Minnesota's Digital Opportunity Plan

EMPLOYMENT AND ECONOMIC DEVELOPMENT
OFFICE OF BROADBAND DEVELOPMENT

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Contents

1.0 | Introduction

"I think everyone should have equal access to internet connectivity. It's an essential part of life in this day and age, and not having internet really inhibits opportunities for people." [1]

The Infrastructure Investment and Jobs Act (IIJA), also referred to as the Bipartisan Infrastructure Law, was passed by Congress in November 2021. This act appropriated a monumental $65 billion to fund the development of broadband infrastructure and the implementation of digital inclusion work on a national scale. Of this full appropriation, nearly $50 billion is being administered by the National Telecommunications and Information Administration (NTIA) at the U.S. Department of Commerce. This portion covers four program areas:

- Tribal Broadband Connectivity Program ($3 billion)
- Enabling Middle Mile Broadband Infrastructure Program ($1 billion)
- Broadband Equity, Access, and Deployment (BEAD) Program ($42.45 billion)
- Digital Equity Act Programs ($2.75 billion)
    - Digital Equity Planning Grants ($60 million)
    - Digital Equity Capacity Grants ($1.44 billion)
    - Digital Equity Competitive Grants ($1.25 billion)

This state digital opportunity plan is the primary deliverable required under the Digital Equity Act. It is funded through a State Digital Equity Planning Grant of $881,905.10[2] and has been prepared by the Office of Broadband Development (OBD) within the Department of Employment and Economic Development (DEED).

Submission and approval of this plan to NTIA enables the state of Minnesota to apply for and receive a federal State Digital Equity Capacity Grant from NTIA in the future. The capacity grant award amount, capacity grant application requirements, and capacity grant implementation timeline are unknown as of November 15, 2023. This makes it impossible to pinpoint the exact timeline after this plan is submitted; at the same time, this ambiguity creates an additional opportunity to pause, reflect, and imagine together what a digitally equitable Minnesota could look like and what it will take to get there.

[1] Focus group, Minneapolis. Provided by Hired (Digital Connection Committee).

[2] Notice of Funding Opportunity (NOFO).

1.1 | Minnesota's Digital Future

1.1.1 | Vision Statement

This plan envisions a future where **comprehensive digital access connects all Minnesota residents to opportunities, options, and each other.**

1.1.2 | Goals

The following list provides a summary of Minnesota's digital opportunity goals as proposed. Digital connection depends on human connection. As such, OBD's intention with these three goals is to center people—not things—in all digital opportunity planning, activities, and solutions. Further details are spelled out at length in Section 3.0.

Goal 1: Connect People to People

This goal is grounded in the value of people coming together to help, advocate for, and learn alongside one another. Even as technology enables connections to far-away people and places, what happens here in Minnesota matters significantly as human connections build out social infrastructure.

Goal 2: Connect People to Information

This goal recognizes the significance of data and information as tools for advancing digital opportunities at both the local and statewide levels. It also aims to foster collaboration among diverse communities to create new avenues for data-driven digital opportunity decision-making.

Goal 3: Connect People to Resources

While the previous two goals are grounded in relationships and skills, this third goal pivots to look more closely at the concrete resources that Minnesotans need in order to access technology. This includes three key components: "broadband internet service; internet-enabled devices that meet the needs of the user; and applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration."[3]

1.1.3 | Objectives

The following summarizes Minnesota's digital opportunity objectives. Achievement of these objectives will support Minnesota in achieving its aforementioned digital opportunity goals. Further details about each objective are provided in Section 3.0.

(1) Internet adoption: Increase Minnesotans' adoption of broadband internet.

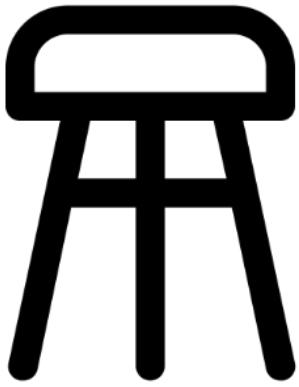
[3] NOFO.

(2) Devices: Increase Minnesotans' access to large-screen devices, such as laptop and desktop computers.
(3) Digital skills: Expand Minnesotans' access to digital skills training. This includes increasing Minnesotans' awareness of cybersecurity and privacy issues.
(4) Accessibility: Improve accessibility of web-based state, local, and tribal government information.

1.2 | Digital Opportunity: Scope and Background

1.2.1 | Defining "Digital Opportunity"

The concept of the "digital divide" first received widespread attention through a 1995 report from NTIA titled "Falling through the Net: A Survey of the 'Haves' and 'Have Nots' in Rural and Urban America." This report highlighted the disparities in internet access between rural and urban areas of the United States, emphasizing the gap between those who had access to technology and those who did not.



But reality is more complicated than "have" vs. "have not," particularly as technology has evolved. Acknowledging this, the multi-faceted nature of technology access was first represented using the metaphor of a three-legged stool in 2008.[4] In this metaphor, each leg of the stool—pictured to the left—signifies a different element of digital access. These three elements are (1) access to internet service; (2) access to an internet-enabled device; and (3) relevant digital skills. Without any one of these three elements, the stool is useless.

When this metaphor is used, the stool is often depicted exactly as it here: floating in the air, devoid of context. OBD could spend years trying to measure each leg of this stool but would still fail to summarize accurately the state of digital opportunity across Minnesota. Even as this plan may outwardly present digital opportunity as being about technological and informational connections, overall success depends on human connections.

Adopting a definition from the NOFO, *digital opportunity* describes "a condition in in which individuals and communities have the information technology capacity that is needed for full participation in the society and economy of the United States." Digital opportunity is achieved through several digital inclusion activities, also provided in the NOFO:

(1) reliable broadband internet service;
(2) internet-enabled devices that meet the needs of the user;
(3) applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration;

[4] Mossberger, Tolbert, and Franko, *Digital Citizenship: The Internet, Society, and Participation*.

(4) access to digital literacy training;[5]
(5) quality technical support; and
(6) basic awareness of measures to ensure online privacy and cybersecurity.

Absent from this definition but absolutely essential are trust, relevance, and safety. These conditions must be present in order for any individual to adopt technology in ways that are meaningful to them.

1.2.2 | Limitations and Possibilities

This plan exists in the middle of a particular kind of tension between what is permissible and what is needed. The gaps in digital opportunity that many individuals confront daily are often a consequence of long-term gaps in federal, state, and local policy that have allowed people to be left behind. For gaps to be closed in the long-term, new federal, state, and local policies need to be adopted. Without addressing the inequities built into this system, the same gaps will remerge and persist. It is, however, outside of the purview of OBD to independently recommend policy changes, serve as a regulatory body, or propose regulatory reform.

With that, **Minnesota's digital opportunity plan is an exploratory document coupled with programmatic goals that are achievable through a State Digital Equity Capacity Grant.** The three goals highlighted in this plan—connect people to people, connect people to information, and connect people to resources—are ultimately limited, nodding to the moments where connections happen rather than the real systemic work it takes to sustain connections. To do so, it will take people working together across the state with this shared vision. This plan presents an informational starting point.

[5] This language is from the NOFO. OBD elects to use the phrase "digital skills" in place of "digital literacy."

2.0 | Planning Process: The Minnesota Model

"Access to high-speed internet is key to digital inclusion. Only then can people learn how to use it to access health care, education, business operations and social connectivity." [6]

For over a decade, Minnesota has been a nationally recognized leader in state-supported, statewide broadband infrastructure expansion. Minnesota's legislatively created broadband goals recommended by its governor-appointed Task Force on Broadband, its Office of Broadband Development, its mapping tools, and its Border-to-Border Broadband Development Grant Program are collectively referred to as "the Minnesota Model" by other state and federal policymakers who are looking to expanded broadband access for their residents.

The Minnesota Model is characterized by a four-part statutory framework which includes the following components:

(1) an Office of Broadband Development within the Department of Employment and Economic Development charged with numerous broadband oversight responsibilities, including digital inclusion;[7]
(2) forward-looking internet speed goals;[8]
(3) broadband deployment data and mapping capabilities to accurately plan, monitor, and track broadband infrastructure; and
(4) the Border-to Border Broadband Development Grant Program to provide matching funds for broadband infrastructure deployment in unserved and underserved areas.[9]

With this strong foundation of past experience and the existing local trust OBD has earned throughout Minnesota, OBD was able to think creatively and compassionately in designing Minnesota's digital opportunity planning process. OBD embedded opportunity in this planning process itself by prioritizing authenticity, cooperation, and relationship-building.

2.1 | Digital Connection Committees

Digital Connection Committees (DCCs) are the heart of Minnesota's digital opportunity planning process. They have served as leaders in ensuring this plan reflects the priorities, goals, and needs of all Minnesotans. Devised by OBD specifically for digital opportunity planning, DCCs are self-selected

[6] Survey, Arrowhead region. Provided by Northspan (Digital Connection Committee).
[7] Minn. Stat. § 116J.39.
[8] Minn. Stat. § 237.012.
[9] Minn. Stat. § 116J.395.

workgroups formed on a voluntary basis by a variety of entities, including political subdivisions, tribes, non-profits, anchor institutions, faith-based organizations, Minnesota-based businesses, and more–or any combination of these.[10]

DCCs encapsulate Minnesota's diversity. Some DCCs are urban; some are rural. Some have just one or two members; others have twenty or thirty. Some have been working in digital opportunity spaces for many years; others are new to this work. Some are focused on reaching a specific group of people; some chose a broader approach. To honor these variations and encourage DCCs to work in the ways they find most meaningful and effective, OBD created a menu of opportunities from which DCCs could choose, outlined below:

Required DCC Responsibilities	Optional DCC Responsibilities
• Receive and share updates about the digital opportunity planning process as it transpires. • Allow OBD to list the DCC in a public directory.	• Gather local information about digital opportunity strengths, unsupported necessities, and systemic challenges. • Attend virtual networking sessions to meet and learn from other committees. • Provide feedback on a draft of the digital opportunity plan. • Act as a network of partners for OBD to call on as digital opportunity work progresses.

To draw attention to their work and illustrate the breadth, depth, and diversity of experience they each bring, every DCC that gathered and submitted digital inclusion data is cited in footnotes throughout this plan (some quotations have been lightly revised for clarity and space). Their contributions are deeply appreciated.

2.1.1 | OBD Support for DCCs

Assessing Digital Inclusion Mini-Grants

OBD provided targeted financial support for DCCs primarily through Assessing Digital Inclusion Mini-Grants. With inclusion in mind, OBD chose to make these grants non-competitive, awarding funds based on each individual application's completeness, timeliness, and adherence to the scope of the intended grant work. By awarding based on these three criteria rather than based on comparative merit, OBD was able to provide mini-grants of up to $4,000 each to 68 of the DCCs. Every DCC receiving a mini-grant was

[10] A full list of DCCs that were registered by November 15, 2023 is available in Appendix A.

required to use their grant funds to prepare and submit the following four deliverables; DCCs not receiving mini-grants were also invited to participate as they chose:

(1) Evidence of having established a local Digital Connection Committee. This includes contact information for a committee leader and minutes from 2 meetings occurring during the grant period.
(2) Quantitative digital inclusion data.
(3) Qualitative digital inclusion data.
(4) An asset inventory identifying existing local resources that contribute to digital inclusion.

Instructions and Templates

To guide DCCs' data collection work, OBD prepared instructions and templates for compiling asset inventories, conducting surveys, convening focus groups, and holding individual interviews. In general, DCCs were welcome to pick which methods they used, which example questions they used, etc. OBD encouraged DCCs to gather data that was meaningful to them, and to use methods of information gathering that were most relevant and appropriate for their audience. To protect all individuals and not jeopardize trust between DCCs and communities, OBD did not accept any personally identifiable information.

2.1.2 | Digital Opportunity Planning Timeline

The timeline below outlines key milestones that the DCCs achieved during the digital opportunity planning process, which occurred entirely during 2023:

Date	Activity
January 25	OBD began recruiting DCCs during the Connecting One Minnesota kickoff event at Mystic Lake Event Center and online.
February 21	Mini-grant technical assistance webinar hosted by OBD: "Your Role in Creating Minnesota's Digital Opportunity Plan."
March 3	Assessing Digital Inclusion Mini-Grant applications due.
March 15	Grantee orientation webinar.
March 31	OBD began sending out updates, templates, guides, and other resources to all DCCs.
April 3	DCC data gathering activities began; start of performance period for mini-grant recipients.
April 12	Virtual informational session for all DCCs.

May 1–31	OBD held individual check-ins with grantees (required) and non-grantees (optional).
June 14	Virtual networking session for all DCCs.
June 30	DCC data gathering activities ended; end of performance period for mini-grant recipients.
July–August	OBD crafted a draft of the Digital Opportunity Plan.
August 21–September 29	Draft of the Digital Opportunity Plan released; OBD worked with DCCs to collect feedback on the plan via surveys, virtual meetings, and in-person gatherings.
October	OBD revised plan based on feedback.
November 30	Final draft of plan due to NTIA.

2.2 | Public Comment Period

The first complete draft of this plan was made available for public comment from Monday, August 21 to Friday, September 29, 2023. During this time, the draft plan was posted on OBD's digital opportunity webpage, made available in print form through public libraries statewide, and distributed in print form to people attending in-person digital opportunity listening sessions.

Comments were accepted in writing through an online submission form linked to OBD's digital opportunity webpage, in writing by mail to OBD's office address, and in spoken form during digital opportunity listen sessions. Additional information about written public comments can be found in Appendix O and Appendix P. Digital opportunity listening sessions saw 306 participants across 17 in-person and 2 virtual sessions. The complete list of dates and locations is provided in the chart below:

Date and Time	Location
August 29 1–3pm	Willmar Public Library 410 5th St SW, Willmar
August 30 1–3pm	Marshall-Lyon County Library 201 C St, Marshall
August 31 noon–2pm	JBS Fieldhouse 700 2nd Ave, Worthington
September 5 1-3pm	Dakota County Library: Wentworth 199 Wentworth Ave E, West St. Paul

Date and Time	Location
September 6 noon–2pm	Witoka Tavern 27983 County Road 9, Winona
September 6 3:30–5:30pm	Family Service Rochester 4600 18th Ave NW, Rochester
September 7 9:30–11:30am	Rice County Administrative Building 320 3rd St NW, Faribault
September 7 1:30–3:30pm	Bridge Plaza–2nd Floor Training Room 201 N Riverfront Dr, Mankato
September 12 2-4pm	UMN-Crookston, Bede Ballroom 2900 University Ave, Crookston
September 13 2–4pm	Fergus Falls Public Library 205 E Hampden Ave, Fergus Falls
September 14 12-1:30pm	Virtual Cohost: Minitex
September 18 2:30–4:30pm	Hinckley City Hall 106 1st St SE, Hinckley
September 19 2–4pm	Two Harbors Public Library 320 Waterfront Dr, Two Harbors
September 20 6–8pm	Deer River High School 101 1st Ave NE, Deer River
September 21 1–3pm	Hennepin County Library: North Regional 1315 Lowry Ave N, Minneapolis
September 22 11am–1pm	Range Association of Municipalities and Schools 5525 Emerald Ave, Mountain Iron
September 26 6:30–8:30pm	MN North College: Rainy River 1501 Hwy 71, International Falls
September 27 10am–noon	Northwest Minnesota Foundation 201 3rd St NW, Bemidji
September 27 2-3:30pm	Virtual Cohost: UMN Urban Research and Outreach Center

2.2.1 | Perceived Strengths

In many instances, OBD heard from Minnesotans who were largely satisfied with the draft Digital Opportunity Plan as it was presented. The overall strategy of using Digital Connection Committees to create the draft garnered positive attention for its creative approach, for the authenticity of the data it produced, and for its true dedication to equity.

The aspect of the draft most frequently praised was OBD's choice to supplement language around "assets, needs, and barriers" with "existing strengths, unsupported necessities, and systemic challenges." People identifying with and/or serving covered populations were especially keen to express gratitude for this reframing, finding it accurately and boldly identified the necessary power shift that needs to happen in order to make digital opportunity accessible for all.

2.2.2 | Out-of-Scope Suggestions

Add Strategies that Promote Broadband Infrastructure Expansion

The Digital Opportunity Plan cannot address infrastructure needs. These funds must support initiatives that are programmatic rather than capital in nature. Comments articulating infrastructure needs have been redirected to the staff at OBD who administer infrastructure funding.

Add Strategies that Prioritize Urban Governmental Entities

Several comments expressed that the draft plan's emphasis on rural was potentially harmful to urban areas of the state. OBD clarifies that this plan is required to address "rural" in name because "rural inhabitants" is a covered population identified with precision in the NOFO. Urban digital opportunity needs are not to be addressed on a geographic basis but rather through the additional seven covered populations who live across both urban and rural areas.

Some comments requested population-based funds for local governmental units to carry out digital opportunity projects. OBD affirms that no local funds will be awarded based solely on local populations (including local population counts of people identified as belonging to a covered population) without taking equity-defining measures of local wealth into consideration.

Add Policy Recommendations

The scope of the Digital Opportunity Plan is to strategize how the state will invest its federal State Digital Equity Act Capacity Grant funds. Proposing and/or enacting policy changes is outside of the scope of this plan and is not fundable through this program. In the State of Minnesota, policies changes are best recommended through the Governor's Task Force on Broadband, an appointed body that provides annual infrastructure and digital opportunity policy recommendations to the Governor and Legislature.

Address Native Nations Separately from "Minoritized Racial and Ethnic Groups"

OBD received a small number of comments suggesting that Native Nations should be addressed as a unique covered population separate from the "people from minoritized racial and ethnic groups" covered population. These comments came from individuals rather than from tribal nations. Minnesota statute provides protocols for maintaining positive government-to-government relationships between the State of Minnesota and the 11 federally recognized tribes sharing this geography. Comments from individuals addressing tribal-state relations are appreciated and cannot be acted upon outside of these protocols.

2.2.3 | Highlights of Actionable Recommendations

Include Agriculture

Commenters in Greater Minnesota identified an absence of strategies supporting agricultural businesses, including family farms. Agriculture forms the backbone of the rural economy throughout Minnesota, in particular the southern and western parts of the state. Precision agriculture has the potential to carry farming and agricultural practices into a strong future. In response to this recommendation, OBD has integrated strategies addressing agriculture from the business perspective.

Include Public, Educational, and Government (PEG) Access TV Services

PEG channels are an essential driver of civic engagement and foster transparency in local government proceedings. Through their services, PEG channels allow residents to participate in significant local decision-making processes and connect residents with accurate information about their local elected officials and current events. As more media is accessed and consumed digitally, PEG channels are expected to expand their offerings to include streaming services. However, this is often done with little to no extra funding. In response to this recommendation, OBD has integrated strategies addressing PEG channels.

Strive for Equity in Grants Administration

Public comments, especially those from people identifying with covered populations, responded positively to certain measures OBD proposed in order to promote equity in the grants administration process. These measures include making small, non-competitive grants available at least six months ahead of competitive grants so that under-resourced applicants have an opportunity to increase their capacity to be competitive. Additional measures—like equitable scoring rubrics, concise grant paperwork, and extended technical assistance—were also recommended. OBD will continue to reflect on this feedback leading up to and throughout the State Digital Equity Capacity Grant program.

3.0 | Goals, Objectives, and Strategies

Survey Question: "What efforts would you like to see your local government do in order to improve digital access for everyone?"

Respondents, ages 16–20:

- *"Understand that not everyone has money for these things."*
- *"Provide low cost or free internet to students."*
- *"Make it more accessible for those who have disabilities."*
- *"Have sufficient help for those who cannot afford technology or internet access."*
- *"I'd like to see the government thinking about sustainability and longevity of these things. How all of this can impact future generations."* [11]

As articulated in Section 1.2, Minnesota's digital opportunity plan is an exploratory document coupled with programmatic goals that are achievable through Minnesota's State Digital Equity Capacity Grant. The three goals, accompanying strategies, and aligned measurable objectives provided in this section stay within that scope.

Digital connection depends on human connection. As such, OBD's intention with these three goals is to center people—not things—in all digital opportunity planning, activities, and solutions. Affordable internet access, access to devices, and digital skills support are all essential tools in advancing digital opportunity; people create the systems that make the meaningful use of these tools possible. With this, each goal becomes measurable through the following objectives:

(1) Internet adoption: Increase Minnesotans' adoption of broadband internet. This is measured using ACS data describing the percentage of households that subscribe to broadband internet service.
(2) Devices: Increase Minnesotans' access to large-screen devices, such as laptop and desktop computers. This is measured using ACS data describing the percentage of households that report having at least one laptop or desktop computer available.
(3) Digital skills: Expand Minnesotans' access to training that supports digital skills and cybersecurity awareness. This is measured by using mapping data that describes the percentage of households located within a 60-minute round-trip drive or ride on public transit from the nearest public location (public library, community college, non-profit, CareerForce location, etc.) that provides free basic digital skills and cybersecurity support.

[11] Survey, Minneapolis and Brooklyn Park. Provided by Minneapolis Youth Coordinating Board (Digital Connection Committee).

(4) Accessibility: Improve accessibility of web-based local and tribal government information. This is measured using an equally-weighted combination of three factors:
   a. the percentage of county, city, and tribal government websites that meet the accessibility standards set forth in Minn. Stat. § 16E.03;
   b. the percentage of county, city, and tribal government websites that reflect a Flesch Readability Score of 90 – 100; and
   c. the percentage of county, city, and tribal government websites that provide translations of certain essential information in alignment with local linguistic diversity.

3.1 | Goal 1: Connect People to People

Progress toward digital opportunity in Minnesota has for so long depended on two groups: First and foremost, it has depended on digitally resilient Minnesotans, that is, the people who live the digital divide every day. These are people who depend on public wifi, share one device across a family, or live in places where internet service comes at a high price for a low speed. This day-to-day resourcefulness is commendable, yet it should not be so necessary.

Second, progress toward digital opportunity requires advocates and educators, the people who share a vision where comprehensive digital access connects all Minnesotans to opportunities, options, and each other. In many instances, this group overlaps with the group described above.

This goal is grounded in the value of people coming together to help, advocate for, and learn alongside one another. Even as technology enables connections to far-away people and places, what happens here in Minnesota matters significantly as human connections build out social infrastructure.

3.1.1 | Strategies and Activities to *Connect People to People*

A. Minnesota's digital opportunity advocates and educators statewide are a strong, united group who can lean on each other for fresh ideas, new strategies, and consistent support.
   a. Pilot a structured Digital Opportunity Leaders Network that combines local energy, regional expertise, and statewide continuity.[12] The Digital Opportunity Leaders Network includes three tiers of participation:
      i. Local participation through Digital Connection Committees
      ii. Regional coordination and technical support for DCCs through contracted regional digital opportunity partners
      iii. State coordination for regions from OBD
   b. Convene an inter-agency digital opportunity workgroup with appointed membership from state agencies representing key partners and covered populations.

[12] This concept has been modeled after the Minnesota Healthy Equity Networks.

c. Expand the Digital Connection Committee model of engagement through annual recruitment campaigns.
d. Retain existing DCCs through regularly scheduled virtual meetings and ongoing communication from OBD.

B. All Minnesotans have access to a trusted provider of digital skills training, including training that addresses cybersecurity.

a. Administer grants designed to pilot and expand digital navigation services, targeting rural cities, rural counties, and organizations across the state that both represent and serve covered populations.
b. Provide all CAP agencies, Centers for Independent Living, regional public library systems, veteran homes, and area agencies on aging a non-competitive funding opportunity to support clients with digital access and skills needs.
c. Prepare a report that explores models for a statewide technology assistance helpline.

C. All Minnesotans have access to a trusted provider of quality technical support.

a. Develop curriculum and administer grants designed to support high schools, after-school programs, and 2-year public and tribal colleges in hiring and training students to work part-time as paid tech repair technicians and technical support providers.
b. Administer grants to small businesses, including agriculture, to determine their technology needs in order of priority and improve their technology access.

3.1.2 | Alignment with Measurable Objectives

(1) Internet adoption: Increase Minnesotans' adoption of broadband internet.
(2) Devices: Increase Minnesotans' access to large-screen devices.
(3) Digital skills: Expand Minnesotans' access to digital skills and cybersecurity training.
(4) Accessibility: Improve accessibility of web-based state, local, and tribal government information.

Strategy	Objective(s)	Covered Populations	Notes
A	1, 2, 3, 4	All	Coalitions, professional support, and cross-sector communications form an essential foundation in all digital opportunity work.
B	3	All	While this strategy focuses on skills, it is likely that the relationships formed between digital navigators and their clients will also align with objectives 1 and 2.
C	2, 3	All	N/A

3.2 | Goal 2: Connect People to Information

Technology can connect people to an incredible wealth of data and information. However, for this data and information to be truly meaningful, both sets first need to be discoverable and accessible. This goal recognizes the significance of data and information as tools for advancing digital opportunities at both the local and statewide levels. It also aims to foster collaboration among diverse communities to create new avenues for data-driven digital opportunity decision-making. Information gains its value by the ways people use it to fuel change.

Transparency is a key value at the core of this goal, emphasizing the importance of open access to information as well as the expert assistance it sometimes takes to make meaning out of it. Making data and information readily available allows for collaboration and informed decision-making, empowering communities to bridge the digital divide and fully utilize the resources offered by technology. By championing accessibility, this goal simultaneously ensures that everyone has an equal opportunity to benefit from digital availability of information.

3.2.1 | Strategies and Activities to *Connect People to Information*

A. Minnesotans can access comprehensive data and mapping tools to evaluate digital opportunity in their area as well as statewide.

a. Expand OBD's staff to include a position supporting digital opportunity data collection and analysis.
b. Build upon OBD's broadband infrastructure maps to include measures of digital opportunity, similar to Purdue University's Digital Divide Index.
c. Enhance readily available data with additional data measuring baseline digital skills across covered populations.
d. Incorporate into OBD's web resources a directory of digital opportunity resources and partners for public reference.

B. All Minnesota townships, cities, counties, and tribes have the opportunity to create localized data-driven digital opportunity plans to support their residents and tribal members.

a. Administer non-competitive formula grants to townships, cities, counties, regional development commissions (RDCs), and tribes that seek funding to conduct local evaluation and develop their own digital opportunity plans.
b. Allow townships, cities, counties, RDCs, tribes, and other entities to contribute data collected under formula grants to OBD's comprehensive digital opportunity data and mapping tools.
c. Partner with UMN Extension to develop curriculum and deliver a cohort-based training series for townships, cities, counties, RDCs, and tribes new to digital opportunity planning to receive additional guidance and support.

C. Township, city, county, and tribal government units have the opportunity to re-design their websites so that they are fully accessible to people with disabilities and people with limited English literacy skills.

a. Conduct a comprehensive evaluation of township, city, county, and participating tribe websites to determine where and how web accessibility can be most effectively improved.
b. Administer non-competitive formula grants to townships, cities, counties, and tribes that seek funding to re-design websites in line with heightened accessibility standards, including translating essential materials to reflect local linguistic diversity and incorporating plain language where feasible.
c. Administer non-competitive grants to PEG channels to pilot and expand availability of digital services.

3.2.2 | Alignment with Measurable Objectives

(1) Internet adoption: Increase Minnesotans' adoption of broadband internet.
(2) Devices: Increase Minnesotans' access to large-screen devices.
(3) Digital skills: Expand Minnesotans' access to digital skills and cybersecurity training.
(4) Accessibility: Improve accessibility of web-based state, local, and tribal government information.

Strategy	Objective(s)	Covered Populations	Notes
A	1, 2, 3, 4	All	Robust, publicly accessible data is a component of the foundation in all digital opportunity work.
B	1, 2, 3, 4	All	Successful digital opportunity work requires proactive thinking.
C	4	Modern Elders People with Disabilities People Experiencing Language Barriers	"Accessibility" includes web design standards supporting the needs of people with disabilities; use of plain language when appropriate; and translation of certain essential information in alignment with local linguistic diversity.

3.3 | Goal 3: Connect People to Resources

While the previous two goals are grounded in relationships and skills, this third goal pivots to look more closely at the concrete, objective resources that Minnesotans need in order to access technology. This includes three key components, which are spelled out as follows in the State Digital Equity Planning Grant NOFO: "broadband internet service; internet-enabled devices that meet the needs of the user;

and applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration."[13] Digital skills are addressed more thoroughly in the preceding goals.

As highlighted throughout Section 5.0 of this plan, the presence and availability of these resources alone is not enough to connect every Minnesotan to digital opportunities in the long-term. Relationships matter. Digital skills matter. Issues surrounding affordability are pervasive across all eight covered populations. Affordability creates a certain digital precarity that can result in a person having full access to technology one day and no access the next. *Eliminating* issues of affordability altogether is beyond the scope of this plan. However, this plan can propose a more holistic, comprehensive, and accessible social infrastructure aimed at *reducing* a person's digital precarity.

3.3.1 | Strategies and Activities to *Connect People to Resources*

A. All Minnesota households have the option to afford the internet service available at their location.

a. Expand OBD's staff to include a position supporting federal and statewide outreach and coordination for Affordable Connectivity Program (ACP), Lifeline, and other programs reducing internet costs for low-income households.
b. Collaborate with Minnesota Housing, EducationSuperHighway, North Country Service Cooperative, and other housing partners to improve internet and device access for Minnesota's apartment, multi-dwelling unit, and manufactured housing residents.
c. Prepare a report that explores potential models for a statewide program similar to ACP and Lifeline to reduce internet costs for low-income Minnesota households.

B. All Minnesota adults have the option to afford a large-screen device or smartphone, whichever most efficiently helps them access the applications they require.

a. Research models for a statewide program similar to ACP that offers a device discount for low-income Minnesotans.
b. Prepare a report that explores sustainable state-managed system for circulating large-screen devices as long-term loans through collaborating public programs.

C. New digital opportunity pathways reach Minnesotans who are at high risk for being digitally excluded.

a. Collaborate with Minnesota Department of Corrections and the Minnesota Career Education Center to ensure incarcerated Minnesotans and Minnesotans who are re-entering society receive full re-entry supports connecting them to digital technologies when legally permissible.
b. Collaborate with DEED's Office of New Americans to support access to digital skills training and resources for immigrants and refugees.
c. Partner with DEED's CareerForce locations to expand digital skills training and resources for career seekers.

[13] NOFO.

d. Administer competitive grant funding to municipalities and organizations that are conducting digital opportunity work to serve covered populations.

3.3.2 | Alignment with Measurable Objectives

(1) Internet adoption: Increase Minnesotans' adoption of broadband internet.
(2) Devices: Increase Minnesotans' access to large-screen devices.
(3) Digital skills: Expand Minnesotans' access to digital skills and cybersecurity training.
(4) Accessibility: Improve accessibility of web-based state, local, and tribal government information.

Strategy	Objective(s)	Covered Populations	Notes
A	1	All	N/A
B	2	All	N/A
C	1, 2, 3, 4	All	N/A

3.4 | Key Performance Indicators (KPIs)

The following table provides key performance indicators (KPIs) aligned with each of the four measurable objectives. While the KPIs presented here consider the entire statewide population, unique KPIs for each covered population are available in Appendix C and Appendix D.

Objective	Measurement	2023 Baseline	2028 Target[14]
Internet Adoption[15]	This is measured using ACS data describing the percentage of households subscribed to broadband internet service.	83.7%	94.3%

[14] KPI percentages for 2028 were determined through a two-step process: (1) calculate the factor equivalent to 65% of the gap between 2023 measures and 100%, and then (2) add this factor to the 2023 baseline measure to arrive at the 2028 measure.
[15] Aligned with "the availability of, and affordability of access to, fixed and wireless broadband technology" as required in the NOFO.

Objective	Measurement	2023 Baseline	2028 Target[14]
Devices[16]	This is measured using ACS data describing the percentage of households that report having at least one laptop or desktop computer available.	82.1%	93.7%
Digital Skills[17]	This is measured using mapping data that describes the percentage of households located within a 60-minute round-trip drive or ride on public transit from the nearest public location (public library, community college, non-profit, CareerForce location, etc.) that provides free basic digital skills and cybersecurity support.	Pending[18]	Pending
Accessibility[19]	This is measured using an equally-weighted combination of three factors: (1) the percentage of county, city, and tribal government websites that meet the accessibility standards set forth in Minn. Stat. § 16E.03; (2) the percentage of county, city, and tribal government websites that reflect a Flesch Readability Score of 90 – 100; and (3) the percentage of county, city, and tribal government websites that provide translations of certain essential information in alignment with local linguistic diversity.	Pending	Pending

[16] Aligned with "the availability and affordability of consumer devices" as required in the NOFO.
[17] Aligned with "digital literacy" and "technical support for those devices" as required in the NOFO. Also aligned with "awareness of, and the use of, measures to secure the online privacy of, and cybersecurity with respect to, an individual" as required in the NOFO.
[18] This component, along with all other occurrences of "pending" in this table, will be determined during Phase 1 of implementation.
[19] Aligned with "the online accessibility and inclusivity of public resources and services" as required in the NOFO.

4.0 | Implementation

"When I first moved in, I Googled 'internet provider near me' and immediately got an affordable introductory offer. The price quickly went up and I was stuck with a bill I couldn't afford and unaware of my choices. I was overpaying for a rental router because I didn't understand how to buy and set up my own. I was overpaying for speed because I didn't know how to determine my needs. It would have been nice to have a hotline to call or website to access that could have helped me navigate without trying to sell me something." [20]

As previously articulated, this plan is an exploratory document coupled with programmatic goals that are achievable through a State Digital Equity Capacity Grant. However, numerous unknowns as of November 15, 2023 render this implementation section more aspirational than immediately practical.[21] Consequently, the implementation strategies, timelines, and partners as presented here require OBD to make the following assumptions:

(1) The Office of Broadband Development will be the state's administering entity of federal Digital Equity Capacity Grant funds.
(2) Minnesota's State Digital Equity Capacity Grant application and award will be approved by July 1, 2024. This is an estimate and will change as more information becomes available.
(3) Minnesota's State Digital Equity Capacity Grant award amount will be sufficient to initiate the activities proposed in Section 3.0.
(4) State and federal digital opportunity programs and policy will remain consistent.

4.1 | Strategy

Creation and support for the Digital Connection Committees exemplifies OBD's strategic efforts to embed opportunity in this very planning process itself. Building on this momentum, OBD aims to continue prioritizing authenticity, cooperation, and relationship-building while implementing this plan. OBD is the state entity responsible for administering Minnesota's federal Digital Equity Act funds, a position that comes with inherent power. In the face of digital opportunity work—that is, work that

[20] Survey, Woodbury. Provided by South Washington County Telecommunications Commission (Digital Connection Committee).

[21] OBD does not yet know how much funding Minnesota will receive for its portion of the Digital Equity Act funds. The State Digital Equity Capacity Grant NOFO has not yet been made available. OBD will likely need to spend time following the submission of this plan in November (a) revising the plan based on NTIA comments, (b) preparing and submitting the State Digital Equity Capacity Grant application, and (c) revising the State Digital Equity Capacity Grant application in order to receive the funding award. A delay during any one of these steps will delay subsequent steps.

strives to create new opportunities in spaces where opportunity has been absent or obscured—it would be inappropriate for OBD to proceed without continuing to center people in this work. OBD has crafted an implementation strategy that builds off and strengthens these relationships:

Phase Name	State Fiscal Year (SFY)[22]	Description
Phase 1: Aligning	SFY2025	The first phase. Focus on convening and connecting with partners; additional information gathering; preparing RFPs for contracts; preparing RFPs and rolling out select capacity grant programs.
Phase 2: Accelerating	SFY2026	The second phase. Focus on publicizing information; research; rolling out additional capacity grant programs.
Phase 3: Amplifying	SFY2027	The third phase. Focus on scaling up activities; expanding and refining programs; updating public information.
Phase 4: Evolving	SFY2028	The final implementation phase. Focus on assessing all progress and future needs; concluding and/or transitioning grant projects; preparing for future.

4.2 | Timelines

4.2.1 | Connect People to People

Activity	ID[23]	**Phase 1** *Aligning* SFY2025	**Phase 2** *Accelerating* SFY2026	**Phase 3** *Amplifying* SFY2027	**Phase 4** *Evolving* SFY2028
Pilot Digital Opportunity Leaders Network	1.A.a	Q1: Complete RFP Q2: Execute contracts	OBD and regions provide technical	OBD and regions provide technical	OBD and regions provide technical

[22] Implementation years are aligned with state fiscal years (SFYs), which start July 1 of the preceding year and end June 30 of the year named. For example, SFY2025 runs from July 1, 2024 to June 30, 2025. This is subject to change based on NTIA's timing of the State Digital Equity Capacity Grant award.

[23] This column is for OBD's internal use. It indicates the goal, strategy, and activity as outlined in Section 3.1.1.

Activity	ID[23]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
		Q3: Orient regional leads Q4: Flex time if needed	support, training, info to DCCs	support, training, info to DCCs	support, training, info to DCCs
Establish inter-agency digital opportunity workgroup	1.A.b	Q1: Form group Q2: Orient group to work Q3 and Q4: Meet quarterly	Q1 and Q2: Regular meetings Q3: Re-evaluate digital opportunity plan Q4: Revise plan based on analysis	Q1 and Q2: Regular meetings Q3: Re-evaluate digital opportunity plan Q4: Revise plan based on analysis	Q1 and Q2: Regular meetings Q3: Re-evaluate digital opportunity plan Q4: Revise plan based on analysis
Expand the DCC model	1.A.c	Q2: Re-evaluate plan with DCCs Q3: New DCC recruitment	Q2: Re-evaluate plan with DCCs Q3: New DCC recruitment	Q2: Re-evaluate plan with DCCs Q3: New DCC recruitment	Q2: Re-evaluate plan with DCCs Q3: New DCC recruitment
Retain existing DCCs through ongoing communication	1.A.d	Q1 – Q4: Virtual meetings bimonthly; monthly e-news	Q1 – Q4: Virtual meetings bimonthly; monthly e-news	Q1 – Q4: Virtual meetings bimonthly; monthly e-news	Q1 – Q4: Virtual meetings bimonthly; monthly e-news
Administer grants designed to support digital opportunity services	1.B.a 1.B.b	Q2: Complete RFPs Q3: Prepare app Q4: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3
Explore models for a statewide technology assistance helpline	1.B.c	N/A	Q2: Complete RFP Q3: Execute contract	Q1: Receive and revise report Q2: Publish report	N/A

Activity	ID[23]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
			Q4: Begin research process	Q3: Update plan with findings	
Administer grants to support training students as paid tech repair technicians	1.C.a	N/A	Q1: Complete RFPs Q2: Prepare app Q3: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2
Administer grants for small business and agriculture tech assessment	1.C.b	Q1: Complete RFPs Q2: Prepare app Q3: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3

4.2.2 | Connect People with Information

Activity	ID[24]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
Add 1 FTE for digital opportunity data analyst position	2.A.a	Q1: Hire 1 FTE	Q1 – Q4: Maintain 1 FTE	Q1 – Q4: Maintain 1 FTE	Q1 – Q4: Maintain 1 FTE
Make MN digital opportunity data publicly available	2.A.b	Q2: Identify project scope Q3: Prepare draft	Q1 – Q4: Publish data	Q1 – Q4: Update data	Q1 – Q4: Update data

[24] This column is for OBD's internal use. It indicates the goal, strategy, and activity as outlined in Section 3.2.1.

Activity	ID[24]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
		Q4: Revise draft			
Enhance data of baseline digital skills across covered populations	2.A.c	Q2: Complete RFP Q3: Execute contract Q4: Collect data	Q1: Incorporate new data in plan and public datasets	Q1 – Q4: Update data	Q1 – Q4: Update data
Create public directory of digital opportunity resources	2.A.d 2.B.b	Q2: Expand asset inventories from DCCs	Q2: Publish directory	Q2: Update directory	Q2: Update directory
Administer grants to support local digital opportunity planning	2.B.a	Q1: Complete RFPs Q2: Prepare app Q3: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3
Support digital opportunity planning cohorts	2.B.c	Q4: Execute contract	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3
Conduct city, county, tribal web accessibility evaluation	2.C.a	Q3: Complete RFP Q4: Execute contract	Q1: Receive report; publish report Q2: Update plan with findings	N/A	N/A

Activity	ID[24]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
Administer grants to improve local website accessibility	2.C.b	N/A	Q2: Complete RFPs Q3: Prepare app Q4: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2
Administer grants to PEG channels	2.C.c	Q1: Complete RFPs Q2: Prepare app Q3: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3

4.2.3 | Connect People to Resources

Activity	ID[25]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
Add 1 FTE for ACP[26] coordinator position	3.A.a	Q2: Hire 1 FTE	Q1 – Q4: Maintain 1 FTE	Q1 – Q4: Maintain 1 FTE	Q1 – Q4: Maintain 1 FTE
Improve digital opportunity for residents of multi-dwelling units	3.A.b	Q3: Group formed, oriented to work	Q1 – Q4: Meet quarterly	Q1 – Q4: Meet quarterly	Q1 – Q4: Meet quarterly

[25] This column is for OBD's internal use. It indicates the goal, strategy, and activity as outlined in Section 3.3.1.

[26] The future of ACP funding is currently unknown. While currently imagined as focusing on ACP, this position will ultimately be broader in scope to encompass Lifeline, additional internet service affordability programs, and research in the area of affordability.

Activity	ID[25]	Phase 1 *Aligning* SFY2025	Phase 2 *Accelerating* SFY2026	Phase 3 *Amplifying* SFY2027	Phase 4 *Evolving* SFY2028
		Q4: Meet quarterly			
Research models for a statewide program like ACP	3.A.c 3.B.a	Q1: Complete RFP Q2: Execute contract Q3: Receive report; publish report Q4: Update plan with findings	N/A	N/A	N/A
Research models for program supporting device access	3.B.b	Q3: Complete RFP Q4: Execute contract	Q1: Receive report; publish report Q2: Update plan with findings	N/A	N/A
Collaborate with DOC, MCEC to help people who are incarcerated and re-entering	3.C.a	Q1: Group formed, oriented to work Q2: Meet bimonthly through 2027	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly
Collaborate with DEED Office of New Americans to help immigrants, refugees	3.C.b	Q1: Group formed, oriented to work Q2: Meet bimonthly through 2027	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly

Activity	ID[25]	**Phase 1** *Aligning* SFY2025	**Phase 2** *Accelerating* SFY2026	**Phase 3** *Amplifying* SFY2027	**Phase 4** *Evolving* SFY2028
Collaborate with CareerForce to expand access to digital skills training	3.C.c	Q1: Group formed, oriented to work Q2: Meet bimonthly through 2027	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly	Q1 – Q4: Meet bimonthly
Administer grants to organizations serving covered populations	3.C.d	Q1: Complete RFPs Q2: Prepare app Q3: Design technical assistance plan	Q1: Launch round 1 Q2 and Q3: Monitor round 1 Q4: Conclude and evaluate round 1	Q1: Launch round 2 Q2 and Q3: Monitor round 2 Q4: Conclude and evaluate round 2	Q1: Launch round 3 Q2 and Q3: Monitor round 3 Q4: Conclude and evaluate round 3

5.0 | The Current State of Digital Opportunity

"Whether we want to believe it or not, people are being left out. Sometimes, it is an oversight. But being from a small town with lower income families, it was hard for myself growing up to get the available technology then. It still is now." [27]

The Digital Equity Act requires a high-level statewide digital inclusion assessment as well as individual assessments of each of the following eight covered populations. These are groups of people who, due to systemic challenges, may face disproportionately low rates of digital inclusion when compared to the overall U.S. population. This list is copied verbatim from the State Digital Equity Planning Grant NOFO:

(1) Individuals who live in covered households;[28]
(2) Aging individuals;[29]
(3) Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility;
(4) Veterans;[30]
(5) Individuals with disabilities;[31]
(6) Individuals with a language barrier, including individuals who
    a. Are English learners; and
    b. Have low levels of literacy;
(7) Individuals who are members of a racial or ethnic minority group; and
(8) Individuals who primarily reside in a rural area.[32]

Identity is complex and overlapping. While each of these covered populations is addressed separately in this plan, this separation is entirely artificial. It is very conceivable for any person to fit into more than

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[27] Survey, Faribault County. Provided by Traverse des Sioux Library Cooperative (Digital Connection Committee).

[28] "The term *covered household* means a household, the income of which for the most recently completed year is not more than 150 percent of an amount equal to the poverty level, as determined by using criteria of poverty established by the Bureau of the Census" (NOFO).

[29] "The term *aging individual* means an individual who is 60 years of age or older" (NOFO).

[30] "The term *veteran* means a person who served in the active military, naval, air, or space service, and who was discharged or released therefrom under conditions other than dishonorable" (NOFO).

[31] "The term *disability* means, with respect to an individual— 1. A physical or mental impairment that substantially limits one or more major life activities of such individual; 2. A record of such an impairment; or 3. Being regarded as having such an impairment" (NOFO).

[32] "The term *rural area* means any area other than: (1) A city or town that has a population of greater than 50,000 inhabitants; (2) Any urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants; and (3) In the case of a grant or direct loan, a city, town, or incorporated area that has a population of greater than 20,000 inhabitants" (NOFO).

one of these stated categories and/or to exist within and across different categories during different phases of their life. Moreover, no group of people is a monolith. Within each category are countless valid ways of living, knowing, and being.

With that, this section of the plan provides nine snapshots addressing statewide digital opportunity as well as within each of the eight covered populations. The focal points for each include the given group's existing digital strengths, their unsupported digital necessities, and systemic challenges they experience that impede their collective access to digital opportunity. OBD has chosen to use these phrases to supplement the terms provided in the Digital Equity Act bill text, which were "assets," "needs," and "barriers."

Digital Equity Act Term	OBD Term	Reason for Supplemental Language
Assets	Existing Strengths	"Assets" implies commodity or extrinsic worth. "Existing strengths" accounts for intrinsic value, including the value of people coming together to solve systemic problems.
Needs	Unsupported Necessities	"Needs" suggests a limited deficit with a fulfillment-based solution. "Unsupported necessities" highlights the enduring nature of inequity, the complexity of remediation, and the role of systemic supports in fostering sustainable change.
Barriers	Systemic Challenges	"Barriers" places the onus to overcome on the individual who has been digitally excluded, oftentimes outside of their own control. "Systemic challenges" acknowledges that public policy and system design underlie and reinforce many barriers.

The choice to supplement this language allows this plan to acknowledge Minnesotans' past and current digital resilience and resourcefulness while addressing how systemic changes can create a more equitable future.

5.1 | Statewide Snapshot

> *"I keep a list of things I need to do in town while I have access to good internet. I am always thinking about these types of things. It is just so exhausting."* [33]

Minnesota's 2022 population was estimated at 5,801,769 residents living in 2,299,740 households.[34] At 86,943 square miles, Minnesota is the 12th largest state by area and ranks 36th for population density with 66.7 people per square mile. Its geography is shared with 11 federally recognized Native Nations, including seven Anishinaabe tribes and four Dakota tribes. Located in the upper Midwest, Minnesota is known for its water[35] and winters.[36]

Even as the Minnesota Model for broadband development has contributed to notable progress and holds a positive reputation nationally, statewide disparities persist relative to technology access, affordability, and digital skills. In this subsection, digital opportunity is considered on a statewide scale.

5.1.1 | Minnesota's Existing Digital Strengths

Technology Availability, Access, and Adoption

- **Minnesota is not new to broadband policy and deployment.**
    - **Universal broadband access has been a state goal since 2010.** This was three years before the Office of Broadband Development was established.[37] The current speed goals in statute are:

        (1) no later than 2022, all Minnesota businesses and homes have access to high-speed broadband that provides minimum download speeds of at least 25 megabits per second and minimum upload speeds of at least three megabits per second; and

        (2) no later than 2026, all Minnesota businesses and homes have access to at least one provider of broadband with download speeds of at least 100 megabits per second and upload speeds of at least 20 megabits per second.

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[33] Focus group, Winona area. Zephyr Valley Community Cooperative (Digital Connection Committee).

[34] MN State Demographic Center, "Latest annual estimates of Minnesota and its Economic Development Regions' population and households, 2022."

[35] MN Department of Natural Resources, "Lakes, Rivers, and Wetland Facts." The Land of 10,000 Lakes actually has 11,842 lakes over 10 acres in size, plus the first 680 miles of the Mississippi River and 68,520 miles of other rivers and streams.

[36] MN Department of Natural Resources, "Climate." In northern Minnesota, the average temperature in winter is 8 degrees Fahrenheit. This average increases to a balmy 18 degrees Fahrenheit for southern Minnesota.

[37] Minn. Stat. § 237.012.

- **Since 2014, the state legislature has directed over $380 million toward broadband infrastructure grants.**[38] This includes $335 million over the lifetime of the Border-to-Border Broadband Grant Program, $30 million for the Low-Density Pilot Program, and $15 million for the Line Extension Program. These programs are most often supported with state general revenue funds with additional federal dollars through American Rescue Plan Act Sec. 604 Capital Projects Funds.
- **Minnesota is pursuing Broadband Equity, Access, and Deployment (BEAD) Funds.** Announced on June 26, 2023, Minnesota's BEAD allocation is $651,839,368.20.[39] The state's Five-Year BEAD Action Plan was submitted to NTIA on July 12, 2023.
- **Regional Library Telecommunications Aid (RLTA)[40] and Telecommunications/Internet Access Equity Aid (TEA)[41] help public libraries and K12 schools provide internet access.** These state programs offset internet costs for libraries and schools participating in the federal e-rate program. E-rate, overseen by the Federal Communications Commission, provides an annual discount of up to 90% of the cost of internet service. RLTA and TEA build on this support.
- **The 2023 Minnesota legislature appropriated new funding for programs related to digital opportunity.** This includes:
  - $40 million for Minnesota IT Services (MNIT)'s Technology Modernization Fund to modernize, secure, and improve the customer experience of executive branch technology systems;[42]
  - Up to $30 million for the Lower Population Density Grant Program to award competitive broadband infrastructure grants using reduced match requirements for applicants serving areas with low population density;[43]
  - **$10 million to modernize digital tools supporting workforce development initiatives;[44] and**
  - School library aid equaling the greater of $16.11 times a district's adjusted pupil units or $40,000. [45] Among other things, this funding can be used for "information technology infrastructure and digital tools."

- **Home internet subscription rates are slightly higher among Minnesotans than the national average.** Statewide, 91.6% of Minnesota households subscribe to any kind of internet service,

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[38] OBD, "2022 Annual Report."

[39] NTIA, "Biden-Harris Administration Announces State Allocations for $42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda."

[40] Minn. Stat. § 134.355.

[41] Minn. Stat. § 125B.26.

[42] Laws of Minnesota 2023, chapter 62, article 1, section 10.

[43] Laws of Minnesota 2023, chapter 43, article 3, section 4.

[44] Laws of Minnesota 2023, chapter 53, article 20, section 2, subdivision 4.

[45] Laws of Minnesota 2023, chapter 55, article 9, section 15.

including broadband (83.7%), satellite (8.5%), dial-up (2.9%), or a mobile data plan (90%). Nationally, this figure is 87%.[46]

- **Minnesota is home to several nationally-recognized computer refurbishers supporting device ownership for individuals from low-income households.** These include PCs for People, Repowered, and Minnesota Tech for Success.
- **Minnesota is a national leader in digital skills assessment.** Northstar Digital Literacy was developed in 2008 through a partnership between Saint Paul Public Library and Saint Paul Community Literacy Consortium. The platform moved to its current home at Literacy Minnesota in 2011 and is used nationwide by over 3,050 Adult Basic Education programs, colleges, nonprofits, workforce centers, government agencies, public libraries, and businesses.
- **Statewide, Minnesota has 356 public library locations.** In total, 355 of these libraries offer wifi and a combined total of 4,872 public computers and devices.[47] Annually, these locations are open a total of 641,419 hours.
    - **In 2021, Minnesota's public libraries supported 1,236,941 internet sessions on their public computers**. Libraries also supported an additional 5,848,695 wireless internet sessions among people bringing their own devices.
    - **Minitex, a state-funded library organization, champions Minnesotans' access to information statewide.** Minitex's resources and services include the extensive databases in eLibrary Minnesota, historical and cultural heritage materials through Minnesota Digital Library, and the AskMN 24/7 online reference service.

Advocates and Educators

- **State broadband and technology policy has been developed alongside experts.**
    - **Minnesota statute provides protocols for maintaining government-to-government relationships between the State of Minnesota and the 11 federally recognized tribes sharing this geography.**[48] These legal requirements support informed decision-making by fostering communication on matters of mutual interest, including broadband access and digital opportunity.
    - **The Governor's Task Force on Broadband provides cross-sector knowledge and perspective around digital opportunity.** First formed in 2008 and continuing with each gubernatorial term since, the role of the 15-member Task Force is to "advise the executive and legislative branches on broadband policy, including strategies for successfully achieving the state broadband goals, comprehensive assessment of digital inclusion issues and gaps, and strategies for unlocking the benefits of universal access to broadband for all communities in Minnesota."

[46] American Community Survey (ACS) 5-Year Estimates, 2017–21.

[47] MN Department of Education, "2021 Minnesota Public Library Annual Report–Outlets."

[48] Minn. Stat. § 10.65.

- **The Minnesota Cybersecurity Task Force contributes to the development of a statewide cybersecurity plan.** This plan will also be a component of Minnesota's application for the State and Local Cybersecurity Grant Program (SLCGP), a new grant program passed in the Bipartisan Infrastructure Law. Its overall goal is to advance cybersecurity protections for Minnesotans.
- **The Minnesota Technology Advisory Council (TAC) advises MNIT and executive branch agencies on strategic information technology initiatives and service delivery.** Their 2022 annual report and recommendations leans into partnerships, relationship-building, and collaboration as it strives to improve cybersecurity measure and website accessibility.[49]
- **University of Minnesota Extension is a reputable skill-developer statewide.** Extension is present in all 87 of Minnesota's counties and at least 6 Native Nations. Conversations between OBD and Extension staff indicate Extension is beginning to forge rural digital inclusion connections and is eager to expand services to further support digital opportunity.

- **Many philanthropic foundations in Minnesota are digital opportunity supporters.** Standouts include the Blandin Foundation and the Shavlik Family Foundation.
- **"Young people […] have an eye towards the future of technology."** As articulated by Smart North following listening sessions with young people in Minneapolis, "Many young people were interested in exploring technology in an artistic space that allowed them to explore industries like fashion, music, audio/visual spaces, and graphic design."[50]
- **"Digital navigator" models are becoming more common.** "Digital navigators" refer to individuals whose job is to support people in getting and sustaining internet access, acquiring devices, and developing digital skills.
  - **"Digital navigators 'make a huge difference.'"**[51] This was observed by ConnectedMN during 2021 interviews of Black- and Indigenous-led organizations receiving digital inclusion project funds.
  - **Multi-lingual digital navigators can provide trusted technology support in people's first languages.** Somali Community Resettlement Services in Faribault provides this.[52] Bilingual staff assist at three computer terminals where clients complete and check the status of online application forms.

    Rural and urban communities alike see potential in digital navigator roles. Upper Minnesota Valley Regional Development Commission serving Big Stone, Chippewa, Lac qui Parle, Swift, and Yellow Medicine Counties heard support for this idea during a focus group with region-wide representation: "Every community [could] have a support

[49] MN IT Services, "2022 Report of the Technology Advisory Council."
[50] Focus group, Minneapolis. Provided by Smart North (Digital Connection Committee).
[51] Impact report finding. Provided by ConnectedMN (Digital Connection Committee).
[52] Individual interview, Faribault. Provided by Rice County (Digital Connection Committee).

location and community navigator … [This could be] one person per county that could move around from community to community and who would know local people."[53]

5.1.2 | Minnesota's Unsupported Digital Necessities

- **Broadband access in Minnesota is not yet universal.** As of October 2022, 92.07% of Minnesota housing units statewide are served by wireline broadband service at speeds of at least 25/3 Mbps.[54] The nearly 8% of households lacking access are located largely in the hardest-to-reach places.
    - **Household computer ownership in Minnesota is lower than household smartphone and tablet ownership.** While smartphones and tablets offer convenience, many essential activities require a large-screen device. Among all Minnesota households, 89.6% have smartphones and tablets compared to 82.1% with laptop or desktop computers. Nationally, an estimated 78.9% of households have a computer.
    - **Minnesota ranks last out of all states for its poor support for computer science courses in high schools.**[55] Nationally, 46% of high schools provide computer science courses. In Minnesota, this figure drops to 21%. Louisiana, ranking just above Minnesota in 49th place, has 32% of its high schools offer computer science courses.
- **Telehealth is a valuable but underutilized resource in communities of all types.** Hennepin Healthcare has piloted the Digital Equity Experts (DEX) service to address this. In 2022, DEX staff observed that 15% of patients reported no access to internet at home, 41% reported not having adequate internet access at home, and 44% reported not having adequate technology skills to meet their educational and/or employment goals.[56]
- **One-on-one technology assistance through community-based organizations is becoming more common, but funding is piecemeal overall.** Non-profit organizations are particularly vulnerable. Grants may be available to pilot a new digital opportunity program or service, but sustaining these services is a persistent puzzle.
- **Minnesota Department of Education no longer includes digital equity as one of its priorities for federal Library Services and Technology Act (LSTA) funding.** LSTA funding is the primary mechanism the state uses to advance public library services through its State Library Services division. The 2018-22 LSTA plan named "libraries facilitate digital equity and literacy" as one of its top-five priorities.[57] The 2023-27 plan does not include digital equity in its goals and mentions digital inclusion activities in two out of the plan's 39 proposed activities.[58]

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[53] Focus group, Region 6W. Provided by Upper Minnesota Valley Regional Development Commission (Digital Connection Committee).
[54] OBD, "2022 Annual Report."
[55] Code.org Advocacy Coalition, "2022 State of Computer Science Education: Minnesota."
[56] Survey, Minneapolis. Provided by Hennepin Healthcare (Digital Connection Committee).
[57] MN Department of Education, "Minnesota LSTA Five-Year Plan: 2018-2022."
[58] MN Department of Education, "Minnesota LSTA Five-Year Plan: 2023-2027."

- **Cyberbullying among Minnesota's students is persistent.** In 2013, 86% of 5th graders responding to the Minnesota Student Survey reported they were never cyberbullied, 2% reported they were cyberbullied one per week, and 1% reported daily cyberbullying.[59] In 2022, 76% of 5th graders reported they were never cyberbullied, 4% reported they were cyberbullied once per week, and 2% reported daily cyberbullying. These increases were greater among students identifying as female.

5.1.3 | Systemic Challenges Impeding Digital Opportunity in Minnesota

- **Winter is a beast.** Snow and frozen ground shorten the annual time available for broadband buildouts. Federal broadband infrastructure programs misaligned with Minnesota's abbreviated construction season may be impractical for larger projects.
- **Some communities report difficulties with the Border-to-Border Broadband Development Grant Program.** Although this program has made a remarkable difference in many Minnesotans' lives, it is not a one-size-fits-all opportunity.
    - **Some communities report feeling held back by the state's broadband speed goals.** A Digital Connection Committee encompassing Region 1 in northwest Minnesota named this early in their work:[60] As business and household broadband usage increases, communities that meet but do not greatly exceed state speed goals find themselves stuck. Their passable broadband speeds disqualify them from state and many federal programs for un– and underserved areas, yet higher speeds are needed and in demand locally. They also see limitations around affordability, recognizing that not all residents can afford service.
    - **Fluctuating state funds for the Border-to-Border Broadband Development Grant Program can create uncertainty among un– and underserved communities.** Some communities interested in partnering with an internet service provider to submit a Border-to-Border application report hesitancy because annual appropriations fluctuate.
- **Minnesota lacks statutory definitions for terms like "digital inclusion" and "digital opportunity."** This creates ambiguity around what the state does and does not consider to be digital opportunity work. Colorado[61] and Washington[62] are some examples of states that are integrating digital opportunity language into state law.
    - **Concepts relevant to digital opportunity are scattered throughout statute and session laws.** A fragmented approach to state-level digital opportunity investment creates fewer systemic, long-term positive changes than a centralized and intentional strategy.

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[59] MN Department of Education, "Minnesota Student Survey Reports: 2013-2022."

[60] Meeting minutes, Warroad participant. Provided by the Veden Center for Rural Development at UMN-Crookston (Digital Connection Committee).

[61] Colorado Department of Labor and Employment, "Digital Equity, Literacy, and Inclusion Initiative."

[62] Washington State Department of Commerce, "Digital Navigator Program."

- **Minnesota statute lacks a mechanism to offset internet and device costs for low-income households.** The state program most similar to ACP is the Telephone Assistance Program (TAP). TAP does not cover internet service but provides a monthly credit of $10 for low-income households to receive landline telephone phone service.
- **Adequate state support for digital opportunity is unlikely to be sustainable without statutory changes.** The current absence of digital opportunity language and funds in statute contribute to an approach that addresses digital opportunity on a case-by-case basis rather than systemically.

5.2 | People Living in Rural Areas

> *"If you remember during Covid when the kids were doing online school—the kids had to go to the bar in town and sit outside to get internet. That's how bad it is up here."* [63]

Out of Minnesota's 5.8 million residents, 55.1% live in the Twin Cities metropolitan area, encompassing Shakopee Mdewakanton Sioux Community and Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties.[64] Although this geographic area—commonly referred to as the Metro—is home to a larger number of Minnesotans, it represents only 3.5% of the state's land area. The rest of Minnesota's residents—44.9%, or nearly 2,605,000—live in the 96.5% of Minnesota's geography located outside of the Metro. This includes 80 counties and 10 Native Nations.

The Digital Equity Act's rural and urban designations do not map perfectly onto the Greater Minnesota and Metro geographic areas;[65] however, this plan chooses to use these familiar terms as they are rooted in geographic identity and lie at the crux of some of Minnesota's statewide tensions.

5.2.1 | Existing Digital Strengths in Rural Areas

Technology Availability, Adoption, and Use

- **State funding for broadband deployment is improving high-speed internet availability in rural Minnesota.** In February 2015, as early rounds of the Border-to-Border Broadband Grant program reached across Minnesota, 68.08% of rural Minnesota housing units had access to

[63] Participant comment, townhall meeting, Big Falls (population: 175). Provided by Koochiching Technology Initiative (Digital Connection Committee).
[64] ACS 5-Year Estimates, 2017–21.
[65] See Appendix F for a complete list of "urbanized" Greater Minnesota cities and "rural" Metro cities per Digital Equity Act definitions.

wireline speeds at or above 25/3 Mbps, and 1/1 Gbps service reached only 5.81%.[66] As of October 2022, those figures rose to 74.42% and 36.04%, respectively. When looking beyond wireline service this 2022 figure rises to 94.31% of rural housing units being served at or above 25/3 Mbps.

    - **Technology access keeps rural Minnesotans connected socially and economically across geographically dispersed communities.** In a survey of 144 residents conducted by the Town of White, the most common uses of internet access were for socializing (88%), making purchases (90%), and paying bills (86%).[67]
    - **Vibrant communities of artists in Greater Minnesota can thrive with high-speed internet access.** In Mahnomen, for example, Gizhiigin Arts Incubator supports Anishinaabe artists by providing wifi access, computers for artists' use, high-quality art photography equipment, and virtual art shows.[68]

- **Counties and organizations in Greater Minnesota are developing new services to get internet-enabled devices in their residents' hands.** This includes KOOTASCA's Digital Divide Program and Lyon County's ResQ Zone.
- **Some youth living in Greater Minnesota are gaining access to computer science skills outside of school.** Out-of-school programs like Martin County KnowHow and Northland Hackathon bring young people together virtually and in-person to explore computer science. In July 2023, the Kandiyohi County Board approved a partnership with New Vision Foundation, which will provide young adult classes in Willmar on coding, software engineering, and digital literacy.

Advocates and Educators

- **Public libraries—and their knowledgeable staff—are essential.** In Greater Minnesota, 251 out of 252 public library facilities provide free wifi and a total of 2,463 public internet-enabled devices, including computers and tablets. Combined, these libraries are open 436,453 hours per year.[69] In many instances, public libraries are the only places in rural towns where public wifi is available.
- **University of Minnesota Extension is a reputable skill-developer in rural communities.** Extension is present in all 87 of Minnesota's counties and at least 6 Native Nations.
- **CareerForce has 43 of its 55 locations in Greater Minnesota.** These locations provide in-person and virtual services, including a variety of classes to develop career seekers' digital skills.

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[66] OBD, "Historical Estimate of Wireline Broadband Service Availability in the State of Minnesota (Rural Areas)."

[67] Provided by Town of White (Digital Connection Committee).

[68] Asset inventory, Mahnomen County. Provided by Headwaters Regional Development Commission (Digital Connection Committee).

[69] MN Department of Education, "2021 Minnesota Public Library Annual Report–Outlets."

- **Minnesota's 1,780 township governments give rural residents political power.** Combined, over 9,000 township officers provide grassroots governance to 922,013 Minnesotans.[70]
- American Connection Corps **(ACC) fellows embedded in rural communities tackle localized technology challenges.** In 2022, ACC had fellows in Duluth, Fergus Falls, International Falls, Martin County, and Waseca County. These fellows developed plans for municipal broadband expansion, secured grant funding to advance broadband deployment, and provided digital skills training to rural residents.

5.2.2 | Unsupported Digital Necessities in Rural Areas

- **Greater Minnesota residents are less likely to have a broadband subscription.** In the Metro counties, 91.5% of households have broadband subscriptions compared to 66.8% of households in Greater Minnesota.[71]
    - **Greater Minnesota households are also more likely to have only a mobile data plan than Metro households.** 12.2% of Greater Minnesota households versus 8.6% of Metro households have access to only a mobile data plan with no broadband subscription. Greater Minnesota residents are also more likely to depend on satellite internet service (8.5% versus 5% in the Metro).
    - **Rural residents frequently cite challenges with slow internet speeds and unreliable service.**
        - In a Pine County survey, 42% respondents who have internet access at home reported that their connection was too slow to do what they needed.[72]
        - In an Aitkin County survey, this figure was 51%.[73]
        - A Wright County survey found that 39% of respondents experienced "unreliable" or "very unreliable" home internet connections.[74]
        - In Kandiyohi County, 51.4% of survey respondents reported they were "sort of" satisfied with their internet speeds, and 21.9% expressed dissatisfaction.[75]
        - Farmers running their agricultural business across multiple buildings may have acceptable internet service to their house but still experience an "inability to connect to internet outside or in farm buildings (like the milking parlor) due to lousy cell service."[76]

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[70] MN Association of Townships, "Townships 101."
[71] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[72] Survey, Pine County. Provided by Pine County (Digital Connection Committee).
[73] Survey, Aitkin County. Provided by Aitkin County (Digital Connection Committee).
[74] Survey, Wright County. Provided by Wright County (Digital Connection Committee).
[75] Survey, Kandiyohi County. Provided by City of Willmar and Kandiyohi County Economic Development Commission (Digital Connection Committee).
[76] Survey, Waseca and Le Sueur Counties. Provided by Waseca-Le Sueur Library System (Digital Connection Committee).

        - Rural public libraries see this too: "Just yesterday," write library staff on the Iron Range, "while trying to stream a movie for the kids in our community, the library experienced poor internet quality and had to end our planned programming early."[77]
    - **Satellite and fixed wireless internet service can be made less reliable by weather fluctuations.** These technologies are more prevalent in Greater Minnesota. Rain and snow are common issues. "In poor weather," writes a survey respondent from the City of Dennison, "the internet is unreliable. If I need to work from home these days, I end up using my personal hotspot on my phone to connect my laptop."[78]
- **A lower proportion of Greater Minnesota residents have enrolled in ACP.** As of July 10, 2023, Minnesota's largely urban 3rd, 4th, and 5th Congressional districts had enrollment rates of 23%–34% among eligible households. At the same time, Minnesota's rural 1st, 7th, and 8th districts had enrollment rates of 18%–25%.[79]
- **Households in Greater Minnesota are less likely to have a laptop or desktop computer at home.** In Greater Minnesota, 77.6% of households have a laptop or desktop compared to 86% of Metro households.[80] Additionally, Greater Minnesota households are more likely to have access to only a smartphone (8.2%) compared to Metro households (5%).
- **Residents of Greater Minnesota need to travel farther to use a public library and have fewer library open hours available.** [81] Metro library buildings are open an average of 1,971 hours per year. Greater Minnesota libraries are open an average of 1,746 hours per year. Additionally, the 3.5% of Minnesota's geography represented by the Metro has 104 public library facilities whereas the 96.5% of Minnesota's geography represented by Greater Minnesota has 252 public libraries. Fifteen counties in Greater Minnesota have only one public library location.
- **Rural residents are using telehealth services at a lower rate than urban residents.** A 2023 survey by the MN Department of Health found 82% of rural Minnesotans reported reliable enough internet access for video telehealth compared to 91% of Minnesotans in urban areas.[82]
- **Greater Minnesota public libraries have significantly fewer staff than their Metro counterparts.** In the 7-county Metro, each public library building is supported by an average of 9.88 FTE versus 3.86 FTE in Greater Minnesota libraries.[83] A library staff member in west-central

[77] Individual interview, Eveleth. Provided by the public libraries of the Quad Cities in Eveleth, Gilbert, Mountain Iron, and Virginia (Digital Connection Committee).
[78] Survey, Dennison. Provided by City of Dennison (Digital Connection Committee).
[79] Institute for Local Service Reliance, "ACP Dashboard."
[80] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[81] MN Department of Education, "2021 Minnesota Public Library Annual Report–Outlets."
[82] MN Department of Health, "Study of Telehealth Expansion and Payment Parity: Preliminary Report to the Minnesota Legislature 2023."
[83] MN Department of Education, "2021 Minnesota Public Library Annual Report–Outlets."

Minnesota describes this challenge: "We do not have enough time to provide the help patrons need. Many people have never used a computer."[84]

5.2.3 | Systemic Challenges Impeding Digital Opportunity in Rural Areas

- **Greater Minnesota is more often un- or underserved by broadband compared to the Metro.** In the Metro, 98.2% of households have access to 25/3 Mbps compared to 85.3% of households in Greater Minnesota.[85] This divide widens at 100/20 Mbps, with 97.5% of Metro households versus 78.3% of Greater Minnesota households having access to this speed.
    - **Limited competition among rural internet service providers reduces consumers' options.** Out of 118 Minnesota cities that have only one fixed, non-mobile broadband provider, only two are located in the Metro.[86] Lack of competition can contribute to higher subscription costs.
    - **Computer and device repair services can be difficult to come by in rural areas.** For many rural communities, the nearest computer repair shop can be 40-plus miles away.
- **Financial wealth accumulates in the Metro.** In 2021, Greater Minnesota experienced a 10.6% poverty rate compared to 8.3% in the Metro.[87] The 2021 median household income statewide was $77,720. Median household incomes in all Metro counties except Ramsey County exceeded this figure, and Ramsey still ranked ahead of 66 Greater Minnesota counties.
- **The dominant narrative about Greater Minnesota sometimes leans into false stereotypes about rural life.** This narrative may wrongly paint Greater Minnesota as an exclusively idyllic weekend destination, a homogenous expanse of land, or a place stuck in the past. Greater Minnesota is none of these, nor is it a singular place. Greater Minnesota is thousands of places and millions of people each of whom deserve the option to bring technology into their daily lives.

5.3 | Modern Elders

> *"You got to think back when we were young … Telephones were haphazard. When I used to live on the Gunflint Trail, our phone was hanging on a tree outside. You had to crank it. And look what we've got today! And they say, 'Well, why don't you know how to do that?' Come on, give me a break! There's been a lot through here!"* [88]

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[84] Survey, west-central Minnesota. Provided by Viking Library System (Digital Connection Committee).
[85] OBD, "Availability of Wireline Broadband Service by County."
[86] OBD, "Broadband Providers by Incorporated City."
[87] ACS 5-Year Estimates, 2017–21.
[88] Focus group, Grand Portage Nation. Provided by Wilderness Health (Digital Connection Committee).

About 24% of Minnesotans—1,348,000 people—are ages 60 and over.[89] This figure has been growing steadily since 2010 and is expected to increase an additional 40% by 2030.[90] During this same timeframe, Minnesota's population of adults ages 85 and greater is estimated to increase by 33%, from 113,083 residents in 2020 to 150,328 in 2030, exceeding 200,000 by 2040. This population growth among elders is already more numerous in Greater Minnesota than in the Metro; this trend will continue into the future. As of 2022, Greater Minnesota has 635,200 residents ages 60 and greater compared to 634,000 in the Metro.

Minnesota's modern elders are active and engaged members of their communities. In 2022, voter turnout among Minnesotans ages 65-plus was 83.8% compared to 56.1% of Minnesotans ages 25–24.[91] Annually, 39% of Minnesotans ages 65-plus spend time volunteering, and 18% are still part of the workforce.[92] The vast majority of modern elders in Minnesota—90%—live independently in their own residences.[93] Another 6% live with relatives or roommates, and 4% live in congregate care or assisted living facilities. Even with so many modern elders living independently, housing costs remain a significant challenge for many. Out of all Minnesotans ages 65 and greater, 31.3% are paying 30% or more of their income on housing.

Technology access is essential in ensuring Minnesota's modern elders can age with support, care, dignity, and independence. It also plays an important role in improving individual long-term quality of life outcomes.

5.3.1 | Existing Digital Strengths for Modern Elders

Technology Availability, Adoption, and Use

- **Broadband subscriptions are increasing among adults ages 60-plus.** In 2021, 79.6% of Minnesota adults ages 60 and greater had a home broadband subscription compared to 66.8% in 2015.[94]
    - **Technology helps modern elders stay connected socially.** Social isolation worsens serious health conditions, such as increasing the risk of dementia by 50%.[95] A Digital Connection Committee member describes the role technology played in elevating her mother's spirits after she became confined to an assisted living facility: "So much of her

[89] ACS 5-Year Estimates, 2017–21.
[90] MN Department of Human Services, "Aging Data Profiles."
[91] U.S. Census Bureau, Voting and Registration Supplement of the Current Population Survey, 2022.
[92] ASC 5-Year Estimates, 2017–21.
[93] MN Compass, "7 Things to Know about Minnesota's Older Adults."
[94] ACS, 2015 and 2021.
[95] U.S. Centers for Disease Control and Prevention, "Loneliness and Social Isolation Linked to Serious Health Conditions."

last days revolved around the connections to things she cared about via the iPad and iPhone. Without it, her last years would have been dramatically different, less connected, less joyful."[96]

- **Modern elders can use technology to age more independently.** HealtheMed, a public benefit corporation, often hears from its patients ages 60-plus about how telehealth services and assistive technologies give them a new sense of freedom. One patient, a 67-year-old with chronic health challenges, describes the difference a smart glucometer made: "Before, I could never drive to Duluth to see my son because the trip would be too much on me, but now, I can see him. I take my glucometer with me, some water, and my peanut butter, and I'm set."[97]
- **ACP can bring modern elders online.** A Digital Connection Committee led by African Community Senior Services noted about half of their clients were using the discount program. Due to their location in Comcast's service area, many clients were able to use ACP to receive the 100 Mbps Internet Essentials Plus service at no cost.[98]

- **Computer ownership is rising among adults ages 60-plus.** In 2021, 77.4% of Minnesota adults ages 60 and greater had a laptop or desktop computer compared to 56.2% in 2015.[99]

Advocates and Educators

- **Numerous elder-serving organizations in Minnesota have expanded their services to include technology access.** These include groups like African Community Senior Services, Gifts for Seniors, Mower County Seniors, Inc., and Senior Community Services.
  - **AARP Minnesota is piloting new community technology outreach using Senior Planet.** Senior Planet is a program providing in-person and online classes to help modern elders use technology to enhance their quality of life.
  - **Age-Friendly Minnesota actively identifies strategies and collaborators to improve modern elders' quality of life outcomes via access to technology.** Age-Friendly Minnesota's preliminary report to Governor Walz, issued in August 2020, recommended that the state "recognize and treat broadband as a basic need, including for older adults."[100] Age-Friendly Minnesota is in the process of preparing a Multi-Sector

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[96] Individual interview, Metro area. Provided by Gifts for Seniors (Digital Connection Committee).
[97] Individual interview, Hennepin County. Provided by HealtheMed (Digital Connection Committee).
[98] Report, Minneapolis. Provided by African Community Senior Services (Digital Connection Committee).
[99] ACS, 2015 and 2021.
[100] MN Department of Human Services, Age-Friendly Minnesota, "Recommendations the from Governor's Council for an Age-Friendly Minnesota." "Access to the internet," the report goes on to say, "is fundamental to principles of equity. As such, broadband service not only must be made available to all, it also must be affordable in the manner of other basic utilities. Older adults need reliable, affordable broadband access as urgently as other age groups. Broadband unlocks doors to information, telemedicine, opportunities to maintain social ties, and vital services such as transportation."

Blueprint that will map existing efforts to create an age-friendly Minnesota; build broad support for comprehensive planning across sectors; and engage with partners to advance legislative agenda items.

- **Adults ages 60-plus with disabilities—including late-onset disabilities like hearing or vision loss—can receive assistive technology services and support through several state agencies and offices.** These include State Services for the Blind at DEED; the Braille and Talking Book Library at MN Department of Education; the Deaf and Hard of Hearing Services Division at MN Department of Human Services; the System of Technology to Achieve Results (STAR) program at MN Department of Administration.

5.3.2 | Unsupported Digital Necessities for Modern Elders

- **Adults ages 60-plus adopt broadband at lower rates than adults under age 60.** The broadband adoption rate among Minnesotans ages 60 and greater is 79.6% compared to 84.7% of adults ages 18–59.[101]
    - **ACP enrollment rates are lowest among adults ages 65-plus.** Even as modern elders on fixed incomes may cite affordability as a reason for lacking home internet service, the Benton Foundation finds that ZIP codes with high proportions of adults ages 65 and greater correlate with some of the lowest ACP enrollment rates among eligible households.[102]
    - **Broadband access in senior living and assisted care facilities is far from universal.** Some facilities with aging infrastructure lack the necessary wiring to provide campus-wide wifi or high-speed internet service. Some facilities provide wifi but do not provide devices. Although they often go above and beyond, the majority of staff at these facilities are ultimately trained as healthcare workers, not as technology educators.
- **Modern elders are left behind adults ages 18–59 in rates of laptop and desktop computer ownership.** This figure is 77.4% among Minnesotans age 60-plus compared to 89.4% among Minnesotans ages 18–59.[103]
    - **Additionally, adults ages 60 and greater may also face barriers related to using outdated technology.** In one survey, 40.7% of modern elder respondents indicated that in the past six months, their "primary tech device was being so slow that [they] just gave up trying to use it."[104]
    - **Smartphone use is low among modern elders.** The eldest Minnesotans have the lowest smartphone adoption rates: 37% of people ages 75 and greater have a smartphone compared to 75.3% of people ages 60–75 and 94.1% of people ages 18–59.[105] Disparities

[101] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[102] Benton Foundation, "Understanding Factors that Play a Role in ACP Enrollment."
[103] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[104] Survey, Rochester. Provided by Family Service Rochester (Digital Connection Committee).
[105] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

within the modern elder population are also seen in broadband subscription rates (77% of adults 75-plus versus 80.2% of adults ages 60–75) and computer ownership (60% of adults 75-plus versus 83.3% of adults ages 60–75).

- **Some modern elders report they do not know where to go for technology assistance or do not have the means to travel there.** This is especially true in rural communities where public libraries are more geographically dispersed.
    - **Challenges layer on top of one another.** One modern elder describes this difficulty of trying to problem-solve independently: "When I look for solutions online, the directions tell me to use specific features on the keyboard, but I don't always know which of the buttons they are referencing. Then I can't solve my problem."[106]
    - **Adults ages 60-plus may be left to navigate the telehealth learning curve on their own.** About half of healthcare providers responding to a survey by MN Department of Health observed "disparities in broadband access, digital literacy, and comfort with using technology … are particularly salient for patients with a lower socioeconomic status, elderly patients, and patients living in remote locations."[107]

5.3.3 | Systemic Challenges Impeding Digital Opportunity for Modern Elders

- **Modern elders frequently cite cybersecurity concerns as their reason for avoiding technology.** While personal preference can certainly play a role in determining which technologies a person brings into their home, this preference may be shaped by fear.
    - In one focus group with the Silver Sneakers senior exercise class, participants "expressed that lack of knowledge and training made them feel unsafe online. The lack of knowledge of how to protect themselves from scams and fraud limited their online presence."[108]
    - This sentiment was echoed in a Metro-area focus group discussing some of their technology challenges: "There are people who will hijack a corporate logo and send you an email acting like they're the company, but they're not. There are also a lot of confusing forms on the internet."[109]
- **Modern elders on fixed incomes may struggle to budget for technology access.** This is especially true for women ages 65-plus, who experience poverty at higher rates than same-aged men. Social security represents 90% of annual income for 19% of women age 65-plus versus about 12% of men in the same age group. [110] Almost half of women ages 65-plus use Social

[106] Survey, Metro area. Provided by Senior Community Services (Digital Connection Committee).
[107] MN Department of Health, "Study of Telehealth Expansion and Payment Parity: Preliminary Report to the Minnesota Legislature 2023."
[108] Focus group, Hibbing. Provided by Hibbing Public Library (Digital Connection Committee).
[109] Focus group, Blaine. Provided by North Metro TV (Digital Connection Committee).
[110] ACS 5-Year Estimates, 2017–21.

Security for at least 50% of their income, compared to about a third of men. Among women who are modern elders, women of color are the most hard-hit by this economic disparity.

- **Services for modern elders are sometimes designed without guidance from modern elders.** This creates a scenario where needs and services are misaligned.
    - Sitting down with a group of modern elders at an assisted living facility, one Digital Connection Committee heard requests for "patience, personalized options, protection of personal information and finances, trustworthy information sources, and the establishment of boundaries for technology use."[111]
    - In interviews with 51 Chinese elders, 82.4% of whom speak limited English, English language skills and typing skills were the two biggest needs they identified.[112]
- **The dominant narrative on aging perpetuates harmful stereotypes about modern elders while reducing their perceived agency.** This narrative is one where modern elders exist primarily as the passive recipients of healthcare services and supports rather than as active, engaged community members. This messaging also tells modern elders that their technology skills will never be good enough. As one Digital Connection Committee observed during individuals interviews with 50 rural adults ages 65 and greater, "All lacked confidence and exhibited negative self-talk when asking for help."[113]

5.4 | People from Minoritized Racial and Ethnic Groups

> *"I rate my [digital] skills as pretty good, but there's a lot I don't know how to do for my job. I have panic attacks sometimes because I can't convert files and more advanced stuff. I don't want anyone at work to find out."* [114]

The State Digital Equity Planning Grant NOFO uses the phrase "individuals from racial or ethnic minority groups" to name the collective lives of people who are African, Asian, Black, Indigenous, Hispanic or Latino, multi-racial, multi-ethnic, and more. With the understanding that these racial and ethnic groups represent the global majority, OBD is instead using the descriptor "people from minoritized racial and ethnic groups." "Minoritized" is a word chosen for its acknowledgement that racial inequities are perpetuated by systems of oppression. OBD also strives to be as specific as possible, as often as possible when addressing individual racial and ethnic groups throughout this subsection.

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[111] Focus group, Austin. Provided by Mower County Seniors, Inc. (Digital Connection Committee).
[112] Individual interviews, Metro area. Provided by Chinese American Chamber of Commerce (Digital Connection Committee).
[113] Individual interviews, Martin County. Provided by Project 1590 (Digital Connection Committee).
[114] Focus group, Metro area. Provided by Global Entrepreneurship Week MN (Digital Connection Committee).

Minnesota's residents include 1,279,000 people from minoritized racial and ethnic groups, representing 22.4% of the state's overall population.[115] Although the number of people from minoritized racial groups is higher in the Metro at 939,000, the population of minoritized racial groups in Greater Minnesota is increasing at a much faster rate. From 2000 to 2022, the number of people from minoritized racial groups in the Metro increased by 111%; during this same time frame, the number of people from minoritized racial groups in Greater Minnesota increased by 147%. Minnesota's most populous racial and ethnic groups include the following:

Race or Ethnicity	Population[116]
Asian: All	**288,400**
Asian: Burmese	15,300
Asian: Cambodian	8,500
Asian: Chinese	31,700
Asian: Filipino	12,000
Asian: Hmong	93,700
Asian: Indian	44,600
Asian: Korean	16,600
Asian: Vietnamese	27,100
Black: All	**387,800**
Black: Ethiopian	31,700
Black: Somali	68,800

[115] MN State Demographic Center, "Our Estimates."

[116] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

Race or Ethnicity	Population[116]
Hispanic or Latino: All	**327,200**
Hispanic or Latino: Cuban	8,900
Hispanic or Latino: Ecuadorian	15,500
Hispanic or Latino: Guatemalan	11,600
Hispanic or Latino: Mexican	206,600
Hispanic or Latino: Puerto Rican	18,500
Hispanic or Latino: Salvadorian	15,000
Indigenous: All	**55,200**
Indigenous: Anishinaabe	31,700
Indigenous: Dakota	5,500
Other Minoritized Race or Ethnicity: Not Specified	**122,300**
Multi-Racial or Multi-Ethnic	**270,600**

5.4.1 | Existing Digital Strengths for People from Minoritized Racial and Ethnic Groups

Technology Availability, Adoption, and Use

- **Five of the 11 federally recognized tribes sharing the geography of Minnesota were recently awarded federal funding broadband infrastructure and use projects**.[117] Awards range from $500,000 to $19,800,704 and support five Native Nations: Bois Forte Band of Chippewa, Leech Lake Band of Ojibwe, Lower Sioux Indian Community, Mille Lacs Band of Ojibwe, and White Earth Nation.

[117] For more details about these awards, see Section 6.2.2.

    - **The Fond du Lac Band of Lake Superior Chippewa's internet service provider—Aaniin—provides fiber-to-the-home across Fond du Lac Nation.** Their services incorporate ACP and Lifeline enrollment into the subscription processes to keep tribal customer costs low.
    - **Four tribal colleges and tribal college libraries connect Indigenous students to culturally-grounded higher education.** All four colleges—Fond du Lac Tribal and Community College, Leech Lake Tribal College, Red Lake Nation College, and White Earth Tribal and Community College—provide on-campus computer access, high-speed internet service, and other high-quality essentials to their students. Bezhigoogahbow Library at Leech Lake Tribal College and Medweganoonind Library at Red Lake Nation College double as community libraries, allowing anyone to access their computer labs, books, and other materials.
- **Numerous Asian–, Black–, Hispanic–, and Indigenous-led organizations in Minnesota have expanded their services to include technology access.** Examples include 30,000 Feet, African Community Senior Services, CLUES, Leech Lake Boys and Girls Club, Migizi, New Vision Foundation, Project Nandi, and Roots Wellness Center.
- **The Black Broadband Summit and Family Broadband Coalition are Black-led initiatives focused on closing the digital divide in the Metro.** Their vision includes creating a community-owned internet cooperative to serve Minneapolis and Saint Paul neighborhoods.

Advocates and Educators

- **The 93rd Minnesota Legislature is the most racially and ethnically diverse in the state's history.** In the House, 23 out of 134 seats are held by leaders self-identifying as American Indian, Arab, biracial, Black, Hispanic or Latino Origin, Hmong, Japanese American, Ojibwe, Puerto Rican, and Somali-American.[118] In the Senate, 12 out of 67 seats are held by leaders self-identifying as American Indian, Black, Hmong, Hispanic or Latino Origin, and Somali-American.
- **The state ethnic councils are positioned to advise the state executive branch and legislature on digital opportunity issues affecting people from minoritized racial and ethnic groups.** These councils include the Council on Asian Pacific Minnesotans, the Council for Minnesotans of African Heritage, the Minnesota Council on Latino Affairs, and the Minnesota Indian Affairs Council.
- **An increasing number of Minnesotans from minoritized racial and ethnic groups are earning postsecondary certifications and degrees.** From 2015 to 2022, post-secondary certification and degree attainment among people ages 25–44 increased by 5.2% for Black people, 9% for Hispanic or Latino people, and 8.1% for Indigenous people.[119]

[118] MN Legislative Reference Library, "Self-Reported Minority Legislators."
[119] MN Office of Higher Education, "Educational Attainment Goal 2025."

5.4.2 | Unsupported Digital Necessities for People from Minoritized Racial and Ethnic Groups

- **Broadband subscriptions are less frequent among most people from minoritized racial and ethnic groups.** Rates are 85.4% for Asian Minnesotans, 75.3% for Black Minnesotans, 77.4% for Hispanic or Latino Minnesotans, 70.9% for Indigenous Minnesotans, 85.1% for multi-racial or multi-ethnic Minnesotans, and 68.6% for Minnesotans of an unspecified minoritized race.[120] White Minnesotans subscribe to home broadband services at a rate of 85.2% statewide.
    - **People from minoritized racial and ethnic groups are more often limited to mobile data only with no home broadband subscription.** 9.7% of White Minnesotans have access to only mobile data. This figure is higher for Minnesotans who are Black (22.3%), Hispanic or Latino (19.4%), Indigenous (22%), and Minnesotans of an unspecified minoritized race (27.1%).[121]
        - In a survey by Asian Media Access, 20.3% of respondents indicated they rely on mobile internet, and another 18.1% expressed that they were not sure whether their home internet use was considered mobile.[122]
        - A similar survey of Black and African Minnesotans by Beyond Media Solutions found 22.4% of respondents relied of mobile internet with an additional 13.4% unsure whether they were using mobile or non-mobile service.[123]
    - **People from minoritized racial and ethnic groups are more likely to lose internet service for days at a time.** A survey conducted by Global Entrepreneurship Week MN found Asian, Black, Indigenous, and Latino respondents were more likely than White respondents to lose internet service for 3 or more days at a time.[124] Asian respondents were the hardest hit with 57% experiencing this. While falling behind on payments is a commonly assumed reason for this, Global Entrepreneurship Week's Hmong interviewers heard from Hmong survey respondents that families whose bills were paid lost service because they were unable to get the technical support they needed from providers. This is likely due to language barriers, cultural barriers, and racial aggressions.
- **Rates of laptop and desktop computer ownership are lower for most people from minoritized racial and ethnic groups.** 90.2% of Asian Minnesotans, 75.8% of Black Minnesotans, 74.8% of Hispanic or Latino Minnesotans, 66% of Indigenous Minnesotans, 85.2% of multi-racial or multi-ethnic Minnesotans, and 65.3% of Minnesotans of an unspecified minoritized race have access

[120] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[121] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[122] Survey, Metro area. Provided by Asian Media Access (Digital Connection Committee).
[123] Survey, Metro area. Provided by Beyond Media Solutions (Digital Connection Committee).
[124] Survey, Minneapolis and Saint Paul. Provided by Global Entrepreneurship Week MN (Digital Connection Committee).

to a laptop or desktop computer at home.[125] White Minnesotans have access to a laptop or desktop computer at a rate of 89.3% statewide.

  - **People from minoritized racial and ethnic groups are more often limited to only a smartphone.** 5% of White Minnesotans have access to only a smartphone. This figure is much higher for Minnesotans who are Black (18.5%), Hispanic or Latino (21.7%), Indigenous (21.5%), multi-racial or multi-ethnic (11.5%), and Minnesotans of an unspecified minoritized race (31.5%).[126] Smartphone-only rates are slightly elevated for Asian Minnesotans as a whole at 6.9%.
  - **"A smartphone isn't enough to do everything I want online."** 70% of people participating in a Ramsey County community survey agreed with this statement.[127] This survey also noted that 49% of respondents identifying as Black, Indigenous, and People of Color felt they always have the technology they need compared to 64% of respondents identifying as White.

- **Small businesses owned by people from minoritized racial and ethnic groups also experience these technology disparities.** In conversations with Black businessowners in Saint Paul's Frogtown and Rondo neighborhoods, Aurora/St. Anthony Neighborhood Development Corporation found 48% of the businesses contacted had websites, 38% had in-store technology access for staff, and none had in-store technology access for customers.[128]
- **Within each major race and ethnicity are even more complex variations in digital opportunities and disparities.** The table included below attempts to capture this:[129]

Race/Ethnicity	Broadband Subscription	Mobile Data Only	Laptop/Desktop Ownership	Smartphone Ownership	Smartphone Only
Asian: All	**85.4%**	**8.4%**	**90.2%**	**95.0%**	**6.9%**
Asian: Burmese	51.0%	32.8%	78.9%	91.8%	20.8%
Asian: Cambodian	80.6%	7.9%	85.0%	92.6%	7.4%
Asian: Chinese	90.1%	2.9%	90.6%	91.6%	2.1%
Asian: Filipino	90.7%	6.4%	98.1%	97.9%	1.4%
Asian: Hmong	84.7%	8.4%	90.1%	96.9%	8.8%

[125] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[126] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[127] Survey, Ramsey County. Provided by the Ramsey County and Saint Paul Connectivity Blueprint Steering Committee (Digital Connection Committee).
[128] Individual interviews, Saint Paul. Provided by Aurora/St. Anthony Neighborhood Development Corporation (Digital Connection Committee).
[129] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

Race/Ethnicity	Broadband Subscription	Mobile Data Only	Laptop/Desktop Ownership	Smartphone Ownership	Smartphone Only
Asian: Indian	93.8%	1.3%	96.7%	99.4%	2.6%
Asian: Korean	84.6%	9.5%	94.9%	95.4%	2.6%
Asian: Vietnamese	87.7%	10.3%	88.8%	90.7%	8.4%
Black: All	**75.3%**	**22.3%**	**75.8%**	**92.2%**	**18.5%**
Black: Ethiopian	74.5%	25.5%	89.2%	92.3%	6.3%
Black: Somali	56.8%	24.7%	68.9%	92.3%	25.4%
Hispanic or Latino: All	**77.4%**	**19.4%**	**74.8%**	**94.1%**	**21.7%**
Hispanic or Latino: Cuban	81.4%	5.4%	68.7%	88.2%	21.7%
Hispanic or Latino: Ecuadorian	66.2%	18.5%	66.1%	97.0%	26.8%
Hispanic or Latino: Guatemalan	59.8%	10.0%	66.1%	95.6%	29.4%
Hispanic or Latino: Mexican	66.6%	20.3%	72.6%	91.6%	21.7%
Hispanic or Latino: Puerto Rican	74.9%	10.1%	82.3%	84.5%	5.9%
Hispanic or Latino: Salvadorian	42.8%	30.9%	63.4%	80.3%	35.6%
Indigenous: All	**70.9%**	**22.0%**	**65.9%**	**82.2%**	**21.5%**
Indigenous: Anishinaabe	68.1%	24.1%	62.6%	79.3%	21.7%
Indigenous: Dakota	83.3%	11.5%	75.3%	86.5%	18.9%
Other Minoritized Race or Ethnicity: Not Specified	**68.6%**	**27.1%**	**65.3%**	**94.3%**	**31.5%**
Multi-Racial or Multi-Ethnic	**85.1%**	**11.1%**	**85.2%**	**94.6%**	**11.5%**
Minoritized Race or Ethnicity: All[130]	**78.5%**	**17.4%**	**78.4%**	**93.3%**	**17.2%**
White: All	**85.2%**	**9.7%**	**89.3%**	**87.1%**	**5.0%**

- **Educators in Minnesota are overwhelmingly White.** According to the Minnesota Department of Education, 94.1% of Minnesota's K12 classroom teachers are White while 36.7% of Minnesota's K12 students are Asian, Black, Hispanic or Latino, Indigenous, multi-racial, or multi-ethnic.[131]

[130] Including people of Hispanic or Latino origin.

[131] MN Department of Education, "Equitable Access to Excellent and Diverse Educators."

When instructors of digital skills come from a different cultural background than their students, additional work needs to be done to ensure implicit bias doesn't hinder student learning.

- **City and county government employees in administrative positions are less likely to be from minoritized racial and ethnic groups.** White people represent 90.1% of administrative staff across Minnesota's city and county governments; Asian people represent 1.9%, Black people represent 5%, Hispanic and Latino people represent 1.6%, Indigenous people represent 0.5%, and multi-racial people represent 0.8%.[132] When city and county government administrative staff are determining how to support digital opportunity, they are less likely to have the lived experience of the people who may need these services most.

5.4.3 | Systemic Challenges Impeding Digital Opportunity for People from Minoritized Racial and Ethnic Groups

- **People from minoritized racial and ethnic groups are more likely to experience poverty.** The State Digital Equity Planning Grant NOFO identifies 150% of the federal poverty level as being low-income. This level of poverty affects 21.6% of Asian Minnesotans, 41.4% of Black Minnesotans, 31% of Hispanic and Latino Minnesotans, 49.3% of Indigenous Minnesotans, 23.8% of multi-racial and multi-ethnic Minnesotans, and 30.6% of Minnesotans of an unspecified minoritized race. In comparison, 14.1% of White Minnesotans experience this level of poverty.[133]
    - **Disparities in credit access and credit scores follow racial lines.** A 2022 study by the Minneapolis Federal Reserve Bank found that Metro ZIP codes with high proportions of Asian, Black, Latino, and Indigenous residents had lower median credit scores than Metro ZIP codes with high proportions of White residents, even after adjusting for disparities in household income.[134] A poor or non-existent credit history can cause residents to need to pre-pay for internet service.
    - **Financial precarity contributes to housing instability.** Irregular relocation, annual lease expirations, and migrant ways of living make it challenging for households to sustain a subscription to broadband internet service. In responses to the 2017-21 American Community Surveys, 11.7% of White Minnesotans reported changing residences within the past 12 months. This figure was elevated for Asian Minnesotans (21.1%), Black Minnesotans (23.9%), Hispanic or Latino Minnesotans (21.7%), Indigenous Minnesotans (17%), multi-racial and multi-ethnic Minnesotans (22.8%), and Minnesotans of an unspecified minoritized race (22.8%).[135]

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[132] U.S. Equal Employment Opportunity Commission, "Job Patterns for Minorities and Women in State and Local Government."

[133] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

[134] Minneapolis Federal Reserve Bank, "Twin Cities Neighborhoods with Higher Shares of Residents of Color Have Less Access to Credit."

[135] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

- **Owners of multi-dwelling units hold significant power over their tenants' and residents' choices for internet providers.** Some property owners invest in modern wiring between units, public computing spaces, and ACP outreach efforts. Other property owners let wiring fall into disrepair and can limit their residents' choice of provider significantly. People from minoritized racial and ethnic groups are more likely to be renters than White people.[136] In Minnesota, 19.5% of White Minnesotans are renters. This rate increases to 69.5% for Black Minnesotans, 50.9% of Indigenous Minnesotans, 34.6% of Asian Minnesotans, 62.4% of Minnesotans of an unspecified minoritized race, 41.8% of multi-racial and multi-ethnic Minnesotans, and 50.8% of Hispanic or Latino Minnesotans.

5.5 | Veterans

> *Veteran, age 70: "We're on a fixed income. I would like to pick up some remote work but can't because we don't have the internet."* [137]

According to 2021 American Community Survey data, Minnesota has 265,920 veterans, representing 6.1% of the civilian population ages 18 and over. The vast majority of Minnesota's veterans are male with just 7.4% being female. Additionally, veterans' ages skew greater than the state's average with 56.9% of all veterans being ages 65-plus. For comparison, 19.6% of the state's non-veteran population is 65-plus. Because modern elders were directly addressed in Section 5.3 of this plan, this section strives to focus on veterans as veterans rather than veterans as a subset of modern elders.

Another striking difference between veteran and non-veteran Minnesotans is the rate of disability experienced by each group. In 2021, 29.1% of veterans had at least one disability versus 12.7% of non-veterans. For many veterans, these disabilities are a direct result of their military service. For this reason, disability has been incorporated intentionally into this section even as it will be expanded on in Section 5.6.

5.5.1 | Existing Digital Strengths for Veterans

Technology Availability, Adoption, and Use

- **Veterans subscribe to broadband at comparative rates.** In Minnesota, 81.5% of veteran households subscribe to broadband service compared to 83.6% of non-veteran households.[138]

[136] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[137] Focus group, Winona area. Provided by Zephyr Valley Community Cooperative (Digital Connection Committee).
[138] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

- **Veterans and military families receiving Veterans and Survivor Pension Benefits are eligible for ACP.** As of June 1, 2023, 544,950 households have enrolled in ACP nationally using this eligibility criterion.[139]
- **Five veterans homes operated by the state provide wifi to their residents.** These homes are located in Fergus Falls, Hastings, Luverne, Minneapolis, and Silver Bay. Three additional homes are under construction in Bemidji, Montevideo, and Preston.[140] Veterans experiencing homelessness who are in transitional housing at Upper Post also receive access to wifi and a computer lab.

- **For veterans seeking education and career skills the Minnesota GI Bill now includes expanded benefits.** Chapter 38 of the Veterans Omnibus Bill, signed into law during the 2023 state legislative session, increased annual tuition reimbursements and lifetime education benefits. Veterans pursuing post-secondary education, apprenticeships, and on-the-job training can also use these state funds to offset costs related to licensing, certification, and professional exams. As Minnesota looks to fill critical gaps in its technology workforce, veterans are well positioned to receive targeted career training.
- **The Minnesota Veterans Application Tracking System (VATS) simplifies the process of applying for benefits and filing claims.** Until June 2019, the MN Department of Veteran Affairs relied on paper applications forms, tracked applications in spreadsheets, and verified payments manually. Misplaced records and typos had the potential to upend veterans' customer service experiences. VATS is accessible from a large-screen computer or mobile device and allows veterans to check the status of any applications in real-time. Technical assistance is available over the phone or through LinkVet live chat.

Advocates and Educators

- **The U.S. Department of Veterans Affairs supports veterans in receiving telehealth services.** Through the Digital Divide Consult process, a VA social worker can determine whether a veteran is eligible for programs that support the technology access needed for VA telehealth. Services include tablet lending, ACP enrollment, and basic digital skills instruction.
- **The MN Association of County Veteran Service Officers advocates for veterans' needs in all 87 counties; Tribal Veteran Service Officers do the same work with the 11 Native Nations.** These service officers are veterans themselves, living and working in the same communities as their veteran clients. These commonalities establish trusting relationships as veterans work with service officers to navigate state and federal benefits, programs, and services.
- **Veterans with disabilities can receive assistive technology services and support through several state agencies and offices.** These include State Services for the Blind at DEED; the Braille and Talking Book Library at MN Department of Education; the Deaf and Hard of Hearing Services

[139] Universal Service Administrative Company, "ACP Enrollment and Claims Tracker."
[140] MN Department of Veterans Affairs, "Veterans Homes."

Division at MN Department of Human Services; the System of Technology to Achieve Results (STAR) program at MN Department of Administration. Veterans with disabilities can also access assistive technology support through Disabled American Veterans of Minnesota.

5.5.2 | Unsupported Digital Necessities for Veterans

- **Veterans own smartphones and laptops or desktops at lower rates than non-veterans.** While 87.3% of non-veteran Minnesota households had a smartphone, this figure drops to 72.1% among veteran households.[141] Likewise, Minnesota veteran households have a home laptop or desktop at a rate of 81% compared to 86.5% of non-veteran households.
    - **While online applications for benefits streamline the process for many veterans, those lacking a device, reliable internet access, or digital skills are left behind.** In some cases, veterans' quality of life is directly harmed by access-related delays in receiving and managing benefits.
    - **The VA's expanded telehealth services and electronic medical records require specific digital skills.** Veterans, whose average age in Minnesota is 65 years old, may not have the prior experience needed to figure this out without assistance.[142]
- **Veterans returning from service may need upskilling or reskilling to find careers.** A recent study by the National Skills Coalition found that 91% of Minnesota job postings required at least one "likely digital" skill, and 48% required at least one "definitely digital" skill.[143]
- **Veterans are more likely to need trauma-informed customer service.** Nationally, more than 414,000 veterans live with the lingering effects of traumatic brain injuries sustained during service.[144] TBIs can cause memory loss, slowed thinking, and irritability, all of which could impede navigating the process of setting up or troubleshooting internet access or technology use.
- **Veterans may feel misunderstood by healthcare workers and other service providers, especially in Greater Minnesota.** A 2017 study by the Amherst H. Wilder Foundation found that 55% of veterans in Greater Minnesota believed there were no good services in their area for veteran-specific issues.[145] In the Metro, this figure was 15%.

5.5.3 | Systemic Challenges Impeding Digital Opportunity for Veterans

- **Veterans on fixed incomes may struggle to budget for technology access.** Cost of living adjustments (COLAs) to disabled and retired veterans' monthly federal payments have not kept

[141] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[142] ACS 5-Year Estimates, 2017–21.
[143] National Skills Coalition, "Closing the Digital Skills Divide."
[144] U.S. Department of Veterans Affairs, "Traumatic Brain Injuries."
[145] Amherst H. Wilder Foundation, "Minnesota Veterans Behavioral Health Needs Assessment."

up with inflation rates. From 2010 to 2021, annual COLAs ranged from 0% to 3.6% with an average of 1.38%. COLAs in 2022 and 2023 increased 5.9% and 8.7%, respectively.[146]

- **Military service leaves invisible wounds that are not always met with care, patience, and respect.** Rates of mental illness (47%), chemical dependency (29%), suicidal ideation (35%), and suicide attempts (9%) are routinely higher among veterans than non-veterans. In the Amherst H. Wilder Foundation's 2017 study, Minnesota veterans who reported a strong sense of belonging in their communities were significantly less likely to report behavioral and mental health diagnoses.[147] While digital opportunity alone cannot create a sense of belonging, it can help catalyze and strengthen the social connections needed to heal.

5.6 | People with Disabilities

> *"I'm disabled and homebound. This is my only link to the world. I need a more affordable and faster connection and also tech help. I can't fix my own tech. I'm 60 and just don't know how."* [148]

Approximately 649,000 Minnesotan, or 11.5%, live with at least one disability.[149] The American Community Survey 5-Year Estimates for 2017–21 identify cognitive difficulties (5.2%), independent living difficulties (5.1%), and ambulatory difficulties (4.9%) as the three most commonly occurring types of disabilities in Minnesota with hearing difficulties (3.9%), self-care difficulties (2.1%), and vision difficulties (1.6%) following behind.

Rates of disability increase steadily with age: 9.6% of Minnesotans ages 18–64 have disabilities compared to 28.6% of Minnesotans ages 65-plus.[150] Indigenous Minnesotans experience the highest rates of disability, affecting 17.4% of American Indian and Alaska Native individuals. This rate is striking when compared to rates of disability among non-Hispanic White Minnesotans (11.8%), Black and African Minnesotans (11.9%), Asian Minnesotans (7.7%), and Hispanic Minnesotans (9.2%). Even as disability affects individuals from all demographic backgrounds in all corners of the state, it coincides with, contributes to, and accumulates alongside other social vulnerabilities.

Whether a disability be physical, developmental, sensory, behavioral, or a combination, it is essential to acknowledge that every individual's experience living with disabilities is wholly unique. Disability exists on a continuum for Minnesotans as a whole and for individuals within the course of their lifetimes.

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[146] U.S. Department of Veterans Affairs, "Compensation Rates."
[147] Amherst H. Wilder Foundation, "Minnesota Veterans Behavioral Health Needs Assessment."
[148] Survey, Metro area. Provided by CCX Media (Digital Connection Committee).
[149] ACS 5-Year Estimates, 2017–21.
[150] ACS 5-Year Estimates, 2017–21.

Access to technology cannot erase disability, but when implemented with care and strategy, it can be a critical tool for people with disabilities.

5.6.1 | Existing Digital Strengths for People with Disabilities

Technology Availability, Adoption, and Use

- **Broadband subscriptions are increasing among people with disabilities.** A 2022 study by the U.S. Department of Labor found a 17% increase nationally in home internet subscriptions among people with disabilities from 2015–2019 compared to a 9.5% increase among people without disabilities.[151]
    - **People with disabilities receiving Supplemental Social Security Income are eligible for ACP.** As of June 1, 2023, 4,353,798 households nationally have enrolled in ACP nationally using this eligibility criterion.[152]
    - **Telehealth services, digital security systems, and web-based delivery services can help people with disabilities live more independently.** This was described by a disabled senior interviewed by a Digital Connection Committee. As summarized, this person "relies on access for everything from keeping up with friends and family, to having her daily needs delivered to her home. While she lives in the Metro, she has many friends who live in outstate Minnesota, and she really wants a solution for them to get quality broadband service."[153]
- **Technology helps people with disabilities stay connected socially.** For people with disabilities who are less ambulatory, lack reliable transportation, or have vulnerable immune systems, technology like Zoom and social media allows socializing that is safe and within their control.

Advocates and Educators

- **Numerous organizations in Minnesota serving people with disabilities have expanded to include technology access.** These include organizations receiving grant funds from a December 2022 technology grant program administered by MN Department of Human Services: Access North Center for Independent Living of Northeastern Minnesota in Hibbing; Accord in Saint Paul; Independent Lifestyles–A Center for Independent Living in Sauk Rapids; Kang Le in Eden Prairie; Lighthouse Center for Vital Living in Duluth; LiveLife Therapy Solutions in Bloomington; Roots Wellness Center in Saint Paul; and Wright County Community Action in Maple Lake.[154]

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[151] U.S. Department of Labor and Industry. "Disability and the Digital Divide."

[152] Universal Service Administrative Company, "ACP Enrollment and Claims Tracker."

[153] Individual interview, Falcon Heights. Provided by NineNorth (Digital Connection Committee).

[154] MN Department of Human Services, "Technology Grants to Benefit Older Adults and People with Disabilities in Minnesota."

- **Several state agencies and offices provide assistive technologies and technical assistance for people with disabilities.** These include State Services for the Blind at DEED; Vocational Rehabilitation Services at DEED; the Braille and Talking Book Library at MN Department of Education; the Deaf and Hard of Hearing Services Division at MN Department of Human Services; and the System of Technology to Achieve Results (STAR) program at MN Department of Administration. The Disability Hub is a free statewide service connecting people with disabilities to comprehensive supports, including assistive technology.
- **Staff at the Centers for Independent Living (CILs) provide comprehensive services to people with disabilities.** Across eight CILs, over 6,200 Minnesotans were served in 2022. Southwest Center for Independent Living learned through client surveys that smartphones and tablets were the most commonly used devices at 88.5% and 86.3%, respectively.[155]

5.6.2 | Unsupported Digital Necessities for People with Disabilities

- **People with disabilities are less likely to have a broadband subscription.** In Minnesota, 79% of people with disabilities have access to a home broadband subscription compared to 83.7% of all Minnesota households.
    - **Remote work options can give people with disabilities the flexibility they need to lead fulfilling careers, but only if they have adequate broadband at home.** Similarly, caregivers of people with disabilities can use home internet access to balance caregiving responsibilities with remote employment. A caregiver in Greater Minnesota describes this balance: "My husband is chronically sick, and our daughter is home to help care for him but can't work with our slow internet. Her job requires high speed internet."[156]
    - **People with disabilities are less likely to have access to computers and smartphones.** A 2021 study by the Pew Research Center found 62% of people with disabilities had access to a computer and 72% had access to a smartphone. For people without disabilities, these figures were 81% and 88%, respectively.[157] Census data from Minnesota show the same pattern: 69.8% of Minnesotans with disabilities have a laptop or desktop computer, and 67.8% of Minnesotans with disabilities have a smartphone.[158]
    - **People with two or more disabilities experience even greater rates of digital exclusion.** For example, in Minnesota, adults with one disability own laptops and desktops at a rate of 73.6%; this figure drops to 65.5% among Minnesota adults with two or more

[155] Survey, Marshall. Provided by Southwest Center for Independent Living (Digital Connection Committee).
[156] Survey, Todd County. Provided by Todd County Broadband Coalition (Digital Connection Committee).
[157] Pew Research Center, "Americans With Disabilities Less Likely Than Those Without to Own Some Digital Devices."
[158] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

disabilities.[159] Similarly, 72.9% of Minnesotans with one disability own smartphones compared to 62.1% of Minnesota adults with multiple disabilities.

- **Government website compliance with accessibility standards is lacking.** While state law requires state agencies to comply with federal accessibility standards, their adherence is ultimately imperfect. Local and tribal governments may lack the funds to make necessary changes. The Minnesota Council on Disability provides resources and training to improve web accessibility.
- **Public libraries, especially those in Greater Minnesota, may not be fully accessible or have assistive technologies available to patrons.** Out of the 12 public library administrative entities in the Metro, 11 reported having building accessibility plans in place. These plans were last revised between 1991–2021 with 2008 being the average year that revisions most recently occurred. In Greater Minnesota, 75 out of 122 public library administrative entities had building accessibility plans. The average year of revision was 2006.[160]
- **Organizations serving people with disabilities often cite short-staffing as significant limiter in their work.** In 2022, Minnesota had 16,052 job vacancies for healthcare support occupations and 4,807 vacancies in community and social service occupations.[161]

5.6.3 | Systemic Challenges Impeding Digital Opportunity for People with Disabilities

- **Accessible design is sometimes framed as an option rather than the necessity it is.** Baseline compliance is not enough to ensure a website is truly accessible. As more assistance programs, healthcare services, education opportunities, and social networks move online, web accessibility—which has always been essential—becomes more and more critical.
- **People with disabilities are more likely to be on fixed incomes and/or experiencing poverty.** In 2021, 23.2% of Minnesotans with disabilities were living below poverty. This is more than double the statewide poverty rate.[162]
    - **For people with disabilities who work, lower median earnings make it challenging to afford costs for assistive technologies and internet service.** From 2016–2020, median annual earnings for all Minnesota workers without disabilities was $41,459. During the same time frame, median annual earnings for all Minnesota workers with disabilities was almost half at just $22,803. Within this group, men with disabilities earned a median income of $26,553 compared to $19,612 for women with disabilities.[163]

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[159] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

[160] MN Department of Education, "2021 Minnesota Public Library Annual Report–Administrative Entities."

[161] DEED, Job Vacancy Survey.

[162] ACS 5-Year Estimates, 2017–21.

[163] U.S. Department of Labor, "Median Annual Earnings Map."

- **Adults with disabilities may be unable to work full-time.** In 2021, 49.6% of Minnesota adults with disabilities were working.[164]

5.7 | People Who are Incarcerated or Re-Entering Society

> *Survey Question: "Describe one important aspect of your life that would be different if you had full access to affordable, reliable, fast internet; a tech device with the right applications and software; and all of the necessary tech skills."*
>
> *Re-Entering Respondent: "My life would be better, and I could feel like a whole person and not someone who is less than others around me."* [165]

As of January 1, 2023, 8,152 adults were being held in Minnesota's 11 state correctional facilities.[166] An additional 745 people were civilly committed in two state Sex Offender Program facilities,[167] approximately 8,000 people were detained across 82 county jails,[168] 2,285 people were in four federal prisons, and 19,975 people were under state supervision.[169] At the direction of the State Digital Equity Planning Grant NOFO, this section focuses on people held at non-federal facilities and will also address people on probation and re-entering.

Although Minnesota has one of the lowest imprisonment rates in the country at 140 people incarcerated per 100,000 state residents, this population is still significant.[170] A statewide prison and jail population over 8,000 outpaces the populations of 86% of Minnesota's cities.[171] Racial disparities and inequities contribute to Black and Indigenous Minnesotans becoming disproportionately justice-involved. On January 1, 2023, 36.8% of people incarcerated in state prisons were Black, yet Black Minnesotans represent 7.6% of the overall state population.[172] Similarly, Indigenous people represented 9.4% of people incarcerated in state prisons but 1.4% of the overall state population.

People who are incarcerated must essentially put their technology skills on hold during their detainment. A person serving a 15-year sentence, if released today, may have never meaningfully used any of today's most common technologies, such as smartphones, tablets, and mobile data. They may never have browsed YouTube, navigated social media, or completed online applications and paperwork.

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[164] ACS 5-Year Estimates, 2017–21.
[165] Survey, Metro area. Provided by Repowered (Digital Connection Committee).
[166] MN Department of Corrections, "Inmate Profile as of 01/01/23."
[167] MN Department of Human Services, "Sex Offender Treatment."
[168] National Institute of Corrections, "State Statistics: Minnesota 2020."
[169] MN Department of Corrections, "2022 Performance Report."
[170] U.S. Department of Justice, "Prisoners in 2021–Statistical Tables."
[171] MN State Demographic Center, "Our Estimates."
[172] MN Department of Corrections, "Inmate Profile as of 01/01/23."

Technology evolves quickly. Cybersecurity threats can change from unimaginable to personal in an instant. Missing out for any length of time puts a person at an immediate disadvantage, which can be especially harmful when that person is trying to restart their life. Within the scope of this plan, and given Minnesota's large probation population, the short-term path forward must address digital opportunity proximal to the re-entry process, referring to the transition from prison to society.

5.7.1 | Existing Digital Strengths Among People Who are Incarcerated or Re-Entering Society

Technology Availability, Adoption, and Use

- **The state Omnibus Judiciary and Public Safety bill, signed into law at the end of the 2023 legislative session, includes language improving prisoner access to technology.**[173] Effective July 1, 2023, people in Minnesota prisons can make phone calls at no cost. Video calls may also become an option at some facilities.
- **County jails are exploring digital options to help incarcerated parents stay connected to their children.**[174] Statewide in 2022, 13% of Minnesota's eighth, ninth, and eleventh graders reported having had an incarcerated parent or guardian. This figure was exceptionally high in Greater Minnesota where nearly one out of every five teens is impacted by parental incarceration. The Minnesota Model Jail Practices Learning Community, an effort co-facilitated by the MN Department of Health and the University of Minnesota, has focused on improving the wellbeing of these children and their incarcerated parents by facilitating more than 3,500 video visits during its pilot phase.
- **The Minnesota Career Education Center (MCEC) provides Adult Basic Education (ABE) services at nine state prison locations.**[175] Programs have classroom computers to allow students access to online software programs. Additionally, learners have access to high-quality academic and legal research databases.
    - **The MN Department of Corrections provides tablets for all incarcerated students**. In partnership, MCEC ensures effective ABE content is available on these tablets to

[173] Laws of Minnesota 2023, chapter 52, article 11, section 11. "Free communication services. (a) A state adult or juvenile facility under the control of the commissioner of corrections must provide incarcerated persons with voice communication services. A facility may supplement voice communication services with other communication services, including but not limited to video communication and email or electronic messaging services. A facility must at least continue to offer the services the facility offered as of January 1, 2023. (b) To the extent that voice communication services are provided, which must not be limited beyond program participation and routine facility policies and procedures, neither the individual initiating the communication nor the individual receiving the communication must be charged for the service."

[174] MN Department of Health, "Minnesota Model Jail Practices Learning Community."

[175] MN Department of Corrections, "Minnesota Career Education Center ABE Consortium Narrative, 2023."

enhance distance learning and hybrid learning options. Tablets also provide access to a curated library of reentry and rehabilitation resources.

- **MCEC makes assistive technologies available to students.**[176] This includes screen readers, large-print keyboards, talking calculators, adaptive computer mice, teacher voice amplifiers, and closed captioning.

Advocates and Educators

- **State-supported partnering organizations connect people who are incarcerated and re-entering with digital skills training.** Data from MN Department of Corrections found educational attainment while incarcerated was associated with a 59% increase in post-release employment.[177]
  - **College and vocational instructors provide training for information technology careers.** This includes Metropolitan State University's College in Prison program, Minneapolis College's College-in-Prison program, and Minnesota State University Mankato's Scholars Serving Time Program.
  - **CareerForce provides tailored services for justice-involved individuals.** This includes digital skills development relevant to job search processes, digital skills training in the use of common workplace technologies, and the New Leaf program, a workshop designed to support the unique needs of job-seekers with criminal records.
  - **ABE instructors teaching through MCEC provide digital skills instruction.** In FY22, 4,123 incarcerated people were served by MCEC ABE. While many of these students are working toward GEDs, digital skills assessment and training is also available using Northstar Digital Literacy. Students passing Northstar's modules can earn a certificate that demonstrates their digital abilities to future employers.
- **Organizations like Repowered support people who are re-entering in gaining work experience while developing technology skills.** In 2022, Repowered saw 56 people hired through its work readiness program. They also had 40 digital literacy graduates and 31 work readiness employees who passed the National Association of Information Destruction certification test, an important credential in technology refurbishment.

5.7.2 | Unsupported Digital Necessities for People Who are Incarcerated or Re-Entering Society

- **Fewer re-entering individuals have access to home internet compared with the general population.** In a survey of re-entering individuals conducted by Repowered, 65.3% of

[176] MN Department of Corrections, "Minnesota Career Education Center ABE Consortium Narrative, 2023."

[177] MN Department of Corrections, "The Effects of Minnesota Prison-Based Educational Programming on Recidivism and Employment."

respondents stated they had internet access at their residence.[178] Moreover, people living in transitional housing reported frequent issues with time limits, restrictions around internet use, and slow speeds during times where more residents are online.

    - **Re-entering individuals are less likely to have access to an internet-enabled device.** Smartphones were the most common device with 62.5% of Repowered survey respondents indicating they had access to one. Laptop computers were a distant second at 42.2%.
    - **After time away from technology, incarcerated and re-entering individuals are more likely to have limited digital skills.** A quarter of Repowered survey respondents indicated they had missed at least one important deadline within the past six months because of limited digital skills.
- **Imperfect content filtering software sometimes blocks access to important information.** One Repowered survey respondent described this challenge: "I have tracking software that prevented me from researching the companies I was applying to because much of their info led to LinkedIn or other sites that I was not allowed use."
- **Student to teacher ratios in MCEC ABE learning classrooms are imbalanced.** In the 2023 MCEC annual report, MN Department of Corrections outlined a staff of 43 licensed ABE teachers.[179] With 2,706 students enrolled at the time of this report, this creates an average ratio of 63 students for every ABE teacher. Facilities like Willow River, which has just one teacher, reported a ratio of 112 students per teacher. Although 10 licensed substitute teachers and 19 ABE support staff are also available, these ratios are still too high.

5.7.3 | Systemic Challenges Impeding Digital Opportunity for People Who are Incarcerated or Re-Entering Society

- **Poverty disproportionately affects people who have been incarcerated and their families who may have been dependent on their income prior to incarceration.** A 2022 study authored by the U.S. Census Bureau observed that people released from prison in 2006 had average annual incomes of $8,065 in 2007 and $10,090 in 2018. Their equally educated peers who had not been in prison had incomes of $16,020 in 2007 and $19,610 in 2018.[180]
    - **People who are incarcerated often have lower levels of educational attainment.** On January 1, 2023, 55.6% of Minnesotans in state prisons had completed high school or a

[178] Survey, Metro area. Provided by Repowered (Digital Connection Committee).

[179] MN Department of Corrections, "Minnesota Career Education Center ABE Consortium Narrative, 2023."

[180] U.S. Census Bureau, "Dim Outlook for People Released from Prison."

GED, and 18.2% had complete a four-year degree or higher.[181] Statewide, these figures are 93.6% and 37.6%, respectively.[182]

- **Rates of unemployment are high among formerly incarcerated people.** A longitudinal 2021 study by the U.S. Bureau of Justice Statistics found 33% of people released from federal prisons in 2010 did not find employment at any point during the subsequent four years.[183] Two-thirds of this study population were 25–44 years old at the time of their released, and 82% had been in prison under 5 years at the time of their release. Affording to access technology consistently is difficult without a steady source of income; likewise, finding and sustaining a job is difficult without access to technology.

- **Imprisonment is dehumanizing and traumatic.** People who have been incarcerated experience lower rates of recidivism when they have comprehensive access to mental healthcare, educational opportunities, and career training during their prison sentence and following their release. All of these are made more possible and more accessible through full access to technology.

5.8 | People Experiencing Language Barriers

> *"The longer we are disconnected, that we can't take opportunities or do certain jobs, the more difficult is to catch up. Things are changing fast. We feel we are going to be left behind."* [184]

As specified in the State Digital Equity Planning Grant NOFO, this covered population is twofold, referring to people who do not speak English fluently and people who lack English literacy. While these groups overlap, neither is perfectly inclusive of the other. As such, this section of Minnesota's digital opportunity plan strives to address both groups side-by-side, acknowledging commonalities without losing sight of differences.

English Fluency: According to the American Community Survey, 12% of Minnesotans ages 5 and over speak a language other than English at home.[185] Minnesotans who communicate using American Sign Language at home are included in this count. Among this 12% of the state's population speaking a language other than English at home, 62.4% can speak English "very well," and 37.6% speak English "less than very well." Statewide, this equates to 239,624 Minnesotans ages 5 and over, or 4.5% of

[181] MN Department of Corrections, "Inmate Profile as of 01/01/23."
[182] ACS 5-Year Estimates, 2017–21.
[183] Bureau of Justice Statistics, "Special Report: Employment of Persons Released from Federal Prison in 2010."
[184] Focus group, Metro area. Provided by Hispanic Advocacy and Community Empowerment through Research (HACER) (Digital Connection Committee).
[185] ACS 5-Year Estimates, 2017–21.

Minnesotans ages 5 and over, speaking English "less than very well." Among people who speak English less than very well, 23.8% are 5-17 years old, 40.1% are 18-64 years old, and 53.5% are ages 65 and greater.

Statewide, the most common languages spoken at home other than English are Spanish (which is spoken in 31.5% of the households that speak other languages), Somali (11.7%), and Hmong (10.9%). While linguistic diversity is more numerous in the Metro, a density of linguistic diversity accumulates in some Greater Minnesota cities. A snapshot of this diversity is seen in this selection from the 2021-2022 primary home language totals across school districts compiled by the MN Department of Education:[186]

School District	County	Top 3 Home Languages
Worthington Public Schools	Nobles	Spanish 35.79% of students Karen 3.55% of students Lao 1.41% of students
St. James Public Schools	Watonwan	Spanish 21.14% of students Quichua 0.95% of students Mam 0.74% of students
Willmar Public Schools	Kandiyohi	Spanish 17.26% of students Somali 11.31% of students Karen 2.22% of students
Austin Public Schools	Mower	Spanish 15.16% of students Karen 5.8% of students Anuak 1.32% of students
Albert Lea Public Schools	Freeborn	Spanish 7.72% of students Karen 7.45% of students Nuer 1.08% of students
All public schools in Hennepin County	Hennepin	Spanish 6.2% of students Somali 3.3% of students Hmong 2.33% of students
All public schools in Ramsey County	Ramsey	Spanish 6.2% of students Somali 3.3% of students Hmong 2.32% of students

English Literacy: The Program for the International Assessment of Adult Competencies (PIAAC), also known as the Survey of Adult Skills, is a large-scale international study collecting data from adults ages

[186] MN Department of Education, "2021-22 Primary Home Language."

16-74 in the United States and ages 16-65 in the other countries. PIAAC data can provide a comparative way to assess English literacy levels across counties, state, and countries.

PIAAC results are reported as averages on a 500-point scale. Nationwide, the current PIAAC average is 264.[187] Minnesota's statewide score is 279, tying it with New Hampshire for the highest English literacy rate out of all 50 states. Minnesota counties scoring above the state average are Carver (290), Washington (287), Hennepin (285), Scott (285), Olmsted (284), Dakota (284), Sherburne (282), Cook, (282), Wright (281), Douglas (280), and Clay (280). The five lowest scoring counties were Clearwater (262), Pine (261), Mahnomen (257), Watonwan (253), and Nobles (250).

Setting up a broadband subscription and navigating the internet can be a challenge even for those who are fluent speakers and readers of English. Translation and plain language, while practical and necessary, are not blanket solutions on their own. These strategies require additional supports, often in the form of human connections and trust.

5.8.1 | Existing Digital Strengths for People Experiencing Language Barriers

Technology Availability, Adoption, and Use

- **Minnesota's most linguistically diverse communities are often located in areas with broadband access.** The majority of people whose primary home language is something other than English live in cities that are served by broadband at speeds of 25/3 or greater.
    - **Households primarily speaking a language other than English are more likely to be digitally connected if K12 students reside there.** South Central Service Cooperative based in Mankato observed that 26 out of 27 of their member schools "allow students to keep their devices or have checkout programs for students to take devices home or to events."[188] During interviews with PACER Center's multi-cultural advocates for children with disabilities, Hmong, Somali, and Spanish advocates noted that children often bring essential devices home from school.[189]
    - **People can use technology to develop their English skills throughout their daily lives.** Thai Cultural Council found that about 60% of their survey respondents and interviewees were using internet access, smartphones, and apps to support English language learning in real-time.[190]

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[187] U.S. Department of Education, "PIAAC."
[188] Focus group, southcentral Minnesota. Provided by South Central Service Cooperative (Digital Connection Committee).
[189] Individual interviews. Provided by MN Department of Education (Digital Connection Committee) in collaboration with PACER Center.
[190] Individual interviews and survey, Metro area. Provided by Thai Cultural Council (Digital Connection Committee).

- **Technology is essential in helping immigrants and refugees stay connected to family, friends, and culture.** One English language student describes what it feels like when they are unable to reach an internet connection: "Without the internet I feel like I live in a prison because you lost your connection with your family."[191]

- **ACP resources are available in many languages.** Through the FCC's ACP outreach toolkit, this includes American Sign Language videos and written Arabic, Chinese (simplified and traditional), French, Haitian-Creole, Korean, Portuguese, Russian, Spanish, Tagalog, and Vietnamese. Hennepin County has independently created additional promotional flyers in Hmong, Somali, and Spanish.

Advocates and Educators

- **Public libraries are a frequent place people with limited English fluency and/or limited English literacy go to get internet access.** This is especially true among Metro residents.
  - A survey by Oromo Community of Minnesota found 52.8% of respondents named the library as the place they go when they can't access the internet at home.[192]
  - The library was named by 74.2% of respondents to a similar survey by Twin Cities West Metro Asian Fair.[193]
- **Numerous organizations serving people experiencing language barriers have expanded to include technology access.**
  - This includes groups like African Community Senior Services, Austin Aspires, CLUES, Haven Housing, Intercultural Mutual Assistance Association, Literacy Minnesota, Roots Wellness Center, Project FINE, the Sanneh Foundation, and the South Sudanese Foundation.
  - **MN Adult Basic Education (ABE) specializes in providing support for people building English fluency and/or English literacy skills.** Funded using a combination of federal and state resources, services are offered to over 65,000 adult students through a network of 39 consortia with over 300 sites total, comprising public school districts, nonprofit organizations, community and technical colleges, and correctional facilities.

5.8.2 | Unsupported Digital Necessities for People Experiencing Language Barriers

- **People with limited English fluency and/or limited English literacy have a broadband subscription at levels lower than average.** Language barriers correlate with low levels of formal education. In November 2021, 66.5% of people without high school diplomas and 71.3% of

[191] Focus group, Metro area. Provided by International Institute of Minnesota (Digital Connection Committee).
[192] Survey, Metro area. Provided by Oromo Community of Minnesota (Digital Connection Committee).
[193] Survey, Metro area. Provided by Twin Cities West Metro Asian Fair (Digital Connection Committee).

people completing high school had a broadband subscription access.[194] This compares to 85.6% of college graduates.

    - **In Faribault, a survey conducted in English, Somali, and Spanish found stark gaps between these three groups.** Lack of home internet access was reported by 12.2% of English speakers, 29% of Spanish speakers, and 78% of Somali speakers.[195]
- **People with limited English fluency and/or limited English literacy are less likely to have a computer at home.** During focus groups of English language learners at Riverland Community College, 29 out of 30 students indicated they had home internet access, but only eight had laptop or desktop computers (and two of those computers were reportedly not in working order).[196]
- **Technology classes focused on internet safety are in demand among adults with limited English fluency.** In a survey of Somali-speaking parents, 9 out of 10 respondents indicated that computer classes would be the most helpful technology resource that the Digital Equity Act could provide.[197]
    - **Online privacy and safety are major concerns among immigrants with limited English fluency.** In a Chinese/English bilingual survey where 85.2% of respondents indicated English was not their native language, 78.4% of respondents expressed concern about privacy and safety of online platforms.[198]
    - **Parents who are unfamiliar with technology due to language barriers express major concerns regarding their children's safe use of technology.** During a focus group with Somali mothers, GMCC learned that "because [parents] are unfamiliar with technology generally, they are unsure how to manage the time their children spend on their devices. Parents overwhelmingly expressed fear that overuse of digital technology put a strain on their relationships with their children."[199]
- **Internet service providers may not be prepared to provide customer service in a language not widely spoken in the U.S.** For people with limited English fluency, this can be an extremely frustrating if not altogether dehumanizing experience if not handled with patience and care.
- **In households where the primary language is not English, it is common for children to take on responsibilities assisting their parents with technology.** In conducting a focus group with Spanish-speaking parents, Raíces Latinas noted, "It is very evident that kids know much more about technology than parents do. There's a clear digital divide between what parents have

[194] NTIA, "Digital Nation Data Explorer."

[195] Survey, Faribault and Northfield. Provided by Northfield Healthy Community Initiative (Digital Connection Committee).

[196] Focus group, Austin. Provided by Austin Aspires (Digital Connection Committee).

[197] Survey, Metro area. Provided by AG Consulting Media (Digital Connection Committee).

[198] Survey, Metro area. Provided by Chinese Community Center (Digital Connection Committee).

[199] Focus group, Metro area. Provided by GMCC (Digital Connection Committee).

access to compared to their children."[200] While intergenerational technology support is common in most households to some extent, English-speaking children whose parents are English learners may feel the weight of this responsibility more significantly than households where English is spoken fluently.

5.8.3 | Systemic Challenges Impeding Digital Opportunity for People Experiencing Language Barriers

- **Minnesota residents born outside the U.S. are more likely to live below 150% of the poverty level.** Among Minnesota-born residents, 14.6% were living in poverty compared to 23.6% of residents who were born outside of the U.S.[201] This can make it challenging to afford internet access.
- **Jargon is still jargon after it's translated.** Additional resources are needed to ensure understanding. That goes for the idea of "digital opportunity" itself. One Digital Connection Committee noted that none of the following terms resonated with their Latino focus group participants: digital literacy (alfabetización digital), digital inclusion (inclusión digital), and digital equity (equidad digital).[202]
- **Limited English fluency and literacy are significant vulnerabilities**. In a focus group held by Roots Wellness Center, staff heard concerns that "due to a language barrier, participants ended up hiring more costly services and added services they did not want."[203] One participant explained, "This does not happen when you call to get your electricity connected as electricity is treated as a commodity."
    - **People new to the U.S. might be coming from a country where technology was restricted or unavailable.** In a survey of intermediate English language learners, one expanded on this newness in response to a question about challenges they have experienced while trying to get internet access, stating it is difficult to "choose a good speed and understand what tools are needed for this and the process itself. Understanding wifi devices. What wire do I need?"[204]
    - **People living with language barriers—especially parents whose tech-savvy children are online—are on high alert for scams and worry about online safety.** People have experienced cybersecurity threats or who have close friends or family who have been harmed by scams may be keenly distrustful of low-cost programs that seem "too good

[200] Focus group, Metro area. Provided by Raíces Latinas (Digital Connection Committee).
[201] ACS 5-Year Estimates, 2017–21.
[202] Focus group, Metro area. Provided by Hispanic Advocacy and Community Empowerment through Research (HACER) (Digital Connection Committee).
[203] Focus group, Minneapolis. Provided by Roots Wellness Center (Digital Connection Committee).
[204] Survey, Minneapolis. Provided by Literacy Minnesota (Digital Connection Committee).

to be true." Trusting relationships are the best way to impart the knowledge a person needs in order to navigate technology with confidence.

5.9 | People in Low-Income Households

> *"I am a single mom with unstable child support and cannot afford the internet options available to me at this time. I get a hotspot from the library. I can only keep it for so long and then have to return it and jump back on the wait list."* [205]

The State Digital Equity Planning Grant NOFO establishes that low-income households are those where "the income of which for the most recently completed year is not more than 150 percent of an amount equal to the poverty level."[206] Statewide, 15.6% of all Minnesotans (about 904,800 people) are below 150% of the poverty level.[207] This group overlaps significantly with the majority of the other seven covered populations addressed in this plan, contributing to their increased likelihood of being digitally excluded.

As with so many identities and experiences, poverty exists on a spectrum. Regarding individuals above 150% of the poverty level as wholly separate from those below 150% of the poverty level is ultimately a reductive activity. Even as some households will never move above or below 150% poverty, many will experience life on both sides of this invisible line. Moreover, income alone is an imperfect metric for determining poverty. Households with income above 150% poverty facing high essential expenses (often related to healthcare, childcare, rising food costs, and transportation) may experience a net financial strain akin to poverty without being able to access services and supports that are designated for low-income households.

A 2023 report authored by United Way states that 35% of Minnesota households were below the ALICE threshold in 2021.[208] The ALICE threshold, first recognized in 2009 by United Way of Northern New Jersey, describes households that are "Asset Limited, Income Constrained, and Employed." ALICE households include those facing deep poverty under federal definitions; they also include those who, due to economic stressors, experience similar struggles of paying for essential services even though their income precludes them from most if not all government assistance programs. Although the Digital Equity Act limits poverty measurements to income, this section of Minnesota's digital opportunity plan also strives to recognize the net financial challenges faced by more than one-third of Minnesota's residents.

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[205] Survey, Columbia Heights. Provided by City of Columbia Heights (Digital Connection Committee).
[206] NOFO.
[207] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[208] United Way, "ALICE Essentials Index," *see* "Downloads: Latest National Report."

5.9.1 | Existing Digital Strengths for People in Low-Income Households

Technology Availability, Adoption, and Use

- **Local and tribal governments are running programs to keep low-income residents and tribal members connected.** For example, Hennepin County Office of Broadband and Digital Inclusion was created in July 2021 and supports residents' technology access through referrals to digital navigators at partnering organizations. Fond du Lac Band of Lake Superior Chippewa's internet service provider—Aaniin—provides fiber-to-the-home across Fond du Lac Nation and incorporates ACP and Lifeline enrollment into its subscription processes to keep tribal customer costs low.
    - **Some Minnesota cities offer city-wide public wifi.** Minneapolis, for example, accomplishes this through an outdoor network on 117 hotspots which require no payment or personal information in order to use.
    - **Public libraries in every Minnesota county provide free wifi and computer access.** Statewide, Minnesota has 356 public library locations, 355 of which offer wifi and a combined total of 4,872 public computers and devices.[209] Annually, these locations are open a total of 641,419 hours. In 2021, Minnesota's public libraries supported 1,236,941 internet sessions on their public computers plus an additional 5,848,695 wireless internet sessions among people bringing their own devices.
- **ACP and the Lifeline Program reduce monthly internet costs for low-income households.** ACP reduces home internet costs by $30 per month (or $75 per month for households in Native Nations) for households at or below 200% of the poverty level. Lifeline concentrates on households at or below 135% of the poverty level and provides a discount of $9.25 per month (or $34.25 per month in Native Nations). In Minnesota, 216,423 households are enrolled in ACP, and 71,712 households are enrolled in Lifeline. [210]
- **Some Minnesota-based organizations provide low-cost refurbished computers.** This includes organizations like Free Geek, PCs for People, and Repowered.

Advocates and Educators

- **Staff at Minnesota's 24 Community Action Partnership (CAP) agencies alleviate poverty through access to resources and services.** CAP services include connecting people with computer access and digital skills. For example, KOOTASCA's Digital Divide Program directly supports its clients' digital inclusion needs.

[209] MN Department of Education, "2021 Minnesota Public Library Annual Report–Outlets."
[210] Universal Service Administrative Company, "ACP Enrollment and Claims Tracker" and "Lifeline Program Data."

- **Federal grants are boosting organizations doing ACP outreach.**[211] The Federal Communications Commission is administering competitive funding awards to improve local ACP outreach. Grant recipients in Minnesota include Leech Lake Band of Ojibwe, Neighborhood House, Ramsey County, and Tri-County Action Program.

5.9.2 | Unsupported Digital Necessities for People in Low-Income Households

- **People in low-income households are less likely to subscribe to broadband.** Minnesota households below 150% poverty saw broadband subscription rates of 75.4%.[212]
    - **Households that cannot afford a contracted broadband subscription might use mobile data instead.** This adds precarity as residents try to stay within monthly data allowances, supplementing mobile data use with public wifi use if possible. The Leech Lake Band of Ojibwe's Digital Connection Committee found 94% of survey respondents from predominantly low-income tribal households were relying on mobile data for their internet service.[213]
    - **Low credit scores can limit which internet service providers and plans people can choose.** A 2018 study found "moderate correlation" between low incomes and low credit scores.[214] Internet service providers running credit checks on prospective customers reserve the right to deny service contracts due to poor or non-existent credit history.
    - **Missed internet service bills in the past can hinder future service.** This is especially true for people with low-income who are living in areas with only one or two internet service providers.
    - **ACP and Lifeline enrollment rates in Minnesota are below the national averages.** Nationally, 35% of all eligible households are participating in ACP, and 19% of all eligible households are participating in Lifeline. In Minnesota, both figures are lower at 27.9% and 12.9%, respectively.[215]
- **People in low-income households are more likely to own only a smartphone.** 19.2% of people in households under 150% poverty had access to only a smartphone.[216] In households between 150% to 200% poverty, this figure dropped to 10%. Households above 200% poverty had access to only a smartphone at a rate of 5.5%.
    - Irreducible Grace Foundation, a non-profit focused on creating safe spaces with youth of color, heard from a survey respondent experiencing poverty who had access to only a

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[211] Federal Communications Commission, "Affordable Connectivity Outreach Grant Program."
[212] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[213] Survey, Leech Lake Nation. Provided by Leech Lake Band of Ojibwe (Digital Connection Committee).
[214] Board of Governors of the Federal Reserve, "Are Income and Credit Scores Highly Correlated?"
[215] Universal Service Administrative Company, "ACP Enrollment and Claims Tracker" and "Lifeline Program Data."
[216] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.

smartphone that improved technology access would help them, "have a more reliable way to do things that could possibly take a load off my shoulders."[217]
    - In a survey of predominantly low-income Minneapolis adults conducted by Urban Strategies Inc., 35.7% of respondents had access to only a smartphone.[218]
- **Owners of multi-dwelling units and owners of private manufactured home parks hold significant power over their tenants' and residents' choices for internet providers.** 65.3% of Minnesota households with annual income under $20,000 are renters compared to 45.7% of Minnesota households with annual income from $20,000 - $49,000; 32.6% of Minnesota households with annual income from $50,000 - $75,000; and 11.7% of Minnesota households with annual income over $75,000.[219]

5.9.3 | Systemic Challenges Impeding Digital Opportunity for People in Low-Income Households

- **Low-income households experience challenging income-to-broadband cost ratios.** A family of four at 150% of the federal poverty level feels this cost more acutely than a family of four at 50% of the federal poverty level.
    - **A 2022 study by Consumer Reports found the national median broadband cost was $74.99 per month.** Approximately half of all sample households were paying between $60 and $90 per month.[220]
    - **Consumers aren't expecting free broadband service.** A City of Duluth survey found 12.6% of respondents identified $21–$30 as an affordable monthly price range, 20.3% identified $31–$40, 31.4% of respondents identified $41–$50, and 14.5% identified $51–$61.[221] Just 1.1% of respondents indicated that $0–$10 would be their most affordable option.
- **The future of ACP is unknown.** Congress first funded ACP under the November 2021 Bipartisan Infrastructure Law using a $14.2 billion appropriation. According to a recent Brookings Institute panel, these funds are expected to run out by mid-2024 unless Congress takes action to infuse the program with more funding.[222]
- **Income– and cost-associated housing issues plus digital inequity plus employment challenges compound on one another in a dangerous cycle.** A survey respondent from Minneapolis describes this experience: "I have a friend who lives on a shoestring and can't afford internet,

[217] Survey, Saint Paul. Provided by Irreducible Grace Foundation (Digital Connection Committee).
[218] Survey, Minneapolis. Provided by Urban Strategies Inc. (Digital Connection Committee).
[219] ACS 5-Year Estimates, 2017–21. Accessed via IPUMS USA, University of Minnesota.
[220] Consumer Reports, "Broadband Pricing: What Consumer Reports Learned from 22,000 Internet Bills."
[221] Survey, Duluth. Provided by City of Duluth (Digital Connection Committee).
[222] Brookings Institute, "Can Attainable Broadband Deployment be Achieved without the Affordable Connectivity Program?"

and it has made it so much more difficult for her to get a job and even to keep a job. Internet is so important, and everyone should have it, if they want it and are willing to learn how to use it."[223] A person who is unable to afford full technology access misses out on opportunities for upward economic mobility. A person who misses out on opportunities for upward economic mobility is more likely to experience housing issues.

  - **People experiencing homelessness face the steepest systemic challenges to breaking this cycle.** During the January 2022 point-in-time count, 7,917 Minnesotans were found to be experiencing homelessness.[224] Of these, 56% were in emergency shelters, 22% were in transitional housing, and 22% were unsheltered.
  - **Residents of apartment buildings and other multi-dwelling units may experience technology challenges related to income and building ownership.** Minnesota Housing Partnership finds that 169,585 Minnesota renters qualify as being "extremely low income," meaning their income is less than 30% of the area median income.[225] In addition, some apartment buildings have outdated internal wiring that cannot adequately deliver high-speed internet service. Further barriers are associated with building owners establishing service contracts that limit which providers can serve a building.
  - **Residents of manufactured home parks experience similar issues as apartment residents.** Manufactured homes make up 5% of Minnesota household dwellings.[226] HUD surveys find approximately 80% of manufactured home residents are low or very low income. On top of affordability, manufactured home park residents may experience similar issues as apartment residents regarding private park owners limiting which providers can serve the residents.

- **"Affordability" depends on context.** Regarding income alone as the baseline for determining affordability is reductive in cases where significant necessary expenses, such as healthcare or childcare, create a net income akin to poverty. An affordable monthly internet service price-point for one household may be wholly unaffordable for another.

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[223] Survey, Minneapolis. Provided by City of Minneapolis Communications Department (Digital Connection Committee).

[224] MN's Homeless Management Information System, "Point-in-Time Count Information."

[225] Minnesota Housing Partnership, "2021 State of the State's Housing."

[226] All Parks Alliance for Change, "Fact Sheet."

6.0 | Areas of Alignment

"Digital equity is a systemic issue that will require systemic investments ... Digital inequity is a result of policies and systems, and policy and system-level changes would be needed to close the gaps." [227]

This section complements Section 4.0 by situating the plan and its implementation in the context of future collaborators; existing state, local, and tribal digital opportunity plans; and future federal, state, and private funding.

6.1 | Future Collaborators and Ongoing Evaluation of Plan

6.1.1 | Public Participation

Digital Connection Committees

The Digital Connection Committees (DCCs) participating in this planning process have been phenomenal partners and have offered essential perspectives, critical feedback, and ongoing guidance. The continued involvement of the DCCs is integral to the future of digital opportunities in Minnesota.

Throughout the State Digital Equity Capacity Grant period, OBD will continue convening and recruiting DCCs, as well as connecting DCCs with one another. Keen attention will be paid to recruiting community-based organizations that serve a less-represented covered population—such as incarcerated individuals and veterans—and labor organizations that represent positions doing relevant work. Activities will include virtual DCC meetings at least bimonthly as well as a monthly DCC e-newsletter to facilitate routine updates. OBD will intentionally solicit feedback from DCCs on an annual basis to ensure digital opportunity implementation remains relevant.

The annual DCC calendar will be approximately as follows:

Month	Activity
July (Q1)	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update
August	OBD sends e-newsletter to all DCCs
September	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update

[227] Digital Connection Committee recommendations, Hennepin County. Provided by SDK Communications and Hennepin County Office of Broadband and Digital Inclusion (Digital Connection Committees).

October (Q2)	OBD sends e-newsletter to all DCCs; OBD collects feedback via surveys from DCCs on plan progress, potential revisions
November	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update; OBD uses virtual update time to collect feedback via small group discussion
December	OBD sends e-newsletter to all DCCs
January (Q3)	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update; OBD shares themes from DCC survey and small group discussion
February	OBD sends e-newsletter to all DCCs; OBD recruits new DCCs
March	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update
April (Q4)	OBD sends e-newsletter to all DCCs; OBD incorporates DCC feedback into annual plan revisions
May	OBD sends e-newsletter to all DCCs; OBD convenes all DCCs for virtual update; OBD shares revised plan
June	OBD sends e-newsletter to all DCCs

Public Comment

Individuals will be able to provide public comments on OBD's rollout of the State Digital Equity Capacity Grant period using a form on OBD's website or by mail. OBD staff will review comments on a monthly basis and track common themes internally.

The annual public comment schedule will be approximately as follows:

Month	Activity
Year-round	OBD accepts public comments through an online form and by mail. OBD reviews and collates any new comments on a monthly basis.
May (Q4)	OBD incorporates public comments into annual plan revisions and posts online

6.1.2 | Inter-Agency Digital Opportunity Workgroup

From January through April of 2022, shortly after the federal Infrastructure Investment and Jobs Act was signed into law, OBD convened three meetings of an inter-agency digital equity workgroup. This workgroup included representation from MN Department of Agriculture; MN Department of Education; MN Department of Human Services; MN Housing; MN IT Services; and MN Public Utilities Commission.

OBD intends to re-create and expand this group as an inter-agency digital opportunity workgroup that will include additional state agencies and offices representing covered populations more directly:

(1) People living in rural areas: MN Department of Agriculture
(2) Modern elders: Age-Friendly MN
(3) People from minoritized racial and ethnic groups: Council on Asian Pacific Minnesotans; Council for Minnesotans of African Heritage; Minnesota Council on Latino Affairs; Minnesota Indian Affairs Council
(4) People with disabilities: MN Council on Disability
(5) Veterans: MN Department of Veterans Affairs
(6) People who are incarcerated or re-entering society: MN Department of Corrections
(7) People experiencing English language barriers: MN Department of Education
(8) People living in low-income households: MN Department of Human Services

Further representation will address perspectives from other key entities:

(1) Workforce: DEED CareerForce
(2) Higher Education: MN Office of Higher Education; Adult Basic Education
(3) Healthcare: MN Department of Health
(4) Housing: MN Housing
(5) Other: MN IT Services; MN Public Utilities Commission

This workgroup's charge will include the following responsibilities:

(1) Coordinate inter-agency digital opportunity implementation;
(2) Share inter-agency digital opportunity updates; and
(3) Evaluate progress on the digital opportunity plan on an annual basis and revise the plan if necessary.

Meeting will be scheduled no less frequent than quarterly beginning in State Fiscal Year 2025.[228] One meeting per year will involve evaluation on digital opportunity plan progress.

Month	Activity
August (Q1)	OBD convenes workgroup
November (Q2)	OBD convenes workgroup
February (Q3)	OBD convenes workgroup; OBD conducts 1:1 interviews with workgroup members to solicit feedback on plan and workgroup progress

[228] State Fiscal Year 2025 begins July 1, 2024 and end June 30, 2025.

May (Q4)	OBD convenes workgroup; OBD incorporates feedback into annual plan revisions and shares with workgroup

6.1.3 | Governor's Task Force on Broadband

OBD looks forward to providing the Governor's Task Force on Broadband regular updates, information, and findings relevant to the implementation of the digital opportunity plan. OBD's participation with the Task Force on Broadband is entirely at the Chair's discretion. As such, OBD cannot accurately estimate the level or timing of its involvement.

6.2 | State, Tribal, and Local Coordination

6.2.1 | State Plans, Goals, and Outcomes

The State Digital Equity Planning Grant NOFO identifies five areas where states must address how their digital opportunity plans align. This subsection provides a non-exhaustive list of publicly discoverable plans, recommendations, and reports authored by a variety of state agencies, task forces, councils, and commissions. State executive branch entities are welcome to have their respective plan, report, or other official guiding document added or removed from this list by contacting OBD.

The five areas of alignment identified in the NOFO include the following:

(1) Economic and workforce development: in the table below, this area is labeled "economy"
(2) Education
(3) Health
(4) Civic and social engagement: labeled "civic"
(5) Delivery of other essential services: During OBD's review of state planning documents, two recurring planning areas absent from the NOFO list are climate action and housing. Both of these areas have been incorporated in the table below.
    a. Climate action ("climate") refers to the steps the state has taken and continues to take to address climate change.
    b. Housing refers to all Minnesota residents having a safe, affordable place to live.

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
One Minnesota Plan: Building Blocks	2023–27	Civic Climate Economy Education Health	**Summary:** Enterprise-wide document authored by the Governor's Office. Mission is to "improve the lives of all Minnesotans by working collaboratively to implement policies that achieve results."

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
		Housing	**Interaction and Impact:** The DO Plan will help state collaboratively implement inter-agency policies ensuring a more digitally equitable future for all Minnesotans **Covered Populations:** All **Aligned Activities:** 3.1.1.A.b
Age-Friendly MN Multi-Sector Blueprint	2023–33	Economy Health	**Summary:** Plan is in development. **Interaction and Impact:** The DO Plan will help state reduce systemic challenges for modern elders trying to access and meaningfully use technology. **Covered Populations:** Modern elders **Aligned Activities:** TBD
Climate Action Framework: Summary of Action Steps	2021	Climate	**Summary:** Includes an action step to, "Support broadband connectivity, particularly for rural and underserved areas, to provide more options to access services." **Interaction and Impact:** The DO Plan will help state improve broadband access and subscriptions for people living in Greater Minnesota **Covered Populations:** All especially People Living in Greater Minnesota **Aligned Activities:** 3.1.1.B.a; 3.1.1.B.b; 3.2.1.A.d; 3.2.1.B.b; 3.2.1.B.a; 3.2.1.B.c; 3.3.1.A.a; 3.3.1.A.c; 3.3.1.B.a
Council on Asian Pacific Minnesotans: Biennial Legislative Priorities	2023–24	Civic Economy Education Health	**Summary:** Council's five priority areas are mental health, higher education, equity, the achievement gap, and healthcare access. **Interaction and Impact:** The DO Plan will help state improve digital inclusion and achievement

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
			of quality of life goals among Asian Pacific Minnesotans **Covered Populations:** People from Minoritized Racial/Ethnic Groups **Aligned Activities:** 3.3.1.A.a; 3.3.1.B.a; 3.3.1.C.b; 3.3.1.C.d
Council on Economic Expansion: Roadmap for Equitable Economic Expansion	2022	Civic Economy	**Summary:** Includes actionable strategy to, "Achieve equitable access to affordable broadband internet." **Interaction and Impact:** The DO Plan will leverage technology access to help state achieve equitable access to affordable broadband. **Covered Populations:** All **Aligned Activities:** 3.3.1.A.a; 3.3.1.A.c; 3.3.1.B.a; 3.2.1.A.b; 3.2.1.B.a
Council on Latino Affairs: 2023 Legislative Priorities	2023	Civic Economy Education Health	**Summary:** Council's four priority areas are lifelong learning, prosperity and financial stability, health and wellbeing, and immigration and belonging. **Interaction and Impact:** The DO Plan will help state improve digital inclusion and achievement of quality of life goals among Latino Minnesotans **Covered Populations:** People from Minoritized Racial/Ethnic Groups **Aligned Activities:** 3.3.1.A.a; 3.3.1.B.a; 3.3.1.C.b; 3.3.1.C.d
Department of Corrections: Strategic Plan	2020–22	Civic Economy Education Health	**Summary:** Includes goals to, "increase the number of people released from prison who within 30 days obtain housing, meaningful employment, enroll in educational programming, or actively engage in community-based treatment."

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
		Housing Social	**Interaction and Impact:** The DO Plan will help DOC attain meaningful employment and engage in community-based activities, education, and health supports. **Covered Populations:** People who are Incarcerated or Re-Entering Society **Aligned Activities:** 3.1.1.B.a; 3.1.1.B.b; 3.2.1.A.d; 3.2.1.B.b; 3.3.1.A.a; 3.3.1.C.a
Department of Education: Due North Education Plan	Not specified	Education	**Summary:** Includes an objective to, "expand career and technical education pathways." **Interaction and Impact:** The DO Plan will help students access affordable internet service at home. **Covered Populations:** All **Aligned Activities:** 3.1.1.A.b; 3.1.1.C.a; 3.2.1.A.d; 3.2.1.B.b; 3.3.1.C.c
Department of Education: Library Services and Technology Act 5-Year Plan	2023–27	Civic	**Summary:** Identifies "prioritization of digital equity, broadband access, and literacy efforts" as a public library need. **Interaction and Impact:** The DO Plan will help public libraries implement digital inclusion activities on a local level. **Covered Populations:** All **Aligned Activities:** 3.1.1.B.a; 3.1.1.B.b; 3.2.1.A.b
Department of Employment and Economic Development: Objectives and Key Results	2023–24	Economy	OBD is part of DEED.

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
Department of Human Services: Agency-Wide Strategic Plan	2020–22	Health Housing Social	**Summary:** Includes a relevant strategy to, "Explore and evaluate options for providing post-discharge telehealth psychiatric and primary care services for direct care clients who are having difficulties finding private provider care." **Interaction and Impact:** The DO Plan will help individuals access telehealth services. **Covered Populations:** All **Aligned Activities:** 3.1.1.B.a; 3.1.1.B.b; 3.3.1.C.d
Department of Human Services: Parent Aware Equity Report	2021	Economy Education	**Summary:** Identifies digital opportunity as barrier to early learning providers obtaining Parent Aware ratings. Names high-level solution: "Support all providers to access high-speed, affordable broadband; work to resolve and support provider technology needs and skills so they can have an optimal Parent Aware experience." **Interaction and Impact:** The DO Plan will help childcare providers access affordable internet service at home to expand the impact of their businesses. **Covered Populations:** All **Aligned Activities:** 3.1.1.C.b; 3.3.1.C.c
Department of Veterans Affairs: Legislation Session Summary	2023	Economy Health	**Summary:** Identifies new changes and initiatives relevant to passage of GI Bill expansion. **Interaction and Impact:** The DO Plan will support veterans homes and other community-based organizations in expanding digital inclusion services to veterans, facilitating educational attainment through the GI Bill. **Covered Populations:** Veterans

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
			Aligned Activities: 3.1.1.B.a; 3.1.1.B.b; 3.3.1.A.a; 3.3.1.A.c; 3.3.1.B.a; 3.3.1.C.c
Great Start for All Minnesota Children Task Force: Final Report	2023	Economy Education	**Summary:** Includes a relevant recommendation that, "The state should consider programs focused on developing business acumen, including technology skills, for small business owners from historically disenfranchised communities and in areas with childcare deserts." **Interaction and Impact:** The DO Plan will help small business owners through targeted grants and expand childcare services. **Covered Populations:** All **Aligned Activities:** 3.1.1.A.b; 3.1.1.C.a; 3.2.1.A.d; 3.2.1.B.b; 3.3.1.C.c
MN Housing: Strategic Plan, *see* "Working Documents for 2024–2027 Strategic Plan"	2024–27	Housing	**Summary:** Identifies "support people needing services" as a strategic objective and names people with disabilities and modern elders as two key groups to support. **Interaction and Impact:** The DO Plan will help individuals improve technology skills needed to search and apply for housing services. **Covered Populations:** All, especially People with Disabilities and Modern Elders **Aligned Activities:** 3.1.1.A.b; 3.3.1.A.b
MN IT Services: Minnesota's Cybersecurity Plan	2023	Civic	**Summary:** States one intention is to, "Grow the Minnesota cybersecurity community, collaborate, and share technology and information about industry changes and emerging threats."

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
			Interaction and Impact: The DO Plan will help improve individuals' understanding of cybersecurity. **Covered Populations:** All **Aligned Activities:** 3.1.1.A.b; 3.2.1.C.a; 3.2.1.C.b
MN IT Services: Technology Advisory Council Report	2023	Civic	**Summary:** Addresses accessibility of state agency online tools. Recommends all agencies "understand and meet the accessibility needs of all customers and staff when planning, developing, purchasing, and maintaining digital products and services." **Interaction and Impact:** The DO Plan will help local governments expand accessibility of web-based services. **Covered Populations:** All, especially People with Disabilities and Modern Elders **Aligned Activities: 3.1.1.A.b; 3.2.1.C.a; 3.2.1.C.b**
Office of Higher Education: Educating for the Future	2015–25	Education	**Summary:** Includes a goal that, "70% of Minnesota adults (ages 25–44) will have attained a postsecondary certificate or degree by 2025." **Interaction and Impact:** The DO Plan will help individuals access the technology needed to enroll in and complete postsecondary programs. **Covered Populations:** All **Aligned Activities:** 3.3.1.A.a; 3.3.1.A.c; 3.3.1.B.a
Olmstead Implementation Office: MN Olmstead Plan	2022–24	Housing	**Summary:** Includes assistive technology activities and vision statement that, "People of all ages and all disability types will have assistive and other technologies necessary to support living, learning, working and enjoying life in the most integrated settings."

Plan Title	Year	Area	Alignment with Digital Opportunity Plan
			Interaction and Impact: The DO Plan will help individuals access assistive technologies. **Covered Populations:** People with Disabilities and Modern Elders **Aligned Activities:** 3.1.1.B.a; 3.1.1.B.b; 3.2.1.C.a; 3.2.1.C.b

6.2.2 | Tribal Broadband Development and Digital Opportunity Planning

The State of Minnesota has clear protocols for how its agencies interact with the 11 federally recognized tribes sharing this geography. This is outlined in Minn. Stat. § 10.65. In conjunction with OBD's federal BEAD planning process, DEED is participating in tribal consultation around broadband and digital inclusion as tribes see fit. Throughout the duration of the State Digital Equity Capacity Grant period, OBD will continue to work with DEED's tribal liaison to ensure tribal digital opportunity needs and goals are addressed.

Parallel to the State Digital Equity Planning Grant program, NTIA is administering the Tribal Digital Equity Planning Grant program, also funded through the Infrastructure Investment and Jobs Act. By July 12, 2022, tribes were required to submit letters of intent to apply for the Tribal Digital Equity Planning Grant program. The following tribes submitted letters of intent:[229]

(1) Bois Forte Band of Chippewa
(2) Fond du Lac Band of Lake Superior Chippewa
(3) Leech Lake Band of Ojibwe
(4) Lower Sioux Indian Community
(5) Mille Lacs Band of Ojibwe
(6) Prairie Island Indian Community
(7) Red Lake Nation
(8) White Earth Nation

As of November 15, 2023, a Notice of Funding Opportunity allowing tribes to apply for the Tribal Digital Equity Planning Grant program has not yet been released, delaying the creation of any federally-funded tribal digital opportunity plans.

Tribes electing to not submit letters of intent are:

[229] NTIA, "Letters of Intent Submitted for the Digital Equity Planning Program by Tribal Organization and State."

(1) Grand Portage Band of Lake Superior Chippewa
(2) Shakopee Mdewakanton Sioux Community
(3) Upper Sioux Community

Also included in the Infrastructure Investment and Jobs Act, the Tribal Broadband Connectivity Program provides $3 billion specifically for tribal broadband infrastructure and use projects. Funding is being administered directly by NTIA across two competitive grant rounds. Tribes receiving funding in Round One include the following:[230]

(1) Bois Forte Band of Chippewa ($19,800,704): Install fiber directly connecting 2,097 unserved Anishinaabe households, plus more than 60 businesses and community anchor institutions with up to 1 Gbps fiber to the home qualifying broadband service.
(2) Leech Lake Band of Ojibwe ($18,797,452): Install fiber and fixed wireless to directly connect 4,399 unserved Anishinaabe households with qualifying broadband service (fiber to the home service up to 100/40 Gbps and wireless service up to 80/20 Mbps).
(3) Lower Sioux Indian Community ($1,995,787): Install fiber directly connecting 47 unserved Dakota households, 3 businesses, and 13 community anchor institutions with fiber to home qualifying broadband service at speeds up to 10 Gbps symmetrical.
(4) Mille Lacs Band of Ojibwe ($11,407,585): Install fiber to directly connect 356 unserved Anishinaabe households, 7 unserved Anishinaabe businesses, and 10 unserved community anchor institutions with service ranging from 250/250 Mbps to 1000/1000 Mbps.
(5) White Earth Nation ($500,000): Equip 6 community centers/business incubators with computer stations and online training courses for the approximately 3,343 White Earth Tribal Members.

6.2.3 | Local Digital Opportunity Planning

OBD conducted a non-exhaustive inventory of township, city, and county plans that address any one of five digital opportunity activities.[231] The five activities are as follows:

(1) Broadband availability: Does the plan assess for and deliver a strategy to expand broadband availability? This aligns with BEAD.
(2) Broadband affordability: Does the plan assess for and deliver a strategy to provide lowered broadband costs to low-income households?[232] This aligns with Objective 1: Internet Access.
(3) Device availability: Does the plan assess for and deliver a strategy to distribute internet-enabled devices to low-income households? This aligns with Objective 2: Devices.

[230] NTIA, "Tribal Broadband Connectivity Program: Round One Award Recipients."
[231] See Appendix E.
[232] While many plans identify affordability as a need, fewer present strategies to address this need in a practicable, systemic way.

(4) Digital skills: Does the plan assess for and deliver a strategy to improve residents' access to digital skills training? Does the plan assess for and deliver a strategy to improve residents' access to a trusted provider of technical support? This aligns with Objective 3: Digital Skills.
(5) Accessibility: Does the plan assess for and deliver a strategy to improve accessibility of its web-based resources? This aligns with Objective 4: Accessibility.

In reviewing the plans gathered for this inventory, OBD found none that include all five elements; specifically, none address accessibility of web-based resources. Most plans focus exclusively on broadband infrastructure. While some identify affordability as a need, few present strategies to address this need in a practical way, very few address device ownership, and very few address digital skills. This insight has led OBD to incorporate local digital opportunity planning into the activities proposed by this plan.

6.3 | Future Funding for Digital Opportunity

The State Digital Equity Planning Grant NOFO requires a description of how Minnesota will coordinate its State Digital Equity Capacity Grant funding with its Broadband Equity, Access, and Deployment (BEAD) funding and other federal, state, or private funding supporting digital opportunity work. At this time, OBD's future digital opportunity work is funded exclusively with Digital Equity Grant Program funds. As such, this section of the plan focuses on the alignment of the Digital Equity Planning and Capacity Grant funds with the BEAD funds. Because of Minnesota's expansive geography, it is not assumed that OBD will be able to allocate any BEAD funding to the fourth BEAD priority of "digital equity activities."

Both BEAD and the State Digital Equity Grant funding are being administered by OBD. OBD's Deputy Director oversees the office's infrastructure work, including BEAD; OBD's Digital Equity Program Lead was hired specifically to lead the development of the Digital Opportunity Plan and initiate its implementation. These two staff members, their respective teams, and the OBD Executive Director meet weekly as one cohesive team to share updates, align strategies, exchange information, and problem-solve. These meetings will continue throughout the planning and implementation of both programs. As BEAD funding is awarded, OBD's digital equity team will be able to promptly communicate relevant digital opportunity grants with cities, counties, and townships that will see buildouts.

OBD's infrastructure and digital opportunity teams have collaborated during numerous meetings with partners. For example, staff from both teams co-presented at a 15-day series of meetings hosted by the Minnesota Association of Townships; at the annual League of Minnesota Cities conference; at a meeting of the Minnesota State Bar Association's Communications Law Section; and at the Minnesota Cable Communications Association annual conference. During the digital opportunity plan public comment period, infrastructure staff accompanied digital equity staff at 15/17 of the in-person listening sessions.

7.0 | Conclusion

"Our imagination is our greatest limitation." [233]

While many components of this plan are required under the State Digital Equity Planning Grant Notice of Funding Opportunity, the content of this plan is entirely Minnesota's—the methodologies used to create it, the strategies it recommends, and its intended outcomes. Its submission to NTIA represents a significant milestone. For so long, digital opportunity work has happened on the fringes. This plan is a step toward centering digital opportunity in Minnesota.

During the course of preparing this plan, OBD and its DCC partners heard from thousands of Minnesotans about the role technology plays in helping them achieve their quality-of-life goals. Across these perspectives, access to technology consistently means access to education, access to healthcare, access to career advancement, access to housing, and access to basic government services. Access to technology means access to the world and to new ideas. Access to technology means stronger connections to one another.

It has never been OBD's goal to present a digital opportunity plan *for* Minnesota. Rather, from to onset, OBD has strived to ensure this plan *belongs to* Minnesota. Here we are: This is Minnesota's digital opportunity plan, and it has been OBD's immense privilege to be the public steward charged with piecing it together.

[233] Individual interview, Bemidji. Provided by Kairos Alive (Digital Connection Committee).