Michigan Department of Labor and Economic Opportunity (LEO) High-Speed Internet Office (MIHI)

State of Michigan

Digital Equity Plan (DRAFT)

July 2023

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Disclaimer: The Draft Michigan Digital Equity Plan was developed based on data and feedback collected through extensive stakeholder and community engagement completed during the first half of 2023. While this plan has been thoughtfully prepared to establish Michigan's vision for digital equity in the context of its overarching strategy and goals, this is not the final version of the document. Responsive public comments from Michiganders of all walks of life are imperative to strengthening the Digital Equity Plan. The Michigan High-Speed Internet Office (MIHI) invites the public to review and comment on this draft version and to provide MIHI with the valuable feedback needed to help ensure that the plan meets the needs of Michiganders.

1 Executive Summary

Introduction to Digital Equity in Michigan

Nearly every aspect of modern life requires access to high-speed internet. Digital equity means that all individuals and communities have the tools and resources necessary to access and meaningfully connect to the internet. Currently, Michigan faces multi-faceted challenges in achieving digital equity leading to a digital divide, or a portion of the population who do not have reliable, affordable access to internet.

As of 2023, more than 492,000 households are unserved (locations without 25/3 Mbps service available) or underserved (locations without 100/20 Mbps service available)[1] by high-speed internet infrastructure. Another 730,000 households face barriers related to affordability, adoption, device access, digital literacy, or a combination thereof. Taken together, this means that approximately 30% of Michigan households struggle with some form of the digital divide[2] . This is particularly prevalent for covered populations including low-income households, where nearly 35% of households earning less than $20,000 annually do not have a broadband connection[3], aging individuals, where more than 22% of residents aged 65 and older do not have broadband at home[4], and racial or ethnic minorities are nearly half as likely to have a home broadband connection than non-minorities[5]. Many Michigan residents fall within these covered populations, with individuals likely falling into more than one covered population category, highlighting a need to ensure all vulnerable populations are included within the state's digital equity efforts. Moreover, many individuals lack access to internet-connected devices such as computers, creating another significant obstacle. Michigan is also a fairly rural state, with 61 of the 83 counties in the state being labeled as rural by the U.S. Census Bureau, posing challenges related to access and affordability of broadband. These complex and overlapping issues create many barriers and challenges for achieving digital equity in Michigan.

High-speed internet is essential to communities, as it provides access to information, enhances communication, and expands opportunities for its users. Additionally, education, economic development and mobility, environment, healthcare, transportation, infrastructure, and workforce development are inextricably linked to the universal availability and adoption of broadband service—its benefits reach beyond the immediate users of broadband service. The Michigan Department of Labor and Economic Opportunities estimates expanding broadband statewide could produce significant economic opportunities for households valued between $1.8 billion to $2.7 billion annually[6].

Michigan's goal to bridge the Digital Divide and increase digital connectivity also includes the aim to ensure all individuals, especially covered populations, are adequately educated, trained, and have the needed resources to utilize the internet in a productive and impactful manner.

Vision

[1] Data for number of unserved and underserved locations comes from the June 15th, 2023 data published by the Federal Communications Commission that represents availability reported by internet service providers as of December 31, 2022.
[2] 2021 Update to the Michigan Broadband Roadmap (2021), Michigan High-Speed Internet Office
[3] U.S. Census Bureau. (2019). 2019 American Community Survey 1-year Estimates Detailed Tables
[4] U.S. Census Bureau. (2019). 2019 American Community Survey 1-year Estimates Detailed Tables
[5] U.S. Census Bureau. (2019). 2019 American Community Survey 1-year Estimates Detailed Tables
[6] 2021 Update to the Michigan Broadband Roadmap (2021), Michigan High-Speed Internet Office

The Michigan High-Speed Internet Office (MIHI) envisions to close the digital divide by 2030 and achieve a digitally connected and inclusive state where every resident and community has an affordable high-speed internet connection available to them regardless of location, economic status, or race/ethnicity. The key to MIHI's vision is community engagement working together with the National Telecommunications and Information Administration (NTIA) and other state agencies, and creating solutions distinct to communities' needs.

MIHI's ultimate goal for digital equity in the state is to ensure that high-speed internet access is available to every home, business, institution, and community. A key component of digital equity includes expanding the availability of internet-connected devices, technical assistance, training programs to ensure individuals are able to utilize the internet effectively.

Alignment with Existing Efforts to Improve Outcomes

The goals of the Digital Equity Plan are aligned to the State of Michigan's priorities and other existing or planned efforts such as the BEAD program. There is considerable overlap in prioritization of increasing the workforce, improving educational attainment, enhancing overall health outcomes, improving civic and social engagement, and increasing awareness to other essential services and programs. To best serve Michigan natives and bridge the digital divide, MIHI will collaborate with public, private, and governmental agencies on new and existing programs that coincide.

Strategy and Objectives

MIHI's goals have informed the development of key strategies aimed at bridging the digital divide and enhancing digital equity throughout Michigan. These strategic initiatives will form the foundation for measurable tactics and objectives that will guide MIHI's efforts to ensure universal access and adoption of broadband service. By aligning MIHI's goals with actionable strategies and measurable objectives, Michigan can develop a comprehensive and equitable approach to achieving digital equity. MIHI's goals for the Digital Equity Plan and to bridge the digital divide by 2030 are included the.

MIHI's Digital Equity Goals

1. Ensure all Michiganders have access to an affordable, reliable high-speed internet connection at their homes
2. Attract workers and employers to Michigan
3. Improve educational attainment including removing barriers for credentialed workers and in postsecondary achievement
4. Improve overall health outcomes, particularly with improvement in rural areas and in underrepresented populations
5. Educate Michiganders about the online services available to them as a citizen of the state

Asset Inventory

MIHI has taken significant steps towards improving digital equity in Michigan through its comprehensive inventory of digital equity assets, plans, and programs. This inventory utilized the Michigan Digital Inclusion Resource Map to inform its collection of available resources and is focused on asset that serve covered populations to improve the state's digital equity ecosystem. The map is based on the Michigan Statewide Digital Inclusion survey, which received responses from over 200 organizations and resources throughout the state. MIHI has aligned the survey results with the covered populations they support, as shown in Appendix A-1.

Central to MIHI's approach to developing the asset inventory was the engagement with stakeholders, communities, and Tribal leaders throughout Michigan to gather a more comprehensive understanding of the state's resources, how those assets can be better utilized, and where asset gaps currently exist. MIHI is committed to addressing the existing asset gaps that were identified, while also maintaining efforts to eliminate the obstacles and barriers related to digital equity.

Needs Assessment

With the goal of 95% statewide adoption of broadband, MIHI conducted a comprehensive community engagement strategy wherein community members and stakeholders shared their biggest broadband barriers via surveys to collect information on the barriers Michiganders face, specifically covered populations, when accessing broadband. The results of the needs assessment emphasized that the most significant barrier to internet adoption was the availability of broadband service. Affordability and the need for digital skills to effectively utilize the internet were also considered as significant concerns. These findings are guiding MIHI's efforts to develop targeted tactics and objectives that respond to the specific needs of these covered populations and to help achieve digital equity throughout Michigan.

Coordination and Outreach Strategy

Core to MIHI's coordination and outreach strategy is MI Connected Future (MICF), an inclusive engagement model that aims to facilitate stakeholder and community engagement by promoting robust outreach and input, specifically targeted to covered populations. The MICF model has four primary components - community meetings, partnership roundtables, data collection, and public comment - that are crucial to its implementation. These components are designed to gather data and feedback from community members and organizations to further improve the Digital Equity Plan.

Implementation Strategy

MIHI's implementation strategy is derived from the data and feedback gathered from community members and organizations during MICF. As a result, MIHI plans to implement a Digital Navigator program that's aim is to promote community-based solutions, address the digital divide equitably based on individual community requirements, and facilitate high-speed internet access and digital skills training opportunities in urban, suburban, and rural areas. The implementation strategy include a robust network of digital navigators deployed throughout the state and designed to support community needs. Each navigator will support the capacity building of individuals through digital skills training, by providing resources for device access, and affordability resources. Navigators will be instrumental in barrier removal for individuals and have an emphasis on supporting underrepresented communities and covered populations.

1 Introduction and Vision for Digital Equity

1.1 Vision

Broadband in the 21st century is a necessity yet much of Michigan remains without access to an affordable, or reliable broadband connection. The Michigan High-Speed Internet Office (MIHI) recognizes the importance of broadband access to its citizens which promotes economic opportunity, educational attainment, health outcomes, and civic engagement. MIHI envisions a connected and inclusive state where every resident has an affordable high-speed internet connection available to them regardless of where they live, how much money they make, or what they look like. Digital equity in Michigan looks like state-wide universal broadband availability, affordable broadband subscription plans for middle- and low-income households, at least one internet enabled device per household, inclusive training and technical support services for devices, digital skills, and personal cybersecurity.

Digital equity is not something that can be accomplished with a one-size-fits-all approach. The needs of each corner of our state vary tremendously, as do they vary from household to household. For example, the Eastern Upper Peninsula lacks broadband infrastructure apart from portions of its towns, compared to Detroit which has infrastructure, but is met with affordability barriers for many of its residents. MIHI will not be satisfied with a blanket approach to digital equity wherein each region of our state has the same solution to close the divide. Digital equity means meeting communities and people where they are, connecting them to the resources that already exist, learning about problems that persist, and providing community level technical support to encourage accessibility and promote adoption.

Communities know communities best. Our vision is to approach the digital divide by employing a grassroots strategy where communities lead the conversation and work toward solutions in tandem with MIHI and other state agencies. By building off the existing work community leaders already have in place and resources available locally, and by providing support for technical assistance, by fostering connections between communities and existing programs and services (state, regional, or otherwise), while following a coordinated approach, Michigan will close the digital divide by 2030.

1.2 Alignment with Existing Efforts to Improve Outcomes

MIHI recognizes the importance and impact of infrastructure deployment on digital equity. As such, the structure of the MIHI office is designed in an intentional way wherein members of the infrastructure team and the Digital Equity team collaborate on cross-over projects and programs to ensure infrastructure deployment is conducted equitably. MIHI will cross reference existing infrastructure with planned infrastructure and overlay it with feedback collected from the state-wide engagement tour to ensure the needs of the community are being met in a holistic manner. Details regarding specifics of infrastructure rollout strategies will be provided in the Michigan Initial Proposal (BEAD Program activity).

MIHI operates based on two strategic state goals:

1. Universal availability of reliable internet service, and,
2. 95% adoption of internet service at the home

As of 2021, 30% of Michiganders struggle with some form of the digital divide[7], but overwhelmingly, MIHI heard from communities that the lack of availability was the biggest concern. MIHI is working to braid existing American Rescue Plan Act – Coronavirus Capital Projects Funding (ARPA-CPF)[8] with future BEAD program dollars to support the build out of a reliable high-speed internet network throughout the state. MIHI is confident with strategic planning and collaboration with internet service providers and communities, goal one will be accomplished by 2030. Additionally, once a plan has been developed to use BEAD funding to bring affordable, high-speed broadband service to all unserved and underserved locations, BEAD funding may be used for non-deployment uses such as digital skills training, education programs, affordability program enrollment assistance, and other digital equity uses that support adoption.

While it is easy to solve the availability problem, the adoption goal becomes increasingly complex. The American Community Survey monitors households that do not have an internet connection, but there is little information available as to why Michiganders don't have an internet connection at their home. Barriers to adoption come in many forms and are evidenced in the feedback MIHI collected as part of its MI Connected Future (MICF) state-wide listening tour[9]; however, the most commonly identified barrier (second to availability) was affordability of service. MIHI is looking to solve the affordability gap through creative engagement with communities and service providers to share existing resources that support affordability of internet service for Michiganders and to explore options for provider-led affordability programs.

Additionally, as MIHI toured the state to learn from Michigander's as to why they were not online, many communities provided their community plans for digital equity and infrastructure expansion. Some of those plans are referenced later in this document, but MIHI will incorporate the content of the existing plans into the implementation of the Digital Equity Act implementation activities by working with community task forces, Tribal nations, and municipalities seeking broadband expansion and digital equity initiatives.

Economic and Workforce Outcomes

MIHI is located within the Department of Labor and Economic Opportunity (LEO). The LEO strategic plan for FY2022-FY2026 emphasizes five strategic focus areas:

1. Close equity gaps
   a. Prioritize closure of socioeconomic/demographic opportunity gaps in all decision making
2. Protect and enhance health, safety, and economic security for workers
   a. Ensure safe working conditions, fair wages, and labor protections
3. Educate Michiganders and grow the middle class by removing barriers to employment
   a. Support education, training, onramps, certifications to make sustaining wages more attainable.
   b. Address barriers including housing, transportation, healthcare, childcare, language, and placement.
   c. Address talent shortages in current and future growth sectors in every region of the state.

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[7] 2021 Update to the Michigan Broadband Roadmap (2021), Michigan High-Speed Internet Office

[8] Also known as the Realizing Opportunities through Broadband Infrastructure Networks (ROBIN)

[9] MI Connected Future (MICF), an inclusive engagement model that aims to facilitate stakeholder and community engagement by promoting robust outreach and input, specifically targeted to covered populations. See section 4 for a full description of this state-wide listening tour.

4. Create better jobs and support small businesses
    a. Become the benchmark of economic development y supporting the creation of good and promising jobs that make Michigan's economy more resilient, while implementing the state's first small business strategy that includes focusing on microbusinesses.
    b. Address talent shortages in current and future growth sectors in every region of the state.
5. Build strong communities and have great places to live
    a. Create a strong foundation for communities to grow by making historic investments in broadband, housing, and other critical infrastructure.
    b. Invest in developing vibrant places with rich amenities.

Worker attraction is paramount to the success of the LEO strategic plan, but to attract workers, the state must also attract employers. Many parts of rural and northern Michigan lack broadband infrastructure that makes it nearly impossible to motivate a business to locate in these areas. The growth of e-commerce, digitization of business practices, and even the automation of worker facing platforms, the internet is key to running a successful small (or large) business. MIHI also recognizes the importance of attracting workers equitably and removing barriers to entry for historically underrepresented communities, including English language learners, women, and people of color.

In addition to barrier removal, worker retraining and upskilling will be necessary to fill looming employment gaps in the trades industry which are crucial to the success of the ARPA- CPF and BEAD programs. The National Telecommunications Information Administration (NTIA) projects a labor shortfall of more than 11% over the next five years for laborers and material movers, and a shortfall of nearly 10% for inspectors. MIHI is partnering with existing state programs to elevate the importance of the trades and the programs available currently that will remove barriers to entry for Michiganders, like MiSTEM, MiYARN, and other LEO based programs.

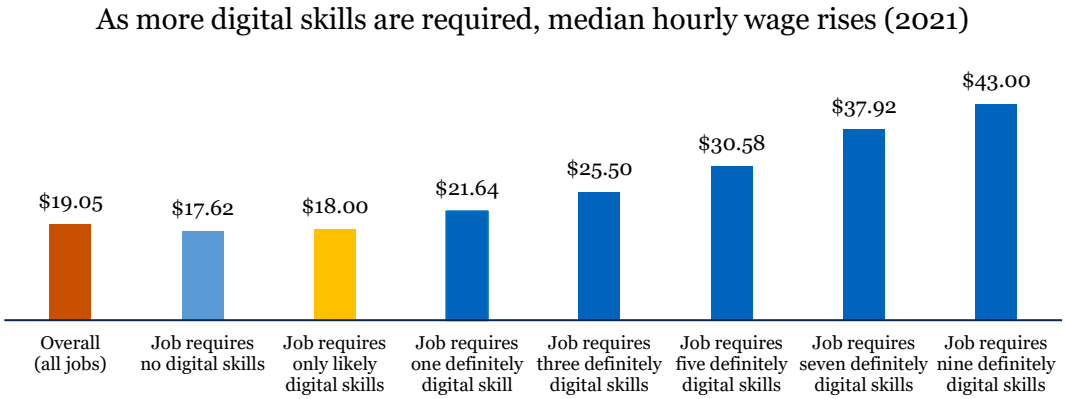
Educational Outcomes

Households with a broadband connection make, on average, over $2,000 more per year than households that do not have a broadband connection[10]. Similarly, the National Skills Coalition researched the difference in wages between workers with no digital skills, compared to the wages of workers with likely digital skills and with wages of workers with up to nine digital skills (Table 1)[11]. The wage differences between a job requiring no digital skills compared to a job requiring nine digital skills equates to a 143% difference in wages.

[10] 2021 Update to the Michigan Broadband Roadmap (2021), Michigan High-Speed Internet Office

[11] Closing the Digital Skill Divide - National Skills Coalition

Figure 1: National Skills Coalition Data on Digital Skills Impact on Median Hourly Wage



Source: National Skills Coalition

MIHI recognizes how foundational digital skills are to increasing household income and educational attainment and aims to incorporate digital skills standards and competencies into K-12 education settings to improve employment outcomes for workers. Employment and education are connected tremendously in this regard. The incorporation of digital skills into the classroom so that they are foundational to the success of education, means workers will have the digital skills competencies needed to attain higher wages when they enter the workforce.

Health Outcomes

Michigan Department of Health and Human Services (MDHHS) elevated the connection between health outcomes and the digital divide as part of the June 2022 Health Information Technology Commission report[12]. This five-year strategy roadmap emphasizes the need to address "Michigan's digital divide to help address disparities in health care and social services if rural parts of the state." The Health IT Commission highlights the need for online accessibility among patients and their healthcare provider, given the recent transition to many online patient management systems. Many health systems exclusively utilize online health information portals that require an internet connection and some level of digital skills in order to view and/or manage. Additionally, the Health IT Commission references challenges in a health IT system regarding consumer cybersecurity and legality of health information exchange.

The Health IT Commission also identifies the need for online data services to promote capacity building for "more complete insight into utilization, quality improvement, and evidence-based intervention design." The purpose of this initiative is to promote holistic wellness and health outcomes and monitor the improvement of health among rural residents.

MIHI supports the use of telemedicine wherever possible to improve patient outcomes, particularly to enhance patient access, improve care, and reduce costs (direct or indirect) to the patient. Telemedicine cannot be utilized in a community lacking broadband infrastructure, or affordable access to said infrastructure and as such, health disparities will continue to occur in rural and underrepresented populations if not deployed equitably.

[12] CY2022 Bridge to Better Health Final Draft Document (michigan.gov)

It is also important to note there are medical researchers and medical professionals (and the National Digital Inclusion Alliance) who identify broadband access as a "super social determinant of health" because of its ability to impact all other Social Determinants of Health's (SDOH).

Civic and Social Engagement

Voter records and registrations are managed by an electronic pollbook system in Michigan which means rural communities will need sustained access to a reliable internet connection to ensure safety of the elections over the course of the nine day early voting period.

Photo ID's are a requirement to vote in Michigan. Photo IDs can be obtained by visiting the Secretary of State branches however, one must obtain an appointment to avoid spending an afternoon in a government office waiting to receive the ID. Appointments can only be booked online. The Michigan Department of State is transitioning some services online, including registering to vote and renewing one's photo ID or Driver's License. The online transition allows for expanded access for Michiganders to obtain the photo ID needed to engage in elections (among other activities) on their own time and in their own home. The same is not true however for those lacking a reliable internet connection in their home.

In addition to online civil engagement, many government assistance programs utilize online application systems for those seeking assistance. For those without internet, they are not only unable to apply for the benefits they need, but also they may be unaware that benefits even exist.

1.3 Strategy and Objectives

To accomplish the vision for Michigan, MIHI aims to employ a holistic strategy focused on meeting the needs of communities by community members themselves. MIHI will serve as a resource and provide support to remove barriers. Partnership with existing state agencies and communities will be paramount to maximizing the reach of the Digital Equity Act (DEA) and its subsequent funding.

Outlined below are the strategies in which MIHI will utilize to close the digital divide in Michigan, followed by how MIHI will measure the progress of the goals with key performance indicators (KPIs). The KPIs are crucial to measuring success of the holistic approach and effectiveness of closing the digital divide for Michiganders by focusing on the availability of and affordability of access to, fixed and wireless broadband technology, the online accessibility and inclusivity of public resources and services, digital literacy, securing online privacy of individuals, and the availability and affordability of consumer devices and technical support for those devices.

Goal	Strategy
Ensure all Michiganders have access to an affordable, reliable high-speed internet connection at their home	Collaborate and align efforts between DEA planned activities with BEAD planned activities and partner with communities, Tribal governments, and state agencies to align similar goals and timelines for infrastructure deployment and digital equity initiatives
Attract workers and employers to Michigan	Coordinate, partner, and support existing workforce development strategies and programs housed within the LEO and other relevant state agencies
Improve educational attainment including removing barriers for credentialed workers and in postsecondary achievement	Collaborate and partner with Michigan Department of Education to elevate online learning opportunities and additional pathways to digital skills development for adults
Improve overall health outcomes, particularly with improvement in rural areas and in underrepresented populations	Coordinate and collaborate with the Michigan Department of Health and Human Services to monitor health outcomes pre- and post-deployment of broadband projects in rural and underrepresented communities
Educate Michiganders about the online services available to them as a citizen	Coordinate and collaborate with the Michigan Department of State to provide trainings to Michiganders about their digital citizenship

Collaborate and align efforts between DEA planned activities with BEAD planned activities and partner with communities, Tribal governments, and state agencies to align similar goals and timelines for infrastructure deployment and digital equity initiatives

MIHI recognizes and values the work municipalities, counties, Tribal governments, and other state agencies have already done to close the digital divide in their respective communities. MIHI also recognizes the importance of collaboration in order to implement BEAD deployment dollars into the communities that need the infrastructure the most. Collaboration with local units of government is paramount to the success of the DEA and BEAD.

The structure of MIHI office is intentionally designed in such a way that the Infrastructure team works closely with the Digital Equity team to ensure both teams are aligned on timelines, upcoming projects, and existing community plans so as to not invalidate the work of community on a project. Throughout the MICF listening tour, the MIHI team heard about the work already happening throughout our state and wants to ensure projects (particularly BEAD deployment projects), align with the goals of the community task forces already in place. Universal availability cannot be accomplished without the voice of community and MIHI aims to work in tandem with community leaders to deploy infrastructure and digital equity initiatives.

Equitable implementation and alignment of the DEA and BEAD requires an equitable approach for each region of our state. The digital equity needs of the Upper Peninsula vary greatly from those of Detroit, and it is the goal of MIHI to support communities by developing a unique solution to each community's needs.

Geographic barriers are important, however they are not the only barrier many communities face when looking at solutions to closing the digital divide. Historically underrepresented communities and covered populations (aging individuals, people of color, non-English speakers to name a few), have unique barriers to full participation in the digital world. Collaboration with organizations and agencies that are comprised of, or represent covered populations are also imperative to the success of the DEA and BEAD alignment and implementation. MIHI continues to collaborate with and learn from organizations who serve covered populations so as to incorporate barrier removal strategies which may not have been initially considered.

MIHI aims to holistically align and implement efforts funded by the DEA and BEAD to the best of its ability, with the recognition that community involvement is the key to its long-term success at closing the digital divide. MIHI will actively work to elevate the voices of underrepresented communities and populations throughout the planning and implementation process for DEA and BEAD funded programs.

Additionally, MIHI collaborates with other state agencies supporting infrastructure deployment activities to ensure projects are planned with similar timelines and cohesiveness. State agencies include, the Michigan Infrastructure Office, the Michigan Department of Transportation, the Department of Environment, Great Lakes, and Energy, the Department of Natural Resources, the LEO, and the Executive Office of the Governor.

Coordinate, partner, and support existing workforce development strategies and programs housed within the LEO and other relevant state agencies

The strategies and objectives MIHI will employ to achieve its goal of attracting workers and employers to Michigan and to improve economic and workforce outcomes for the state include emphasis on strong labor standards, the attraction, retention, and transition of skilled workers, and outlines the importance of partnership with in-house training organizations and community colleges to achieve the goal.

MIHI and the Department of Labor and Economic Opportunity (LEO) support all efforts to promote strong labor standards to ensure worker safety. The workforce and labor division of LEO focuses on "ensuring workplace safety and equitable labor relations for employees and employers." MIHI plans to require potential subgrantees to comply with the strong labor standards outlined in the BEAD NOFO including, but not limited to, using a directly employed workforce, compliance with Davis-Bacon Act requirements (including the collection of certified payrolls), using project labor agreements, local hire provisions, union neutrality commitments from all subgrantees, and proof of an appropriately skilled and credentialed workforce. To support employers unfamiliar with Davis-Bacon Act requirements, MIHI will conduct a series of technical assistance webinars tailored to employers to prevent compliance failures. MIHI will continue to collaborate with Labor Division leadership to ensure accuracy of information and equitable outreach to industry leaders.

Additionally, LEO identifies safe working conditions, fair wages, and labor protections for workers in its 5-year operational plan. One relevant strategy to achieving this goal in the context of the DEA is through strategic promotion of the workplace rights one-stop site which emphasizes responsibilities, rights, compliance requirements, and regulations. The one-stop site is a resource for employers and employees to ensure safe working conditions and strong labor practices. MIHI will encourage subgrantees to utilize the workplace rights one-stop site and to promote it to their workforce.

LEO prioritizes talent and worker attraction within Michigan as evidenced in the LEO 5-Year operations plan. As a division of LEO, MIHI operates under the same goals. Additionally, LEO has established the Infrastructure Workforce Taskforce (IWT) following the passage of the Bipartisan Infrastructure Law (BIL). MIHI is a member of the IWT which operates with the goal to "identify opportunities and develop plan for increasing talent pipeline for infrastructure jobs in order to:

1. Translate unprecedented BIL resources into good paying jobs and career pathways with diversity, equity, inclusion, and accessibility focus, and;
2. Mitigate labor market inflation at height of BIL investments in order to improve effectiveness economy-wide."

The IWT is comprised of LEO division heads and representatives from the Michigan Infrastructure Office (MIO) to ensure coordinated approach to workforce attraction plans across the state.

Outlined below are relevant plans, strategies, and programs LEO and other State of Michigan Departments have in place. This list is not exhaustive in nature.

Agency	Strategy/Plan/Program
Michigan Economic Development Corporation (MEDC)	$34 million talent attraction and retention strategy targeting student, job seekers and industry professionals in key growth areas (i.e., EV mobility and semiconductor industries).
MEDC	STEM-Forward Internship program connects students, who attend Michigan colleges and universities, with paid internship opportunities in STEM-focused careers.
LEO - Michigan Science, Technology, Engineering, and Math (MiSTEM)Network	Removing barriers to employment by increasing the implementation of project-, problem-, and place-based education-based instruction in K-12 schools in Michigan and expose 200,000 students to STEM careers.
LEO – Workforce Development, Education and Training (E&T)	Addressing talent shortages by engaging and creating customized targeted solutions to meet employer needs by: • Establishing and strengthening existing employer-led collaboratives (ELCs) • Aligning career pathways and educational credentials that lead to transferrable skills and increased wages for job seekers
LEO – E&T; MEDC	Expand talent in Michigan by upskilling and reskilling Michiganders and leverage resources resulting in 7,500 postsecondary credentials by: • Promoting tuition free pathways to obtain postsecondary credentials; • Expanding relationships with secondary and postsecondary education providers to improve job outcomes for students with disabilities; and, • Boosting apprenticeship opportunities to obtain industry-recognized credentials.
LEO – E&T; Michigan Works! Agencies	Expand Michigan's labor force by providing job readiness services to 800 people by conducting outreach activities and supporting eligible persons experiencing barriers to employment to re-enter the labor force.
LEO – Office of Prosperity; Women's Commission	Help 50,000 Michigan women re-enter or remain in the workforce with support of the Tri-Share Child Care program and the MI Fostering Access, Rights and Equity (MI FARE) program. MI FARE is designed to educate women workers about their employment rights and benefits.

Agency	Strategy/Plan/Program
Michigan Department of Corrections (MDOC)	MDOC operates a skilled trades training program that aims to provide a positive learning community for prisoners who are serious about completing career and technical education. Prisoners complete training at the vocational village located in the state prison facilities. Career paths include (but are not limited to): • Commercial Driving License and Forklift Operation • Carpentry • Electrical • Computer Coding • Computer Numerical Control Machine Tooling and Robotics • Line Clearance and Tree Trimming

MIHI is aware of several Internet Service Providers (ISPs) that conduct in-house training programs, as well as labor unions who support training programs. MIHI will require any subgrantee to outline their in-house training programs to determine appropriate skilling for the projects which they are seeking funding.

Workforce gaps are top of mind for Michigan policy makers and agencies, especially as Michigan is entering the time for unprecedented BIL buildouts. MIHI is plugged in to existing workforce development structures within the state given the vast network stewarded by our Workforce Development division. Partners in this space are eager to engage with MIHI to support workforce growth in their respective capacities.

MIHI partners with LEO E&T to support relationship building among the Michigan Community College Association (MCCA), the Michigan Association of Intermediate School Administrators (MAISA), and Michigan Occupational Dean's Advisory Council (MODAC). Additionally, LEO houses the Michigan office of Registered Apprenticeships which provides supportive services and funding for employers of apprentices. The GoingPRO Talent fund supports employers in reskilling new workers and ensures a pathway to credentialling as part of the involvement in the program. GoingPRO is housed in the WD division. Other programs include the Michigan Youth Apprenticeship Readiness Network (MiYARN) which aims to expand youth registered apprenticeships by partnering with regional entities, the Michigan Learning and Education Advancement Program (MiLEAP) which supports in the transition from education and training programs to high-wage jobs. MiLEAP focuses on underrepresented populations, particularly that of economically distressed rural and urban areas.

Collaborate and partner with Michigan Department of Education and other state agencies, to incorporate a statewide digital skills curriculum for K-12 students, and additional pathways to digital skills development for adults

The Michigan Department of Education's (MDE) Top 10 Strategic Education Plan was approved in August 2020 and provides direction to the Michigan education community.[13] MDE aims to be a Top 10 education state in 10 years and employs the strategic education plan to monitor growth and progress on its eight goals. Three of MDE's goals most relevant to the work at MIHI are:

- Expand secondary learning opportunities for all students
- Increase the percentage of all students who graduate from high school
- Increase the percentage of adults with a postsecondary credential

The following provides an overview of how MIHI can impact/influence MDE's goals.

Expand secondary learning opportunities for all students

MDE focuses on six specific areas for secondary learning opportunities:

1. Career and Technical Education
2. Early Middle College
3. Advance Placement
4. International baccalaureate
5. Dual Enrollment
6. Secondary Transition

Closing the digital divide is important for all six focus areas and supports growth and progress not only in the number of skilled workers able to build the infrastructure needed to close the availability gaps, particularly in Michigan's rural communities, but closing the digital divide ensures more educational opportunities for individuals looking to advance their education, but may be limited by their school districts' course offerings.

Dual Enrollment, for example, showcases a strong argument and need for closing the digital divide. When COVID-19 shut down schools and learning transitioned online, those who were dual enrolled were now at risk of losing not only their high school credential but also their college credits or even degree, if they did not have reliable access to the internet. According to MDE, in the 2018-19 school year, 4.1% of students across all Michigan schools were dual enrolled. Enrollment declined to 3.7% during 2020-21 and remained into 2021-22. Subsequently, school districts who offered a dual enrollment opportunity also declined and have not yet met pre-pandemic numbers. [14]

Increase the percentage of all students who graduate from high school

[13] Michigan's Top 10 Strategic Education Plan
[14] https://www.mischooldata.org/dual-enrollment/

Access to the internet and high school graduation rates may not be directly correlated, however, a recent study found that Grade Point Average (GPA) does. According to the Quello Center, students with a "fast" internet connection at home report a GPA of 3.18 compared to their counterparts with "slow" internet connections at home who reported a GPA of 3.10. Additionally, students with no internet access at home reported a 2.81 GPA and those who only had cell phone access to the internet who reported a 2.75 GPA.[15] While GPA is not the sole indicator for graduation, it does play a major part.

MIHI will work with MDE to incorporate awareness campaigns for parents and students about the importance of an at-home internet connection, and provide a pathway to support the affordability of, and access to a reliable broadband connection, including affordability of and access to internet enabled devices. This holistic approach will support families with the resources needed to get online and support their scholars in school.

Increase the percentage of adults with a postsecondary credential

MDE and LEO partner to achieve Governor Whitmer's 60x30 initiative. 60x30 is a program with the goal of supporting 60% of Michigander's achieving a postsecondary credential or college degree by removing barriers to attainment. Educational attainment and economic growth correlate closely, particularly in the earned wages for individuals with a postsecondary degree or credential.

MIHI is working to expand the broadband skilled trades workforce through partnerships among industry leaders, and community colleges to ensure Michigan has the skilled workforce needed to build out the robust broadband network necessary to reach universal availability. This means credentialed workers will earn more in their lives, and Michigan will be one step closer to closing the digital divide.

In addition to the Top 10 in 10 strategic plan, MDE adopted a set of competencies to support consistent digital skills for k-12 schools in 2016. The International Society for Technology in Education (ISTE) standards have been adopted in Michigan as the Michigan Integrated Technology Competencies for Students (MITECS).[16] These competencies work to integrate technology into learning for students as a way to enhance their education. 81% of all workforce sectors indicated the MITECS competencies reflect "high" or "very high" alignment with the skills needed in their workforce.

MIHI aims to continue collaboration with MDE to meet the digital skills gap and promote workforce development for K-12 students, but will also work to ensure adult learners and covered populations have ready access to a digital skills curriculum regardless of enrollment status in a postsecondary education program. MIHI and the State of Michigan Library plan to incorporate free access to a digital skills learning platform via local libraries and Michigan Works! Associations.

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[15] Hampton, K. N., Fernandez, L., Robertson, C. T., & Bauer, J. M. Broadband and Student Performance Gaps. James H. and Mary B. Quello Center, Michigan State University. https://doi.org/10.25335/BZGY-3V91

[16] MITECS

Coordinate and collaborate with the Michigan Department of Health and Human Services to monitor health outcomes pre- and post-deployment of broadband projects in rural and underrepresented communities

Michigan Department of Health and Human Services (MDHHS) operates with the vision to "deliver health and opportunity to all Michiganders, reducing intergenerational poverty and promoting health equity." With broadband indicated as a super determinant of health (SDOH), it is imperative to equitably roll out broadband infrastructure and the necessary technical support to rural and underrepresented communities. Particular emphasis is to be paid to Michigan's Tribal communities given their simultaneous rurality and historically underrepresented status.

MIHI and MDHHS will work together to support the monitoring and tracking of health outcomes in areas both pre- and post-deployment through existing health monitoring and could expand to new datasets as needed. Continued partnership with the Health IT commission is paramount to improving health outcomes for Michigan.

Additionally, MIHI will work with MDHHS to promote and improve the way in which benefits such as SNAP, FAP, Medicare, and Medicaid are accessed by improving the MIBridges portal to improve accessibility for individuals with few digital skills. MIHI and MDHHS will work to promote relevant programs to MIBridges users, such as the Affordable Connectivity Program.

Coordinate and collaborate with the Michigan Department of State to provide trainings to Michiganders about their digital citizenship

With the rise of political and civic engagement transitioning to exclusively online mechanisms, it is imperative to support covered populations in getting involved in the services provided by the state. The Michigan Department of State emphasizes equity in engagement and utilizes a team of individuals to specifically reach out to historically underrepresented communities regarding the changes MDOS is implementing and how it will effect them. MIHI and the MDOS will work closely to educate Michiganders on the tools available to engage digitally.

Additionally, to promote safety and security of covered populations, MIHI will work with MDOS to educate individuals on the importance of protecting online activities and how to do so. Many Michiganders indicate that they refrain from using online services due to cybersecurity concerns. By utilizing preventative education, the online transition will promote better civic engagement for Michigan through ease of access and barrier removal to voter registration and/or license renewals.

Key Performance Indicators:

Below are the key performance indicators by which MIHI will measure the effectiveness of the Digital Equity Act implementation plan. The goals and strategies outlined above detail the holistic ways in which MIHI will work to support the systemic changes needed to close the digital divide effectively and permanently. The goals and KPIs are designed to work in tandem, but may not initially appear to align, however they are intrinsically connected. For example, the goal of attracting workers and businesses to Michigan will be effected as MIHI improves the affordability and availability of service throughout the state, particularly rural areas. With more broadband availability, more Michiganders can work from home, which will impact their income or their options for educational advancement, and so on.

Each KPI will be measured on a scale that will indicate zero when the digital divide has been closed. The baseline for each of the below KPIs will be determined as part of the initial phase of the State Digital Equity Capacity Grant and the short-term goals will be determined following the results of the baseline, however, the long-term goal for each will be to reach zero (0) thereby indicated the digital divide has been closed. The data for KPIs is a combination of public data sources including the American Community Survey, the FCC, and the Computer Use Survey.

1. The availability of, and affordability of access to fixed and wireless broadband technology
    a. An affordability score that combines three data sets
        i. Internet-income ratio developed as part of Purdue University's Digital Divide Index (measured by each covered population in each region)
        ii. The ratio between the FCC's Benchmark Rate for 100/20 Mbps unlimited internet service and what each covered population in each region would pay for home internet service
        iii. Percentage of households who temporarily lost their internet connection due to inability or difficulty paying for the subscription (measured by each covered population in each region)
2. The online accessibility and inclusivity of public resources and services
    a. A digital government accessibility score
        i. Likelihood of each covered population to access government services online as compared to how likely they are to use telehealth, online banking, or online consumer services
3. Digital literacy
    a. A digital participation score that combines two things:
        i. Proportion of each covered population in each region that struggles to use computers or internet devices
        ii. Likelihood of each covered population is to do various online tasks versus the overall statewide average
4. Awareness of, and the use of, measures to secure the online privacy of, and cybersecurity with respect to an individual
    a. A Digital Security Score that combines two things:
        i. The percentage of each covered population in each region which has refrained from one or more online activities due to cybersecurity concerns
        ii. The percentage of each covered population in each region which doesn't use the internet at all due to cybersecurity or privacy concerns
5. The availability and affordability of consumer devices and technical support for those devices

a. A Device Distress Score for each covered population in each region that compares:
    i. Percentage of homes with no computing device at all
    ii. Percentage of homes with only a smartphone
    iii. Percentage of homes where someone was unable to use a computer five or more days during the last six months because someone else was using it/it was elsewhere/it was otherwise inaccessible

2 Current State of Digital Equity: Barriers and Assets

2.1 Asset Inventory

The objective of this section is to provide an overview of the specific advantages that the state of Michigan has in terms of advancing digital equity for underserved communities. It aims to compile a comprehensive list of existing resources, programs, and strategies that contribute to digital inclusion and promote availability and adoption. The inventory encompasses both publicly and privately funded assets, as well as digital equity initiatives and plans initiated by various governmental entities such as municipal, regional, and Tribal governments.

By conducting this asset inventory, the state of Michigan aims to identify and highlight the key resources at its disposal, enabling the effective implementation of the Digital Equity Plan. This comprehensive approach aims to bridge the existing gaps and address the specific needs of the state in order to accomplish its goals and objectives for achieving digital equity.

2.1.1 Digital Inclusion Assets by Covered Population

2.1.1.1 Introduction and Methodology for Identifying Digital Inclusion Assets

Leveraging existing assets is a key strategy for both the Digital Equity and BEAD programs, this is why MIHI developed a Digital Inclusion Resource Map in September 2022. The map serves as a tool for:

1. Collecting information regarding existing assets from the communities
2. Understanding the current digital inclusion programs, offerings, and resources available in communities across Michigan.
3. Promoting these new and existing programs to communities

The map was developed based on responses received to the Michigan Statewide Digital Inclusion survey developed by MIHI and distributed to key stakeholders and the public throughout the state. MIHI used several channels to engage stakeholders and encourage participation in the survey, including socializing it at community meetings as part of the MI Connected Future tour, Partnership Roundtables, and in the MIHI newsletter. Additionally, the survey is easily accessible and prominently displayed on the MIHI website. By targeting stakeholders, such as non-profit organizations, for-profit organizations, government agencies, colleges, universities, trade schools, public libraries, and K-12 schools, the survey seeks to determine the current state of digital equity and inclusion programs and identify key organizations involved in these efforts. Based on these insights, the Digital Inclusion Resource Map is continuously updated, providing an ongoing and up-to-date inventory of digital inclusion assets in Michigan.

In addition to the Digital Inclusion Resource Map, MIHI has independently developed a robust list of assets, plans, and programs that can support digital inclusion. As a way to identify the resource and initiatives and associated gaps in each, the MIHI office developed a robust and innovative community and stakeholder engagement process called MI Connected Future (MICF). The MICF aimed to holistically and authentically engage with communities and

stakeholders to provide the state with input and direction needed to achieve universal broadband access and a more digitally equitable state. MIHI adopted the ethos of "listen first, plan second" to ensure the needs and current challenges of communities and stakeholders were collected and incorporated into the planning process equitably. This key initiative demonstrates that Michigan is at the forefront of the efforts to promote digital equity and inclusion. MIHI will continue working towards achieving its goal of a more connected and equitable Michigan by maintaining a collaborative approach with stakeholders across the state and providing ongoing support for existing and emerging digital equity and inclusion assets, plans, and programs.

2.1.1.2 Digital Inclusion Assets

In addition to the Digital Inclusion Resource Map and MICF, MIHI has identified other assets throughout the state that can play a significant role in closing the digital divide across the state of Michigan. The assets identified in this section do not constitute an exhaustive list but represent a best effort from the MIHI Office to identify key assets across state government.

In this section, a selection of the state's digital inclusion assets were aligned with the covered populations they support, as outlined in Table 2. Additional assets identified through the Michigan Statewide Digital Inclusion survey are summarized in Appendix A-1. For clarity and context, a definition for each of the covered population categories are presented in Table 1, sourced from the Digital Equity Act of 2021. Despite not being a covered population under the Digital Equity Act of 2021, at-risk youth category was added to the list based on the Digital Inclusion Resource Map survey, which reflected significant digital inclusion efforts in this area.

Table 1: Definitions of Covered Populations

	Covered Population	Description
	Covered households	Households with income no more than 150 percent of the federal poverty threshold.
	Aging Individuals	Individuals 60 years and older.
	Incarcerated individuals	All persons in State prisons, local jails and other municipal confinement facilities, correctional residential facilities, and correctional facilities intended for juveniles. This does not include individuals who are incarcerated in a federal correctional facility.
	Veterans	All persons aged 18 years and older who served in the armed forces in the past but are no longer on active duty.
	Individuals with disabilities	A person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment[17].
	Individuals with language barriers	This includes: a) English learners: Individuals who speak a language other than English at home and speak English less than "very well." b) Have low levels of literacy: Individuals below literacy proficiency
	Racial or ethnic minorities	Individuals who identify as a race other than White alone or as Hispanic or Latino of any race.
	Rural community	Individuals living outside of cities and towns with more than 20,000 residents or living outside larger cities and towns with more than 50,000 residents and their surrounding urban areas.
	At-risk youth	An individual who is less than 18 years of age who faces extreme threats to a successful transition into adulthood.

[17] *Guide to Disability Rights Laws | ADA.gov*

Table 2: Select Digital Inclusion Assets by Covered Population

Select Digital Inclusion Assets	Covered Populations								
	Covered households	Aging individuals	Incarcerated individuals	Veterans	Individuals with disabilities	Individuals with a language barrier	Racial/Ethnic minorities	Rural community	Youth
MI Dept. of Labor and Economic Opportunity (LEO), Michigan Poverty Taskforce	✓	✓	✓	✓	✓	✓	✓	✓	✓
MI Dept. of Labor and Economic Opportunity (LEO), Office of Global Michigan						✓	✓		
Michigan 2-1-1, 2-1-1 Assistance	✓	✓	✓	✓	✓	✓	✓	✓	✓
MI Public Service Commission (MPSC), Wi-Fi Hot Spot Map	✓	✓	✓	✓	✓	✓	✓	✓	✓
MI Dept. of Technology, Management, and Budget (DTMB), Michigan Geographic Framework	✓	✓	✓	✓	✓	✓	✓	✓	✓
DTMB, Michigan Public Safety Communications System (MPSCS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
MI Dept. of Health and Human Services, Community Information Exchange (CIE)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Southeast Michigan Broadband Navigator	✓	✓	✓	✓	✓	✓	✓	✓	✓
Washtenaw Community College, Fiber Optics Certifications	✓	✓	✓	✓	✓	✓	✓	✓	✓
Closing the Digital Gap	✓	✓		✓	✓	✓	✓		✓
Human-I-T	✓								
Michigan Public Libraries	✓	✓	✓	✓	✓	✓	✓	✓	✓
Michigan K-12 schools and school districts	✓				✓	✓	✓	✓	✓
Community Centers	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health Divisions/Departments	✓	✓	✓	✓	✓	✓	✓	✓	✓

A more detailed description of the select digital inclusion assets are included below:

MI Dept. of Labor and Economic Opportunity (LEO), Michigan Poverty Taskforce

The Michigan PTF is committed to finding ways to strengthen, broaden, coordinate, and streamline existing state efforts to ensure that Michigan families have access to the support they need. The Michigan PTF will work to evaluate measures and better understand poverty's impact on Michigan families and communities, identifying root causes and opportunities to bring positive change. The PTF is creating a coordinated plan to help communities address the digital

divide, which acts as a barrier for families in accessing available economic, educational, health, housing, and safety services, and it awarded funding to create a playbook for local communities to plan their broadband expansion efforts. The Michigan Poverty Task Force can help promote digital equity by identifying root causes of poverty, reducing access barriers, and streamlining efforts across the state to ensure accessibility to digital resources and technology for all covered populations.

MI Dept. of Labor and Economic Opportunity (LEO), Office of Global Michigan

The mission of the Office of Global Michigan is to empower and engage the immigrant, refugee, and international community to make Michigan the home for opportunity. The office assists immigrant and refugee communities with connectivity needs, as well as licensing, workforce training, education, housing, healthcare, and quality of life. The Office also works with state agencies that provide services to immigrants and refugees and strives to minimize or eliminate barriers to accessing those state services.

Michigan 2-1-1, 2-1-1 Assistance

Michigan 2-1-1 provides individuals with a confidential and free-to-use service (by simply calling or texting 2-1-1 or visiting their website), connecting all covered populations with local community-based organizations offering thousands of programs and services. 2-1-1 Assistance is a robust information and referral system that provides users with information on a range of services, including the Affordable Connectivity Program, and assistance with needs such as food, housing, financial aid, employment, childcare, education, healthcare, and mental health, as well as household needs and utility payments. Michigan 2-1-1 serves as a connectivity tool for individuals seeking help and resources within their community. The accessibility of this service, one of 2-1-1's guiding principles, on a digital platform helps promote digital equity and ensure that all individuals have access to critical resources.

MI Public Service Commission (MPSC), Wi-Fi Hot Spot Map

During the COVID-19 pandemic, MPSC partnered with Connected Nation Michigan to create a map of known public Wi-Fi hotspots to support those without a home connection. The resulting interactive broadband map enables all covered populations to search for broadband availability by street address, view the types of broadband available, and locate providers offering service at their home or business.

MI Dept. of Technology, Management, and Budget (DTMB), Michigan Geographic Framework

DTMB supports the business operations of state agencies through services such as the management of a variety of geospatial datasets, enterprise software licenses, aerial photography, and other remote sensing products that can be used for various purposes. The Michigan Geographic Framework serves as the digital base map for the State government and assists in maintaining core enterprise spatial assets. The Michigan Geographic Framework is an integrated and centralized place to store and maintain data, where it can also be standardized and shared with other entities to create accurate Geographic Information Systems (GIS) maps.

DTMB, Michigan Public Safety Communications System (MPSCS)

The MPSCS is a network of over 300 towers and more than 14,000 radios located throughout the state that supports public safety communications, such as first responders in their service to citizens. These towers can also be used as colocation points for wireless broadband facilities. MPSCS also provides interoperable voice and data communications to federal, state, local and private public safety agencies all over the state of Michigan.

MI Dept. of Health and Human Services, Community Information Exchange (CIE)

CIE is a localized effort to create and sustain the technology and relationships required to support Social Determinants of Health (SDOH) needs of both individuals and communities. CIE maximizes a person-centered approach by ensuring social care information for all covered populations is collected only as needed and is stored safely. CIE's initiatives encompass a wide range of objectives related to digital equity, including expanding broadband access, supporting digital literacy, and promoting patient agency in accessing and mediating their health and social care data.

Southeast Michigan Broadband Navigator

The Southeast Michigan Broadband Navigator is a resource that provides information on broadband availability, digital literacy, equity, inclusion, cybersecurity, funding, and programs. It is a resource for communities, governments, educators, and stakeholders by providing data and maps on broadband availability and usage. The navigator will be regularly updated and expanded to address emerging issues and respond to feedback from stakeholders. The intent of the Navigator is to help Michigan residents answer questions related to broadband access, availability, and affordability, as well as provide information on resources and policies to increase equitable broadband access.

Washtenaw Community College, Fiber Optics Certifications

Washtenaw Community College offers certification courses for fiber optic technicians, fiber specialists in testing and maintenance, and fiber specialist in splicing. The comprehensive training program combines theory and hands-on learning experiences to prepare any individual, with a high school diploma, to take the Certified Fiber Optic Technician exam.

Closing the Digital Gap (CTDG)

CTDG is a nonprofit corporation headquartered in Lansing. Closing the Digital Gap provides computer training, computer ownership and internet access to small non-profit organizations and individual in Michigan who may be unemployed, underemployed, low-income, single parents, disabled, veterans, immigrants, at-risk youth, and seniors. Its mission is to provide low-to moderate income residents of the service area the opportunity to earn or purchase a low-cost computer, receive computer/Internet training and access internet services for low-cost, along with assisting participants in making connections with community resources through referrals for further training or resources that may lead to employment and/or educational enrichment for participants and their families. CTDG further services micro-enterprises/entrepreneurs and small non-profits to support with technology and training in Michigan both online, in-person, and through a blended delivery of training, programs and services.

Human-I-T

Human-I-T is an organization that believes removing systemic social and economic barriers is essential to shrinking the digital divide. They are committed to shrinking the digital divide by providing communities with equitable access to opportunity through devices, internet access, digital skills training, and tech support. The organization has distributed 318K tech items, assisted 105K households with internet and provided digital literacy training to 7K learners. The organization runs an online store, HITConnect.org, which offers laptops, desktops, and tablets for as low as $50 per device to Detroiters. They also offer Detroit households eligible for Comcast Internet Essentials high-speed home Wi-Fi for $9.95 a month.

Michigan Public Libraries

Across the state, Michigan has 665 public libraries, which are integral to supporting digital equity and inclusion efforts. Michigan public libraries commonly offer public computers and free internet access through wireless connections (Wi-Fi), although the availability of services and technologies may differ across locations; the overarching aim is to provide individuals with access to resources and information, both in physical and digital formats. For instance, the Elk Rapids District Library has allowed library cardholders to access Wi-Fi hotspots for the past six years due to the high cost and unreliable nature of rural internet. Similarly, the Kent District Library provides an array of digital and technical resources, such as one-on-one technology tutoring, classes for seniors learning computer basics, and computer software tutorial courses. Hence, libraries play an integral role in building digital literacy, engaging in workforce development, and expanding access to the internet across the state.

Michigan K-12 schools and school districts

Primary and secondary institutions play an integral role in developing digital literacy skills for children and adolescents. There are a total of 899 districts in Michigan, with 3,400 public schools serving over 1.4 million students. The Michigan Integrated Technology Competencies for Students (MITECS) is a statewide effort spearheaded by the Michigan Department of Education to focus on learning enhanced by technology by integrating technology competencies across all areas. Digital literacy plays a large part in the effort, centralizing on responsible digital citizenship and the utilization of digital tools to solve problems and achieve goals in a creative, innovative, and collaborative manner. Additionally, some school districts, such as the Detroit Public Schools Community District, have a device lending program that allow students to borrow laptops and Wi-Fi hotspots to use in and outside classroom settings.

K-12 schools also play a large role in providing internet to students, faculty, and staff. During the COVID-19 pandemic, many devices such as laptops, wireless tablets, and Wi-Fi hotspots were loaned to students to complete coursework through distanced learning. Certain schools, such as schools in St. Clair County, installed wireless hotspots to provide 24-hour internet access across the county to students, faculty, and staff. K-12 institutions provide the foundation to develop digital skills through expanding training and access.

Community Centers

Community centers, including those that provide social, educational, or recreational activities, generally provide services to individuals of all-ages and often serve as locations where information and resources can be accessed. For instance, the Martin Luther King Community Center in Jackson has a dedicated computer center and provides Wi-Fi to the public. During the COVID-19 pandemic, many community centers, such as the New Troy Community Center in

New Troy and Baxter Community Center in Grand Rapids, were transformed into "Lift Zones". Lift Zones was a partnership with Comcast where free Wi-Fi HotSpots were provided to allow for free access to the internet. Community centers are playing an increasingly large role in expanding digital equity and access.

Health Divisions/Departments

There are 43 Health Divisions and Departments across the state of Michigan, all tasked with the promotion of public health and wellness. An essential component of the promotion of public health is health equity—ensuring all individuals have access to needed resources. Hence, several Health Divisions and Departments provide services to aiding individuals with online enrollment in public assistance programs. For example, the Grand Traverse County Health Department has developed the Michigan Child Collaborative Care (MC3) Telemedicine Program, which provides psychiatric support to primary care providers in Michigan managing patients with behavioral health problems. The program supports telehealth by offering same-day phone consultations and remote psychiatric evaluation via video telepsychiatry. Moreover, the COVID-19 pandemic has increased the use of telehealth to provide needed services to the general population. Telehealth can be beneficial for many populations, such as those living in rural areas, are low-income, lack transportation, and are disabled, as many such barriers can be removed using telehealth.

2.1.2 Existing Digital Equity Plans

Creating a more digitally equitable Michigan is a significant priority for the state, and many existing plans and efforts support this goal. Listed below are several existing state, local, and regional plans and efforts that have been identified as critical components in supporting and enabling state objectives related to digital equity and inclusion. Though the list is not exhaustive, it highlights much of the state's plans for education, economic development, healthcare, transportation, workforce development, and equity which are inextricably linked to universal availability and adoption of broadband service.

2021 Michigan Broadband Roadmap

To bridge the digital divide and improve digital equity and inclusion, MIHI has committed to implement strategies to ensure that every Michigander, business, institution, and community can meaningfully adopt high-speed internet service. In support of this mission, MIHI developed a Michigan Broadband Roadmap, which established four core goals related to digital equity and inclusion as mentioned below:

1. Ensure high-speed internet is available to every household, business, anchor institution, and community in the state
2. Create a more digitally equitable Michigan
3. Improve the state's broadband ecosystem
4. Enhance and coordinate Michigan's broadband related investments with other investments in social programs, education, and economic equity and development

Michigan Poverty Task Force Report

The Michigan Poverty Task Force issued its second report with recommendations aimed at lifting Michiganders out of poverty, connecting families in every corner of Michigan with economic opportunity, improving quality of life, improving outcomes, and creating real change.

The following selection of recommendations from the report are relevant to supporting the work of MIHI is undertaking in the successful implementation of the DEA and BEAD programs:

1. Increase investments in a universal benefit application so Michigan residents can apply for resources in one place, which can promote digital equity by enhancing resident's access to digital resources and services.
2. Establish a highly visible education and awareness effort to boost participation in and access to a formal network of Community-Based Education and Training Information Portals, which can establish an accessible resource for residents to access education, training, career resources, and other digital resources.
3. Develop a coordinated strategy to help communities address the digital divide, including identifying best practices and effective measures to provide digital resources, access to training and education, and other tools necessary to bridge the digital divide and promote digital equity.

The report includes other recommendations that are indirectly related to the success of the DEA and BEAD programs, and could be implemented more effectively by ensuring every home, business, and institution in the state has access to affordable and reliable high-speed internet.

Michigan Economic Development Corporation (MEDC) Five-Year Strategic Plan

The MEDC is Michigan's economic development lead with a mission to achieve long-term economic prosperity for Michiganders by investing in communities, enabling the growth of good paying jobs, and promoting Michigan's strong image worldwide. The strategic focus areas rely heavily on achieving universal broadband availability and improved digital equity by adopting the following activities:

1. Attract, keep, and grow businesses in industries that support maximum growth in jobs, wages and investments.
2. Cultivate the skills and talent needed for in-demand and high-growth occupations statewide.
3. Collaborate with local communities and partners to create places in which people and talent want to live, work, visit and play.
4. Support entrepreneurial growth to enable commercialization and new high-tech business creation.
5. Promote Michigan's image as a world-class business location and travel destination.
6. Help existing small and microbusinesses grow and thrive and improve economic prosperity for all through small business ownership.

Michigan's Statewide Housing Plan

The Statewide Housing Plan of Michigan, the first of its kind for the state, focuses on creating housing stability for all residents. The plan includes five statewide housing targets, eight priority areas, 37 goals, and 134 suggested strategies to address complex and intersecting challenges related to achieving housing stability. Feedback from thousands of residents, hundreds of organizational partners, public surveys, focus groups, meetings, and interviews informed the five-year plan. Broadband Infrastructure is a key priority with the goal of increasing affordable

high-speed internet access. One strategy is to coordinate with MIHI and others to improve accessibility and affordability of high-speed internet. The plan also includes a strategy to offer extra points when awarding contracts for projects that provide high-speed internet access, particularly in rural and low-connectivity areas.

Education Equity in Michigan Plan

Created by the Michigan Civil Rights Commission in September 2022, the Education Equity in Michigan Plan recommends that the Michigan Department of Civil Rights expand the existing Council for Government and Education on Equity and Inclusion to include representatives of the Michigan Department of Education and establish the Council as the entity responsible for implementing and overseeing the following recommendations for action:

1. Develop a Statewide Educational Equity Plan to enhance policies, accountability, and opportunities for all, using a holistic approach to inform the Michigan Department of Civil Rights, the State Department of Education, and schools statewide
2. Encourage schools across the state to create local school equity plans and contribute information and resources to encourage and support equitable practices and opportunities for schools
3. Increase internet access for students and families and develop an easily accessible electronic outreach and inclusion model that is available to everyone involved in the education process

Given the necessity of high-speed internet connectivity and digital inclusion in the P-20 environment, this plan supports the vision and mission of MIHI for the State Digital Equity Plan to create a more digitally equitable state by ensuring equity of access across several aspects of the education ecosystem.

Michigan's Top 10 Strategic Education Plan

The Top 10 Strategic Education Plan has a vision that states; "every learner in Michigan's public schools will have an inspiring, engaging, and caring learning environment that fosters creative and critical thinkers who believe in their ability to positively influence Michigan and the world beyond."

One of the key guiding principles of the plan states that students should be provided every opportunity to achieve the broadest range of life dreams, and a selection of key goals seek to; 1) expand early childhood learning opportunities; 2) improve the health, safety, and wellness of all learners; 3) expand secondary learning opportunities for all students; and 4) increase the percentage of adults with a postsecondary credential. While high-speed internet access isn't explicitly called out in the plan, equitable and affordable access and use are inherent in supporting Michigan's achievement of the goals outlined in the plan.

Health Information Technology Roadmap

This roadmap is maintained and implemented by the Policy and Planning, Strategic Engagement, and Alignment section of the Michigan Department of Health and Human Services. The Health Information Technology Roadmap identifies several relevant goals, objectives, and strategies that impact and are impacted by the state digital equity programs:

1. Address Michigan's Digital Divide by ensuring that all communities have equal access to important public health information and resources

2. Improve Onboarding and Technical Assistance by providing the necessary training and support to individuals and communities on how to effectively use digital health tools

While the deployment of universal high-speed internet service and addressing digital equity contribute to each of these objectives, the objective from the Roadmap to, "Address Michigan's Digital Divide," directly aligns with the vision and goals of Michigan's Digital Equity Plan and BEAD.

Michigan Roadmap to Healthy Communities

The Michigan Roadmap to Healthy Communities aims to address the Social Determinants of Health (SDOH) through a collaborative, upstream approach to remove barriers to social and economic opportunity, improve health outcomes, and advance equity. Phase I of the SDOH Strategy promoted the alignment of efforts at the state, local, and community level and the improvement of programs and policies through an in-depth internal review. It prioritized efforts in three focus areas – health equity, housing stability, and food security. Phase II of the SDOH Strategy builds on improvement and alignment efforts from Phase I, with a focused effort on health equity through multisector collaboration and supporting holistic solutions.

A key component of the Roadmap is the development of a Community Information Exchange (CIE). A CIE is an evolving set of best practices and technology guided by the goal of identifying and addressing social needs. As identified in the plan, a successful CIE requires widespread access to broadband and technology and a workforce trained in its use, agreed protocols around data collection and coding, staff with dedicated time to facilitate the referral process, and a robust network of referral partners. The success of this plan is heavily reliant on the universal availability of high-speed internet service.

MI Healthy Climate Plan

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) published the MI Health Climate Plan in April 2022. This plan lays out a broad vision for fulfilling the governor's fall 2020 commitment for Michigan to achieve 100% economy-wide carbon neutrality by midcentury – the global science-based benchmark for reducing greenhouse gas emissions to avoid the most devastating and costly impacts of climate change. The plan establishes ambitious goals and strategies for achieving the plan's vision.

Broadband internet access is crucial to achieve the goals laid out in the MI Healthy Climate Plan as it enables people to access the latest climate science, connect human activities to climate impacts, and make informed decisions. It is important to advocate for equitable access to this information, so that all residents can make informed decisions regarding climate change.

Thirty-Year Integrated Infrastructure Plan

Developed by the Michigan Infrastructure Council, this plan includes the state's dig-once strategy to collocate facilities during construction within state and local rights-of-way. The strategies in the Integrated Infrastructure Plan, including dig-once and ROW access, are also identified in the Broadband and Digital Equity (BEAD) Five Year Action Plan as strategies to help remove obstacles to broadband deployment and adoption in historically marginalized and underserved communities. This plan enables the efficient deployment of broadband networks and universal availability of broadband access, which are key factors to achieving digital equity. This plan is currently under development.

Michigan Public Service Commission (MPSC) Strategic Plan

The mission of the MPSC is to serve the public by ensuring safe, reliable, and accessible energy and telecommunications services at reasonable rates. While the MPSC does not regulate broadband, the commission intersects with the goals, vision, and objectives of the MIHI Office, the BEAD plan, and this plan. By working towards the goal of expanding broadband access, the MPSC is supporting the overall efforts of the MIHI Office to promote digital equity and inclusion across the state. The following are selected key goals and strategies of the MPSC Strategic Plan that support the efforts of the MIHI Office.

1. Empower customers to make informed utility choices
    a) Publish accurate information on energy and telecommunications programs
    b) Promote Connect Michigan broadband expansion
    c) Collaborate with other state departments and stakeholders
    d) Develop energy and technology pilots
2. Assure safe, secure, and reliable utility services and infrastructure
    a) Issue a Telecommunications Assessment
    b) Define roles for telecommunications outage monitoring
    c) Support the transition to IP-911
3. Assure accessible and affordable utility services through regulatory oversight
    a) Administer and promote customer programs
4. Cultivate open and diverse communication and education
    a) Establish and encourage virtual stakeholder participation in workgroups and proceedings
    b) Engage partners on informational webinars/forums
    c) Evaluate communication and outreach programs and efforts

Michigan Future Mobility Plan

The Michigan Office of Future Mobility and Electrification oversees the Michigan Future Mobility Plan. This plan identifies several objectives to position the state as a leader in next-generation mobility. A few of the objectives are impacted by digital equity programs, including deploying EV chargers, ensuring Mobility as a Service (MaaS), and reducing congestion and traffic crashes.

Mobility and electrification are heavily reliant on the availability of wired and wireless connections to provide real-time data, enable transactions, and monitor the electrical grid and associated systems. Universal connectivity and adoption are important for the operations of EV chargers and transit access. Having large green sites that are attractive for automotive investments in the future will mean looking outside of traditional urban areas to parts of the state that aren't connected today. The operations of intelligent transportation systems and connected/automated vehicle tech rely on the reliable availability of the Internet of Things (IoT) and edge computing across cellular-vehicle-to-vehicle/everything (CV2V / CV2X) systems. Michigan's digital equity programs directly support the success of the Michigan Future Mobility Plan.

Michigan Mobility 2045 Plan

Michigan's State Long-Range Transportation Plan (MM2045) is an essential element of Michigan's transportation planning and program development process. The public- and stakeholder-driven plan provides a foundation for developing Michigan's transportation programs, including MDOT's Five-Year Transportation Program (5YTP) and the statewide, rural and metropolitan transportation improvement programs, and presents the social and economic cases for transportation investment in Michigan.

The universal availability of high-speed internet is recognized as a key requirement for the successful implementation of the MM2045 Plan. Additionally, the plan contains the following strategies that are relevant to the digital equity programs and work of the MIHI Office:

1. Identify opportunities to expand fiberoptic, broadband, and 5G connections through coordination or partnerships.
2. Leverage technology to improve passenger transportation availability and services.
3. Invest in data, data collection, analytics, and information systems to advance data informed decisions.
4. Extend opportunities to share data and information for improved efficiency, accountability, and transparency across all of Michigan's transportation partners.
5. Implement and expand a real-time Transportation Infrastructure Data Exchange (TIDE) system to function as a centralized platform to support continuous exchange of transportation data among MDOT and other stakeholders.

Michigan Workforce Development Plan

The Michigan Workforce Development Plan is maintained and implemented by the Employment and Training Division of LEO, the same agency the MIHI Office is part of. The plan identifies a projected worker shortage in twelve NTIA identified occupation groups. The most significant occupation groups impacted by projected shortfall are "laborers and material movers," "trenchers," and "inspectors" which are facing a 11.9%, 10.4%, and 9.8% shortfall respectively. The Michigan Workforce Development Plan outlines several steps to address the projected shortage that could impact the expansion and access to digital resources statewide related to digital equity:

1. Engagement of underrepresented communities, unions, worker organizations.
2. Leveraging and partnering with subgrantees, contractors, subcontractors, educational institutions, supportive service providers, and workforce/labor training providers

MIHI is actively partnering with the workforce development division of LEO to creatively solve these shortfall projections. Upcoming workforce strategies highlight the importance of diversity, equity, and inclusion to expand the labor pool to those not historically represented in the construction industry.

Michigan Sixty by 30 Strategic Plan

The Michigan Sixty by 30 Initiative aims to increase postsecondary educational attainment to 60% by 2030. The Sixty by 30 program is housed within the LEO, the same agency the MIHI Office is part of. The Sixty by 30 Strategic Plan outlines several focus areas that are impacted by the work of the MIHI Office including, boosting youth college going rates, creating pathways for

immigrants and international students, and addressing barriers to success, especially for students living below the ALICE threshold.

Expanding access to high-speed internet and promoting digital equity contribute to the objectives of the Sixty by 30 initiative, which prioritizes student and career success.

Existing County Plans

Connected Nation's "Connected Community" program has partnered with 10 counties across the state of Michigan to conduct an assessment regarding the current status of broadband and to establish a broadband planning process. Through surveys of local residents, businesses, and organizations, the program aims to understand the existing resources and capabilities in place to support the access, adoption, and use of broadband technology in homes and businesses. Data obtained from this assessment is used to develop an appropriate action plan to improve the broadband ecosystem effectively, addressing the current and future broadband needs of these counties. The program's aim is to enhance the accessibility, affordability, and availability of broadband technology in the counties, leading to social and economic development. Appendix A-1 provides additional information on the Technology Action Plan development of the 10 county plans listed below.

Cheboygan County	Eaton County
Huron County	Lake County
Lapeer County	Midland County
Newaygo County	Oceana County
Sanilac County	Tuscola County

Please note that these are not the entirety of county plans that MIHI is aware of, rather, these are the 10 county plans which were developed in tandem with Connected Nation.

Washtenaw County Broadband Equity Subcommittee Final Report

Washtenaw County's Broadband Equity Subcommittee final report highlights how lack of broadband access is impacting residents across the county. The Committee suggests several activities to achieve this goal, such as defining the need, supporting best and emerging practices, seeking funding, changing or updating policies, and coordinating with local governments.

Digital Equity and Inclusion – City of Detroit

The Office of Digital Equity & Inclusion in Detroit offers solutions and resources to bridge the digital divide in the city by providing affordable and quality high-speed internet, access to devices, digital literacy training, technical support, and upgraded internet infrastructure city-wide.

The Office of Digital Equity and Inclusion developed an interactive digital dashboard that defines the needs of Detroit residents. The interactive dashboard provides transparency to the residents of Detroit concerning the allocation of resources and services geared towards closing the digital gap in the city. This data driven approach will allow for the creation of customized digital equity plans for each district and neighborhood to meet the needs of the community.

Southeast Michigan Council of Governments (SEMCOG)

SEMCOG developed *Broadband in Southeast Michigan*, a roadmap that identifies key challenges and opportunities, policy recommendations, and case studies for expanding

broadband throughout the region. The goal of the roadmap is to promote accessibility of high-speed broadband to homes and businesses across Michigan to enhance community and economic development, improve quality of life, provide access to education and lifelong learning opportunities, support remote work demand, and promote equitable access to health. The four goals related to digital equity include:

1. Expand high-speed broadband availability throughout Southeast Michigan
2. Improve data on broadband availability and access to reflect current conditions with accuracy
3. Ensure equitable access to broadband and support digital literacy efforts for students, seniors, and households with limited access to resources
4. Coordinate broadband efforts at the State level to support broadband development for community and economic development

2.1.2.1 Asset Gaps in Existing Digital Equity Plans

MIHI recognizes the need for additional local, regional, and county digital equity plans to ensure equitable access to digital resources and opportunities throughout the state. There should be additional focus on building partnerships and collaborations with various stakeholders to implement digital inclusion activities at the local level effectively. These efforts will help drive the development of more digital equity plans and address the current gaps in Michigan's digital inclusion landscape.

The results of the Digital Inclusion Resource Map, in Appendix A-1, revealed asset gaps primarily related to incarcerated individuals, veterans, and individuals with disabilities. Although the Digital Inclusion Resource Map is not a complete list of organizations supporting Digital Inclusion throughout the state, out of the 208 organizations that completed the survey, only four organizations covered incarcerated individuals, and five organizations covered veterans and individuals with disabilities. The organizations supporting these individuals mainly focused on providing services related to digital access.

During the partnership roundtable meetings which discussed obstacles and barriers of broadband deployment and adoption, participants were asked to share their thoughts and ideas regarding digital equity, focusing on device access, digital skills and proficiency, affordability, relevance/awareness, and inclusivity. After analyzing the feedback gathered from these discussions and responses, we identified several common themes related to asset gaps that emerged across these discussions. The following is a summary of these themes, which can guide us as we work towards addressing these issues and achieving greater digital equity and inclusion in our communities.

- Rural communities are often left behind when it comes to access to high-speed internet and other digital services due to the higher costs associated with providing these services in remote areas. This lack of access can have a significant impact on economic development, education, healthcare, and social connectivity in these rural communities.
- In addition to access issues, the cost of service is often higher in rural areas than in urban areas. Internet Service Providers (ISPs) have to invest more to build the necessary infrastructure in remote areas, and due to smaller populations, they may not be able to achieve the same economies of scale as they do in urban areas. This cost burden is usually

passed on to the consumers, making the service more expensive for those who live in rural areas.

- Many individuals do not have access to high-speed internet, which is necessary to access telehealth services. This creates a significant gap in healthcare accessibility and highlights the need for increased focus on expanding access to telehealth services for all individuals.
- Deploying broadband infrastructure is a complex and time-consuming process that requires significant investment and coordination from stakeholders. Waiting for broadband infrastructure to be deployed can result in significant opportunity costs, including lost economic development, healthcare, and educational opportunities.
- Digital literacy and training is a crucial asset gap, especially notable for older generations. Digital literacy training can include basic computer skills, internet browsing, digital data entry, and file management. Offering digital literacy training in person may be essential to serving aging individuals.
- Digital safety is another critical concern. With the risk of cyber-attacks and digital fraud, it is essential to educate people on digital safety best practices. Older generations may be particularly vulnerable to scams and fraud.

MIHI is committed to addressing the digital asset gaps that affect covered populations, including veterans, incarcerated individuals, and those with disabilities, while also prioritizing removing the obstacles and barriers related to digital equity. The asset gaps and themes identified during the Digital Inclusion Resource Map and Partnership Roundtable discussions provided key insights for addressing challenges related to broadband deployment and adoption, access and affordability, digital literacy and training, digital safety, and more. By recognizing these challenges and working together to develop comprehensive solutions, plans, and programs we can achieve greater digital equity and inclusion in our communities and bridge the digital divide.

2.1.3 Existing Digital Equity Programs

In this section, MIHI has identified various existing state and local digital equity programs, and outlined how each initiative enables or supports Michigan's digital equity and inclusion goals. Although this is not an all-encompassing list, it reflects MIHI's commitment to identify and leverage existing programs and initiatives across state and local government as part of the strategy to closing the digital divide. Understanding the strengths and potential gaps in service of these various programs is crucial in advancing Michigan's broader digital inclusion goals and ensuring a cohesive and coordinated approach to achieving digital equity across the state. By identifying areas of convergence and potential collaboration across programs, Michigan can leverage existing resources, expertise, and momentum, while avoiding duplication of efforts especially with the non-deployment aspect of the BEAD program and maximizing the impact of state investment in digital inclusion.

Affordable Connectivity Program Eligible Households

Eligible Michiganders may qualify for monthly assistance toward paying their monthly home internet bill under the federal Affordable Connectivity Program (ACP). The Affordable Connectivity Program is a $14.2 billion benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare and more. The benefit provides a discount of up to $30 per month toward internet service for eligible households and up to $75 per month for households on qualifying tribal lands. Eligible households can also receive a one-time discount of up to $100 to purchase a laptop, desktop computer, or tablet from participating

providers if they contribute more than $10 and less than $50 toward the purchase price. The Affordable Connectivity Program is limited to one monthly service discount and one device discount per household.

Eligibility for the ACP program is based on household income. ACP-eligible households include families with incomes at or below 200% of the federal poverty level and those who qualify for Lifeline, SNAP, Free and Reduced-Price School Lunch, WIC and other government-funded programs. Essentially, the covered population that this program is geared towards is the households with lower incomes. An estimated 1,685,725 households in Michigan are eligible for the ACP program. As of April 1, 2023, 604,108 households are enrolled in the program which constitutes approximately 35.8% of the estimated eligible households.

MI Dept. of Education, E-Rate Support

E-rate is a federal program that provides reduced rates on internet access and internal connections for schools and libraries. The discount rate, which ranges between 20% and90%, is based on the number of school children in the area who are eligible for a free or reduced lunch, and E-rate can save libraries money through lower fees for these vital services. The funding for the E-rate program is determined based on the level of demand, up to an annual cap of $4.456 billion set by the Commission.

If a state provides eligible schools and libraries with funding for special construction charges for high-speed broadband that meets the FCC's long-term connectivity targets, the E-Rate program will increase an applicant's discount rate for these charges up to an additional 10% to match the state funding on a one-to-one dollar basis. For tribal schools and libraries, the E-Rate program will also match special construction funding provided by states, tribal governments, or other federal agencies on a one-to-one basis, up to an additional 10% for the applicant's discount rate. Total E-Rate support with matching funds may not exceed 100 percent. Discounts for support depend on the level of poverty and whether the school or library is located in an urban or rural area.

Michigan Public Service Commission, Utility Assistance Programs

The Michigan Public Service Commission (MPSC) is the regulatory authority for all utility providers in the State of Michigan. The MPSC maintains a database of utility assistance programs to support consumers. The purpose of the assistance program is to establish and administer programs statewide that provide energy assistance and self-sufficiency services to eligible low-income households. Self-sufficiency services include assisting participants with the following: paying their utility bills on time, including broadband; budgeting for and contributing to their ability to provide for energy expenses, which may include enrollment into an affordable payment plan (APP); and utilizing energy services to optimize energy efficiency. Additionally, the assistance program allows low-income residents who fall behind on their gas and electric bills to stay safely in their homes and become energy self-sufficient through utility bill payment assistance and an array of other support programs, including the Affordable Connectivity Program (ACP), which offers monthly assistance towards broadband or internet bills.

Michigan Public Act 95 allows the MPSC to approve a low-income energy assistance "funding factor" (a surcharge on utilities), not to exceed $50 million dollars, every year to fund the program. In 2017, the MPSC established a monthly .93 cents per meter surcharge on all participating electric utilities who have opted-in to fund the program.

Connecting Michigan Communities Grant Program

The Michigan Department of Technology, Management, and Budget (DTMB) is providing a grant opportunity to extend broadband service into unserved areas in Michigan. The grant funds are available to middle mile and last mile projects that demonstrate collaboration to achieve community investment and economic development goals of the area impacted.

CMIC was created in late 2018 as Michigan's first broadband infrastructure grant program and seeded with $20M in initial funds. An additional $14.3M was added to the program in mid-2020. The program has issued three rounds of grants with the last occurring in 2022. The program is currently housed at the MI Dept. of Technology, Management, and Budget, but recent discussion may shift administration of the program to MIHI. No additional grant awards are anticipated from the program. The intended outcome of the program is to connect more than 17,000 locations to high-speed internet.

Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Broadband Infrastructure Grant Program

ROBIN is a high-speed internet last mile and middle mile infrastructure competitive grant program with $238M in project funds from the US Treasury as part of the Coronavirus Capital Projects Fund. ROBIN provides funds to internet service providers and public-private partnerships for the expansion of broadband infrastructure to unserved areas. Up to 35% of ROBIN funds can be used for middle-mile projects that support deployment of broadband service to unserved areas, while the remainder is dedicated for last-mile service projects. The program is designed to connect locations currently without 100/20 Mbps service. Ultimately, the goal is to connect 60,000 – 75,000 locations with high-speed internet service with this grant.

Tribal Broadband Connectivity Program (TBCP)

The NTIA's Tribal Broadband Connectivity Program is an initiative that provides grants to support broadband deployment and adoption in tribal communities across the United States. The program offers $1 billion in funding to tribal governments and tribal organizations to expand access to high-speed internet and improve digital inclusion. The grants can be used for a range of activities, such as building and upgrading broadband infrastructure, establishing public computer centers, and providing digital skills training. These grants will expand high-speed Internet network deployment and digital skills training to improve access to education, jobs, and healthcare on Tribal lands.

Two tribes in Michigan received grants from the TBCP. The Nottawaseppi Huron Band of the Potawatomi project was awarded about $1.2M and proposes to upgrade existing local fiber optic infrastructure that currently serves Tribal government offices, Tribal businesses, and community anchor institutions in addition to 35 Tribal households. These upgrades will assist Tribal members in gaining better access to telehealth, distance learning, and economic and workforce development, in addition to digital inclusion efforts. In addition, Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians (Gun Lake) was awarded around $500k, which will connect 17 households in the Gun Lake tribe that lacked access to broadband to qualifying broadband service.

2.1.3.1 Asset Gaps in Existing Digital Equity Programs

Refer to Asset Gaps in Existing Digital Equity Plans.

2.1.4 Broadband Adoption

As of 2023, more than 492,000 households are unserved (locations without 25/3 Mbps service available) or underserved (locations without 100/20 Mbps service available)[18] by high-speed internet infrastructure. Another 730,000 households face barriers related to affordability, adoption, device access, digital literacy, or a combination thereof. Taken together, this means that approximately 30% of Michigan households struggle with some form of the digital divide[19] MIHI has actively been working with internal and external agencies to ensure that Michiganders are aware of the programs and resources that can subsidize internet service plans and internet-enabled devices.

The Affordable Connectivity Program is administered by the Federal Communications Commission (FCC) and provides financial assistance ($30 per month) and a one-time discount to purchase an internet enabled device for eligible households and households on qualifying lands (FCC.gov). The Affordable Connectivity Program is open to households with an income of 200% or less of the Federal Poverty Guidelines. It is also available to households that have a member who accesses any of the following programs: Supplemental Nutrition Assistance Program (SNAP), Medicaid, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Supplemental Security Income (SSI), Federal Public Housing Assistance (FPHA), Veterans Pension and Survivors Benefit, Free and Reduced-Price School Lunch Program or School Breakfast Program, Federal Pell Grant (received in current award year). Tribal members involved in specific additional programs are also eligible. Tribal members who live on federally recognized tribal lands are eligible for a more significant potential benefit (up to $75 per month). ACP also provides a one-time subsidy for the purchase of an internet-enabled device.

MIHI will support the ACP enrollment process for Michiganders, by partnering with EducationSuperHighway to coordinate a statewide ACP awareness campaign. EducationSuperHighway is a national nonprofit that has worked in the broadband space for decades and has recently shifted their focus to on the digital divide. Another program that assists in the promotion of ACP is Lifeline. Through this service, Michigan senior citizens have access to a phone landline and are also eligible for the Affordable Connectivity Program.

MIHI currently leverages a digital navigator program presently funded with Community Development Block Grant dollars from the CARES Act and administered in partnership with the MEDC. The program is hosted in three of the ten economic prosperity regions. The primary goal of this program is to increase awareness of broadband opportunities and events, to provide technical assistance for broadband related skills, and to identify resources to subsidize internet service plans. MIHI will scale the Digital Navigator program to a statewide offering covering each of the ten Prosperity Regions with a focus on underrepresented and underserved communities.

MIHI has partnered with the statewide library network and the Michigan Department of Education to leverage resources and expand digital learning opportunities for communities. For decades, Michigan's statewide libraries have provided a physical space and digital learning opportunities for community members. More recently, many libraries have also been a provider

[18] Data for number of unserved and underserved locations comes from the June 15th, 2023 data published by the Federal Communications Commission that represents availability reported by internet service providers as of December 31, 2022.
[19] 2021 Update to the Michigan Broadband Roadmap (2021), Michigan High-Speed Internet Office

of loaner internet enable devices and mobile hotspots. The MDE has adopted the International Society for Technology in Education (ISTE) standards as digital literacy competencies that are implemented at various grade levels for students in kindergarten through secondary schools.

MIHI's works to collaborate and coordinate with local nonprofit organizations that are operating in the device ecosystem, workforce and digital skill development space. One such collaboration with Human-I-T. Detroit's Human-I-T creates equitable access to technology in several ways. The most notable strategies are providing low-cost devices, internet access, digital skills training, and tech support. Human-I-T also works with companies to recycle internet-enabled devices. A multi-tiered approach will be considered to scale the work of Human-I-T to more Detroiters and Michiganders.

During the MI Connected Future Tour, MIHI learned that communities want to get involved and develop relationships that will aid in them to compete in the BEAD subgrantee process. The current landscape of broadband adoption allows MIHI to support digital inclusion virtually by way of a Digital Inclusion Playbook[20], which is a five-step framework to address Digital Equity in communities. The Playbook guides communities on how to identify key stakeholders, create the coalition, collect data, and establish goals. These are all critical components to creating a more digitally inclusive community.

Additionally, MIHI has created an asset inventory that allows organizations/companies to share their information including the digital services it provides. Once complete, the organization can be located by anyone inquiring about their services in an online map.

2.1.5 Broadband Affordability

MIHI provides resources and outreach toolkits that are available electronically via the Labor and Economic Opportunity website. MIHI also references the Affordable Connectivity Program (ACP). Enrollments for ACP in the state of Michigan are among the highest nationally. According to EducationSuperHighway, 1,690,382 Michigan households are eligible for the ACP, yet only 636,672,007 (38% of those eligible) have enrolled. Without high- speed internet access at home, Michigan households can't work remotely, can't access healthcare, job training, the social safety net, or critical government services, and their children can't complete schoolwork outside the classroom. The MIHI website links several internet service providers directly for Michiganders to enroll in low-cost opportunities. MIHI intends to sustain a low-cost internet service plan model that is required by the BEAD program.

In addition to that household subsidy program, several organizations and municipalities were awarded federal grants towards ACP promotion through the Affordable Connectivity Outreach Grant Program. The grantees were: United Way of Southeastern Michigan, Wayne County, City of Flint and Literacy Center of West Michigan. Each of the awardees will serve as trusted community institutions that will implement strategies to reach unserved and underserved households.

The State of Michigan has provided additional support to low-income households. The Michigan Energy Assistance Program (MEAP) administers statewide programs that provide energy assistance and self-sufficiency services to eligible households. MEAP acknowledges that concerns about gas, electric, telecommunications and broadband services affects Michiganders. According to the MEAP website, self-sufficiency services include assisting eligible households

[20] LEO - Michigan Digital Inclusion Resources

with paying energy bills on time, budgeting for and contributing to their ability to provide for energy expenses, assistance in enrollment into an affordable payment plan, and utilizing energy services to optimize on energy efficiency. MEAP carefully outlines a step-by-step process for participants to employ and to be proactive. Additionally, MEAP outlines an outreach toolkit, links to resources, including MiBridges, the Michigan Department of Health and Human Services led program. Using MEAP, Michiganders can also discover energy assistance resources available to them in their area.

2.2 Needs Assessment

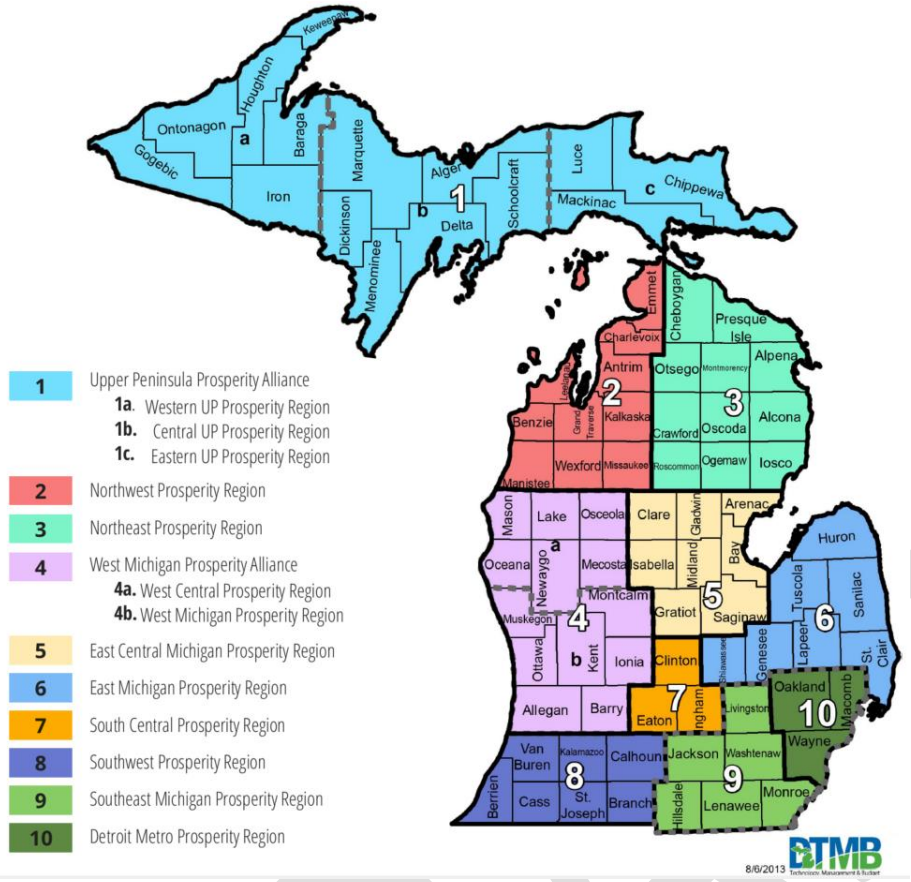
MIHI instituted a comprehensive community engagement strategy wherein community members and partnership roundtable attendees shared their biggest broadband barriers via surveys. MIHI conducted 31 community meetings, held in-person, throughout each of the 10 prosperity regions in Michigan and the data collected during these meetings is the source of the information below. Cities where each community meeting was held were targeted based on their rurality, status of internet availability, and historically underrepresented populations.

Section 3.2.1. below summarizes the results of those surveys by region and covered population including:

- Income below 150% of the poverty line
- Aging Individuals
- Veteran Status
- Disabled Individuals
- English Language Learners
- Racial-Ethnic Minorities
- Rural Residents

2.2.1 Covered Population Needs Assessment

The MIHI Office has chosen to examine its needs and gaps regionally. LEO defines ten, multi-county economic prosperity regions as a basis for analysis and implementation across programs. The map below provides the regional boundaries.



The profiles begin with that of Michigan as a whole, followed by a similar profile for each of the ten regions. The purpose of these profiles is to establish a baseline for understanding the unique digital equity and connectivity needs of the state and each region. Each profile contains a digital equity analysis that identifies the covered populations as defined by the Digital Equity Act, as well as the current state and needs for broadband availability and the priorities defined by each region during MIHI's MICF listening tour. The following describes each of the data points found in the profiles. If a metric is highlighted in a regional profile, the rate of that metric in the region is higher/lower than the state average, which may indicate a need for additional focus on this covered population or element of digital equity.

Digital Equity Profile

The Digital Equity Profile identifies and enumerates the various Digital Equity Act covered populations within each region. These metrics are critical for identifying the unique digital equity needs throughout the state that can drive future digital inclusion program implementation.

Population: The total population of the area from the American Community Survey 2021 5-Year Estimates.

Rural: The total number and percentage of the population residing in rural areas of the region as defined by the USDA 2013 Rural-Urban Continuum Code.

Age 60+: The total number and percentage of the population aged 60 years or more in the region from the American Community Survey 2021 5-Year Estimates.

Below Poverty: The total number and percentage of the population living below the federal poverty guideline in the region from the American Community Survey 2021 5-Year Estimates.

ALICE Population: The total number and percentage of the population defined as Asset Limited, Income Constrained, Employed (ALICE) in the region as defined by the United Way. Data is from 2021.

Non-White: The total number and percentage of the population identifying as a race other than white, not including those of Hispanic descent, in the region from the American Community Survey 2021 5-Year Estimates.

Hispanic: The total number and percentage of the population identifying as being of Hispanic descent in the region from the American Community Survey 2021 5-Year Estimates.

Foreign-Born: The total number and percentage of the population in each region born outside of the United States from the American Community Survey 2021 5-Year Estimates.

Limited English-Speaking: The total number and percentage of the population in each region that identify as being limited English speakers. This data was derived by identifying the number of households in each region identifying as such and multiplying it by the average household size for each region to determine the estimated population that are limited English speakers. Data is from the American Community Survey 2021 5-Year Estimates.

Veterans: The total number and percentage of the population in the region that indicate past military service from the American Community Survey 2021 5-Year Estimates..

Disabled: The total number and percentage of the population in the region that indicate that they have mental or physical disability from the American Community Survey 2021 5-Year Estimates.

Living in Correctional Facility: The total number and percentage of the population in the region that is living in a correctional facility. This data comes from the 2020 Decennial Census. The data does not differentiate between those in federal or state correctional facilities.

Broadband Availability

This section identifies the total number of residential and business Broadband Serviceable Locations (BSL) identified on the BSL Fabric developed and maintained by the Federal Communications Commission. The number and percentage of unserved (locations without 25/3 Mbps service available) and underserved (locations without 100/20 Mbps service available) BSLs are included for each region. This data comes from the June 15th, 2023 data published by the FCC that represents availability reported by internet service providers as of December 31, 2022. These metrics are critical for understanding the service availability needs and gaps within each region.

Digital Equity Priorities

This data is derived from the MICF statewide community listening tour MIHI conducted in early 2023. Community meetings were held in each region and participants were asked to prioritize the importance of the four primary barriers to digital equity; 1) Availability; 2) Affordability; 3) Digital Literacy/Skills; and 4) Devices. Participants were asked to rank these topics in order of importance through a dot-sticker exercise. Votes were weighted according to their importance and the results averaged to determine the overall importance of each topic on a scale of one to four with four being the most important and one being the least important. This data helps identify the most critical issues for those living in each region of the state.

MICHIGAN DEPARTMENT OF LABOR & ECONOMIC OPPORTUNITY

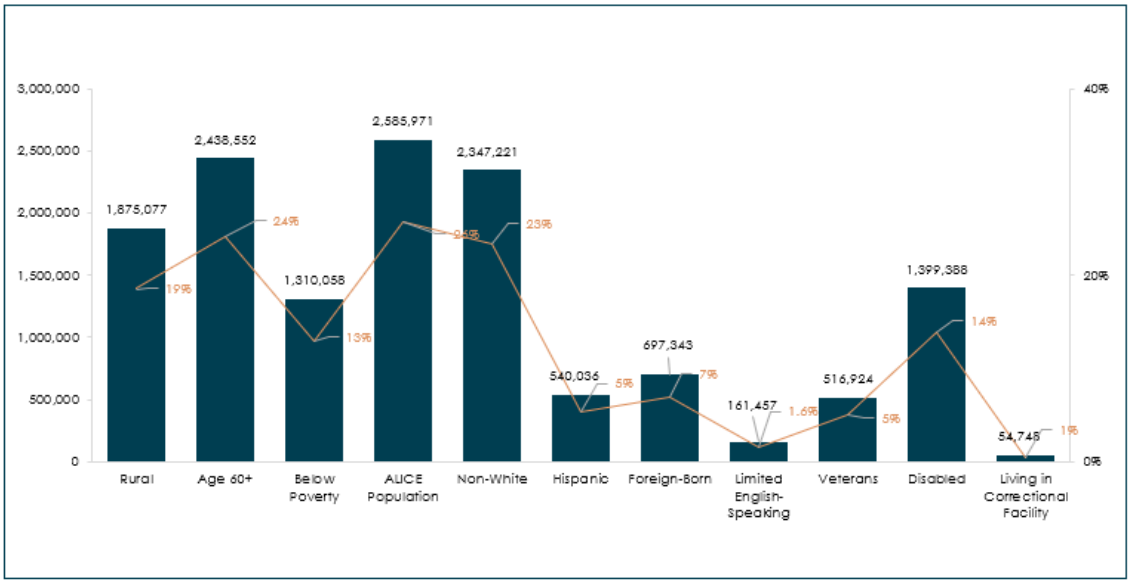
State of Michigan

Includes all the 83 counties of the State of Michigan. Michigan has an ever-changing tapestry of residents that evokes an evolving approach to addressing the digital equity needs of the state.

Digital Equity Profile

10,062,512
Population

- Nearly one-quarter of the state's residents are aged 60 or more, and nearly one-quarter are non-white.
- Additionally, while 13% of the population lives at or below the federal poverty line, approximately one-quarter of the state's residents are part of the asset limited, income constrained, employed (ALICE) population.
- These characteristics, as well as those of the other covered populations outlined in the Digital Equity Act, suggest a set of diverse digital inclusion needs that span across the state.



Broadband Availability

4,027,591
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Veterans	Disabled	English Lang. Learners	Racial-Ethnic Minority	Rural
Affordability	3.59	3.63	3.52	3.47	3.58	3.43	3.63	3.63
Availability	3.55	3.42	3.58	3.61	3.58	3.37	3.26	3.67
Devices	2.65	2.85	2.55	2.58	2.83	2.73	3.10	2.53
Digital Literacy/Skills	2.73	3.00	2.74	2.66	2.93	2.51	3.11	2.70

- According to the latest FCC data, Michigan has nearly 500,000 homes and businesses that are either unserved or underserved by high-speed internet infrastructure. This is a higher proportion of un- and underserved locations than is found in other states with comparable population sizes, as evidenced by the fact that Michigan received the fourth-largest allocation of BEAD funding despite having the tenth-largest population.

Higher than state average

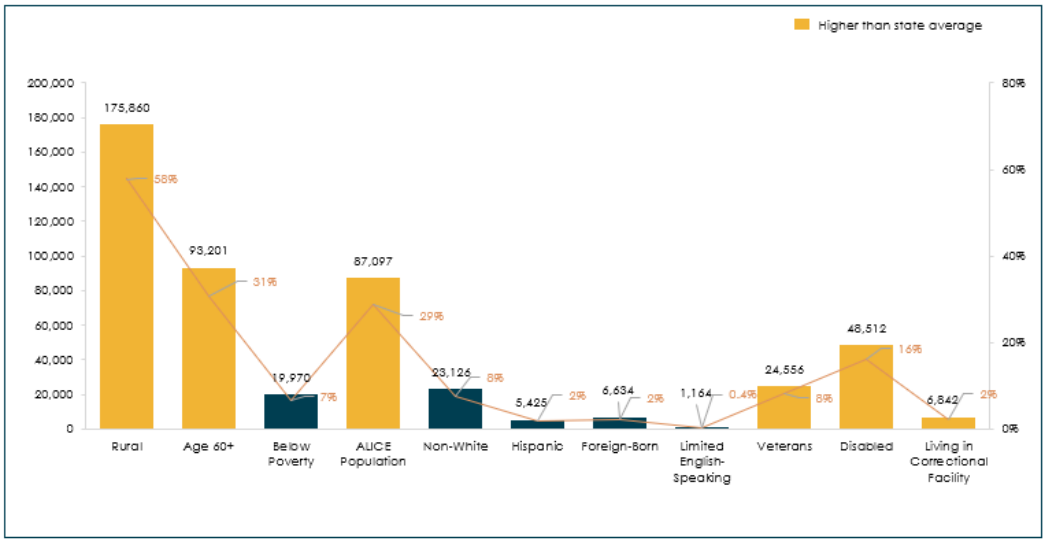
Prosperity Region One: Upper Peninsula

Includes the counties of: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft and represents the entirety of Michigan's Upper Peninsula.

Digital Equity Profile

303,102
Population

The region has a significant rural population, as well as an older and less affluent one compared to the state, (the region has a lower rate of those at the federal poverty line, but a higher ALICE population). It also has a higher concentration of veterans and those with disabilities, as well as those living in correctional facilities.



Broadband Availability

180,746
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.63	3.57	3.52	3.45	3.67	3.60	3.64
Availability	3.71	3.64	3.60	3.64	4.00	3.73	3.61
Devices	2.61	3.07	2.39	2.73	3.00	2.80	2.62
Digital Literacy/Skills	2.86	3.15	2.64	3.00	2.38	2.79	2.81

- As expected, a more rural population equates to more un/underserved locations..
- These data points are reflected in the region's high prioritization of availability, affordability, and digital skills during the MIHI listening tour.

Higher than state average

Higher than region average

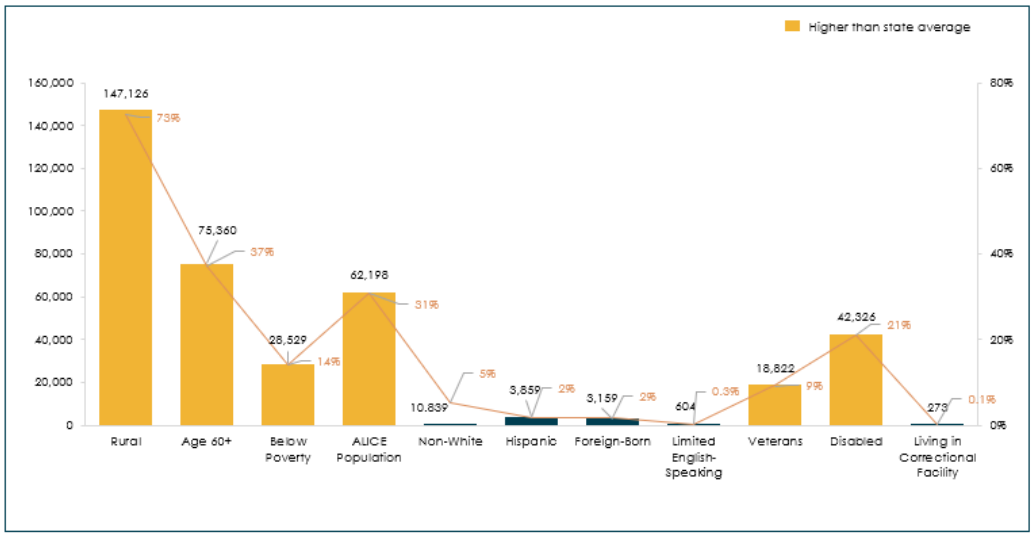
Prosperity Region Three: Northeast

Includes the counties of: Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, and Roscommon.

Digital Equity Profile

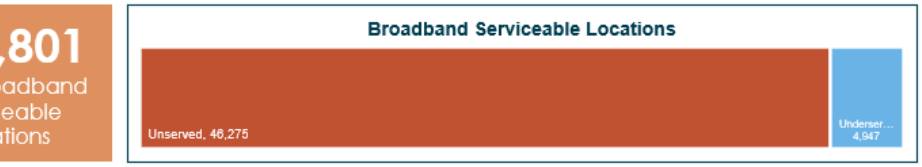
202,634
Population

The region is in the northeastern part of Michigan's Lower Peninsula and includes the cities of Alpena and Rogers City. Region Three has a high concentration of rural older, and less affluent Michiganders than the state as a whole, and a higher rate of veterans and those with disabilities than most other regions.



Broadband Availability

163,801
Total Broadband Serviceable Locations



Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.56	3.50	3.44	3.50	3.75	N/A	3.50
Availability	4.00	4.00	4.00	4.00	4.00	N/A	3.93
Devices	2.44	2.75	2.61	2.25	2.00	N/A	2.32
Digital Literacy/Skills	2.50	0.65	2.61	2.75	2.00	N/A	2.46

- While a priority for devices was not reflective in their region's priorities, there is a strong desire and priority for improving availability.

Higher than state average
Higher than region average

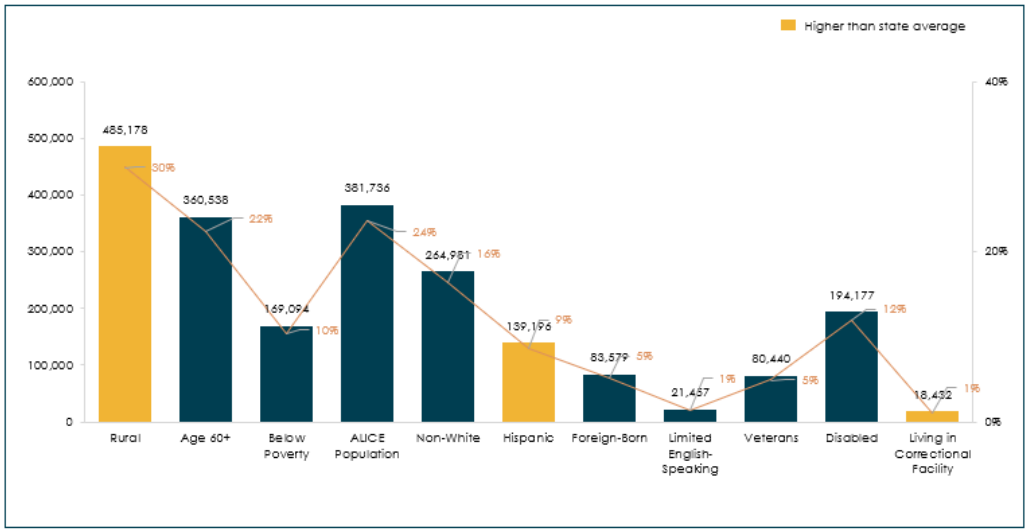
Prosperity Region Four: West

Includes the counties of: Allegan, Barry, Kent, Ionia, Lake, Mason, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, Osceola, and Ottawa.

Digital Equity Profile

1,619,257
Population

The region is in the middle and western areas of the Lower Peninsula bordering Lake Michigan and includes the Grand Rapids metropolitan area. While the region has large rural areas, the majority of the population residents in the Grand Rapids area. The region has a higher proportion of Hispanic residents than the state as a whole, as well as those living in correctional facilities.



Broadband Availability

619,080
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.52	3.56	3.52	3.33	3.25	3.54	3.60
Availability	3.84	3.44	3.61	4.00	2.75	3.46	3.77
Devices	2.54	1.86	2.28	2.60	2.33	2.67	2.45
Digital Literacy/Skills	2.55	0.96	2.50	3.00	2.75	3.07	2.64

- This reflected the region's priority for availability (higher than the state average but lower than other, more rural regions), and higher priority for devices.

Higher than state average
Higher than region average

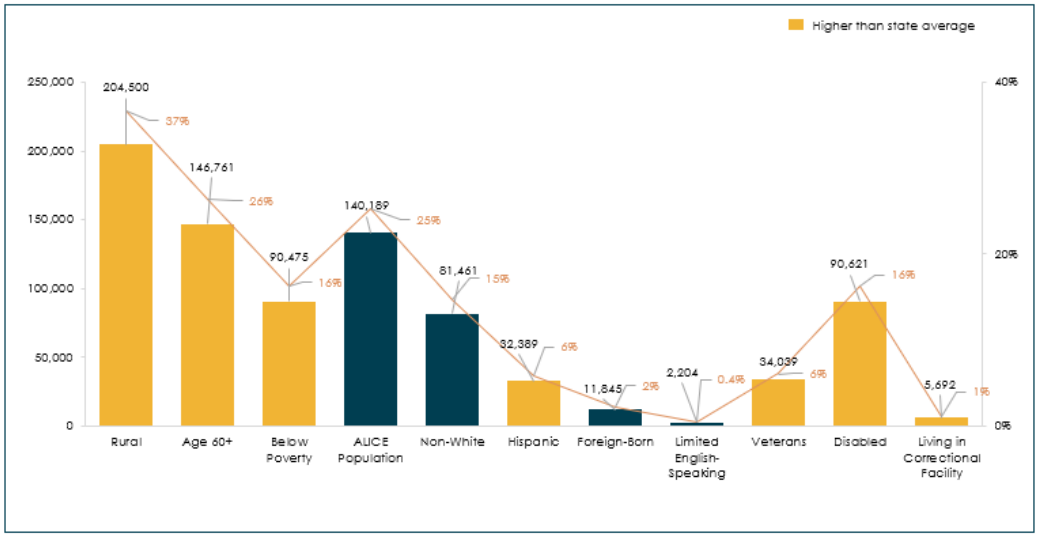
Prosperity Region Five: East Central

Includes the counties of: Arenac, Bay, Clare, Gladwin, Gratiot, Isabella, Midland, and Saginaw, and is located in the middle of Michigan's Lower Peninsula.

Digital Equity Profile

556,618
Population

The region is more rural than the state as a whole and has a higher concentration of aging residents. While the ALICE population is similar to the state, the region has a higher proportion of those living at or below the federal poverty line. The region also has slightly more veterans and disabled individuals than the state.



Broadband Availability

255,046
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.51	3.50	3.50	3.50	3.50	2.75	3.68
Availability	3.50	3.50	3.50	4.00	2.50	3.25	3.89
Devices	2.53	3.00	2.74	2.25	3.00	1.75	2.47
Digital Literacy/Skills	2.69	1.21	3.09	2.67	2.50	2.00	2.79

- These data points are reflected in region's prioritization of affordability, digital literacy/skills, and devices at similar rates (or lower than) that of the state overall.

Higher than state average

Higher than region average

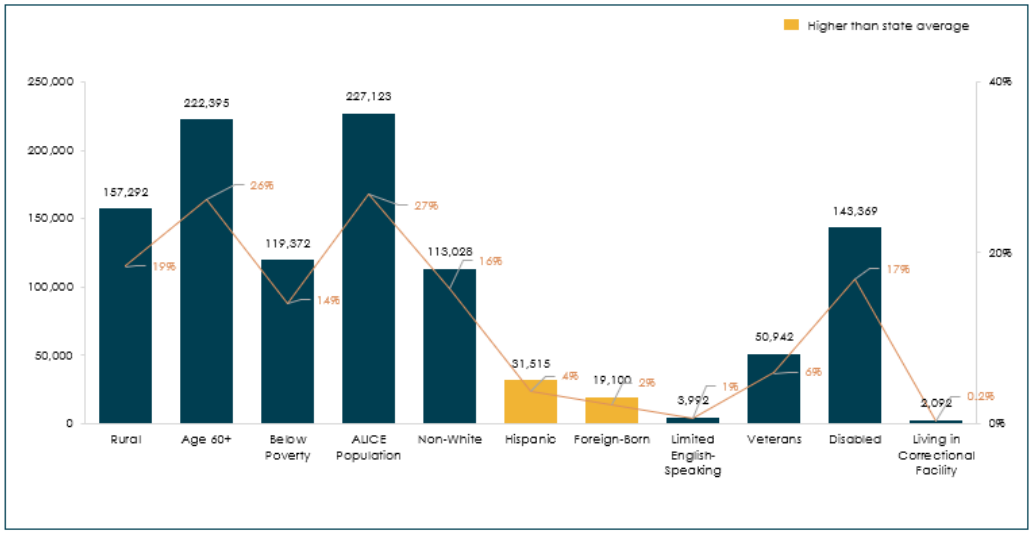
Prosperity Region Six: East Michigan

Includes the counties of: Genesee, Huron, Lapeer, Sanilac, Shiawassee, St. Clair, and Tuscola.

Digital Equity Profile

848,973
Population

The region is located in the eastern part of Michigan's Lower Peninsula, often referred to as Michigan's "Thumb," and includes the Flint metro area. The region has a smaller rural population than more northernly regions but has a higher proportion of aging individuals and those in poverty and defined as ALICE.



Broadband Availability

384,174
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.61	3.75	3.52	3.64	3.67	3.88	3.60
Availability	3.69	3.53	3.67	3.91	2.67	3.31	3.56
Devices	2.46	2.87	2.21	2.82	3.33	3.47	2.19
Digital Literacy/Skills	2.43	0.63	2.37	2.64	3.17	2.93	2.52

- The region prioritized availability and affordability higher than the state average.

Higher than state average
Higher than region average

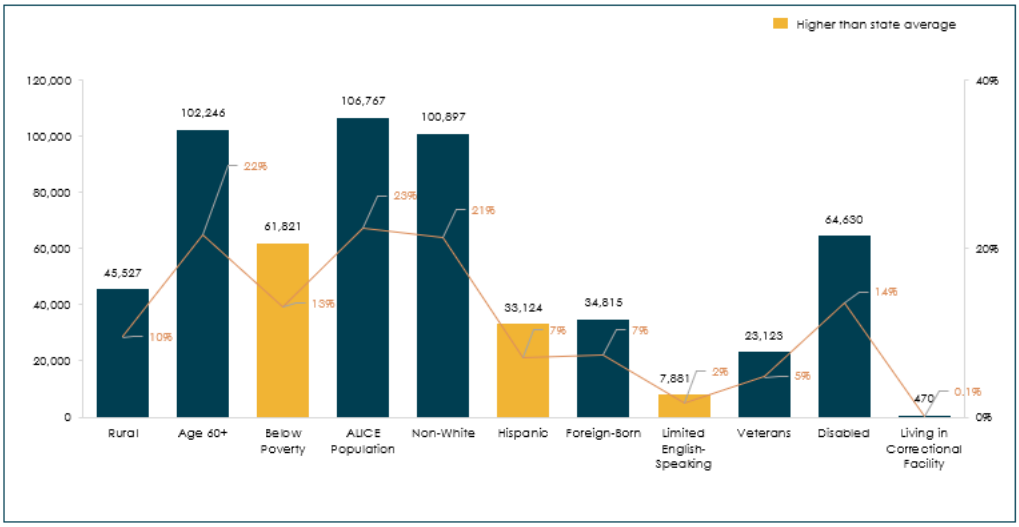
Prosperity Region Seven: South Central

Includes the counties of: Clinton, Eaton, and Ingham and is in the southern part of Michigan's Lower Peninsula and includes the Lansing metro area.

Digital Equity Profile

473,527
Population

The region has a higher rate of poverty than the state average, as well as a higher proportion of Hispanic and limited-English speaking residents.



Broadband Availability

165,439
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.46	3.63	3.30	3.25	2.33	3.67	3.67
Availability	3.58	3.13	3.43	4.00	3.33	4.00	2.67
Devices	2.44	2.63	2.55	1.75	2.00	2.83	2.67
Digital Literacy/Skills	2.56	0.97	2.80	2.00	2.67	3.00	3.33

- The regional priorities are slightly elevated for availability, but overall, closely match the state average priorities.

Higher than state average

Higher than region average

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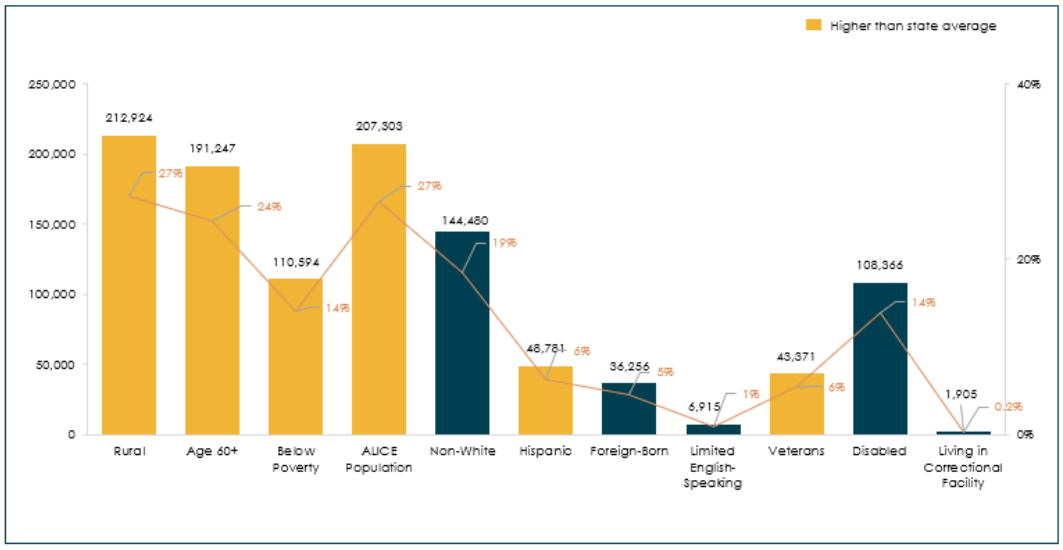
Prosperity Region Eight: Southwest

Includes the counties of: Berrien, Branch, Calhoun, Cass, Kalamazoo, Van Buren, and St. Joseph and is in the southwestern part of Michigan's Lower Peninsula.

Digital Equity Profile

782,437
Population

Region has scattered aging, rural population that's less affluent than state. The region also has high proportion of Hispanic residents and veterans.



Broadband Availability

332,518
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.56	4.00	3.51	3.82	3.13	3.82	3.64
Availability	3.64	3.67	3.64	3.64	3.75	3.36	3.58
Devices	2.65	3.17	2.61	3.09	2.50	3.09	2.84
Digital Literacy/Skills	2.70	1.00	2.80	2.73	1.88	3.18	2.87

- Regional priorities elevate availability over the state average, but priorities among the four digital equity priorities close match those of the state as a whole.

Higher than state average
Higher than region average

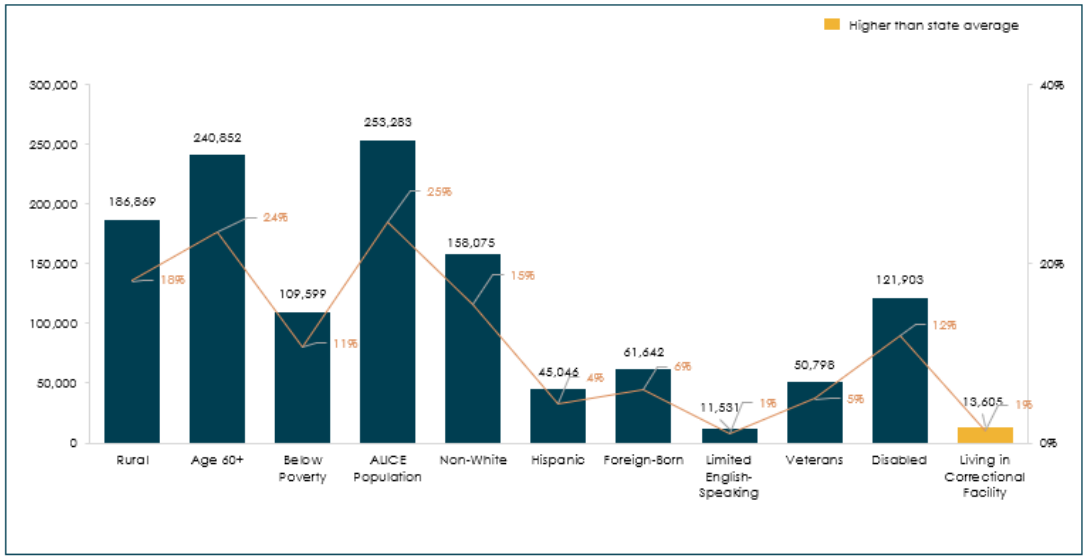
Prosperity Region Nine: Southeast Michigan

Includes the counties of: Hillsdale, Jackson, Lenawee, Livingston, Monroe, and Washtenaw and is located in the southeastern corner of Michigan's Lower Peninsula.

Digital Equity Profile

1,025,514
Population

Much of the region is representative of the statewide proportions of covered population, with the exception of those living in correctional facilities.



Broadband Availability

383,024
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.52	3.50	3.40	3.50	3.00	3.31	3.63
Availability	3.47	3.50	3.43	3.88	4.00	3.31	3.13
Devices	2.59	2.25	2.43	2.75	1.50	2.92	2.13
Digital Literacy/Skills	2.64	1.15	2.79	3.00	2.00	3.00	2.13

Availability and affordability have been identified as regional priorities.

Higher than state average

Higher than region average

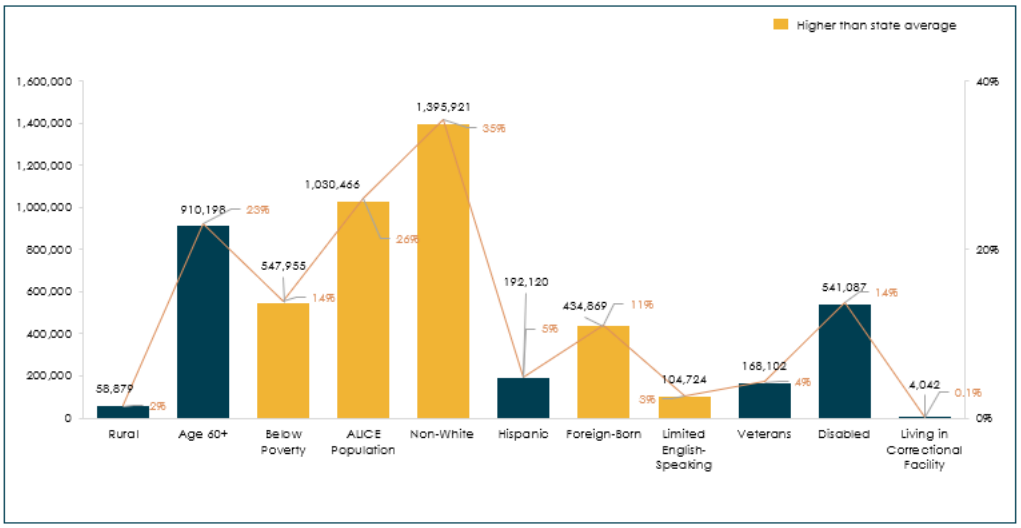
Prosperity Region Ten: Detroit Metro

Includes the counties of: Macomb, Oakland, and Wayne and is located in the southeastern part of Michigan and is home to the state's largest city, Detroit, and its metropolitan area.

Digital Equity Profile

3,940,887
Population

The region has a higher proportion of those in poverty and ALICE. The region is also more demographically diverse with higher proportions of non-white, foreign-born, and limited English-speaking residents than the state as a whole.



Broadband Availability

1,359,185
Total Broadband Serviceable Locations

Digital Equity Priorities by Covered Population (1-4 scale)

Digital Equity Priorities	Overall Importance Rank	Income Below 150% of Poverty Line	Aging Individuals	Disabled	English Language Learners	Racial-Ethnic Minority	Rural
Affordability	3.66	3.56	3.68	3.64	3.50	3.67	3.00
Availability	3.13	3.00	3.17	2.81	2.91	3.01	3.67
Devices	3.27	3.17	3.31	3.29	3.18	3.31	2.00
Digital Literacy/Skills	3.29	2.04	3.43	3.52	3.09	3.31	2.33

- Region Ten did not prioritize availability as high as other regions, but affordability, digital literacy/skills, and devices are more a priority for this region than the state as a whole.

Higher than state average

Higher than region average

2.2.2 Broadband Adoption

The MIHI Office recognizes that the following challenges exist for Michiganders: availability of affordable high-speed internet, accessible internet enabled devices and digital skills. Addressing these barriers across all sectors is essential. The Needs Assessment/MI Connected Future Listening Tour of 31 cities highlighted some critical data points regarding the barriers. The 778 surveys collected during the Listening Tour, produced the following:

- 553 of the attendees ranked Availability as the most challenging barrier. Availability was defined as: having internet service providers and speeds that meet the needs of the household
- Affordability was identified by 172 of the participants as the highest priority challenge. Affordability was defined as: internet service plans in the area meet the household needs of participants and fit within the household monthly budget
- 25 participants ranked having applicable digital skills (Tech Savvy) needed to use internet enabled devices as the highest priority
- Having access to internet enabled devices was ranked a high priority for 8 participants

With the goal of 95% adoption of broadband, MIHI intends to take careful consideration of covered populations, which may overlap with unserved and underserved communities. MIHI intends to prioritize the barriers above based upon the responses of Michiganders to address adoption. Additionally, MIHI recognizes that using digital skills requires the availability of internet service, having affordable options and having access to internet enabled devices. A wholistic approach to meeting the needs of covered populations is necessary. Working with trusted institutions or CAIs requires a focus on statewide, regional and local partners that are already working to improve adoption in ways previously discussed. Digital programs, digital skills-based nonprofits and library systems currently exist. By providing additional data and resources, MIHI can leverage these partnerships and scale the availability of services to covered populations. MIHI has also developed partnerships with agencies focused on aging populations, individuals with disabilities, veterans, members of racial minority groups and individuals in rural areas. Improving digital literacy and increasing broadband subscribers has also been a focus.

2.2.3 Broadband Affordability

The Affordable Connectivity Program (ACP)

The ACP is a program that allows for a thirty dollar-a-month subsidy for eligible households toward internet bills, is now utilized in 40.6% of all eligible households in Michigan[9]. To increase the remaining 59.4% of eligible households who are not yet enrolled, the State of Michigan partnered with EducationSuperHighway to coordinate an ACP seminar on June 26, 2023. The ACP faces uncertainty of continued funding with some projections showing the funds running out by early 2024. This would leave the 278,000 Michigan households that currently

receive funds and more who will apply for funding with an additional monthly cost[21]. The ACP needs to be continued to help provide internet service

Increased Technical Assistance

The MIHI office has been offering technical assistance and answering queries for Michiganders who send in questions related to the finding affordable service and signing up for the ACP. Currently, MIHI works with three Digital Navigators who are located within 3 different regions of Michigan. The state will need more Digital Navigators who can inform people about what is available as well as ask questions about what users can afford to pay for certain services. Digital Navigators will be familiar with regional ISPs, costs, and how to sign up for programs like the ACP.

Creating Different Broadband Service Plans

Michiganders attending MI Connected Future events spoke about receiving poor service quality at costs ranging from seventy dollars to over one hundred dollars a month. The cost for internet is too high. The NTIA's Internet Use survey further validates this with the fact that 18.7% of people who did not have internet pointed to the cost[22]. Creating more affordable plans and having a middle-class affordability plan will help to ensure that the needs are met for all Michiganders.

Lack of Standardization - Broadband Consumer Labels

While touring the state, many Michiganders expressed frustration about costs or knowledge of increased fees. For example, a modem/router combo from many ISPs will cost an additional ten dollars a month. The explanation for such information is not always simple and many internet users do not realize that purchasing their own modem and router can save money in the long term. Broadband labels not only provide information on prices, service speeds, and the type of service, but also allow consumers to compare one internet service plan with another with ease[23].

[21] https://acpdashboard.com/
[22] Ibid.
[23] https://www.fcc.gov/broadbandlabels

3 Collaboration and Stakeholder Engagement

3.1 Coordination and Outreach Strategy

Beginning in Fall 2022, MIHI developed the MI Connected Future (MICF) strategy designed to fulfill the needs of both the BEAD and DEA programs. MICF includes an innovative strategy for stakeholder and community engagement. Comprised of in-person regional meetings and partnership roundtables comprised of industry leaders and organizations representing covered populations, MICF actively supports robust community outreach and input while providing an opportunity for industry to provide additional barriers in the broadband space in a comprehensive and equitable manner.

There is particular care and intention in creating an avenue for engagement for historically marginalized populations including not only low-income, ageing individuals, and those residing in rural areas, but also refugees, members of racial or ethnic minority groups, veterans, individuals with disabilities, individuals with language barriers, and formally incarcerated individuals.

There are four primary components that are key to the execution of MICF:

1. Community Meetings;
2. Partnership Roundtables; and
3. Data
4. Public Comment

Community Meetings

Each region and community in the state is unique and approaching the needs of each in the way that serves them best promotes equity. MICF supports equitable engagement by respecting the unique needs of each community. This manifests as relationship building with community leaders prior to hosting community meetings in their towns. Buy-in is crucial for the success of MICF, and ultimately for the success of BEAD and DEA programs. In the conversations leading up to a formal community meeting, MIHI acted within its capacity to understand the issues that are important to the community, including critical context regarding past and current broadband and digital equity and inclusion activities.

MIHI divided the community meeting portion of MICF into two phases: initial data collection and public comment/feedback. Phase one consisted of 31 MICF stops throughout all 10 economic Prosperity Regions in Michigan. Phase two consisted of an additional 10 stops to collect public comment and feedback on the draft BEAD Five-Year Action Plan and the Digital Equity Plan.

Initial Data Collection

The initial data collection phase of MICF aimed to gather feedback from Michiganders regarding their biggest broadband barriers.

- 778 surveys collected
- 854 Michiganders attended
- 31 MIHI hosted meetings Dot Activity
- Availability: 553 attendees ranked this as the most challenging barrier

- Affordability: 172 attendees ranked this as the most challenging barrier
- Tech Savvy: 25 attendees ranked this as the most challenging barrier
- Devices: 8 attendees ranked this as their most challenging barrier
- Other: 32 attendees ranked other as their most challenging barrier. These concerns ranged from internet reliability to lack of economic competition for ISPs Survey Results (4-Point Scale)
- Availability was ranked 3.49 statewide for its level of importance
- Affordability was ranked 2.92 statewide for its level of importance
- Devices was ranked 1.6 statewide for its level of importance
- Tech Savvy was ranked 1.94 statewide for its level of importance

Partnership Roundtables

Concurrently, MIHI convened a series of roundtable discussions comprised of stakeholders from organizations across the state who are necessary in guiding the development of the BEAD and SDEPG/SDECG programs. These panels included representatives from community anchor institutions, tribal nations, organizations representing covered populations, internet service providers, and many others. The intent for the cross-sectorial panel format is to share information and resources, raise awareness for potential issues concerning infrastructure deployment and digital inclusion, and provide MIHI with policy and operational guidance for program implementation. These panels met regularly throughout the entire stakeholder engagement and plan development phases of MICF planning process.

Data

Quality data collection is crucial for determining the correct baseline for broadband service in Michigan. Furthermore, quality data supports an equitable deployment strategy in both the infrastructure and digital equity programs. Questions and input asked of community members will be consistent throughout the MICF Plan state-wide tour; however, the context in which the questions will be delivered will be unique to the group with whom MIHI is engaging. Following the state-wide tour, the MIHI team has analyzed feedback and engage with other professional organizations for quality analysis. Care was taken to engage with academics who work in the digital equity field and with existing digital equity indices to highlight areas of need.

After gathering community feedback, engaging with partnership roundtables, and analyzing the gathered data, the final phase of the MICF planning process is to return to communities to share results and the draft MICF plan. MIHI aims to have a draft MICF Plan completed no less than three months prior to its submission deadline to the NTIA in July of 2023. In the three- month window prior to submission, MIHI will again visit communities across the state to solicit feedback on the proposed MICF Plan.

Public Comment

Responsive public comments from Michiganders of all walks of life are imperative to strengthening the Digital Equity Plan. All comments will allow MIHI to consider input and further improve the plan. To best facilitate the public comment period MIHI contacted all individuals who attended previous sessions and those who receive MIHI newsletter recipients, partnered with local and regional organizations, used State of Michigan communications, and leveraged relationships to share the opportunity to make public comments.

MIHI knows that not everyone is online and wants to provide ample opportunities for the public to comment. Three avenues to submit public comments are available.

1. Online on the MIHI website
2. In-person at a MI Connected Future event
3. In-person at a local library after reading a physical copy of the Digital Equity Plan

Option One: Submitting a comment online allows you to submit a comment when it is most convenient for you. Upon visiting the public comment page, you download the Digital Equity Plan, research it, and then submit a public comment.

Option Two: Ten in-person events will take place over the course of five weeks with one event in each Prosperity Region of Michigan. These events will share information about gathered data from the former tour stops, allow for questions and feedback, and give all participants the opportunity to submit public comments in either a digital or physical format.

Option Three: Local libraries in Michigan will have physical copies of the Digital Equity Plan on hand for Michiganders to come in and read. After reading the plan, interested individuals will be able to submit a public comment using a computer at the library connected to the internet or write down feedback in a tangible format that will be scanned and sent to MIHI as a form of public comment.

Public Comment Outcomes

[This section will include a report on the number of comments received, some background analytics, and a summary of revisions made to the plan. A full report with public comment tracking will be placed in the Appendix.]

4 Implementation

4.1 Implementation Strategy & Key Activities

MIHI takes every effort to utilize holistic strategies to close the digital divide and remove barriers in a non-traditional manner. The digital divide looks different to everyone depending on their community, their income, their race, or their education. A person may have easy access to the internet, but not have the digital skills to advance in their career. Another may not have the money to utilize public transportation to get to a library to complete their college courses. Closing the digital divide is not a "one-size-fits-all" solution and Michigan will not approach it as one. Additionally, MIHI is aware of several local and regional partners that are currently offering digital opportunities to communities. With this in mind, MIHI intends to support and convene efforts on the local and regional level to scale programs statewide. The current digital skills programming offered may be isolated to individual municipalities or to smaller populations. Ideally, MIHI's efforts will be coordinated in the most efficient way.

The main vehicle for closing the digital divide in Michigan will be through the implementation of a robust community Digital Navigator program. Navigators will serve communities they live in, therefore understand the needs of the digital divide in their community. Information from state agencies pertaining to online accessibility of services, new opportunities for workforce or education, and affordable internet service plans and devices will be disseminated to communities through these digital navigators. MIHI recognizes that community members know their communities best.

Digital Navigator System

During MIHI's MICF Listening Sessions, Michiganders expressed challenges with accessing and/or utilizing high-speed internet and having the needed skills to use internet enabled devices. Each community is different and has key insights on how to solve challenges with broadband that suit their needs. MIHI staff also heard that many communities want to get involved in the digital inclusion space but are unsure of where to find appropriately scaled resources, funding for positions, and the individuals with the skills to teach others about the resources available to them.

To meet the needs of communities, and to close the digital divide, MIHI will implement a grassroots Digital Navigator program to serve as the vehicle for community-based solutions development. MIHI will implement the Digital Navigator program using the "snowflake model" of community organizing (as seen in the image below). This model allows communities to be engaged in the work to close the digital divide in an equitable manner, and one in which suits their community best, but continues to align with the coordinated strategy led by MIHI. By utilizing partnerships with local, trusted community institutions, MIHI, as the lead, will serve as the hub and the foundation of the vehicle providing support to the navigators and coordinating initiatives from within LEO and in partnership with other state agencies. The statewide Digital Navigator Program will promote equitable access to high-speed internet and digital skills training opportunities to Michiganders in urban, suburban, and rural areas. The program will target underrepresented, under-invested and underserved communities. The Digital Navigators will aim to increase adoption of broadband and the skills needed to use devices, based on the needs in the community, including physical and virtual access to identified need-based programs. In collaboration with community leaders, local businesses high quality programming will center around barrier removal for access to high-speed internet, internet enabled devices, applicable digital learning, and practical skill development. With the need for digital skills and internet use growing, Michiganders will have the training required to compete in an evolving digital society.

Figure 1: Snowflake model for community organizing

The digital divide is influenced by many factors beyond lack of access to a device or a broadband connection and for many Michiganders, barriers such as childcare or transportation impact

their ability to get online. The Digital navigator system will not only fund the positions for Community Digital Navigators and Regional Digital Coordinators but will support barrier removal activities such as providing bus passes or gas cards for individuals with transportation barriers, assistance devices for those with disabilities, or translation software for non-English speakers. The barriers for the individual will be unique, and as such, the removal of those barriers will be viewed by MIHI as a "strategic investment in human and community capacity."[24]

To scale the program throughout the state, Digital Navigators will be placed in each of the ten Prosperity Regions and in larger municipalities, e.g., Detroit and Grand Rapids. Digital Navigators facilitate need-based partnerships, programs, and digital skill development. The evolving workforce, telehealth platforms, virtual learning, and entertainment needs of covered populations in Michigan. By focusing the Digital Navigator Program on the communities that have the most need, the digital divide can be positively impacted. MIHI will provide oversight as it relates to assigning measurable deliverables and reporting requirements for the Digital Navigators.

Digital Navigators will be trained on the initiatives of the state and how to holistically implement the activities for community by the Digital Inclusion Program Manager. Initial reviews of the progress for the Digital Navigators will occur in the first 90 days of their placement and will occur every six months for the term of their placement. Navigators will be required to provide monthly reports on the status of progress for implementation including metrics aligned with KPIs.

To sustain the Digital Navigator system, MIHI will build relationships with philanthropic organizations and Community Reinvestment Act participating banking instutions. The ability to create an endowment fund with DEA funding is something MIHI is also strongly advocating for to ensure long-term sustainability of not only the Digital Navigator program, but other digital equity activities in the state.

It is anticipated this this plan will be reviewed annually to assess activities performed against those planned and make updates or adjustments to the plan, as required. The KPIs will be evaluated annually, and where possible, quarterly, and will consist of data collected from the Digital Navigators as well as reporting from the Digital Equity Director regarding the progress of interagency coordination and implementation efforts. Progress on all KPI's, and other relevant state initiatives supporting closing the digital divide will be published in an annual report by MIHI to the residents of Michigan.

Goals and Planned Activities

Priorities, KPI, Planned Activities, Roles and Responsibilities Related to Affordability	
Priorities:	• Empower communities through engagement and involvement • Leverage community inputs to drive program planning and implementation. • Develop an approach for communities to define infrastructure and equity programs roll out • Include evidence of community support as part of subprogram requirements and partnerships for infrastructure deployment

[24] State Digital Equity Planning Grant Notice of Funding Opportunity, § (C)(1)(b)

	• Community involvement to ensure alignment between local plans and state plans
KPI:	An affordability score that combines: 1. Internet to Income ratio as part of the Purdue University Digital Divide Index 2. FCC's Benchmark Rate for 100/20 mbps unlimited internet service and what each covered population in each region pay for internet service 3. The percentage of households (per covered population, per region) who lost their internet connection temporarily due to inability or difficulty paying
Activities:	• Digital Navigators placed in statewide libraries and other CAIs to support local, low-cost broadband opportunities • Utilize Intake Form for each participant to provide insight on related points for the participants' Affordability Score • Promote low-cost broadband services to community members at host site, events, etc. • Participate in local broadband related events and meetings (i.e., broadband taskforce, committees) • Evaluate the progress of adoption for community members who indicated affordability or availability as a barrier to adoption
Roles:	• **Digital Inclusion Program Manager** will serve as the primary contact for each Regional Digital Coordinator. Will provide information on the status of the region as a baseline, the progress goals for the upcoming quarter, and the resources available for affordability and availability of broadband service to the Regional Digital Coordinator. • **Regional Digital Coordinator** will serve as the primary contact for each of the prosperity regions and the larger municipalities in the state. Will report directly to the MIHI office. Will flow information from the Digital Inclusion Program Manager regarding resources to the Community Digital Navigator. Will also share concerns with Digital Inclusion Program Manager from Community Digital navigators as needed. • **Community Digital Navigator** will serve as the leads in communities to support efforts to expand the impact of broadband in areas that covered populations. Will report data directly to the Regional Digital Coordinator.
Priorities, KPI, Planned Activities, Roles and Responsibilities Related to Accessibility	
Priorities:	• Empower individuals to utilize online services available from their health care provider, financial institution, or other online services as needed (i.e. Secretary of state appointments) • Target covered populations, particularly geographically isolated, and low-income households, to take advantage of the online services available to them to reduce unnecessary expenses relating to transportation or lost wages for services which can be conducted online
KPI:	A digital government accessibility score 1. Determine how likely each covered population is to access government services online as compared to how likely they are to use telehealth, online banking, or online consumer services

Activities:	• Analyze webservices available throughout the state and create a resource bank of offerings available from the state for enrollment into assistance programs relating to workforce, education, healthcare access, and general civic engagement. • Utilize Intake Form for each participant to provide insight on related points for the participants' baseline Digital Government Accessibility Score • Measure progress periodically and at program exit • Analyze webservices available throughout the region and create a bank of resources available from the region's healthcare systems, financial institutions, Tribal resources, municipal and county governments, and education institutions • Provide tailored resource guides for industry improvement of websites for improving their government accessibility score
Roles:	• **MIHI** with the help of other state agencies will complete the analysis of statewide resources and their current digital government accessibility status. MIHI will develop the framework for analysis and provide a template to Regional Digital Coordinator to expand capacity for communities to utilize the template for local use. • **MIHI**, with the help of relevant state agencies, and external partners, will facilitate the creation of resource guides to support education, workforce, banking, healthcare, and other civic agencies to improve their accessibility • **Regional Digital Coordinator** will support Community Digital Navigator with training and resources to encourage community members to utilize the online services available to them. • **Community Digital Coordinator** will promote and encourage online services among targeted covered populations to telehealth, online banking, and consumer services resources available
Priorities, KPI, Planned Activities, Roles and Responsibilities Related to Digital Skills and Digital Literacy	
Priorities:	• Promote Digital Equity and Digital Literacy • Target covered populations that are economically distressed, geographically distressed areas, historically underrepresented and uninvested • Support non-deployment subprograms that promote digital equity and literacy • Develop awareness strategies that improve digital literacy engagement and enrollment through marketing and communication
KPI:	Create a digital participation score that: 1. Combines the proportion of each covered population in each region that struggles to use computers or internet enabled devices 2. How likely each covered population is to do various online tasks versus the overall statewide average 3. Utilize Intake Form for each participant to provide insight on related points for the individual Participation Score
Activities:	• Partner with the State of Michigan Library to identify and employ a digital skills training platform for adults • Partner with the Michigan Department of Education to promote digital skills competencies among K-12 students

	• Analyze regional and covered population data to focus resources in areas with lower rates of digital literacy • Evaluate digital literacy levels among participants in Digital Navigator led activities • Convene a workgroup comprised of MIHI and MDE staff to provide quarterly status updates toward the status of digital literacy in Michigan among covered populations in K-12, postsecondary, and adult learning environments.
Roles:	• **MIHI** will convene education workgroup and monitor growth toward closing the digital literacy skills gap. Resources and updates to relevant educational programs will be provided to the Regional Digital Coordinator by the Digital Inclusion Program Manager. • **Regional Digital Coordinator** will provide information updates to the Community Digital Navigator on programs relevant to their region/community. Regional Digital Coordinator will collect data from Community Coordinator and report back to MIHI staff. • **Community Digital Navigator** will facilitate digital literacy programs for adult learners at community organizations and provide data and progress to Regional Digital Coordinator. Any challenges or barrier trends preventing adults from completing course work will be shared with Regional Digital Coordinator and MIHI staff.
Priorities, KPI, Planned Activities, Roles and Responsibilities Related to Individual Cybersecurity	
Priorities:	• Target covered populations, specifically aging individuals, geographically isolated individuals, and formerly incarcerated individuals • Utilize Intake Form for each participant to provide insight on related points for the participants' Digital Security Score • Empower individuals to utilize online services available to them with confidence to keep their information safe and to minimize unnecessary expenses relating to transportation or lost wages for services which can be conducted online
KPI:	Develop a Digital Security Score that: 1. Determines the percentage of each covered population in each region which has refrained from one or more online activities due to cyber security concerns 2. Determines the percentage of each covered population in each region which does not use the internet at all due to cybersecurity or privacy concerns
Activities:	• Develop communications strategy to promote safe online practices to targeted populations • Utilize practical examples of good cyber-hygiene to model behavior among target populations • Coordinate with Michigan Department of State and other relevant state agencies to communicate best practices when engaging online to protect personal information • Convene/attend relevant workgroup with appropriate state agencies to report the status of, and progress toward KPI, specifically among targeted populations

Roles:	• **MIHI** will convene/attend the relevant workgroup among state agencies to monitor progress of digital security among targeted populations. MIHI will report changes quarterly to show progress to the KPI. Communications strategy will be led by MIHI staff with resources disseminating to the Regional Coordinator and Community Digital Navigators. • **Regional Digital Coordinator** will disseminate information to the Community Digital Navigator and provide support to Community Digital Navigator for any concerns regarding personal cybersecurity as they arise. • **Community Digital Navigator** will disseminate information to community members regarding best practices to stay safe online and share concerns from the public with the Regional Digital Coordinator as needed.
Priorities, KPI, Planned Activities, Roles and Responsibilities Related to Device Access and Affordability	
Priorities:	• Target covered populations, specifically aging individuals, individuals with disabilities, formerly incarcerated individuals, and low-income households • Coordinate outreach (and in-reach in the case of incarcerated individuals) and communication about how to purchase low-cost, refurbished, or access free devices meeting the needs of the individual
KPI:	Create a device distress score for each covered population per region which compares: 1. The percentage of homes with no computing device at all 2. Percentage of homes with only a smartphone 3. Percentage of homes where someone was unable to use a computer five or more days during the last six months because someone else was using it/it was elsewhere/it was otherwise inaccessible
Activities:	• Partner with internal and external organizations currently refurbishing internet enabled devices to expeditiously distribute devices to targeted populations • Utilize Intake Form for each participant to provide insight on related points for the participants' baseline Device Distress Score • Encourage responsible device ownership including the promotion of digital skills and cyber-hygiene best practices with every device • Coordinate with MDE to promote responsible device usage among K-12 students, post-secondary, and adult learners • Monitor the progress of device distress score on annual basis in alignment with data sources
Roles:	• **MIHI** will develop and secure relationships with internal and external agencies to promote device distribution throughout more significantly distressed regions in accordance with the device distress score. MIHI will develop and coordinate the outreach and in-reach strategies and capitalize on existing programs to utilize funding efficiently. MIHI will elevate the importance of devices to education with its partners throughout MDE. MIHI will monitor the device distress score accordingly. • **Regional Digital Coordinators** will promote device outreach strategies to Community Digital Navigators and regional businesses. • **Community Digital Navigators** will disseminate information to community members regarding device access and resources.

Partners, Host sites

MIHI will continue to work with partners to scale programs that are successful in smaller areas to statewide efforts. Digital Navigators will be placed in organizations as determined by a competitive RFP process. Potential host site partners include, but are not limited to:

- Michigan Works! Associations
- Library Systems
- Local Community Colleges, Colleges, Universities
- Intermediate School Districts
- Tribal Nations
- Councils of Government
- United Way organizations
- Philanthropic entities
- Healthcare Systems
- Non-profit entities
- Other partners, as needed

MIHI DE KPI Impact/Interaction with Outcomes

Key Performance Indicator	Outcomes				
	Economic and workforce development goals, plans and outcomes	Educational outcomes	Health outcomes	Civic and social engagement	Delivery of other essential services
Affordability Score	✓	✓	✓	✓	✓
Digital Government Accessibility Score	✓	✓	✓	✓	✓
Digital Participation Score	✓	✓	✓	✓	✓
Digital Security Score	✓	✓	✓	✓	✓
Device Distress Score	✓	✓	✓	✓	✓

4.2 Timeline

Year/Stage	Activities
2023	• Complete Phase 1 of community meetings for initial data collection • Complete partnership roundtable discussions • Draft MICF Plan • Complete Phase 2 of community meetings for public comment and feedback on the draft BEAD Five-Year Action Plan and the Digital Equity Plan • Develop the DE plan, and finalize based off on public feedback

2024	• Apply for State Digital Equity Capacity Grant funding
	• Calculate Key Performance Indicator Scores
	  • Affordability
	  • Digital Government Accessibility
	  • Digital Participation
	  • Digital Security
	  • Device Distress
	• Finalize asset inventory
	• Develop tracking mechanism for KPI progress
	• Convene workgroups among relevant state agencies and external partners

2025	• Coordination between State Digital Equity Capacity Grant and Digital Equity programs funded through BEAD • Begin designing outreach and in-reach campaigns for relevant KPIs • Issue RFP for Digital Navigator Host sites • Hire Regional Digital Coordinators and Community Digital Navigators • Finalize digital skills platform contract
2026	• Collaborate on progress of workforce development strategies and programs • Collaborate with MDE on progress of statewide digital skills competencies for K-12 learners • Coordinate with MDHHS on health outcomes from pre-and post-deployment of broadband projects in targeted areas • Publish annual progress report card
2027	• Monitor KPI progress quarterly and annually • Publish annual progress report card • Monitor continuous quality improvement mechanisms for KPI analysis and among internal systems/coordination
2028	• Monitor KPI progress quarterly and annually • Publish annual progress report card • Monitor continuous quality improvement mechanisms for KPI analysis and among internal systems/coordination
2029	• Monitor KPI progress quarterly and annually • Publish annual progress report card • Monitor continuous quality improvement mechanisms for KPI analysis and among internal systems/coordination
2030	• Close the digital divide • Universal availability of reliable internet service

5 Conclusion

Michigan's journey to digital equity is a challenging but achievable goal that promises a brighter and more connected future. The state recognizes that broadband infrastructure and resources are crucial for economic and workforce development, healthcare, education, transportation, and more. Michigan's Digital Equity Plan aims at closing the digital divide by 2030 and ensuring universal access and adoption of high-speed internet services. With its integrated and comprehensive approach that involves state agencies, public and private stakeholders, and community members, Michigan is well-positioned to achieve its objectives and become an accessible and inclusive state.

Michigan's Digital Equity Plan sets out key goals, strategies, and measurable objectives to ensure that every resident in the state has access to affordable high-speed internet services. This includes developing and supporting new plans and programs to expand broadband coverage statewide, facilitating digital skills training for all Michiganders, and removing barriers to increased digital adoption, such as device access and computer training. Through collaboration and a success-focused approach, Michigan is paving the way for a more connected future and an inclusive state that offers boundless opportunities for every Michigander.

Appendix A-1

Digital Inclusion Assets by Covered Population

Introduction

Michigan's digital inclusion asset inventory identifies existing resources available to promote digital availability and adoption and has been used to identify any asset gaps that may exist. Leveraging existing assets is a key strategy of both the Digital Equity and BEAD programs.

Leveraging existing assets is a key strategy for both the Digital Equity and BEAD programs, this is why MIHI developed a Digital Inclusion Resource Map in September 2022. The map serves as a tool for:

1. Collecting information regarding existing assets from the communities
2. Understanding the current digital inclusion programs, offerings, and resources available in communities across Michigan.
3. Promoting these new and existing programs to communities

The map was developed based on responses received to the Michigan Statewide Digital Inclusion survey developed by MIHI and distributed to key stakeholders and the public throughout the state. MIHI used several channels to engage stakeholders and encourage participation in the survey, including socializing it at community meetings as part of the MI Connected Future tour, Partnership Roundtables, and in the MIHI newsletter. Additionally, the survey is easily accessible and prominently displayed on the MIHI website. By targeting stakeholders, such as non-profit organizations, for-profit organizations, government agencies, colleges, universities, trade schools, public libraries, and K-12 schools, the survey seeks to determine the current state of digital equity and inclusion programs and identify key organizations involved in these efforts. Based on these insights, the Digital Inclusion Resource Map is continuously updated, providing an ongoing and up-to-date inventory of digital inclusion assets in Michigan.

Methodology and Purpose

The purpose of this appendix is to provide NTIA with a high-level summary of digital inclusion efforts that were undertaken in the state of Michigan, including the diverse set of organizations and stakeholders involved in promoting digital inclusion throughout the state. By identifying key players and networks, NTIA can gain a deeper understanding of the scope and scale of digital inclusion initiatives across the state and the impact that these efforts are having on the covered populations they serve.

Table A-1 summarizes assets (including non-profit organizations, for-profit organizations, government agencies, colleges, universities, trade schools, public libraries, and K-12 schools or school districts) that support digital equity and were submitted as part of the Michigan Statewide Digital Inclusion survey in 2023. Each organization was aligned to the covered populations they best serve based on the organization's mission, values, and services provided. Some organizations included in Table A-1 may serve multiple covered populations, but in order to simplify our approach in the Organizations by Covered Population section below, they were classified under a single covered population. Following Table A-1, a description of each of these organizations is included, categorized by the category of covered population each organization serves the most.

Digital Inclusion Resource Map by Covered Populations

Table A-3: Select Digital Inclusion Assets by Covered Population

Select Digital Inclusion Assets	Covered Populations								
	Covered households	Aging individuals	Incarcerated individuals	Veterans	Individuals with disabilities	Individuals with a language barrier	Racial/ Ethnic minorities	Rural community	Youth
Detroit Blight Busters Inc.	✓								✓
Edgewood Village Nonprofit Housing	✓	✓							✓
The Avalon Village Inc.	✓								✓
SAY Detroit Play Center	✓								✓
NPower Inc.	✓			✓	✓		✓		
Digitunity	✓	✓	✓	✓	✓	✓	✓	✓	✓
Center County Center for Seniors		✓							
St. Patrick Senior Center		✓							
Engage @ Eastern Michigan University - Digital Connecting Corps		✓							
Grand Traverse County Commission on Aging		✓							
Buchanan Area Senior Center		✓							
Greater Niles Senior Center Inc.		✓							
River Valley Senior Center		✓							
Senior Citizens Center		✓							
ABC Computers		✓							✓
Detroit Rescue Mission Ministries Education Complex	✓		✓						✓
Emmanuel House	✓			✓					
Michigan Department of Military and Veterans Affairs				✓					
Closing the Digital Gap	✓	✓		✓	✓	✓	✓		✓
Ann Arbor Center for Independent Living					✓				
Chance For Life Satellite Center Location			✓		✓				
Washtenaw Literacy						✓	✓		✓
American Indian Health and Family Services						✓	✓		✓

Select Digital Inclusion Assets	Covered Populations								
	Covered households	Aging individuals	Incarcerated individuals	Veterans	Individuals with disabilities	Individuals with a language barrier	Racial/ Ethnic minorities	Rural community	Youth
Alkebu-Ian Village							✓		✓
Detroit Urban League	✓	✓					✓		✓
Dream of Detroit	✓		✓				✓		✓
Interfaith Center for Racial Justice							✓		
Latin Americans United for Progress						✓	✓		
Latin Americans for Social and Economic Development		✓					✓		
The Detroit Association of Black Organizations							✓		
Association of Chinese Americans Community Center		✓				✓	✓		✓
Pure Broadband								✓	
Lee Township								✓	
London Township								✓	
Boys and Girls Club							✓		✓
Center for Success									✓
Church of the Messiah / BLVD Harambee							✓		✓
Detroit Hispanic Development Corporation	✓					✓	✓		✓
Detroit PAL									✓
Downtown Boxing Gym Youth Program									✓
Life Remodeled	✓								✓
New City Kids: Grand Rapids	✓								✓
New Level Sports Ministries									✓
Baxter Community Center	✓								✓

Organizations by Covered Population

Individuals living in households with incomes at or below 150% of the poverty line

1. **Detroit Blight Busters Inc.:** Detroit Blight Busters mission is to stabilize, revitalize, and rebuild the city of Detroit. by demolishing, renovating, and boarding up blighted homes for community use, and building community partnerships and events to help low to middle-income families.
2. **Edgewood Village Nonprofit Housing Corporation:** Edgewood Village empowers low to very low-income households by providing them with access to affordable housing, educational opportunities, assistance, health and wellness, and community programming.
3. **The Avalon Village Inc.:** Avalon Village's mission is to create a safe, nurturing, uplifting, and healing space within the City of Highland Park, MI by converting vacant and blighted land into a valuable urban resource and providing basic living components for a quality, comfortable, and prosperous life. In addition, the company provides basic services to the community to enhance traditional municipal or government services that have been reduced, eliminated, or have become unaffordable.
4. **SAY Detroit Play Center:** SAY Play helps students from low-income families overcome literacy inequality while improving themselves and their communities. It has also become a motivational learning center for Detroit youth with academics as its core.
5. **NPower Inc.:** NPower creates pathways to economic prosperity by launching digital careers for military veterans and young adults from underserved communities. Their mission is to move people from poverty to the middle class by creating access and pathways to careers in technology fields.
6. **Digitunity:** Digitunity is a national organization working to eliminate technological gaps between individuals by providing computers and related equipment to those in need since 1984. Their mission is to ensure that everyone has access to technology through a network of stakeholders and solutions. They focus on the device component of digital equity from the supply chain to community distribution.

Individuals 60 years of age or older

1. **Central County Center for Seniors:** The Central County Senior Center has a clear objective of meeting the documented needs of senior citizens aged 60 and above. It aims to provide solutions to their problems and offer enjoyable activities for those who reside in their homes.
2. **St. Patrick Senior Center:** Detroit's largest health, wellness, and activities center for people over the age of 55. The center provides a variety of services including nutritious meals, dozens of health & wellness programs, an on-site clinic, transportation to medical appointments, and others.
3. **Engage @ Eastern Michigan University - Digital Connecting Corps:** The Digital Connecting Corps, a collaboration between Eastern Michigan University (EMU) Engage @ EMU and University of Michigan (UM) Ginsberg Center, seeks to design and implement an intergenerational and sustainable digital support program for older adults living in Washtenaw County. The goal is to leverage the resources of both institutions' student capital to serve as tech coaches for the older adult community at older adult centers.
4. **Grand Traverse County Commission on Aging:** Grand Traverse County Commission on Aging provides services to Grand Traverse County residents aged 60 and over to enable

them to remain living at home. This includes personal care, medication management, foot care, housecleaning, laundry, outdoor services, and personal emergency response systems.

5. **Buchanan Area Senior Center:** Buchanan Area Senior Center is a community focal point on aging, where older adults gather for services, programs, and activities that reflect their experiences and skills, and responds to their diverse needs and interests.
6. **Greater Niles Senior Center Inc.:** Greater Niles Senior Center is a senior citizen center located in Berrien County, Michigan. The center provides a broad range of services and programs for Seniors in the Niles area. Its mission is to offer a variety of activities to keep seniors engaged and active.
7. **River Valley Senior Center:** River Valley Senior Center is a senior center located in Harbert, Michigan. Its mission is to offer residents of the area aged 60 years and older a range of educational, recreational, social, transportation, and referral services.
8. **Senior Citizens Center:** Senior Citizens Center is a senior citizen center located in Benton Harbor, Michigan. The mission of the service Center is to provide safe, friendly, and positive social, educational, and recreational services to enhance the independence and well-being of the 60+ citizens of its community.
9. **ABC Computers:** ABC Computers offers a range of computer-related services, including the sale of computer equipment, computer servicing (inclusive of laptops), onsite service, data recovery, and providing educational services for both high school students and senior citizens. They also offer consulting services.

Incarcerated Individuals

1. **Detroit Rescue Mission Ministries Education Complex:** The Detroit Rescue Mission Ministries is a faith-based, non-profit organization that has devoted a wealth of resources to meet the basic needs of humanity while motivating individuals to rebuild their lives, one life at a time. DRMM has spent over 100 years of continued service providing food, shelter, and services to intervene where homelessness and substance addiction occur.

Veterans

1. **Emmanuel House:** Emmanuel House is a nonprofit organization that provides daily programs and services to over 70 homeless veterans. It offers homeless Veterans an opportunity to take steps towards employment, create a self-help environment, establish a safe and drug-free residential setting, provide economic management training services, and facilitate structured interactions for the entire family.
2. **Michigan Department of Military and Veterans Affairs:** The DMVA synchronizes strategic, legislative, and fiscal initiatives to build and sustain military readiness, care and advocate for veterans, and cultivate purposeful partnerships. Its vision is for Michigan to be the premier state for advancing military readiness and serving veterans and their families.
3. **Closing the Digital Gap:** Closing the Digital Gap provides computer training, computer ownership and internet access to small non-profit organizations and individual in Michigan who may be unemployed, underemployed, low-income, single parents, disabled, veterans, immigrants, at-risk youth, and seniors.

Individuals living with one or more disabilities

1. **Ann Arbor Center for Independent Living:** The center is a nonprofit disability advocacy and service agency that assists people with disabilities and their families in living full and productive lives. Its mission is to empower the lives of people with disabilities and advocate for a more inclusive community for all.

2. **Chance For Life Satellite Center Location:** The center's vision is to transform minds, change hearts, and create safe communities by giving returning citizens and people with disabilities an opportunity to develop themselves in a positive manner in spite of adverse conditions. CFL focuses on fueling workforce development and strengthening family bonds.

Individuals with barriers to the English language (including English language learners and those with low literacy)

1. **Washtenaw Literacy:** Washtenaw Literacy provides literacy support, free of charge, to adults through a network of trained tutors. It is the organization's vision to eliminate illiteracy in Washtenaw County. The organization also offers free English as a Second language (ESL) tutoring for adults. Tutoring is open to adults who live, work, or volunteer in Washtenaw County.

Members of racial and ethnic minority groups

1. **American Indian Health and Family Services:** The American Indian Health and Family Services is a nonprofit health and community wellness center whose mission is to empower and enhance the physical, spiritual, emotional, and mental well-being of American Indian/Alaska Native individuals, families, and other underserved populations in Southeast Michigan through culturally grounded health and family services.
2. **Alkebu-Ian Village:** The original purpose of the organization was to provide affordable martial arts training for the African American youth. Over the years the organization has expanded to include youth and adult sports and fitness, leadership training, visual and performing arts, homework assistance and tutoring, youth entrepreneurship training and community service.
3. **Detroit Urban League:** The Urban League of Detroit & Southeastern Michigan is committed to being a provider of choice for its clients, an employer of choice for its co-workers, and the investment of choice for its stakeholders and philanthropic entities. Its mission is to enable African Americans and other persons of color to achieve their fullest potential.
4. **Dream of Detroit:** Dream facilitates the growth of a thriving Muslim community, rooted in Detroit's Black Muslim history while attracting a young, multi-racial future. It also remains committed to the broader neighborhood, meeting the concerns and building the capacity and connectedness of all residents, no matter their background.
5. **Interfaith Center for Racial Justice:** The Interfaith Center for Racial Justice has been working for over 50 years to build bridges of understanding among people of different cultures and faith traditions. The center addresses issues that impact inclusion and recognize that social and racial justice are key elements that impact inclusion in its communities.
6. **Latin Americans United for Progress:** The organization focuses on empowering Latinos to participate in creating a better community for all through advocacy, education & celebration.
7. **Latin Americans for Social and Economic Development:** The development's focus is to promote the social economic educational development of the residents of South Detroit by providing advocacy services and programs that create opportunities for the diverse community to better their educational level employment opportunities health and well-being.
8. **The Detroit Association of Black Organizations (DABO):** The association has been a champion for greater unity and opportunities in Detroit's African American community.

Through an expansive network of over 130 organizations, DABO strives to create meaningful resources aimed at improving quality-of-life initiatives around the city. It has uplifted, unified, and empowered Detroit's African American community through various programs, initiatives, and events.

9. **Association of Chinese Americans Community Center:** The center plays a leading role in enriching the lives of Asian Pacific Americans in the Metro-Detroit region. The organization is one of several entities that serve the Chinese and Asian Pacific American communities, providing year-round programs that include social services, educational classes, preventive health care, and cultural events. Programs focus currently on wellness for seniors and underserved Asians, education excellence and culture awareness for youths, and social and education services for adults.

Individuals residing in rural areas

1. **Pure Broadband:** Pure Broadband is an internet service provider focusing on serving rural communities for over 10 years. Pure provides rural internet, home automation, IT support, and personalized installations.
2. **Lee Township:** Lee Township is a government agency trying to get reliable, affordable internet in a rural community. The township partners with county and local service providers to ensure residents have access to affordable and reliable broadband services.
3. **London Township:** London Township is a local township agency with a population of 3,000 with the goal of getting reliable internet in its rural community.

Youth

1. **Boys and Girls Club:** The club is a nonprofit youth development organization that seeks to create hope, opportunity and foster civic engagement by inspiring and enabling all young people, especially those that need the most, to realize their full potential as productive, responsible, and caring citizens. The club focuses on three core areas to meet diverse needs and interests of members - academic success, good character and citizenship, and healthy lifestyles.
2. **Center for Success:** The mission of the Center for Success is to unite literacy and community to empower students in the journey of education. The center offers mentoring, bringing together students and community partners during one-on-one, small group and whole class sessions to allow students to participate in various opportunities.
3. **Church of the Messiah / BLVD Harambee:** BLVD Harambee is a non-profit organization helping foster life skills and connect resources for the holistic development of young people in the neighborhood. The church's primary focus is young people; the congregation is 60% African American males under thirty.
4. **Detroit Hispanic Development Corporation:** DHDC is an organization that focuses on youth and families, particularly those at high risk within the Hispanic communities. DHDC provides a range of community services including adult continuing education, conversational Spanish classes, parenting classes, and after-school and summer programs for youth. DHDC's mission is to make a difference by creating life-changing opportunities for youth and their families. Their vision is to create a stable and safe community where youth and families have quality opportunities for self-empowerment, education, and personal wealth.
5. **Detroit PAL:** Detroit PAL helps youth find their greatness through athletic, academic, and leadership development programs. The Detroit PAL department of Youth Enrichment provides supplemental services for youth and their families in order to help influence

student-athletes to be school and life ready. It focuses on literacy and academic enrichment, leadership development, college readiness, mentoring, workforce development, partnerships, and collaboration.

6. **Downtown Boxing Gym Youth Program:** DBG is a leading, free, out-of-school time program centered around student achievement and success. DBG has been providing free academic and athletic programs to students with continuing mentorship and support up to the age of 25.
7. **Life Remodeled:** Life remodeled repurposes properties into one stop hubs of opportunity for entire families to thrive. The organization fills buildings with the best and brightest nonprofit organizations who are providing youth programs, workforce development, and human services to tens of thousands of students and community members each year.
8. **New City Kids: Grand Rapids:** New City Kids offers after school programming for local low-income youth. Children and teens get a chance to explore music and academics in a creative and fun environment.
9. **New Level Sport Ministries:** New Level Sport Ministries is a non-profit youth support service committed to developing purpose-driven individuals that will be highly effective in all aspects of life. It is a Student Athlete Support Service, for ages 1 – 18 with a mission to maximize and balance the intellectual, spiritual, mental, and physical elements of all participating student-athletes.
10. **Baxter Community Center:** The Baxter Community Center's Child Development Center serves infants through preschoolers and provides a Wholistic Health Center that offers dental and mental health services through partnerships with local clinics and dedicated volunteers. It also has a marketplace which provides fresh produce to those in need of food assistance.

Digital Inclusion Plans

Existing County Plans

Connected Nation's "Connected Community" program has partnered with 10 counties across the state of Michigan to conduct an assessment regarding the current status of broadband and to establish a broadband planning process. Through surveys of local residents, businesses, and organizations, the program aims to understand the existing resources and capabilities in place to support the access, adoption, and use of broadband technology in homes and businesses. Data obtained from this assessment is used to develop an appropriate action plan to improve the broadband ecosystem effectively, addressing the current and future broadband needs of these counties. The program's aim is to enhance the accessibility, affordability, and availability of broadband technology in the counties, leading to social and economic development. Additional information by county is included below. It's important to note that as more households and communities participate in the Connected Community program, these figures are likely to change.

Cheboygan County: Data from Cheboygan County represent survey responses collected between September 28, 2020, and January 29, 2021. Altogether, 1,126 Cheboygan County households responded to the survey; some responded more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and January 29, 2021.

Eaton County: Data from Eaton County represent survey responses collected between September and November 2021. During this time, 1,322 Eaton County households responded to the survey, with some households responding more than once. Data from all Connected communities represent survey responses collected between January 1, 2017, and November 30, 2021. Eaton County also released the Executive Summary of their Technology Action Plan in January 2022. Eaton County's Executive Summary document can be accessed using the following link: Eaton-County_Executive-Summary_01272022.pdf (connectednation.org).

Huron County: Data from Huron County represent survey responses collected between December 2020 and April 2021. During this time, 682 Huron County households responded to the survey, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and April 30, 2021.

Lake County: Data from Lake County represent survey responses collected between September 2020 and February 2021. During this time, 464 Lake County households responded to the survey, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and February 28, 2021.

Lapeer County: Data from Lapeer County represent survey responses collected between October 9, 2020, and January 1, 2021. Altogether, 1,845 Lapeer County households responded to the survey. Data from all Connected communities represent survey responses collected between January 1, 2017, and January 29, 2021.

Midland County: Data from Midland County represent survey responses collected between October 26, 2020, and January 26, 2021. Altogether, 1,438 Midland County households responded to the survey. Data from all Connected communities represent survey responses collected between January 1, 2017, and January 29, 2021.

Newaygo County: Data from Newaygo County represent survey responses collected between April 2017 and September 2018. During this time, 929 Newaygo County households responded to the survey, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and February 28, 2021.

Oceana County: Data from Oceana County represent 481 households that responded to the survey in 2017 and 537 households that responded in 2021, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and May 31, 2021.

Sanilac County: Data from Sanilac County represent survey responses collected between October 2020 and February 2021. During this time, 676 Sanilac County households responded to the survey, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and February 28, 2021.

Tuscola County: Data from Tuscola County represent survey responses collected between February 2021 and April 2021. During this time, 663 Tuscola County households responded to the survey, with some households responding more than one time. Data from all Connected communities represent survey responses collected between January 1, 2017, and April 30, 2021.

Broadband Equity, Access, and Deployment Program (BEAD)

FIVE-YEAR ACTION PLAN

MICHIGAN DEPARTMENT OF LABOR & ECONOMIC OPPORTUNITY

MICHIGAN HIGH-SPEED INTERNET OFFICE

August 2023

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Executive Summary

Michigan recognizes that nearly every aspect of life is impacted by access to fast, reliable, and affordable high-speed internet service. From virtual learning, telehealth, remote working, job opportunities, communication, to government services, access to the internet is critical for every resident, business, institution, and community in Michigan.

Acknowledging digital connectivity deficiencies exist not just in the state of Michigan but throughout the United States, the Broadband Equity Access and Deployment (BEAD) program was established as part of the 2021 Infrastructure Investment and Jobs Act (IIJA). The program appropriates $42.45 billion for high-speed internet deployment, mapping, and adoption projects that are set to make a significant impact on improving internet access across the nation. Each state will receive a minimum allocation of $100 million with additional formula funding allocated based on the number of unserved areas within each state. The National Telecommunications and Information Administration (NTIA) is the federal agency administering this program and is a key resource and collaborator for its successful implementation. The goals of the BEAD Program are closely aligned with Michigan's broadband goals outlined in the state's 2021 Broadband roadmap and in this Five-Year Action Plan. These objectives include funding the necessary infrastructure for widespread access to affordable and equitable broadband, creation of good-paying, and closing long-standing equity gaps in broadband adoption. The BEAD Program, coupled with the State Digital Equity Planning Grant Program (SDEPG) program, offers Michigan a once-in-a-generation opportunity to comprehensively address connectivity challenges and create a more digitally equitable state.

What is our challenge?

As of 2023, close to 500,000 households are unserved or underserved by high-speed internet infrastructure and another 730,000 households face barriers related to affordability, adoption, device access, digital literacy, or a combination thereof. Taken together, this means that approximately 30% of Michigan households do not have an affordable, reliable high-speed internet connection that meets their needs.

How have we organized?

The Michigan High-Speed Internet (MIHI) Office was created in June 2021 within the Department of Labor and Economic Opportunity (LEO) to drive Michigan's broadband mission to close the digital divide. MIHI is the administering entity for the BEAD Program in Michigan. The MIHI Office currently has a staff of eight with an additional seven, limited-term positions anticipated to be added in late 2023. The office has two dedicated teams, one that focuses on infrastructure-related programs and the other on digital equity. MIHI is currently administrating Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Program funded through the Capital Projects Fund.

Given the integrated nature of broadband infrastructure and digital equity, the MIHI office developed a robust and innovative community and stakeholder engagement process that was used to gather the needs and priorities of Michiganders. This stakeholder engagement provided valuable input to this plan and the Michigan Digital Equity Plan and will be used to inform MIHI strategies and plans to close the digital divide.

Our Vision and Goals

The BEAD funding that the state of Michigan will receive will be used to support the 10-year broadband vision of the state where every Michigander has:

- An affordable and reliable high-speed internet connection available that meets their household needs.
- A high-speed-internet-enabled device(s) that meets the needs of everyone in the home or in their community centers.
- Access to digital skills training regardless of who they are or where they live.
- Access to technical support to maximize device and application use.
- The ability to reside anywhere in the state and not worry about access to high-quality and reliable internet service.
- Freedom from digital discrimination and barriers to connectivity within an evolving and unbiased digital equity ecosystem.

MIHI's ultimate goals for broadband in the state is to ensure that high-speed internet access is available to every home, business, institution, and community (100% availability) and that 95% of Michigan households adopt a permanent home internet connection. MIHI's goals for the BEAD Program and to achieve the 10-year broadband vision are included below.

MIHI's Goals for the BEAD Program

1. **Expand high-speed broadband infrastructure to reach unserved and underserved areas**
2. **Increase digital skills**
3. **Promote affordable broadband services**
4. **Support equitable access to devices**
5. **Empower consumers with applications and online content**

Current State of Broadband and Digital Inclusion in Michigan

The BEAD Program is part of a connected ecosystem of plans, programs, and existing assets all working toward the goal of closing the country's digital divide. Early on, MIHI identified that a robust partnership and decision-making framework is necessary to resolve obstacles and barriers, achieve the identified goals and objectives, and design and implement the BEAD Program. The framework provides MIHI with guidance, inputs, and decision-making support for the BEAD Program as well as a network of support and resources. The following graphic provides a visual demonstration of the partnership framework.

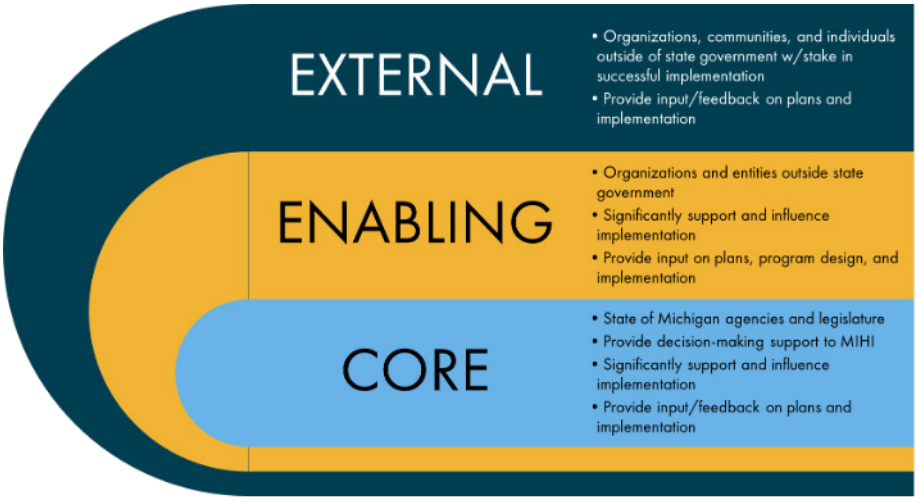


Figure 1:MIHI Partnership Framework – External, Enabling, and Core Partners

Execution of this plan requires leveraging existing hard and soft assets available to Michigan. The asset inventory includes soft assets such as E-Rate Support, Wi-Fi Hot Spot Map, and 2-1-1 Assistance and hard assets such as the Michigan Public Safety Communications System. As stewards of federal funding, MIHI will provide resources to BEAD applicants and leverage partnerships and existing assets wherever possible to extend the reach of BEAD funding.

Similarly, the identification of current gaps and needs of broadband deployment and digital equity is critical to inform the priorities and execution strategies of the BEAD program. Further, Michigan chose to examine its needs and gaps regionally to highlight the nuanced differences in digital needs between these areas of the state. The purpose here is to establish a baseline for understanding the unique digital equity and connectivity needs of the state and each region separately.

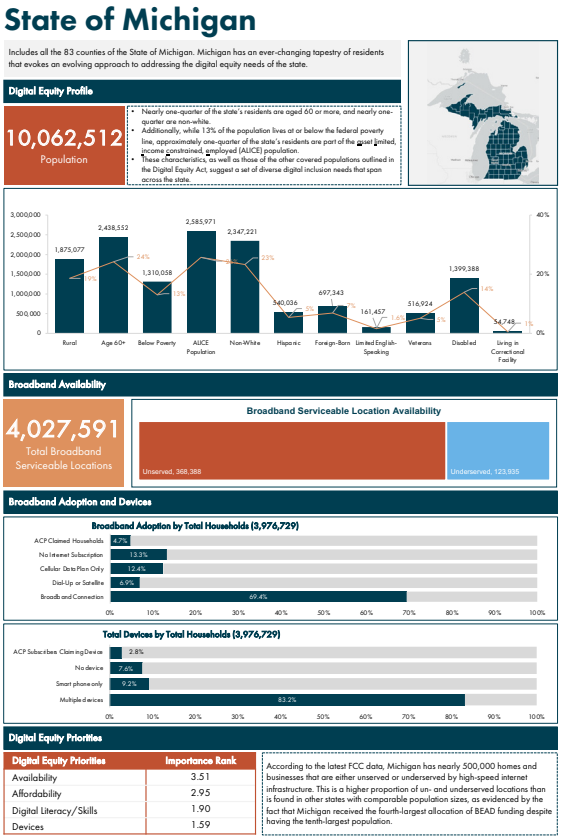


Figure 2: State of Michigan Digital Equity Profile

Each profile contains a digital equity analysis that identifies the covered populations as defined by the Digital Equity Act, as well as the current state and needs assessment for broadband availability, adoption, devices, and data gathered during MIHI's community engagement process.

Obstacles and Barriers

Identifying the obstacles and barriers for the future deployment and non-deployment of broadband is crucial to the 5-Year Action Plan so that appropriate strategies could be developed to address and mitigate potential obstacles. The MIHI Office has identified several obstacles and barriers that could hinder the successful implementation of the BEAD Program, specifically regarding the deployment of new high-speed internet networks. These include:

Infrastructure Deployment Barriers

Legislative or Regulatory Barriers

Permitting

Workforce Storages

Supply Chain and Material Availability

Local Capacity

Topography /Geography

Procurement, Contracting, and Industry Participation

Knowledge and Communication

Digital Equity Barriers

Device Access and Cost

Digital Literary and Skills

Affordability

Inclusivity

Relevance / Awareness

The obstacles and barriers identified have been summarized into impact matrixes that assess 1) the estimated impact the barrier may have on the success of the BEAD Program and 2) the likelihood that through the collective action of public, private, and other partners the barriers can be overcome. The estimated impact and the state's ability to address each barrier were determined through engagement with MIHI's Partnership Roundtable. The impact matrixes for deployment barriers and digital equity are included below.

Deployment Impact Matrix

Category	Barrier	Impact on BEAD	Likely to Overcome
Legislative or Regulatory Barriers	Pole Attachment		
	Municipal Participation		
	Utility Notification and Flagging Capacity		
Federal Permitting			
State Permitting	Environmental		
	Cultural and Historic		
	State Rights-of-Way		
Local Permitting	City, Village, and Township Rights-of-Way		
	County Rights-of-Way and Drains		
	Railroad crossings		
Workforce			
Supply Chain and Materials			
Local Capacity			
Topography/Geography			
Procurement, Contracting, and Industry Participation			
Knowledge and Communications			

Figure 3: Deployment Impact Matrix

Digital Equity Impact Matrix

Barrier	Impact on BEAD	Likely to Overcome
Device Access		
Digital Literacy and Skills		
Affordability		
Inclusivity		
Relevance/Awareness		

Figure 4: Digital Equity Impact Matrix

How will the plan be implemented?

The implementation plan is a direct reflection of stakeholder engagement during MI Connected Future Tour and the Partnership Roundtables efforts and MIHI's commitment to our vision and goals for closing the digital divide. In addition to the BEAD program priority requirements of connecting the unserved, underserved, and CAIs, MIHI defined five key priorities to achieve the vision and goals for broadband deployment and digital inclusion. These priorities will guide the development of the program and the strategies employed by MIHI to help ensure successful implementation of the BEAD program in Michigan.

MIHI's Key Priorities for the BEAD Program

- **Reduce barriers to broadband deployment**
- **Maximize the use and reach of federal funds**
- **Promote digital equity and inclusion**
- **Empower communities through engagement and involvement**
- **Advocate for resiliency and sustainability for broadband infrastructure development**

The key priorities identified were used to identify the required execution strategies that MIHI and their stakeholders will implement to overcome barriers and successfully implement the BEAD Program. For each of the execution strategies developed, planned activities have been identified as the actionable and discrete, actions that can be taken by MIHI and their partners to effectively implement the strategies and help ensure the priorities of the program are realized.

This Five-Year Action Plan serves to meet the requirements of the BEAD Program and to provide the roadmap for achieving universal availability in Michigan over the next 10 years. Built on a foundation of authentic engagement with communities throughout Michigan, data, and the support of MIHI's partners and stakeholders, the plan provides a comprehensive landscape of the current state and path forward to a digitally equitable future.

Overview of the Five-Year Action Plan

Vision

Michigan has long recognized the importance of broadband access for the economic development, educational opportunities, and health of its citizens. Our vision for broadband deployment and digital equity in Michigan is to create a connected and inclusive state where every resident has access to affordable high-speed internet, and to the necessary tools that enable that access, regardless of their location, income, or demographic. To achieve this vision, we will work toward closing the digital divide by expanding broadband infrastructure, promoting digital literacy, and providing access to affordable devices and services.

Michigan will strive toward this vision by implementing this plan with collaboration, efficiency, creativity, and transparency. We will work with internet service providers, local governments, and community organizations to develop subprograms geared toward investing in new infrastructure and upgrading existing networks to ensure that high-speed internet is available to all.

Concurrently, we will focus on promoting digital literacy and providing affordable devices and services to help close the digital divide and ensure that every Michigander can take advantage of the opportunities that come with connectivity. Together, we can build a more equitable and connected Michigan where everyone has the digital tools they need to succeed and improve their quality of life.

As envisioned, by 2030, every Michigander will have:

- An affordable and reliable high-speed internet connection available that meets their household needs;
- A high-speed-internet-enabled device(s) that meets the needs of everyone in the home;
- Access to digital skills training regardless of who they are or where they live;
- Access to technical support to maximize device and application use;
- The ability to reside anywhere in the state and not worry about access to high-quality and reliable internet service; and
- Freedom from digital discrimination and barriers to connectivity within an evolving and unbiased digital equity ecosystem.

Goals and Objectives

Michigan's statewide goals for broadband are to ensure that high-speed internet access is available to every home, business, institution, and community and that at least 95% of Michigan households adopt a permanent home internet connection. MIHI has further established the following objectives to realize its vision and these goals:

1. **Expand high-speed broadband infrastructure to reach unserved and underserved areas**
   Identify and address areas of the state where high-speed internet access is limited or nonexistent and invest in new infrastructure to close the gaps.

2. **Increase digital skills**
   Develop and implement programs to promote digital literacy and digital skills and provide training and education for individuals and organizations, particularly those that are underrepresented and marginalized, to effectively use and benefit from technology. Digital skills training should be designed to evolve as required skills for new technologies and devices advance over time.

3. **Promote affordable broadband services**
   Help ensure internet service providers offer affordable plans for low-income households and create programs to make broadband services and affordability programs more accessible to all.

4. **Support equitable access to devices**
   Provide support for residents to obtain and use affordable devices such as computers and tablets and promote the use of libraries and other community centers as digital access and device lending points. Device programs should also evolve as device technology advances over time, and consumers should have ready access to quality technical support to sustain and prolong their use.

5. **Empower consumers with applications and online content**
   Support the development of robust applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration that are accessible by all Michiganders. Moving toward digital equity allows the development of new, robust accessible online content that allows users to improve their quality of life.

Current State of Broadband and Digital Inclusion

Existing Programs

The following provides a summary of the activities, positions, contractor support, and funding for the Michigan High-Speed Internet Office.

Current Activities of the Michigan High-Speed Internet Office

Activity Name	Description	Intended Outcome(s)
Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Program[1]	ROBIN is a last-mile and middle-mile broadband infrastructure grant program. The program is funded by $250M from the Capital Projects Fund with $238M in project funds for grants. The program is designed to connect locations currently without 100/20 Mbps service. MIHI anticipates making final grant awards in August 2023.	Connect 80,000 – 90,000 locations with high-speed internet service.
MI Connected Future Partnership Roundtable[2]	The Partnership Roundtable is designed as an inclusive opportunity for stakeholders to be involved in the decision-making process for the current and forthcoming federally funded programs administered by MIHI. Partners meet virtually each month to respond to questions posed by MIHI staff that drive office decision-making and program design. More than 200 unique organizations have participated in the Partnership Roundtable. More on this activity can be found in the stakeholder engagement section of this plan.	Provide decision-making guidance to MIHI. Provide input and feedback on program design. Maintain active engagement with a diverse stakeholder group.
MI Connected Future Community Listening Tour[3]	The Community Listening Tour is designed as an in-person opportunity for MIHI to hear the connectivity and digital equity needs, aspirations, goals, and ideas of Michigan's many communities. MIHI held 31 community meetings to gather data in preparation for this plan, and 10 additional meetings to present the results. More on this activity can be found in the stakeholder engagement section of this plan.	Engagement with local and community stakeholders. Data gathering to inform plan and program development.

Activity Name	Description	Intended Outcome(s)
Connecting Michigan Taskforce (CMIT)	CMIT was conceived in the fall of 2020 in response to the COVID-19 pandemic. CMIT is an internal State of Michigan task force formed to help coordinate broadband, digital equity, and other related efforts across agencies.	Ongoing coordination among stateagencies. Improved communication regarding digital equity activities, programs, and initiatives.
Connecting Michigan Communities (CMIC) Program[4]	CMIC was created in late 2018 as Michigan's first broadband infrastructure grant program and seeded with $20M in initial funds. An additional $14.3M was added to the program in mid-2020. The program has issued three rounds of grants with the last occurring in 2022. The program is currently housed at the MI Dept. of Technology, Management, & Budget, but recent discussion may shift administration of the program to MIHI. No additional grant awards are anticipated from the program.	Connect more than 17,000 locations to high-speed internet.

Table 1: Current Activities of MIHI Office

Current and Planned Full-Time and Part-Time Employees of the Michigan High-Speed Internet Office

The Michigan High-Speed Internet Office was created in June 2021 by Executive Directive 2021-2[5] within the Department of Labor and Economic Opportunity (LEO). While created in June 2021, LEO did not receive funding or the authorization to hire staff for the office until the passage of the Building Michigan Together[6] plan in April 2022. MIHI's Chief Connectivity Officer was onboarded at the end of July 2022 and the office was staffed with eight full-time employees in January 2023.

1. https://www.michigan.gov/leo/bureaus-agencies/mihi/funding-opportunities
2. https://www.michigan.gov/leo/bureaus-agencies/mihi/miconnectedfuture/partnership-roundtable
3. https://www.michigan.gov/leo/bureaus-agencies/mihi/miconnectedfuture/mi-connected-future-tour-schedule
4. https://www.michigan.gov/dtmb/policies/governance/cmic-grant
5. https://www.michigan.gov/whitmer/news/state-orders-and-directives/2021/06/02/executive-directive-2021-2
6. http://www.legislature.mi.gov/documents/2021-2022/publicact/pdf/2022-PA-0053.pdf

An additional Executive Directive 2021 -12[7] has ensured that Michigan is poised to make effective use of the once-in-a-generation resources that are being made available through the federal Infrastructure Investment and Jobs Act (IIJA). The MIHI Office represents the first time Michigan has had a dedicated office within state government to address the Digital Divide.

The Michigan High-Speed Internet Office currently has a staff of eight with an additional seven limited-term positions anticipated to be added in late 2023. Once fully staffed, the office will have a two-section organizational structure; one will be focused on infrastructure-related programs and the other on digital equity. The organizational chart below provides a visual representation of the office structure. Positions in orange are existing and those in gray are planned.

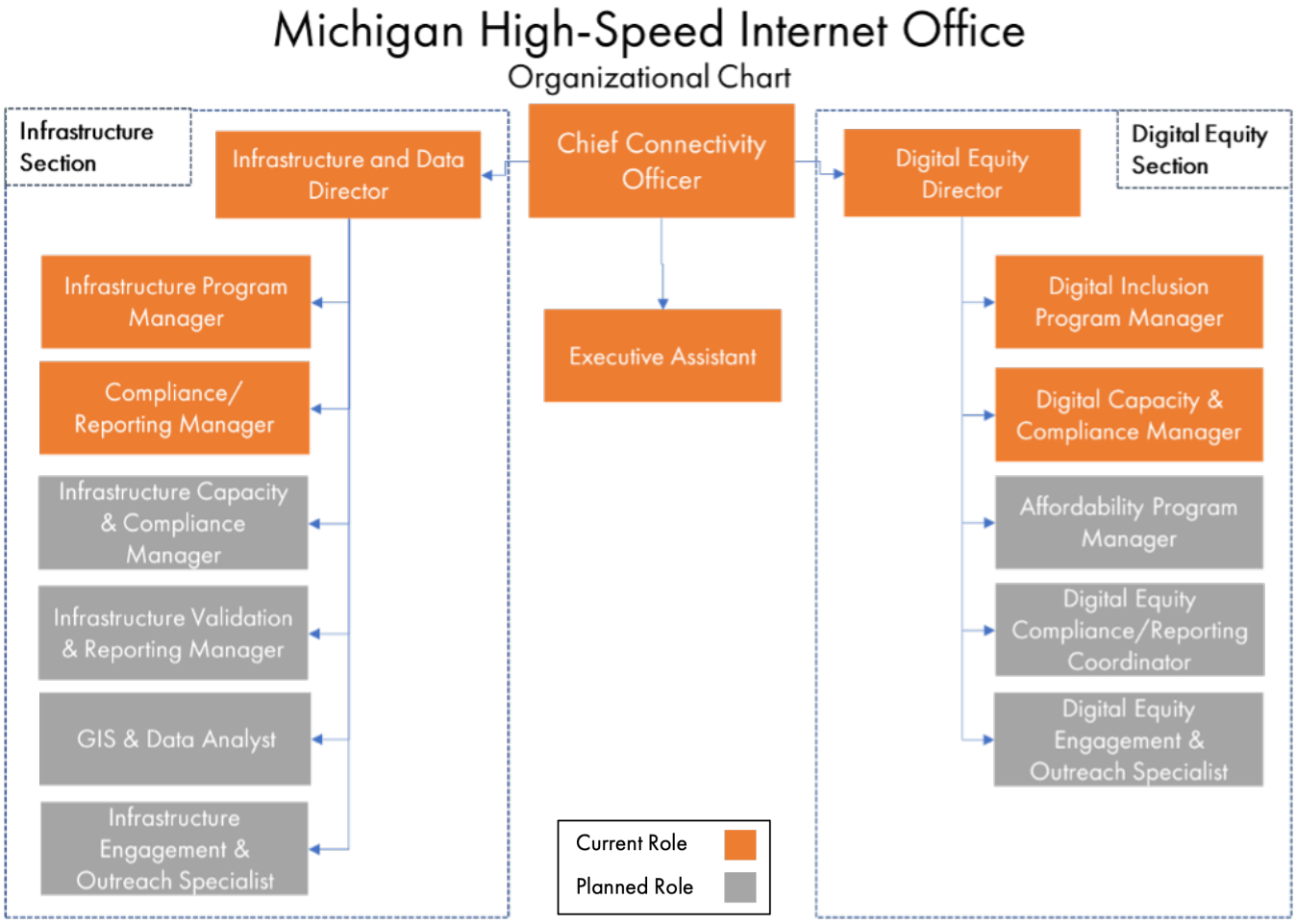


Figure 5: Michigan High-Speed Internet Office Current and Planned Roles

7. https://www.michigan.gov/whitmer/news/state-orders-and-directives/2021/12/06/executive-directive-2021-12-2

The following table describes the role of each position in the office.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Current	Full-Time	Chief Connectivity Officer (CCO)	The CCO leads the MIHI Office and serves as the primary point of contact (POC) for all broadband and digital equity matters in the state.
Current	Full-Time	Executive Assistant	The Executive Assistant is responsible for providing a full range of administrative and executive support functions relating to the day-to-day activities of the Michigan Chief Connectivity Officer and the Michigan High-speed Internet Office.
Current	Full-Time	Infrastructure and Data Director	The Infrastructure and Data Director leads the Infrastructure and Data team within the MIHI Office. The responsibilities include research, policy development, program planning, implementation, and assessment related to office high-speed internet infrastructure-related programs. The Infrastructure and Data Director also plans, coordinates, manages, and executes the office data, infrastructure, and geospatial strategies.
Current	Full-Time	Infrastructure Program Manager	The Infrastructure Program Manager serves as the recognized resource responsible for the administration of the office's infrastructure grant program(s). Performs complex consultative services and technical assistance work related to the financial program management within the office. Work involves providing financial and administrative advice and support services to designated program(s), awardees, proponents, recipients, and contractors in areas such as project development, implementation, and monitoring as applied to the wide variety of projects and throughout the life cycle of programs.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Current	Full-Time	Infrastructure Federal Compliance/ Reporting Manager	The Infrastructure Federal Compliance/Reporting Manager serves as a recognized resource for the planning, development, and implementation requirements of federal law regarding broadband infrastructure-related funding opportunities and assists with in-state applications to discretionary funding opportunities.
Planned	Full-Time	Infrastructure Capacity and Compliance Manager	The Infrastructure Capacity and Compliance Manager serves as a recognized resource for the planning, development, and implementation requirements of federal law regarding broadband infrastructure-related funding opportunities. The position also provides assistance to grantees and other stakeholders to build capacity within external organizations to seek out, apply for, manage, and comply with federal and other grant opportunities related to high-speed internet deployment.
Planned	Full-Time	Infrastructure Validation and Reporting Manager	The Infrastructure Validation and Reporting Manager serves as a recognized resource for the planning, development, and implementation requirements of federal law regarding broadband infrastructure-related funding opportunities and assists with in-state applications to discretionary funding opportunities. Serves as a liaison for program compliance reporting and issues and serves as a field validation specialist to ensure infrastructure deployment progress and completion.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Planned	Full-Time	GISand Data Analyst	The GIS and Data Analyst is tasked with high-speed internet and digital equity-related mapping coordination, data collection, data analysis, and geospatial data collection. The GIS and Data Analyst's work in this regard relates to federal funds allocated to the state for broadband and digital equity work. This position will be responsible for collecting, analyzing, and interpreting large data sets related to broadband access, affordability, and adoption in the state.
Planned	Full-Time	Infrastructure Engagement and Outreach Specialist	The Infrastructure Engagement and Outreach Specialist serves as a recognized resource responsible for engaging with a variety of external stakeholders to provide education, capacity building, support, and coordinate technical assistance on the topics of high-speed internet infrastructure, broadband deployment, network development, and other issues related to the availability of high-speed internet.
Current	Full-Time	Digital Equity Director	The Digital Equity Director leads the Digital Equity team within the MIHI Office. Responsibilities include research, policy development, program planning, implementation, and assessment related to digital equity and inclusion programs. The Digital Equity Director is the primary office liaison with the public, businesses, ISPs, state agencies, legislature, and other critical stakeholders.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Current	Full-Time	Digital Inclusion Program Manager	The Digital Inclusion Program Manager serves as a recognized resource responsible for the operations of broadband-related programs and services focused on digital literacy, affordability, and digital equity and inclusion. Work involves developing, operationalizing, and managing digital equity and literacy services and programs; providing financial and administrative advice and support services to designated program(s), awardees, proponents, recipients, and contractors in areas such as project development; implementation and monitoring as applied to a wide variety of projects and throughout the life cycle of programs.
Current	Full-Time	Digital Capacity and Compliance Manager	The Digital Capacity and Compliance Manager serves as a recognized resource for the planning, development, and implementation for the NTIA requirements of federal law regarding broadband-related funding opportunities and assists with in-state applications to discretionary funding opportunities.
Planned	Full-Time	Affordability Program Manager	The Affordability Program Manager serves as a recognized resource responsible for the operations of broadband-related programs and services focused on broadband affordability and digital equity and inclusion. Work involves developing, operationalizing, and managing digital equity and affordability programs.
Planned	Full-Time	Digital Equity Compliance/ Reporting Manager	The Digital Equity Compliance/ Reporting Manager serves as a recognized resource for the planning, development, and implementation requirements of federal law regarding digital equity-related funding opportunities and assist with in-state applications to discretionary funding opportunities.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Planned	Full-Time	Digital Equity Engagement and Outreach Specialist	The Digital Equity Engagement and Outreach Specialist serves as a recognized resource responsible for engaging with a wide variety of external stakeholders to provide education, capacity building, support, and coordinate technical assistance on the topics of digital equity, digital inclusion, digital literacy, devices, and other issues related to the adoption and use of high-speed internet.

Table 2: Current and Full Time Roles for MIHI Office

Current and Planned Contractor Support

The following provides a summary of the current and planned contractor support for the office.

Current/Planned	Full-Time/Part-Time	Position	Description of Role
Current	1.5 FTE	Geospatial Support	AppGeo provides MIHI with geospatial support for the ROBIN program, FCC challenge process, BEAD, SDEPG, and other similar applications.
Current	1.5 FTE	Compliance, Plan, and Program Development	KPMG provides a variety of services to the MIHI Office including compliance, planning, and subgrant process development.
Current	0.25 FTE	ROBIN Objection Validation	Connected Nation supports the engineering application review and field validation of objections for the ROBIN grant program (not BEAD).
Planned	N/A	Grantee Validation and Compliance	MIHI will procure contracted support to provide third-party validation of office-funded projects and compliance of those projects with grant requirements.
Planned	N/A	Community Engagement, Outreach, and Coordination	MIHI will procure contracted support to provide local and regional engagement support for the implementation of the BEAD program.

Table 3: Current and Planned Contractor Support

Broadband Funding

This section identifies funding from various sources that are currently available for broadband deployment or that have already been committed for broadband deployment and other related activities in the state. As shown, most of the funding for deployment or related activities in Michigan is already obligated.

Source	Purpose	Total	Obligated	Available
Broadband Equity, Access, and Deployment Program (BEAD)	Funded through IIJA, this program is the largest source of broadband funding. Priority in this program is given to building networks that connect unserved and underserved locations and community anchor institutions. This program will be implemented as a subgrant program to a variety of entities including private ISPs, nonprofits, communities, cooperatives, and others.	$1.559B	$0	$1.559B
US Dept. of Treasury, Coronavirus Capital Projects Fund	Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Program is a last-mile and middle-mile broadband infrastructure grant program. Applications were accepted from 01/13/2023 through 03/14/2023. Final grant announcements are expected near Labor Day 2023. MIHI anticipates being able to connect 80k-90k locations with the ROBIN program.	$238M	$0	$238M
State Digital Equity Planning and Capacity Grant Programs (SDEPG & SDECG)	The State Digital Equity Planning Grant Program provides funding to develop the state digital equity plans. The State Capacity Program will fund digital equity projects and the implementation of digital equity plans.	$32M	$1.3M	$30.7M

Source	Purpose	Total	Obligated	Available
USDA ReConnect	The USDA ReConnect program is a federal initiative that provides loans and grants to expand access to broadband services in rural communities. The program aims to improve economic and educational opportunities, as well as healthcare and public safety, by supporting the development of high-speed internet infrastructure in underserved areas. Eligible entities can apply for funding to construct, improve, or acquire broadband facilities and provide broadband service to rural households, businesses, and farms. Ten entities have received ReConnect funds since 2020 in Michigan.	$77M	$77M	$0
FCC Emergency Connectivity Fund (ECP)	The FCC's ECP is a $7.17 billion program that aims to help schools and libraries provide internet connectivity and devices to students and staff who lack access to them. The program provides funding to educational institutions to purchase and distribute laptops, tablets, Wi-Fi hot spots, modems, routers, and other necessary equipment. The ECP was launched in response to the COVID-19 pandemic. Since its launch, 373 schools and libraries in Michigan have received ECP funds.	$158M	$158M	$0
FCC Rural Digital Opportunity Fund (RDOF)	The FCC's Rural Digital Opportunity Fund (RDOF) is a program designed to expand high-speed internet access in unserved rural areas of the United States. The program offered up to $20.4 billion in funding over 10 years to internet service providers (ISPs) to deploy broadband infrastructure in eligible areas. ISPs in Michigan won $363M in RDOF awards in 2020 and are currently building to meet their obligations.	$363M	$363M	$0

Source	Purpose	Total	Obligated	Available
FCC Alternative Connect America Cost Model	The FCC's Alternative Connect America Cost Model (A-CAM) is a program designed to provide funding to telecommunications providers that serve high-cost rural areas of the United States. The program offers predictable, ongoing support for the deployment and maintenance of broadband infrastructure in these areas. Providers that accept the A-CAM offer commit to deploying broadband with specified speeds and latency, and to meet certain build-out requirements over a 10-year period.	$53M	$53M	$0
FCC Supply Chain Reimbursement Program	The FCC's Supply Chain Reimbursement Program is an initiative aimed at helping small and rural communications providers remove and replace equipment that poses a national security risk. The program provides funding to cover the costs of removing and replacing equipment from certain designated companies that pose a risk to national security. One entity has received funds from this program.	$21M	$21M	$0
FCC E-Rate Program	The E-Rate program is an initiative that provides funding to help schools and libraries obtain affordable access to broadband internet and other telecommunications services. The program is administered by the Universal Service Administrative Company and is funded by fees charged to telecommunications providers. E-Rate funding can be used to pay for services such as broadband internet access, Wi-Fi networks, and internal connections like routers and switches. Data is from 2020-2023 and is aggregated among all E-Rate participating entities.	$124M	$124M	$0

Source	Purpose	Total	Obligated	Available
FCC Rural Healthcare Program	The FCC Rural Health Care Program is an initiative aimed at helping healthcare providers in rural areas obtain affordable access to telecommunications and broadband services. The program is administered by the Universal Service Administrative Company and is funded through the Universal Service Fund. The program provides funding for eligible healthcare providers to help cover the costs of broadband connectivity, network equipment, and other related expenses. Data is from 2020-2023.	$85k	$85k	$0
ARPA State and Local Fiscal Recovery Funds	The State and Local Fiscal Recovery Fund is a program created by ARPA that provides funding to states, territories, and eligible local governments to help them recover from the economic impacts of the COVID-19 pandemic. The program aims to support public health efforts, replace lost revenue, and address negative economic impacts such as job loss and decreased economic activity. Several Michigan communities have used these funds for broadband expansion.	$26M	$26M	$0
NTIA Connecting Minority Communities Pilot Program	The NTIA's Connecting Minority Communities Pilot Program is an initiative aimed at addressing the digital divide in communities that are traditionally underserved or underrepresented in broadband adoption. The program provides $268 million in funding to support broadband infrastructure deployment, digital inclusion activities, and workforce development in minority communities, including those with high poverty rates. One entity in Michigan received an award in this program in 2023.	$3M	$3M	$0
NTIA Broadband Infrastructure Program	The NTIA's broadband infrastructure program provides grants to support broadband deployment and adoption in unserved and underserved areas. The grants can be used for a range of activities, such as building and upgrading broadband infrastructure, establishing public computer centers, and providing digital skills training. One entity received funding through this program in 2022. The project awarded in Michigan is implemented by Merit Network through their Project MOON-Light.[8]	$22M	$22M	$0

Source	Purpose	Total	Obligated	Available
NTIA Tribal Broadband Connectivity Program	The NTIA's Tribal Broadband Connectivity Program is an initiative that provides grants to support broadband deployment and adoption in Tribal communities across the United States. The program offers $1 billion in funding to tribal governments and tribal organizations to expand access to high-speed internet and improve digital inclusion. The grants can be used for a range of activities, such as building and upgrading broadband infrastructure, establishing public computer centers, and providing digital skills training. One entity has received an award through this program.	$1.2M	$1.2M	$0
NTIA Enabling Middle Mile Broadband Infrastructure Program	NTIA's Middle Mile Broadband Infrastructure Program provides $1B from the Bipartisan Infrastructure Law to reduce the cost of bringing high-speed internet service to unserved and underserved communities by connecting local networks to major networks. Peninsula Fiber Network was awarded $61.2M in funding to construct middle-mile networks connecting the Upper and Lower Peninsulas with fiber via Beaver Island to create new redundant routes from Benton Harbor to Chicago. New overland routes are also planned to provide greater capacity to unserved areas of the state.	$61.2M	$61.2M	$0
Connecting Michigan Communities (CMIC) Program	CMIC was created in late 2018 as Michigan's first broadband infrastructure grant program and seeded with $20M in initial funds. An additional $14.3M was added to the program in mid-2020. The program has issued three rounds of grants with the last occurring in 2022.	$34.4M	$34.4M	$0

Table 4: Existing Broadband Funding

8. https://www.merit.edu/initiatives/moon-light/

Partnerships

The following provides descriptions of the current and planned partnerships of the Michigan High-Speed Internet Office. Additionally, this section outlines the partnership structure to be used by MIHI to develop and implement the BEAD Program.

Key Partners

Partners	Description of Current or Planned Role in Broadband Deployment and Adoption
Michigan Infrastructure Office (MIO)	Coordinator of all IIJA infrastructure resources in Michigan. Provides cross-sectoral support to MIHI, coordinates responses to global issues such as supply chain, workforce, permitting, etc.
Lieutenant Governor's Office/EOG (Executive Office of the Governor)	Administration stakeholder and subject matter expert (SME) on digital inclusion. Propels BEAD needs and requirements within administration and with legislature.
Michigan Public Service Commission (MPSC)	Telecommunications division that intersects with ISPs on the telecom and cable side. Does not regulate broadband. Provides context on telecom/cable issues, intersection with ISPs, works closely with FCC.
Michigan Department of Agriculture and Rural Development (MDARD)	Office of rural development has a specific charge to address rural broadband. The majority of BEAD funds will be deployed in rural communities. Coordination and advocacy in rural communities to ensure networks are deployed AND adopted is key.
State Legislature	Appropriates BEAD and Digital Equity (DE) Capacity funds to MIHI.
Michigan Economic Development Corporation (MEDC)	Experience addressing broadband from a community and economic development perspective for years. Provides key insights into community needs, cybersecurity, and how to leverage new networks for economic growth. The Michigan State Historic Preservation Office for permitting is located within this department.
Michigan Department of Health and Human Services (MDHHS)	Engages directly with vulnerable and covered populations. Supports messaging and future DE program implementation.
Michigan Department of Education (MDE)	Plays a key role in digital skills in the P-20 environment. Direct contact with vulnerable populations via local schools. Responsible for the Library of Michigan and has previous experience with the federal program E-rate, which provides for reduced rates on internet access and internal connections for schools and libraries.

Partners	Description of Current or Planned Role in Broadband Deployment and Adoption
Michigan Department of Technology, Management & Budget (DTMB)	Provides context on state assets, networks, and CAIs.
MI State Housing Development Authority (MSHDA)	Engages with public housing entities and thus covered populations.
Michigan Department of Transportation (MDOT)	Provides coordination on permitting and right-of-way (ROW) access.
Michigan Dept. of Environment, Great Lakes, and Energy (EGLE)	Provides coordination for environmental permitting.
Michigan Department of Corrections (MDOC)	Provides coordination with covered populations for needs identification and workforce development.
Michigan Department of Civil Rights (MDCR)	Provides context and outreach on issues of digital equity and inclusion.
Michigan Department of Military and Veterans Affairs (MMVA)	Provides coordination with covered populations for needs identification and workforce development.
ISPs	Enables deployment of new infrastructure networks and services.
Covered population organizations	Represents defined covered populations to provide MIHI with information and context for addressing the needs of those they represent. Includes AARP, ethnic commissions, etc.
CAI supporting organizations	Represents the needs of the state's many and varied community anchor institutions.
Grassroots/Community Organizations	Engage with residents, businesses, institutions, and non-governmental organizations (NGOs) at the local community level throughout the state. This group will provide guidance on local engagement for digital equity planning and support efforts with community organizations for implementation. Includes community action agencies, LISC, MSU Extension, United Ways, Public Housing Commissions.

Partners	Description of Current or Planned Role in Broadband Deployment and Adoption
Deployment-supporting organizations	Advise infrastructure planning, development, and implementation by providing insight to barriers and opportunities for coordination in relation to rights-of-way, permitting, pole attachments, and other topics related to the physical deployment of broadband networks. Streamlining and coordinating permit processes will be critical to deploying networks at a scale called for in BEAD. Includes road commissions, drain commissions, SHPO, MISSDIG, Rail Association, etc.
Economic Opportunity Supporting Organizations	Provide guidance on planned engagement with business and economic development communities to support leveraging new networks to create economic opportunity for Michigan residents and businesses. The BEAD Program requires states to identify each unserved and underserved business in the state and ensure their connectivity needs are met. The business community can also play a key role in digital equity and inclusion.
Tribes	Tribal communities have unique connectivity challenges that can be addressed by the BEAD and the State Digital Equity Planning Grant Program (SDEPG).
Local Government	Provide valuable insights into the connectivity needs of Michigan's many and varied communities. MIHI's federally administered programs require robust engagement with local and regional governments, and Michigan's regions, counties, townships, and cities.
Sustainability Organizations	Organizations from philanthropy, academia, and other similar groups. Implementing the MI Connected Future Plan will likely necessitate long-term sustainability to achieve systemic change. MIHI's federally funded programs will provide states with funding for infrastructure deployment and digital inclusion, but additional sources of funding and smart policy decisions will be needed to create a more digital equitable state.
Workforce Development Organizations	Organizations that impact the talent and workforce ecosystem in the state. A talented workforce will be critical to the timely deployment of broadband infrastructure in the short term but ensuring that Michigan has a well-trained workforce that can use information and communications technology will be needed to grow Michigan's economy into the future. Unions, educational entities, trade associations, etc.

Table 5: MIHI Key Partners

Partnership Framework

MIHI identified, early on, that a robust partnership and decision-making framework was necessary to resolve "obstacles and barriers" (a term described and defined in the Notice of Funding Opportunity) to achieving the identified goals and objectives, and to designing and implementing the BEAD Program. Each layer of the framework is nested and build on each other to ensure a continuity of knowledge and engagement as MIHI's dependence on each nested layer increases. The following graphic provides a visual demonstration of the partnership framework.

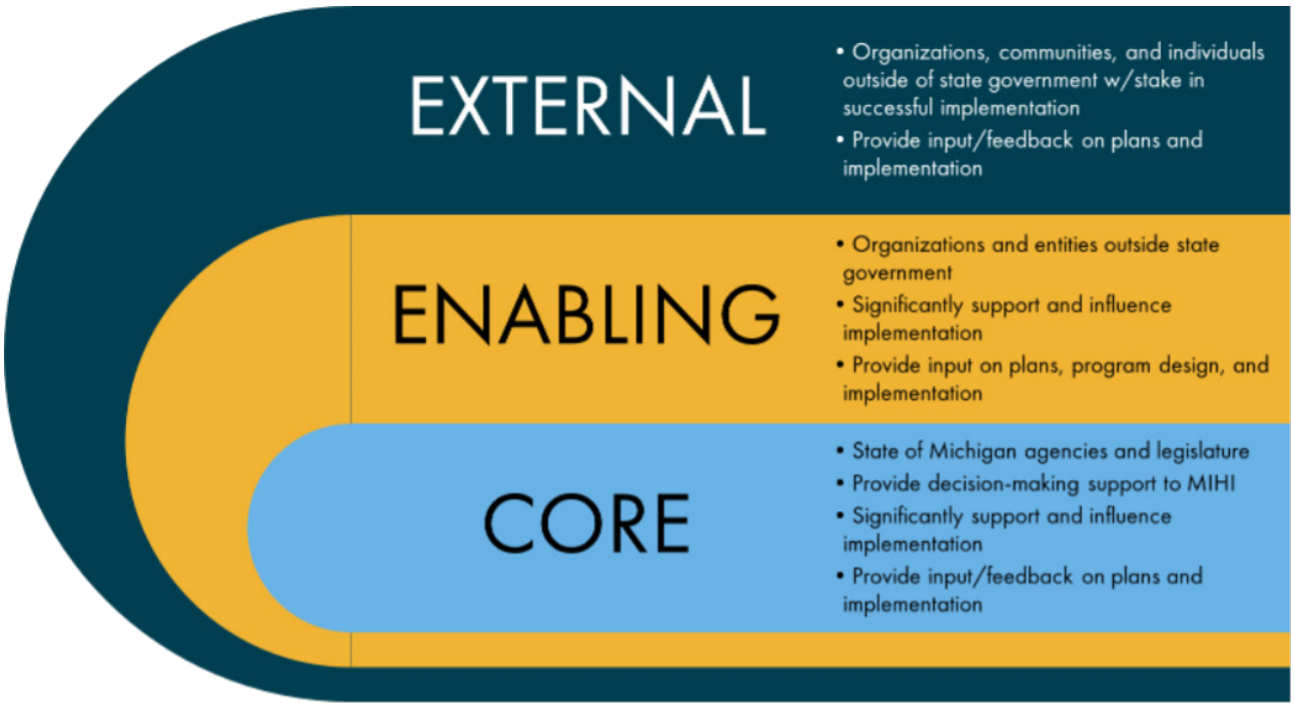


Figure 6: MIHI Key Partnership Framework

Core Partners

Core partners include state agencies and offices that assist in the development of the BEAD plan and program. Core partners have a key stake in the BEAD program and contribute resources such as funding, assets, or decision-making support in addition to feedback, information, or guidance.

Core Partners include:
Office of Lieutenant Governor Garlin Gilchrist II;
Michigan Legislature;
Michigan Department of Agriculture and Rural Development;

Michigan Department of Civil Rights; and
Michigan Department of Corrections;
Michigan Department of Education, including the State Library of Michigan;
Michigan Department of Environment, Great Lakes, and Energy;
Michigan Department of Health and Human Services;
Michigan Department of Labor and Economic Opportunity;
Michigan Department of Military and Veterans Affairs;
Michigan Department of Natural Resources;
Michigan Department of Technology, Management, & Budget;
Michigan Department of Transportation;
Michigan Economic Development Corporation;
Michigan Infrastructure Council;
Michigan Infrastructure Office;
Michigan Public Service Commission;
Michigan State Housing Development Authority;
State Historic Preservation Office

Core partners participate in the partnership roundtable and community listening tour, provide feedback/input on program plans and design, identify barriers, and develop and implement solutions. Core partners represent program ownership and responsibility for the program in partnership with MIHI.

Enabling Partners

Enabling partners include organizations outside of state government that significantly impact the development and implementation of the BEAD Program. Enabling partners are or will be key to the deployment of high-speed infrastructure and ensuring Michigan can achieve program goals within the time specified by the NTIA.

Enabling partners include organizations and associations that represent the following: permitting, right-of-way owners/managers, and similar entities; labor unions and other workforce entities; local, county, and regional government; state agencies; utility providers; and other similar organizations. These partners are key to identifying barriers to infrastructure deployment and developing and implementing solutions to overcome these barriers. Enabling partners may be asked to develop or modify policy that contributes to successful program implementation.

Enabling partners include, but are not limited to:

American Electric Power

AT&T

Charter Communications

Comcast

Communications Workers of America

Consumers Energy

DTE Energy

Frontier Communications

Highline Broadband

HomeWorks Tri-County

International Brotherhood of Electrical Workers

Indiana Michigan Power Company

Lansing Board of Water and Light

Merit Network

Michigan Association of Counties

Michigan Association of County Drain Commissioners

Michigan Building and Construction Trades Council

Michigan Cable Telecommunications Association

Michigan County Road Association

Michigan Electric Cooperative Association

Michigan Infrastructure and Transportation Association

Michigan Municipal Electric Association

Michigan Municipal League

Michigan Public Service Commission

Michigan Railroads Association

Michigan Townships Association

Michigan Utility Notification Center

Midwest Energy and Communications

NATE: The Communications Infrastructure Contractors Association

Nokia

Peninsula Fiber Network

PROTEC Michigan

TDS Telecommunications

Telecommunications Association of Michigan

Tribal Nations

T-Mobile

Verizon

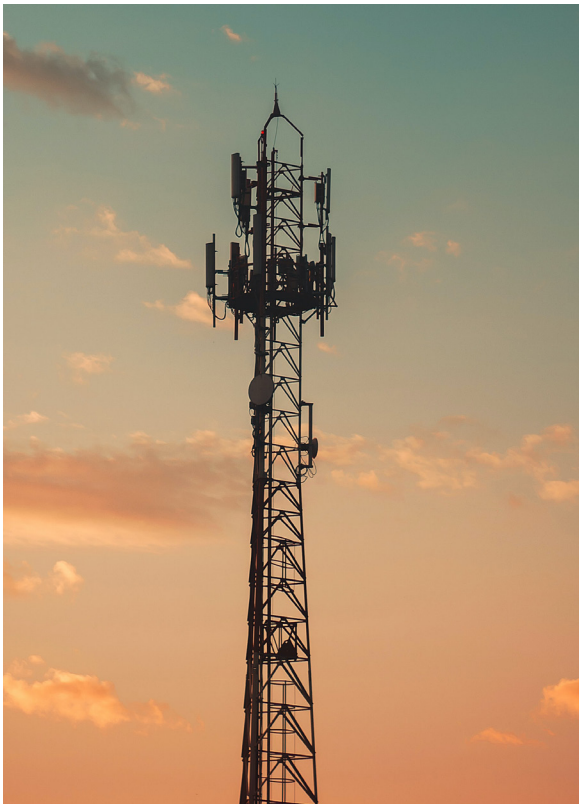
External Partners

External partners represent a variety of organizations from both inside and outside state government including state agencies, nonprofits, industry associations, and private sector entities. External partners have a stake in the implementation of BEAD as well as its connectivity and digital equity goals and results of the program. External partners are those that participate in the Community Listening Tour and the Partnership Roundtable aspects of MIHI's MI Connected Future planning process (see the stakeholder engagement section of this plan for more information) and provide key input that supports in the development of the strategy and implementation of the program.

External partners include organizations, and their related associations, that represent the following; community anchor institutions; Digital Equity Act-defined covered populations; state agencies: community organizations; internet service providers; local, county, and regional governments; business and economic development; philanthropy; utilities; Tribal nations; and permitting and similar entities. External partners exist and participate from all scales: national, state, regional, and local, but most are represented at the state level. These external partners provide input and feedback on program plans, design, and implementation throughout the BEAD performance period. See Appendix A for a full list of external partners.

Asset Inventory

This asset inventory is intended to capture both existing hard assets (e.g., towers, buildings, utility poles) and soft assets—or efforts (e.g., programs, activities, strategies, skills, technical assistance) that can be leveraged to close the digital divide in Michigan. Additionally, MIHI developed a Digital Inclusion Resource Map in September 2022. The map was developed based on responses received to the Michigan Statewide Digital Inclusion survey developed by MIHI and distributed to key stakeholders and the public throughout the state. MIHI used several channels to engage stakeholders and encourage participation in the survey, including socializing it at community meetings as part of the MI Connected Future tour, Partnership Roundtables, and in the MIHI newsletter.



By targeting stakeholders, such as nonprofit organizations, for-profit organizations, government agencies, colleges, universities, trade schools, public libraries, and K-12 schools, the survey seeks to determine the current state of digital equity and inclusion programs and identify key organizations involved in these efforts. Based on these insights, the Digital Inclusion Resource Map is continuously updated, providing an ongoing and up-to-date inventory of digital inclusion assets in Michigan.

The following table identifies key hard and soft assets that contribute to broadband deployment, adoption, affordability, access, and digital equity. This inventory is not exhaustive and MIHI continues to identify assets that can contribute to the successful and efficient implementation of the BEAD Program.

Asset	Type	Category	Description
E-Rate Support[9]	Soft	Access	This $5M matching grant program, if passed, will provide improved connections to schools and libraries at much lower costs with better reliability and leverage additional federal E-Rate funds. Program will be implemented by the MI Dept. of Education.
Wi-Fi Hot Spot Map[10]	Soft	Access	During the COVID-19 pandemic, the Michigan Public Service Commission created a map of known public Wi-Fi hot spots to support those without a home connection.
2-1-1 Assistance[11]	Soft	Adoption	Michigan 2-1-1- Information Assistance provides users with information on a variety of services, including the Affordable Connectivity Program.
ACP Eligible Households	Soft	Affordability	An estimated 1,685,725 households in Michigan are eligible for the ACP program. As of April 1, 2023, 604,108 households are enrolled in the program, approximately 35.8% of the estimated eligible households.
ISP-Sponsored Low-Cost Service Programs	Soft	Affordability	Three internet service providers offer low-cost internet service programs for eligible households including Access from AT&T[12], Comcast Internet Essentials[13], and Spectrum Internet Assist.[14]

9. https://www.michigan.gov/libraryofmichigan/libraries/admin/erate
10. https://cngis.maps.arcgis.com/apps/webappviewer/index.html?id=0d69accbb5ff422a82eccc2c9101b69d
11. https://mi211.org/
12. https://www.att.com/internet/access/
13. https://www.xfinity.com/learn/internet-service/internet-essentials
14. https://www.spectrum.net/support/account-and-billing/spectrum-internet-assist

Asset	Type	Category	Description
Utility Assistance Programs[15]	Soft	Affordability	The Michigan Public Service Commission maintains a database of utility assistance programs to support consumers. Information on ACP and Lifeline is also included.
Fiber Optics Certifications[16]	Soft	Deployment	Washtenaw Community College offers certification courses for fiber optic technicians, fiber specialists in testing and maintenance, and fiber specialist in splicing.
Michigan Geographic Framework[17]	Soft	Deployment	MI Dept. of Technology, Management & Budget manages a variety of geospatial datasets, enterprise software licenses, aerial photography, and other remote sensing products that can be used for a variety of purposes.
Michigan Infrastructure Asset Audit	Soft	Deployment	During the summer of 2022, MIHI contractors traversed more than 65,000 miles of roads identifying and cataloging the location of infrastructure that can support at least 100/20 Mbps connectivity. The study area was defined as places where infrastructure is likely to terminate given the rurality of the area.
Michigan Public Safety Communications System[18]	Hard	Deployment	The MI Public Safety Communications System is a network of 206 towers located throughout the state that support public safety communications. These towers can also be used as colocation points for wireless broadband facilities.

15. https://www.michigan.gov/mpsc/consumer/get-help/utility-customers
16. https://www.wccnet.edu/business/workforce-development/fiber-optics-1-campaign.php
17. https://www.michigan.gov/dtmb/services/maps
18. https://www.michigan.gov/mpscs

Asset	Type	Category	Description
Michigan State Education Network	Hard	Deployment	The State Education Network (SEN) is a fiber optic network that provides fast, affordable, reliable, and secure broadband internet capacity to schools and public entities throughout Michigan. It is an entity external to the State of Michigan. The vision of the SEN is to connect 100% of Michigan's Intermediate School Districts (ISDs), Local Education Agencies (LEAs), and Public-School Academies (PSAs).
Merit Network[19]	Hard	Deployment	Merit Network, the state's research and education network, through their NTIA-funded Michigan MOON-Light program, provides a robust open-access middle-mile network that can provide backhaul connectivity in many unserved and underserved areas of the state.
Merit Michigan Moonshot Program.[20]	Soft	Digital Equity	The Michigan Moonshot aims to act as a catalyst in the broadband ecosystem by informing policy makers, fostering public-private partnerships, and convening collaboration between citizens and organizations in the state.
Community Information Exchange (CIE)[21]	Soft	Digital Equity	CIE is a localized effort to create and sustain the technology and relationships required to support Social Determinants of Health (SDOH) needs of both individuals and communities. The program is coordinated by the MI Dept. of Health and Human Services.

19. https://www.merit.edu/initiatives/moon-light/
20. https://www.merit.edu/community/moonshot/
21. https://www.michigan.gov/mdhhs/inside-mdhhs/legislationpolicy/2022-2024-social-determinants-of-health-strategy/community-information-exchange-task-force

Asset	Type	Category	Description
Digital Inclusion Location Map[22]	Soft	Digital Equity	The MIHI Office maintains a database and map of digital inclusion programs throughout the state to aid residents in finding the services they need.
Michigan Poverty Taskforce[23]	Soft	Digital Equity	The Michigan Poverty Task Force, within the MI Dept. of Labor and Economic Opportunity, is committed to finding ways to strengthen, broaden, coordinate, and streamline existing state efforts to ensure that Michigan families have access to the support they need.
Office of Global Michigan[24]	Soft	Digital Equity	The mission of the Office of Global Michigan is to empower and engage the immigrant, refugee, and international community to make Michigan the home for opportunity. The office assists immigrant and refugee communities with connectivity needs.
Student Information System (SIS) Questionnaire	Soft	Digital Equity	The MI Dept. of Education has asked schools to collect digital equity data as part of their SIS questionnaire to start the year. While not mandatory, MDE hopes to grow this data set to support digital inclusion efforts.
Michigan State University Quello Center[25]	Soft	Digital Equity	The Quello Center seeks to stimulate and inform debate on the economic and social implications of media, communication, and information innovations of the digital age, and the policy and management issues raised by these developments.
Michigan Institute for Data Science[26]	Soft	Digital Equity	MIDAS strengthens University of Michigan's preeminence in Data Science and Artificial Intelligence, and enables their transformative use in a wide range of research disciplines to achieve lasting societal impact.

22. https://www.michigan.gov/leo/bureaus-agencies/mihi/michigan-digital-inclusion-resources
23. https://www.michigan.gov/leo/initiatives/poverty-task-force
24. https://www.michigan.gov/ogm
25. https://quello.msu.edu/
26. https://midas.umich.edu/

Asset	Type	Category	Description
Michigan Reconnect[27]	Soft	Workforce	Michigan Reconnect provides free in-district tuition at a Michigan community college to earn an associate degree or Pell-eligible skill certificate. Participants can receive up to $1,500 toward tuition costs for eligible career training programs here in Michigan with the Short-Term Training Program.
Michigan Achievement Skills Scholarship[28]	Soft	Workforce	Students can choose to attend a career training program in Michigan through the Michigan Achievement Skills Scholarship. Students who graduate from high school in Michigan with a diploma or certificate of completion or achieved a high school equivalency certificate in 2023 or after will be eligible for up to $2,000 if they attend a career training program in Michigan, per year, up to two years.
Futures for Frontliners[29]	Soft	Workforce	State scholarship program for Michiganders without college degrees who worked in essential industries during the state COVID-19 shutdown in spring 2020 (April 1-June 30). This scholarship provides these frontline workers with tuition-free access to local community college to pursue an associate degree or a skills certificate, either full-time or part-time while you work.

Table 6: Current Asset Inventory of Hard and Soft Assets

27. https://www.michigan.gov/reconnect
28. https://www.michigan.gov/mistudentaid/programs/michigan-achievement-scholarship/career-training
29. https://www.michigan.gov/frontliners

Needs and Gaps Assessment

The purpose of this section is to identify the gaps between the current state and needs of broadband deployment and digital equity in Michigan. This section begins with data profiles for the state as a whole, followed by a similar regional analysis. A summary of the key deployment, adoption, affordability, access, and digital equity needs, and gaps follows the state and regional data profiles.

State and Regional Profiles

The MIHI Office has chosen to examine its needs and gaps regionally. The Michigan Department of Labor and Economic Opportunity (LEO), which houses the MIHI Office, defines 10, multi-county economic prosperity regions as a basis for analysis and implementation across programs. The map below provides the regional boundaries.

The profiles begin with that of Michigan as a whole, followed by a similar profile for each of the 10 regions. The purpose of these profiles is to establish a baseline for understanding the unique digital equity and connectivity needs of the state and each region. Each profile contains a digital equity analysis that identifies the covered populations as defined by the Digital Equity Act, as well as the current state and needs for broadband availability, adoption, devices, and the priorities defined by each region during MIHI's MI Connected Future listening tour. The following describes each of the data points found in the profiles. If a metric is highlighted in a regional profile, the rate of that metric in the region is higher/lower than the state average, which may indicate a need for additional focus on this covered population or element of digital equity.

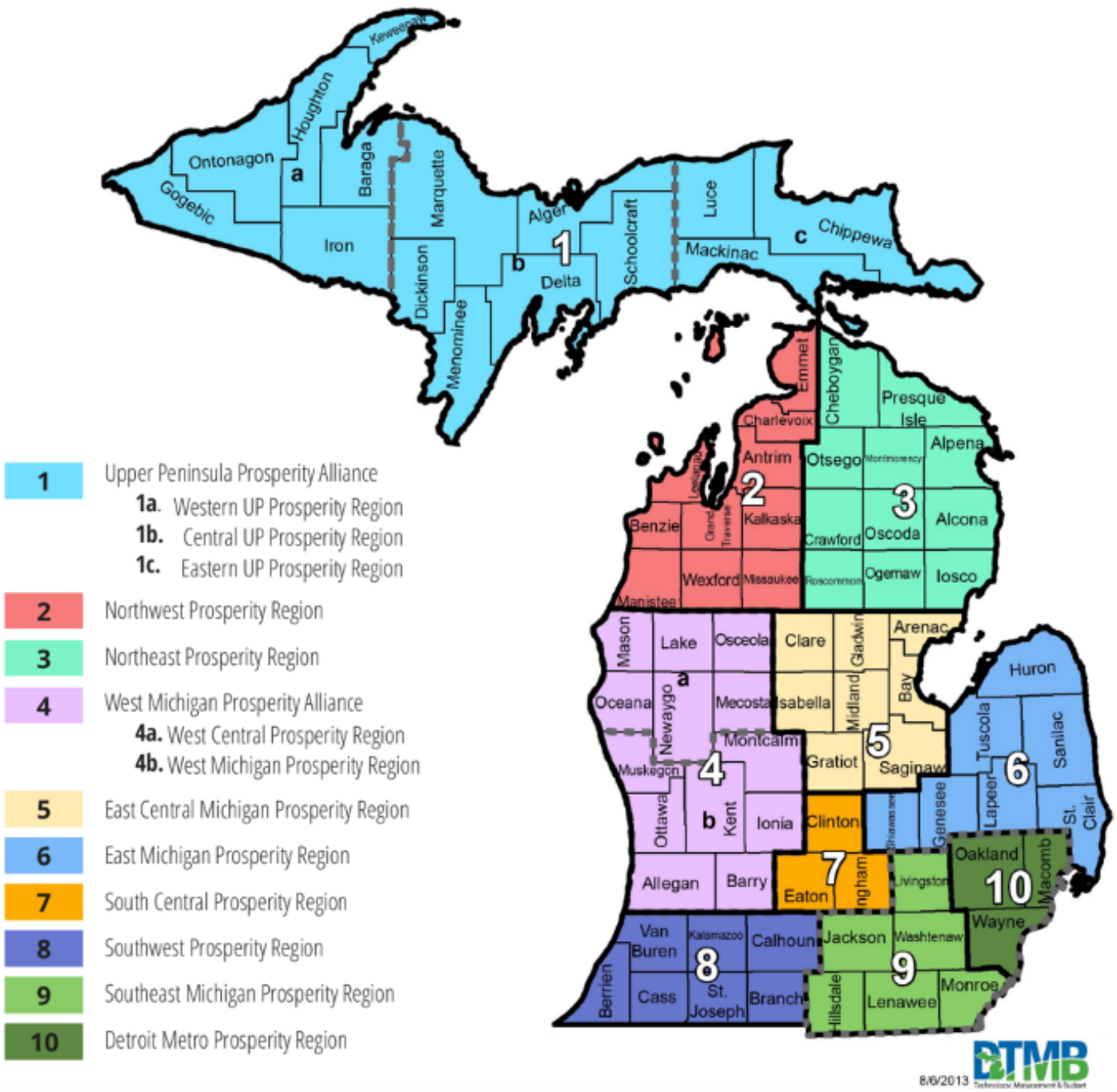


Figure 7: Map of the 10 Prosperity Regions of Michigan

Digital Equity Profile

The Digital Equity Profile identifies and enumerates the various Digital Equity Act "covered" populations within each region. These metrics are critical for identifying the unique digital equity needs throughout the state that can drive future digital inclusion program implementation.

Population: The total population of the area from the American Community Survey 2021 5-Year Estimates.

Rural: The total number and percentage of the population residing in rural areas of the region as defined by the USDA 2013 Rural-Urban Continuum Code.

Age 60+: The total number and percentage of the population aged 60 years or more in the region from the American Community Survey 2021 5-Year Estimates.

Below Poverty: The total number and percentage of the population living below the federal poverty guideline in the region from the American Community Survey 2021 5-Year Estimates.

ALICE Population: The total number and percentage of the population defined as Asset Limited, Income Constrained, Employed (ALICE) in the region as defined by the United Way. Data is from 2021.

Non-White: The total number and percentage of the population identifying as a race other than white, not including those of Hispanic descent, in the region from the American Community Survey 2021 5-Year Estimates.

Hispanic: The total number and percentage of the population identifying as being of Hispanic descent in the region from the American Community Survey 2021 5-Year Estimates.

Foreign-Born: The total number and percentage of the population in each region born outside of the United States from the American Community Survey 2021 5-Year Estimates.

Limited English-Speaking: The total number and percentage of the population in each region that identify as being limited English speakers. This data was derived by identifying the number of households in each region identifying as such and multiplying it by the average household size for each region to determine the estimated population that are limited English speakers. Data is from the American Community Survey 2021 5-Year Estimates.

Veterans: The total number and percentage of the population in the region that indicate past military service from the American Community Survey 2021 5-Year Estimates.

Disabled: The total number and percentage of the population in the region that indicate that they have mental or physical disability from the American Community Survey 2021 5-Year Estimates.

Living in Correctional Facility: The total number and percentage of the population in the region that is living in a correctional facility. This data comes from the 2020 Decennial Census. The data does not differentiate between those in federal or state correctional facilities.

Broadband Availability

This section identifies the total number of Broadband Serviceable Locations (BSL) identified on the BSL Fabric developed and maintained by the Federal Communications Commission. The number and percentage of unserved (locations without 25/3 Mbps service available) and underserved (locations without 100/20 Mbps service available) BSLs are included for each region. This data comes from the June 15th, 2023, data published by the FCC that represents availability reported by internet service providers as of December 31, 2022. These metrics are critical for understanding the service availability needs and gaps within each region.

Broadband Adoption

This section identifies the various scales of home broadband adoption/subscription in the region. This data does not represent the availability of these connection types, but the reported subscription type for households. These metrics are critical for understanding adoption or subscription needs and gaps within each region that can indicate barriers to broadband affordability and other related issues.

Households: The total number of households in the region from the American Community Survey 2021 5-Year Estimates.

Broadband Connection: The total number and percentage of households in the region reporting that they have a broadband connection. Types of subscriptions may include fiber, cable, DSL, or otherwise. The speed of the connection is unknown. These households may also have a cellular internet subscription in addition to their broadband connection. Data is from the American Community Survey 2021 5-Year Estimates.

Dial-Up or Satellite: The total number and percentage of households in the region reporting that they have a dial-up or satellite internet connection, but not a broadband connection. The speed of the connection is unknown. These households may also have a cellular internet subscription but do not have a broadband subscription. Data is from the American Community Survey 2021 5-Year Estimates.

Cellular Data Plan Only: The total number and percentage of households in the region reporting that they have a cellular data plan only; no other type of internet subscription is present. The speed of the connection is unknown. Data is from the American Community Survey 2021 5-Year Estimates.

No Internet Subscription: The total number and percentage of households in the region reporting that they have no internet subscription whatsoever in their home. The reason for not having an internet subscription is unknown. Data is from the American Community Survey 2021 5-Year Estimates.

ACP Claimed Households: The total number and percentage of total households in the region claimed by an internet service provider that is participating in the FCC's Affordable Connectivity Program (ACP). Households must meet eligibility requirements to participate in ACP. The percentage is of the total households, however, not the total eligible households in the region. Data is from the Universal Service Administrative Company (USAC) and is current as of February 2023.

Devices

This section focuses on the reported types of devices in the home. These metrics are critical for understanding device access needs and gaps within each region. Device access, or lack thereof, is a known barrier to digital equity.

Households: The total number of households in the region from the American Community Survey 2021 5-Year Estimates.

Multiple Devices: The total number and percentage of households in the region that indicate they have one or more computing devices in the home. Those with only a smartphone are not included in this total. Data is from the American Community Survey 2021 5-Year Estimates.

Smartphone Only: The total number and percentage of households in the region that indicate they have only a smartphone to connect to the internet with no other devices present, from the American Community Survey 2021 5-Year Estimates.

No Device: The total number and percentage of households in the region that indicate they have no computing device of any kind, from the American Community Survey 2021 5-Year Estimates.

ACP Households Claiming Device: The total number of households in the region that have claimed a device discount from the Affordable Connectivity Program (ACP). The percentage shown is the percent of ACP households claiming a device compared with the total number of ACP households claimed in the region, not the total number of households in the region. Data is from the Universal Service Administrative Company (USAC) and is current as of February 2023.

Digital Equity Priorities

This data is derived from the MI Connected Future statewide community listening tour MIHI conducted in early 2023. Community meetings were held in each region and participants were asked to prioritize the importance of the four primary barriers to digital equity: 1) Availability; 2) Affordability; 3) Digital Literacy/Skills; and 4) Devices. Participants were asked to rank these topics in order of importance through a dot-sticker exercise. Votes were weighted according to their importance and the results averaged to determine the overall importance of each topic on a scale of one to four with four being the most important and one being the least important. This data helps identify the most critical issues for those living in each region of the state.

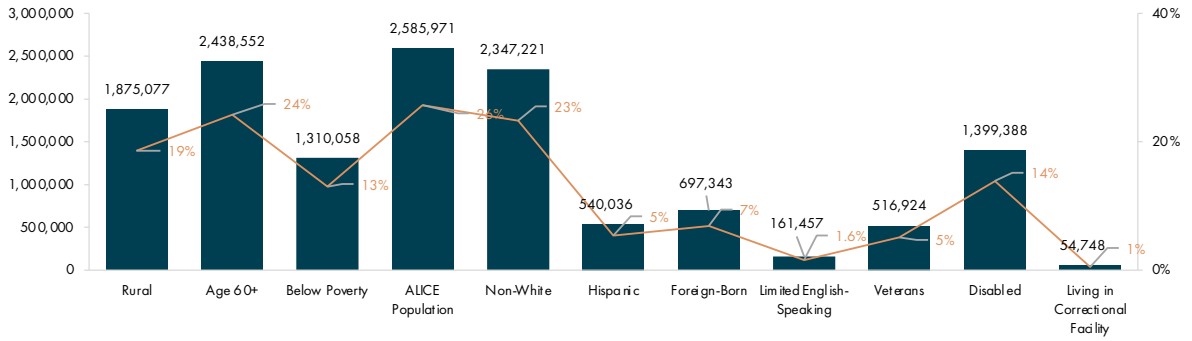
State of Michigan

Includes all the 83 counties of the State of Michigan. Michigan has an ever-changing tapestry of residents that evokes an evolving approach to addressing the digital equity needs of the state.

Digital Equity Profile

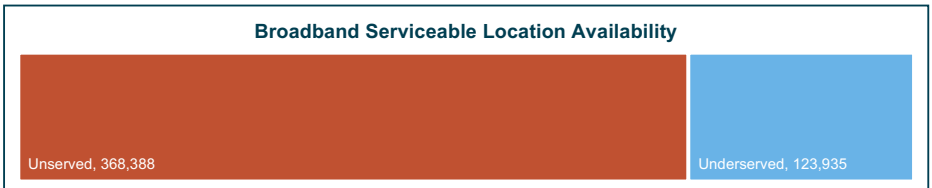
10,062,512
Population

- Nearly one-quarter of the state's residents are aged 60 or more, and nearly one-quarter are non-white.
- Additionally, while 13% of the population lives at or below the federal poverty line, approximately one-quarter of the state's residents are part of the asset limited, income constrained, employed (ALICE) population.
- These characteristics, as well as those of the other covered populations outlined in the Digital Equity Act, suggest a set of diverse digital inclusion needs that span across the state.

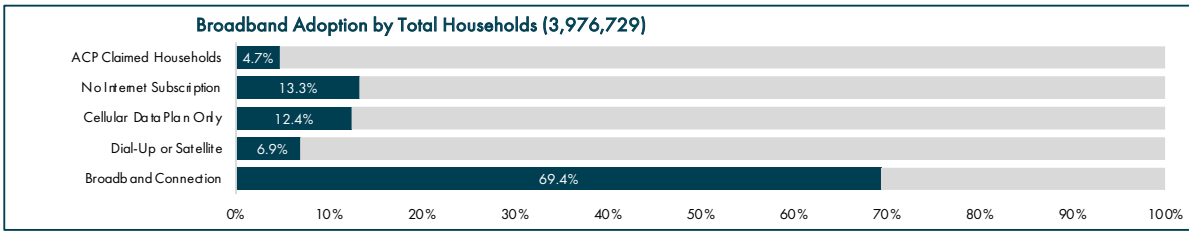


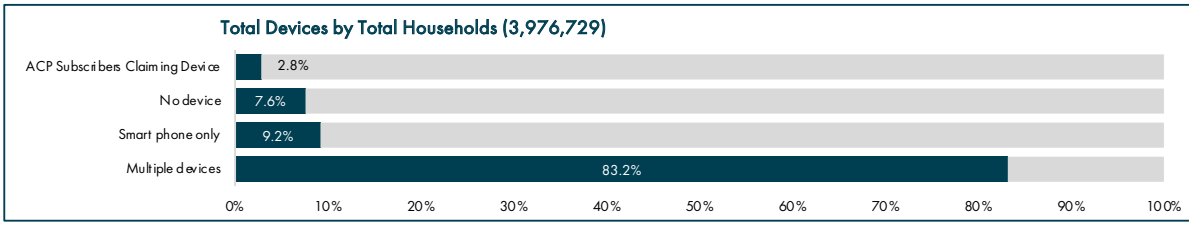
Broadband Availability

4,027,591
Total Broadband Serviceable Locations



Broadband Adoption and Devices





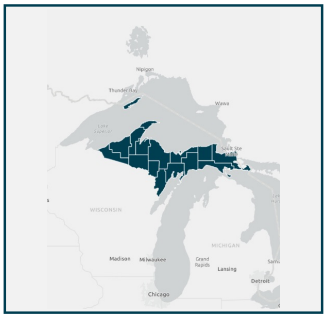
Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.51
Affordability	2.95
Digital Literacy/Skills	1.90
Devices	1.59

According to the latest FCC data, Michigan has nearly 500,000 homes and businesses that are either unserved or underserved by high-speed internet infrastructure. This is a higher proportion of un- and underserved locations than is found in other states with comparable population sizes, as evidenced by the fact that Michigan received the fourth-largest allocation of BEAD funding despite having the tenth-largest population.

Prosperity Region One: Upper Peninsula

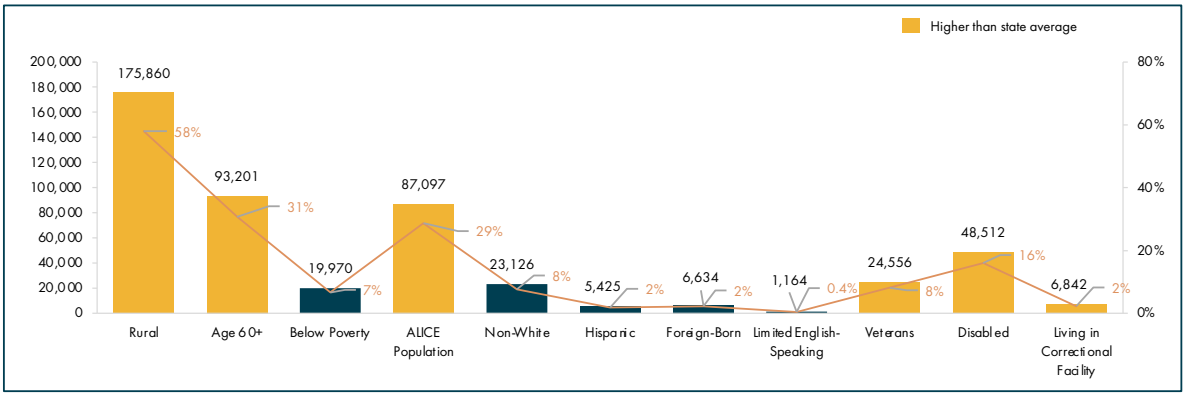
Includes the counties of: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft and represents the entirety of Michigan's Upper Peninsula.



Digital Equity Profile

303,102
Population

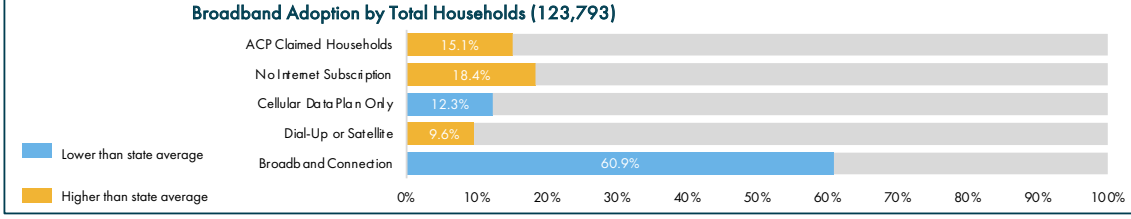
The region has a significant rural population, as well as an older and less affluent one compared to the state, (the region has a lower rate of those at the federal poverty line, but a higher ALICE population). It also has a higher concentration of veterans and those with disabilities, as well as those living in correctional facilities.

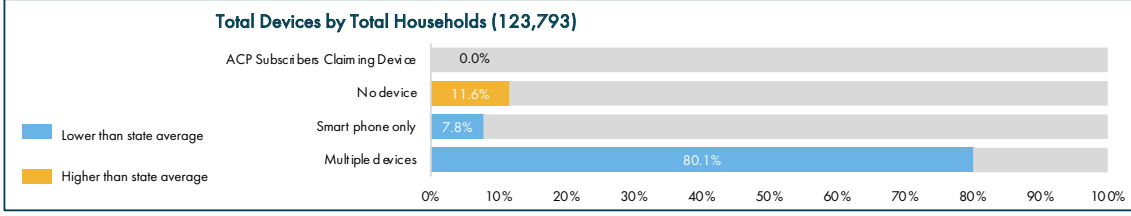


Broadband Availability

180,746
Total Broadband Serviceable Locations

Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.69
Affordability	3.07
Digital Literacy/Skills	1.69
Devices	1.63

Higher than state average

- As expected, a more rural population equates to more un/underserved locations and lower rates of home broadband adoption and higher reliance on other methods of connectivity.
- These data points are reflected in the region's high prioritization of availability and affordability during the MIHI listening tour.

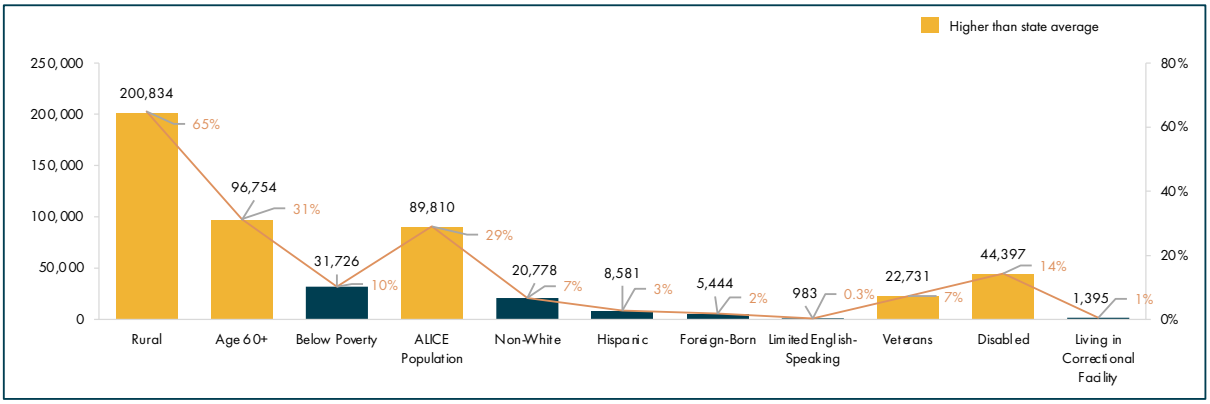
Prosperity Region Two: Northwest

Includes the counties of: Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee and Wexford.

Digital Equity Profile

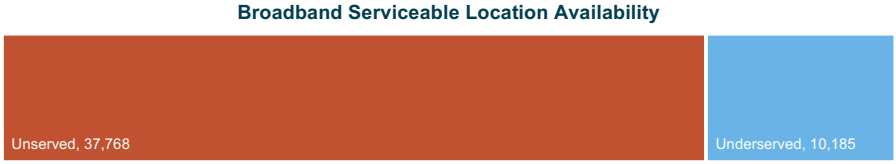
309,563
Population

The region encompasses the northwest corner of Michigan's Lower Peninsula, including the cities of Traverse City and Petoskey. Like Region One, Region Two has a high concentration of rural residents, those over 60, ALICE population, Veterans, and those with disabilities.

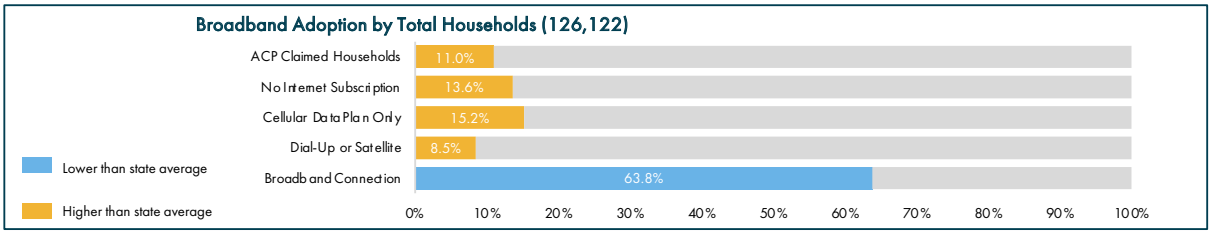


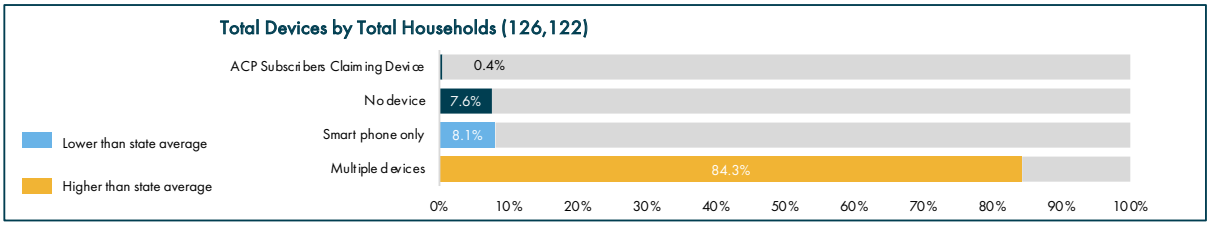
Broadband Availability

183,208
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.66
Affordability	2.92
Digital Literacy/Skills	1.90
Devices	1.48

Higher than state average

- Given the high proportion of unserved and underserved households, a lower home broadband adoption rate is expected coupled with higher rates of other forms of connectivity.
- Region Two indicated that availability was their highest priority while affordability, digital literacy/skills, and devices fell below the state average priority.

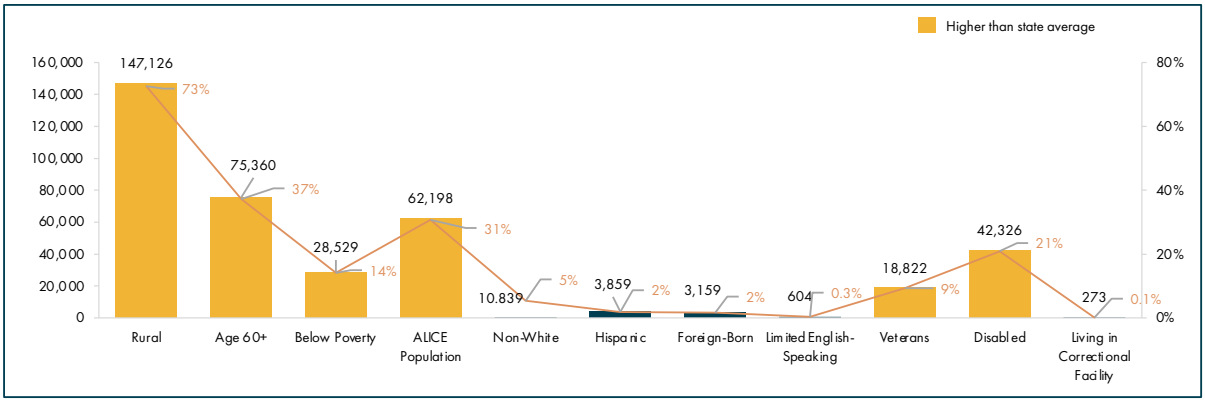
Prosperity Region Three: Northeast

Includes the counties of: Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, and Roscommon.

Digital Equity Profile

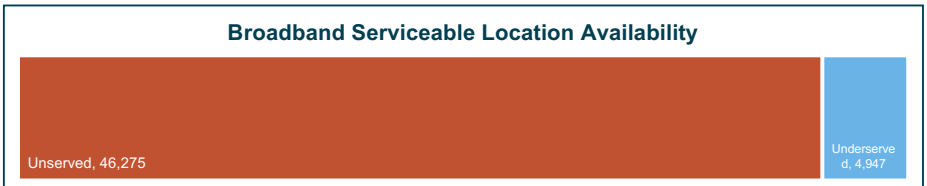
202,634
Population

The region is in the northeastern part of Michigan's Lower Peninsula and includes the cities of Alpena and Rogers City. Region Three has a high concentration of rural older, and less affluent Michiganders than the state as a whole, and a higher rate of veterans and those with disabilities than most other regions.

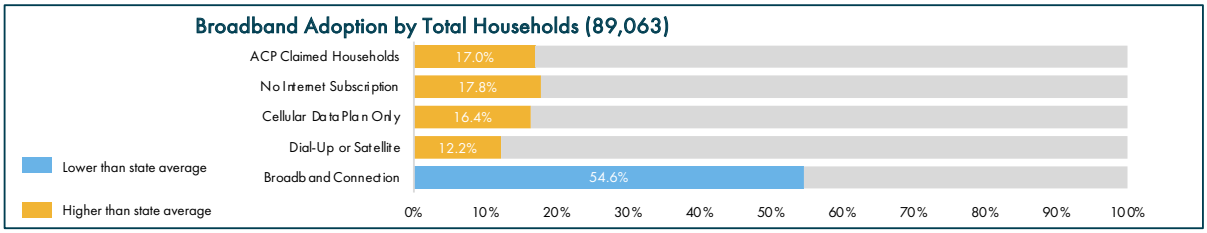


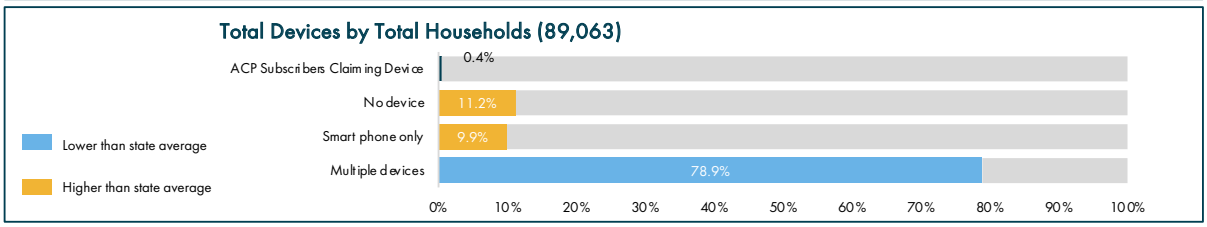
Broadband Availability

163,801
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.72
Affordability	2.94
Digital Literacy/Skills	1.70
Devices	1.42

Higher than state average

- The low rate of household broadband adoption is reflective of the low rate of broadband availability. Device ownership is also less prevalent in Region Two.
- While a priority for devices was not reflective in their region's priorities, there is a strong desire and priority for improving availability.

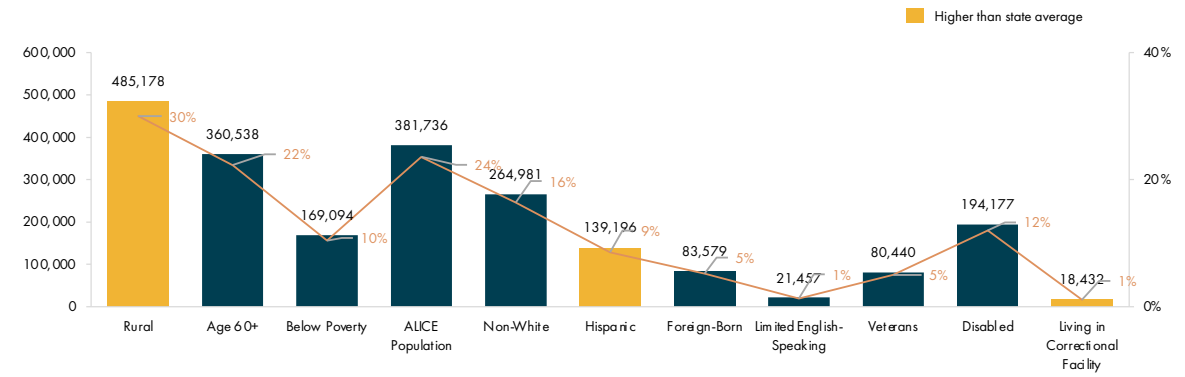
Prosperity Region Four: West

Includes the counties of: Allegan, Barry, Kent, Ionia, Lake, Mason, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, Osceola, and Ottawa.

Digital Equity Profile

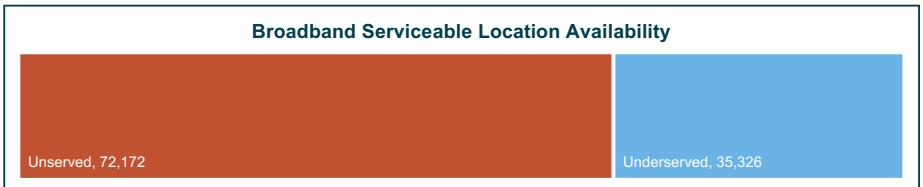
1,619,257
Population

The region is in the middle and western areas of the Lower Peninsula bordering Lake Michigan and includes the Grand Rapids metropolitan area. While the region has large rural areas, the majority of the population residents in the Grand Rapids area. The region has a higher proportion of Hispanic residents than the state as a whole, as well as those living in correctional facilities.

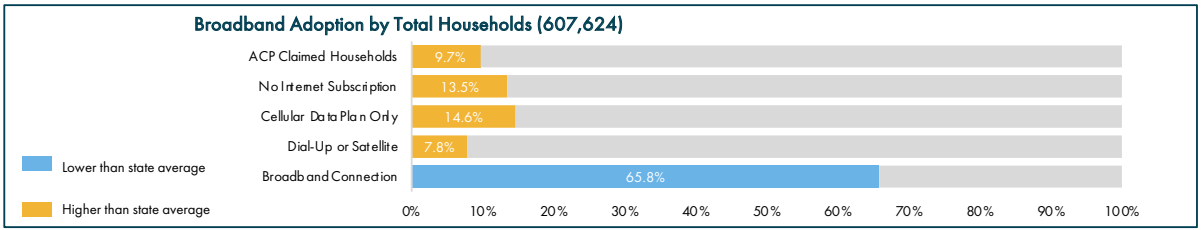


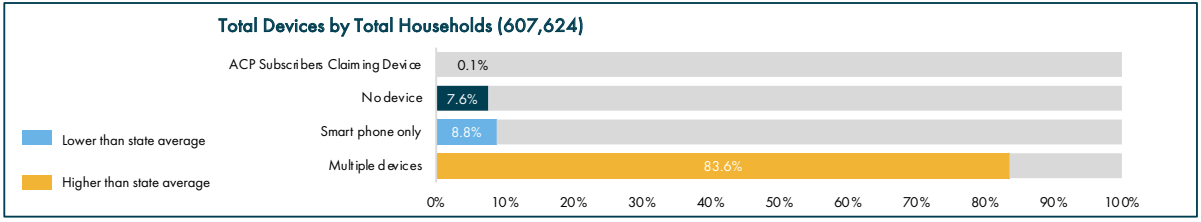
Broadband Availability

619,080
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.53
Affordability	2.75
Digital Literacy/Skills	1.64
Devices	1.73

Higher than state average

- Home broadband adoption is lower than the state average, but higher than in some of the more northernly regions likely due to the higher rates of infrastructure availability.
- This is also reflected in the region's priority for availability (higher than the state average but lower than other, more rural regions), and higher priority for devices.

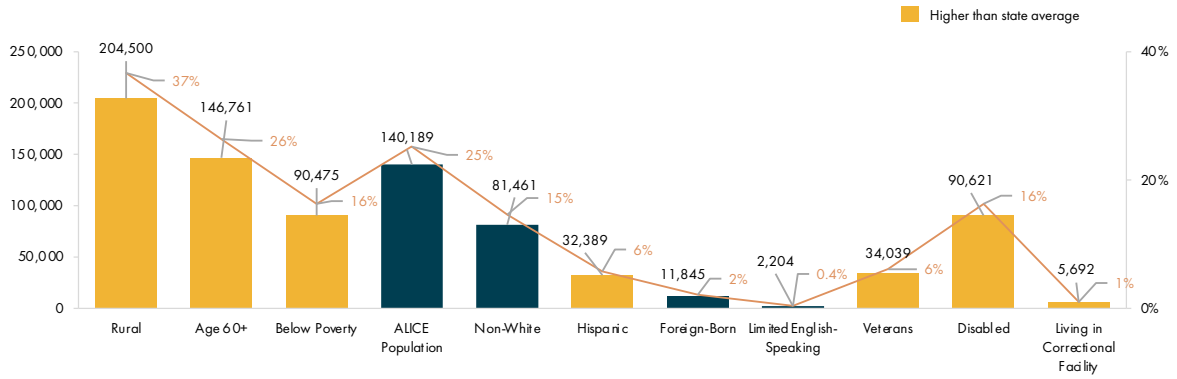
Prosperity Region Five: East Central

Includes the counties of: Arenac, Bay, Clare, Gladwin, Gratiot, Isabella, Midland, and Saginaw, and is located in the middle of Michigan's Lower Peninsula.

Digital Equity Profile

556,618
Population

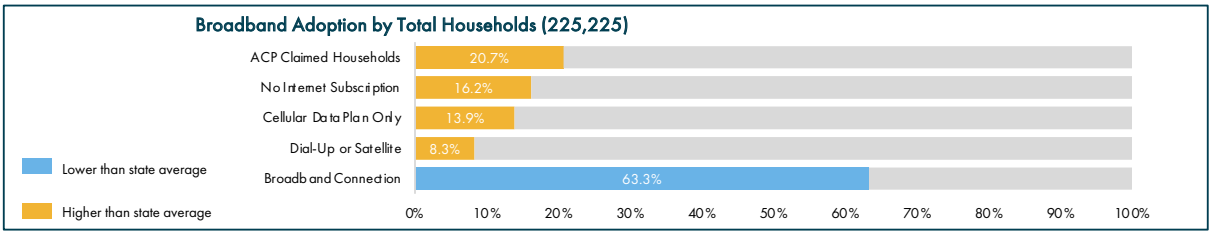
The region is more rural than the state as a whole and has a higher concentration of aging residents. While the ALICE population is similar to the state, the region has a higher proportion of those living at or below the federal poverty line. The region also has slightly more veterans and disabled individuals than the state.

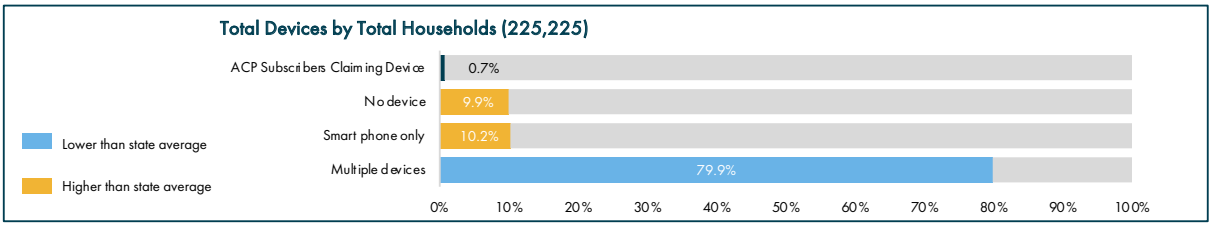


Broadband Availability

255,046
Total Broadband Serviceable Locations

Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.16
Affordability	3.17
Digital Literacy/Skills	1.96
Devices	1.71

Higher than state average

- While region has areas lacking availability, home broadband adoption is only rather less than state average.
- Device ownership is less than state average, and region has a higher proportion of those relying on smart phones or without a device altogether.
- These data points are reflected in region's prioritization of affordability, digital literacy/skills, and devices at higher rate than state.

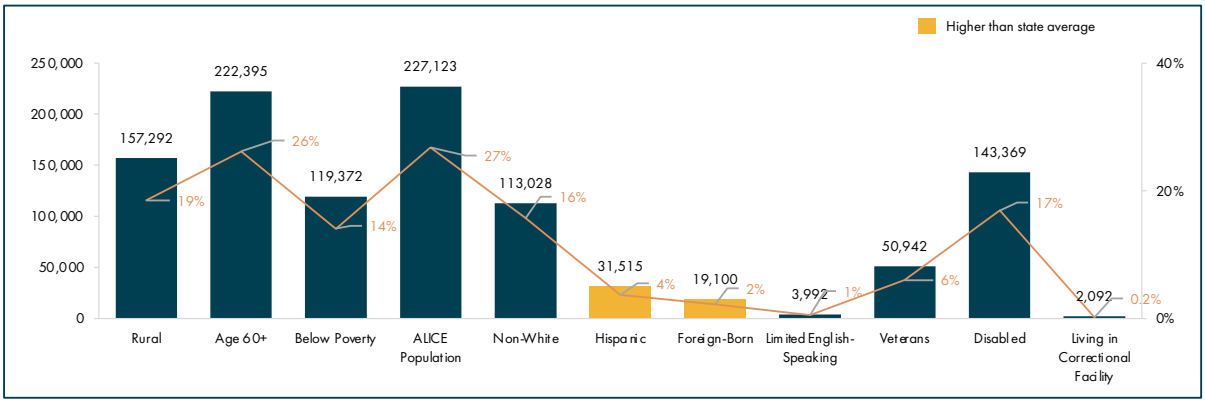
Prosperity Region Six: East Michigan

Includes the counties of: Genesee, Huron, Lapeer, Sanilac, Shiawassee, St. Clair, and Tuscola.

Digital Equity Profile

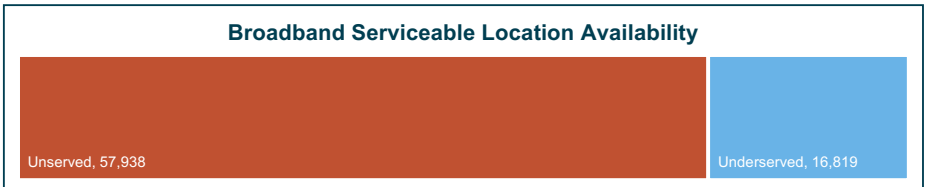
848,973
Population

The region is located in the eastern part of Michigan's Lower Peninsula, often referred to as Michigan's "Thumb," and includes the Flint metro area. The region has a smaller rural population than more northernly regions but has a higher proportion of aging individuals and those in poverty and defined as ALICE.

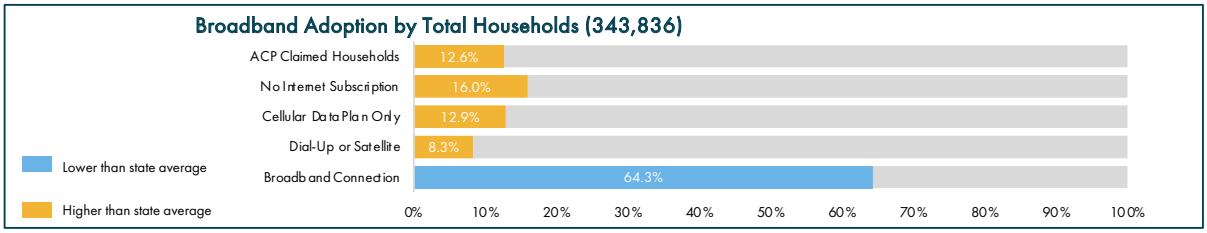


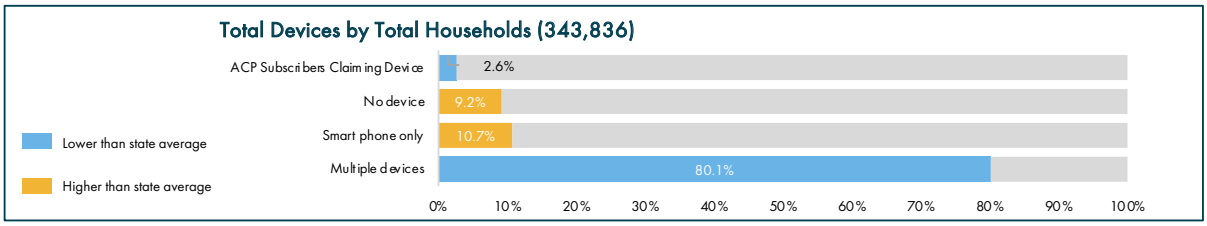
Broadband Availability

384,174
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.64
Affordability	2.89
Digital Literacy/Skills	1.93
Devices	1.54

Higher than state average

- Home broadband adoption is slightly lower than the state average and rates of connecting with dial-up, satellite, and cellular data plans are also slightly elevated. The rate of homes with multiple devices is slightly less than the state average as well with elevated rates of smart phone only and no device households.
- The region prioritized availability and digital literacy/skills higher than the state average.

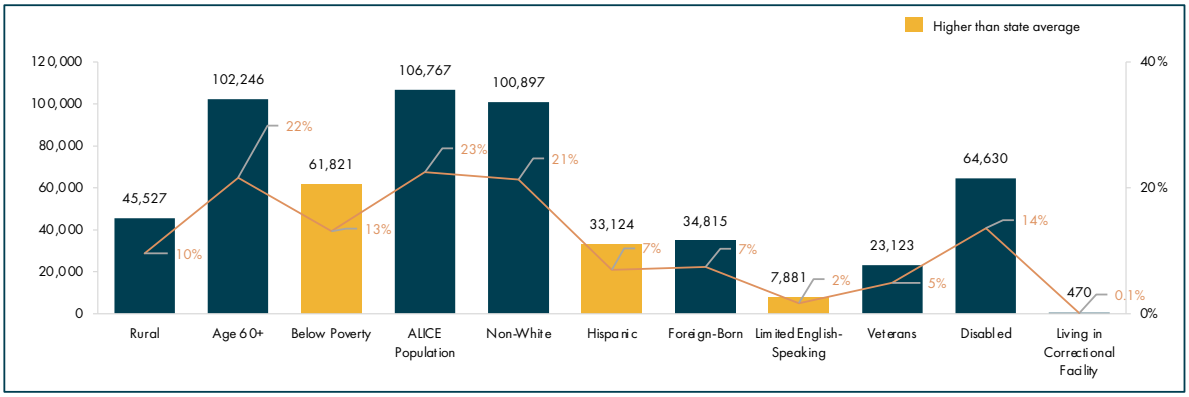
Prosperity Region Seven: South Central

Includes the counties of: Clinton, Eaton, and Ingham and is in the southern part of Michigan's Lower Peninsula and includes the Lansing metro area.

Digital Equity Profile

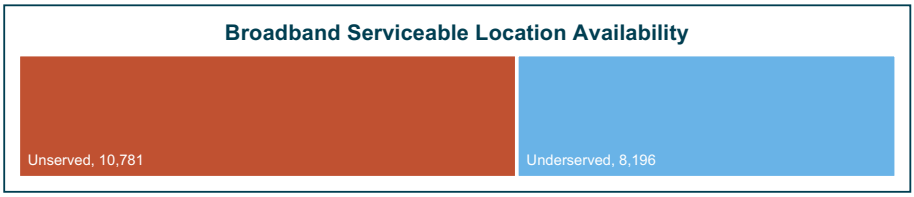
473,527
Population

The region has a higher rate of poverty than the state average, as well as a higher proportion of Hispanic and limited-English speaking residents.

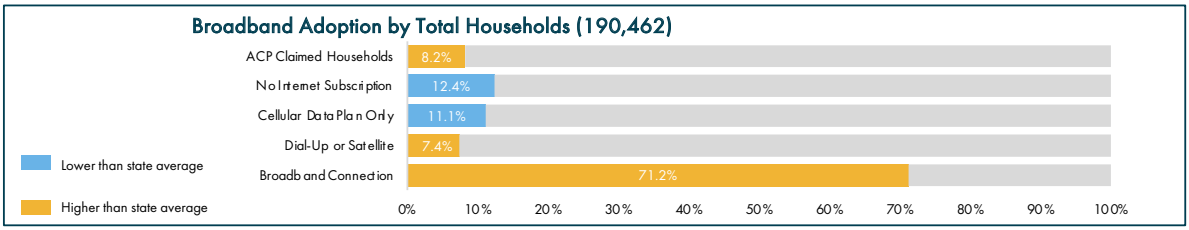


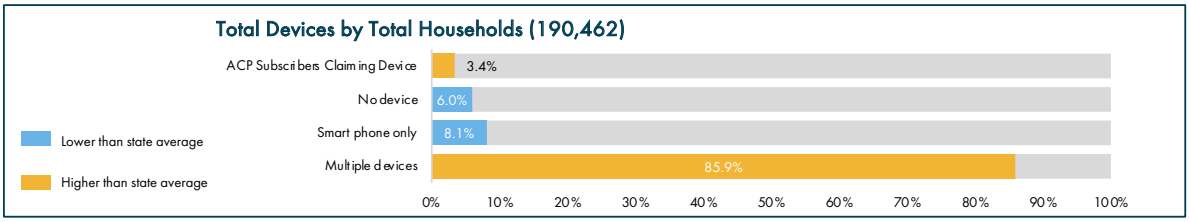
Broadband Availability

165,439
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.52
Affordability	2.86
Digital Literacy/Skills	1.83
Devices	1.60

Higher than state average

- Home broadband adoption is higher than the state average, but the area has a higher reliance on dial-up and satellite services, likely in the more agricultural rural areas.
- The Regional priorities are slightly elevated for availability and devices, but overall, closely match the state average priorities.

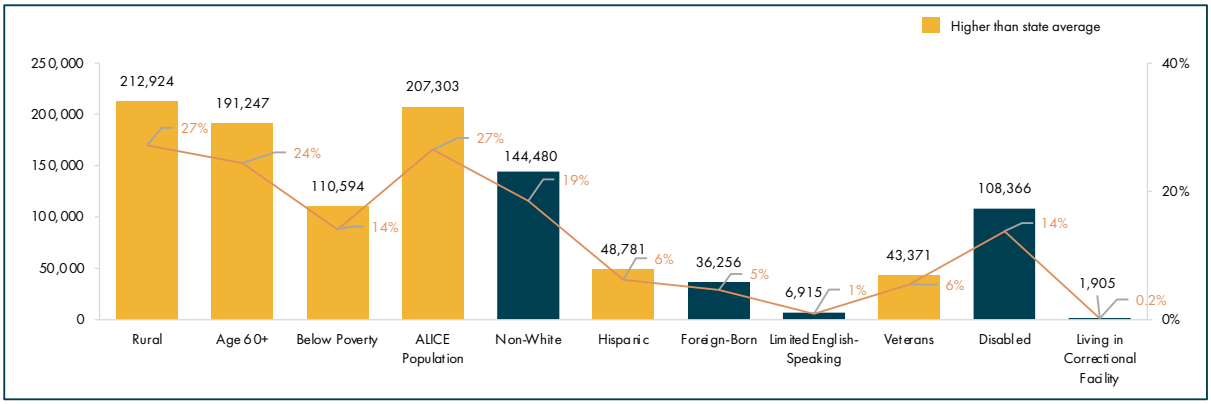
Prosperity Region Eight: Southwest

Includes the counties of: Berrien, Branch, Calhoun, Cass, Kalamazoo, Van Buren, and St. Joseph and is in the southwestern part of Michigan's Lower Peninsula.

Digital Equity Profile

782,437
Population

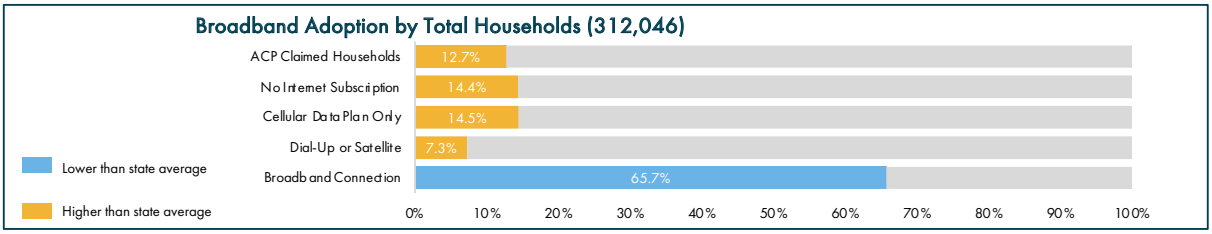
Region has scattered aging, rural population that's less affluent than state. The region also has high proportion of Hispanic residents and veterans.

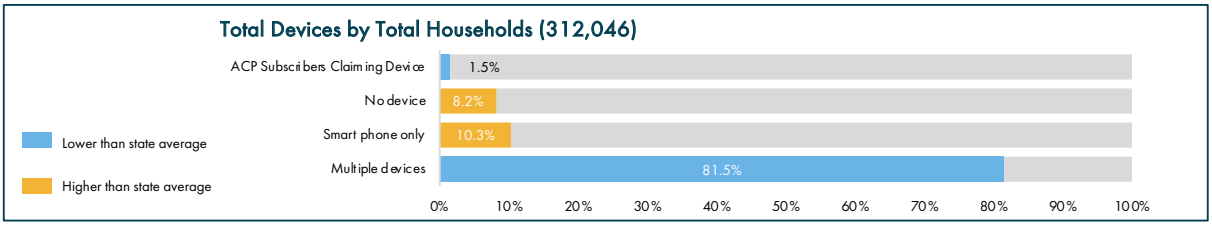


Broadband Availability

332,518
Total Broadband Serviceable Locations

Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.45
Affordability	2.95
Digital Literacy/Skills	1.94
Devices	1.55

Higher than state average

- Home broadband adoption is lower than state average and many households rely on dial-up, satellite, or cellular data plans to connect, or simply don't have an internet subscription. Device ownership is also slightly less than state average.
- Regional priorities elevate digital literacy/skills over the state average, but priorities among the four digital equity priorities close match those of the state as a whole.

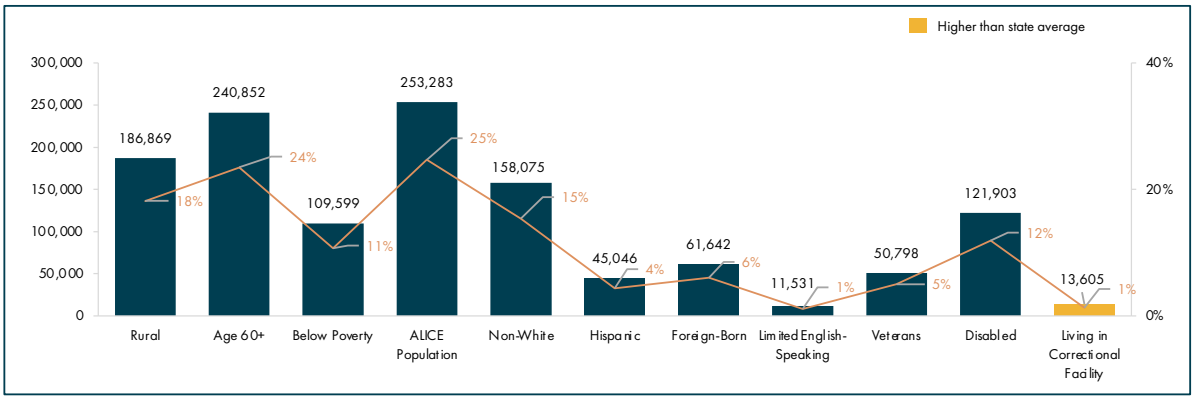
Prosperity Region Nine: Southeast Michigan

Includes the counties of: Hillsdale, Jackson, Lenawee, Livingston, Monroe, and Washtenaw and is located in the southeastern corner of Michigan's Lower Peninsula.

Digital Equity Profile

1,025,514
Population

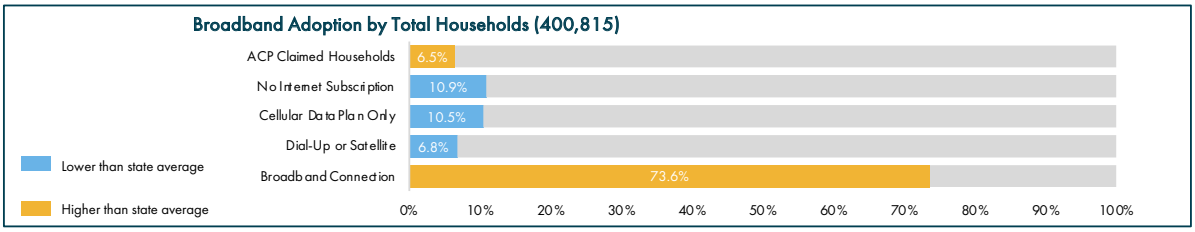
Much of the region is representative of the statewide proportions of covered population, with the exception of those living in correctional facilities.

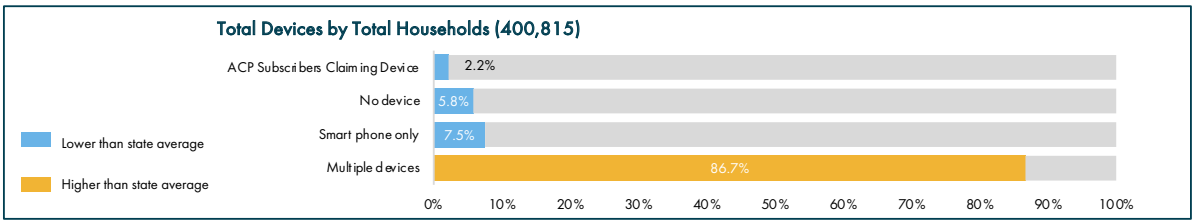


Broadband Availability

383,024
Total Broadband Serviceable Locations

Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	3.65
Affordability	2.99
Digital Literacy/Skills	1.88
Devices	1.52

Higher than state average

While the region has higher rates of home broadband adoption than the state and other regions, availability and affordability have been identified as regional priorities.

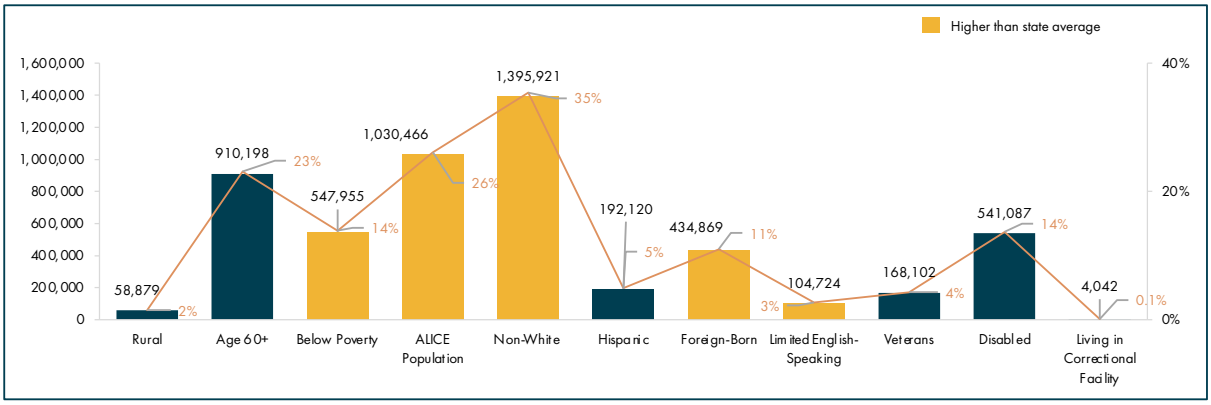
Prosperity Region Ten: Detroit Metro

Includes the counties of: Macomb, Oakland, and Wayne and is located in the southeastern part of Michigan and is home to the state's largest city, Detroit, and its metropolitan area.

Digital Equity Profile

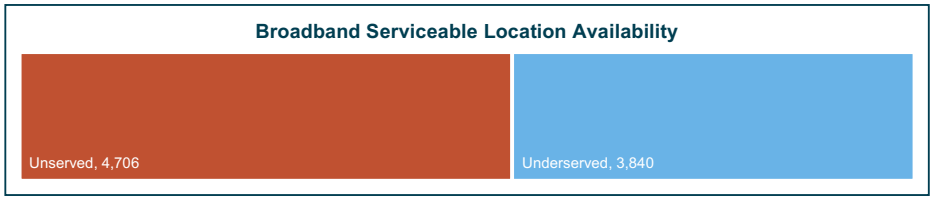
3,940,887
Population

The region has a higher proportion of those in poverty and ALICE. The region is also more demographically diverse with higher proportions of non-white, foreign-born, and limited English-speaking residents than the state as a whole.

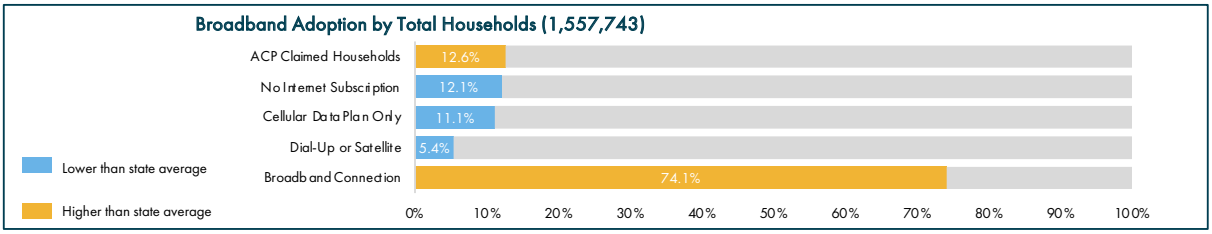


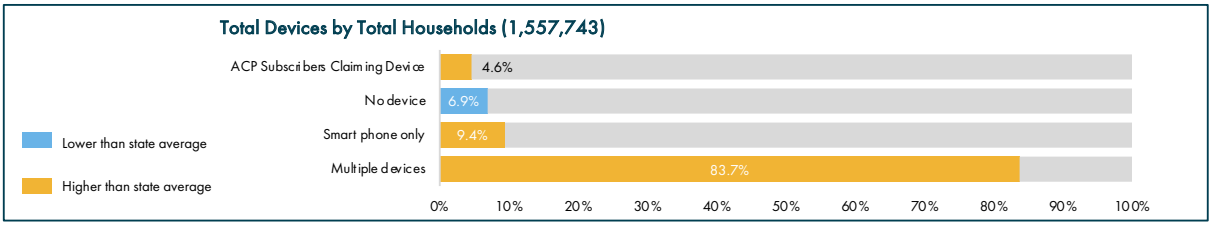
Broadband Availability

1,359,185
Total Broadband Serviceable Locations



Broadband Adoption and Devices





Digital Equity Priorities

Digital Equity Priorities	Importance Rank
Availability	2.98
Affordability	2.98
Digital Literacy/Skills	2.38
Devices	1.68

Higher than state average

- Home broadband adoption is higher than the state and other regions as is device ownership.
- Region Ten did not prioritize availability as high as other regions, but affordability, digital literacy/skills, and devices are more a priority for this region than the state as a whole.

Regional Profile Summary

Michigan has an ever-changing tapestry of residents that evokes an evolving approach to addressing the digital equity needs of the state. Notably, among the covered populations outlined in the Digital Equity Act, nearly one-quarter of the state's residents are aged 60 or more, and nearly one-quarter are non-white. Additionally, while 13% of the population lives at or below the federal poverty line, approximately one-quarter of the state's residents are ALICE. These characteristics, as well as those of other covered populations, suggest a set of diverse digital inclusion needs that span across the state.

According to the latest FCC data, Michigan has nearly 500,000 homes and businesses that are either unserved or underserved by high-speed internet infrastructure. This is a higher proportion of un/underserved than other large states as evidence by Michigan's BEAD allocation. While having the 10th-highest population in the country, Michigan's BEAD allocation of funds was fourth largest.

As of the June 15, 2023, FCC National Broadband Map, nearly one-half million locations in Michigan are identified as unserved or underserved. The geographic distribution of un/underserved locations in the state follows expected patterns and can be found in the rural areas of the northern Lower Peninsula and Upper Peninsula. The widespread agricultural and small-town communities of southern Michigan are prone to higher levels of un/underserved locations as well.

While broadband availability is one matter, adoption of a connection in the home is another. Across the state, approximately 70% of households subscribe to a broadband connection. The remainder either do not have an internet subscription at all (13.3%) or seek out alternative methods of connectivity such as dial-up or satellite (6.9%) or cellular hot spot (12.4%).

When it comes to internet-connected devices in the home, 83.2% report having multiple devices to support their connectivity. Nearly 10% of households, however, report having only a single smartphone to support their home's connectivity, and another 7.6% report having no device at all.

In terms of priorities, participants in MIHI's MI Connected Future listening tour prioritized service availability far above other issues. This is anticipated given the pervasiveness of the un/underserved locations across the state. Affordability of service was the second priority among Michiganders, followed then by digital literacy/skills and devices. It is clear that ensuring the universal availability of high-speed internet is a priority for Michiganders, and that once those connections are available, that they are affordable to all. These state-level priorities vary by region, thus the need for prioritizing different digital inclusion interventions and foci across the state.

The availability of high-speed internet service is a clear priority for the state and its regions. Ensuring access to service for all is a goal shared by Michiganders, the MIHI Office, and the BEAD Program. Available connections, however, need to be affordable for those they serve, a clear secondary priority among listening tour participants. While digital literacy/skills and devices received a lower relative priority ranking compared with availability and affordability, these aspects of digital equity can come only once affordable, reliable, high-speed networks are available to all. MIHI anticipates seeing priorities shift to digital literacy/skills and devices once the BEAD program begins to deliver affordable connectivity to all.

Michigan's regions vary greatly in their digital equity and inclusion needs and the populations among which digital equity efforts need to be focused. Participant feedback on priorities gathered during the MI Connected Future listening tour further validates the needs and gaps that exist across the state. The data on covered populations and identified priorities will guide the implementation of this plan as well as the statewide Digital Equity Plan.

Workforce

The MIHI Office acknowledges the importance of engaging the existing broadband workforce in Michigan as well as empowering the growth of the workforce to meet the needs of the BEAD Program. We have identified key areas of need and developed plans to fulfil them.

The below chart highlights identification and plans to address known or potential obstacles and gaps related to workforce:

Identification	Plan(s)
Michigan is facing a projected worker shortage in 12 NTIA-identified occupation groups. The most significant occupation groups impacted by projected shortfall are "laborers and material movers," "trenchers," and "inspectors," which are facing a 11.9%, 10.4%, and 9.8% shortfall, respectively.	MIHI is actively partnering with the workforce development division of LEO to creatively solve these shortfall projections. Upcoming workforce strategies highlight the importance of diversity, equity, and inclusion to expand the labor pool to those not historically represented in the construction industry.
Criminal history as barrier to employment	Michigan launched the "Clean Slate" Pilot Program to support justice-involved individuals to expunge their records and obtain meaningful employment. Clean Slate is run through Michigan Works! Associations and expunges certain infractions from an individual's record, including minor traffic infractions, misdemeanor marijuana possession/use, or if a person has not received additional convictions during certain time frames (dependent on infraction class and number of infractions).

Table 7: Michigan Broadband Workforce Obstacles, Gaps, and Plans for Mitigation

Workforce gaps are top of mind for Michigan policymakers and agencies, especially as Michigan is entering the time for unprecedented broadband infrastructure deployment. MIHI is leveraging existing workforce development structures within the state given the vast network stewarded by our Workforce Development division. Partners in this space are eager to engage with MIHI to support workforce growth in their respective capacities.

MIHI partners with LEO Employment and Training to support relationship building among the Michigan Community College Association (MCCA), the Michigan Association of Intermediate School Administrators (MAISA), and Michigan Occupational Dean's Advisory Council (MODAC). Additionally, LEO houses the Michigan office of Registered Apprenticeships, which provides supportive services and funding for employers of apprentices. The GoingPRO Talent fund supports employers in reskilling new workers and ensures a pathway to credentialling as part of the involvement in the program. GoingPRO is housed in the WD division.

Some other programs include the Michigan Youth Apprenticeship Readiness Network (MiYARN), which aims to expand youth registered apprenticeships by partnering with regional entities, and the Michigan Learning and Education Advancement Program (MiLEAP), which supports in the transition from education and training programs to high-wage jobs. MiLEAP focuses on underrepresented populations, particularly that of economically distressed rural and urban areas.

Outlined below are relevant plans, strategies, and programs LEO and other State of Michigan Departments have in place. This list is not exhaustive in nature.

Agency	Strategy/Plan/Program
Michigan Economic Development Corporation (MEDC)	$34 million talent attraction and retention strategy targeting students, job seekers, and industry professionals in key growth areas (e.g. EV mobility, telecommunications, and semiconductor industries).
MEDC	STEM-Forward Internship program connects students who attend Michigan colleges and universities with paid internship opportunities in STEM-focused careers.
LEO — Michigan Science, Technology, Engineering, and Math (MiSTEM) Network	Removing barriers to employment by increasing the implementation of project-, problem-, and place-based education-based instruction in K-12 schools in Michigan and expose 200,000 students to STEM careers.
LEO — Workforce Development, Education and Training (E&T)	Addressing talent shortages by engaging and creating customized targeted solutions to meet employer needs by: • Establishing and strengthening existing employer-led collaboratives (ELCs) • Aligning career pathways and educational credentials that lead to transferrable skills and increased wages for job seekers
LEO — E&T; MEDC	Expand talent in Michigan by upskilling and reskilling Michiganders and leverage resources resulting in 7,500 postsecondary credentials by: • Promoting tuition-free pathways to obtain postsecondary credentials; • Expanding relationships with secondary and postsecondary education providers to improve job outcomes for students with disabilities; and, • Boosting apprenticeship opportunities to obtain industry-recognized credentials.

Agency	Strategy/Plan/Program
LEO — E&T; Michigan Works! Agencies	Expand Michigan's labor force by providing job readiness services to 800 people by conducting outreach activities and supporting eligible persons experiencing barriers to employment to re-enter the labor force.
LEO — Office of Prosperity; Women's Commission	Help 50,000 Michigan women re-enter or remain in the workforce with support of the Tr-Share Child Care program and the MI Fostering Access, Rights and Equity (MI FARE) program. MI FARE is designed to educate women workers about their employment rights and benefits.
Michigan Department of Corrections (MDOC)	MDOC operates a skilled trades training program that aims to provide a positive learning community for prisoners who are serious about completing career and technical education. Prisoners complete training at the vocational village located in the state prion facilities. Career paths include (but are not limited to): • Commercial Driving License and Forklift Operation • Carpentry • Electrical • Computer Coding • Computer Numerical Control Machine Tooling and Robotics • Line Clearance and Tree Trimming

Table 8: Existing Plans, Strategies, and Programs for Addressing Workforce in Michigan

Obstacles and Barriers

The purpose of this section is to proactively identify the obstacles or barriers that Michigan may encounter as it implements the BEAD Program—and more generally, as it addresses issues related to broadband deployment and digital inclusion. Each barrier contains a description of the barrier and a reference to the relevant Priorities or Key Strategies found in the Implementation Plan that will address the barrier.

Deployment Barriers

The MIHI Office has identified several obstacles and barriers that could hinder the successful implementation of the BEAD Program, specifically regarding the deployment of new high-speed internet networks. The following organizes and summarizes these obstacles and barriers and provides context for how they could impact broadband deployment.

Legislative or Regulatory Barriers

The broadband deployment ecosystem has a light regulatory framework. However some aspects of this framework could impact the success of the BEAD Program. These obstacles include the pole attachment process, state and local taxes, municipal participation as an ISP, the capacity of the Michigan Utility Notification Center, and mandates for facilities relocation. Other regulatory barriers include permitting; however, permitting is given its own section given the layers of permitting required for deployment.

Pole Attachment

Pole attachments refer to the cables, wires, and other equipment that are attached to utility poles to provide broadband services. While these attachments are essential for delivering broadband services to customers, they can also be a barrier to broadband deployment for several reasons, including high fees, delays in make-ready, limited physical space on the pole, denial of access, and the need to replace aging or damaged poles.

In Michigan, pole attachment authority is regulated by the Michigan Public Service Commission (MPSC). The MPSC has authority over investor-owned utilities in the state, including electric and gas utilities, and it regulates the rates, terms, and conditions of pole attachments. The MPSC has adopted rules and regulations to govern the process of obtaining pole attachments, including the application and approval process, the rates and fees charged by pole owners, and the terms and conditions of attachment agreements. Additionally, some municipalities in Michigan have their own municipal utilities with their own ordinances and regulations regarding pole attachments, which may supplement or differ from the state-level regulations. In those cases, providers seeking pole attachments will need to comply with both state and local requirements.

Overall, pole attachments can be a significant barrier to broadband deployment, particularly for small or new providers. Reducing the cost and complexity of obtaining pole attachments, increasing access to poles, and creating consistent regulations and policies can help to promote broadband deployment and increase access to high-speed internet.

Solution: Streamline permitting processes and coordinate deployment planning.

Barriers to Municipal Participation

Michigan state law allows public entities to provide broadband services, but only if the public entity has first sought bids in the form of a request for proposal (RFP) on the project from private companies and has only received fewer than three "qualified" bids. The public entity must also adhere to the same terms and conditions that private companies would need to meet as specified in the request for proposals. Doing so effectively eliminates some of the benefits that building a public network can offer residents.

Municipalities and local units of government are deeply aware of the needs and desires of their residents, businesses, and institutions, and virtually all local leaders recognize the benefits their communities will experience from expanded and improved connections. The Michigan Legislature recognized the importance of local leadership and various options for public involvement in BEAD projects with the following language in Public Act 119 of 2023 that appropriated the BEAD funding to the Department of Labor and Economic Opportunity:

> **"The department shall consider cooperatives, nonprofits, public-private partnerships, private companies, public or private utilities, public utility districts, or local governments for eligibility to deploy and access broadband funds appropriated in part 1 and shall not unduly favor any of these entities."**

It remains important to note that not all local units of government are interested in acting as an internet service provider. Local officials and their staff have myriad responsibilities and significant current workloads that could make it difficult to take on a broadband deployment project. MIHI is committed to ensuring that communities and local leaders have opportunities to be engaged and involved with BEAD projects, irrespective of whether the project is led by a public, private, or nonprofit entity.

Solution: Empower communities through engagement and involvement.

Utility Notification and Flagging Capacity

Utility notification programs are used by utilities to notify other parties, such as ISPs, of planned work that may impact existing infrastructure, such as roads or utility poles. Flagging programs, on the other hand, involve physically marking the location of underground utilities to prevent damage during excavation or construction work.

The Michigan Utility Notification Center (MISS DIG) is the state's only utility safety notification system. If both programs do not have the capacity to handle demand, it can lead to delayed notification of planned utility work, which can disrupt services and result in costly and time-consuming delays.

Similarly, if flagging programs are not able to keep up with demand, it can increase the risk of damage to underground utilities during excavation or construction work. The lack of capacity in both programs can create significant safety risks for workers and the public. If utility work is not adequately marked or notification of planned work is delayed, it can create hazardous conditions for workers and increase the risk of accidents or injuries.

Solution: Coordinate deployment planning.

Permitting

Broadband network deployment in Michigan requires permits from multiple authorities, including local governments, county governments, state agencies, and federal entities. The requirements and processes for obtaining permits vary among these authorities, leading to inconsistencies and delays in the permitting process. Additionally, a lack of standardized requirements for similar work can lead to confusion and inconsistency in the permit application process, as well as potential delays and additional costs for applicants. This lack of standardization also applies to permitting fees and timelines among the various and sometimes overlapping permitting authorities.

Federal Permitting

Michigan has several federally managed lands, including national parks, national lakeshores, national forests, national wildlife refuges, among others. These federal lands represent significant opportunities for outdoor recreation and conservation but can pose barriers to high-speed internet expansion. The permitting process for building networks across federal lands can be complex and lengthy and involve multiple agencies and regulations. Federal timelines for approval are often lengthy and are often longer. It is worth noting that the permitting process can vary depending on the agency, the type of land involved, and other factors.

Solution: Coordinate deployment planning.

State Permitting

The Michigan Infrastructure Office leads implementation of Executive Directive 2022-06, which Governor Whitmer issued on June 1, 2022, and which directs MIO to create and implement a streamlined permitting process for large infrastructure projects with a total cost of more than $50 million and, in a later phase, will expand the process to cover additional projects. ED 2022-06 requires MIO to convene all relevant state departments and agencies to develop a coordinated permitting process for each large infrastructure project. Additionally, it requires state departments and agencies to create publicly available permitting schedules offering clear timelines and avoiding duplication of efforts. Finally, it instructs MIO to develop a public permitting dashboard[30] to track progress of projects and ensure that all projects meet environmental and climate resilience goals. MIHI will continue to support streamlined permitting processes, standardization, and coordinated planning for BEAD projects, particularly those processes detailed below.

Environmental

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) is the primary entity responsible for approving environmental permits for broadband deployment. EGLE is the state agency charged with protecting Michigan's environment and public health through a variety of regulatory programs and initiatives. EGLE is responsible for administering several state and federal environmental laws and regulations that may apply to broadband deployment projects, including the Michigan Environmental Protection Act, the Natural Resources and Environmental Protection Act, and the federal Clean Water Act and Clean Air Act.

Entities seeking to deploy broadband infrastructure in Michigan may need to obtain one or more environmental permits or approvals from EGLE, depending on the nature and location of the project. These activities may include permits for activities such as wetland mitigation, stormwater management, air emissions, and water quality.

30. https://somgovweb.state.mi.us/miinfrapermits/

The timeline and process for obtaining an environmental permit from EGLE for broadband deployment can vary depending on the nature and location of the project and the completeness of the permit application and lead to extended project timelines. EGLE aims to complete the permit review process as quickly as possible while ensuring that the proposed project meets all applicable environmental regulations and requirements.

Cultural and Historical

Permits for cultural and historic significance related to broadband deployment are typically approved by the Michigan State Historic Preservation Office (SHPO). The SHPO is part of the Michigan State Housing Development Authority (MSHDA) and is responsible for reviewing and approving permits for projects that may impact cultural or historic resources in Michigan. When an entity seeks to deploy broadband infrastructure that may impact cultural or historic resources, they should consult with SHPO to determine if a permit is required. If a permit is required, the entity will need to submit an application to SHPO that describes the proposed project, the potential impacts on cultural or historic resources, and any mitigation measures that will be taken to minimize those impacts.

SHPO will then review the application and any accompanying documentation and may request additional information or studies if needed. Once SHPO determines that the proposed project is compliant with applicable cultural and historic preservation laws and regulations, a permit will be issued.

State Rights-of-Way

In Michigan, the Michigan Department of Transportation (MDOT) is the entity that approves permit requests for installing broadband infrastructure within a state-owned right-of-way. MDOT has established policies and procedures for issuing permits to entities seeking to install broadband infrastructure within the state's right-of-way. These policies and procedures are designed to ensure that broadband infrastructure is installed safely and efficiently, without disrupting other transportation activities or damaging the environment. Entities seeking to install broadband infrastructure within a state-owned right-of-way in Michigan must submit a permit application to MDOT, providing detailed information about the proposed infrastructure, including the route, design, and potential environmental impacts.

The permit application will be reviewed by MDOT to ensure compliance with applicable laws, regulations, and policies. If the application is approved, the permit may include conditions or requirements to ensure compliance with relevant laws and regulations, as well as technical specifications for the broadband infrastructure and requirements for restoration of the right-of-way after installation. MDOT aims to review and approve permit applications as quickly as possible while ensuring compliance with applicable laws, regulations, and policies. It is also worth noting that MDOT may require additional permits or approvals from other agencies before issuing a right-of-way permit, which can further affect the timeline.

Solution: Streamline permitting processes, standardize processes and supporting documentation where possible, and coordinate deployment planning.

Local Permitting: **City, Village, Township and Rights-of-Way**

On March 14, 2002, Act 48 of the Public Acts of 2002, created the Metropolitan Extension Telecommunication Rights-of-Way Oversight (METRO) Authority, whose purpose was to assist telecommunications providers cut through red tape and obtain permits without having to pay excessive fees or endure unnecessary delays. On October 1, 2014, the powers, duties, functions, and responsibilities previously vested in the METRO Authority under the METRO Act, 2002 PA 48, as amended, were transferred to and vested in the Local Community Stabilization Authority (LCSA).

The METRO Act streamlines the process for telecommunications providers seeking to obtain rights-of-way permits in designated metropolitan areas. The Act set common fees and a maximum permit approval period. The METRO Act does not cover the permitting process for county rights-of-way. The METRO Act does not necessarily present a barrier or obstacle to the success of the BEAD program, but it is important context for infrastructure deployment and a potential model to streamline permitting and access to other rights-of-way.

County Rights-of-Way and Drains

To install broadband infrastructure in a Michigan's county right-of-way (ROW), providers need to obtain permits from the county. Electronic permit/payment options are used by approximately half of Michigan counties, making it easier for companies to obtain ROW permits. All Michigan county road agencies have been trained on the state's broadband regulations. This has brought some consistency to the permits, the permitting platform, and fees charged. It also contributes to the speed of permit issuance once contractor paperwork is complete.

However, the definition of a project (which cannot be an entire township/county on a single permit) and the depth and placement of the broadband infrastructure can vary from one county to the next. Due to ROW complexity, urban areas may require more oversight and specialization. Each county road agency has the statutory responsibility in Michigan to ensure motorists' safety, ensure the agency's ability to maintain the road and shoulder, and to protect infrastructure in the ROW, including the broadband infrastructure. As internet service providers seek to deploy network infrastructure, it is very important to contact a county road agency's permitting professional early in the process. The agency may need to visit the site to ensure infrastructure is being properly placed.

Permit holders and applicants should be aware that 1) there is other infrastructure in the ROW, 2) there may be future development plans, and 3) the presence of other considerations not readily apparent. The County Road Association of Michigan has a short video available on how broadband contractors and workers can assist streamlining project approval and permit issuance. To install broadband infrastructure near or across county or intercounty drains, internet service providers must obtain permits from the county drain commissioner or water resources commissioner (or the intercounty drain drainage board). Recognizing existing drain easements and the crucial nature of stormwater infrastructure, internet service providers should be aware that the drain permit process can take time.

Providers can communicate early and often with county drain and water resource offices to ensure a timely permitting process. In addition to the permitting process, there are concerns related to the physical infrastructure of county and intercounty drains, such as the possibility of damaging drainage systems during construction or installation of broadband infrastructure. Early and frequent communication can alleviate some concerns and issues in the drain permitting process.

Solution: Streamline permitting processes, coordinate deployment planning, and leverage community inputs.

Railroad Crossings

Railroad crossings have frequently been pointed to as an impediment to broadband deployment in Michigan, with those who make this point citing complex and lengthy permit processes and, in some instances, expensive insurance or indemnification agreements or other restrictions that were incompatible with a broadband deployment project. With that said, like county road associations and county drain commissioners, railroads have an obligation to protect public safety. At the time this Five-Year Action Plan is being submitted, the Michigan Supreme Court has received an application for leave to appeal a decision issued by the Michigan Court of Appeals in February 2023 that would impact the installation of telecommunications facilities under a railroad crossing.

Whatever the ultimate disposition of this case, effective communication between railroads and internet service providers will remain important. It is demonstrable that many delays that have been experienced in securing permits for broadband deployment projects can be attributed to incomplete applications and documentation, and that early and frequent communication between an internet service provider and a railroad can prevent such difficulties.

Solution: Coordinate deployment planning.

Workforce

Labor and workforce shortages create significant barriers to broadband deployment by limiting the availability of skilled workers for construction, installation, maintenance, and customer support. These shortages can cause delays and increase costs for broadband providers, as well as reduce the reliability of broadband services for customers. The shortage of skilled workers can also limit the ability of smaller broadband providers to compete with larger providers, as they may struggle to attract and retain skilled workers. The deployment of broadband infrastructure requires not only a skilled workforce, including engineers, construction workers, and technicians, but also general laborers, material movers, and trucking crews.

If there are shortages of skilled workers in these fields, it may be more difficult to deploy broadband infrastructure quickly and efficiently. The NTIA provided MIHI with an analysis of BEAD's occupational demand on Michigan's workforce and which occupations have broader cross-industry deficits.

The following chart shows the anticipated BEAD Demand and Cross-Industry Deficits by occupation group.

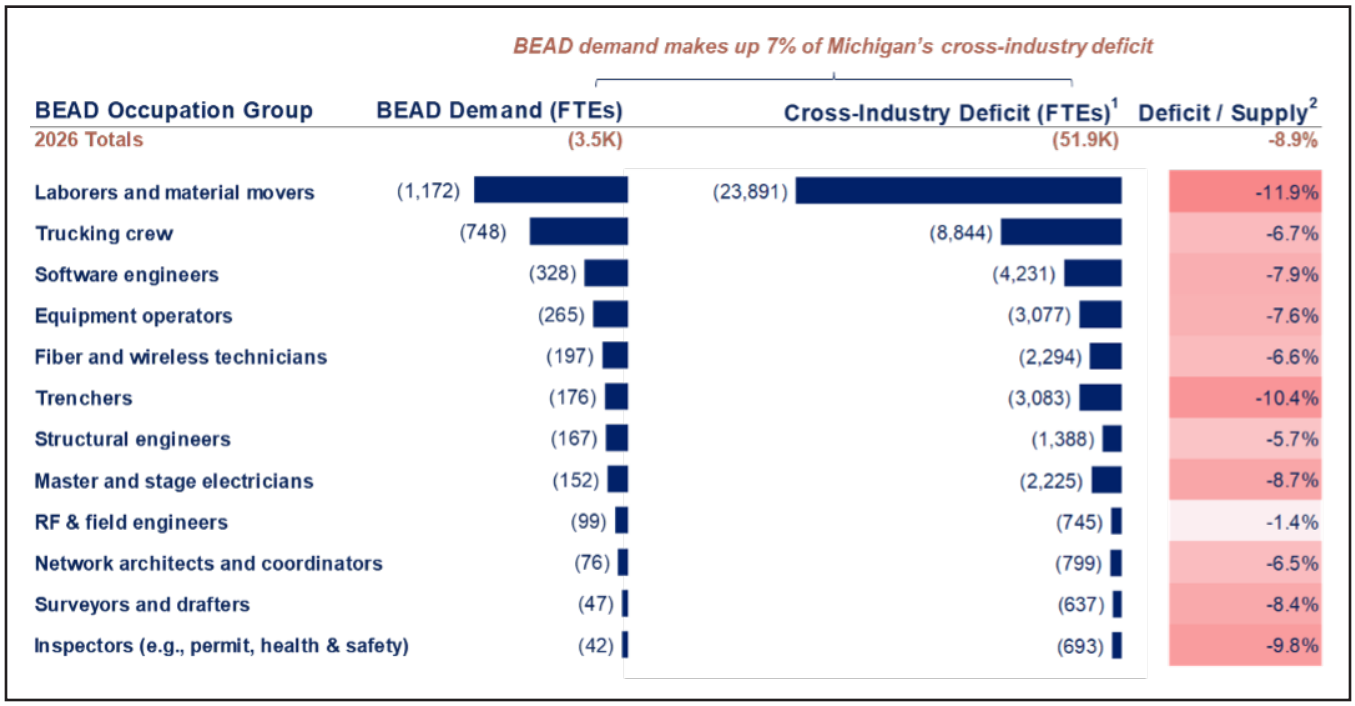


Figure 8: BEAD Demand and Cross-Industry Gaps by Occupation Group

As shown, BEAD alone is estimated to have a deficit of 3,500 positions by 2026, the majority of which are represented in the laborers and material movers and trucking crew occupation groups. These two groups also represent the largest cross-industry deficits in the state. Small gaps exist in the more BEAD-specific occupation groups such as network architects and coordinators, RF and field engineers, and fiber and wireless technicians. There will likely be competition for workers between the BEAD projects and other large infrastructure projects happening in the state, such as road construction and in particular energy or other utility-related projects. This competition for workers may make it more difficult to find enough skilled workers to complete broadband projects on schedule.

Additionally, in Michigan, weather patterns may impact the ability to deploy broadband infrastructure throughout the year. Contracted firms and labor, seeking continuity of employment and revenue, often seek opportunities in warmer climates during the winter months. While the deployment of broadband is not as sensitive to winter weather construction compared to other infrastructure types, the general migration of contractors to warmer climates can impact the availability of such work in Michigan.

Solution: Prioritize workforce development plans and support job training programs.

Supply Chain and Materials

Supply chain and materials shortages can create significant barriers to broadband deployment by limiting the availability of key components and materials needed for the construction and maintenance of broadband infrastructure. These shortages can cause delays, increase costs, and impact the quality and reliability of broadband services. The COVID-19 pandemic has further exacerbated these supply chain and materials shortages due to disruptions in global shipping and manufacturing. The following summarizes key obstacles and barriers in the supply chain space.

Limited Availability of Materials

The deployment of broadband infrastructure requires a wide range of materials, including fiber optic cable, wireless equipment, and utility poles. If there is limited availability of these materials due to high demand or supply chain disruptions, it may be more difficult to deploy broadband infrastructure quickly and efficiently.

Semiconductors

Semiconductors are used in a wide range of electronic devices, including broadband networking equipment. The global semiconductor shortage, which began in 2020, has led to supply chain disruptions and delays in the production of networking equipment.

Fiber Optic Cables

Fiber optic cables are the backbone of broadband networks, and the demand for these cables has surged due to the pandemic. The production of fiber optic cables is complex and time-consuming, which has contributed to supply chain disruptions.

Modems and Routers
The pandemic has led to a surge in demand for home internet services, which has resulted in a shortage of modems and routers. The production of these devices has been impacted by the semiconductor shortage, as well as supply chain disruptions.

Network Switches
Network switches are used to connect devices in a network, and the demand for these devices has surged due to the pandemic. The production of network switches has been impacted by the semiconductor shortage, as well as supply chain disruptions.

Batteries
Batteries are used in a wide range of electronic devices, including networking equipment. The global demand for batteries has surged due to the shift toward electric vehicles and renewable energy, which has contributed to supply chain disruptions and higher prices.

Supply Chain Disruptions
The COVID-19 pandemic has exposed vulnerabilities in global supply chains, and disruptions could occur due to transportation restrictions, factory closures, or other factors. Michigan may face delays or higher costs if key components or equipment are not available due to supply chain disruptions.

Additionally, the Build America, Buy America Act, passed as part of the Infrastructure Investment and Jobs Act, has caused concern among many internet service providers and manufacturers in the industry. The Build America, Buy America Act requires that all of the iron, steel, manufactured products (including but not limited to fiber optic communications facilities), and construction materials used in the project or other eligible activities are produced in the United States unless a waiver is granted. The strict enforcement of, or failure to grant waivers of general applicability for broadband network equipment and consumer devices, could significantly delay the implementation of the BEAD Program and prevent states and subgrantees from meeting the timelines outlined in the BEAD Notice of Funding Opportunity.

Competition for Resources

Every state and territory in the United States is investing in broadband network deployment on roughly the same timeline, and there will likely be competition among them for the same resources, such as fiber optic cables and network equipment. This could lead to increased costs and delays if Michigan subgrantees are unable to obtain the necessary resources in a timely manner.

Solution: Coordinate deployment planning and encourage the use of existing infrastructure and assets.

Local Capacity

Broadband infrastructure deployment requires significant planning, coordination, and execution, which can only be achieved when local leadership has sufficient resources and sufficient expertise available. Local leaders play a critical role in facilitating deployment by identifying funding sources, coordinating with internet service providers, and advocating for broadband infrastructure projects.

Furthermore, local leaders are responsible for engaging and educating their communities about the benefits of broadband connectivity. This education is crucial, particularly in rural areas where residents may not have access to high-speed internet and may not understand how broadband can improve their lives.

With that said, local leaders also have myriad other responsibilities to their communities and constituents. In instances where officials and staff are already working at their full capacity, it can be difficult to add additional administrative, public education, and outreach efforts to their workload—even though most local leaders clearly understand the benefits associated with broadband infrastructure deployment and expanded adoption. In short, a lack of capacity can hinder the progress of broadband infrastructure deployment or slow down the process of adoption once networks have been deployed and are available.

It is, therefore, important to build and support local leadership capacity and resources to ensure successful broadband deployment. The following summarizes additional barriers related to local capacity.

Limited Local Resources

Local governments, community organizations, and other entities often invest in broadband infrastructure projects to meet the needs of their residents and businesses, often through public-private partnerships or by providing matching funds for a specific project. If these sources of funding are insufficient, it can be challenging to secure any additional necessary funds for deployment.

Limited Demand for Service

Network deployment requires a sufficient level of demand for service to justify the investment and ongoing maintenance costs. One of the primary factors that influences demand for broadband service is the number of residents and businesses in the area. In areas with a small population, demand for service may be limited, making it difficult to justify the investment needed for infrastructure deployment. While grant programs can offset these costs, areas that are extremely remote with low population density will still struggle to get connected to the relative lack of demand. In addition to location density, there may be a lack of awareness or understanding of the benefits of being connected to high-speed internet in the area. If residents and businesses are not aware of the benefits of broadband service, they may not see a need to subscribe to the service, leading to limited demand.

Lack of Community Engagement

Community engagement is essential to ensure that newly deployed broadband infrastructure meets the needs of local residents and businesses. Without input from the community, infrastructure projects may not reflect the specific needs and challenges of the area, leading to suboptimal outcomes and lower rates of adoption. Additionally, without engagement and feedback from local residents and businesses, there may be a lack of awareness and understanding about the benefits of broadband infrastructure, leading to a lack of demand. A lack of engagement can also hinder the funding and financing of broadband infrastructure projects. Network deployment is expensive, and funding sources may require evidence of local community support to justify investment. Without community engagement, it can be challenging to secure the necessary funding for broadband deployment.

Solution: Empower communities through engagement and involvement; enable variable match requirements based on cost of deployment; prioritize geographically challenged, economically distressed, and historically underrepresented areas; and maximize private sector participation and promote the development of public-private partnerships.

Topography/Geography

Michigan's topography and geography present several challenges to the deployment of broadband internet infrastructure. The state's large size and rural areas make it expensive to install and maintain broadband infrastructure. The terrain, including forests, hills, and waterways, can impede the signal, making it difficult to provide reliable service to remote areas. Additionally, the harsh weather conditions in Michigan can cause damage to the infrastructure, requiring frequent repairs and maintenance. The following summarizes key obstacles and barriers related to topography and geography.

Rural Terrain

Michigan has many rural areas with challenging terrain, such as hills, valleys, forests, inland lakes, and wetlands. These areas can be difficult to access and may require specialized equipment and techniques to install and maintain fiber optic cables and other network infrastructure.

Great Lakes

Michigan is surrounded by four of the five Great Lakes, which can create challenges for underwater fiber optic cable deployment. The Great Lakes have fluctuating water levels, strong currents, and extreme weather conditions that can impact the stability and maintenance of underwater cables or networks deployed along the shoreline of the lakes.

Remote Areas

Michigan has remote areas that are difficult to access, such as the Upper Peninsula and certain parts of northern Michigan. These areas may have limited transportation infrastructure, which can make it challenging to deliver equipment and materials to remote locations or attract a skilled workforce to the area for long periods of time. Many of Michigan's remote areas are federally managed lands such as the Hiawatha and Huron-Manistee National Forests and the Seney Wildlife Refuge.

Winter Weather

Michigan experiences cold and snowy winters, which can create challenges for equipment installation and maintenance and shorten the annual construction season. Additionally, heavy snowfall, ice storms, and freezing temperatures can impact the performance and reliability of broadband network infrastructure and increase long-term maintenance costs.

Environmental Concerns
Michigan has many environmentally sensitive areas, such as wildlife habitats, wetlands, and water bodies. The deployment of broadband network infrastructure will need to comply with regulations related to environmental impact assessments, protected species, and water quality.

Remote Islands
Michigan has several remote islands in the Great Lakes, which require unique solutions for broadband network deployment. These islands have limited transportation options, making it challenging to deliver equipment and materials.

Solution: Coordinate deployment planning, include resiliency and sustainability criteria as part of subprogram requirements, promote the deployment of fiber and define the "Extremely High-Cost per Location," and assess project applications for long-term service and reliability.

Procurement, Contracting, and Industry Participation

Procurement processes and contracting can present significant challenges to the deployment of broadband infrastructure in the state. Procurement processes can be complicated and time-consuming, making it difficult to move quickly and efficiently to deploy broadband infrastructure. Overly complex competitive bidding processes can be a barrier to entry for smaller providers who may not have the resources to participate. Additionally, state and federal regulations can vary, making it challenging to navigate and comply with all requirements and reporting obligations. Finally, contract negotiations can be complex and time-consuming, leading to further delays in the deployment of broadband infrastructure. Some of the key barriers in this category include hefty financial incentives/match requirements; regulatory and reporting burdens; legal liability of grantees; slow and complex processes; a lack of competition among applicants; and limited collaboration. Government processes are thorough and comprehensive to protect public investments; however, overly bureaucratic and complex reporting procedures can create undue burdens on grantees and the grantor.

Solution: Improve participation in the State's subprograms by running a fair and transparent subgrantee selection process and develop, implement subgrantee accountability and compliance strategies, standardize processes and supporting documentation where possible, and coordinate deployment planning.

Knowledge and Communications

Without effective communication, various stakeholders involved in broadband deployment, such as government agencies, service providers, and local communities, may not be able to coordinate their efforts effectively. This can lead to duplication of efforts, delays, and inefficiencies in broadband deployment, as well as misinformation and local resistance to deployment efforts. The following summarizes barriers related to gaps in knowledge and communications.

Accurate and timely data is critical to effective broadband planning and deployment. Without access to comprehensive and up-to-date information about existing infrastructure, demand for broadband, and other relevant factors, it may be difficult to plan and deploy broadband services effectively. Finally, a lack of information and communication can also limit access to resources that are critical for broadband deployment, such as funding, technical expertise, and community support. Without access to these resources, broadband deployment efforts may be stymied, or progress may be slow.

Local Resistance

A lack of community engagement can create local resistance to broadband deployment. In some cases, community members may be resistant to infrastructure projects due to concerns about privacy, security, or property rights. Without effective community engagement, educational programs, and capacity-building efforts, these concerns may not be addressed, leading to opposition that can stall or even halt the deployment process.

Misinformation

Misinformation can create significant challenges for broadband deployment efforts. It is crucial to address misinformation by providing accurate and clear information about the benefits, costs, and safety of broadband deployment. Misinformation can be a significant barrier to successful deployment in several ways:

False Claims about Health and Safety

False claims about the health and safety risks of broadband deployment, such as radiation exposure, can generate fear and resistance among communities. This can lead to delays or cancellation of broadband projects.

Misconceptions about Costs

Misconceptions about the costs of broadband deployment can lead people to believe that broadband is too expensive or not worth the investment. This can reduce support for broadband deployment initiatives and slow down the deployment process.

Myths about the Benefits of Broadband

Misinformation may also generate myths about the benefits of broadband, such as the notion that it is only needed for entertainment purposes. This can lead people to undervalue the importance of broadband, making it harder to gain support for deployment initiatives.

False Information about Availability

Misinformation could lead to false claims about the availability of broadband services in a particular area, leading people to believe that it is not necessary to invest in broadband deployment. This can hinder the deployment process by reducing the perceived need for broadband services.

Lack of Topical Knowledge/Awareness

Many people are not aware of the benefits of broadband and may not understand how it can improve their lives. This lack of understanding can lead to resistance or apathy toward broadband deployment efforts. There is also a lack of knowledge among the public regarding the basic technical aspects of high-speed internet availability. The difference in speeds, service quality, delivery technologies, bits vs. bytes, and other aspects of consumer internet service can cause confusion that could manifest as a barrier to deployment, apathy, or ineffective community engagement.

Solution: Empower communities through engagement and involvement, develop awareness strategies, and coordinate deployment planning.

Deployment Barriers Impact Matrix

The following table provides a summary of the aforementioned deployment obstacles and barriers and identifies 1) the estimated impact the barrier may have on the success of the BEAD Program and 2) the likelihood that through the collective action of public, private, and other partners the barrier can be overcome. The estimated impact and the state's ability to address each barrier were determined through engagement with MIHI's Partnership Roundtable and Enabling Partners.

Impact on BEAD

The Impact on BEAD metric in the table below was derived from members of the Partnership Roundtable responding to questions asking how significant they felt each barrier would to the success of the BEAD Program. The table is coded as follows:

How significant will <barrier> be to achieving the goals of universal high-speed internet availability and digital equity in Michigan?	**Not a Barrier**	**Minor Barrier**	**Moderate Barrier**	**Serious Barrier**

Likely to Overcome

The Likely to Overcome metric in the table below was derived from members of the Partnership Roundtable responding to questions regarding the likelihood/ability of the state to address the various barriers. The table is coded as follows:

Please rate the likelihood that the barrier of <barrier> can be overcome through the collective action of public, private, and other interested partners.	**Not Likely**	**Somewhat Likely**	**Probably Likely**	**Definitely Likely**

Deployment Impact Matrix

Category	Barrier	Impact on BEAD	Likely to Overcome
Legislative or Regulatory Barriers	Pole Attachment		
	Municipal Participation		
	Utility Notification and Flagging Capacity		
Federal Permitting			
State Permitting	Environmental		
	Cultural and Historic		
	State Rights-of-Way		
Local Permitting	City, Village, and Township Rights-of-Way		
	County Rights-of-Way and Drains		
	Railroad Crossings		
Workforce			
Supply Chain and Materials			
Local Capacity			
Topography/Geography			
Procurement, Contracting, and Industry Participation			
Knowledge and Communications			

The Impact Matrix is designed to help identify the barriers that are most significant to the BEAD Program success and are likely to be overcome through the collective action of MIHI and its key partners. More can be found on the solutions to these barriers in the Implementation Plan section.

Digital Equity Barriers

Similar to the previous section, the MIHI Office has identified several barriers that could prevent the realization of the state's digital equity and non-deployment goals. The following organizes and summarizes these obstacles and barriers and provides context for how they could impact digital equity and inclusion.

Device Access

Device access is a barrier to digital equity given that not all individuals have access to a device such as a computer or smartphone to access the internet. This lack of access can prevent individuals from participating in digital activities such as remote learning, job applications, and accessing government services. According to the Census, 16.8% of households have only one device or no device at all, and 9.2% of those households rely solely on a single smartphone for their internet access. Greater device access data is provided in each of the regional profiles included earlier in this plan. The following describes the issues associated with device access in greater detail.

Cost

Computers and other devices can be expensive, and not everyone has the financial means to purchase them. This is particularly true for low-income households where the cost of a computer or device can represent a significant portion of their income. Even if individuals or households are able to afford a computer or device, they may prioritize other expenses over purchasing one, such as paying for basic needs like food, housing, and healthcare, and multiple devices may be needed in a home, particular homes with school-aged children.

Obsolescence

Technology is advancing at an incredibly fast pace, which means that newer devices with better features and capabilities are constantly being released. This can make older devices quickly outdated, meaning that they may not be able to handle newer software, applications, or internet speeds.

Additionally, as devices become outdated, they may become more prone to breakdowns and require more frequent repairs, which can be costly and time-consuming. This can be frustrating for users who rely on their device for work or other important tasks and may deter them from investing in home broadband if they feel that their device will not be able to keep up with the demands of a high-speed internet connection.

Additionally, the cost of upgrading to a newer device can be a significant barrier for many users, particularly those with limited financial means. Upgrading to a newer device can be expensive, and may not be feasible for some users, particularly if they have recently invested in an older device.

Technical Support

Many users may not have the technical skills or knowledge required to set up and maintain their device or troubleshoot issues that arise. This can be particularly true for older users or those with limited experience using technology. As a result, they may be hesitant to invest in home broadband if they feel that they will not be able to get the support they need to use it effectively. Furthermore, even users with some technical knowledge may require assistance with more complex issues that arise, such as hardware or software problems. Without access to technical support, users may struggle to address these issues on their own, which can be frustrating and time-consuming. Additionally, technical support can be particularly important in the event of a cyber-attack or other security breach. Without access to timely and effective technical support, users may be unable to respond quickly enough to prevent or mitigate the damage caused by such attacks, which can put their personal information and privacy at risk.

Solution: Establish non-deployment initiatives and align subprograms with the goals and objectives of the state's Digital Equity Plan.

Digital Literacy and Skills

The skills necessary to fully leverage a high-speed internet connection go beyond the basics of how to use a computer, mouse, and keyboard. A lack of digital literacy and other associated skills can be significant barrier to home broadband adoption and digital equity.

Confidence/Limited Technology Experience

A lack of confidence or limited technology experience can be a significant barrier to digital literacy and, in turn, home broadband adoption. When users lack the confidence or experience to use technology effectively, they may feel intimidated or overwhelmed by the prospect of using a computer or other similar device to access the internet.

In turn, these feelings of uncertainty and lack of experience can make it difficult for users to take full advantage of the many benefits of home broadband. For example, they may be less likely to use online resources such as educational tools, job search websites, or online banking services. They may also be less likely to connect with friends and family through social media or other online platforms.

Online Safety and Security

Online safety and security is a significant aspect of digital literacy that can act as a barrier to home broadband adoption. Users who lack digital literacy skills may not be aware of the potential risks and threats that come with using the internet and may not know how to protect themselves from these risks. One of the biggest risks associated with internet use is cybercrime, including malware, phishing, and hacking. Users who lack digital literacy skills may not be aware of these risks or may not know how to identify and avoid them. This can put their personal information and privacy at risk and make them hesitant to invest in home broadband.

Overall, online safety and security is an important aspect of digital literacy that can act as a barrier to home broadband adoption. Users who lack the knowledge and skills necessary to protect themselves online may be hesitant to invest in home broadband, which can limit their ability to take advantage of the many benefits that it offers.

Advanced Online Services

Not being able to access advanced online services is a significant digital literacy barrier to home broadband adoption. Many online services require a certain level of digital literacy to use them effectively. Users who lack the necessary skills and knowledge may find it difficult or impossible to access these services, which can limit their ability to take advantage of the full range of benefits offered by home broadband. Examples of advanced online services that may require digital literacy skills include online banking, distance learning, telemedicine, and e-commerce. Users who lack the necessary digital literacy skills to access these advanced online services may be hesitant to invest in home broadband, as they may feel that they are unable to take advantage of the full range of benefits that it offers.

Solution: Develop awareness strategies that improve adoption through marketing and communication, and establish non-deployment initiatives and align subprograms with the goals and objectives of the state's Digital Equity Plan.

Affordability

Affordability is a substantial issue that impacts home broadband adoption. For many individuals and families, the cost of broadband service can be a significant barrier to adoption, preventing them from accessing the many benefits of an internet connection. This can be especially true for low-income households, which may find it difficult or impossible to afford the cost of broadband service along with other necessary expenses.

The high cost of broadband service can be attributed to several factors, including the availability of service providers in a given area, the quality and speed of the service offered, and the terms of the contract or subscription. In addition, users may also need to purchase or rent equipment such as a modem or router to use the service, which can add to the overall cost.

Most Michigan internet service providers participate in the Affordable Connectivity Program and, in addition, many companies have developed lower-cost service offerings that have been very successful in enrolling participants. With that said, for many low-income households, the cost of broadband service may simply be too high, making it difficult to justify the expense. As a result, these households may rely on other forms of internet access, such as public Wi-Fi hot spots or public computer centers, which may not provide the same level of speed and reliability as home broadband. This can limit their ability to access online resources, communicate with friends and family, and participate in online commerce and education.

The impact of affordability on home broadband adoption is not limited to low-income households. Many middle-class households may also find the cost of broadband service to be prohibitive, especially in areas where there is limited competition among service providers. This can result in a "digital divide" between households that can afford broadband service and those that cannot, which can have long-term social and economic implications.

Additionally, the issues of affordability and awareness or relevance are interconnected. Awareness refers to the level of understanding people have about the benefits of using the internet. People who are not aware of these benefits may not be motivated to invest in broadband or may not understand how to use it effectively. This lack of awareness can lead to a lack of demand for broadband, which can affect affordability.

Relevance, then, refers to the extent to which the content available via the internet meets the needs and interests of different groups of people. If the available content does not meet the needs or interests of a particular group, then they may not find broadband affordable or valuable. For example, if the available content is not available in their language or does not reflect their culture, they may not find broadband relevant.

Overall, affordability is a significant factor that impacts home broadband adoption. By addressing this issue, we can help to ensure that all individuals and families have access to the many benefits of home broadband, regardless of their income level or geographic location.

Solution: Develop awareness strategies that improve adoption through marketing and communication, develop and implement subgrantee accountability and compliance strategies, and prioritize geographically challenging, economically distressed, and historically underrepresented areas.

Inclusivity

Technological inclusivity is impacted by discrimination and bias. Research has shown that the digital divide discriminates based on age, income, race, ethnicity, educational attainment, and geography. Discrimination and bias in relation to digital equity, home broadband adoption, and technology can manifest in several ways:

Socioeconomic Status: Discrimination can also manifest in the form of unequal access to technology based on an individual's socioeconomic status. For example, low-income families may not be able to afford home computers, tablets, or smartphones, and may have to rely on public libraries or schools for access to technology.

Online Harassment: Discrimination can take the form of online harassment and cyberbullying, including racist, sexist, or homophobic hate speech, that can prevent certain individuals or groups from fully participating in online spaces.

Algorithmic Bias: Discrimination can also manifest in the form of algorithmic bias, which occurs when automated decision-making systems perpetuate existing social biases and inequalities. This can result in discriminatory outcomes, such as biased hiring practices or discriminatory loan decisions.

Accessibility

Many people with disabilities face physical barriers that can make it difficult to access technology, such as physical limitations that make it difficult to use a mouse or keyboard, or visual or auditory impairments that make it difficult to see or hear digital content. Assistive technology, such as screen readers or speech recognition software, can help people with disabilities access and use technology. However, many assistive technology solutions can be expensive, and people with disabilities may not have access to the necessary technology or training to use it effectively.

People with disabilities may also face barriers to accessing digital content, such as websites or online applications that are not designed to be accessible to people with visual or auditory impairments. This can limit their ability to access online resources, including educational and employment opportunities.

Geographic Location

Inequality occurs when certain communities are excluded from advanced connectivity due to a lack of investment in networks in low-income communities or those with concentrations of racial or ethnic minorities. Internet service providers may discriminate against minority communities by offering them lower-quality or more expensive broadband services compared with other communities. This practice, known as digital redlining, can exacerbate existing inequalities and limit access to critical online resources. Additionally, rural areas struggle for digital equity as high-speed connectivity is often less likely to be available where they live. Rural areas are less attractive to internet service providers as there are fewer potential customers per mile of infrastructure deployed. Additionally, even when high-speed internet is available in a rural or small-town community, digital inclusion programs and resources aren't as readily available given the low population density and lack of capacity among local institutions to provide such services.

Language and Cultural Barriers

Ethnic minority communities may face language barriers when it comes to understanding and accessing broadband services or digital inclusion programs. This can limit their ability to navigate complex technical terms and understand their rights as consumers and use applications and hardware that are designed for much of the population.

Solution: Prioritize geographically challenging, economically distressed, and historically underrepresented areas, establish non-deployment initiatives and align subprograms with the goals and objectives of the state's Digital Equity Plan, develop an approach for communities to define infrastructure and equity program rollout, and develop and implement subgrantee accountability and compliance strategies.

Relevance/Awareness

A lack of relevance/awareness can contribute to perceived issues of broadband affordability in several ways. When people do not see the relevance of having broadband internet access or are unaware of its benefits, they may be less willing to pay for it. This can make broadband seem less affordable to them, even if the actual cost is reasonable. Additionally, if people do not see the relevance of broadband, they may not prioritize it when it comes to their household budget, which can make it difficult for them to justify the expense.

Furthermore, if people do not see the relevance of broadband or are unaware of its benefits, they may not use it as often or as effectively as they could. For example, if they do not understand how to use online resources to save money or access services, they may not see the value in having broadband. This can create a cycle where people do not use broadband to its full potential, which can make it seem even less relevant and more expensive over time.

Moreover, a lack of relevance can also impact the demand for broadband, which can affect the cost of service. If there is low demand for broadband in a particular area, providers may charge higher prices to make up for the lack of customers. This can make broadband seem less affordable for people who do not see the relevance of having it. Overall, a lack of relevance/awareness can contribute to perceived issues of broadband affordability by making it less appealing to consumers, reducing their willingness to pay for it, and limiting their ability to use it effectively.

Solution: Develop awareness strategies that improve adoption through marketing and communication, coordinate deployment planning, and prioritize geographically challenging, economically distressed, and historically underrepresented areas.

Digital Equity Impact Matrix

The following table provides a summary of the aforementioned deployment obstacles and barriers and identifies 1) the estimated impact the barrier may have on the success of the BEAD and SDPEG programs and 2) the likelihood that through the collective action of public, private, and other partners the barrier can be overcome. The estimated impact and the state's ability to address each barrier were determined through engagement with MIHI's Partnership Roundtable.

Impact on BEAD and SDEPG

The Impact on BEAD and SDEPG metric in the table below was derived from members of the Partnership Roundtable responding to questions asking how significant they felt each barrier would be to the success of the BEAD and SDEPG programs. The table is coded as follows:

How significant will <barrier> be to achieving the goals of universal high-speed internet availability and digital equity in Michigan?	**Not a Barrier**	**Minor Barrier**	**Moderate Barrier**	**Serious Barrier**

Likely to Overcome

The Likely to Overcome metric in the table below was derived from members of the Partnership Roundtable responding to questions regarding the likelihood that, through collective action, the various barriers can be overcome. The table is coded as follows:

Please rate the likelihood that the barrier of <barrier> can be overcome through the collective action of public, private, and other interested partners.	**Not Likely**	**Somewhat Likely**	**Probably Likely**	**Definitely Likely**

Digital Equity Impact Matrix

Barrier	Impact on BEAD				Likely to Overcome			
Device Access								
Digital Literacy and Skills								
Affordability								
Inclusivity								
Relevance/Awareness								

Table 9: Digital Equity Matrix

The Impact Matrix is designed to help identify the barriers that are most significant to program success and are likely to be overcome through the collective action of MIHI and its partners.

Implementation Plan

The implementation plan was developed by first conducting a comprehensive stakeholder engagement process to gather information on barriers, needs, recommendations, and priorities. Stakeholder engagement included community meetings, partner and stakeholder meetings, and consultations with tribal leaders. Following MIHI's extensive stakeholder engagement, the plan was developed by synthesizing all the data and feedback collected to identify key priorities for the BEAD program. The priorities identified then informed the execution strategies required to ensure the priorities for the program were addressed. For each of the execution strategies developed, planned activities have been identified as the actionable and discrete steps to implement the strategies and successfully implement the BEAD Program.

Figure 9: Implementation Plan Development Approach

Stakeholder Engagement Process

The stakeholder engagement process for the BEAD Program was developed to also align to the requirements of the Digital Equity Plan Act and give a voice to communities with the greatest digital needs. Additionally, following the development of this plan, ongoing community feedback is planned over the life of the BEAD Program to track the impact of MIHI's execution strategies and planned activities, ensuring that the priorities identified in this document are achieved.

The MIHI office developed a robust and innovative community and stakeholder engagement process called MI Connected Future (MiCF). The MiCF aimed to holistically and authentically engage with communities and stakeholders to provide the state with the input and direction needed to achieve universal broadband access and a more digitally equitable state. Consisting of in-person regional meetings and partnership roundtables made up of industry leaders and organizations representing covered populations, MiCF actively supports robust community outreach and input while providing an opportunity for industry to provide additional barriers in the broadband space in a comprehensive and equitable manner. MIHI adopted the ethos of "listen first, plan second" to ensure the needs and current challenges of communities and stakeholders were collected and incorporated into the planning process equitably. Results of MIHI's efforts will be available to the public and continuously updated on our website. The approach included three primary components:

1. Community Listening Tour
2. Partnership Roundtables
3. Tribal Consultations

Community Listening Tour

The MIHI office conducted a collaborative statewide tour to engage with communities to build trust and long-term relationships, support quality data collection and analysis, highlight stories of needs and success, and emphasize cyclical input. Each region and community in the state is unique and approaching the needs of each in the way that serves them best promotes equity.

MiCF supports equitable engagement by respecting the unique needs of each community. This manifests as relationship building with community leaders prior to hosting community meetings in their towns. Buy-in is crucial for the success of MiCF, and ultimately for the success of BEAD and DEA programs. In the conversations leading up to a formal community meeting, MIHI acted within its capacity to understand the issues that are important to the community, including critical context regarding past and current broadband and digital equity and inclusion activities. MIHI tailored the approach to the community meeting based on the information gathered prior to the event; however, the feedback prompts during the meetings remained the same for all stakeholders to gather consistent data that could be analyzed.

During the meetings, community members were given the opportunity to share their thoughts on prioritizing BEAD Program funding to deliver affordable, equitable, and reliable high-speed internet service throughout Michigan. MIHI divided the community meeting portion of MiCF into two phases: initial data collection and public comment/feedback. Phase one consisted of 31 MiCF stops throughout all 10 economic Prosperity Regions in Michigan. Phase two consisted of an additional 10 stops to collect public comment and feedback on the draft BEAD Five-Year Action Plan and the Digital Equity Plan.

MIHI created additional opportunities for engagement with special MiCF sessions with youth in Flint and Wayne State University and through the Community Meeting in a Box (CMIB) program. CMIBs provided advocacy groups and communities with an opportunity to engage in the MiCF process if they were not able to attend one of the in-person sessions. CMIBs contained all of the presentation and data collection materials, along with a meeting facilitation guide for hosting local MiCF events without MIHI staff present. Forty-five CMIBs were sent to organizations and communities during the MiCF listening tour.

Various approaches were used to promote participation in the Community Listening Tour meetings, including social media posts, email campaigns, and distribution of flyers. Special attention was placed on creating opportunities for engagement among historically marginalized populations who have been underrepresented in community decision-making. These groups included low-income individuals, aging adults, rural residents, refugees, members of racial or ethnic minority groups, veterans, people with disabilities, those with language barriers, and incarcerated individuals.

The initial data collection phase of MICF aimed to gather feedback from Michiganders regarding their biggest broadband barriers and their priorities for addressing digital equity. Collection of quality data is crucial for determining the correct baseline for broadband service in Michigan. Quality data also supports an equitable deployment strategy in both the infrastructure and digital equity programs.

Figure 10: Summary of MIHI's Statewide Tours and Participation

Questions asked and feedback requested from community members were consistent throughout the statewide tour; however, the context in which the questions were delivered was unique to the type of participants MIHI was engaging. The MIHI team has analyzed feedback from and engaged with other professional organizations to ensure analysis accurately reflects the data collected. MIHI plans to engage with experts in the digital equity field and assess existing digital equity indices to highlight areas of need in a geospatial format to support the implementation of both BEAD and the DEA programs. The results of the priority identification and rankings data gathered during the listening tour can be found in the regional profiles in the Needs and Gaps Assessment section.

Partnership Roundtables

Partnership Roundtables represent MIHI's work to regularly convene a wide variety of stakeholders to provide feedback and input on various office activities related to BEAD and DEA. A series of virtual Partnership Roundtables were convened monthly from January 2023 to July 2023 to gather input from the wider external stakeholders throughout Michigan irrespective of location. Participants of the Roundtables consisted of representatives from community anchor institutions, tribal nations, organizations representing covered populations, internet service providers, local government, and many others. The cross-sectoral format aimed to share information and resources, raise awareness of potential issues concerning infrastructure deployment and digital inclusion, and provide MIHI with policy and operational guidance for the development and implementation of the BEAD Program.

The Partnership Roundtables met regularly throughout the development of the BEAD Five-Year Action Plan and will continue through the development of the Initial Proposal and BEAD implementation. Each meeting focused on a topic or theme. Participants were asked targeted questions to which MIHI would collect responses. The first meeting was used to level-set the BEAD Program goals and requirements, introduce the format of the discussions, and seek participants' input on ultimate goals.

The subsequent meetings focused on different themes such as deployment equity/infrastructure availability, affordability, workforce development, and digital skills. The discussions allowed stakeholders to provide direct input on equitable solutions and strategies regarding broadband deployment in underserved Michigan areas, affordability program ideas, and structures for execution, workforce development investment, digital skills training, and curriculum. Future meetings will focus on the impact of the program and whether participants are witnessing improvements in digital connectivity and equity.

Tribal Consultations

Tribal Consultation sessions were held with Tribal leaders and representatives. These discussions focused on critical issues related to BEAD and digital equity and invited Tribal representatives to provide advice and insights on how best to get tribal communities connected. MIHI requested Tribal input on key considerations regarding digital equity for Tribal nations, identification of unserved and underserved areas, listing of community anchor institutions eligible for funding, and broadband deployment and digital equity projects within Tribal nations. MIHI seeks to collaborate with Tribal nations on the Five-Year Action Plan and Digital Equity Plan to provide digital access and connectivity to all of Michigan's tribes. The following Tribal nations were invited to participate in the consultation; an asterisk indicates their participation.

Bay Mills Indian Community*

Grand Traverse Band of Ottawa and Chippewa Indians*

Hannahville Indian Community

Keweenaw Bay Indian Community*

Lac Vieux Desert Band of Lake Superior Chippewa Indians of Michigan

Little River Band of Ottawa Indians

Little Traverse Bay Bands of Odawa Indians

Match-e-be-nash-she-wish Band of Potawatomi Indians*

Nottawaseppi Huron Band of Potawatomi

Pokeagon Band of Potawatomi Indians

Saginaw Chippewa Indian Tribe of Michigan*

Sault Ste. Marie Tribe of Chippewa Indians*

Priorities

Following the stakeholder engagement, the MIHI Office used the detailed feedback, input, and data to develop high-level priorities for the BEAD Program. Five primary priorities are identified. Each priority is then further divided into multiple key strategies, and each strategy and priority has several planned activities for implementation.

Priorities for Broadband Deployment and Digital Equity

Priority	Description
Reduce barriers to broadband deployment	Reducing barriers to infrastructure deployment is critical to the timely execution of the BEAD Program and to realizing the program's goals of providing affordable high-speed internet access to Michigan's un/underserved locations. These barriers include lengthy and complex processes for permitting, pole attachments, and right-of-way access, among others, and a potential shortage in broadband workforce. Some of these existing processes in the state are complex and pose a hurdle to successful and timely broadband infrastructure deployment. Expediting these processes requires a collaborative effort between the state, local governments, private sector, and communities. By reducing the complexity and time associated with these processes and ensuring the right set of skills are available, MIHI can accelerate broadband deployment and ensure a timely delivery of the BEAD Program projects.
Maximize the use and reach of federal funds	To achieve equitable access to affordable internet throughout Michigan, including high-cost areas with difficult topography and remote locations, Michigan will aim to maximize private sector participation and matching funds. This priority is of paramount importance to MIHI, particularly given Michigan's geography and the presence of remote areas. Certain rural areas in Michigan have extremely low population densities, with just 2-20 individuals residing per square mile, making physical infrastructure deployment difficult and costly. It is by extending the reach of federal and local funds that MIHI will be able to serve these locations and ensure the goal of universal high-speed internet availability is achieved.
Promote digital equity and inclusion	Promoting digital equity is crucial in today's increasingly connected world. However, there are multiple factors, such as device access, skills, affordability, and inclusivity, that perpetuate the digital divide, making it difficult for some individuals to fully participate in the digital world. In Michigan alone, 1.2 million households still struggle with internet connectivity[31] and approximately 730,000 households face barriers related to high-speed internet access.[32] This means that approximately 30% of Michigan households do not have an affordable, reliable high-speed internet connections. Additionally, two-fifths (40%) of these households report not being able to afford to pay for home internet subscriptions at all, which further exacerbates the digital divide.[33] Access to the internet has become a critical aspect of modern life, and those who are unable to connect are at a distinct disadvantage when it comes to finding a job, participating in online learning, or even accessing essential healthcare services. Addressing adoption, affordability, digital skills, and devices supports the deployment of network infrastructure and helps to ensure their long-term sustainability.

31. American Community Survey 2021 5-Year Estimates
32. Federal Communications Commission Broadband Data Collection and fabric Version 3
33. Horrigan, J. (2021). Affordability and the Digital Divide: The first in a 3-part series on digital connectivity during the pandemic (1). EveryoneOn. https://www.everyoneon.org/2021-national-study

Priority	Description
Deploy resilient and sustainable broadband infrastructure	Deploying resilient and sustainable infrastructure is essential for ensuring the long-term viability and capacity of new infrastructure to meet the needs of Michigan's residents now and far into the future. With the increasing number of harsh weather events caused by climate change, it has become imperative to adopt a proactive approach that prioritizes sustainable infrastructure deployment. By investing in sustainable infrastructure that lasts for decades, the state of Michigan can mitigate the effects of climate change and save significant costs in the long run and ensure that BEAD investments can be sustained over time. Sustainable networks also mean ensuring that BEAD-funded connections can meet the connectivity needs of Michigan's residents now and for the future. BEAD-funded networks should provide more than the minimum required connection speeds to ensure Michiganders have the connections they need far into the future. Prioritizing resiliency and sustainability aims to address and deliver benefits now and for generations to come.
Empower communities through engagement and involvement	Communities should have a say in how they get connected. Incorporating community input plays a crucial role in driving program planning, spending, and broadband deployment where it is needed the most. It can also create an equitable approach to infrastructure deployment that prioritizes the unique needs of communities throughout the state of Michigan. By giving underrepresented communities an opportunity to share their thoughts and concerns, the implementation of federal programs like BEAD can ensure that their voices are heard and their views are considered. Engaging communities to drive program planning can also lead to innovation and creative solutions to the unique challenges faced by different communities.

Table 10: Priorities and Description for Broadband Deployment and Digital Equity

Key Strategies

To support its goals, objectives, and priorities, MIHI plans to adopt the following execution strategies. The strategies described in this section are also supported by the planned activities described in the following section.

Reduce barriers to broadband deployment

To reduce barriers to broadband infrastructure deployment, MIHI will adopt several strategies to streamline processes and support the development of a skilled workforce. These strategies include:

- **Streamline permitting processes:** Identify ways to streamline permitting processes required for infrastructure deployment, including reducing review timelines and application requirements (where feasible).
- **Coordinate deployment planning:** Establish regular communication and coordination structures with relevant entities to prevent permitting and other delays to deployment.
- **Standardize processes and supporting documentation, where possible:** Standardize the terms of fiber make-ready agreements such as pole attachments and easements.
- **Encourage the development of a unified approach for right-of-way access and fiber deployment and maintenance:** Work with stakeholders to develop a consistent process and unified approach, where possible, to right-of-way access for fiber deployment and maintenance.
- **Prioritize workforce development plans and support job training programs:** Support the supply of a highly skilled workforce for broadband infrastructure projects.

Maximize the use and reach of federal funds

To maximize the reach of federal funds, MIHI will adopt several strategies to leverage existing assets and encourage private sector participation and contributions. These strategies include:

- **Encourage the use of existing infrastructure and assets:** Encourage program participants to leverage the use of existing infrastructure and assets by introducing scoring criteria in the proposed subprograms.
- **Maximize private sector participation and promote the development of public-private partnerships.** To promote the use of public-private partnerships, MIHI will provide guidance and resources to local and regional governments to support them in developing partnerships with ISPs. Additionally, subgrant programs will incentivize private-sector matching funds in areas with lower estimated deployment costs to maximize the reach of federal funds.
- **Improve participation in the State's subprograms by running a fair and transparent subgrantee selection process.** Ensure that the application process is widely communicated and that all resources and materials are available to all applicants through MIHI's website. Also, the selection criteria will be developed to ensure smaller ISPs, local governments, and utilities are afforded the same opportunities as larger ISPs.
- **Develop and implement subgrantee accountability and compliance strategies.** Subgrantee accountability and compliance is of the utmost importance to Michigan. MIHI will prioritize subgrantee compliance by developing a risk assessment and monitoring framework for applicants and subgrantees. Additionally, support will be provided to subgrantees, including resources such as compliant reporting templates and guidance.

Promote digital equity and inclusion

To promote digital equity and inclusion, MIHI will adopt several strategies that will help ensure unserved areas, underserved areas, and CAIs have access to reliable high-speed internet access and that non-deployment programs are not only established but have a means to continue beyond the period of performance of the BEAD Program. These strategies include:

- **Prioritize geographically challenging, economically distressed, and historically underrepresented areas:** To prioritize these areas, MIHI will develop targeted subprograms and leverage enhanced scoring criteria. These locations will be identified through data and mapping carried out internally by MIHI and use data from the FCC, Census, and other sources. Fiber deployment in these locations will be prioritized, where possible.
- **Establish non-deployment initiatives and align subprograms with the goals and objectives of the State's Digital Equity Plan.** To align the BEAD and the Digital Equity programs, MIHI developed a coordinated stakeholder engagement and listening process that collected data and needs to inform the development of both programs. To further align BEAD non-deployment uses and the SDEPG programs, MIHI is developing this Five-Year Action Plan and the Digital Equity Plan in parallel, using consistent resources across both plan developments to help ensure alignment.
- **Develop awareness strategies that improve adoption through marketing and communication.** Support awareness campaigns for digital equity subprograms developed by the State as well as federal program targeting low- and medium-income households such as the Affordable Connectivity Program. MIHI will continue to raise awareness and provide communications to the public on existing and future subprograms through social media, email campaigns, and other media. In addition, MIHI will continue to advocate for ongoing funding for this critical program.

Advocate for resiliency and sustainability for broadband infrastructure development

Advocating for resiliency and sustainability in the development of broadband infrastructure requires a multifaceted approach that not only prioritizes resilient and sustainable infrastructure, but also seeks to prioritize long-term sustainability and capacity of service and equity programs, beyond the period of performance of the BEAD Program. To support the implementation of resilient and sustainable projects, MIHI plans to execute the following strategies:

- **Include resiliency and sustainability criteria as part of subprogram requirements:** Work with identified key partners to determine the right resiliency and sustainability standards and requirements for the subprograms that MIHI intends to administer.
- **Promote the deployment of fiber and define the "Extremely High-Cost per Location":** Set a high Extremely High-Cost per Location threshold, given the funding allocation, to maximize fiber adoption throughout the state**.**
- **Encourage service providers to upgrade outdated infrastructure:** Incentivize applicants to upgrade their existing assets by including evaluation criteria related to the use of existing assets in the subprogram application requirements. Overall, the strategy is to incentivize applicants to upgrade their existing assets by providing them with financial support and related evaluation criteria. This can help increase the quality of assets and thus improve the applicant's chances of being selected for subprograms.
- **Assess project applications for long-term service and reliability.** Ensuring that affordable, accessible, high-capacity internet service is sustained beyond the period of performance of the BEAD Program and creating lasting change for universal availability in the State of Michigan is a top priority for the MIHI Office. To achieve this goal, MIHI will evaluate all applications based on long-term reliability and affordability. This means that proposed solutions and projects must be able to provide consistent, high-speed internet access over an extended period of time, ideally beyond the duration of the BEAD Program. Additionally, MIHI may require applicants to provide a detailed plan for how they will maintain and improve service quality over time or demonstrate a successful track record of maintaining reliable internet service.
- **Enable variable match requirements based on cost of deployment.** Adopt a strategy of variable match requirement depending on the cost and feasibility of broadband infrastructure deployment. This strategy is intended to ensure that all locations and communities in the state, regardless of location or existing infrastructure will have access to affordable high-speed internet.

Empower communities through engagement and involvement

Maintain the stakeholder and community engagement activities described in the Stakeholder Engagement Process section above throughout the implementation of the BEAD Program. MIHI will continue to seek input and involvement from the communities in Michigan to help shape the structure of the BEAD Program and course-correct, if needed. To empower communities in the BEAD Program development and implementation, MIHI will adopt the following strategies:

- **Leverage community inputs to drive subprogram planning and implementation:** Actively seek and leverage community input during the planning and implementation of subprograms. This will involve identifying pathways and channels through which communities can provide input on subprogram development. Such channels may include public meetings, surveys, focus groups, town halls, formation of local or regional technology councils, and other similar means of gathering input. The insights gained from these community engagement efforts will be used to help shape the direction of MIHI subprograms, build awareness from program progress and success, and ensure that processes and programs are designed to meet the unique needs of Michigan communities and provide maximum benefit to all residents of the state.
- **Develop an approach for communities to define infrastructure and equity program rollout:** Determine the best approach for collecting and incorporating community needs for infrastructure and non-deployment digital equity programs. This strategy is intended to give communities a voice in how they will be served through the BEAD Program.
- **Include evidence of community support and partnerships as part of subprogram requirements.** Encourage subprogram applicants to engage and communicate with the communities they plan to serve. As part of the evaluation criteria, MIHI intends to require evidence of consultations, partnership, and/or support from targeted communities.

Planned Activities

In this section, the MIHI Office provides a comprehensive outline of the specific activities that it will undertake to implement each of the execution strategies provided above. This also includes identifying the funding sources for each activity to ensure that the MIHI Office has the necessary resources to execute those strategies successfully.

By detailing the below activities and their sources of funding, the MIHI Office can provide a clear roadmap for achieving the state's broadband goals and objectives and bring the benefits of high-speed internet connectivity to the state's residents and businesses. This information will be beneficial not only to the MIHI Office but also to its stakeholders and key partners who will need to be aware of those activities.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Continue to work on and improve the GIS mapping for the state to identify unserved and underserved locations, Community Anchor Institutions, and existing assets.	MIHI	BEAD Planning Funds/SDEPG Funds	Comprehensive and accurate maps to help identify areas that lack connectivity so that they are prioritized in terms of funding. Funding for this activity will be through BEAD and SDEPG planning funds and output data will be published on MIHI's website.
Work with Michigan core and enabling stakeholders to streamline the permitting process for broadband infrastructure projects. For example, leveraging the Michigan Information Office (MIO) permitting dashboard and support tools or the Michigan Infrastructure Council (MIC) Dig-Once Portal.	MIHI and Core/Enabling Stakeholders	BEAD Planning Funds	Reduced processing or waiting times for securing permits and approvals for construction and/or right-of-way access. Increased transparency and information for subgrantees. No funds are expected to be incurred for this activity but in the event funds are required MIHI will use a portion of its BEAD planning funds.
Set up regular meetings with core and enabling stakeholders and other relevant stakeholders regarding standardizing permitting processes.	MIHI and Core/Enabling Stakeholders	BEAD Planning Funds	
Coordinate with local governments and utilities regarding pole attachments and make-ready and create faster systems for resolving disputes.	MIHI, Local Governments, and Utilities	BEAD Planning Funds	Reduced dispute times for pole attachments-related issues and aligned responsibilities for the benefit of broadband expansion. No funds are expected to be incurred for this activity but in the event funds are required MIHI will use a portion of its BEAD planning funds.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Hold meetings with industry associations, labor unions, and other relevant stakeholders to discuss workforce development plan.	MIHI, Industry Associations, Labor Unions, Enabling Partners	BEAD Planning Funds	A comprehensive workforce development plan that incorporates stakeholder input. MIHI will use BEAD and SDEPG planning funds to support the logistics of holding such meetings.
Leverage existing partnerships to develop the workforce development plan with input from wider Michigan workforce assessment/plan and LEO.	MIHI and LEO	BEAD Planning Funds	
Participate in the development of training programs for skills and licenses required by the telecommunications industry.	MIHI and LEO	BEAD Planning Funds	Increased availability of a skilled broadband workforce. Funding for this activity will be provided through both BEAD and SDEPG planning funds.
Research MIHI's ability to support county drain and road commission permitting offices with increased review capacity.	MIHI	BEAD Administrative Funds	Increased capacity of permitting offices to review requests for the anticipated influx of permit applications. Decreased wait time for permitting approvals and support for project deployment timelines.
Determine information, data, and input from stakeholders required to establish a scoring methodology to maximize private sector contributions while not excluding participation from smaller ISPs and other eligible subgrant applicants.	MIHI	BEAD Planning Funds	Increased amount of funding available and support a greater number of broadband projects.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Set up a dedicated subprogram for middle-mile infrastructure with associated evaluation criteria and selection process.	MIHI	BEAD Planning Funds	A subprogram that is tailored specifically to addressing the unique challenges and opportunities associated with middle-mile infrastructure. This program will likely have its own evaluation criteria that take into account factors such as existing infrastructure, community needs, and the technical feasibility of the proposed project. The selection process for this program would also be tailored to meet the unique needs of middle-mile infrastructure projects, such as considering the impact on existing networks and the potential to catalyze the development of last-mile infrastructure.
Identify other sources of BEAD matching funds to help ensure that the reach of federal funds is maximized.	MIHI	BEAD Planning Funds	Identify potential state funding that can be used to support matching funds and maximize the reach of BEAD funds. Funding for this activity will be based on state support. No funds are expected to be incurred for this activity but in the event funds are required MIHI will use a portion of its BEAD planning funds.
Provide technical resources and assistance to eligible entities to support their participation in the subgrant process.	MIHI	BEAD Planning Funds	Comprehensive technical support for potential applicants to develop projects and submit compliant applications. The goal of this support is to help ensure that eligible entities have access to the resources they need to successfully participate in the subgrant process and compete for funding. MIHI may leverage some of its BEAD and SDEPG planning funds to support this activity.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Set up a risk evaluation, validation, and monitoring framework for applicants and subgrantees.	MIHI	BEAD Planning Funds	Reduced risk for noncompliance with the federal award and early identification or any reporting or compliance issues.
Develop targeted subprograms for digital equity and inclusion based on needs identified through the community listening tours.	MIHI	BEAD Planning Funds	Subprograms that incorporate the needs identified during community listening tours, which solicit feedback from key stakeholders. The targeted subprograms will likely have their own unique goals, evaluation criteria, and selection processes, based on the specific needs and priorities identified by the communities.
Support smaller ISPs, advocacy organizations, and other similar stakeholders with technical assistance to provide low-cost service (including ACP) through information and application support.	MIHI	BEAD Planning Funds	Increased participation in the Affordable Connectivity Program (ACP) and increase the availability of affordable broadband services.
Leverage existing workforce training programs with colleges, universities, and workforce development entities to develop mentoring and training programs for digital literacy and skills. Establishing an education pipeline through K-12.	MIHI and LEO	BEAD Planning Funds	Increased availability of education and training programs for digital literacy and skills. Long-term skill gap reduction through increased education on digital skills in schools.
Develop a plan for digital equity and inclusion that targets covered populations and underrepresented areas.	MIHI	BEAD Planning Funds	A comprehensive plan that prioritizes the unique needs of community in the way that serves them best and promotes equity.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Promote ACP adoption using ongoing information and awareness campaigns through social media posts, email campaigns, and flyer distribution.	MIHI	BEAD Planning Funds	Improvement in broadband adoption rates among low-income households. MIHI will work with ISPs to promote the availability of the ACP program among lower-income households.
Align Digital Equity Capacity grant activities and non-deployment programs developed through BEAD.	MIHI	BEAD Planning Funds	Aligning the BEAD goals and objectives included in this document with those of the Digital Equity Plan and ensuring that the activities are complementary rather than duplicative.
Work with stakeholders to determine infrastructure resiliency core elements.	Core/Enabling Stakeholders	BEAD Planning Funds	Broadband infrastructure resiliency requirements and guidance for applicants that supports long-term infrastructure.
Use a data driven approach to set the Extremely High Cost Per Location Threshold for addressing high-cost areas.	MIHI	BEAD Planning Funds	An Extremely High Cost Per Location Threshold that promotes the deployment of fiber as much as possible within the given funding amount.
Establish minimum requirements for a cybersecurity risk management plan with the support of core and enabling stakeholders.	MIHI and Core/ Enabling Stakeholders	BEAD Planning Funds	Cybersecurity mitigation plan and guidance that is made available to subgrantees to ensure their compliance with federal requirements.
Develop scoring methodology that assesses physical and financial long-term viability and sustainability of service.	MIHI	BEAD Planning Funds	Deployment projects that provide long-term affordable service to unserved and underserved locations.

Activity	Key Implementor	Funding Source	Expected Outcome(s)
Continue community and partnership communications and engagement.	MIHI	BEAD planning Funds/ SDEPG Funds	Input from communities and stakeholders on needs, gaps, and priorities that can continue to shape the outcomes, support decision-making, and be used to measure the success of the BEAD program.
Create and leverage local or regional technology committees to provide input on scoring or project selection.	Enabling Stakeholders	BEAD planning Funds	Projects awarded are based on community needs and input.
Provide transparency, accessibility (including multiple languages), and empower communities with knowledge through public-facing documents and websites.	MIHI	BEAD Planning Funds / SDEPG Funds	Reduced misinformation, clearer communication, and increased broadband adoption.
Develop scoring methodology to incentivize applicants that demonstrate addressing community needs.	MIHI	BEAD planning Funds	Prioritizing unserved and underserved locations.
Establish application requirement for applicants to demonstrate community support or feedback related to issues with reliability and speed of service.	MIHI	BEAD planning Funds	Addressing reliability and service issues based on community input and actual service performance.

Table 11: Planned Activities, Key Implementor, Expected Outcomes, and Activity

Estimated Timeline for Universal Service

Michigan estimates that universal availability of reliable, affordable, high-speed internet throughout Michigan will occur by 2030. In the below Gannt chart, Michigan estimates the start and end dates for BEAD Program activities based on released guidance from the NTIA and due dates set in the NOFO.

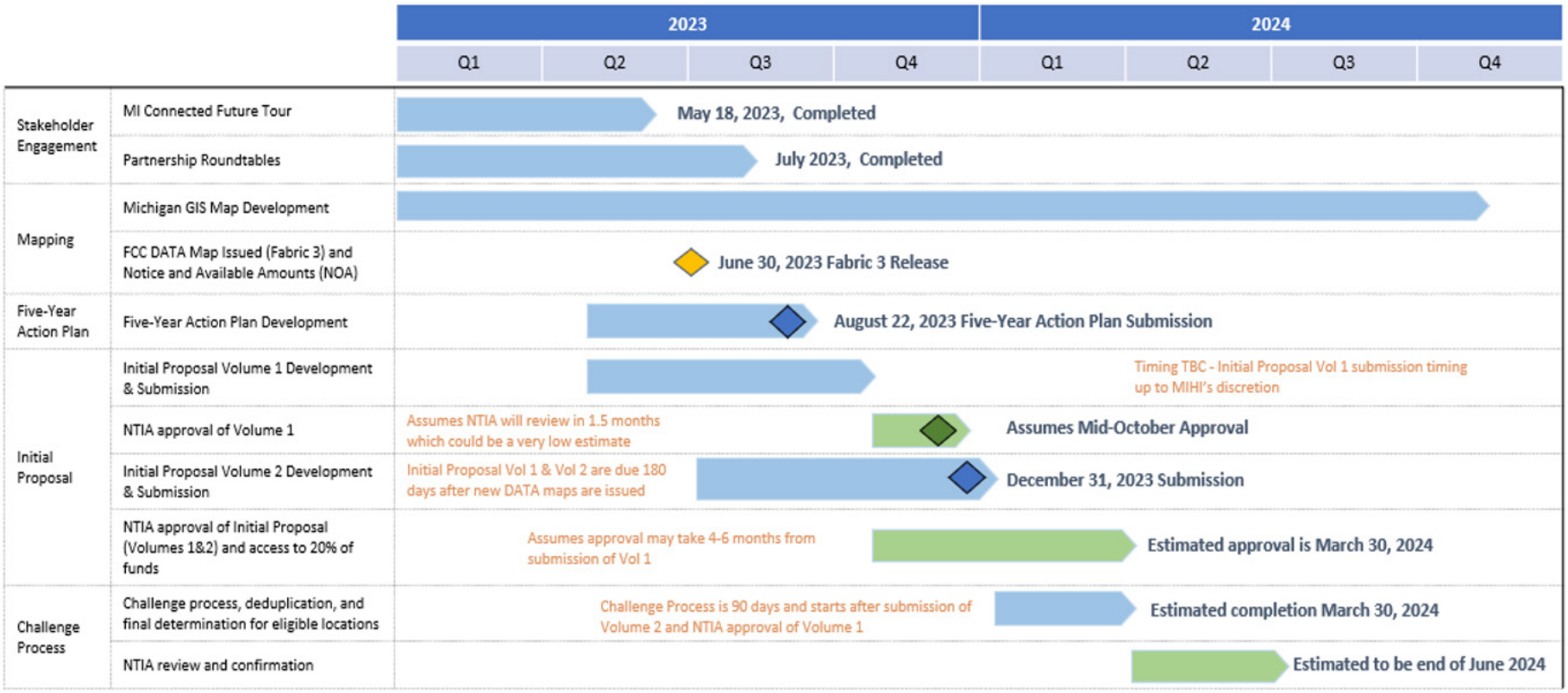


Figure 11: Estimated Universal Timeline Stakeholder Engagement through Challenge Process

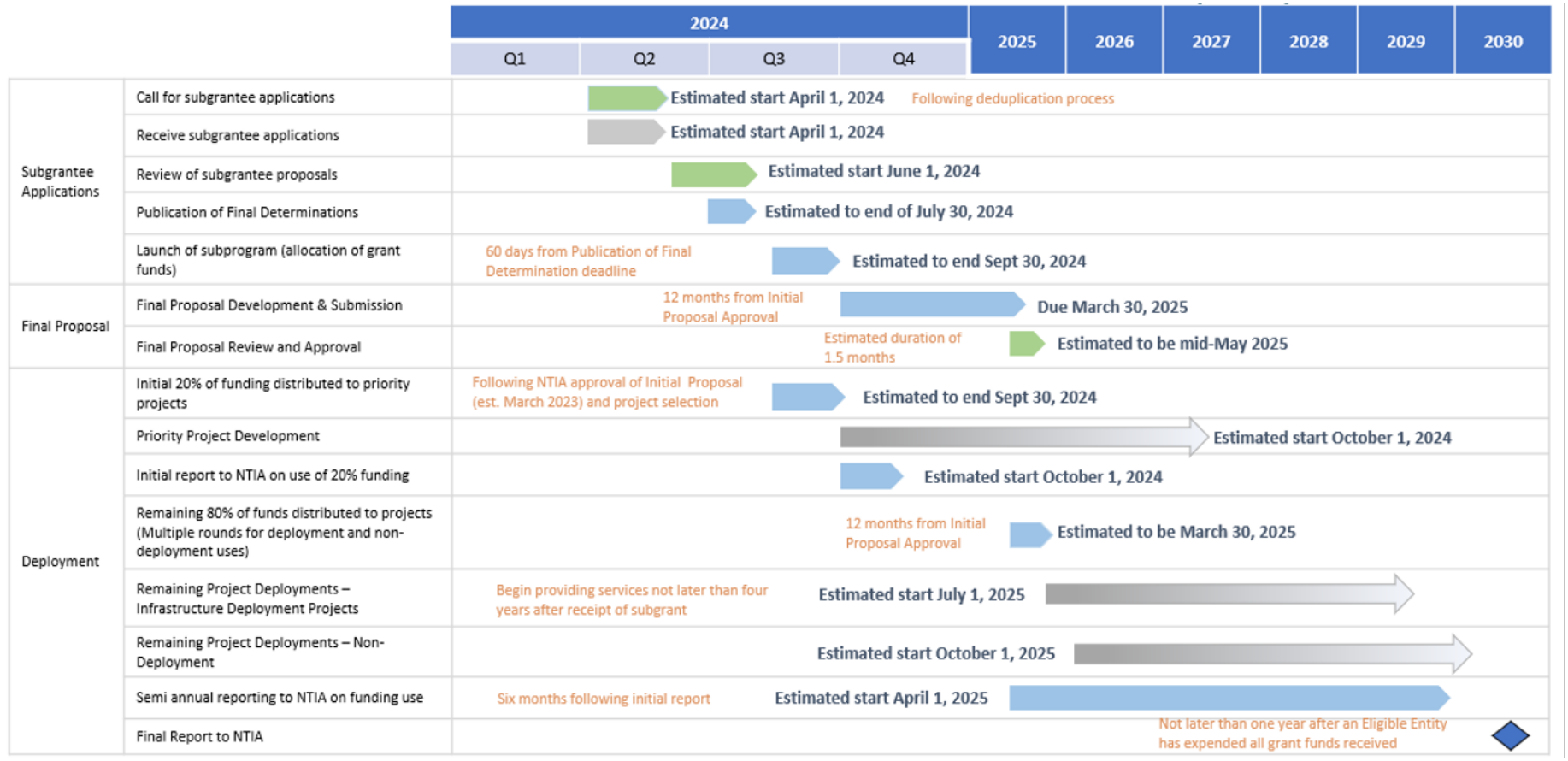


Figure 12: Estimated Universal Timeline Subgrantee Applications through Deployment

Execution of this timeline depends on the approval and responsiveness of the NTIA and the overcoming of obstacles and barriers as described in the section Obstacles and Barriers of this plan.

Estimated Cost for Universal Service

The MIHI does not yet have an estimate for the cost of achieving universal availability. The cost for universal service depends on multiple programs in addition to BEAD, including RDOF, CAF, ROBIN, and others. The office received cost modeling data from CostQuest via an agreement with the NTIA during the week of August 14 and is currently working through this analysis.

Alignment

The purpose of this section is to explain how the Five-Year Action Plan is aligned to Michigan's priorities and other existing and planned efforts. The following identifies and summarizes other existing state plans and efforts and how each enables or supports the BEAD Five-Year Action Plan, the state Digital Equity Plan, and vice versa. This is a not an exhaustive list but represents a best effort of the MIHI Office to identify key plans across the state government. Plans are organized by topic.

Economic Development

Michigan Economic Development Corporation (MEDC) Five-Year Strategic Plan

The MEDC is Michigan's economic development lead with a mission to achieve long-term economic prosperity for Michiganders by investing in communities, enabling the growth of good jobs, and promoting Michigan's strong image worldwide. The six strategic focus areas rely heavily on MIHI achieving universal broadband availability and improved digital equity:

1. Attract, keep, and grow businesses in industries that support maximum growth in jobs, wages and investments.
2. Cultivate the skills and talent needed for in-demand and high-growth occupations statewide.
3. Collaborate with local communities and partners to create places in which people and talent want to live, work, visit and play.
4. Support entrepreneurial growth to enable commercialization and new high-tech business creation.
5. Promote Michigan's image as a world-class business location and travel destination.
6. Help existing small and microbusinesses grow and thrive and improve economic prosperity for all through small business ownership.

Robust, reliable, and affordable high-speed internet that is universally available supports business and job growth, creates attractive communities, supports entrepreneurs, promotes the state's competitiveness, and enables economic prosperity for all.

Michigan Poverty Task Force Report

The Michigan Poverty Task Force, established in 2019, issued its second report[34] with recommendations aimed at lifting Michiganders out of poverty, connecting families in every corner of Michigan with economic opportunity, improving quality of life, improving outcomes, and creating real change. The following selection of recommendations from the report are relevant to the work of MIHI and the BEAD and DEA programs:

1. Increase investments in a universal benefit application so Michigan residents can apply for resources in one place.
2. Establish a highly visible education and awareness effort to boost participation in and access to a formal network of Community-Based Education and Training Information Portals.
3. Develop a coordinated strategy to help communities address the digital divide.

The report includes many other recommendations that are tangentially related to the success of the BEAD Program but that could be facilitated more rapidly by ensuring every home, business, and institution in the state has access to affordable and reliable high-speed internet. Ensuring digital equity allows programs that rely on digital platforms or apps to reach their intended participants/audiences.

34. https://www.michigan.gov/leo/-/media/Project/Websites/leo/Folder16/22-LEO-0478-PTF-PrePress.pdf?rev=db428253b1154b5e8621b799370c123d&hash=5F422576BB6C143F65BB5A50ED5

Education

Education Equity in Michigan Plan

Created by the Michigan Civil Rights Commission in September 2022, the Education Equity in Michigan plan recommends that the Michigan Department of Civil Rights expand the existing Council for Government and Education on Equity and Inclusion to include representatives of the Michigan Department of Education and establish the Council as the entity responsible for implementing and overseeing the following recommendations for action.

1. Develop a Statewide Educational Equity Plan to enhance policies, accountability, and opportunities for all, using a holistic approach to inform the Michigan Department of Civil Rights, the State Department of Education, and schools statewide.
2. Ensure that all data collected by state and county government entities be disaggregated by race and ethnicity.
3. Encourage schools across the state to create local school equity plans and contribute information and resources to encourage and support equitable practices and opportunities for schools.
4. Host periodic professional development training workshops and a yearly "Best Practices in Education Equity" conference.
5. Provide year-round cultural competency/race and equity education, advice, and coaching.
6. Increase internet access for students and families and develop an easily accessible electronic outreach and inclusion model that is available to everyone involved in the education process.
7. Support a well-resourced and quality teacher training program (through universities and colleges), encouraging diversity in its teaching roles and student enrollment.

Given the necessity of high-speed internet connectivity and digital inclusion in the P-20 environment, this plan supports the vision and mission of MIHI, this plan, and the State Digital Equity Plan to create a more digitally equitable state by ensuring equity of access across several aspects of the education ecosystem.

Michigan's Top 10 Strategic Education Plan

The Top 10 Strategic Education Plan[35] has a vision that states: "every learner in Michigan's public schools will have an inspiring, engaging, and caring learning environment that fosters creative and critical thinkers who believe in their ability to positively influence Michigan and the world beyond."

One of the key guiding principles of the plan states that students should be provided every opportunity to achieve the broadest range of life dreams, and a selection of key goals seek to 1) expand early childhood learning opportunities; 2) improve the health, safety, and wellness of all learners; 3) expand secondary learning opportunities for all students; and 4) increase the percentage of adults with a post-secondary credential. While high-speed internet access isn't explicitly called out in the plan, equitable and affordable access and use are inherent in supporting Michigan's achievement of the goals outlined in the plan.

Environment

MI Healthy Climate Plan

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) published the MI Health Climate Plan[36] in April 2022. This plan lays out a broad vision for fulfilling the governor's fall 2020 commitment for Michigan to achieve 100% economy-wide carbon neutrality by midcentury — the global science-based benchmark for reducing greenhouse gas emissions to avoid the most devastating and costly impacts of climate change. The plan establishes ambitious goals and strategies for achieving the plan's vision. The following selected goals and strategies are supported by the efforts of the MIHI Office and vice versa.

1. Clean the electric grid.
2. Electrify vehicles and increase public transit.
3. Repair and decarbonize homes and businesses.
4. Drive clean innovation in industry.
5. Protect Michigan's land and water.

Many of the innovative solutions to mitigate climate change rely on advancements in technology, which is heavily dependent on high-speed connectivity.

35. https://www.michigan.gov/mde/-/media/Project/Websites/mde/top10/top_10_mi_strategic_ed_plan_promising_practices_1_pager.pdf?rev=8a9af7389097471a971dc5e97d48a6a8&hash=E1CDB70B6C52F11C51E4F2D4AD040333
36. https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Offices/OCE/MI-Healthy-Climate-Plan.pdf?rev=d13f4adc2b1d45909bd708cafccbfffa&hash=99437BF2709B9B3471D16FC1EC692588

Health

Health Information Technology Roadmap

This roadmap is maintained and implemented by the Policy and Planning, Strategic Engagement, and Alignment section of the Michigan Department of Health and Human Services. The Health IT Roadmap[37] identifies several relevant goals, objectives, and strategies that impact and are impacted by the BEAD and state Digital Equity programs:

1. Identify Champions and Empower Leaders
2. Enhance Health Date Utility
3. Address Michigan's Digital Divide
4. Improve Onboarding and Technical Assistance
5. Protect Public Health
6. Adopt Standards for Social Care Data Fields

The deployment of universal high-speed internet service and addressing digital equity contribute to each of these objectives, and the objective from the Roadmap to "Address Michigan's Digital Divide" directly aligns with the vision and goals of this and Michigan's Digital Equity Plan. The successful implementation of BEAD will directly support the goals of the Health IT Roadmap.

Michigan Roadmap to Healthy Communities

The Michigan Roadmap to Health Communities aims to address the social determinants of health (SDOH) through a collaborative, upstream approach to remove barriers to social and economic opportunity, improve health outcomes, and advance equity. Phase I of the SDOH Strategy promoted the alignment of efforts at the state, local, and community level and the improvement of programs and policies through an in-depth internal review. It prioritized efforts in three focus areas — health equity, housing stability, and food security. Phase II of the SDOH Strategy builds on improvement and alignment efforts from Phase I, with a focused effort on health equity through multisector collaboration and supporting holistic solutions.

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37. https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Doing-Business-with-MDHHS/Boards-and-Commissions/Health-Information-Technology-Commission/CY2022-Bridge-to-Better-Health-Report_Adopted_Final-Aug22.pdf?rev=4dd6bf50a4d24d71a049c15f7032b524

38. https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Inside-MDHHS/Policy-and-Planning/Social-Determinants-of-Health-Strategy/Strategy-Documents/Phase-II-SDOH-Strategy-2823.pdf?rev=12e0ca6c22a9434ea133d197e44d9b82&hash=591123DA9B8D2012DE255E44B1DAD44F

A key component of the Roadmap is the development of a Community Information Exchange (CIE). A CIE is an evolving set of best practices and technology guided by the goal of identifying and addressing social needs. As identified in the plan, a successful CIE requires widespread access to broadband and technology and a workforce trained in its use, agreed protocols around data collection and coding, staff with dedicated time to facilitate the referral process, and a robust network of referral partners. The success of this plan is heavily reliant on the universal availability of high-speed internet service.

Infrastructure

Thirty-Year Integrated Infrastructure Plan

Developed by the Michigan Infrastructure Council, this plan includes the state's dig-once strategy to collocate facilities during construction within state and local rights-of-way. This plan enables the efficient deployment of broadband networks. This plan is currently under development.[39]

Michigan Public Service Commission (MPSC) Strategic Plan

The mission of the MPSC is to serve the public by ensuring safe, reliable, and accessible energy and telecommunications services at reasonable rates. While the MPSC does not regulate broadband, the commission intersects with the goals, vision, and objectives of the MIHI Office, this plan, and the statewide Digital Equity Plan. The following are selected key goals and strategies of the MPSC Strategic Plan[40] that support the efforts of the MIHI Office and vice versa.

1. Empower customers to make informed utility choices.
    a. Public accurate information on energy and telecommunications programs
    b. Collaborate with other state departments and stakeholders
    c. Develop energy and technology pilots
2. Ensure safe, secure, and reliable utility services and infrastructure
    a. Issue a Statewide Telecommunications Assessment Report[41]
    b. Define roles for telecommunications outage monitoring
    c. Support the transition to IP-911

39. https://www.michigan.gov/mic/30-year-integrated-infrastructure-strategy
40. https://www.michigan.gov/-/media/Project/Websites/mpsc/about/External_Strategic_Plan_2021-2025.pdf?rev=29287fd46c794a07a671c37f4e97f5f9
41. https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/regulatory/reports/STAR.pdf?rev=ce82749e37a3433b951363b817a0da66

3. Ensure accessible and affordable utility services through regulatory oversight
    a. Examine role in addressing systemic racism's impact on energy and telecom programs
    b. Administer and promote customer programs
4. Ensure accessible and affordable utility services through regulatory oversight
    a. Establish and encourage virtual stakeholder participation in workgroups and proceedings
    b. Engage partners on informational webinars/forums
    c. Evaluate communication and outreach programs and efforts

Transportation

Michigan Future Mobility Plan

The Michigan Office of Future Mobility and Electrification oversees the Michigan Future Mobility Plan[42]. This plan identifies several objectives to position the state as the leader in mobility. The following objectives from the plan have been identified as those that impact or are impacted by the BEAD and State Digital Equity Programs:

1. Deploying EV chargers.
2. Ensuring Mobility as a Service (MaaS) access across all 77 public transit agencies.
3. Be the number one state for mobility research and development.
4. Be a top ten state for mobility investments.
5. Reduce congestion and traffic crashes, (improve traffic safety).

Mobility and electrification are heavily reliant on the availability of wired and wireless connections to provide real-time data, enable transactions, and monitor the electrical grid and associated systems. Universal connectivity and adoption are important for the operations of EV chargers and transit access. Having large green sites that are attractive for automotive investments in the future will mean looking outside of traditional urban areas to parts of the state that aren't connected today. The operations of intelligent transportation systems and connected/automated vehicle tech rely on the reliable availability of IoT and edge computing across cellular-vehicle-to-vehicle/everything (CV2V/CV2X) systems. Michigan's BEAD and Digital Equity programs directly support the success of the Michigan Future Mobility Plan.

42. https://www.michiganbusiness.org/4aecec/globalassets/documents/mobility/state-strategy-for-the-future-of-mobility-and-electrification-detailed-version.pdf

Michigan Mobility 2045 Plan

Michigan's State Long-Range Transportation Plan (MM2045)[43] is an essential element of Michigan's transportation planning and program development process. The public- and stakeholder-driven plan provides a foundation for developing Michigan's transportation programs, including MDOT's Five-Year Transportation Program (5YTP) and the statewide, rural, and metropolitan transportation improvement programs, and presents the social and economic cases for transportation investment in Michigan.

The universal availability of high-speed internet is recognized as a key requirement for the successful implementation of the MM2045 Plan. Additionally, the plan contains the following strategies that are relevant to the BEAD Program and work of the MIHI Office:

1. Identify opportunities to expand fiberoptic, broadband, and 5G connections through coordination or partnerships.
2. Leverage technology to improve passenger transportation availability and services.
3. Invest in data, data collection, analytics, and information systems to advance data informed decisions.
4. Extend opportunities to share data and information for improved efficiency, accountability, and transparency across all of Michigan's transportation partners.
5. Implement and expand a real-time Transportation Infrastructure Data Exchange (TIDE) system to function as a centralized platform to support continuous exchange of transportation data among MDOT and other stakeholders.

Workforce

Michigan Workforce Development Plan

The Michigan Workforce Development Plan is maintained and implemented by the Employment and Training Division of the Michigan Department of Labor and Economic Opportunity (LEO), the same agency that houses the MIHI Office. This plan is currently under development.

43. http://www.michiganmobility.org/pdfs/mm2045_plan/MM2045_Plan_FINAL_2021_11_03_remediated.pdf

Michigan Sixty by 30 Strategic Plan

The Michigan Sixty by 30 Initiative aims to increase postsecondary educational attainment to 60% by 2030. The Sixty by 30 program is housed within the Michigan Department of Labor and Economic Opportunity (LEO), the same agency that houses the MIHI Office. The Sixty by 30 Strategic Plan[44] outlines several focus areas that are impacted by the work of the MIHI Office including:

1. Boost youth college going rates.
2. Boost adult postsecondary enrollment.
3. Create pathways for immigrants and international students.
4. Partner with employers.
5. Catalyze a statewide postsecondary completion agenda with postsecondary institutions.
6. Address barriers to success, especially for students living below the ALICE threshold.

The achievement of the universal availability of high-speed internet and improved digital equity supports the focus areas of the Sixty by 30 initiative as student and career success is supported through expanded access to the internet.

Technical Assistance

MIHI is grateful for the technical assistance that the NTIA has provided thus far and is looking forward to NTIA's continued support in the form of guidance and informational webinars on the following topics, as described in the NOFO:

- Identification of Extremely High Cost Per Location areas
- Approaching the subgrantee selection process
- Developing grant applications
- Procedures for distribution of funds
- Cybersecurity
- Preference for maximum subgrantee contribution and minimal BEAD subsidy determinations

44. https://www.michigan.gov/-/media/Project/Websites/leo/Documents/Executive/Sixty_by_30_Strategic_Plan.pdf?rev=b75c735459cf411ca327cb22628ac0c7

In addition to guidance, timely review and feedback from NTIA on the Five-Year Action Plan, Initial Proposal, and Final Proposal, as well as dedicated technical assistance in the revision process of the Initial Proposal, will support the BEAD program deployment in Michigan.

In addition to the guidance NTIA has already reported, the below are additional areas of technical assistance requested by MIHI:

- Audit requirements
- Subgrantee compliance and reporting requirements including timelines, templates, and tutorials
- Compliance with Build America and Buy America Acts
- Resiliency standards or guidance
- Application of 2 CFR 200 requirements including real property, program income, cost principles, and procurement standards
- Low-cost service option requirements
- Use of public data sets
- Defining digital equity KPIs
- Rural area definition
- Representations of covered populations and the relation to the recommended data sets

MIHI values input from their partners and aims to provide them with the technical assistance necessary to implement a successful BEAD project. During MIHI's partnership roundtable meetings, concerns regarding the availability of electronic components and supply chain shortages were raised. MIHI shares NTIA's confidence in current supply chain and material availability, while acknowledging that unforeseen issues may arise. Therefore, MIHI also requests guidance on flexibility of the required milestones, timelines, and requests for extensions, in the event delays due to supply chain shortages occur.

MIHI would appreciate guidance on how we can holistically plan for and overcome nontraditional barriers that may keep Michiganders from being digitally connected. Nontraditional barriers may include those that reach into broader social determinants such as socioeconomic status.

Conclusion

Access to high-speed internet substantially affects the ability to fully participate in everyday life and plays a critical role in accessing employment, education, and healthcare. The digital divide has the most significant impact on communities that have previously been overlooked or that have been historically disadvantaged. The BEAD Program offers an opportunity for Michigan to finally close the digital divide and achieve its statewide goals to ensure that high-speed internet access is available to every home, business, institution, and community and that 95% of Michigan households adopt a permanent home internet connection.

MIHI's robust and innovative community and stakeholder engagement process highlighted the need to address and approach broadband challenges based on the unique characteristics of regions and local communities.

It is not possible to fully address the digital divide in Michigan without concurrently addressing digital equity. MIHI is committed to digital inclusion and will coordinate the planning and implementation of the BEAD Program with the state Digital Equity Plan and SDECG to achieve its digital equity goals. With the help of the state Digital Equity Plan, and in collaboration with partners and stakeholders, MIHI is confident in its ability to overcome obstacles and barriers. MIHI has conducted meetings with its enabling partners and partnership roundtables, which have reassured MIHI that stakeholders throughout the state are willing to collaborate for achieving the state's vision for broadband and digital equity.

MIHI is grateful to all the Michiganders who have taken the time to participate in the surveys, roundtables, coordination meetings, and the listening tours and is looking forward to a continued dialogue with residents and partners throughout the BEAD program implementation. This participation and stakeholder feedback are key to the state's strategy for closing the digital divide. Following the submission of this Five-Year Action Plan, MIHI will continue to engage with its stakeholders and collect valuable input and data for the BEAD Program implementation to serve communities in the best possible way that meets their needs.

Appendices

Appendix A – External Partner Organizations

The following is a list of organizations invited to participate as external partners and attend MIHI's monthly Partnership Roundtable meetings, (*indicates organization has attended at least one partnership roundtable meeting).

123.NET, INC.
906 Technologies, LLC
AARP*
Above Wireless LLC
ACD.net*
Ace Telephone Company of Michigan, Inc*
AcenTek
Adtran, Inc.*
AEG/ITC Broadband
Agri-Valley Communications, Inc*
Allband Communications Cooperative*
Allegan County Government*
Almont Township
Almvoy Inc
Altman Solon*
American Arab Chamber of Commerce
American Electric Power (AEP)*
Aspen Wireless
Astrea Connect*
AT&T*
Athens Township*
ATI Networks, Inc.
AuSable Valley CMHA*
Ballmer Group
Baraga Telephone Company*
Barger Creek Wireless
Barry County Telephone Company
Bath Township MI Broadband Taskforce
Bay Arenac ISD
Bay County Commission*
Bay County*
Bay Mills Indian Community*
BCN Telecom, Inc.
Beaver Island Joint Townships Telecommunications Advisory Committee*
Benefits Data Trust*
Berrien County*
Big Rapids Charter Township*
Big River Telephone Company, LLC
Black Leadership Advisory Council
Blanchard Telephone Co.
Bloomingdale Telephone Company, Inc.*
Blue Collar ISP
Bruce Township

Buckeye Broadband*

Building Assets to Strengthen Society (BASS Inc)*

Business Leaders of Michigan

Cadillac Area Chamber of Commerce*

Calhoun County

Cannon Township

Capital Area District Libraries

Carr Telephone Company

CCI Systems

CEDAM*

Cedar Creek Wireless LLC

Center for Change Northern Michigan Advocacy*

Center Upper Peninsula Planning and Development*

Central Michigan University*

Central Upper Peninsula Planning and Development Regional Commission*

Chaldean Community Foundation

Charter Communications (Spectrum) *

Charter Township of Hampton

Charter Township of Union*

Charter Township of Vienna*

Cheboygan County*

Cherry Capital Connection, LLC*

Chikaming Township*

Chocolay Township

CHR Solutions*

Church of the Messiah / BLVD Harambee*

City of Alpena

City of Birmingham, MI*

City of Detroit*

City of Flint*

City of Hart

City of Norway

City of Portland

Clare County EMHSD*

Climax Telephone Company

Closing The Digital Gap*

CMC Telecom, Inc.

CMSInter.net LLC

Cogent Communications*

Coldwater Telecommunications Utility

COLI, Inc.

College of Healthcare Information Management Executives (CHIME)

Columbia Township Board*

Columbus Township

Comcast*

Commission on Middle Eastern American Affairs

Communications Workers of America*

Community Action Agency Association

Community Action Alger Marquette*

Community Action of Allegan County

Community Advisory Council-D4 (Detroit)*

Community Economic Development Association of Michigan

Connecting Manistee County*

Consumer Cellular, Incorporated

Consumers Energy

Convis Township

Conway Township

Cooperative Network Services

COOR ISD*

Corewell Health

Council of Michigan Foundations

County of Gladwin*

County of Iosco

County Road Association of Michigan*

Crown Castle Fiber LLC

Crystal Automation Systems, Inc
dba Casair, Inc

CS Mott Foundation

D & P Communications*

DayStarr LLC

DCS Technology Design*

Detroit Community Technology Project*

Detroit Regional Chamber

Detroit Regional Partnership

DetroitJCS*

Develop Iosco, Broadband Advisory Committee*

Dexter Township

Dickinson Area Community Foundation

DMCI Broadband LLC*

Downriver Community Conference*

DTE Energy

Duke Broadband*

Dykema

Dynamic Environmental Associates, Inc.

East Bay Township

East Michigan Council of Governments*

Eastern UP Regional Planning and Development Commission*

Eclipse Communications

Egelston Township

Elk Rapids Schools*

EUPConnect Collaborative / EUPISD*

Everstream GLC Holding Company LLC

Farmers Mutual Telephone Company

FirstNet Built with AT&T

Flint Innovative Solutions*

Frontier Communications*

Frontier*

Fund MI Future*

General Equipment Maintenance and Language llc*

Gerald R Ford Job Corps Center

Gladwin County Commission

Gladwin County Democratic Party*

Gladwin County Office of Veterans Affairs*

Global Entrepreneurship Business Lab*

GLS Region V Planning and Development Commission

Google North America Inc.

Grand Rapids Alliance of Cooperative Communities

Grand Rapids Area Black Businesses

Grand Rapids Chamber*

Grand Rapids Urban League*

Grand Traverse Band of Ottowa and Chippewa Indians

Granite Telecommunications, LLC

Gratiot County

Great Lakes Energy*

Great Lakes Islands Alliance*

Guidehouse

GVSU*

Hannahville Indian Community, Michigan

Hayes Township

Health Care Association of Michigan

Henry Ford Health*

Hiawatha Communications*

Hiawatha Telephone Company

Hidden Lake Wireless, Inc.

Highland Twp Supervisor*

Highline*

Hispanic/Latino Commission

Holland Board of Public Works

HomeWorks *

Hudson Webber Foundation

Human-I-T*

Huron County

Huron & Sanilac Economic Development Corp*

IBEW*

ICEA*

Indiana Michigan Power Company Inc.

Internet Service Inc.*

InvestUP*

Ionia Unlimited LLC

Iron River Coop TV and Ant.

ISP Management Inc.

ITC*

JMF Solutions, Inc.

JSI Telecom*

Kalamazoo Regional Educational Service Agency

Kaleva Telephone Company

KALITTA AIR *

Kellogg Foundation of Michigan

Kent County*

Kent ISD

Keweenaw Bay Indian Community

KPMG*

Lac Vieux Desert Band of Lake Superior Chippewa Indians

LakeNet*

Lansing Board of Water & Light*

Lansing Regional Chamber

Lapeer County ISD

Latin Americans United for Progress

Lee Township Allegan County*

Leland Public Schools*

Lennon Telephone Company

LEO - Employment & Training*

Leroy Township

Library of Michigan

Lighthouse.Net

Lit Communities*

Little River Band of Ottawa Indians*

Little Traverse Bay Bands of Odawa Indians

LLEAD - Latino Leaders for the Enhancement of Advocacy and Development

Local Access, LLC

Local Initiatives Support Corporation

Local Union 876

London Township*

Lynx Network Group, Inc.

Macomb County Dept of Planning & Economic Development

Macomb Intermediate School District*

Macon Township

MAEDS Michigan Association for Educational Data Systems

Mainstee County Commission*

Mainstee County Human Services Collaborative Body*

Make This World Foundation

Market Van Buren*

Marq6 Broadband

Marquette County*

MASAL

Mastodon Township Planning Commission

Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians (Gun Lake)*

MBK Benton Harbor

MBK Highland Park

MBK Lansing

MBK Southfield

MBK Washtenaw County

McKenzie Health System*

MDHHS*

MDOT*

Mental Health Association in Michigan*

Mercury Broadband*

Meridian Charter Township

Merit Network*

Merritt Township*

MetaLINK Technologies, Inc.*

Metro Fibernet, LLC

Metropolitan Telecommunications of Michigan, Inc., dba MetTel

MI Community Action*

MI Health and Hospital Association*

Michigan AgriBusiness Association

Michigan Asian Pacific American Affairs Commission

Michigan Association for Computer Users in Learning (MACUL)*

Michigan Association of Counties*

Michigan Association of County Drain Commissioners

Michigan Association of Intermediate School Administrators

Michigan Association of Senior Centers

Michigan Association of State Universities

Michigan Association of United Ways

Michigan Building and Construction Trades Council

Michigan Central Broadband Company, LLC

Michigan Chamber of Commerce

Michigan Coalition on Black Civic Participation

Michigan College Access Network*

Michigan College Alliance

Michigan Community College Association

Michigan Cooperatives Directors Association

Michigan Department of Agriculture and Rural Development*

Michigan Department of Civil Rights*

Michigan Department of Corrections*

Michigan Department of Education

Michigan Department of Education Office of Special Education*

Michigan Department of Health and Human Services*

Michigan Department of Natural Resources*

Michigan Department of Technology, Management, & Budget*

Michigan Department of Transportation*

Michigan Economic Developers Association

Michigan Economic Development Corporation*

Michigan Educational Technology Leaders

Michigan Electric Cooperatives Association*

Michigan Farm Bureau

Michigan Farmers Union*

Michigan Health and Hospital Association

Michigan Health Council

Michigan Health Improvement Alliance*

Michigan Hispanic Chamber of Commerce

Michigan Infrastructure and Transportation Association

Michigan Infrastructure Council

Michigan Infrastructure Office*

Michigan League For Public Policy

Michigan Library Association

Michigan Medicine*

Michigan Municipal Electric Association

Michigan Municipal League*

Michigan Primary Care Association*

Michigan Public Service Commission*

Michigan Railroads Association

Michigan Small Business Development Center

Michigan State University Center for Community and Economic Development*

Michigan State University*

Michigan Technological University, Information Technology*

Michigan Townships Association*

Michigan Unemployment Insurance Agency*

Michigan Veterans Affairs Agency*

Michigan Veterans Foundation

Michigan Workforce Development Institute

Michigan Works! Association*

Michigan Works! Region 7B*

Michigan Works! Region 7B/Ogemaw EDC*

Michigan's Great Lakes Bay Regional CVB*

Michwave Technologies, Inc.

Middle Michigan Development Corporation

Midland Area Transportation Study*

Midwest Energy & Communications*

Millennium

MISSDIG (Michigan Utility Notification Center)*

MITCON, LLC

Mobilitie Management, LLC

MPSC*

MSU

MSU Extension*

Munson Healthcare*

MVAA*

MyMichigan Health

Nation Outside A Voice for the Formerly Incarcerated*

Negaunee Cable Company

NEMCOG*

Networks Northwest/Northwest Michigan Works!*

NMU Network

Nokia

North End Woodward Community Coalition*

Northeast Michigan Council of Governments

Northern Broadband*

Northern Lakes Economic Alliance

Northern Michigan University*

Northside TV Corporation

Northwest Education Services*

Northwest Michigan Council of Governments (dba. Networks Northwest)

Norvell Township Government

NOS Communications, Inc.

Nottawaseppi Huron Band of the Potawatomi*

nTechQuity Community Learning *

Oakfield Township

Oakland Livingston Human Service Agency*

Oakland University*

Oceana Country Economic Alliance*

Oceana County Board of Commissioners

Office of Foundation Liaison

Office of Global Michigan

Office of U.S. Senator Debbie Stabenow*

Ogden Telephone Company

Osceola County

Ottawa County*

Park Township

Pasty.net*

Peerless Network of Michigan, LLC

Peiane Township*

Peninsula Fiber Network*

Pennies from Heaven Foundation*

Pentwater Township*

Pinconning Township

Plainfield Township*

Plante Moran

Point Broadband Fiber Holding, LLC

Pokagon Band of Potawatomi

Presque Isle Electric & Gas Co-op*

PROTEC Michigan*

Pure Broadband*

Quello Center at MSU*

Ralph J Wilson Jr Foundation

Region 2 Planning Commission

Regional Educational Media Center Association of Michigan*

REMC*

Representative Greg Alexander's Office

Richland Township, Kalamazoo County

Rockford Telephone Company, Inc.

Roscommon County

Roscommon Township*

Rural Gig LLC*

Rural Innovation Strategies Inc

Sage Telecom Communications, LLC

Saginaw Chippewa Indian Tribe*

Saginaw County Community Action Center*

Saginaw County Information Technology Director*

Saginaw Housing Commission

Sand Creek Telephone Company*

Sanilac County Community Foundation*

Sault Ste. Marie Tribe of Chippewa Indians*

SCIT*

Secord Township

ShoreWaves LLC

Sidney Township*

Sister Lakes Cable TV

Small Business Association of Michigan*

SoftPath Technologies, LLC

SonicNet, Inc.*

Southcentral Michigan Planning Council

Southeast Michigan Council of Governments*

Southwest Michigan Planning Commission

Southwestern Michigan Urban League

Springport Telephone Co*

Sprint Communications Company, L.P.

St James Township, Charlevoix County*

St. Clair County Commissioner

St. Clair County Metropolitan Planning Commission

State Historic Preservation Office

State of Michigan (MDARD) - Office of Rural Development*

State Representative Angela Witwer*

STELLAR Broadband*

Strategic Alliance Community Development*

Summit Digital

Sunrise Communications, LLC

Surf Broadband

Sylvester Broome Empowerment Village

SyncWave, LLC*

TC3 Telecom, Inc.

TDS Telecom

Telecommunications Association of Michigan*

The Chillicothe Telephone Company

The Disability Network *

The Ezekiel Project

The Kresge Foundation

The Right Place*

Thumb Electric

T-Mobile

Torch Wireless

Township of Bruce

Tri-County Electric Cooperative dba HomeWorks Connect*

Tri-County Regional Planning Commission

United Tribes of Michigan

United Way for Southeastern Michigan*

University of Michigan - Flint*

University of Michigan*

UP Health Care Solutions / Health Information Exchange*

Upjohn Institute*

Urban League of Detroit and Southeastern Michigan

Urban Wireless Solutions*

US Cellular*

US Signal Company, L.L.C.

Vantage Point

Vergennes Broadband LLC

Verizon*

Victor Township, Clinton County*

Village of Pentwater*

Waldron Communication Co.*

Washington Township*

Washtenaw County

Washtenaw Fiber Properties LLC

Wayne County Community College District*

Wayne Metro

Wayne State University*

Webster Broadband Cooperative

West Michigan Regional Planning Commission

West Michigan Shoreline Regional Development Commission*

Western Upper Peninsula Planning and Development Regional Commission*

Westphalia Broadband, Inc.

Wheatfield Township*

Wideband Group, LLC*

Williamston Township*

WISPA*

WOW!

Wyandotte Cable

Zayo Group, LLC

MICHIGAN DEPARTMENT OF
LABOR & ECONOMIC
OPPORTUNITY

MICHIGAN
HIGH-SPEED
INTERNET
OFFICE

Trinity Health
Alliance of Michigan

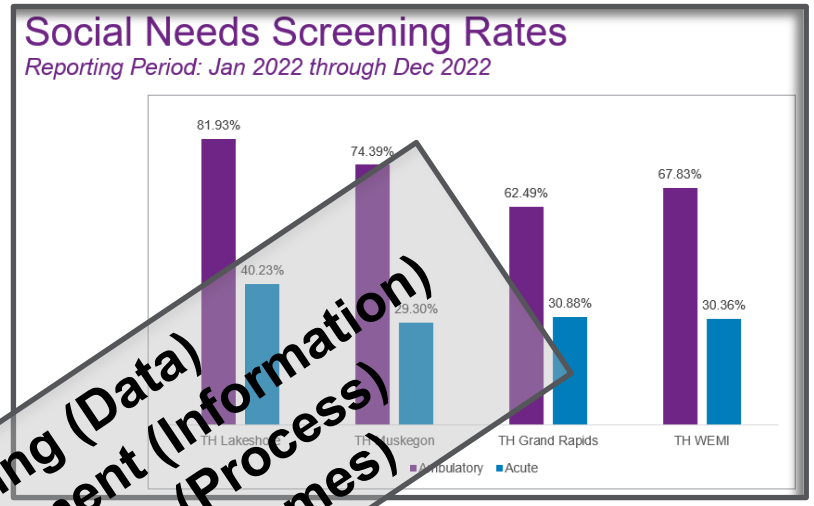
HEALTH-RELATED SOCIAL NEEDS

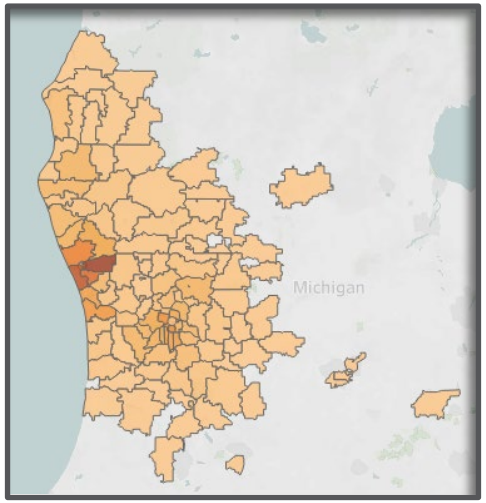
September 2023

COMMUNITY HEALTH & WELLBEING: HEALTH-RELATED SOCIAL NEEDS

CURRENT STATE

- **Collection of data** on housing, food access, transportation and other health-related social needs
  - Ambulatory > Acute settings for CY22 accomplishments
- **Community partner engagement**





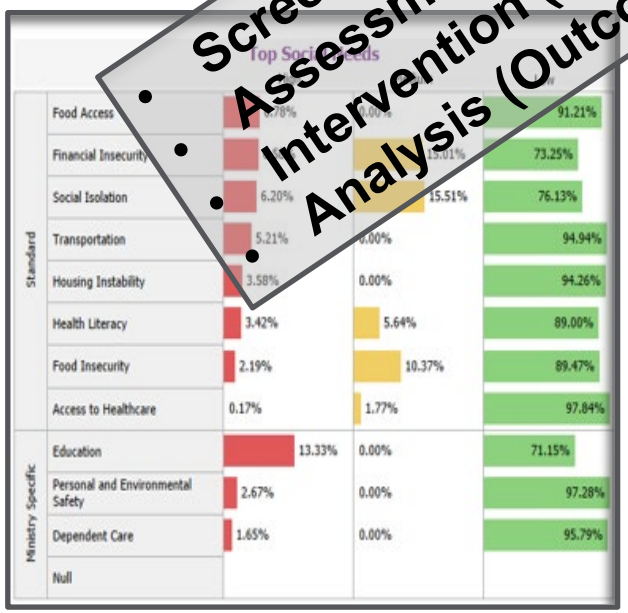
- **Screening (Data)**
- **Assessment (Information)**
- **Intervention (Process)**
- **Analysis (Outcomes)**

POPULATION HEALTH

Risk Stratification
- Clinical/claims data
- Shared populations

Standards
- Guidelines/Protocols
- Quality/Gaps in Care

Transitions
- ADT feeds
- Community Collaboration



FUTURE STATE

- **Standardization** of terms, questions, coding and messaging
- **Convening of data** across multiple stakeholders for strategies, resources and policymakers
- **Trusted, secure connections** to community-based organizations and public entities for interoperable referrals

REFERENCES

- Inadequacy of Current Screening Measures for Health-Related Social Needs | Health Care Quality | JAMA | JAMA Network
- The AHC Health-Related Social Needs Screening Tool (cms.gov)
- Moral Failure And Health Costs: Two Simplistic Spending Narratives | Health Affairs
- OECD2019-Social-Expenditure-Update.pdf
- Estimated Costs of Intervening in Health-Related Social Needs Detected in Primary Care | Health Disparities | JAMA Internal Medicine | JAMA Network

Session 7: HIT Hard or Go Home? Future of HIT in Michigan Executive Panel: 3:30 – 4:30 PM

Notes from Kevin Bohnsack, MD, MPH, CPE, FAAFP, Executive Director Population Mgmt., Trinity Health MI

Personalized medicine: With the rise of genomic sequencing, it is becoming increasingly possible to develop personalized treatment plans for patients based on their individual genetic makeup. Reimagining MI Health could involve developing more sophisticated algorithms and software tools that can interpret genetic data and use it to guide treatment decisions.

Telemedicine: Telemedicine has become increasingly popular over the past few years, allowing patients to receive care from the comfort of their own homes. Reimagining MI Health could involve developing more sophisticated telemedicine tools that allow doctors to diagnose and treat a wider range of conditions remotely, along with emerging remote patient monitoring (RPM) technologies.

Data analytics: Healthcare generates vast amounts of data, from electronic health records to clinical trial data. Reimagining MI Health could involve developing more sophisticated data analytics tools that can help healthcare providers make better use of this data to improve patient outcomes and advance medical research, including but not limited to artificial intelligence and machine learning.

Interoperability: One of the biggest challenges facing health is the lack of interoperability between different systems and platforms. Reimagining MI Health could involve developing more open, standardized platforms that can share data more easily between different healthcare providers, systems, and community-based organizations (CBOs). Health Information Exchange (HIE) & Community Information Exchange (CIE)

Patient engagement: Reimagining MI Health could also involve developing more patient-centric tools that empower patients to take a more active role in their own healthcare. This could include things like mobile health apps, wearable devices, and patient portals that allow patients to access their health records and communicate with their healthcare providers more easily. Third-party Apps / FHIR

"Reimagining MI Health" 2023 Fall Conference

Dan Waltz, Corporate VP and CIO

My Michigan Health
UNIVERSITY OF MICHIGAN HEALTH

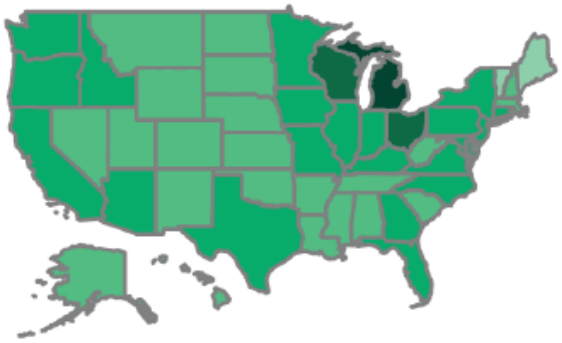
Data Exchange

Patient Records Exchanged

You've exchanged patient records with organizations spanning

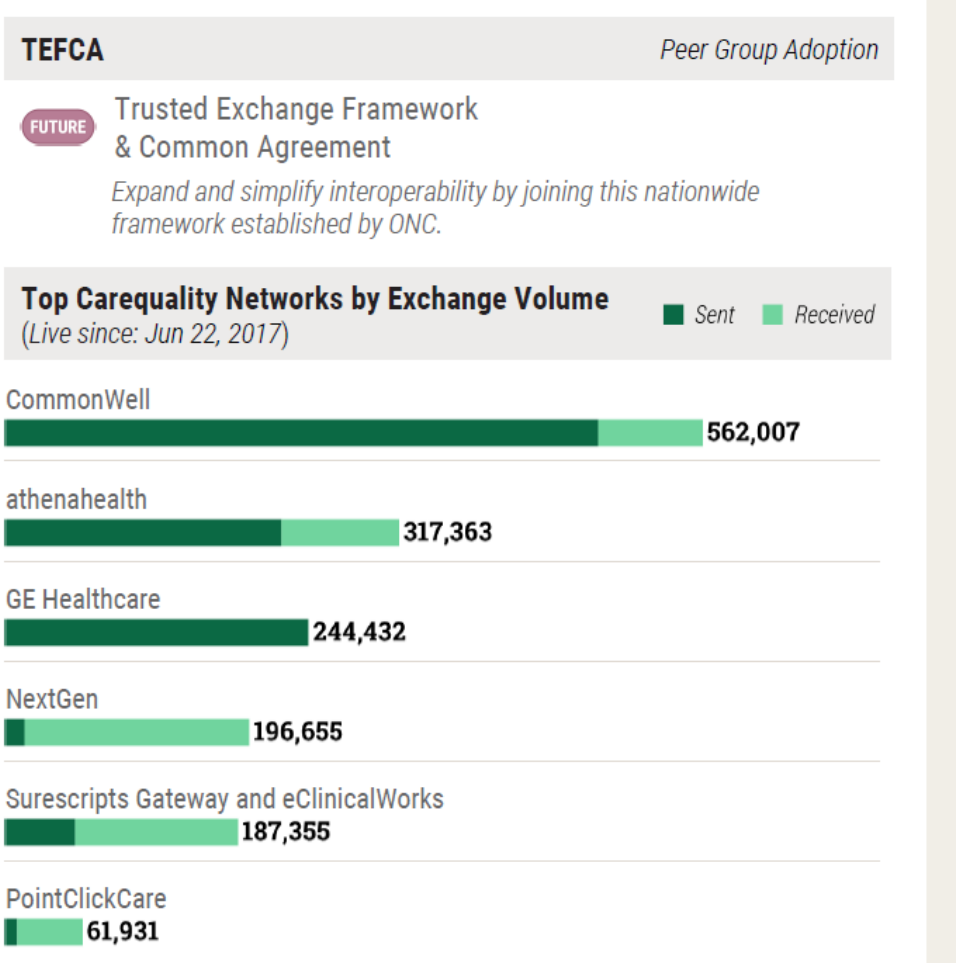
50 **STATES**

Darker shading indicates higher exchange volume



3,898,015	Patient Record Exchanges in 2023 YTD
6,650,319	Patient Record Exchanges in 2022
25,716,391	Patient Record Exchanges Since Care Everywhere Go-Live in 2017

Data Exchange



MyMichigan Challenges Force Field

For

- Growth
- Operating Margin
- Access
- Interoperability
- Quality

Against

- Staffing
- Reimbursement
- Availability of providers /
- excess regulations
- Internet access
- Overlapping requirements – Federal, State, Mihin, Epic, Etc
- cost – reimbursement – insurance – regulatory - etc

MyMichigan Health Focus Areas

- Growth
- Physician Productivity and Engagement
- Population Health
- Operating Margin
- Patient Experience and Self Health
- Nursing Productivity
- Mobile
- Interoperability
- Patient Access
- Quality & Saving Lives
- Patient Flow