



CONNECT ILLINOIS

FIVE-YEAR ACTION PLAN

Broadband Equity, Access, and Deployment (BEAD)

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Illinois
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OFFICE OF BROADBAND
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UNIVERSITY OF ILLINOIS SYSTEM

DRAFT CONTENT. The Illinois Office of Broadband will synthesize key aspects of its *Five-Year Action Plan* and separate *State Digital Equity Plan* into an updated *Connect Illinois Broadband Strategic Plan*, which will articulate and guide the State's accessible, integrated, and comprehensive approach to eliminate the digital divide.

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1 EXECUTIVE SUMMARY

The digital divide in Illinois remains wide and deep. At least 2.9 million individuals in 1.3 million households (roughly 28 percent) do not have a subscription to high-speed internet, potentially driven by gaps in infrastructure availability, affordability of subscriptions or devices, and/or limited digital skills.¹ These residents are increasingly isolated in a world that relies more and more on technology for employment, education, connection with family and friends, and even health care.

Illinois is committed to changing this picture – achieving universal broadband access statewide and making significant progress toward digital equity by 2030. As an initial step in a sequenced process, the *Connect Illinois Five-Year Action Plan* will help guide these efforts. The plan is anchored in comprehensive research, asset mapping and collaborative engagement with a range of stakeholders from across Illinois – including an ambitious statewide listening tour and survey. The plan builds on insights from the *Connect Illinois Broadband Grant Program*, local planning and capacity building that has engaged over 50 local governments and related stakeholders, and the work of the Illinois Broadband Advisory Council. The research and asset mapping effort included an assessment of publicly available data, as well as a review of the local planning efforts happening across Illinois communities, Illinois state agencies, as well as in other states.

The statewide listening tour, led by the Illinois Broadband Lab (IBL) collaboration between the Illinois Office of Broadband (IOB) and University of Illinois System – included 54 sessions across 40 cities, including all 10 economic development regions. In those sessions IBL heard from residents, local government leaders, broadband and digital equity practitioners. All this work proceeded in partnership with community organizations, higher education institutions, and state agencies.

Illinois developed its *Five-Year Action Plan* for broadband access and deployment in parallel with its *State Digital Equity Plan* for broadband adoption and application. These plans will contribute to an updated *Connect Illinois Broadband Strategic Plan*, which will articulate and guide the State’s accessible, integrated, and comprehensive approach to eliminate the digital divide.

¹ U.S. Census Bureau, 2021 American Community Survey (ACS) 5-year data

Our Vision and Goals

Closing the digital divide in Illinois will require vision and resources. Illinois has a threefold vision for broadband deployment and digital equity:

Provide universal **access** to high-speed broadband that is affordable, reliable, and fully scalable. We have set the specific goals for 2030 of at least 100/20 Mbps for all Illinois residences and businesses and at least one Gigabit symmetrical broadband service for all community anchor institutions (CAIs).

Increase **adoption** by achieving universal digital literacy, including basic awareness of online privacy and cybersecurity; providing universal access to affordable devices, subscriptions, and tech support; ensuring that all students, schools, and school districts in Illinois have adequate access to reliable internet and internet-capable devices; and increasing the use of broadband services to facilitate aging in place.

Empower **application** of the internet by Illinoisans everywhere, including their full participation in an increasingly digital economy and society. We will pay particular attention to agriculture, manufacturing, transportation, and health care and will expand opportunities for inclusive workforce development empowered by broadband.

Solid Foundation for Achieving Our Vision

Three strong foundational resources make us confident that we can realize our vision for broadband deployment and digital equity in Illinois.

The Illinois Office of Broadband. Opened in 2019, the IOB launched the *Connect Illinois Broadband Grant Program* in 2020, backed by a \$420 million State investment and guided by a *Broadband Strategic Plan* calling for universal broadband access. Since then, the IOB has supported initiatives to deploy high-speed broadband infrastructure and expand access across the state and programs that combine grant and outreach activities to build digital equity. The IOB has also developed engagement methods and resources to connect with the public and key stakeholders on broadband deployment and digital equity topics.

Collaborations. The IOB has forged collaborations with external organizations to deploy broadband infrastructure and support digital equity programming across Illinois—including with two research institutions, four advocacy organizations, nineteen state agencies, seventeen higher education institutions, seven local or municipal governments, and six non-profits during the drafting of this plan. State agencies—such as the Illinois Department of Innovation and Technology and the Department of Public Health—were engaged in the State Government Broadband Working Group, launched in February 2023, to provide feedback and inputs on key topics such as obstacles and barriers to access, programs or assets that can be leveraged to support deployment and digital equity, and workforce development opportunities. Collaborations with academic institutions—such as the University of Illinois and Illinois State University—established through IBL’s Broadband READY program, were engaged to support the IOB on stakeholder engagement, along with local and municipal governments like the City of Chicago’s Digital Equity Coalition.

Assets. Illinois has built a robust inventory of the assets needed to close the digital divide. This inventory includes both hard assets like the Illinois Century Network, towers, buildings, and utility poles, and soft assets like programs, activities, strategies, skills, and technical skills. These assets equip us to improve broadband deployment, access, adoption, and affordability, as well as digital equity, across the state.

In addition, Illinois benefits from significant private sector investment in broadband deployment and related infrastructure, including but not limited to last mile networks, middle mile and backhaul capacity, and vertical assets such as towers, poles, and electrical grid components.

Obstacles to Achieving Our Vision

Despite having a strong foundation for success, Illinois faces significant obstacles to closing the digital divide.

Obstacles to Broadband Deployment

Research has established potential obstacles to deploying broadband across the state by 2030. A subset of potential obstacles is highlighted below.

Topography. Topography creates challenges to broadband deployment as the price of installing broadband infrastructure often depends on terrain. For example, farmland occupies 75 percent of Illinois, and the farms are often large, flat, and very spread out. This may make building underground difficult and complicate the cost of universal service. Satellite has been the online infrastructure deployed in hilly terrain, but service becomes unreliable when it rains. Hills and trees also make line-of-sight internet difficult.

Population density. Population density varies widely in Illinois. This may create obstacles to providing universal access due to the high cost of reaching every individual in the state, especially those in rural areas.

Middle-mile availability gaps. Current projects are working to close the gaps, but significant gaps in the availability of the fiber-optic infrastructure for internet connectivity remain.² The middle-mile network must expand to support the last-mile and retail service providers.

Labor shortages. The State expects broadband deployment to experience labor shortages, especially as the effort increasingly requires qualified workers, including information and communications technology (ICT) workers.

Supply chain issues and materials availability. Inflation and supply chain issues have stressed the telecom industry in recent years and are increasingly delaying the delivery of equipment to the existing broadband network. The State anticipates more challenges as multiple states deploy unprecedented levels of federal funding.

Multi-dwelling-unit (MDU) availability gaps. MDUs vary widely so the cost of deploying broadband services to MDU tenants can follow suit, depending on the specific issues of a building, such as ownership of existing communications infrastructure by an entity other than the property owner like a cable or telephone company. Access issues may make fiber providers reluctant to use wiring or infrastructure owned by another entity.

² FCC Broadband Maps, accessed March 21, 2023; [If we build it, would they come](#), Benton Institute, December 2020; ICN Middle Mile Expansion (Draft document), October 2021

Competitive landscape and industry participation. Based upon listening tour feedback about provider competition across the state, this topic was explored further by using the FCC Broadband Map, accessed June 8, 2023, to count the number of providers offering 100/20+ Mbps service across all broadband serviceable locations (BSLs) identified by federal mapping efforts. Of the 4.2 million BSLs in Illinois, 9 percent have no providers, 34 percent have only one provider, 33% have two providers, and 24 percent have three or more providers. While the data show that half of Illinois residents can choose from two or more providers when evaluating 100/20 Mbps internet services, 43 percent have access to no more than one provider offering 100/20+ Mbps service.

Obstacles to Digital Equity

Our research finds five potential obstacles to establishing digital equity across the state by 2030.

Subscription affordability. Digital equity requires affordable broadband. Today, most affordable subscription costs in Illinois range from \$25 to \$50, depending on the plan. Our current strategy for expanding access to affordable plans relies heavily on the federal Affordable Connectivity Program (ACP), which may run out of money by mid-2024 without additional funding.³

Affordable Connectivity Program knowledge and enrollment support. Illinois currently ranks #11 among states for ACP enrollment overall, and #29 on a per-capita basis. Few participants in our listening sessions had heard of the program. The ACP also poses enrollment hurdles for many residents, such as those without social security numbers or the ability to upload documents.

Device access and affordability. More than one million households in Illinois do not have a desktop or laptop computer.⁴ Device access and affordability are major barriers to digital equity and inclusion in many regions of the state.

Digital literacy. More than three million Illinoisans, age 18+, may have low digital literacy skills.⁵ Participants in our listening sessions recognized the need to boost those skills, but program

³ Institute for Local Self Reliance [ACP Dashboard](#)

⁴ U.S. Census, [ACS 2021 5-Year Estimates](#)

⁵ [A Description of U.S. Adults Who Are Not Digitally Literate](#), U.S. Department of Education, May 2018; [The New Landscape of Digital Literacy](#), National Skills Coalition, May 2020; [Digital Readiness Gaps](#), Pew Research Center, September 2016

capacity and accessibility were concerns highlighted by practitioners; and concerns about data collection and internet privacy and tracking remain obstacles for many residents.

Limited local digital inclusion programs. While the IOB has engaged in several initiatives to ensure universal broadband in Illinois, the cost of broadband and the inability of some residents to cover the price of broadband connectivity limit adoption. While the State has made digital access and literacy high priorities and has dedicated funding before the passage of federal programs, the funding available is insufficient to address all digital needs. Transportation, lack of awareness about a service or benefit, lack of direct service support, low reading/comprehension skills, and inability to use digital tools remain barriers to low-income households accessing available services.

Competitive landscape and industry participation. Our research suggests that internet prices are higher in certain areas due to a lack of provider competition. In six counties in Southern Illinois and five in Southeast Illinois, more than 60% of BSLs have only one provider offering service. In the Southern region, regional providers offer either no alternative option or less affordable options compared to providers with a larger statewide presence. The four top providers in Illinois account for 70% of provider offerings in the state.

The State is aware of these obstacles to broadband deployment and digital equity and is planning and launching efforts to mitigate all of them.

Strategic Approach to Achieving Our Vision

We have defined a strategic approach to realizing our vision for broadband deployment and digital inclusion that builds on our strong foundation and addresses the recognized obstacles to success.

Broadband deployment. Working through the IOB, Illinois will prioritize deploying broadband service to all unserved and underserved locations. The IOB will then focus on ensuring that community anchor institutions receive gigabit-symmetrical service. To support meeting these objectives, the State will tap into existing legislative and regulatory supports, expand workforce development programming to address expected labor shortages, and enhance databases to accelerate broadband infrastructure deployment.

Broadband access. Pending the completion of broadband deployment across Illinois, the State will expand broadband access for households that may not subscribe to internet service or have access to internet subscriptions by improving cellular connectivity and increasing the number of public wi-fi networks and access points.

Broadband adoption and affordability. The State will work with sectors that could benefit from increased broadband availability and digital literacy, such as health care, small businesses, and agriculture. The State will explore three potential solutions to the issue of broadband affordability in Illinois — increasing ACP uptake and enrollment, providing additional assistance and programs, and implementing alternative approaches.

Digital equity. The IOB will increase workforce development programming, resources for digital inclusion, and community partnerships to build trusted relationships with Illinois’s neediest communities, while providing resources to promote full participation in the digital economy.

Throughout these efforts, we will continue to engage stakeholders statewide. In addition to seeking to understand needs and barriers more deeply, we will also understand how new and ongoing programming is working, assess progress and determine ways to continuously improve.

In Conclusion

The *Connect Illinois Five-Year Action Plan* sets the direction for the State to achieve universal broadband access, closing the digital divide and establishing Illinois as a leader in technology and innovation. Broadband deployment and digital equity are critical to improving the lives and livelihoods of families, entrepreneurs, farmers, and other Illinoisans who rely on high-speed broadband for everything from education to health care. Illinois plans to remain at the forefront of deploying equity-driven approaches to broadband deployment, adoption, affordability, and access that began with one of the largest state broadband matching grant programs ever, the *Connect Illinois Broadband Grant Program*, and Illinois remains committed to continue deploying the *BEAD* and *Digital Equity* funds in a smart, targeted, and effective manner.



2 OVERVIEW OF THE FIVE-YEAR ACTION PLAN

The Connect Illinois Five-Year Action Plan sets the direction for the state to achieve universal broadband access and close the digital divide for Illinois. Illinois plans to become a leader in technology and innovation. Broadband deployment and digital equity are critical components of staying ahead of the curve and improving the lives of families, entrepreneurs, farmers, and other Illinoisans who rely on high-speed broadband for everything from healthcare to education.⁶ Illinois plans to remain at the forefront of deploying equity-driven approaches to broadband deployment, adoption, affordability, and access that began with one of the largest state broadband matching grant programs ever, the Connect Illinois Broadband Grant Program, and to continue deploying over \$1 billion in Broadband, Equity, Access, and Deployment (BEAD) Program funds.^{7,8}

⁶ [Broadband Expansion](#), Department of Commerce and Economic Opportunity (DCEO)

⁷ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023; [BEAD Program: A Framework to Allocate State Funding for Broadband Availability State Broadband Report: Illinois](#), February 2023

⁸ [Connect Illinois](#), DCEO; [Illinois Broadband Advisory Council \(BAC\) Annual Legislative Report](#), January 2023

The IL BEAD Plan lays the groundwork for the future initial and final proposals that continue to be developed for the BEAD program. More than that, it sets a forward-looking vision for an Illinois with state-driven broadband ubiquity—and lasting broadband equity.⁹

2.1 Vision

Illinois’s vision for broadband deployment and digital equity is as follows:

Connect Illinois seeks to (A) ensure universal access to high-speed broadband that is affordable, reliable, and fully scalable for residences, businesses, and community anchor institutions across Illinois. At the same time, Connect Illinois plans to promote digital literacy, adoption, and inclusion while leveraging investment in new broadband infrastructure to spur advances in economic development, as well as innovation in healthcare delivery, education, and agriculture.

At its core, the push toward broadband ubiquity is one of broadband equity: targeting resources to close gaps and expand opportunity for unserved and underserved communities throughout Illinois. The Connect Illinois digital equity programming and collaborations are a comprehensive approach designed to ensure the state (B) leverages new and existing resources for adoption through targeted digital inclusion strategies and sustainable broadband equity outcomes to help communities identify and address existing broadband equity gaps, and to (C) empower application of the internet by Illinoisans everywhere, including their full participation in an increasingly digital economy and society.¹⁰

2.2 Goals and Objectives

The goals and objectives are aligned to the three core vision statements:

- a. Ensure universal **access** to high-speed broadband that is affordable, reliable, and fully scalable;

⁹ [Connect Illinois](#), DCEO

¹⁰ [Connect Illinois Broadband Strategic Plan](#), February 2020; [Connect Illinois Digital Equity and Inclusion](#), October 2021; [Illinois BAC Annual Legislative Report](#), January 2023

- b. Leverage new and existing resources for **adoption** through targeted digital inclusion strategies and sustainable broadband equity outcomes; and
- c. Empower **application** of the internet by Illinoisans everywhere, including their full participation in an increasingly digital economy and society.

This section aligns to the Strategy and Objectives section (2.3) of the Illinois State Digital Equity Plan, hereinafter known as the “IL SDEP.” Table 1 below details the objectives the state hopes to achieve by implementing either the IL BEAD Plan or the IL SDEP. The IL BEAD Plan is expected to focus on broadband deployment and infrastructure, while the IL SDEP is expected to focus on activities related to digital equity and on the implementation of digital equity and inclusion programming across Illinois.

Table 1: Illinois’s Goals and Objectives for Broadband Deployment and Digital Equity

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
A1. By 2030, ensure universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses	A1a. All Illinoisans have access to at least 100/20 Mbps reliable high-speed internet by 2030.	# unserved IL BSLs	~235K BSLs (6%) ¹²	0 (0%)	Broadband Access
		# underserved IL BSLs	~132K BSLs (3%) ¹³	0 (0%)	Broadband Access
	A1b. All Illinoisans have access to at least 100/20 Mbps fully scalable high-speed internet by 2030.	% IL BSLs with access to fiber	35% ¹⁴	95%	Broadband Deployment
		A1c. All Illinoisans have access to at least 100/20 Mbps affordable high-speed internet by 2030. ¹⁵	% IL BSLs with access to at least one affordable internet plan (less than \$50/month) ¹⁶	77% ¹⁷	100%
	A1d. All Illinoisans have access to at least 100/100 Mbps fully scalable high-speed internet by 2035.	% IL BSLs with access to 100/100 Mbps	42% ¹⁸	80%	Broadband Deployment
A2. By 2030, ensure that every CAI has access to at least 1 Gigabit symmetrical broadband service ¹⁹	A2a. All Illinois schools, libraries, and public health-related entities have at least 1 Gbps symmetrical broadband service by 2030.	% schools, libraries, and public health-related entities with access to 1 Gbps symmetrical+ internet	To be detailed in Initial proposal	100%	Broadband Access
		% other CAIs with access to 1 Gbps symmetrical+ internet	To be detailed in the Initial proposal	100%	Broadband Access

¹¹ [Five-Year Action Plan Guidance](#)

¹² Combines the underserved and served BSLs in Illinois; FCC Broadband Maps accessed June 8, 2023

¹³ FCC Broadband Maps accessed June 8, 2023

¹⁴ FCC Broadband Maps accessed June 8, 2023

¹⁵ To achieve this objective, two things must be true: (1) a provider with an affordable option is present, and (2) consumers must be able to access the service.

¹⁶ Based on the definition in the [BAC Affordability Study](#) as either \$10/month or \$25/month

¹⁷ Provider and speed distribution based on FCC Broadband Maps, Nov 2022. Internet price based on secondary research

¹⁸ Combines the underserved and served BSLs in Illinois; FCC Broadband Maps accessed 2023

¹⁹ Based on BEAD NOFO, CAI (“community anchor institution”) means an entity such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals (including CDFIs).

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
	A2b. Expanded availability of public Wi-Fi throughout the state	# counties that have access to five public Wi-Fi hotspots	31 ²⁰	102	Broadband Access
B1. Achieve universal digital literacy, including basic awareness of online privacy and cybersecurity, focusing on covered populations	B1a. Improved adoption rates both overall and for each covered population	% difference in broadband adoption between covered and non-covered populations	26pp gap between those with incomes <150% FPL and rest of the population ²¹	0%	Broadband Adoption, Digital Equity
	B1b. Increased # of Illinoisans using internet-ready devices	% Illinoisans using computer, laptop, or tablet device	74% for computer/laptop/computer ²²	90%	Broadband Adoption, Digital Equity
	B1c. All Illinoisans possess the digital skills required to participate in the digital economy.	% digital literacy rate, overall and for covered populations	To be detailed in the state digital equity plan	90%	Broadband Adoption, Digital Equity
	B1d. Increased number of digital navigator programs	# digital navigator programs offered across the state	To be detailed in the state digital equity plan	102	Broadband Adoption, Digital Equity
	B1e. Increased local government and communities engaged on digital equity topics	# counties with participants in statewide broadband-related programming	38 ²³	102	Broadband Adoption, Digital Equity
	B1f. Decreased broadband hesitancy due to privacy/cybersecurity concerns	% residents who are very or somewhat often worried about the privacy or security of their personal data	To be detailed in the state digital equity plan ²⁴	10%	Broadband Adoption, Digital Equity

²⁰ Data from the [Drive Up Wi-Fi Hotspots](#) map maintained by the IOB and IBL

²¹ ACS 5-Year Estimates Public Use Microdata Sample 2021; additional details in Section 3.4.5.1

²² Share of Illinoisans over the age of three who responded that they use a desktop computer, laptop, or tablet on the [NTIA Internet Use Survey 2021](#)

²³ Estimated based on counties with a participating organization in Round 1 or Round 2 of the Illinois Connected Communities or Accelerate Illinois and Broadband Breakthrough

²⁴ Based on IBL Stakeholder Survey responses to the question, “How often, if at all, have you ever experienced any of the following?”

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
B2. Ensure that all Illinoisans, including members of covered populations, have access to affordable subscriptions, devices, and tech support	B2a. Increased % of Illinoisan households with access to internet-ready devices	% households with access to desktop or laptop computers	79% ²⁵	90%	Broadband Adoption, Digital Equity
	B2b. Decreased % of households without enough devices	% households that need more computing devices to allow each member to connect to the internet	To be detailed in the state digital equity plan ²⁶	10%	Broadband Adoption, Digital Equity
	B2c. Increased enrollment in ACP (Affordable Connectivity Program) among Illinois households	ACP uptake rate	24% ²⁷	50%	Broadband Affordability
B3. Ensure that every student, school, and district within Illinois participates in a sustainable one-to-one initiative	B3a. All IL students and teachers have access to reliable internet and internet-capable devices	% students with access to reliable internet and devices	To be detailed in the state digital equity plan	90%	Broadband Access, Digital Equity
		% teachers with access to reliable internet and devices	To be detailed in the state digital equity plan	90%	Broadband Access, Digital Equity
	B3b. Increased % of IL school districts offering 1 Mbps/student	% IL school districts at 1 Mbps/student	68% ²⁸	90%	Broadband Access, Digital Equity
	B3c. Increased % of IL school districts providing one device per student by 2030	% IL school districts with a one-to-one program	79.8% ²⁹	90%	Broadband Adoption, Digital Equity

²⁵ U.S. Census, [ACS 2021 5-Year Estimates](#)

²⁶ Data to be collected based on IBL Broadband and Digital Equity Survey question, “Does your household need more computing devices, such as a laptop or tablet computer, to allow each person to connect to the internet as needed?”

²⁷ Calculated with data from [Estimating participation in the Affordable Connectivity Program \(ACP\)](#), Dec 2022 and [USAC ACP Enrollment and Claims Tracker](#), December 2022

²⁸ [Connect K-12](#)

²⁹ [2020 Illinois School District Technology Survey](#), Learning Technology Center of Illinois in collaboration with the Illinois State Board of Education

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
	B3d. Increased % of IL school districts offering parent/caregiver training on technology and remote learning	% IL schools offering tech training to parents/caregivers	85% ³⁰	90%	Broadband Adoption, Digital Equity
B4. Increase the use of broadband services to facilitate aging in place	B4a. Increased % of Illinoisans using internet-ready devices	% Illinoisans over 65 using computer, laptop, or tablet computer	61% computer/tablet ³¹	80%	Broadband Adoption, Digital Equity
	B4b. Illinoisans over 65 possess the digital skills required to participate in society and the digital economy.	% digital literacy rate among the over-60 population	To be detailed in the state digital equity plan	5%	Broadband Adoption, Digital Equity
	B4c. Increased # Illinoisans over 60 participating in the Illinois Care Connections (ICC) program	# Illinoisans over 60 referred and approved for technology bundles	~1,901 ³²	To be detailed in the state digital equity plan	Broadband Adoption, Digital Equity
	B4d. Reduced social isolation and loneliness ³³	% “less lonely” rating among aging participants in the ICC Program	37% ³⁴	90%	Broadband Adoption, Digital Equity
C1. Accelerate the use of digital agriculture applications across rural Illinois	C1a. All farms in IL have access to high-speed internet.	% IL farms with access to internet	90% ³⁵	100%	Economic Growth and Job Creation, Digital Equity
	C1b. Increased implementation of precision agriculture use cases	# farms implementing precision agriculture applications	To be detailed in the state digital equity plan	to be detailed in the SDEP	Economic Growth and Job Creation

³⁰ [2020 Illinois School District Technology Survey](#), Learning Technology Center of Illinois in collaboration with the Illinois State Board of Education

³¹ Share of Illinoisans over the age of 65 who responded that they use a desktop computer, laptop computer, or a tablet on the [NTIA Internet Use Survey 2021](#)

³² [A Report on the Illinois CARE Connections Program](#), August 2021

³³ Adapted from the Illinois Department of Aging’s [State Plan on Aging FY2022-FY2024](#)

³⁴ [Reducing Social Isolation Through Technology: A Report on the Illinois CARE Connections Program, August 2021](#)

³⁵ Figures for farms with internet access, from USDA Farm Computer Usage and Ownership, 2021. Note: Speed data not available

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
C2. Expand broadband-powered opportunities for inclusive workforce development in communities throughout Illinois, with a focus on covered populations	C2a. Scaled education and training programs for skill development for the tech-related occupations	# participants trained for IT occupations	To be detailed in the state digital equity plan	to be detailed in the SDEP	Economic Growth and Job Creation
	C2c. Increased number of Illinoisans that can work from home	% Illinoisans over 15 years old working remotely via the Internet	32% ³⁶	to be detailed in the SDEP	Economic Growth and Job Creation
	C2c. Scaled education and training programs to develop skills for the broadband industry	# participants trained for broadband-related occupations	To be detailed in the state digital equity plan	to be detailed in the SDEP	Economic Growth and Job Creation
C3. Expand access to broadband-powered health-related services for covered populations to provide additional healthcare options to communities throughout Illinois. Services include but are not limited to telehealth, telemetry, and remote surgery.	C3a. Higher utilization of and satisfaction with remote healthcare among prioritized populations	% population that use telehealth	To be detailed in the state digital equity plan	90%	Economic Growth and Job Creation, Digital Equity
		% population satisfied with telehealth	To be detailed in the state digital equity plan	80%	Economic Growth and Job Creation, Digital Equity
C4. Expand usage of digital manufacturing applications for small businesses	B4a. Increased adoption of advanced manufacturing technologies	% manufacturers that currently implement advanced manufacturing technology	36.9% ³⁷	90%	Economic Growth and Job Creation

³⁶ [Working Remotely via the Internet](#), Age 15+ Persons Who Use the Internet, November 2021, NTIA Internet Use Survey

³⁷ [How Illinois Manufacturers Are Adopting Advanced Technologies: An Insight Report on Automation, Workforce, and Productivity](#), Illinois Manufacturing Excellence Center

Goal	Objective	KPI	Baseline	2030 target	Area ¹¹
and/or develop use cases for intelligent transportation and smart logistics in regions with the most need	B4b. Improved safety and efficiency of transportation infrastructure in Illinois	# intelligent transportation systems (ITS) projects across Illinois ³⁸	To be detailed in the state digital equity plan	To be detailed in the state digital equity plan	Economic Growth and Job Creation
	B4c. Increased adoption of intelligent transportation system (ITS) technology	# pilot programs or projects out of the Illinois Autonomous and Connected Track (I-ACT)	To be detailed in the state digital equity plan	To be detailed in the state digital equity plan	Economic Growth and Job Creation

³⁸ Intelligent transportation systems can be defined as “the integrated application of sensor, computer, electronics, and communications technologies and management strategies to provide traveler information to increase the safety and efficiency of the surface transportation system,” [Illinois Statewide ITS Strategic Plan](#), 2019



3 CURRENT STATE OF BROADBAND AND DIGITAL INCLUSION

3.1 Existing Programs

Created in September 2019, the Illinois Office of Broadband (IOB) is housed within the Illinois Department of Commerce and Economic Opportunity (DCEO). In 2020, the IOB released its vision and strategy focused on broadband deployment, backed by a \$420 million investment from the governor in the Connect Illinois Grant program.³⁹ The \$400 million Connect Illinois Broadband Grant Program launched in 2019 was one of the largest state matching-grant programs for broadband expansion at the time. The investment also included \$20 million to provide all Illinois school districts with access to free gigabit broadband by extending and improving the existing 2,100-mile Illinois Century Network, which is managed by the Illinois Department of Innovation and Technology (DoIT). The strategic capital investment sought to ensure that all Illinois households, businesses, and community anchor institutions had access to affordable, reliable, and high-performing broadband. The state's commitment to broadband investment has been

³⁹ [Gov. Pritzker Launches Connect Illinois, a \\$420 Million Statewide Broadband Expansion Under Rebuild Illinois](https://www.illinois.gov/gov/pritzker/launches-connect-illinois-a-420-million-statewide-broadband-expansion-under-rebuild-illinois), Illinois.gov

enhanced by significant federal funding that includes the American Rescue Plan Act (ARPA) Capital Projects Fund and the Infrastructure Investment and Jobs Act (IIJA) Broadband Equity, Access, and Deployment (BEAD) programs (Table 5).⁴⁰

In 2021, the Connect Illinois strategy expanded to include specific, tactical priorities to drive digital equity in Illinois, including the launch of the Illinois Broadband READY program, which focuses on community planning and capacity-building as well as digital literacy, adoption, and inclusion under the Connect Illinois umbrella (Table 2). To facilitate the growing scope of action required to execute these priorities, DCEO's IOB established a partnership with the University of Illinois System's Office of the Vice President for Economic Development & Innovation (OVPEDI) in 2022 to create the Illinois Broadband Lab (IBL). The IBL is a collaborative cross-sector effort to advance shared interests in broadband data and research, explore various aspects of the digital divide, and provide thoughtful analysis of Connect Illinois's capital investment and related programming.⁴¹ The partnership also includes the Illinois Innovation Network, the Illinois-based Benton Institute for Broadband & Society, DoIT, and the University of Illinois Extension.⁴² The IOB and IBL (Table 3) are further supported by strategic collaborations (Table 4) that have broadened the team's reach and scope of activities.⁴³ The IBL works alongside public, private, nonprofit, and philanthropic partners to raise awareness and resources to address the digital equity challenges facing communities throughout the state.

The current activities that are conducted by the IOB fall into five categories:

1. **Broadband access and deployment** programs—like the Connect Illinois Broadband Grant Program—that focus on deploying high-speed broadband infrastructure and expanding access throughout the state
2. **Digital equity and inclusion programs** that combine grant and outreach activities conducted by the state

⁴⁰ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

⁴¹ [About, Illinois Broadband Lab](#)

⁴² [About, Illinois Broadband Lab](#)

⁴³ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

3. **Collaborations** and partnerships that the state formed with external organizations to deploy broadband infrastructure, digital equity programming, and related resources across Illinois
4. **Methods of engagement** that the state has created to connect with the public and key stakeholders on broadband deployment and digital equity topics
5. **Resources** produced by the state (such as publications, reports, maps, and dashboards) and shared with the public to share information about the broadband landscape.

Table 2: Current Activities Conducted by the Broadband Program/Office

Activity category	Activity name	Description	Intended outcome(s)
1. Broadband access	Connect Illinois Broadband Grant Program	The Connect Illinois Broadband Grant Program is a \$400 million state matching-grant program for broadband expansion. The investment also includes \$20 million to enable the existing 2,100-mile Illinois Century Network to provide all school districts in the state with access to free gigabit broadband.	The Connect Illinois Broadband Grant Program expands broadband connectivity by providing a competitive matching grant and maintaining an applicant-inclusive, community-driven approach with a focus on affordability, open access, and shared use of resources.
2. Digital equity and inclusion program	Connect Illinois Digital Equity + Inclusion ⁴⁴	The Connect Illinois digital equity programming—which includes the Illinois Connected Communities Program, READY, Accelerate, Broadband Breakthrough, and Digital Navigators Collaboration efforts—is a comprehensive approach designed to help communities identify and address gaps in broadband equity and to leverage new and existing sources of funding for long-term broadband equity.	The Connect Illinois digital equity programming and collaborations empowers Illinoisans to participate fully in an increasingly digital economy and society, helps communities identify and address existing broadband equity gaps, and ensures that the state leverages new and existing resources for targeted digital inclusion strategies and sustainable broadband equity outcomes.
	Accelerate Illinois Broadband Infrastructure Planning Program ⁴⁵	The Accelerate Illinois Broadband Infrastructure Planning Program is a Benton Institute-managed and -supported planning and capacity-building program designed to help Illinois communities leverage historic broadband infrastructure funding for community-driven broadband expansion and public-private partnership. The Accelerate Illinois program offers Illinois local governments an intensive 14-week community engagement program.	Through Accelerate Illinois, communities hope to be equipped to prepare for funding available through Connect Illinois and federal broadband. Communities are positioned to build inclusive broadband teams, determine effective community roles, set visions, develop public-private partnerships, obtain financing, implement projects, and gather critical information about their local marketplace, technology options, and broadband provider partners.

⁴⁴ [Illinois Broadband Equity + Inclusion](#), Illinois Department of Commerce & Economic Opportunity; [Connect Illinois Digital Equity + Inclusion](#), October 2021

⁴⁵ [Accelerate Illinois](#), Illinois Department of Commerce & Economic Opportunity

Activity category	Activity name	Description	Intended outcome(s)
Broadband Breakthrough: Infrastructure Planning for Rural Farming Communities ⁴⁶		The Broadband Breakthrough is a rurally focused extension of the Benton Institute-run Accelerate Illinois program, which helps rural communities and farmers leverage federal broadband funding to address gaps in internet access and the broadband needs of rural and farming communities. The program is offered in collaboration with Illinois State University, the Illinois Soybean Association, and the Benton Institute for Broadband and Society and was launched in January 2023.	Through Broadband Breakthrough, five selected teams receive 16 weeks of support in applying to state and federal broadband programs. The programs provide rural communities with expanded access to broadband and broadband-enabled technologies that are expected to help boost economic development by: (1) connecting local businesses to global markets and patients to health care and educational opportunities, (2) boosting rates of business formation and (3) decreasing unemployment rates. The broadband access gained as a result of Broadband Breakthrough capacity-building is expected to help revitalize and preserve rural communities.
Broadband Regional Engagement for Adoption + Digital Equity (READY) Grant Program ⁴⁷		The IBL-led Broadband READY Grant Program was launched in 2021 to support qualified regional entities in each of the state’s 10 economic development regions to develop and deliver programs that address broadband inequities. Grantees convene inclusive and regionally representative Broadband READY Teams to balance investment in urgent broadband access expansion with the strategic imperative to identify gaps, integrate resources, and track progress over time. The programs delivered focused on providing eligible residents across the state with affordable computing	READY represents a holistic approach to digital equity that allows regions to identify and address existing broadband equity gaps and to leverage new resources for urgent broadband access—with an eye toward building sustained broadband equity and inclusion. To meet project deliverables, teams develop an inclusive team that reflects the diversity of the economic development region. In addition, teams conduct regional asset mapping to determine which strategic partnerships to leverage in their own program delivery. Teams host and co-host

⁴⁶ [Project looks to increase broadband access for Illinois farmers](#), AdVantage; [ISA launches ‘Broadband Breakthrough’](#), Agrinews
⁴⁷ [Broadband READY](#), DCEO

Activity category	Activity name	Description	Intended outcome(s)
		devices and broadband service, as well digital skills training.	events designed to reach the broadest swath of residents within the region. Finally, teams record their activities, progress, and next steps at the close of their grant period.
	Digital Navigator Collaboration and Grant Program ⁴⁸	Digital navigators can be volunteers or cross-trained staff who already work in social service agencies, libraries, health, and more and who offer remote and socially distant in-person guidance. Digital navigator capacity is being built within communities around Illinois. Navigators work to address the digital inclusion process—including home connectivity, devices, and digital skills. Digital navigators plan to be deployed throughout the state to support ACP enrollment throughout the ACP Outreach Grant programming.	By empowering digital navigators to work with community organizations and residents directly, the full digital inclusion process is addressed—ranging from at-home broadband connectivity to computer use to digital skills. Navigators expect to assess residents' needs and connect them to resources that match their households' lifestyles. They plan to support the ACP Outreach work of the IOB and IBL by increasing ACP enrollment and providing well-resourced technology support.
	Illinois Connected Communities (ICC) Grant Program ⁴⁹	The Illinois Connected Communities (ICC) Grant Program began in 2020 to facilitate community planning and capacity-building for advances in broadband access, adoption, and utilization. The Illinois Connected Communities program is designed to engage cohorts of up to 10 communities in best-practice curriculum to foster authentic community engagement and help communities prepare for a better broadband future. The initial cohort included four school districts, two community-based organizations, two local governments, two county-level organizations, and two economic	Through the Illinois Connected Communities program, cohort members complete a community-driven, broadband strategic action plan. Through the ICC program, communities tackle digital inequities through community-informed strategies. For example, in the City of Carrollton a detailed, crowd-sourced map of current internet service levels and providers was developed to guide conversations with potential providers. In the City of Waukegan, a community digital navigator reached 850 households with ACP information across 15

⁴⁸ [Illinois Broadband Connections](#), May 11, 2020; [Digital Equity + Inclusion Programming](#), DCEO

⁴⁹ [Illinois Connected Communities](#), DCEO; [Digital Equity + Inclusion Programming](#), DCEO; [Illinois Connect Communities Round 2 Concludes](#), Illinois Broadband Connections

Activity category	Activity name	Description	Intended outcome(s)
		development groups. The second cohort included one school district, two community-based organizations, three local governments, and two county-level organizations.	enrollment events, enrolled 70 households, and trained 37 volunteers. Latinx Digital Leaders Now (DLN) established a partnership providing bilingual technical training to over 70 high school student volunteers to support ACP enrollment.
3. Collaborations	Broadband Advisory Council (BAC) ⁵⁰	To inform and advise the Connect Illinois program, the Illinois BAC appointed by Governor JB Pritzker convened in August 2019. The 25-member council includes representation from various internet service providers, state agency officials and legislators, and certain broadband-related stakeholders. The deputy director for the IOB serves as the chair of the council. The BAC has five working groups to discuss key issues and identify various opportunities and barriers related to broadband infrastructure and utilization. Topics addressed in the working groups included access, economic development, education, infrastructure and technology, and telehealth.	Through the BAC, the State plans to explore all ways to expand broadband availability to end-user customers, explore ways to encourage state and municipal expansion of new broadband services, research ways to eliminate adoption barriers, identify service barriers to residents and small businesses, and serve as a broadband advocate for all state entities.
	Computer Equity Network ⁵¹	The Connect Illinois Computer Equity Network was launched by the IOB in 2020 to address a key contributing factor to the digital divide: the lack of at-home connected computing devices. The statewide network receives, refurbishes, and redistributes used computers for those in need. At the time of the program’s launch, over 1.1 million Illinois households lacked at-home computer access. The Computer	Through a first-of-its-kind statewide collaboration, the Computer Equity Network hosts collection and redistribution events in all 102 Illinois counties, giving refurbished computers, internet service and tech support to thousands of people in Illinois—with a goal of reaching at least 10,000 households annually. This initiative hopes to bridge the digital divide for equitable

⁵⁰ [Illinois Broadband Advisory Council](#), DCEO; [Working Groups](#), DCEO

⁵¹ [Connect Illinois Computer Equity Network](#), DCEO

Activity category	Activity name	Description	Intended outcome(s)
		Equity Network is a collaboration between the Illinois Office of Broadband, PCs for People, Cook County, and various community partners. The goal is to put upgraded devices into the homes of as many qualifying Illinois families as possible through regular community distribution events across the state.	advances in remote learning, working from home, telemedicine, and other requirements of everyday life.
	Illinois Broadband Lab (IBL) ⁵²	The office collaborated with the University of Illinois System to establish the Illinois Broadband Lab, a five-year commitment to broadband and digital equity capacity and programming. Currently, the lab leverages university leadership and administrative resources with Office of Broadband operational funding to support five full-time staff focused on mapping and data, digital equity and inclusion, and programing and communications, respectively.	The University of Illinois System plans to enable the administration of the Connect Illinois Broadband Grant Program and related federally funded programming, including the State Digital Equity Planning Grant and the Broadband Equity, Access, and Deployment (BEAD) programs.
	Illinois Connection Corps ⁵³	The Illinois Connection Corps is also known as the American Connection Corps. It is an AmeriCorps-style two-year program with six fellows placed across Illinois.	Through the Illinois Connection Corps, fellows work to increase broadband access and digital literacy while contributing to critical community development initiatives.
	Illini Science Policy Scholars ⁵⁴	The Office of Broadband serves as a host for graduate students designated as Illini Science Policy Scholars. The Illini Science Policy Program is a unique post-graduate opportunity for students graduating from the University of Illinois and who are interested in University of Illinois Extension’s critical issue areas—food, economy, environment, community,	Through the Illini Science Scholars Program, scholars consider work in the public sector through placement at the IOB and provide substantial professional contributions to the office, drawing from the latest scientific and disciplinary advances at University of Illinois’s flagship campus.

⁵² [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

⁵³ [American Connection Corps](#), Connecting the Heartland

⁵⁴ [Illini Science Policy Program](#), Illinois Extension; [Our Impact](#), Illini Science Policy Program, Illinois Extension

Activity category	Activity name	Description	Intended outcome(s)
		and health—and the policy decisions affecting those resources.	
4. Methods of engagement	ACP Outreach Calls	The ACP Outreach Call is a newly established IBL-led and supported statewide call (January 2023). The call is designed to support broadband and digital equity practitioners statewide in providing education, outreach, and engagement best practices for promoting and enrolling residents in the ACP. IBL leverages connections in state and out of state to deliver programming and activities to those who participate in the call. The IBL also uses this call to support digital navigator programs throughout the state.	Through the IBL-led ACP Outreach Calls, participants learn about the federal data, mapping, and policy that governs the ACP. They use the open format to offer constructive feedback to IOB on how best to deliver ACP outreach and programming. IBL compiles and shares best practices in ACP outreach, enrollment, and engagement strategies in IL for sustainable program development. IBL expects to create a cohort of Illinois ACP Outreach grantees and program managers to support ACP capacity-building and program sustainability.
	Community Broadband Development Webinars ⁵⁵	Illinois Extension’s Local Government Education (LGE) program partners with the Department of Commerce and Economic Opportunity’s Illinois Office of Broadband and the Benton Institute for Broadband & Society to conduct broadband accessibility outreach through regular webinars. In 2021, over 1,000 community leaders were educated on state and federal broadband opportunities, over 700 participants learned how to organize and mobilize community partners, and over 400 individuals learned about broadband project management.	This outreach effort extends critical high-speed internet access across the state by describing the best ways to apply for community broadband expansion support; preparing participants to obtain funding, strategically plan, and assess the need for broadband; and instructing participants on how to move broadband projects forward, deploy broadband infrastructure, and share community success stories.
	Developing Broadband	The Developing Broadband Leadership Webinar Series shares regular webinar content that is well-publicized and curated around a	Through the annual webinar series, best practices on broadband funding, partnerships, and projects are intended to be

⁵⁵ [Community Broadband Development](#), Illinois Extension

Activity category	Activity name	Description	Intended outcome(s)
	Leadership Webinar Series ⁵⁶	broadband-related topic. The series, hosted in 2020 and 2021, included content on how communities are addressing short-term broadband connectivity issues while moving forward with longer-term solutions.	broadcasted to show how communities are addressing short-term broadband connectivity issues while moving forward with longer-term solutions.
	Illinois Digital Equity Coalition ⁵⁷	Since Summer 2021, Illinois Digital Equity Coalition holds monthly meetings to receive updates on Illinois digital equity work and share best practices in the state. The coalition has been able to engage organizations across various sectors, including education, healthcare, businesses, agriculture, and housing.	Through the workshop-style gathering, organizations committed to digital equity in Illinois have the opportunity to discuss best practices and community trends and to share resources and help each other.
5. Resources	Broadband Affordability Study ⁵⁸	In 2020, the BAC commissioned a study called “Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents.” The study explores various questions posed by the state’s General Assembly related to broadband access, adoption, and affordability. This study is unique in that it not only examines what the state needs to do to promote universal broadband infrastructure, but also considers universal broadband affordability and adoption.	The study lays the foundation to pursue the Governor Pritzker administration’s universal broadband goal to connect everyone in Illinois by (1) establishing a baseline against which future initiatives can be measured and (2) providing recommendations for next steps to be taken in response to SB 2135, which requested the study.
	Broadband Wi-Fi Hotspot Map ⁵⁹	In response to COVID-19 and the urgent need for ubiquitous broadband access, the Illinois Office of Broadband began hosting an interactive map of open Wi-Fi hotspots in Illinois. This interactive map is housed at the Illinois Office of	Through the “Drive-Up Wi-Fi Map,” publicly accessible Wi-Fi information is available to Illinois residents to promote remote learning during the disruptions caused by the COVID-19 pandemic and by limited broadband access.

⁵⁶ [Developing Broadband Leadership Webinar Series Part 2: The Community Broadband Development Process](#), Benton Institute for Broadband and Society

⁵⁷ [Introducing the Connect Illinois Broadband and Digital Equity Planning Initiative](#), Illinois Broadband Connections, February 6, 2023; [U.S. Treasury Approves State's Capital Projects Fund Plan](#), January 2023, Illinois Broadband Connections

⁵⁸ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

⁵⁹ [Illinois Broadband Connections](#), May 11, 2020

Activity category	Activity name	Description	Intended outcome(s)
		Broadband and is a collaborative effort by the Illinois Board of Higher Education, Illinois Community College Board, Illinois Department of Commerce & Economic Opportunity, Illinois Department of Innovation & Technology, Illinois State Board of Education, and the Illinois State Library.	
	Connect Illinois Digital Equity + Inclusion publication ⁶⁰	The Connect Illinois Digital Equity + Inclusion publication details the Illinois Office of Broadband’s digital equity programming, approach, and indicators. This serves as the Illinois Broadband Equity + Inclusion Strategic Plan and includes details on the Illinois Connected Communities Program, READY, Accelerate, Broadband Breakthrough, and Digital Navigators Collaboration efforts.	The Connect Illinois digital equity programming and collaboration empowers Illinoisans to participate fully in an increasingly digital economy and society. It also helps communities identify and address existing broadband equity gaps and ensures that the state leverages new and existing resources for targeted digital inclusion strategies and sustainable broadband equity outcomes.
	Digital Indicator Dashboard ⁶¹	In 2021, the Office of Broadband introduced the Connect Illinois Digital Indicator Dashboard, a template deliverable for its Broadband READY program and a key component of the digital equity strategic plan. The dashboard’s intent and utility are to aggregate community- and regional-level data statewide and to serve as a singular source of data that is integral to the broadband and digital equity charge.	Through the Digital Indicator Dashboard, Connect Illinois stakeholders have access to data that tracks additional contributing factors to the digital divide.
	FCC Mapping Initiative ⁶²	The Illinois Office of Broadband and the Illinois Broadband Lab engaged Illinois residents, local governments, and other partners to accurately map	The Illinois Office of Broadband and the Illinois Broadband Lab plan to maximize the BEAD allocation of funds by participating

⁶⁰ [Illinois Broadband Equity + Inclusion](#), DCEO; [Connect Illinois Digital Equity + Inclusion](#), October 2021

⁶¹ [Illinois Broadband Advisory Council Legislative Report](#), January 2022; [Connect Illinois Digital Equity + Inclusion](#), October 2021

⁶² [Illinois Broadband Advisory Council](#), December 14, 2022

Activity category	Activity name	Description	Intended outcome(s)
		the areas in our state without high-speed internet. The state has built the capacity to participate in the FCC fabric and service availability challenge to ensure that all locations that have or should have a fixed broadband connection are located on the federal maps. The state deployed a website and marketing campaign to encourage community partners and residents to participate in the challenge. These outreach efforts included a survey of residents about their individual broadband challenges, which will be incorporated into the state’s description of its overall challenges.	in the FCC challenge process. Participating will allow the state to focus its federal funding on bringing high-speed internet to locations that currently lack any type of access. By engaging residents and community partners in the FCC fabric challenge, the state can build partnerships and collaborations that can be leveraged throughout the implementation of the IL BEAD Plan.
	Illinois Broadband Connections	A bi-weekly newsletter of broadband news and events specific to Illinois. The newsletter is a collaborative effort of the Illinois Office of Broadband and the Illinois-based Benton Institute for Broadband & Society and has published 80 editions – and counting.	In “Illinois Broadband Connections,” broadband-related local initiatives, private investment, and partnerships throughout Illinois will be highlighted and shared with approximately 2,000 subscribers.
	Illinois Broadband Needs and Past Programming Dashboard	The IBL is in the process of finalizing a dashboard to highlight broadband needs and past programming efforts at a county level. This dashboard will be made available to the public in the coming months.	With access to this map, community leaders, government leaders, and the public can focus their broadband-related efforts on those with the most need and expand programming to address pressing broadband requirements.
	Illinois Economic Plan: A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future ⁶³	This economic plan outlines a vision to reinvigorate our economy and spur equitable growth. The State of Illinois proposes an ambitious agenda that builds on the successes of this administration to reposition state	Actions related to broadband are outlined for three (agribusiness and ag tech, information technology, and life sciences and healthcare) of the seven key industries identified, including small businesses. Broadband deployment and access are

⁶³ [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), October 2019

Activity category	Activity name	Description	Intended outcome(s)
		government as a valuable partner to workers and businesses in Illinois.	referenced throughout the economic plan as a key strategy to support industry growth. This strategy will guide IL BEAD Plan's economic and job growth efforts, and the actions outlined in the plan will facilitate broadband expansion and investment to support the Illinois economy.
	Fedcelerator Framework ⁶⁴	The Connect Illinois Fedcelerator federal broadband accelerator framework offers general guidance for Connect Illinois applicants seeking to leverage federal, state, and local funding to deploy fully scalable broadband networks in unserved and underserved areas in Illinois.	By using the framework, Connect Illinois applicants maximize federal funding for Illinois deployment, promote investment in fully scalable broadband infrastructure, and accelerate the deployment schedules of federally funded broadband projects.
	The Illinois Broadband Map	A new interactive Illinois Broadband Map launched in 2021 for a more accurate, granular, and timely understanding of broadband access in Illinois. The interactive map and set of PDF maps are updated twice annually, with direct input from Illinois broadband providers and confirmed in part through field validation work.	The Illinois Broadband Map guides the investment of state and federal funds in pursuit of its ambitious goal to achieve universal broadband access throughout Illinois.

Table 3: Current and Planned Full-Time and Part-Time Employees

Current/ planned	Full-time/ part-time	Position	Description of role
Current	FT	Director, IOB	The Director of the IOB is the bureau's lead administrator and manages a current annual operating budget of \$1 million, a current capital budget of \$400 million, and anticipated federal funding of over \$1.3 billion to supplement existing investment in broadband infrastructure deployment, community and regional planning and engagement, and digital equity and inclusion programming. The director focuses primarily on the IOB's two primary charges: (1) administering the Connect Illinois Broadband Grant Program and (2)

⁶⁴ [Fedcelerator Framework](#), DCEO

Current/ planned	Full-time/ part-time	Position	Description of role
			supporting the BAC, which the director chairs. The director facilitates the deployment of the Connect Illinois Broadband Grant Program funding; manages strategic collaborations throughout Illinois, including with the Benton Institute for Broadband & Society and the University of Illinois System; and oversees the IOB and IBL's portfolio of work. ⁶⁵
Current	FT	Grants Manager, IOB	The Grants Manager's functions include organizing, planning, and executing program grants; implementing program policy and effectively managing statewide grants for the Broadband Development Program; designing, reviewing and processing financial and programmatic reports from grantees; developing and implementing a plan to regularly evaluate grant program components and, as a result, developing and recommending new and innovative policy objectives; and serving as a working supervisory. ⁶⁶
Current	PT	Associate Vice President, University of Illinois System (x2)	The Associate Vice President advances the university's mission by managing the development and execution of strategic initiatives for the Office of the Vice President for Economic Development and Innovation (VPEDI) and building and managing broadband-related relationships across a wide range of constituents. ⁶⁷ The Illinois Broadband Lab leverages the Associate Vice President as university leadership in the intergovernmental agreement between the IOB and University of Illinois System to manage efforts in mapping and data, digital equity and inclusion, and programming and communications. ⁶⁸
Current	FT	Visiting Coordinator for Broadband, IBL (x5)	The Visiting Coordinator for Broadband works closely with the Associate Vice President for Economic Development and Innovation (AVP) to advance the university's mission by assisting in the development and execution of strategic initiatives for the Office of the Vice President for Economic Development and Innovation (VPEDI) and by building and managing broadband-related relationships across a wide range of constituents. The Visiting Coordinator also works closely with the DCEO in support of their broadband initiatives and with IIN. The IIN is a system of 15 university-, community-, and industry-based hubs throughout the state that work together to drive inclusive innovation, sustainable economic development, and equitable workforce development across Illinois. The administrative agent to the IIN is VPEDI. Responsibilities include:

⁶⁵ Adapted from [Assistant Director, Illinois Office of Broadband \(Senior Public Administrator Opt. 1\); Illinois Office of Broadband](#), DCEO

⁶⁶ Adapted from the Illinois Department of Central Management Services Broadband Grants Manager Position Description

⁶⁷ Adapted from [Visiting Director for Broadband Access, and Deployment](#), Salary.com

⁶⁸ Adapted from the [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

Current/ planned	Full-time/ part-time	Position	Description of role
			<ol style="list-style-type: none"> 1. Coordinating public research, management, and policy issues related to broadband infrastructure and K-12 learning environments 2. Conceptualizing, developing, designing, and maintaining policies or programs that foster scientifically literate students and/or residents in Illinois 3. Serving as a science policy expert in planning and implementing programs that address broadband infrastructure as it relates digital literacy and e-learning. This may include policy development, outreach/educational activities, workshops, meetings, presentations, and other activities. 4. Working with the DCEO, the IOB, IIN, and other partners to identify resource gaps and make resources available to appropriate users 5. Performing other duties as appropriate for an assistant director.
Current	FT	Illini Science Policy Program Scholar, Illinois Extension (x2)	The Program Scholar helps to administer grants, engage the community, and plan and execute programs in the IOB. The fellow is also invited to contribute to the BAC's work, including developing policy expertise in one or more of the subject areas (such as broadband access, technology and infrastructure, economic development, education, and telehealth) based on the fellow's academic interests and/or professional goals. This work could be included in the BAC's annual report or related intermediate deliverables, as well as communicated during engagement opportunities with various state agencies, private businesses, and/or nonprofit public policy organizations. The fellow's work may also include working with the state's broadband mapping vendor(s) to facilitate the incorporation of related maps and datasets into the Connect Illinois website and the use of the maps for related programming and community engagement. ⁶⁹
Planned	FT	Assistant Director, IOB	The Assistant Director helps lead and support a growing office staff in grants management, mapping and technical assistance, and community and stakeholder engagement. The position's responsibilities include: (1) formulating, developing, implementing, and controlling Division operations; (2) establishing policy regarding program methodology and fiscal and personnel management; (3) representing the agency before various private and public groups on a state and local level concerning the mission, goals, and program resources available through the Division; (4) planning and developing all program objectives for Division programming, including "Eliminate the Digital Divide"; (5) supervising staff; and (6) performing other

⁶⁹ Adapted from the Illinois Science Policy Fellowship 2020 Host Application Template

Current/ planned	Full-time/ part-time	Position	Description of role
			duties as required or assigned that are reasonably within the scope of the duties enumerated above. ⁷⁰
Planned	FT	Visiting Director, Broadband Access & Deployment, IBL	The Visiting Director for BEAD serves as the Broadband Equity, Access and Deployment lead in the IBL collaboration between the University of Illinois and the IOB. This individual manages all contracts and day-to-day activity in fulfillment of requirements set forth under the BEAD program administered by the National Telecommunications and Information Administration, per its grant agreement with the State of Illinois. The position's duties include day-to-day project management of all broadband deployment activities of the Illinois Broadband Lab, including oversight of management consulting and engineering contract(s), as well as completion of final BEAD project deliverables, including the Five-Year Action Plan. The Director is accountable to the Illinois DCEO and its IOB, per the Intergovernmental Agreement between DCEO and University of Illinois. In addition, the Director contributes to stakeholder engagement, hosts meetings with broadband partners, conducts data analysis on broadband deployment and digital inclusion metrics, interprets the data, and is responsible for overall program and project evaluation and success. ⁷¹ Additional responsibilities include (1) assisting with public research, management, and policy issues related to broadband infrastructure and K-12 learning environments; (2) conceptualizing, developing, designing, and maintaining policy or programs to foster scientifically literate students and/or residents in Illinois; and (3) participating as a science policy expert in planning and implementing programs that address broadband infrastructure as it relates digital literacy and e-learning. ⁷²
Planned	FT	Visiting Director, Digital Equity, IBL	The Visiting Director for Digital Equity serves as the digital equity lead in the "Illinois Broadband Lab" collaboration between the University of Illinois and the Illinois Department of Commerce and Economic Opportunity (DCEO) Office of Broadband. The individual manages all contracts and day-to-day activity in fulfillment of requirements set forth under the Digital Equity program administered by the National Telecommunications and Information Administration, per its grant agreement with the State of Illinois. ⁷³ The duties of the position(s) include directing day-to-day project activities to manage the digital inclusion project as well as completion of final project deliverables (the Digital Equity Plan). The digital equity manager(s) would direct digital

⁷⁰ [Assistant Director, Illinois Office of Broadband \(Senior Public Administrator Opt. 1\)](#), Talentify.io & Sabido.com

⁷¹ BEAD Planning and Detailed Budget Narrative

⁷² [Visiting Director for Broadband Access, and Deployment](#), Salary.com

⁷³ [Visiting Director for Digital Equity](#), Indeed.com

Current/ planned	Full-time/ part-time	Position	Description of role
			equity consultants and coordinate stakeholders, host meetings with telecom partners, conduct data analysis on digital inclusion metrics, interpret the data, and be responsible for overall program and project evaluation and success. ⁷⁴
Planned	FT	Administrative and Support Staff, IBL	Staff will conduct operations, supervise program staff, develop and deploy knowledge, and provide reports included in the IGA to capture the administrative burden for this activity. ⁷⁵
Planned	FT	Digital Navigator, IBL (x10)	The Digital Navigator position will closely collaborate with the Associate Vice President for Economic Development and Innovation (AVP) to advance the university's mission by providing individualized or small group assistance to Illinois residents and commuting organizations that need affordable home internet service, affordable internet-capable devices, and/or coaching in introductory digital skills to become effective home internet users. This assistance will be provided primarily in-person or by voice telephone but may also include email, text, video chat, and other communication methods that work for the learner. ⁷⁶

⁷⁴ DE Planning Application Budget Narrative

⁷⁵ BEAD Planning and Detailed Budget Narrative

⁷⁶ Digital Navigation System Office Job Description, University of Illinois System

Table 4: Current and Planned Contractor Support

Current/ planned	Full-time/ part- time (duration)	Position	Description of role
Current	FT (24 months)	Management Consultancy Vendor	The Management Consultancy Vendor is tasked with supporting the Illinois Broadband Lab in creating and executing broadband deployment plans that maximize the deployment of high-speed, reliable, resilient, and affordable broadband infrastructure to unserved and underserved households, small businesses, and CAIs throughout Illinois. This work includes data collection and analysis, asset mapping, residential surveys, local coordination, developing BEAD funding strategy, following the BEAD Five-Year Action Plan, and providing initial and final proposal support. This position will also require creating and implementing the state’s digital equity plan in partnership with residents, digital equity organizations, and practitioners, as well as scaling digital inclusion programming to the communities across the state that need it most. Doing so will involve establishing baseline metrics, providing community outreach and engagement support, developing an implementation strategy, drafting a state digital equity plan, and providing input into grant applications. ⁷⁷
Current	FT	Mapping Vendor	This broadband data collection and mapping partner will follow a four-pronged approach to broadband mapping and analysis: (1) independent research, (2) provider relationships/outreach, (3) field validation, and (4) crowd-sourced data/resident feedback. ⁷⁸

Table 5: Broadband Funding

Source	Purpose	Total	Expended	Available
Rebuild Illinois Capital Financing Program Act of 2019	Rebuild Illinois dedicates \$400 million to partnering with internet service providers to build 21 st -century infrastructure connecting communities across the state to high-speed internet. A combined \$400 million from the Rebuild Illinois Projects Fund and the	\$420,000,000		

⁷⁷ Description of role is based on tasks outlined in the request for proposals (RFP)

⁷⁸ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

Source	Purpose	Total	Expended	Available
	Build Illinois Bond Fund appropriated to the Department of Commerce and Economic Opportunity for grants and loans includes but is not limited to broadband deployment to expand and strengthen existing broadband network infrastructure, health information technology, telemedicine, distance learning, and public safety, including prior incurred costs. It also invests \$20 million in the Illinois Century Network, an existing broadband network serving K-12 schools, higher education, public libraries, museums, state and local governments, and the health care community. ⁷⁹			
American Rescue Plan's Capital Projects Fund (CPF) ⁸⁰	The CPF was launched to allow investment in capital assets that meet communities' critical needs in the short and long term, with an emphasis on making funding available for broadband infrastructure. CPF funding accounts for a portion of the \$350 million Round 3 of the Connect Illinois Broadband Grant Program.	\$253,682,328	none	
American Rescue Plan's Coronavirus State Fiscal Recovery Fund (CSLFRF) ⁸¹	One of the uses of the CSLFRF funds is to invest in water, sewer, and broadband infrastructure. The CSLFRF's allocated funds to the Rebuild Illinois Projects Fund account for about \$46 million of the \$350 million Round 3 of the Connect Illinois Broadband Grant Program.	\$46,317,672		
FCC Rural Digital Opportunity Fund	The RDOF Phase I auction was held to bring broadband to homes and businesses in census blocks that were entirely unserved by voice and broadband. The broadband services	\$241,378,544.00	Not state managed	none

⁷⁹ [Rebuild Illinois Legislation](#), Illinois Economic Policy Institute; [HB0062; Broadband Grants](#), Department of Commerce and Economic Opportunity; [Gov. Pritzker Launches Connect Illinois, a \\$420 Million Statewide Broadband Expansion Under Rebuild Illinois](#)

⁸⁰ [Capital Projects Fund](#), U.S. Department of Treasury

⁸¹ [State of Illinois Recovery Plan](#), Governor's Office of Management and Budget Report, 2022

Source	Purpose	Total	Expended	Available
(RDOF) Phase I Auction ⁸²	were set to offer download speeds of at least 25 Mbps through bidders who were internet service providers. The total assigned support for Illinois was \$378 million for 19 winning bidders across the state, with about 160,000 locations assigned over 10 years. Of the winning bidders in the original support assigned, CTI Fiber, Connect Everyone LLC, Hawaii Dialogix Telecom LLC, LTD Broadband LLC, MCC Network Services LLC, and Space Exploration Technologies Corp—corresponding to about 66,000 locations—had defaulted as of January 13, 2023. AMG Technology Investment Group LLC, Mercury Wireless, Inc., Rural Elective Cooperative Consortium, and Wisper-CABO 904 Consortium—corresponding to 1,300 locations—partially defaulted as of January 13, 2023. As of that same date, approximately 93,000 locations remained earmarked to be served by the providers that were awarded funding. See the appendix for additional details on RDOF-funded projects.			
FCC Connect America Fund Phase II (CAF II) ⁸³	In CAF Phase II, the FCC provides funding to service providers to subsidize the cost of building a new network infrastructure or upgrading networks to provide voice and broadband service in areas where it is lacking. The total assigned support for Illinois was \$99 million for nine winning bidders across about 32,000 locations assigned over 10 years. See the appendix for additional details on the projects that have been funded.	\$99,602,495.10	Not state managed	n/a

⁸² [Auction 904: Rural Digital Opportunity Fund](#); [FCC: Rural Digital Opportunity Fund Phase I Auction Closes](#), as of January 2021; [Rural Digital Opportunity Fund: Assignments Total Assigned by State](#); [Auction 904: Rural Digital Opportunity Fund](#); Note: Applicant's name and winning bidder's name may not directly correspond

⁸³ [Connect America Fund Phase II FAQ](#); [Authorized Auction 903 Long-Form Applicants](#) (updated 11/17/2022)

Source	Purpose	Total	Expended	Available
Rural Utility Service (RUS), United States Department of Agriculture's (USDA) Rural eConnectivity Program (the ReConnect Grant and Loan Program) ⁸⁴	The Broadband ReConnect Program's grant and loan funding for high-speed broadband infrastructure was invested in Illinois in FY2019, FY2020, and FY2022 among 10 recipients in different funding categories. Eight recipients were awarded investments to deploy fiber-to-the-premises across about 1,300 square miles; one recipient was awarded to deploy fiber-to-the-home across approximately 102 square miles; and one recipient was awarded to extend existing broadband service network across about 38 square miles. See the appendix for additional details on the projects that have been funded.	\$164,353,545	Not state managed	n/a
Emergency Connectivity Fund (ECF), Federal Communications Commission ⁸⁵	The FCC's ECF program provides funding to schools and libraries to help close the "homework gap" for students who currently lack necessary Internet access or the devices they need to connect to classrooms. As of March 1, 2023, 144,574 broadband connections and 582,975 connected devices have been funded in Illinois.	\$237,852,487.45		
Connecting Minority Communities Pilot Program (CMC), National Telecommunications and Information Administration (NTIA) ⁸⁶	Three four-year institutions in Illinois were awarded CMC Pilot Program grants: (1) Chicago State University for its Community Navigator program, (2) Dominican University for its "Cross-Campus Digital Literacy" initiative, and (3) St. Augustine College for its initiative to address digital inequities through infrastructure, affordable connections and devices, and training. The IBL plans to support the three recipients in their digital equity initiatives to build collective resources and to share	\$8,497,531.84	Not state managed	n/a

⁸⁴ [ReConnect Loan and Grant Program](#), USDA U.S. Department of Agriculture; Based on FY19, FY20, FY22 funding; one project funded across Illinois and Kentucky

⁸⁵ [Emergency Connectivity Fund](#), FCC

⁸⁶ [Connecting Minority Communities Pilot Program](#), NTIA

Source	Purpose	Total	Expended	Available
	knowledge among stakeholders. The goal is to build a collaborative digital navigator program that is expected to be the foundation for efforts scaled across Illinois.			
“Internet for All” planning grants, Bipartisan Infrastructure Law ⁸⁷	Illinois received \$1,515,352.64 to fund activities related to digital equity planning. Illinois received \$5 million to fund activities related to the BEAD Equity, Access, and Deployment Program.	\$6,515,352.64		
ACP Outreach Grant ⁸⁸	The Affordable Connectivity Outreach Grant Program is meant to foster awareness and enrollment in the ACP. Awardees are meant to serve as trusted community messengers about the ACP and to be equipped with funding to pursue innovative outreach strategies for reaching historically underserved and unserved communities. ACP Outreach Calls hosted by the IBL are a forum for grantees across the state to collaborate and share best practices for deploying their grant funding.	\$700,000 (directed to the DCEO); \$1,863,719 (total across 7 awardees in Illinois)		
Governor's Emergency Education Relief (GEER) Funds ⁸⁹	Illinois’s governor dedicated GEER funds to pre-K-12 and higher education to bridge the digital divide. School districts received \$32.5 million to purchase devices, such as laptops and tablets, and \$7.5 million to purchase Wi-Fi hotspots and increase internet connectivity among students and families. Some \$46 million was directed to public universities and community colleges to help institutions' efforts to overcome barriers facing students and caused by the COVID-19 pandemic, including	\$86,000,000		

⁸⁷ [Biden-Harris Administration Awards More Than \\$6.5 Million to Illinois in 'Internet for All' Planning Grants](#), December 2022

⁸⁸ [FCC Announces \\$66 million in Affordable Broadband Outreach Grants](#), FCC

⁸⁹ [Gov. Pritzker Announces \\$108.5 Million COVID Funding for PreK-12, Higher Education with Equity Focus](#)

Source	Purpose	Total	Expended	Available
	limited access to laptops and wireless hotspots.			
Elementary and Secondary School Emergency Relief (ESSER) Fund ⁹⁰	ISBE directed ESSER funds in the following three categories: \$33.3 million for laptops and tablets, \$7.1 million for internet connectivity, and \$6.5 million for virtual coaching to support an estimated 4,000 new teachers, who are expected to enter the teaching profession this fall.	\$46,900,000		
Lifeline Program for Low-Income Consumers	Lifeline is an FCC program that helps make communications services more affordable for low-income consumers. Eligible telecommunications carriers (ETCs, or service providers) can offer a discount to eligible low-income consumers on their mobile or fixed (i.e., landline) voice service or broadband (i.e., internet) service and receive a reimbursement from the federal universal service fund. Lifeline Program funding is disbursed in Illinois to a combination of incumbent local exchange carriers (ILECs) and competitive eligible telecommunications carriers (CETCs) monthly. ⁹¹	\$120,038,623 (total as of March 15, 2023) ⁹²		
E-Rate - Schools & Libraries USF Program ⁹³	The FCC's E-Rate program makes telecommunications and information services more affordable for schools and libraries. With funding from the Universal Service Fund, E-Rate provides discounts for telecommunications, internet access, and internal connections to eligible schools and libraries. The total requested invoice line amount as of April 5, 2023, is \$763 million.	\$592,815,633.95 (total authorized disbursements as of April 5, 2023) ⁹⁴		

⁹⁰ [Gov. Pritzker Announces \\$108.5 Million COVID Funding for PreK-12, Higher Education with Equity Focus](#)

⁹¹ [Lifeline](#), Universal Service Administrative Co.; [Lifeline Disbursements Tool](#)

⁹² Amount listed represents total for duration of the program.

⁹³ [E-Rate: Universal Service Program for Schools and Libraries](#), FCC; [E-Rate Invoices and Authorized Disbursements \(FCC Forms 472 and 474\)](#)

⁹⁴ Amount listed represents total for duration of the program.

Source	Purpose	Total	Expended	Available
Rural Health Care Program ⁹⁵	The Rural Health Care Program provides funding to eligible health care providers for the telecommunications and broadband services necessary to provide health care. The program’s goal is to improve the quality of health care available to patients in rural communities by ensuring that eligible health care providers have access to telecommunications and broadband services. Illinois has received Rural Health Care Program disbursement since 2012 with an original committed amount of \$79,952,118.78 and a total committed amount of \$68,699,205.45.	\$54,007,789.72		(total disbursed as of April 5, 2023) ⁹⁶

3.2 Partnerships

Table 6 identifies the new and existing partners that Illinois plans to engage for the development and implementation of the Five-Year Action Plan. This list is ordered as follows: (1) statewide organizations and state agencies, (2) local or municipal governments and organizations, and (3) academic institutions.

Table 6: Partners

Partners	Description of current or planned role in broadband deployment and adoption
Benton Institute for Broadband & Society (Benton Institute)	The IOB partners with the Benton Institute on both broadband-related programming and the bi-weekly Illinois Broadband Connections publication. Programming has included ICC, Accelerate, and Broadband Breakthrough, which have helped the state engage over 50 communities across 38 counties on broadband infrastructure planning and digital equity initiatives since 2019. ⁹⁷ Benton Institute for Broadband & Society was a main funding source for ICC, Accelerate Illinois, and Broadband Breakthrough.

⁹⁵ [Rural Health Care Program](#), FCC; [RHC Commitments and Disbursements Tool](#)

⁹⁶ Amount listed represents total for duration of the program. Total listed is for health care providers located in Illinois and receiving the service, whether individual or consortium.

⁹⁷ See Table 2 for additional details.

Partners	Description of current or planned role in broadband deployment and adoption
Connected Nation (CN) ⁹⁸	Currently, the IOB partners with CN to: 1) identify and engage broadband providers and infrastructure owners operating in the State of Illinois; 2) collect and validate broadband deployment data by technology and speed; and 3) prepare maps and data identifying available broadband service. ⁹⁹ CN also supported the state in its FCC Mapping Challenge efforts by comparing the Illinois Broadband Lab Map to the FCC Broadband Map. Specifically, the CN identified areas where service might be misreported in the new FCC maps, planned and implemented field validation efforts, and assembled a desktop research team to support the FCC Availability Challenge.
Heartland Forward (Connecting the Heartland Initiative)	The IOB partnered with Heartland Forward to place six Connection Corps fellows in Illinois and raise awareness for adoption resources, such as the ACP. Fellows have organized digital literacy events, device distribution, and ACP enrollment with PCs for People; supported local broadband planning efforts (Greater Peoria Economic Development Region, Southwest Leadership Council through Accelerate and Broadband Breakthrough, and broadband planning in Mercer); and collaborated with the Illinois Office of Broadband on various programs to help with outreach efforts and build partnerships.
Illinois Association of Housing Authorities (IAHA)	The IOB collaborates with the IAHA through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan. The IAHA also engages stakeholders in surveying housing authorities across Illinois.
Illinois Board of Higher Education (IBHE)	The IOB partners with the IBHE on projects like the Illinois Drive-Up Hotspots Map. The IOB collaborates with the IBHE through the BAC and State Government Broadband Working Group, which are regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Century Network (ICN)	The IOB partners with the ICN through its role in the Connect Illinois Broadband Grant program, which sets aside \$20 million for upgrades to the 100 GB ICN, the state’s existing 2,000-mile, open-access, institutional fiber network serving over 3,400 K-12, higher education, and library locations across Illinois. ¹⁰⁰ The ICN’s middle-mile network effort is managed in collaboration with the Illinois Department of Innovation and Technology and is expected to increase service to CAIs and to support last-mile providers during broadband deployment efforts.
Illinois Commerce Commission	The IOB collaborates with the Illinois Commerce Commission through the BAC and State Government Broadband Working Group which are regularly updated and engaged on topics related to developing the IL BEAD Plan.

⁹⁸ [Connected Illinois Round 1 Projects Announced](#), July 2020, Illinois Broadband Connections

⁹⁹ See Table 2 for additional details.

¹⁰⁰ [Connect Illinois](#), DCEO

Partners	Description of current or planned role in broadband deployment and adoption
Illinois Community College Board (ICCB)	The IOB partners with the ISBE on projects like the Illinois Drive-Up Hotspots Map and through its representation on the BAC. By implementing the IL BEAD Plan, the IOB plans to work with the ICCB on workforce development solutions that will increase the workforce available for broadband deployment. ICCB is a member of the State Government Broadband Working Group.
Illinois Department of Aging (IDoA)	The IOB collaborates with the IDoA through the BAC and State Government Broadband Working Group, which are regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Department of Healthcare and Family (HFS)	The IOB collaborates with HFS through the BAC and State Government Broadband Working Group, which are regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Department of Innovation and Technology (DoIT)	The IOB collaborates with the DoIT through the IBL. The DoIT provides the subject-matter expertise needed to conduct merit reviews and related activities within the IOB. ¹⁰¹ DoIT also manages the ICN, which serves over 2,000 locations in Illinois and is a member of the BAC and the State Government Broadband Working Group. ¹⁰²
Illinois Department of Employment Security (IDES)	The IOB collaborates with IDES through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Department of Labor (IDOL)	The IOB collaborates with IDOL through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Department of Public Health (IDPH)	The IOB collaborates with IDPH through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Department of Transportation	The IOB collaborates with IDOT through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois Farm Bureau (IFB)	The IOB collaborates with the IFB through the BAC, which is regularly updated and engaged on topics related to developing the IL BEAD Plan. The IOB also partners with the IFB to engage stakeholders in marketing local events and supporting community members who participate in the online survey.
Illinois Guardianship & Advocacy Commission (GAC)	The IOB collaborates with GAC through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.

¹⁰¹ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

¹⁰² [Illinois K-12 Broadband Network](#), NASCIO

Partners	Description of current or planned role in broadband deployment and adoption
Illinois Library Association (ILA)	The IOB collaborates with the ILA through the BAC, which is regularly updated and engaged on topics related to developing the IL BEAD Plan. The IOB also partners with the ILA in its efforts to engage stakeholders in marketing local events and supporting community members who participate in the online survey.
Illinois Library and Information Network (ILLINET)	The IOB partners with the ILLINET in its efforts to engage stakeholders in marketing local events and supporting community members who participate in the online survey.
Illinois Rural Development State Office, U.S. Department of Agriculture (USDA)	The IOB partners with the Illinois Rural Development State Office in its effort to engage stakeholders in marketing local events and supporting community members who participate in the online survey.
Illinois Soybean Association	The IOB partners with the Illinois Soybean Association to host the Broadband Breakthrough program, an agriculture-themed Accelerate Illinois track. Broadband Breakthrough engages rural counties in digital equity efforts and the farming community in planning for broadband infrastructure.
Illinois State Police	The IOB collaborates with the Illinois State Police through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Illinois State Board of Education (ISBE)	The IOB partners with the ISBE on projects like the Illinois Drive-Up Hotspots Map. The IOB collaborates with the ISBE through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
LatinX DLN	The IOB partners with the LatinX DLN in its efforts to engage stakeholders in marketing local events and supporting community members who participate in the online survey. LatinX DLN was a member of the second cohort of Illinois Connected Communities (ICC).
National Digital Inclusion Alliance	The IOB and IBL is affiliated with the National Digital Inclusion Alliance, which advances digital equity by supporting community programs and equipping policymakers to act. ¹⁰³
Next Century Cities	The IOB partners with Next Century Cities to tell the stories of local communities throughout the broadband deployment and adoption process. Next Century Cities supports the state in conducting video interviews with community advocates, local officials, and residents from the various communities. ¹⁰⁴

¹⁰³ [Illinois Broadband Lab](#)

¹⁰⁴ [Illinois Connected Communities Kickoff](#), August 2020, Illinois Broadband Connections

Partners	Description of current or planned role in broadband deployment and adoption
Office of Community Relations, Illinois Environmental Protection Agency (EPA)	The IOB collaborates with Illinois EPA through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Office of Minority Economic Empowerment, DCEO	The IOB collaborates with the Office of Minority Economic Empowerment through the State Government Broadband Working Group, which is regularly updated and engaged on topics related to developing the IL BEAD Plan.
Office of the Secretary of State	The IOB partners with the Office of the Secretary of State, which houses the Illinois State Library. The Illinois State Library supports the state in stakeholder engagement by connecting the IBL with local libraries, which serve as a marketing channel to Illinois residents who frequent these community institutions.
PCs for People	The IOB partners with PCs for People through its Connect Illinois Computer Equity Network and plans to work with PCs for People in the stakeholder engagement process.
Pew Charitable Trusts	The IOB partners with the Pew Charitable Trusts' Broadband Access Initiative. ¹⁰⁵
Office of the President, Cook County	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in Northeastern Illinois. In addition, the IBL supports the Cook County Office of Digital Equity in capacity-planning and program development.
Mayor's Office, City of Chicago	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in Northeastern Illinois. In addition, the IBL supports the City of Chicago's Digital Equity Coalition in capacity-planning and program development.
City of Rockford	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in Northern Stateline Illinois.
City of Macomb	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in West Central Illinois.
City of Effingham	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in Southeast Illinois.

¹⁰⁵ [Celebrating 50 Editions of Illinois Broadband Connections](#), May 2022, Illinois Broadband Connections

Partners	Description of current or planned role in broadband deployment and adoption
Leadership Council Southwestern Illinois	The IOB and IBL are working with representatives from Leadership Council Southwestern Illinois in the stakeholder engagement process, specifically to coordinate listening sessions in Southwest Illinois. The Council also participated in Round 1 of the Illinois Connected Communities program and Round 2 of Accelerate Illinois through Kaskaskia College.
Region 1 Economic Development Council or Regional Planning Council (R1)	The IOB and IBL continue to partner with the Region 1 Economic Development Council through its Northern Stateline Broadband READY team. The IOB and IBL are working with representatives from the Regional Planning Council in the stakeholder engagement process, specifically to coordinate listening sessions in Northern Stateline Illinois. R1 maintains new relationships developed in the Northern Stateline region during the stakeholder engagement process.
Bloomington-Normal EDC	The IOB and IBL continue to engage Bloomington-Normal EDC through its North Central Broadband READY team. Additionally, Bloomington-Normal EDC supports stakeholder engagement efforts in North Central Illinois and maintains relationships developed during the stakeholder engagement process.
Chicago State University	The IOB and IBL continue to engage Chicago State University through its Northeast Broadband READY team. Additionally, Chicago State University supports stakeholder engagement efforts in the Northeast and maintains relationships developed during the stakeholder engagement process.
Danville Area Community College	Danville Area Community College supports the IOB and IBL's stakeholder engagement efforts in East Central Illinois and plans to work with the IBL to maintain relationships developed during the stakeholder engagement process.
Eastern Illinois University	The IOB and IBL continue to partner with Eastern Illinois University through its Southeast Broadband READY team. The IOB and IBL are engaging representatives from Eastern Illinois University in the stakeholder engagement process, specifically to coordinate listening sessions in Southeast Illinois. Eastern Illinois University maintains new relationships developed in the Southeast region.
Illinois State University (ISU)	The IOB and IBL partner with the ISU to host the Broadband Breakthrough program, an agriculture-themed Accelerate Illinois track. ISU served as a key partner in designing the Broadband Breakthrough program by providing mapping support from their research team to show the economic impact of reliable, high-speed broadband in rural areas. This mapping work was initially funded through an Illinois Innovation Network seed grant. In addition, ISU is the North Central READY team lead.
Kaskaskia College	The IOB and IBL engaged Kaskaskia College as a cohort member of Accelerate Illinois. Kaskaskia College also supports stakeholder engagement efforts in Southwest Illinois and plans to work with the IBL to maintain relationships developed during the stakeholder engagement process.

Partners	Description of current or planned role in broadband deployment and adoption
Northern Illinois University	The IOB and IBL continue to engage Northern Illinois University through its Northwest Broadband READY team. Additionally, Northern Illinois University supports stakeholder engagement efforts in Northwest Illinois and maintains relationships developed during the stakeholder engagement process.
Shawnee Community College	The IOB and IBL are working with city representatives in the stakeholder engagement process, specifically to coordinate listening sessions in Southern Illinois. Shawnee Community College plans to be a host location for in-person events.
Southern Illinois University Carbondale	The IOB and IBL continue to partner with Southern Illinois University Carbondale through its Southern Broadband READY team. The IOB and IBL are working with representatives from Southern Illinois University Carbondale in the stakeholder engagement process, specifically to coordinate listening sessions in Southern Illinois. Southern Illinois University Carbondale plans to be a host location for in-person events, and it expects to maintain relationships developed in the Southern region after the implementation of the IL BEAD Plan.
Southern Illinois University Edwardsville	The IOB and IBL continue to engage Southern Illinois University Edwardsville through its Southwest Broadband READY team. The IOB and IBL are working with representatives from the Southern Illinois University in the stakeholder engagement process, specifically to coordinate listening sessions in Southwest Illinois. Southern Illinois University Edwardsville expects to maintain relationships developed in the Southwest region after the implementation of the IL BEAD Plan.
University of Illinois Springfield	The IOB and IBL continue to partner with University of Illinois Springfield through its Central Broadband READY team. The IOB and IBL are working with representatives from the University of Illinois Springfield in the stakeholder engagement process, specifically to coordinate listening sessions in Central Illinois in partnership with city officials. University of Illinois Springfield expects to maintain relationships developed in the Central region after the implementation of the IL BEAD Plan.
University of Illinois Urbana-Champaign UIUC	The IOB and IBL continue to engage UIUC through its East Central Broadband READY team. Additionally, UIUC supports stakeholder engagement efforts in East Central and maintains the relationships developed through these efforts.
University of Illinois System	The IOB has an intergovernmental agreement (IGA) with the University of Illinois System for the Illinois Broadband Lab to support Office programming, grow capacity, and facilitate data collection, mapping, and research.

Partners	Description of current or planned role in broadband deployment and adoption
Illinois Innovation Network (IIN) (University of Illinois System)	The IOB collaborates with the Illinois Innovation Network through the IBL. This collaborative effort provides marketing support throughout the stakeholder engagement process. Many Illinois Innovation Network hubs have been leading regional broadband planning efforts through the Broadband READY program, which is expected to be leveraged and scaled throughout the implementation of the IL BEAD Plan and IL SDEP.
Illinois Extension (University of Illinois System)	The Illinois Extension collaborates with the IOB to support Illinois Connected Communities and Accelerate Illinois programs through communications, organizational support, and content curation. Additionally, the extension supports community-driven broadband webinars and curates content on its website. ¹⁰⁶
Western Illinois University	The IOB and IBL continue to engage Western Illinois University through its West Central Broadband READY team. Additionally, Western Illinois University supports stakeholder engagement efforts in West Central and maintains relationships developed during the stakeholder engagement process.
West Illinois University Quad Cities	Western Illinois University – Quad Cities supports the IOB and IBL’s stakeholder engagement efforts in Northwest Illinois and plans to work with the IBL to maintain relationships developed during the stakeholder engagement process.

3.3 Asset Inventory

This section inventories both existing hard assets (e.g., towers, buildings, utility poles) and soft assets—or efforts (e.g., programs, activities, strategies, skills, technical assistance) that can be readily leveraged to close the digital divide in Illinois. Illinois tried to conduct a comprehensive assessment that focused on assets that can be readily leveraged during the implementation of the IL BEAD Plan. This asset inventory was used as the starting point for the Illinois State Digital Equity Plan’s asset inventory (Section 3.1).

3.3.1 Broadband Deployment

The State views broadband deployment as the development of networks or infrastructure that can be leveraged to deliver broadband services. Below is a list of broadband deployment asset

¹⁰⁶ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

types that are currently deployed across the state with details of each of these described in the table (Table 7) that follows:

1. **Conduits/dark fiber deployed by the State:** networks of fiber-optic cable and fiber-optic infrastructure that isn't being used. These networks are middle-mile infrastructure as they don't connect directly to the end-user
2. **Current or forthcoming capital projects:** ongoing or upcoming projects to deploy broadband infrastructure across the state, including those that could allow providers to lay new fiber at lower costs (e.g., road construction, water, or sewer projects)
3. **Existing rights of way:** policies that address access to roads, railroads, tribal lands, and other public rights of way. "Dig once" statutes, which coordinate conduit installation with transportation projects with the goal of lowering costs for deployment and reducing construction in the right of way, fall under rights of way policies¹⁰⁷
4. **Highly skilled workforce available to deploy broadband:** programs that increase the size of the workforce available to deploy broadband infrastructure or to support the telecommunications industry
5. **Programs that conduct broadband deployment planning efforts:** community-led or state-supported efforts to understand community broadband deployment, access, affordability, and adoption needs
6. **State-owned structures and utility infrastructure:** public assets or real estate that providers could utilize at low- or no-cost for broadband deployment (e.g., towers, water towers, silos, buildings, utility poles)

¹⁰⁷ [Local Management of Public Rights-of-Way](#), Cark Kandutsch Law Office; [State Broadband Policy Explorer](#), Pew Trusts

Table 7: Broadband deployment assets in Illinois that can be leveraged in the deployment of federal BEAD and Digital Equity Act funding

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
1. Conduits/dark fiber deployed by the State	ICN	Lit Fiber	The ICN, managed by the Illinois Department of Innovation & Technology (DoIT), is a high-speed broadband network serving K-12 and Higher Education, Public Libraries, and Government entities. The ICN provides Internet and Intranet connectivity for thousands of sites statewide. Lit Fiber service provides point to point wave-based circuits that utilize the ICN Dense Wave Division Multiplexing network.
	ICN	Dark Fiber	The ICN has over 1000 miles of Dark Fiber available to build a robust and scalable network. This is available to both CAIs and ISPs.
	ICN	Additional ICN broadband infrastructure and services	The ICN is a statewide high speed broadband network delivering fiber-based bandwidth services to retail and wholesale service providers in Illinois and Community Anchor Institutions, including schools, libraries, museums, hospitals, municipal government, and other not for profit organizations. The Connect Illinois program allocates \$20 million for upgrades to the 100 GB Illinois Century Network.
	Central Illinois Regional Broadband Network	Dark Fiber	A cross-sector cohort, CIRBN is a regional broadband network in Central Illinois which has constructed more than 100 miles of new fiber optic cable throughout the state. The network encompasses 6 counties, 20 communities, and 100+ partners (including Illinois State University)

¹⁰⁸ Organization who owns or manages the described asset

¹⁰⁹ Links provide either further information on asset or direct to organization providing access depending on what is available online

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Chicago-Southland Fiber Network	Fiber deployment	A collaboration between South Suburban Mayors & Managers Association, Cook County, and Urbancom.net the network provides high-speed fiber optic infrastructure to the Chicago-Southland communities and is funded by the Jobs First grant from the State of Illinois.
2. Current or forthcoming capital projects	DCEO	Rebuild Illinois	Rebuild Illinois is Illinois's infrastructure program and includes \$400 million for statewide broadband deployment. The grant intends to expand access to reliable, high-speed internet service statewide.
	Illinois Century Network	Middle Mile Expansion	The Illinois Century Network (ICN) is a highspeed broadband network serving K12 and Higher Education, Public Libraries and Museums, State and Local Government and broadband service providers. The purpose of the ICN middle mile expansion project, and updated pricing for existing and new middle mile segments is to facilitate provider deployment to unserved households, by bringing the connection to the Internet closer to the last mile provider. ¹¹⁰
	Missouri Network Alliance, LLC dba Bluebird Network	Illinois Middle Mile Network	Missouri Network Alliance, LLC dba Bluebird Network responded to the State of Illinois's Middle Mile Infrastructure RFI. The Illinois Middle Mile Network would be a public-private partnership to deploy fiber and conduit along select roadways, including state routes, county and local roads.
	FirstNet Authority; State of Illinois	Expansion of FirstNet Network	The state of IL helped FirstNet Authority identify priority locations for purpose-built network enhancements. FirstNet is an independent agency within the NTIA dedicated to building and maintaining communication networks for first responders/public safety officials.

¹¹⁰ From the ICN Middle Mile Expansion, October 2021

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	SiFi Network	Rockford FiberCity	SiFi Networks funds, builds and operates the 100% fiber network which allow service providers to join to provide super-fast connectivity. The network is be constructed through every street in the city passing every home and business, and once built residents and businesses have the opportunity to access the fastest internet services around. It is expected to also enable the City to utilize the network to access Smart City applications to help meet their long-term objectives.
	Crown Castle	Crown Castle	Crown Castle builds shared infrastructure for use by the wireless carriers. The company has communications infrastructure assets in all 50 City of Chicago wards. While many of these assets have been deployed in the Chicago Central Business District, Crow Castle has new contracts with its wireless customers to deploy in Chicago’s South, West and Northwest Side neighborhoods. Across Chicago, wireless connectivity plays a critical role in expanding access to broadband for underserved communities. ¹¹¹
	Applied Research Designs, Inc.	A.R. Designs, Inc.	A.R. Designs builds Wi-Fi community networks for large scale historically under-served, affordable communities by deploying a unique combination of smart antenna technology, mesh software and Cisco carrier grade mesh hardware. A.R. Designs, Inc. capital projects make quality high speed internet access affordable throughout the South and West Sides of Chicago. ¹¹²

¹¹¹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹¹² [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Community Development Corporation for Pembroke and Hopkins Park; DCEO; LEMKO	Pilot Model for Rural K3 County	Project to extend access to approximately 850 residences, businesses, and community anchor institutions throughout the entire 52-square-mile Pembroke Township footprint funded by a \$3 million federal grant that was secured by U.S. Representative Robin Kelly for broadband, GPS and other infrastructure. A Connect Illinois Broadband Grant Program round 3 is planned to secure funding for the remaining costs for Phase 1 of the project. ¹¹³
3. Existing rights of way	Illinois Department of Transportation (IDOT)	(605 ILCS 5/) Illinois Highway Code	Based on Section 605 ILCS 5/4-209, IDOT requires a permit when working within the right-of-way of an Interstate, U.S. state route, Illinois state route, or state-maintained roadway. A permit must be obtained prior to the start of any work and a copy of the approved permit must be always at the worksite.
4. Highly skilled workforce available to deploy broadband	DCEO	Employer Training Investment Program (ETIP)	ETIP is a grant program that helps keep Illinois workers' skills on pace with new technologies and business practices, which helps businesses increase productivity, reduce costs, improve quality, and boost competitiveness. ETIP grants can reimburse new or expanding companies for up to 50 percent of the cost of training their employees. Trainees must be employed by the company prior to implementation of the training program. Instructors may be plant workers, public educators, private consultants, or others possessing the required expertise. Grants may be awarded to individual businesses, original equipment manufacturers sponsoring multi-company training for employees of their Illinois supplier companies, and intermediary organizations operating multi-company training projects.

¹¹³ Pembroke-Hopkins Park Broadband NOW! Plan, Accelerate Round 2; [Pembroke Township gains broadband funding, infrastructure upgrades](#), 94.1 WGFA

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	DCEO	Illinois Works Apprenticeship Initiative (Illinois Apprenticeship)	<p>This program opens the doors of opportunity into the construction industry and the trades. It applies to public works projects with an estimated cost of \$500,000 or more, including both capital grants and direct capital contracts and awards. For applicable projects, the goal is for apprentices attending apprenticeship programs approved and registered by the U.S. Department of Labor to perform 10% of the total labor hours actually worked in each prevailing wage category OR 10% of the estimated labor hours in each prevailing wage category, whichever is less.</p>
	DCEO	Illinois Works Construction Pre-apprenticeship Program	<p>This grant program creates a qualified talent pipeline to fill job opportunities with diverse candidates throughout the state. This program delivers pre-apprenticeship skills training through a network of non-profit, community-based organizations, including community colleges, faith-based organizations, and business associations. Applications have been accepted starting in the summer of 2021, with a focus on grant proposals that provide training for underrepresented populations in the construction and building trades and prepare them for jobs on public works projects. Participants of the program attend tuition-free and receive a stipend and other supportive services to help overcome systemic barriers to entering the construction industry.</p>

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	DCEO	Illinois Works Bid Credit Program	This program incentivizes contractors to increase the diversity of their workforce. The Bid Credit program allows contractors and subcontractors to earn bid credits by employing and retaining apprentices who have completed the IL Works Pre-apprenticeship Program. Bid credits can be used toward future bids for public works projects contracted by an agency of the State.
	Cook County	Chicago Cook Workforce Partnership	The program trains young adults in suburban Cook County and connects them with businesses that are looking for new employees. The program offers sector-specific training in Manufacturing, IT, and Transportation/Logistics.
See appendices for details on Department of Labor (IDOL) registered apprenticeships and secondary school programs with broadband workforce certificates or programs.			
5. Programs that conduct broadband deployment planning efforts	IBL; Benton Institute; Connecting the Heartland; Illinois Extension	Accelerate Illinois	Accelerate Illinois boosts community engagement in broadband planning and capacity building by offering 30+ hours of free expert consultation and best practices for community-driven broadband planning. The Benton Institute is a main funding source for this program. ¹¹⁴ As of March 2023, two cohorts have completed Accelerate Illinois.
	IBL; Benton Institute; United Soybean Board; Illinois Soybean Association, Illinois Extension; IIN, ISU, Center for Rural Strategies, Wireless Research Center	Broadband Breakthrough	Broadband Breakthrough is a collaboration to help rural farming communities in Illinois stimulate the broadband infrastructure needed to modernize farming operations and support broader community goals. The program is funded by the United Soybean Board and Illinois Soy Association. Three separate cohorts including over 15 counties are planned for 2023-2024. ¹¹⁵

¹¹⁴ See Table 2 for additional details

¹¹⁵ See Table 2 for additional details

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Ogle County; Lee County; Putnam County; Growth Dimensions Inc. Economic Development (Boone County)	Broadband for All in North Central Illinois	Ogle, Lee, Boone, and Putnam counties were participants in Accelerate Illinois Round 2. The initial scope of work for the partnership included a focus on identifying (1) existing broadband networks, (2) underserved areas, (3) funding opportunities, and (4) physical, policy, and other barriers to network deployment. ¹¹⁶
	Peoria County; Woodford County	Peoria-Woodford Broadband Planning Team	Peoria and Woodford counties were participants in Accelerate Illinois Round 2. The committee met with Greater Peoria Economic Development Council (EDC) to plan and implement a countywide household survey and interview local and regional internet service providers. The final strategy involved (1) creating an advisory committee, (2) expanding understanding of infrastructure needs, (3) developing strategies to garner local government support, (4) developing communication and collaboration approaches, and (5) striving to address access, adoption, and utilization. ¹¹⁷
	Kaskaskia College	Kaskaskia College Region Accelerate Team	The Kaskaskia College Region Accelerate Team, which includes representatives from Clinton, Marion, Fayette, and Washington counties, participated in Accelerate Illinois Round 2. The team’s strategies involve focusing on underserved areas and establishing a plan. The team is beginning to engage with possible internet service providers, and to pursue funding opportunities. ¹¹⁸

¹¹⁶ Broadband for All – Plan for Ogle, Lee, Boone, and Putnam Counties, Accelerate Illinois Round 2

¹¹⁷ Peoria-Woodford Broadband Planning, Accelerate Illinois Round 2

¹¹⁸ Accelerate College Region Accelerate Team Presentation; [Accelerate Illinois Brakes...for Now](#), Illinois Broadband Connections

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Livingston County	Connect Livingston Broadband Plan	The Livingston County Broadband Team participated in Accelerate Illinois Round 2. The Livingston County Broadband Team developed a vision and mission statement, aiming to ensure all residents have access to affordable connectivity of at least 100/100 Mbps. The team is now working to get financial commitments from the county board to continue its work. The team is hoping to host town halls with community anchor institutions to help map assets and with potential local internet service provider partners. ¹¹⁹
	Lake County	ConnectLakeCounty	The ConnectLakeCounty (formerly ConnectWaukegan) effort has undertaken broadband planning efforts including reviewing funding sources for broadband expansion, alternative infrastructure deployments, and three fixed-wireless deployment models. The organization conducted a CBRS Fixed Wireless prototype with assistance or proof of concept to (1) understand the current cost, configuration, and capabilities of a roof mounted CBRS fixed wireless radio, antenna, and SAS connected solution, (2) understand the cost, configuration, and capabilities of the different CBRS customer premises equipment (CPE) devices, and (3) test range capabilities and bandwidth capabilities of the CBRS prototype and performance of the different CPE devices. ¹²⁰

¹¹⁹ Connect Livingston Broadband Plan, Accelerate Round 2; [Accelerate Illinois Brakes...for Now](#), Illinois Broadband Connections
¹²⁰ [ConnectWaukegan – Fixed Wireless Proof of Concept](#), Waukegan Broadband Community Taskforce, October 2022

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Champaign County Farm Bureau	Connect Champaign County	Connect Champaign County is an organization dedicated to bringing fast, reliable, and affordable broadband internet to rural Champaign County. Spearheaded by the Champaign County Farm Bureau and funded by ARPA funds, Connect Champaign County works with internet providers, community stakeholders, and landowners to support broadband projects in rural Champaign County. Connect Champaign County is committed to making sure that rural Champaign County residents can get the benefits of fast, reliable, and affordable broadband internet. The Champaign County Broadband Task Force selected two internet providers—Nextlink Internet and Volo Internet—as “preferred providers” to lead the broadband infrastructure build-out in rural Champaign County.
	Hancock County	Grow Hancock	Hancock County is putting together a plan to distribute Hancock County with high speed, reliable internet service. Current initiative is centered on collecting survey data and speed tests to inform grant applications. The county is a participant in the Broadband Breakthrough five county pilot program.
	Edgar County	Edgar County Broadband Initiative	The county is a participant in the Broadband Breakthrough five county pilot program. The Edgar County Broadband Initiative is being led by High Speed for Edgar County.
	McLean County; McLean County Regional Planning Commission	McLean County	The county is a participant in the Broadband Breakthrough five county pilot program. Through the Broadband Breakthrough program, McLean County Government has been awarded technical assistance from the United Soybean Board to develop a strategic action plan in conjunction with our community partners to tackle internet connectivity challenges in the county. ¹²¹

¹²¹ McLean County High-Speed Internet Quality Survey, open through March 31, 2023

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Ogle County	Ogle County	The county is a participant in the Broadband Breakthrough five county pilot program.
	Schuyler County	Schuyler County	The county is a participant in the Broadband Breakthrough five county pilot program.
	Bond County	Bond County Broadband Initiative	Bond County was a participant in Accelerate Illinois Round 2. The resulting strategy of the Bond County Broadband Initiative was (1) middle mile, (2) public access locations, (3) underserved/unserved areas, and (4) competitive market to achieve affordability. The initiative plans to continue writing grant applications, narrowing potential middle mile partners, and discussing with ISPs how to get service to homes. ¹²²
	Kankakee County	Kankakee County Broadband Plan team	Various stakeholders in Kankakee—including the PHP CDC, Economic Alliance of Kankakee County, the Kankakee County Planning Department, and the Kankakee County Board—were involved on the team that participated in Accelerate Illinois Round 2. The primary focus coming out of the planning effort included meeting with county decision makers, gathering additional information on the current system and gaps, and creating a broadband deployment strategy. ¹²³
	Mercer County	Mercer County Broadband Team	Representatives from the Mercer County Board and local schools, municipalities, and organizations participated in Accelerate Round 1. The team has outlined a three-phase approach to planning and building out a hybrid fiber/fixed wireless model. ¹²⁴

¹²² Bond County Broadband Initiative, Accelerate Illinois Round 2

¹²³ Kankakee County Broadband Plan, Accelerate Illinois Round 2

¹²⁴ Mercer County Broadband Plan, Accelerate Illinois Round 1

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	Jackson County	Jackson County Broadband Team	Jackson County stakeholders formed a team to participate in Accelerate Illinois Round 1. Priority strategies identified in the Jackson County Broadband Plan include serving unserved and underserved locations with an equity strategy, identifying provider partners, conducting community meetings, and identifying funding. ¹²⁵
	Knox County	Knox County Broadband Team	Members from Knox County Board and local organizations participated in Accelerate Illinois Round 1. The Knox County Broadband Plan highlights four strategies (1) identify and prioritize unserved and underserved areas, (2) invite internet service providers to share proposals, (3) use ARPA funds to incentivize priority projects, and (4) work with providers to promote ACP. ¹²⁶
	Whiteside County	Connect Whiteside Committee	Members from Whiteside County Board and local organizations, CAIs, and providers participated in Accelerate Illinois Round 1. The committee plans to address issues of reliability and speed and increase awareness of affordability assistance programs. ¹²⁷
	City of Springfield	Springfield Broadband Cohort	The Broadband Cohort participated in Accelerate Illinois Round 1. The Cohort has identified three zip codes to focus on and plans to (1) assess individual providers, (2) host community meetings, (3) create subcommittees, and create an RFP. ¹²⁸
	Village of Elsah	Connect Elsah	Connect Elsah was a participant in Accelerate Illinois Round 1. Connect Elsah is on a mission to provide reliable and affordable high-speed internet as an essential utility for the community in and around the Village of Elsah. ¹²⁹

¹²⁵ Jackson County Broadband Plan, Accelerate Illinois Round 1

¹²⁶ Knox County Broadband Plan, Accelerate Illinois Round 1

¹²⁷ Whiteside County Broadband Plan, Accelerate Illinois Round 1

¹²⁸ City of Broadband, Illinois Broadband Plan, Accelerate Illinois Round 1

¹²⁹ The Historic Village of Elsah, Accelerate Illinois Round 1

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
	City of Aurora, IT Division	Technology Strategic Plan	The Technology Strategic Plan provides a roadmap of short- and long-term technology initiatives aimed at building the necessary foundations to ensure that the City of Aurora’s people, processes, and businesses thrive. The Technology Strategic Plan outlines 58 short- and long-term initiatives across four Aurora-focused thematic categories— Infrastructure, Innovation Projects, Governance & Security and IT Management.
	The QUILT Corporation	Chicago-Area Broadband Initiative (CABI)	CABI is a digital socio-economic transformation project whose goal is to provide residents of Chicago’s economically challenged areas with Gigabit Opportunities that enable them to become participants in the digital economy. The initiative also raises awareness of the time value of broadband adoption (the longer we wait the further behind we leave the unconnected) and builds collaborations with communities, public, private, and philanthropic partners. ¹³⁰
	Community Development Corporation (CDC) of Pembroke-Hopkins Park (PHP)	PHP BroadbandNOW!	CDC of PHP was a participant in Accelerate Illinois Round 2. The BroadbandNOW! Plan has six priority strategies: (1) low monthly cost (<\$40), (2) environmentally friendly, (3) minimum high speed (100/20 Mbps), (4) immediate deployment, (5) community ownership, and (6) cellular upgrades. ¹³¹

¹³⁰ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹³¹ Pembroke-Hopkins Park Broadband NOW! Plan, Accelerate Illinois Round 2

Asset type	Organization name(s) ¹⁰⁸	Asset name with link to asset ¹⁰⁹	Description
6. State owned structures and utility infrastructure	Illinois State Board of Education; EducationSuperHighway	Illinois Classroom Connectivity Initiative	The program aims to place high-speed internet access in every classroom. EducationSuperHighway supports each internet upgrade project, which are provided free of charge to school districts committed to upgrading their networks for digital learning. The program's technical assistance includes: <ul style="list-style-type: none"> • Research on technology and provider options • Development of Form 470 / RFP strategy and business case • Assistance on bid responses and procurement • Implementation of upgrades
	Hancock County	Hancock County Vertical Assets	The map identifies vertical assets suitable for expanding the rural broadband network in Hancock County. Vertical assets included on the map are at least 20 feet tall and away from tree cover. Assets included on the map are categorized by specific height range.
	City of Chicago	Chicago Real Estate Asset Inventory	As a part of Chicago's Strategic Broadband Planning report published in the fall of 2022, the city conducted an inventory of hard assets available for broadband deployment.

3.3.2 Broadband Adoption

The National Digital Inclusion Alliance defines broadband adoption as residential subscriptions to high-speed internet access and the digital capacity of communities.¹³² The State utilized this definition when conducting its inventory of broadband adoption assets. The assets (Table 8) in this section match Section 3.1.4 (broadband adoption assets) of the Illinois State Digital Equity

¹³² [Definitions](#), National Digital Inclusion Alliance

Plan. Below is a list of broadband adoption asset types that are currently deployed across the state with details of each of these described in the table that follow:

1. **Computer refurbishing programs:** device reuse or recycling programs
2. **Digital Navigator programs:** offer technical assistance services to support broadband adoption and the use of devices
3. **P-20 school system one-to-one computer programs:** run by individual schools or school districts that offer one internet-enabled devices for each student, so that every student can have their own computing device to use for learning
4. **Loaner computer/hotspot programs:** programs that offer device or hotspot loans on a temporary basis
5. **Percentage of residents who have adopted broadband:** tracked through programming that monitors broadband adoption statistics, and increased through programming that focuses on broadband adoption
6. **Programs that conduct awareness and outreach activities of digital inclusion programming and resources:** research, marketing and awareness campaigns intended to encourage broadband adoption
7. **Programs that provide digital literacy and digital skills training:** offer training related to digital literacy, digital skills, or internet-enabled device usage
8. **Programs that provide subsidized or low-cost devices:** provide eligible individuals with low-cost or free internet-enabled devices
9. **Public computing labs:** spaces that offer open use of internet-enabled devices to the public

Table 8: Broadband adoption assets in Illinois that can be leveraged in the deployment of federal BEAD and Digital Equity Act funding

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
1. Computer refurbishing programs	Illinois Assistive Technology Program	Reuse Program	IATP provides services to help ensure assistive technology in good working condition can be reused and benefit an individual in need. The types of equipment available include computers and related hardware and software. IATP's Reuse Program provides assistive technology and durable medical equipment to people of all ages with disabilities who can't afford to purchase new.
	PCs for People; Cook County, IL	Electronic Recycling Center	PC for People's Illinois chapter has created an electronic recycling/refurbishing center in Cook County (selected since ~40% of IL's unserved population live in Cook County). Businesses are encouraged to donate their devices which PCs for People refurbishes for free and sells for discounted rates in-store.
	Computer Banc	Computer Banc	Computer Banc is a non-profit that has provided high-quality refurbished computers throughout the community for over 20 years. To ensure that they are serving those with the most need, Computer Banc asks that certain qualifications to be met to be eligible to purchase one of their computers. Computer Banc serves those in their community such as people with disabilities, those with low income, nonprofits, schools, and our Military Veterans.

¹³³ Organization who owns or manages the described asset

¹³⁴ Links provide either further information on asset or direct to organization providing access depending on what is available online

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
2. Digital Navigator programs	DCEO; the IOB	Digital Navigator Grant Program (part of Connect Illinois Digital Equity Package)	Digital Navigators (volunteers or cross-trained staff) serve as the community “expert” to assist local residents needing improved digital literacy skills and know-how. They also work with the Illinois Office of Broadband and program partners through a train-the-trainer model—where Digital Navigators assess community digital literacy gaps and provide competent guidance towards resources and program development that is suitable for the community and its residents.
	Elevate Inc in partnership with LISC Rural Digital Navigator Midwest	Digital Navigator Program	Elevate, a non-profit dedicated to innovation and entrepreneurship in East Central Illinois, partnered with LISC Rural DN Midwest to provide individualized/small group assistance in 5 states in the Midwest. The non-profit aspires to create an ongoing/sustainable model of DN support so they can equip individuals with the digital skills necessary for future innovation.
	ConnectLakeCounty (formerly known as ConnectWaukegan)	Community Digital Navigator	ConnectLakeCounty has designed a Digital Navigator role to advocate for the community and offer small-group training to Waukegan residents/community groups. The Navigator is expected to report to ConnectLakeCounty and the Community Digital Navigation Coordinator who guides the Navigator to specific community locations. The Community Digital Navigator also works with organizations and directly with residents providing support and helping them enroll in ACP and apply the benefits to their home internet bill. ¹³⁵
	College of Lake County	Tutoring Center at CLC	CLC tutoring centers offer tutoring support to students who need help with basic computer skills or a refresher on technology use. Tutors across all three campuses can assist with various tasks including navigating the computer, managing computer files, using a flash drive, creating a simple presentation, and creating a spreadsheet.

¹³⁵ [ConnectLakeCounty](#)

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Comcast	Digital Navigators w/ YMCA of Metro Chicago	Comcast recently announced a major investment and partnership to support the launch and scale of a Digital Navigator program spanning six YMCA locations in the city. Digital Navigators are individuals affiliated with trusted community organizations, like the YMCA, that are trained to help people connect to the Internet. ¹³⁶
	LatinX DLN; Village of Summit	NeighborSquad Techies	Digital Navigators or "NeighborSquad Techies" provide digital literacy trainings. ¹³⁷
3. P-20 school system one-to-one computer programs	Illinois State Board of Education	FY23 Elementary and Secondary Relief - Digital Equity Grant	The purpose of the program is to assist school districts in closing the digital divide and enabling digital-age teaching and learning. School districts may use funds to provide students with technology tools necessary for technology-rich learning experiences. All purchases must be prioritized first to ensure 1:1 ratio of devices to students.
	Special Education District of Lake County	Student Mobile Device Initiative	The SEDOL has implemented a 1:1 model for students to learn how to use Chromebooks as their main mobile device. The Chromebooks are connected to student accounts and teacher classroom workspaces, so students benefit from tablet and app-driven instruction while strengthening digital skills.
4. Loaner computer/hotspot programs	PCs for People; State of Illinois; IOB	Connect Illinois Computer Equity Network	A statewide network to receive, refurbish, and redistribute used computers across the state (priority is distribution to households without computers). IL is the first state to develop a statewide computer equity network dedicated to collecting used computers from the public and private sector for a multiyear commitment to distribute upgrade devices on an annual basis.

¹³⁶ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹³⁷ [Broadband Adoption in Illinois](#), Panel presentation for Illinois Association of County Board Members, October 2022

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Compudopt	Computer Drive-Thru	Compudopt, a national organization with activity in IL, operates a computer drive-thru where individuals can adopt a free computer. To qualify, individuals must not already own a computer at home and must have a child in K-12 education in the Chicago, Northern Illinois, or St. Clair area.
	T-Mobile	Project 10 Million	T-Mobile's Project 10 Million program provides eligible households a free hotspot and 100GB of free internet access each year for five years. Assurance Wireless, T-Mobile's primary Lifeline Assistance brand, participates in the ACP. ACP allows customers to receive a free phone with unlimited data, texts, and minutes along with 10GB of hotspot data, all on the power of T-Mobile's nationwide network.
	Community Data Clinic; PCs for People	Dignifying Digital Connection	CDC and PCs for People distribute laptops and hotspots to low-income families in East Central Illinois, and Dignifying Digital Connection simultaneously gains insight into other factors around digital connectivity: including sustained broadband access, tech literacy, trust in technology, and affordability.
	Waukegan Public Library	Free digital literacy and computer class series	To support adults interested in the Northstar assessment and the public, the Waukegan Public Library offers a 5-course Digital Literacy program in English and Spanish. The classes introduce individuals to Word, searching the internet, and job readiness/financial management. Adults who complete the class are entered in a raffle to win a free computer.
	Waukegan Public Library	Mobile Hot Spot	The Waukegan Public Library offers portable mobile hotspots for rental (up to 1 week). Rental instructions are available in English and Spanish.
	Geneva Public Library District	Tech To Go	The Geneva Public Library District offers iPads and portable hotspots for rental.
	Batavia Public Library	Mobile Hot Spot	The Batavia Public Library offers portable mobile hotspots for rental (up to 2 weeks).

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Chicago Public Library	Computer reservation system & Go Wi-Fi Lending	For in-library device access, CPL cardholders can reserve a computer for an hour at any CPL location and may create up to two reservations in one day. Wi-Fi access is available through the mobile lending program at 17 of the CPL locations. Cardholders may reserve a Chromebook Kit which includes a Wi-Fi hotspot and Chromebook at ten of the CPL locations.
	Rockford Public Library	Borrow a Chromebook Program	The Rockford Public Library offers adults who are aged 18 years+ the opportunity to borrow a Google Chromebook laptop (up to three months) and/or Wi-Fi Hot Spot (up to three weeks). When the device is checked out, library staff perform a visual inventory to help the borrower understand how to use the device and its components (case, cord, etc.)
5. Percentage of residents who have adopted broadband	University of Illinois-Urbana Champaign; the IOB; IBL; Benton Institute	IBL Mapping Initiative	IBL has partnered with the University of Illinois to create static county-level broadband maps on broadband adoption and service speeds.
	The University of Chicago: Data Science Institute	Internet Equity Initiative	<ul style="list-style-type: none"> • University of Chicago's Data Science Institute has created a national heat map which pulls together Census, FCC 477, and Ookla data at the Census Tract (CT). Data is available for all CTs by hovering over the map, and users can select major cities for a zoomed-in view (i.e., Chicago). • Census variables are broadband access, device access, graduation rates, Black and Hispanic demographics, and income levels • FCC 477 variables are # ISPs, ISPs by speed, Fiber ISPs, Fiber availability, and Downstream/Upstream speeds • Ookla variables are focused on speed: download rate, upload rate, latency, and tests/devices per capita

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Purdue Center for Regional Development	Digital Distress Metric and Digital Divide Index	These two metrics developed by the Purdue Center for Regional Development offer census tract and county level views of digital distress and the digital divide utilizing various data points as indicators. These can be used by Illinois to track digital equity and inclusion progress over time.
	Broadband READY; Purdue Center for Regional Development	Illinois READY Regional 2020 Digital Inclusion Profiles138	The Illinois Digital Inclusion Profiles—a set of data for each of the state’s counties, organized by region to align with the Broadband READY structure. The documents offer data visualization tools such as regional maps, demographic data in charts, and bar graphs that illustrate gaps in broadband access for student and senior populations, among other analyses.
	Broadband READY	Digital Indicator Dashboard	A statewide digital indicator dashboard that can be customized by region. Metrics on the dashboard relate to digital demographics, access and availability, adoption and affordability, utilizations, and the served population in the state/region.
6. Programs that conduct awareness and outreach activities of digital inclusion programming and resources	Urbana-Champaign Big Broadband (UC2B); Housing Authority of Champaign County	Hip Hop Xpress Bus Wi-Fi	The Hip Hop Xpress Bus (HHX) is a mobile sound studio and classroom providing Wi-Fi access for learning, teaching, and connecting in Champaign County communities. The HHX commits 12 hours a week traveling to underserved areas and partnering with the Housing Authority of Champaign County to educate and enlighten families about creative opportunities and financial goals that are within reach via the internet. The UC2B Community Benefit Fund provided \$10,000 to support the operation of the Hip Hop Xpress Bus.

¹³⁸ Links to profiles for each region: [Northwest](#), [Northern Stateline](#), [Northeast](#), [East Central](#), [North Central](#), [West Central](#), [Central](#), [Southwest](#), [Southeast](#), [Southern](#)

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Chi Commons Cooperative	BlockShare	A communications platform run by neighbors to empower and connect neighbors. A neighborhood-scale communications platform built, owned, operated, and trusted by its stakeholders that provides solidarity, shared benefits, and digital equity. The server hosts applications that neighborhoods can use to share their assets and organize themselves with modern digital tools. The Internet gateway connects the neighborhood to the external world. The platform is currently deployed in South Shore, Greater Grand Crossing and other under-served communities. ¹³⁹
7. Programs that provide digital literacy and digital skills training	Learning Technology Center of Illinois (LTC)	Digital Literacy & Citizenship	LTC offers resources, professional learning, and support for building the next generation of engaged knowledgeable, and responsible digital citizens.
	University of Illinois Extension, Fulton-Mason-Peoria-Tazewell Unit	4-H Tech Changemakers	4-H teen leaders in the Fulton-Mason-Peoria-Tazewell Unit have engaged a broad range of community organizations to learn about community issues. Teens have created community action plans that incorporated technology into solving a community issue and have implemented technology training with several diverse groups such as Common Place adult learners, University of Illinois Extension staff, and senior residents at Courtyard Estates. Since its launch in July 2019, 4-H Tech Changemaker teens have trained over 40 adult learners. The Tech Changemakers work collaboratively with an adult volunteer to teach digital literacy and internet safety and security to adult learners. Digital literacy refers to the ability to effectively use technology to interact and communicate. The most often requested lessons in this unit include online safety and security, using social media, and learning about different types of devices (smartphones, tablets, etc.)

¹³⁹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Southeast READY; Booth Library, Eastern Illinois University	Digital Literacy “Train the Trainer” Program	The team worked to create curriculum and educational experiences that could continue in perpetuity long after the grant itself expired, with a central goal of establishing a repeatable and successful example for future programs through a “Train the Trainer” format. In partnering with rural libraries, K-12 educators, local GED instructors, and university professionals, the program aimed to provide a means for accessible and effective digital literacy education throughout the Southeast region, with a primary focus on the areas immediately surrounding Coles County. Guides are now available with resources about Digital Literacy/ Citizenship and Digital Literacy Education for students, educators, and community members.
	West Central READY	Data analytics and cybersecurity training program	The West Central READY team has hosted data analytics and cyber security workshops in person at Spoon River College, John Woods Community College, and McDonough Telephone Cooperative. It has also delivered workshops online.
	East Central READY	Financial Literacy series	In Spring 2023, the East Central READY team is offered a financial literacy series.
	Central READY	Community Health Workers Digital Literacy Curriculum	Offered in Spring 2023, the Central READY team, led by the University of Illinois Springfield developed a curriculum for community health workers.
	YWCA Champaign County	Strive	Strive is a partnership program between YWCA USA and Google.org to help close the "digital divide": the gap that exists between individuals who have access to technology and those who lack access. Through this program, YWCA provides free education in the use of computers and internet tools, as well as additional training on essential workplace skills. The goal of the program is to provide training that helps women in our community gain the knowledge they need to access education and employment opportunities.

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Champaign District Park	Tech Talk	Course offered through Champaign District Park to teach computer basis, how to use mobile devices, apps, the internet and more to individuals 50 and older. Free for members and \$4 for nonmembers. The East Central READY team is also working with the Champaign Park District to offer digital skills training.
	The Education Justice Project	Computer Workshops	These not-for-credit workshops, which are held in EJP's computer lab at Danville Correctional Center, allow EJP students to gain confidence in diverse aspects of computing, from foundational skills like keyboarding to advanced programming skills. There is no internet in the lab at this time. Some workshops are one-time events, while others are series that last a few weeks or an entire semester. It depends on the subject and the pedagogical aims of the instructor.
	Chicago Public Schools	Chicago Connected Initiative	Chicago Connected offers online trainings led by experts from organizations in the community on topics like Google Sheets & Excel 101 and Computer Literacy.
	Rockford Public Library	Chromebook + Hot Spot Tutorial Drop-In Classes	In addition to loaner devices/hot spots, the Rockford Public Library offers drop-in classes where individuals can learn how to use their computer, Microsoft Suite programs, Google Suite programs, Zoom, and other skills.
	Waukegan Public Library	Computer Classes and Appointments	The Waukegan Public Library has a drop-in lab that offers support in both English and Spanish. The Library also offers a Get that Job Lab with resume help and Learn Microsoft Word at home class in English. The library also offers free online Northstar accounts and enrollment in TypingClub.
	Literacy Chicago	ACE the Workforce & ACE the Computer programs	Literacy Chicago's ACE programs offer training on 1) computer basics and 2) how to use the computer for work. Content includes how to search the internet, write emails, use social media, consider online communication etiquette, and fill out online job applications.

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Urban Muslim Minority Alliance (UMMA)	Education Empowerment	UMMA is a case management organization in Waukegan that takes participating neighbors on a journey that leads to financial security and meets needs through education classes, food pantry, job readiness, and self-sufficiency. Out of seven programs offered for educational empower, two of the Urban Muslim Minority Alliance’s programs for on digital skill building include the Microsoft Office program which teaches the Word, Excel, PowerPoint, and Publisher components of the Microsoft Office 2019 suite and the Introduction to Basic Computers program which teaches basic computer hardware, how to use the keyboard, the internet, and email, and computer social skills and “netiquette”.
	Access Living	The Disability Inclusion Institute	The Disability Inclusion Institute is Access Living’s consulting and training service. Access Living is doing a pilot program to improve digital access and literacy for people with disabilities. ¹⁴⁰
	Claretian Associates	Claretian Associates	Claretian Associates provides digital literacy trainings and education regarding digital literacy to South Chicago. ¹⁴¹
	Governors State University (GSU)	College courses on Intensive English, Digital Literacy, and Math Interventions	With GEER funding from the Illinois Board of Higher Education, GSU is creating courses on English, math, and digital literacy topics. The courses support ~200 students via a two-semester training.

¹⁴⁰ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁴¹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
	Association House of Chicago	Tech#Ready	Tech#Ready helps people develop the digital skills they need for future jobs. Participants learn essential computer skills from experienced instructors. There are beginner and advanced courses offered and certification opportunities with Microsoft Office Suite (MOS) available. This 8-week course offers a self-paced, online curriculum that is designed to boost digital literacy and confidence working with computers. With group and 1-on-1 instruction, this training course can fit anybody's learning style.
	LatinX DLN; Village of Summit	Cybersecurity courses	Bilingual cybersecurity virtual courses are offered to diverse stakeholders. ¹⁴²
	LULAC Illinois Education Council 5238	Grow with Google	LULAC 5238 has partnered with LULAC National to be a part of the pilot program with Google, which is focused on improving digital skills in their community. Through the partnership, the council has also partnered with the Summit School District 104 in Summit, IL to engage the local community in growing their digital skills. The program has engaged teachers and parents through a fun and educational workshop to teach fundamentals of using Google digital products. Participants have learned how they can utilize Google's wide variety of digital products in their personal and professional lives.

¹⁴² [Broadband Adoption in Illinois](#), Panel presentation for Illinois Association of County Board Members, October 2022

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
8. Programs that provide subsidized or low-cost devices	Illinois Department of Aging, Illinois Assistive Technology Program	Illinois CARE Connections (ICC) Program	The program serves individuals who are most likely to be socially isolated because of the pandemic and provides them with technology solutions to help alleviate isolation. Participants receive an Apple iPad or Android tablet with a case, keyboard, and headphones. If needed, they are also provided internet access through a hot spot. The technology is used to increase social engagement and social connectedness. The priority is to serve those who live alone, do not normally receive in-home services, and who live in rural areas. The devices have applications that support different communication options so individuals can connect with family, friends, providers, and participate in Telehealth appointments with doctors.
	ISBE	School Technology Revolving Loan Program	The School Technology Revolving Loan Program (STRLP) is a 3-year loan with 1.685 percent interest rate. The district must allocate the loan expenditures based on the percent of enrollment that is attributable to grades K-8. Loans can be used for equipment and wiring for installing/upgrading networks, computer hardware used for classroom instruction and/or staff development, computer furniture, other technology hardware investments, and staff development related to the integration of technology into the learning environment.
	Learning Technology Center of Illinois (LTC)	Illinois Learning Technology Purchase Program (ILTTP)	ILTTP is an Illinois cooperative whose mission is to provide accessible, high-quality, affordable technology, digital learning resources, and opportunities to K-12 educational communities. The cooperative aggregates the buying power of hundreds of districts to help them procure products and services from quality vendor partners and partners with vendors to help them reach the correct audience.

Asset type	Organization name(s) ¹³³	Asset name with link to asset ¹³⁴	Description
9. Public computing labs	YMCA Chicago	Tech Hubs	The YMCA Chicago locations have created in-person computer labs, called Tech Hubs, for free use by community members. The Tech Hubs are equipped with computers and Digital Navigators. The initiative is supported by Chicago Connected's internet provision and Comcast's \$500 million investment into YMCA facilities, and the Y hopes to expand Tech Hubs across six different locations within the next three years. Northeast READY region is currently piloting its first digital navigator through the YMCA in Chicago.
	Southern Illinois University	Community Technology Center	Southern Illinois University Carbondale has opened a Community Technology Center at its Eurma C. Hayes Community Center. The center is a 3-room suite where area residents can access free broadband, rent tablet computers, print documents, and learn various digital skills. Southern READY team has collaborated with the local community and supporters to support the reopening of this historically important community center.
	Richard J. Daley College, City Colleges of Chicago (CCC)	Computer Labs	Daley College provides computer lab access for both City Colleges of Chicago students and to the public via the Connect Chicago initiative. The Daley College computing lab houses the latest in PC system technology. All PCs host a standard Office software suite as well as departmental sponsored academic applications.
	Greater Auburn-Gresham Development Corporation (GAGDC)	Digital Community Center, Auburn Gresham Healthy Lifestyle Building	Auburn Gresham Healthy Lifestyle Technology Hub plans to directly respond to the community's quality of life plan including workforce development – the creation of 100 living wage jobs within the community – access to health and wellness services “Hub”, technology and educational enhancements, along with community development services supporting youth, seniors, families and disenfranchised serving the greater South Side.

3.3.3 Broadband Affordability

The State defined broadband affordability as internet subscription affordability that ensure the price of monthly broadband service is sustainable for families.¹⁴³ The assets (Table 9) in this section match Section 3.1.5 (broadband affordability assets) of the Illinois State Digital Equity Plan. Below is a list of broadband affordability asset types that are currently deployed across the state with details of each of these described in the table that follow:

1. **Discount or subsidized broadband service and equipment programs:** programs that offer subsidies or discounts for broadband services or internet-enabled devices
2. **Steps taken to increase enrollment in the ACP:** programs that focus on increasing ACP enrollment

Table 9: Broadband affordability assets in Illinois that can be leveraged in the deployment of federal BEAD and Digital Equity Act funding

Asset type	Organization name(s) ¹⁴⁴	Asset name with link to asset ¹⁴⁵	Description
1. Discount or subsidized broadband service and equipment programs	Illinois Commerce Commission	The Illinois High-Cost Universal Service Program	Through this program, customers of telecommunications carriers contribute to a fund that is used to provide cost support to certain incumbent rural local exchange telecommunications carriers in Illinois in order to keep rural telephone rates affordable. ¹⁴⁶
	Illinois Commerce Commission	The Illinois Universal Telephone Assistance Program	Through this program, customers of telecommunications carriers in Illinois may submit voluntary contributions that can be used to offset the costs to eligible low-income customers of connecting to the telephone network. This program has also provided funding to the PCs for People program. ¹⁴⁷

¹⁴³ [Affordability Connectivity Program](#), Federal Communications Commission

¹⁴⁴ Organization who owns or manages the described asset

¹⁴⁵ Links provide either further information on asset or direct to organization providing access depending on what is available online

¹⁴⁶ State Government Broadband Working Group

¹⁴⁷ State Government Broadband Working Group

Asset type	Organization name(s) ¹⁴⁴	Asset name with link to asset ¹⁴⁵	Description
	Illinois Commerce Commission	The Illinois Telecommunications Access Corporation Program	Through this program, customers of telecommunications carriers and voice-over-internet protocol providers contribute to a fund that is used to provide support for Deaf, Hard of Hearing, Late-Deafened, Deaf Blind, and Speech-Disabled communities. ¹⁴⁸
	Comcast/Xfinity	Comcast Internet Essentials	Comcast Internet Essentials provides high-speed internet service at a discounted price for individuals/households who are eligible for various public assistance programs. Recipients have the option to purchase a computer for a discounted rate, and can receive free internet training online, a free wireless gateway, and access to Xfinity hotspots.
	AT&T	AT&T Access	AT&T's Access program includes discounted high-speed internet, Wi-Fi service to participants' existing devices, a free wireless gateway, access to Wi-Fi hotspots, and unlimited monthly data. Lower-cost plans are available to households with a monthly speed of 10 Mbps or less.
	Spectrum	Spectrum Internet Assist	Spectrum Internet Assist is an affordable, reliable Internet option for low-income households. The program includes high-speed internet at 30 megabits/second (wireless speeds may vary by location), a free internet modem, no data caps or contracts, and an optional in-home Wi-Fi service with a router for an additional \$5 per month and no activation fee.
	Chicago Public Schools (CPS)	Chicago Connected	Chicago Connected provides no-cost, high-speed internet service to eligible CPS students and their families.
2. Steps taken to increase enrollment in the ACP	IOB	Illinois Broadband Affordability Study	Multipronged research study on affordability and device access for Illinois residents. One proposed recommendation included increasing public awareness of assistance programs, such as ACP.

¹⁴⁸ State Government Broadband Working Group

Asset type	Organization name(s) ¹⁴⁴	Asset name with link to asset ¹⁴⁵	Description
	IOB; IBL	ACP Outreach Calls	The ACP Outreach Call is a newly established IBL-led and supported statewide call (January 2023). The call is designed to support broadband and digital equity practitioners statewide in providing education, outreach, and engagement best practices for promoting and enrolling residents in the ACP. IBL leverages connections in state and out of state to deliver programming and activities to call participants. The IBL also uses this call to support digital navigator programs throughout the state. The ACP Outreach call also provides a space for experienced practitioners and newcomers alike to network, collaborate, and create partnerships across the state and within the same region.
	LatinX Digital Leaders Now (DLN)	Digital Equity	This initiative is focused on making affordable internet available to families who may have financial hardships by connecting them to federal subsidies.

3.3.4 Broadband Access

The State defined Broadband access as the ability to reach internet and internet-related services at significantly higher speeds than those available through “dial-up” services.¹⁴⁹ Below is a list of broadband access asset types that are currently deployed across the state with details of each of these described in the table (Table 10) that follow:

1. **Open access middle mile networks:** physical mid-sections of broadband infrastructure that are comprised of high-capacity fiber lines that internet service providers can connect to
2. **Public Wi-Fi, networks, and access points:** platforms or programs that offer information about public Wi-Fi, networks, access points, or sub-devices that provide access to networks

¹⁴⁹ [Getting Broadband Q&A](#), Federal Communications Commission

Table 10: Broadband access assets in Illinois that can be leveraged in the deployment of federal BEAD and Digital Equity Act funding

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
1. Open access middle mile networks	ICN	Open-access middle mile	Since 2013, the ICN has provided open-access middle-mile networks across the state and connected with 40 providers (incl. dark fiber, lit service, and colocation).
	ICN	K-12 Network	The Illinois K-12 Broadband Network removes bandwidth restrictions for K-12 schools, allowing public K-12 to use as much bandwidth as required for their digital learning needs and one to one device programs. Through the \$20 million capital investment for upgrades, the K-12 Broadband Network is expected to be available at no cost for all Illinois K-12 public schools. ¹⁵²
	Middle Mile Missouri Network Alliance dba Bluebird Network	Bluebird Network	Bluebird supports businesses, schools, hospitals and many other data-driven enterprises with high-capacity transport, blazing internet speeds and data center solutions. Bluebird Networks offers dedicated internet access, Ethernet, colocation, cloud services to carriers and enterprises in Missouri, Illinois, Kansas, Iowa and surrounding states. It operates almost 10,800 fiber route miles, serves more than 82,000 on-net and near-net buildings, and has 153 points of presence (PoPs). The State supported an Enabling Middle Mile Broadband Infrastructure Program application for the Middle Mile Missouri Network Alliance dba Bluebird Network. ¹⁵³

¹⁵⁰ Organization who owns or manages the described asset

¹⁵¹ Links provide either further information on asset or direct to organization providing access depending on what is available online

¹⁵² [Illinois Century Network](#), DCEO; [Illinois K-12 Broadband Network](#), NASCIO

¹⁵³ [Bluebird to Extend Missouri Network with Missouri Telecom Assets Purchase](#); [Bluebird Network](#)

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
	Bond County	Bond County Middle Mile Infrastructure	The Middle Mile Infrastructure serves as a county-wide digital highway that connects 9 township facilities and 3 public schools to a 1 Gigabit+ capable network. ISPs also use the middle mile fiber network as a starting point for service to homes and businesses. ¹⁵⁴
	Urbana-Champaign Big Broadband (UC2B); i3 Broadband	Urbana-Champaign Big Broadband - Below Ground (UC2B Middle Mile & Last Mile Infrastructure)	UC2B is a not-for-profit organization created by the Cities of Urbana and Champaign, Illinois, and the University of Illinois to oversee the UC2B fiber optic network throughout the community. UC2B started as an intergovernmental consortium in 2010 to build and operate the UC2B fiber-optic network using federal and state grants with local matching funds. UC2B is primarily a middle-mile network that connects a large number of anchor institutions throughout the community. UC2B is unique in that it deploys FTTH in an urban setting and prioritizes low-income neighborhoods. ¹⁵⁵
	City of Aurora	OnLight Aurora	OnLight Aurora is a community fiber, service provider and ISP. It was founded in 2012 to serve Aurora, which is the second largest city in Illinois. OnLight provides Gig speed, lower cost, and widely available fiber services to businesses, schools, and other anchor institutions. Its mission is to foster economic development and support community improvement. The Aurora City council also approved an application for the Middle Mile Infrastructure grant program. ¹⁵⁶

¹⁵⁴ Bond County Broadband Initiative, Accelerate Illinois Round 2

¹⁵⁵ [UC2B and i3 Broadband's Champaign-Urbana Fiber Network Growth Continues](#), i3 Broadband; [Urbana-Champaign Big Broadband - Below Ground \(UC2B Middle Mile & Last Mile Infrastructure\)](#), Broadband USA Applications Database; [UC2B Rolls Out Fiber](#), Broadband Properties, LLC

¹⁵⁶ [Aurora, Ill., to Apply for New \\$100M Broadband Grant](#), September 2022

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
	City of Springfield	City Water, Light, and Power (CWLP)	CWLP’s Ethernet network runs on over 270 miles of fiber optic cable and is remotely monitored from the utility’s network management center. The network provides multiple paths across the fiber backbone and is designed to provide a high level of redundancy and a high level of system reliability. CWLP provides telecommunications and fiber optics services to approximately 70 area entities—including schools, medical facilities, banks, insurance companies, county offices, and car dealerships. The most common use of the telecommunications service provided by CWLP is the linking of remote facilities, enabling customers to connect their local area networks (LANs) to create wide-area networks (WANs) with little or no degradation in data delivery speed.
	City of Fairmont City; Spectrum	Spectrum's Full Suite	Spectrum’s high-bandwidth, low-latency network means more than 1,700 local residents and small businesses now have access to Spectrum Internet Gig, with download speeds of 1 Gbps, throughout the buildout area, which includes Fairmont City and Washington Park.
2. Public Wi-Fi, networks, and access points	Illinois Office of Broadband; Illinois Board of Higher Education; Illinois Community College Board; Illinois DCEO; Illinois Department of Innovation & Tech; Illinois State Board of Education; Illinois State Library	Drive-Up Wi-Fi Map	This interactive map provides the geographic location of public drive-up Wi-Fi hotspots in IL. The hotspots are intended for remote learning, so the map includes log-in instructions for educators and students (preK-12 and higher education). Residents may use these hotspots for other purposes, but the state has requested that enabling remote learning is the primary function.

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
	Illinois State Board of Education; EducationSuperHighway	Illinois Classroom Connectivity Initiative	<p>The program aims to place high-speed internet access in every classroom by upgrading projects, with the support of EducationSuperHighway, free of charge. Technical assistance includes:</p> <ul style="list-style-type: none"> • Research on technology and provider options • Development of Form 470 / RFP strategy and business case • Assistance on bid responses and procurement • Implementation of upgrades
	DCEO; Illinois Century Network	Illinois K-12 Broadband Network	<p>State of Illinois funding has been allocated for a secure K-12 Broadband Network available at no cost for all Illinois K-12 public school districts. This program removes barriers limiting access to secure Internet bandwidth essential in today's digital learning environment. The key objective is to ensure every Illinois public K-12 school district has sufficient and fully funded bandwidth to meet the needs of their students, faculty, and administration. The Century Network received \$20 million from Rebuild Illinois to repair, upgrade, and expand broadband network in schools. The \$20 million is intended to prioritize K-12 students, but ICN also serves higher education institutions, public libraries/ museums, local governments, and ISPs.</p>
	City of Chicago	Chicago Connected	<p>Launched in June 2020, the program provides free broadband access to pre-K-12 students and digital learning support to families. In its first two years, the program connected 60K households (or ~100K students). The program is intended to reduce the digital divide and prioritizes low-income families (approx. 70% of participants have an income below \$35K and 40% were unserved prior to the program).</p>

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
	City of Chicago	ChicagoWiFi	ChicagoWiFi is a free public wireless network available at facilities across the city. Wireless Internet Zones are available at all Chicago Public Libraries and other public landmarks (e.g., Cultural Center, Millennium Park). The city has stated that the security of the network may vary.
	City of Chicago	Chicago Park District	The Chicago Park District is installing public Wi-Fi at 60 parks. This includes upgrades to interior Wi-Fi at field houses as well as new exterior public Wi-Fi accessible from outdoor features in the park such as the playgrounds, turf fields and tennis courts. This initiative aims to transform the local parks into Wi-Fi hubs for local communities by providing free, high-speed wireless internet access to the public.
	Urbana-Champaign Big Broadband (UC2B)	Library Hot Spots	The UC2B Community Benefit Fund and the Champaign Public Library added 45 hotspots to their collection—bringing the total to 80. These hotspots give community members free access to the internet.
	Urbana-Champaign Big Broadband (UC2B); City of Champaign	Shadowwood	The City of Champaign coordinated the installation of new equipment to provide wireless Internet connectivity to Champaign Unit 4 students living in the Shadowwood Mobile Home Park. Through a collaborative project, new wi-fi equipment is being installed in Shadowwood. The City of Champaign coordinated the project with cooperation from Unit 4 Schools, i3 Broadband, Mesh++, Ameren Illinois, and Shadowwood Mobile Home Park. Equipment should be fully operational to support online learning as of Fall 2020.

Asset type	Organization name(s) ¹⁵⁰	Asset name with link to asset ¹⁵¹	Description
	Town of Normal	Normal Wi-Fi	The Town of Normal provides free outdoor, wireless networks at several municipal facilities and in Uptown Normal. Facilities include the Uptown Station (train station), local museums, and 4 parks/facilities (Anderson, Champion Fields, Community Activity Center, Fairview). The town has stated that service may be inconsistent indoors and in case of inclement weather.
	Comcast	Lift Zones	Lift Zones are Wi-Fi-enabled safe spaces in community organizations where students and families can get online for remote learning, to build digital skills, access government and other services, and search for employment. Comcast’s Lift Zones provide service, resources, and support in Chicago’s under-resourced neighborhoods. ¹⁵⁷

3.3.5 Digital Equity

The Digital Equity Act of 2021 defines digital equity as the condition 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.¹⁵⁸ The State utilized this definition when conducting its inventory of digital equity assets. Below is a list of digital equity asset types that are currently deployed across the state with details of each of these described in the table (Table 11) that follow:

1. **Civic and volunteer organizations that provide volunteer and advocacy assistance for digital equity programs:** organizations that advocate for digital equity or offer volunteer programming related to digital literacy, inclusion, or equity

¹⁵⁷ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition
¹⁵⁸ [H.R.1841 – Digital Equity Act of 2021](#)

2. **Taskforces or place-based coalitions that work towards digital equity:** platforms that bring together individuals or organizations on broadband-related or digital equity topics
3. **Technical assistance to support digital inclusion:** programs offered to provide internet-enabled devices or digital literacy assistance to covered populations
4. **Workforce development training and employment services:** programs that offer training and employment resources to community members

Table 11: Digital equity assets in Illinois that can be leveraged in the deployment of federal BEAD and Digital Equity Act funding

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
1. Civic and volunteer organizations that provide volunteer and advocacy assistance for digital equity programs	Learning Technology Center of Illinois (LTC)	Connectivity and Digital Equity	LTC offers training and consulting support for obtaining state, federal, and grant funding to help districts with access to, and improvements of, broadband connectivity, devices, and digital resources that increase equitable learning opportunities.
	LatinX Digital Leaders Now (DLN)	Computer Science 4Latinx (CS4Latinx)	The DLN organization recruits Latinx teachers to participate in CS professional development opportunities—specifically, empowering them with CS skills, micro-credentials, and STEM endorsements. The program has a particular focus in helping teachers understand how to distribute the curriculum in the native language of students.
	Community Data Clinic, Technology Services (UIUC)	Dignifying Digital Connection Project	Dignifying Digital Connection aims to expand Internet and technology access for low-income families in East and Central Illinois. Based on the community partnership model, CDC and PCs for People distribute laptops and hotspots to provide access to basic technology and Internet connection. This project supports closing the digital gap for connectivity under a human-centered approach and enables understanding of the socio-technical inequities that persistently prevent diverse vulnerable populations from

¹⁵⁹ Organization who owns or manages the described asset

¹⁶⁰ Links provide either further information on asset or direct to organization providing access depending on what is available online

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			accessing stable broadband connectivity in East Central Illinois. Dignifying Digital Connection gains insight into other factors around digital connectivity: including sustained broadband access, tech literacy, trust in technology, and affordability.
	Chi Hack Night	Chi Hack Night	Chi Hack Night is a free weekly event for individuals who are interested in programming to learn from those in the industry. Hack Nights include announcements on civic tech and open government topics, presentations on active civic tech/open government applications, and mini hackathons where individuals can practice and refine their tech skills. Chi Hack Night strives to increase diversity, equity, and inclusion in Chicago's tech sector. The event promotes presenters from underrepresented groups in tech and hold spaces for anti-racism discussions and projects. ¹⁶¹
2. Taskforces or place-based coalitions that work towards digital equity	IOB	Connect Illinois Digital Equity Package	The State of Illinois has launched a three-pronged digital equity package to help regions identify and address existing broadband equity gaps, and use new resources for urgent broadband access and longer-term broadband competitiveness. Components include: <ol style="list-style-type: none"> 1. Broadband READY 2. Illinois Connected Communities (ICC) Program 3. Digital Navigator
	IOB, IBL	Illinois Digital Equity Coalition	The Illinois Digital Equity Coalition holds monthly meetings to receive updates on Illinois digital equity work and share best practices in the state. The coalition provides the opportunity for individuals across Illinois to convene monthly to discuss best practices and community trends. The workshop-style gathering allowed different organizations across Illinois to come together to share resources and help each other.

¹⁶¹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	IQB; IBL	Broadband READY	The Broadband READY program aims to provide a roadmap to eliminating the digital divide by using regional coalitions to assess broadband access, adoption, and utilization. Qualified regional entities include community and economic development organizations, regional planning councils, or institutions of higher education.
	IBL; Benton Institute	Illinois Connected Communities (ICC)	Illinois Connected Communities is a program designed to engage a first-year cohort of communities through best practice curriculum, expert consultation, and a state grant of up to \$15,000. By the end of the 12-month program, each Illinois Connected Community completes a community-driven, broadband strategic plan that articulates the community's broadband vision and identifies an action plan for progress toward improved broadband access in the areas of community and economic development, education, civic engagement, healthcare, agriculture, and more. The Benton Institute is a funder of this program. ¹⁶²
	State of Illinois; Community Data Clinic	Broadband and Civic Empowerment	Study aims to amplify civic connection and minimize digital inequity via an expanded civic curriculum to address broadband gaps which most acutely impact the state's marginalized and infrastructurally isolated populations.
	Illinois Broadband & Cable Association	Illinois Broadband for All	Illinois Broadband for All is a coalition representing individuals and organizations that advocate for investment in reliable broadband Internet service to enhance the quality of life and create economic opportunity in Illinois.
	Leadership Council of Southwestern Illinois (SWIL)	Leadership Council of SWIL Education Committee	The Leadership Council of SWIL participated in the first cohort of the ICC program. The Leadership Council Education Committee seeks to build long-term reliability and consistency in internet connectivity and broadband access for remote workers and e-learning for students in

¹⁶² See Table 2 for additional details

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			the SWIL region enabling further economic development and educational enhancement activities.
	LULUC Illinois Education Council 5238	DLN	The purpose of DLN is to launch digital initiatives in diverse institutions to grow and prepare the Latinx pipeline in technology for the global marketplace and advocate for equity and diversity in STEM related fields. The vision of DLN is for Latinx to be equitably represented in technology spaces while making a positive impact on society. The mission of DLN is to engage in computer science related initiatives to intentionally include Latinos in STEM pathways following a Diversity, Equity and Inclusion (DEI) model. DLN was a participant in ICC’s second cohort.
	Partnership for a Connected Illinois (PCI)	PCI	PCI seeks to advance the deployment and adoption of high-speed internet services and information technology which has resulted in enhanced economic development and public safety for Illinois’s communities, improved healthcare and educational opportunities and a better quality of life for the state's residents.
	Black Churches 4 Digital Equity (BC4DE)	BC4DE	Black Churches 4 Digital Equity (BC4DE) is building collaborative movement across the nation to make sure that Black communities—communities with the least access—get digital equity. The coalition works to educate members of the community about broadband internet assistance programs, encourage unconnected households to get online, to train and organize leaders as advocates to get their communities connected, and to advance digital equity through the Affordable Connectivity Program (ACP). There are currently three BC4DE Fellows in Illinois who represent Samuel DeWitt Proctor Conference, Inc..
	McKinley Park Development Council	McKinley Park Development Council	The Mercer County Better Together participated in the first cohort of the ICC program.

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	Cook County	Council on Digital Equity (CODE)	President Preckwinkle's Council on Digital Equity (CODE) is comprised of local members and senior advisors from around the U.S. who provide expertise and guidance as Cook County takes action to address digital inequities. CODE has a special focus on the County's south suburbs and other communities that have great need. CODE engages numerous, diverse groups to advance digital inclusivity and equity in the areas of digital infrastructure, digital proficiency, and digital well-being. ¹⁶³
	Region 1 Planning Council	Region 1 Planning Council	The Region 1 Planning Council participated in the first cohort of the ICC program on behalf of the Winnebago County and City of Rockford.
	Housing Authority of Champaign County (HCAA)	HACC	The HACC participated in the first cohort of the ICC program. The HACC has plans to expand access to senior and disabled properties, expand workforce readiness, and launch Community Access Centers.
	McHenry County	Internet Freedom for McHenry County (IFMC)	A non-profit (501(c)(4)) organization of community volunteers from McHenry County, Illinois that is dedicated to providing better broadband access and Internet development in McHenry County, ensuring freedom of information, right to privacy, and Net Neutrality. IFMC participated in the second ICC cohort.
	ConnectLakeCounty	Lake County Community Broadband Taskforce	ConnectLakeCounty has identified five key priorities for addressing barriers to digital equity through its participation in in ICC and securing additional private funding. ConnectLakeCounty, as ConnectWaukegan, participated in the second ICC cohort.
	Tazewell County	Tazewell County ICC Planning Team	The Tazewell County participated in the second ICC cohort. It is planning to host a local government summit to engage in a conversation on strategies for broadband access. The County has performed surveys and conducted

¹⁶³ [Gov. Pritzker and President Preckwinkle Announce New Statewide Network to Deploy Computer Devices for Low-Income Residents Across the State](#), December 2020

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			interviews to understand the current provider landscape and the needs of residents. ¹⁶⁴
	City of Carrollton; the Greene County Economic Development Group	Greene County Committee	The Greene County Committee participated in the second ICC cohort. The committee plans to conduct a broadband design study and explore low capital solutions that can provide service while the county identifies a provider that is willing to partner on future infrastructure grants. ¹⁶⁵
	City of Harvey	City of Harvey Steering Committee	The City of Harvey participated in the first cohort of the ICC program. Through ICC the City convened a Steering Committee and engaged other experts to aid in developing a community-driven strategic plan that articulates Harvey’s broadband vision and identifies an action plan for progress toward improved broadband access, adoption, and utilization
	City of Chicago	Chicago Digital Equity Coalition (formerly Council)	In May 2022, the city announced the launch of the Chicago Digital Equity Council—a coalition born out of Chicago Connected and built on the program’s progress in the K-12 space—to pinpoint and tackle the barriers to digital equity. During its time, the DEC hosted ~20 community conversations and solution design workshops in the city's least connected neighborhoods and connected ~400 residents. Via on-the-groundwork, the DEC surfaced barriers to digital equity, understood the initiatives underway, and co-created recommendations with the community. The Chicago Digital Equity Plan is the product of this work and synthesizes next steps for the city. Now, the City is formally launching the Chicago Digital Equity Coalition – an inclusive community for digital equity advocacy, resources, best practice sharing, and program development.

¹⁶⁴ Tazewell County Broadband Planning, Illinois Connected Communities Round 2
¹⁶⁵ Greene County ICC Update, June 2022

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	The Digital Excellence Consortium, Inc.	The Chicago Digital Access Alliance, Inc.	In 2007, The Chicago Digital Access Alliance, Inc., established its vision for Digital Excellence in Chicago and the transformation into a digitally empowered city. That vision became the framework for “The City That Networks”, a groundbreaking report and evocation of the city Chicago could be with all 77 Chicago neighborhoods connected as digitally driven communities. That vision also attracted \$21 million in federal investment in 2009 into concepts and training pilot programs of digital demonstration communities that became the Smart Chicago Collaborative. Thirteen years later, many parts of that vision remain unrealized, and one of the missions of the Consortium is to establish the unrealized elements in a goal toward #endingthedigitaldivideby2030.
	Smart Chicago Collaborative	Smart Chicago	Smart Chicago is a civic organization devoted to improving lives in Chicago through technology. The organization works on increasing access to the Internet, improving skills for using the Internet, and developing meaningful products from data that measurably contribute to the quality of life of residents in the region and beyond.
	City of Waukegan	Waukegan Community Broadband Taskforce	The Waukegan Community Broadband Taskforce (WCBT) was formed to create the vision and solution for a critical pathway to recovery and resurgence in this community. This public/private collaboration of city staff, anchor institutions, and community partners sees the critical obstacles that exist when access, adoption and full utilization of broadband is not available to all.
	Village of Flanagan	Connect Flanagan	The Village of Flanagan Steering Committee participated in the first cohort of the ICC program. Connect Flanagan members have communicated with providers and applied for a

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			grant to help spur the building of fiber infrastructure in their community. ¹⁶⁶
	Village of Fairmont City	Village of Fairmont City	Village of Fairmont City is focused on adoption through education, tech classes, small business classes, technology giveaways, and free Wi-Fi in green spaces. The Village of Fairmont City participated in the second ICC cohort.
	Waukegan Public Library	Northstar Digital Literacy Certificates	The Waukegan Public Library is an official testing location for the Northstar Digital Literacy program, an industry-wide national program which certifies an adult's ability to use computers/software. Adults who complete an assessment at the library are eligible to earn Northstar certificates.
	Bloomington-Normal Innovation Alliance (BN Innovation Alliance)	BN Innovation Alliance	The Alliance's mission is to empower the Bloomington-Normal region to embrace innovation, bolstering local economies with smart development & policies rooted in connectivity, mobility, equity, and sustainability. Eight project areas that include the digital divide, digital transformation, enhanced digital services, and cybersecurity summit.
	Urbana-Champaign Big Broadband (UC2B)	UC2B	UC2B strives to be a community-based voice in Champaign-Urbana focused on ensuring that modern, dependable, high-speed connectivity is available to all residents. UC2B seeks to unite people, organizations and technology to build an advanced and inclusive future with a focus on equity, collaboration, economic development, and Smart City innovation.
	scaleLIT	scaleLIT	The Chicago Citywide Literacy Coalition (CCLC) was created by adult literacy programs 20 years ago to network, share resources, and raise awareness. Under the new name, scaleLIT continues to assist its members in advancing work in its core program areas of career pathways, digital literacy, and health literacy.

¹⁶⁶ [Illinois Connected Communities: Leveraging the Power of Local Communities](#), Benton Institute, June 2021

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			scaleLIT also continues offering direct services in career pathway navigation and digital literacy.
	The Community Builder's Oakwood Shores	The Community Builder's Oakwood Shores Resident Steering Committee	The Community Builder's Oakwood Shores have formed a steering committee with community members as well as other stakeholders such as libraries, schools, and internet providers. ¹⁶⁷ The Community Builder's Oakwood Shores participated in the second ICC cohort. The committee plans to continue holding monthly meetings, teaching residents technology use skills, offering programming through library partners, and hiring youth to teach digital skill. ¹⁶⁸
	I AM ABLE	I AM ABLE	I AM ABLE has worked within the North Lawndale community to assist and develop technological literacy with its citizens. I AM ABLE connects residents with related resources and advocate for supports that close the digital divide. ¹⁶⁹
	North Chicago CUSD 187	North Chicago CUSD 187	North Chicago CUSD 187 participated in the second cohort of ICC. North Chicago CUSD 187 has focused on expanding internet access throughout the district, device access, and trainings. The group plans to host regular meetings and continue device giveaway, access initiatives, and training programs. ¹⁷⁰
	Mattoon School District 2	Mattoon School District 2	The Mattoon School District 2 participated in the first cohort of the ICC program.
	Neighborhood Network Alliance	Neighborhood Network Alliance	The Neighborhood Network Alliance participated in the first cohort of the ICC program. The South Shore neighborhood-based organization created a digital inclusion alliance coming out of the program. ¹⁷¹

¹⁶⁷ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁶⁸ Illinois Connected Communities Final Report, The Community Builder's Oakwood Shores

¹⁶⁹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁷⁰ Illinois Connected Communities Final Report, North Chicago CUSD 187

¹⁷¹ [Illinois Connected Communities: Leveraging the Power of Local Communities](#), Benton Institute, June 2021

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	Palatine School District 15	Palatine School District 15	The Palatine School District 15 participated in the first cohort of the ICC program. Palatine and its school district plan to leverage the resources of its local libraries to build a sustainable model of digital inclusion with digital navigators. ¹⁷²
	Park Forest-Chicago Heights School District 163	Park Forest-Chicago Heights School District 163	The Park Forest-Chicago Heights School District 163 participated in the first cohort of the ICC program.
	Brown County School District 1	Brown County School District 1	The Brown County School District 1 participated in the first cohort of the ICC program.
3. Technical assistance to support digital inclusion	Illinois State Board of Education; EducationSuper-Highway	Illinois Classroom Connectivity Initiative	ISBE and ESH are offering technical assistance to school districts across the state, helping upgrade tools, and distributing procurement resources free of charge.
	LULAC Illinois Education Council 5238; DLN; Flyer School; Our American Voice®	LULAC Connect	In creating LULAC Connect, DLN has partnered with Flyer School to use Flyer School’s mobile content management platform, Flyer Connect. Hundreds of schools and communities are currently using Flyer Connect to communicate more effectively with students’ families. For instructional content, DLN is working with Our American Voice® to provide educational resources available on the mobile app. The app gives schools the ability to use critical push notifications and announcements, surveys, instructional resources, and calendaring, while providing data analytics for schools to ensure their families are accessing the information and resources.
	LULAC Illinois Education Council 5238; DLN	LULAC Census 2020	The DLN is expected to provide the LULAC Connect Mobile App with Managed Services that includes intensive design and technical support to schools and organizations. The DLN team plans to help support families as they deploy the LULAC Connect innovative mobile technology tool to facilitate communication and remote learning. LULAC Connect posts resources students and families can access using mobile

¹⁷² [Illinois Connected Communities: Leveraging the Power of Local Communities](#), Benton Institute, June 2021

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			phones. Once it is up and running, the schools and organizations have the ability to efficiently maintain and manage the app on their own with minimal time investment.
	Housing Authority of Champaign County (HACC)	Virtual Tutoring/ Homework Assistance	During COVID-19, HACC partnered with students at the University of Illinois Urbana-Champaign to offer free virtual tutoring and homework assistance to students in need. Additionally, technical support was provided to parents trying to navigate the various online platforms their children needed to use during that period of virtual learning.
	Housing Authority of Champaign County (HACC)	EnVision Center	HACC received the EnVision Center designation in October 2020. An EnVision Center is a centralized hub that provides community members with the resources and support needed to excel. Grant funds were used to purchase 10 all-in-one pcs to equip a computer lab.
	YMCA of Metropolitan Chicago	Computer Support Labs	The YMCA of Metro Chicago’s new computer labs add an in-person component to digital access and literacy efforts, which began with connecting Chicago Public Schools (CPS) families to no-cost, high-speed internet and operating a bilingual Community IT Help Desk phone line. The Y’s Computer Support Labs also bridge the digital divide by providing free computer training and IT assistance.
	Chicago Public Schools	Parent Tech Support Center	The Parent Tech Support center offers support for student’s CPS-issued device and other technology-related issues.
	Chicago Public Schools	Parent University	All Parent Universities provide a hub for parents to access internet, devices, and classes. Parent Universities offer parents, guardians, and community members learning and training programs on a broad array of topics at CPS school sites across the city at no cost. Class, workshop, and event offerings include understanding Common Core, GED, ESL, parenting skills, health and wellness, nutrition, understanding Microsoft Office Suite (Microsoft Word, Microsoft Excel, and other programs),

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			financial literacy, job search, and career development strategies. Each Parent University is equipped with a computer lab, a parent resource room, an office area, and an activity room. ¹⁷³
	Chicago Housing Authority	Digital Inclusion Services (DIS)	CHA is dedicated to bringing digital inclusion services and resources to participating residents by providing access to low-cost Internet services, free or low-cost devices, and digital skills training. In addition, CHA offers digital inclusion services in nine Digital Resources Centers located in CHA’s developments and community centers where residents can receive one-on-one assistance. CHA also uses a Mobile Technology Van to offer onsite services throughout the city for individuals who do not otherwise have access to devices/trainings. ¹⁷⁴
	Quincy Public Library	Technology Tutor	Tech Tutors provide assistance in a relaxed, pressure free environment, designed to help QPL members build the skills they need to access the digital resources they want. Sessions are tailored specifically to the skills, experience, and goals of the individual.
	Education Justice Project (EJP)	Computer Lab	EJP maintains a computer lab at Danville Correctional Center. Students use it to produce assignments and notes, watch uploaded content (there is no internet), and gain confidence on computers. Some instructors also hold classes in the lab. EJP students provide tech support. The aim is for the lab to be a valued and vibrant space that supports community building within the program while comfortably and efficiently meeting the various functions that take place in the room.
	Community Data Clinic, Technology Services (UIUC)	Tech Buddies Program	A 20-member team of UIUC students and local community members trained to support households’ continued connectivity needs in the

¹⁷³ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁷⁴ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			months following their receipt of laptops and hotspots.
	Illinois State University	Technology Assistance Community Outreach Service	The Technology Assistance Community Outreach Service (TACOS), a Registered Student Organization (RSO) under the School of Information Technology, aims to serve the Bloomington Normal Community by providing technical assistance to those who need it most. The organization's goal is to create a positive impact on the local community through knowledge of troubleshooting, programming, and other technology-related skills. Current projects include providing technical help to residents at the Luther Oaks assisted living facility in Bloomington and assisting/teaching technology classes for seniors at Living Well United in LeRoy, Bloomington Housing Authority in Bloomington, and Western Avenue Community Center in Bloomington.
	Chicago State University	Chicago State University (Rise Scholar)	Through its library, instruction, and outreach, CSU works to teach digital literacy to its students. The university also provides laptops to entering Freshmen. Enabled by the State of Illinois digital literacy grants, the university is developing a program to use student navigators to assist in community digital equity training. CSU is located in a predominately Black area of the far South Side, and its students are predominately Black, female, and nontraditionally aged for undergraduates. ¹⁷⁵
	City Colleges of Chicago (CCC)	Tech Equity Program	The Tech Equity program is an effort to create more equitable access to technology and tech skills for City Colleges of Chicago students, preparing them to enroll, complete a college credential (certificate or degree), launch or advance their careers, and contribute to an inclusive Chicago economy. City Colleges offers free Wi-Fi to eligible students through the Chicago Connected program, free laptops

¹⁷⁵ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			through the Learn to Own Laptop program, and is building more digital literacy opportunities through its digital equity strategy. City Colleges of Chicago serves students as diverse as the city itself. Many students are the first in their family to attend college. Three-quarters of students are Black or Latinx, and a pre-pandemic student survey found that 60% of respondents self-identified as recently housing- or food-insecure. ¹⁷⁶
	Chicago Public Library	Technology	CPL provides access to desktop computers at 80 locations across the city along with Wi-Fi at library locations. The library also loans Wi-Fi hotspots and Chromebooks in communities most impacted by the digital divide. CPL has developed courses such as Get a Job with IllinoisWorknet for local residents, along with other courses for computer beginners. In select locations, CPL provides computer tutors to assist patrons. CPL has 80 locations across the city some of which include historically excluded communities. Each location is equipped with an Adesso Luminous keyboard. The library’s central location offers the Assistive Resource Center for patrons with limited vision or limited mobility. ¹⁷⁷
	Coalition for a Better Chinese American Community (CBCAC)	Digital Literacy	Every month CBCAC offer a digital literacy class for CPS parents and the members of the general public who want to learn. Materials and recordings for all courses are shared publicly following a session. CBCAC also offers bilingual service, help finding more resources, and help for community members to develop digital skills when looking for employment. ¹⁷⁸
	Humboldt Park Community as a Campus	Family Outreach and Support and Parent Digital Training	Program offers parents in Humboldt Park schools with an opportunity to participate in digital trainings both in-person or remotely. Trainings range from setting up and managing an

¹⁷⁶ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁷⁷ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁷⁸ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			e-mail account and navigating computer applications to trainings that lead to certificates and credentials that assist parents in seeking a livable salary. This program serves Spanish speakers and low-income families, who have historically been excluded in this city. ¹⁷⁹
	Northwest Center	Northwest Center	Northwest Center provides 1:1 coaching in a beginner's computer basics course. As supplies allow, the Center provides participants with a device upon completion of the course. Northwest Center also supports families eligible for Chicago Connected and the ACP to receive internet service for free or at a lower cost. Northwest Center also has additional workshops for personal, career, professional, and digital advancement. ¹⁸⁰
	Southwest Organizing Project's (SWOP)	SWOP	SWOP connects families to internet through the Chicago Connected program and provides digital learning courses through NorthStar Digital Literacy, in English and Spanish. ¹⁸¹
	Preservation of Affordable Housing – Chicago (POAH)	Digital Technology	POAH's onsite computer lab has 10 computer stations and is managed by the Digital Literacy Instructor (funded by LISC AmeriCorps) who: (1) administers digital literacy classes (now offered remotely) and other adult learning technology resources and (2) provides technology instruction and guidance for employment and financial clients as well as assistance to independent users.
	Teamwork Englewood	Team Englewood	Teamwork Englewood provides resources to Chicago Connected for quality internet services to the community, advocate to help community acquire devices and organize digital literacy classes. The Englewood community residents consists mostly of low-income families that do not have access to quality internet services and/or quality devices. This community is often

¹⁷⁹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁸⁰ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁸¹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			overlooked because of its financial stature and families are opted out of a lot of resources, in particular, affordable, high-quality internet and digital technology devices.
	AT&T	Connected Learning Centers (Chicagoland; West Side)	In Chicago, AT&T opened two AT&T Connected Learning Centers where the organization provides free high-speed internet, devices, and educational resources. In June 2022, AT&T opened an AT&T Connected Learning Center on the West Side, at Marillac St. Vincent Family Services, and in September 2022, the organization opened another Chicago AT&T Connected Learning Center at New Life Centers on the South Side. In addition, AT&T has deployed AT&T Fiber to numerous predominantly Black neighborhoods on the south and west sides. ¹⁸²
4. Workforce development training and employment services	DCEO	Office of Employment and Training	The Office of Employment and Training supports innovative workforce programs and career, training and employment services that connect employers to a highly skilled workforce. Providing assistance and resources for job seekers is central to Illinois's commitment to ensuring that businesses thrive in the state.
	DCEO	CEJA Workforce Programs	DCEO's role in CEJA is to help Illinois's workforce prepare for and train for jobs in the clean energy industry and to provide support to workers and communities facing plant closures. These programs prioritize Illinoisians who live in communities that have historically faced economic barriers and environmental damage, bolstering a diverse workforce in the clean energy industry.
	DCEO	Office of Minority Economic Empowerment (OMEE)	The OMEE is committed to providing minority-, women-, persons with disabilities-, and veteran-owned small businesses and entrepreneurs across the state with equitable access to opportunities and resources. Through dynamic

¹⁸² [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			<p>partnerships, targeted outreach, and tailored programs and initiatives, OMEE aims to create an inclusive business ecosystem for communities that have traditionally faced systemic barriers to entry and growth. This investment spurs local economic development in underserved areas resulting in a revitalized and thriving Illinois economy.</p>
DCEO		Illinois workNet® Portal and Program	<p>To expand economic opportunity, the Illinois workNet® Portal and Program utilizes partnerships and technology to expand seamless and real-time access to workforce development resources aimed at individuals, employers, and workforce/education partners.</p>
DCEO		WIOA Works Illinois	<p>WIOA Works Illinois is an online resource to assist business and industry leaders, policy makers, community organizations and workforce professionals in achieving success under the Workforce Innovation and Opportunity Act (WIOA).</p>
Illinois Green Economy Network (IGEN)		Illinois Green Economy Network (IGEN)	<p>IGEN is a consortium of all Illinois community colleges working together to drive growth of the clean energy economy and green workforce. This unique approach leverages the power of a sustainability network while utilizing the deep community connections of individual colleges. IGEN provides a platform to expand the deployment of clean energy technologies, increase employment opportunities, improve environmental and human health, foster community engagement and accelerate market competitiveness.</p>
Discovery Partners Institute (DPI), University Illinois System		Chicago Tech Fellows	<p>Chicago Tech Fellows is a network of programs and support systems from high school to adulthood. The holistic approach is designed to bring more people of color and women into the city’s vibrant and recession-proof tech economy. Among the offerings: In high school, fellows learn an enriching curriculum around computing, computer science, and data science; In college, students embark on immersive hands-on</p>

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			<p>experiences; and within the workforce, adults navigate various pathways into the tech-ecosystem through programs like the network’s 1-year software apprenticeship. All along this pipeline, DPI is focused on demystifying what it means to be in tech, and who should be in tech by creating opportunities for communities that have historically been left out.</p>
	<p>DPI, University of Illinois System; UIC’s CHANCE program; UIUC’s Grainger College of Engineering, and UIUC’s College of Liberal Arts & Sciences</p>	<p>Digital Scholars Program</p>	<p>In the summer of 2020, DPI launched the Digital Scholars program to build a deeper and more diverse pool of homegrown students pursuing computer science and tech-related degrees. The program is a partnership between UIC’s CHANCE program, UIUC’s Grainger College of Engineering, and UIUC’s College of Liberal Arts & Sciences. To date, the program has reached 200+ students and involved more than 100 representatives from Chicago’s tech community. The program is intentional about serving Black and Latinx, CPS and Chicago-area, young women, and first-generation students—at no cost.</p>
	<p>DPI, University of Illinois System</p>	<p>PTTL’s Software Development Program</p>	<p>DPI’s Pritzker Tech Talent Labs Software Development Program aims to reskill and upskill adult learners that are rethinking their careers. The Program’s North Star is to increase Chicago’s digital talent supply and drive representative economic growth in the region through innovative, mastery-oriented upskilling programs designed to match student skills and career aspirations with company needs.</p>
	<p>DPI, University of Illinois System; Google Chicago; Wright College</p>	<p>Discover Computing</p>	<p>This two-part program series is a partnership with Google Chicago and Wright College to help early high school students build interest and awareness in pursuing computer science and tech careers while building their personal Computer Science Discovery Journey. Students work with DPI staff, Google mentors, and Wright College near peer mentors; and develop skills in problem-solving and team building through human centered design thinking activities. This program intentionally serves Chicago-area</p>

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			students, first-generation students, and students of color—at no cost.
	DPI, University of Illinois System	Community College Pathways	Community College Pathways is focused on developing strategic partnerships and relationships with educational organizations and aligned entities (particularly those focused on computing and data) such as community college and university partners, non-profit organizations and service providers, K-12 administrators, corporations, foundations, and others in the community to collaboratively advance DPI's goal of increasing the throughput of Black, Latinx, female, and other minoritized populations into computer science, data science, and related fields of study at Illinois institutions.
	Illinois Manufacturer's Association	Makers on the Move	Makers on the Move bus visits manufacturing facilities, colleges, and high schools across the state to highlight the innovative manufacturing sector and job opportunities that are available today. The program is designed to showcase modern manufacturing, which is high-tech, clean, diverse, and sustainable.
	Illinois Manufacturers' Association; EdSystem	Scaling Transformative Advanced Manufacturing Pathways (STAMP)	Through a community of practice and technical assistance to regional teams, STAMP serves secondary students enrolled in manufacturing pathways that matriculate to community college programs and employment opportunities, with a particular focus on under-represented students with one or more barriers to education, training, and employment. The structure and supports provided through STAMP accelerate and expand manufacturing pathways across numerous population centers in the State and establish a foundation for broader scaling in future years.
	Education Justice Project (EJP)	Prison-to-Gown Pathway	The Prison-to-Gown Pathway plans to seek to address the challenges that these students face. This program plans to implement services and provide support for University of Illinois students who have interacted with the criminal legal system. EJP also hopes it can develop into a useful model for other universities that want to

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			support systems-involved students. EJP is currently in the learning and research phase of this initiative. In future years, EJP plans to pilot services and recruit Pathway members as resources allow.
	Chicago Public Schools	Chicago Connected Initiative	Chicago Connected participants can now access free world-class content taught by instructors from over 190 of the world's leading universities and organizations through Coursera. Chicago Connected is a first-of-its-kind broadband program that has connected over 64K Chicago Public Schools (CPS) students to at-home high-speed internet and made free digital learning resources available to families.
	Chicago Public Schools	Chicago Connected Initiative – Northstar Digital Learning	Northstar Digital Learning sites are working with Chicago Connected families to support parents and guardians learning experience, and proctor assessments to earn a certificate related to computer skills, software skills, and daily technology like social media.
	Chicago Jobs Council (CJC)	Capacity Building	CJC works with non-profit leaders, funders, services providers, and government agencies to build the tools and resources needed to help marginalized workers change their economic conditions. Through public and customized trainings, learning cohorts, and communities of practice, CJC cultivates an environment where workforce development professionals can learn and share their best practices in the field.
	County of Vermilion	Vermilion County Works	Vermilion County Works offers workforce training to youth, adults, and displaced workers across industries.
	Latinx Digital Leaders Now (DLN)	Tech Diverse Workforce	The LatinX DLN organization has partnered with 2 high schools in IL to increase tech career pathways. They offer bilingual cybersecurity workshops and other workforce training.
	Housing Authority of Champaign County	Workforce Development Center at Oakwood Trace	The Housing Authority created a workforce development center at its Oakwood Trace property where residents can access 20 Chromebooks, chargers, and a projector for

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			workforce development trainings, financial literacy classes, and educational workshops.
	Chicago Urban League	Workforce Development Center	Chicago Urban League's Workforce Development Center programs work to raise Black employment and income levels through job training and placement services, career exposure, career advancement support services, seminars, coaching, and long-term retention strategies.
	The Puerto Rican Cultural Center (PRCC)	Education	The education initiative supports youth in becoming lifelong learners and provides wrap-around services to get students from Pre-K to higher education. The PRCC's programs consider the social/emotional needs of youth and their support systems, and offer bilingual and culturally informed programming, affordable childcare, counseling, work readiness development, and employment opportunities. This includes digital literacy classes and workshops to Spanish speakers. ¹⁸³
	Women Employed (WE)	Career Pathways	WE is a trusted expert on career pathways programs. Three key pillars are included in their career pathways work (1) creating daily lesson plans for two types of career pathways programs in partnership with the City of Chicago, (2) meeting regularly with directors of multiple state agencies to discuss career pathways policies, and to provide state-level guidance to educational institutions and community organizations who provide career pathways programs, and (3) overseeing the implementation of the statewide career pathways definition WE worked to develop.
	WE	Bridge Programs & Career Foundations	WE are champions three types of career pathways programs—bridge programs, integrated education and training, and Career Foundations—providing colleges and community organizations with resources to help implement

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
			them and seeking policy improvements to bring programs to scale. This work includes three key parts (1) partnering with City Colleges of Chicago to create daily lesson plans for bridge and integrated education and training programs in high-demand industries, like healthcare, information technology, and early childhood education, (2) working with community organizations and community colleges outside of Chicago to design and deliver bridge programs that support adults to smoothly transition into higher education and further job training, and (3) making Career Foundations lesson plans—an innovative course that helps non-traditional students explore their options, identify a future career, and learn what academic programs they’ll need to get there—available to colleges and community organizations, making it easier for them to implement the course.
	Preservation of Affordable Housing – Chicago (POAH)	Employment Services	The WRC has an Employment Specialist on staff who: (1) offers job training and career placement, re-employment, and/or career advancement, (2) assesses of education, employment experience, skills, and interests, (3) connects clients to jobs and long-term professional development workshops, (4) and provides long-term counseling to clients throughout every step of the job searching process and supports them to further their career.
	North Lawndale Employment Network (NLEN)	NLEN	The NLEN serves under- and unemployed residents of the North Lawndale neighborhood and surrounding communities. North Lawndale Employment Network offers job readiness training, digital learning workshops, financial workshops, resume assistance, energy assistance, and resource supports. ¹⁸⁴
	Cisco Systems	Cisco Networking Academy	The Cisco Networking Academy is a comprehensive curriculum, developed by Cisco

¹⁸⁴ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

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			Systems, which provides students with Internet and information and communication technology (ICT) skills essential in a global economy. The Cisco Academy courses deliver content and assessment, student performance tracking, hands-on labs, and activities to prepare students for industry-standard certifications. Southwestern Illinois College offers Cisco Academy courses at the Sam Wolf Granite City Campus.
	Hughes Who Technologies Studio	Hughes Who Technologies Studio	Hughes Who Technologies Studio is a not-for-profit that uses art, technology, and gaming to enhance the academic, social, and creative skills of at-risk youth; and prepares young adults for future employment in the gaming and interactive industries (film, video and online). Hughes Who Technologies Studio works with underserved middle schoolers to young adults in low-income areas, and additionally offer programs for 3 rd graders and up. ¹⁸⁵
	Phalanx Family Services	Phalanx Family Services	Phalanx Family Services is a premier Southside One-Stop Social Service Agency providing a wide array of services to the community. Phalanx Family Services offers industry specific training, workforce development solutions and Youth reconnection services. In-person and virtual digital literacy opportunities are also provided. The on-site walk-in service offers opportunities for the community to inquire about services and to get their questions addressed. ¹⁸⁶
	UCAN	UCAN Connect, Workforce Innovation and Opportunity Act (WIOA)	The program provides a year-round employment program to “Opportunity Youth” ages 18 – 24 who are disconnected from school or work. This program provides comprehensive services that result in out-of-school youth achieving academic and employment success. Serving approximately 40 youth, UCAN Connects places youth in permanent employment, post-

¹⁸⁵ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁸⁶ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	UCAN	Career Services	<p>secondary education, and certification and apprenticeship programs.¹⁸⁷</p> <p>UCAN’s Career Services is a component of the organization’s FamilyWorks program that works with Chicago Housing Authority residents to help families achieve economic and social self-sufficiency. Career Services’ goal is to offer participants the knowledge, skills, and confidence to become successful in the workplace by inspiring, motivating and educating clients to pursue a career path, whether or not they are currently in school. Utilizing career interest inventories and workforce assessments, staff are able to assist participants in identifying their strengths and goals, so they are able to make informed decisions while pursuing employment opportunities. After participating in training, UCAN’s employment assistance helps match participants to a variety of employers in various communities. UCAN develops partnerships with key employers and service providers that help to make employment a reality.</p> <p>Once participants are placed, our employment retention services help clients maintain their jobs. Ongoing activities and workshops continue to increase participants’ skills and knowledge so that they not only remain on the job but increase their opportunities for growth and promotion.</p>
	Verizon; Code Nation	Code Nation	Code Nation, a STEM organization with school-based programming that teaches coding skills to youth on the South and West side of Chicago, enabled high school students to learn coding and apply their skills to build websites in a Hackathon.

¹⁸⁷ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

Asset type	Organization name(s) ¹⁵⁹	Asset name with link to asset ¹⁶⁰	Description
	Women’s Business Development Center (WBDC)	Digital Learning	WBDC’s online library includes on-demand courses for virtually all business stages. ¹⁸⁸
	Project Exploration (PE)	PE	PE is a Chicago-based nationally recognized nonprofit science education and youth development organization launched in 1999 to address inequities in access to high-quality STEM (science, technology, engineering, math) opportunities in out-of-school time. PE strives to ensure every Chicago student becomes STEM literate, promote a diversified STEM workforce in Chicago and work to serve students that are traditionally underrepresented in STEM.
	Center for Changing Lives	Employment Coaching & Digital Literacy	The Employment Team at the Center for Changing Lives trains its industry-specific members to become Microsoft Office Specialists in Word and Excel. This globally recognized certificate is achieved over the course of 6 months as it advances an individual's computer skills and technical expertise in preparation for a new career pathway. Participants enrolled in both the Office Career Training program and Black and Latinx In Tech (BLIT) program are primarily from underrepresented communities (BIPOC: Black, Indigenous, People of Color) and confront significant financial hardships. ¹⁸⁹
	Microsoft; various corporate and community partners	Accelerate Chicago	Created in 2021, Accelerate Chicago is a workforce development program focused on training and connecting people with diverse and equitable hiring and re-employment opportunities. Microsoft is relying on community partners to mobilize the community and identify those with greatest need of program support, while learning partners deliver the curriculum and provide credentials.

¹⁸⁸ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

¹⁸⁹ [Digital Equity Asset Map Survey Responses](#), City of Chicago Digital Equity Coalition

3.4 Needs and Gaps Assessment

This section assesses Illinois’s current needs for both broadband deployment and digital equity. This assessment was conducted by identifying the state’s needs; collecting data using various sources, including the stakeholder engagement process, the NTIA Internet Use Survey, the NTIA Indicators of Broadband Need Map, and the American Community Survey; and analyzing and evaluating that data.

The needs and gaps presented in this section are considered from a local perspective to help the State of Illinois focus its efforts in deploying solutions to address needs. The DCEO has divided the state’s 102 counties into 10 economic development regions (Figure 1), which are referenced throughout this section and used in the stakeholder engagement process (Section 5.1). The data presented in this section comes from an analysis completed in April 2023. Some of the information may have changed by the time the Illinois BEAD Plan is submitted and published.



Figure 1. Illinois DCEO Economic Development Regions, which divide the state into 10 economic development regions

In line with the asset inventory (Section 3.3), broadband deployment and digital equity across the state were analyzed across five categories:

1. **Broadband deployment:** In Illinois, ~235,000 locations are not served or do not have access to 25/3 Mbps broadband, and ~132,000 additional locations are underserved or do not have access to 100/20 Mbps service.¹⁹⁰ Counties in the Southern, Southwest, and Southeast regions have the most unserved locations, while counties in the Northwest and Northeast regions have the most underserved locations. Section 3.4.1 details the needs and gaps related to broadband deployment in Illinois. In alignment with the BEAD Program, Illinois, through the IOB, plans to prioritize deploying broadband service to its unserved and underserved locations. The IOB plans to then focus on ensuring that community anchor institutions receive gigabit-symmetrical service. In support of these objectives, the state plans to utilize the legislative and regulatory supports in place, increase workforce development programming to address expected labor shortages, and improve databases to accelerate broadband infrastructure deployment.
2. **Broadband adoption:** In Illinois, about one million households—21 percent—do not have access to a laptop or desktop device. An estimated 3.1 million to 3.3 million Illinoisans—31-33 percent—have little to no digital literacy skills.¹⁹¹ Section 3.4.2 details the needs and gaps related to broadband adoption in Illinois. While 72 percent of households in Illinois have adopted broadband, members of these households may not have the skills and devices to use their internet service effectively and efficiently.¹⁹² The State of Illinois hopes to work with sectors that could benefit from increased broadband availability and digital literacy, like healthcare, small businesses, and agriculture.
3. **Broadband affordability:** In Illinois, about 1.9 million households—39 percent—are eligible for the ACP, but only 452,000 households—23 percent of eligible households—are enrolled. Most households eligible for ACP are in Northeast Illinois. Counties in the Southern region

¹⁹⁰ FCC Data Map, June 8, 2023

¹⁹¹ U.S. Census Bureau, 2021 American Community Survey (ACS) five-year data; Digital literacy skill level based on estimates by [The New Landscape of Digital Literacy](#) and [Digital Readiness Gaps](#)

¹⁹² U.S. Census Bureau, 2021 American Community Survey (ACS) five-year data

also have a large ACP-eligible population.¹⁹³ Section 3.4.3 details the needs and gaps related to broadband affordability in Illinois. The section explores three potential solutions for addressing broadband affordability needs in Illinois: (1) ACP uptake or increased enrollment, (2) additional assistance and programs, and (3) alternative approaches.

4. **Broadband access:** In Illinois, at least 2.9 million individuals in 1.3 million households (28 percent of Illinois households) do not subscribe to high-speed internet, which is defined by the American Community Survey as cable, fiber optic or DSL service.¹⁹⁴ Section 3.4.4 details the needs and gaps related to broadband access in Illinois. Improving cellular connectivity across Illinois and increasing the number of public Wi-Fi, networks, and access points can widen broadband access for households that may not subscribe to internet service or have access to internet subscriptions. These intermediary measures are especially important while waiting for broadband deployment to be completed. A four-year deployment timeline is set by the BEAD NOFO.
5. **Digital equity:** About 78.2 percent of Illinois’s population belongs to at least one of the eight covered population categories defined by the Digital Equity Act of 2021.¹⁹⁵ Section 3.4.5 details the needs and gaps related to digital equity in Illinois. The section includes a needs assessment for underrepresented communities with respect to factors like affordability, devices, digital skills, technical support, and digital navigation. It serves as a current baseline for the state in working to address barriers to digital equity. For covered populations that have historically been unable to fully engage in the digital economy, gaps in broadband adoption and device access persist between covered populations and their non-covered peers. To address the digital equity needs of Illinois, the IOB plans to focus on increased workforce development programming, resources for digital inclusion, and community partnerships to build trusted relationships with Illinois’s neediest communities, while also providing resources to promote full participation in the digital economy.

¹⁹³ Eligible households is equal the number of households at/below 200% of the Federal poverty level, those who receive Medicaid or govt medical assistance, Supplemental Security Income, Public Assistance, or SNAP benefits. See details on methodology and source [here](#). Data as of Dec 2022.

¹⁹⁴ U.S. Census Bureau, 2021 American Community Survey (ACS) 5-year data

¹⁹⁵ [Digital Equity Act Population Viewer](#), U.S. Census Bureau

Local and regional broadband service and digital equity needs and gaps were determined using available federal, state, and local data on broadband availability and adoption. This data, coupled with findings from the state’s stakeholder engagement process as well as local and regional efforts to plan for broadband and digital equity, have helped the state develop its plans to address broadband deployment and digital equity gaps in Illinois.

3.4.1 Broadband Deployment

Illinois residents face myriad challenges as a result of current broadband infrastructure deployment. Bandwidth limitations may prevent residents from performing multiple internet-related tasks within a household at the same time. For example, residents in Southwest Illinois shared in listening sessions that students cannot use video conferencing services while completing schoolwork due to bandwidth limitations, and residents in Joliet reported that only one family member can use the internet at any given time.^{196,197} Other participants mentioned having to stay up late at night to download cloud-based data as multiple users slowed down the household’s connection.¹⁹⁸ Some residents report being unable to use their internet-enabled devices due to a lack of internet access and phone service coverage.¹⁹⁹ In Southeast Illinois, participants shared in listening sessions that almost 50 percent of residents in counties like Jasper and Moultrie have resorted to connecting to “grain tower” satellites operated by local farmers. These towers—which users learn about via word of mouth—offer low-speed, unreliable internet for a few dollars a month.²⁰⁰ Caused by dated infrastructure, lack of high-speed internet service at home has forced some residents to travel to public locations to perform daily activities, like banking and accessing government services.

Based on Listening sessions, residents of Illinois want better infrastructure and technology to be deployed. In Southeast Illinois, participants in listening sessions said that costly, low-bandwidth, slow internet results from poor and aging infrastructure like cell or water towers.²⁰¹ In Southwest

¹⁹⁶ Southwest Listening Sessions on 3/15 – 3/16

¹⁹⁷ Northeast Listening Session in Joliet on 5/31

¹⁹⁸ Southwest Listening Sessions on 3/15 – 3/16

¹⁹⁹ Southwest Listening Sessions on 3/15 – 3/16

²⁰⁰ Southeast Listening Sessions on 3/22

²⁰¹ Southeast Listening Sessions on 3/22

Illinois, a participant who switched to a fiber optic plan reported no longer having to coordinate internet usage at home once the improvement was made.²⁰² In Southern Illinois, some infrastructure has “been the same for the last 50 years”.²⁰³ Equitable deployment of broadband infrastructure throughout Illinois and supported by communities could help reduce societal inequities, especially among covered populations who lack equitable access to broadband infrastructure and internet service.

This need for improved infrastructure is echoed in local surveys administered by local governments. The **Bond County Broadband Initiative** found that many rural homes report that their internet service is not reliable.²⁰⁴ Forty percent of rural homes in Bond County rely on cellular technologies as their only source of access to the internet. Additionally, 23% of rural homes utilize ADSL—a phone line—service as their primary broadband connection. These residents reported that their internet service is poor, yet expensive. After learning that no rural area is fully and economically developed without a wireless and fiber broadband system, the **Jackson County Broadband Plan** intends to recommend to the County Board that future broadband deployment projects focus on investments in fiber, wireless, or both.²⁰⁵ In Chicago’s downtown loop, the Illinois Medical District’s (IMD) master plan describes the initiatives the district plans to undertake as it becomes a leader in patient care and medical research. One of the district’s infrastructure and development initiatives is to bring fiber-optic infrastructure into the loop to enable ultra-high-speed internet for businesses.²⁰⁶ The IMD hopes that by deploying an ultra-high-speed broadband network, the network can meet the current and future needs of health care and other high-tech customers in the IMD.²⁰⁷

²⁰² Southwest Listening Sessions on 3/15 – 3/16

²⁰³ Southern Listening Sessions on 3/1 – 3/2

²⁰⁴ Bond County Broadband Initiative, Accelerate Illinois Round 2

²⁰⁵ Jackson County Broadband Plan, Accelerate Illinois Round 1

²⁰⁶ [Master Plan, Illinois Medical District](#), November 2021

²⁰⁷ [Request for Information for Potential Service Providers and Customers for Innovation District Broadband Project](#), September 2018

3.4.1.1 Service to unserved and underserved locations

Illinois used the FCC Broadband Maps to understand where broadband is available and at what speeds, since BEAD program allocation is expected to be based on these maps. According to the FCC Broadband Maps accessed on March 15, 2023, there are 4.1 million broadband serviceable locations (BSLs) in Illinois (Figure 2). Of these, 235,000 (6%) are unserved, ~132,000 (3%) are underserved, and 3.8 million (91%) are served. The distribution of these locations varies among regions. Figure 3 shows how unserved, underserved, and unserved locations are distributed by region.

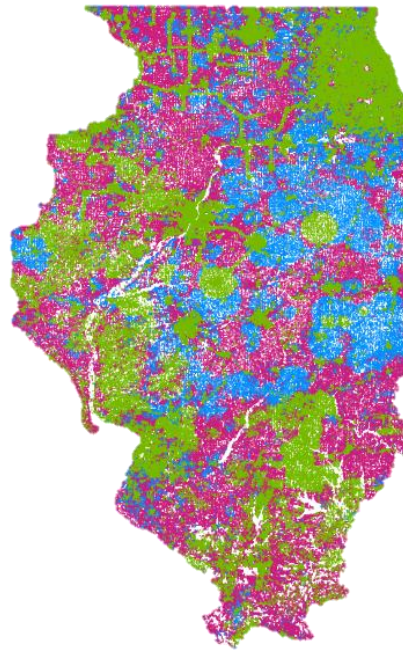


Figure 2. Map of service availability in Illinois by BSL. Unserved BSLs are noted in pink, underserved BSLs in blue, and served BSLs in green

x% Share of type X locations out of all type X locations in the state

Region	All locations, BSLs, #	Served locations BSLs, #	Underserved locations BSLs, #	Underserved locations BSLs, #
Northeast	2,162,737 52%	2,117,891 56%	25,443 19%	19,403 8%
Northern Stateline	169,856 4%	152,402 4%	6,055 5%	11,399 5%
Northwest	401,855 10%	356,824 9%	13,180 10%	31,851 14%
North Central	295,724 7%	258,675 7%	15,605 12%	21,444 9%
East Central	145,055 3%	115,612 3%	16,032 12%	13,411 6%
Central	251,147 6%	210,630 6%	20,846 16%	19,671 8%
West Central	112,028 3%	89,511 2%	5,442 4%	17,075 7%
Southeast	141,165 3%	98,042 3%	12,130 9%	30,993 13%
Southern	192,569 5%	145,410 4%	5,176 4%	41,983 18%
Southwest	296,650 7%	257,631 7%	11,600 9%	27,419 12%
Total	4,930,255	3,802,628	131,509	234,649

Source: FCC Data Map June 2023

Figure 3. Service availability in Illinois by region

The Northeast region has 2.2 million BSLs, representing 52%—a majority—of all BSLs in the state. The region has a high share of underserved locations—25,000 underserved BSLs, representing 19% of all underserved BSLs in the state. Three counties— DeKalb, Grundy, and Kankakee—in the Northeast have over 15% of BSLs that are either unserved or underserved. The Northern regions combined (Northeast, Northwest, and Northern Satellite regions) have 2.6 million BSLs, representing 62% of all BSLs in the state and 76% of Illinois’s total population. The Northwest region also has a high number of unserved locations—32,000 unserved BSLs, representing 8% of the BSLs in the region, and 14% of all unserved BSLs in the state. One county, Putnam, in the Northwest has over 57% of BSLs that are either unserved or underserved.

A high share of the state’s unserved locations is located in the three Southern regions: the Southern region, with 42,000 unserved locations (representing 18% of all unserved locations in the state and 22% of the region’s total BSLs); the Southeast region, with 31,000 unserved locations (13% of all unserved locations in the state and 22% of the region’s total BSLs); and the Southwest region, with 27,000 unserved locations (12% of all unserved locations in the state and 9% of the region’s total BSLs). The three Southern regions combined have 21% of all BSLs in the

state, 20% of the served locations, 23% of the underserved locations, and 43% of the unserved locations. The population across the three regions accounts for 12% of Illinois's population.

In contrast to the northern and southern regions, the central regions of Illinois have 17% of the state's BSLs, 15% of the served locations, 37% of the underserved locations, and 35% of the unserved locations. Of the four regions in the central parts of the state, the Central region has the highest unserved and underserved location counts, with 83,000 unserved locations and 49,000 underserved locations. The population across the four central regions accounts for 12% of Illinois's population.

In total, 50% of BSLs are underserved or unserved in eight counties across the state: Cumberland and Jasper in Southeast Illinois, Pope and Massac counties in Southern Illinois, Calhoun and Bond counties in Southwest Illinois, Shelby County in Central Illinois, and Putnam County in Northwest Illinois. The appendices (Section 7.1) include a breakdown of the number of unserved, underserved, and served BSLs for every county by region.

In alignment with the BEAD Program, Illinois is committed to expanding broadband service to unserved and underserved BSLs by prioritizing fiber connectivity directly to the end-user wherever feasible. Section 5.6 presents an analysis of the funding needed to deploy broadband infrastructure to the remaining unserved locations, as well as underserved locations that may still be unserved after federal (ARPA-CPF, ARPA CSLFRF, RDOF, CAFII, and USDA ReConnect) and Connect Illinois state funding is granted.

Illinois aspires to a further goal of 100/100 Mbps service for all residences and businesses. In the FCC Broadband Maps, accessed June 8, 2023, only 42% of BSLs in Illinois have 100/100 Mbps service, and 35% of BSLs overall have fiber infrastructure.²⁰⁸ Residents have indicated an interest in service beyond the 100/20 Mbps standard. In East Central Illinois, participants in a listening session said that speed standards are rapidly changing as technology changes, meaning that soon higher upload and download speeds may be required.²⁰⁹

²⁰⁸ FCC Broadband Maps, June 8, 2023

²⁰⁹ East Central Listening Session, April 12-13, 2023

Local organizations have considered how to connect households that cannot currently subscribe to existing services. The **ConnectLakeCounty Digital Equity Strategic Plan** found that fiber could provide 100/20 Mbps service for \$2,745 per student household over five years. The plan notes that this approach, while relatively cost-effective, only provides coverage for 20% of the total Waukegan population. Other estimates that focused on citywide coverage were more costly, as they looked at the use of new fiber backhaul and a wider range of structures.²¹⁰

The **Greene County Broadband Committee** proposed one potential solution to the state: low-capital wireless solutions could provide service to unserved and underserved locations sooner, as internet providers work within their project timelines to deploy fiber infrastructure within four years of receiving funding.²¹¹

While fiber is more expensive to deploy, the State of Illinois does plan to prioritize deploying fiber in as many locations as possible in accordance with the BEAD Program. Beyond this requirement, the state strongly supports fiber technology, as it transmits data at speeds far exceeding current DSL or cable modem speeds—typically by tens or even hundreds of Mbps.²¹² Based on the FCC National Broadband Maps, accessed March 21, 2023, fiber technology is deployed at only 35% of locations in Illinois, compared to 90% of locations with licensed fixed wireless service and 5% of locations with LBR fixed wireless, not mutually exclusive (Figure 4).²¹³ Wireless technologies offer similar speeds to DSL and cable modem but use longer-range directional equipment. Such equipment allows for deployment in remote or sparsely populated areas where DSL and cable technologies are costly to deploy.²¹⁴ In Illinois, 87% of locations have available cable technology and 64% of locations have available DSL technology.²¹⁵ Throughout listening sessions, residents and community organizations have been clear: Illinois residents want fiber.

²¹⁰ [Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

²¹¹ Greene County ICC Update, June 2022, Illinois Connected Communities Round 2

²¹² [Types of Broadband Connections](#), FCC

²¹³ FCC Broadband Maps accessed June 8, 2023

²¹⁴ [Types of Broadband Connections](#), FCC

²¹⁵ FCC Broadband Maps accessed June 8, 2023

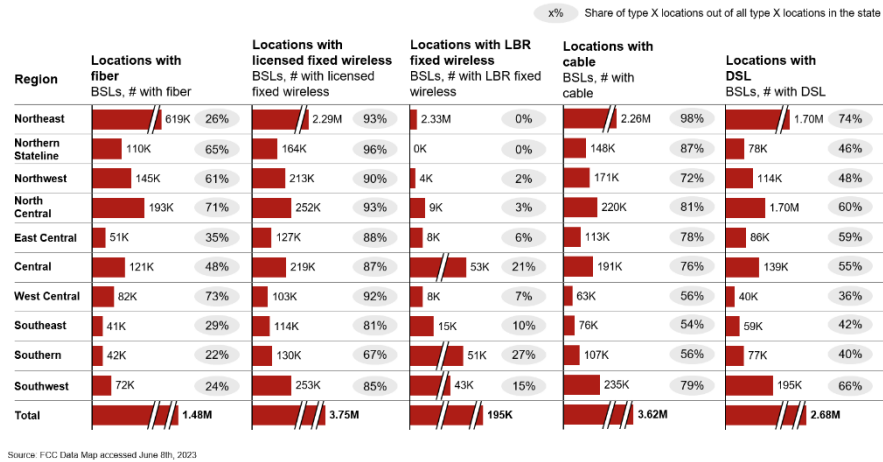


Figure 4. Types of broadband connections in each region across Illinois

3.4.1.2 Service to Community Anchor Institutions (CAIs) without at least one gigabit symmetrical service

After allocating funds for infrastructure to provide high-speed internet service to all unserved and underserved locations, Illinois could use BEAD funding to connect and upgrade CAIs that currently do not have one gigabit per second (Gbps) symmetrical connection.²¹⁶ CAIs have been crucial to broadband access in Illinois, especially during the pandemic. Participants in listening sessions have described traveling to local libraries, schools, and parks to use public Wi-Fi during COVID-19 to engage in virtual classes and work. CAIs are also a key avenue through which Illinois could provide access to broadband services to the unhoused population. An estimated 110,000 Illinois residents experienced homelessness in Illinois in 2020; 65,000 of these residents were in Chicago.²¹⁷ Since this Five-Year Action Plan is meant to deploy broadband that will serve all covered populations in Illinois, the state has made sure to consider the varying day-to-day experiences of all its residents and where they will most likely need broadband access. CAIs are essential to residents' participation in the digital economy (Section 3.4.5.3) and society; therefore at least one gigabit symmetrical service is critical. The state plans to prioritize schools,

²¹⁶ [Frequently Asked Questions and Answers Draft Version 2.0](#), BEAD Program, NTIA

²¹⁷ [Illinois State of Homelessness Report](#), Chicago Coalition for the Homeless, 2022

libraries, and health-related entities for any funding that is allocated to provide gigabit symmetrical service to CAIs.

The National Broadband Map is designed to display mass-market, fixed broadband internet access, CAIs are not marked as BSLs in the initial version of the FCC map, making it difficult to understand the gigabit connectivity of CAIs in Illinois.²¹⁸ CAIs will likely need subscriptions to customized, enterprise-grade internet service (as opposed to mass-market internet service) and are therefore not included in the National Broadband Map—unless a challenge is submitted for specific CAIs that subscribe or could subscribe to mass-market internet service.²¹⁹

The state estimates that there are at least 18,000 CAIs in Illinois.²²⁰ This includes:

- Schools: 4,645 public schools, 1,028 private schools, and 257 colleges and universities
- Healthcare facilities: 224 hospitals and 147 urgent care facilities
- Libraries: 642 public libraries²²¹
- Public safety entities: 1,098 law enforcement locations
- Public venues: 9,704 places of worship

The State of Illinois gained insight on the gigabit symmetrical service available in schools through Connect K-12, which estimates that 68% of Illinois school districts have speeds of one Mbps per student.²²² To understand internet speeds available to other CAIs, the IOB plans to work with state associations and state agencies associated or closely related to the CAIs to survey and understand service availability at CAIs. Its mapping partner, Connected Nation, will support this effort. The state also plans to work with the ICN and ISBE to support the 83 school districts that have internet contracts expiring in 2023. The state and these organizations will help these

²¹⁸ [SHLB Coalition urges FCC to label anchor institutions as broadband serviceable locations](#), Benton Institute, November 2022

²¹⁹ [How to Identify a Community Anchor Institution as a Broadband Serviceable Location](#), FCC

²²⁰ [Homeland Infrastructure Foundation-Level Data](#) (HIFLD), U.S. Homeland Security

²²¹ [Illinois Libraries Today](#), Illinois Library Association

²²² [Illinois Overview](#), Connect K-12

districts to upgrade their service and to onboard to the ICN K-12 Network. These upgrades should help 11% of Illinois school districts meet the 1Mbps-per-student goal set by the FCC.²²³

To create a complete picture of the gigabit symmetrical service available across all CAIs, the state plans to:

1. Collaborate with the State Government Broadband Working Group to understand the state of their constituents' gigabit symmetrical broadband connectivity. The Illinois Department of Health could provide information on the connectivity of healthcare facilities, especially those in rural parts of Illinois.
2. Facilitate a survey, the Illinois Broadband Lab Internet Access Survey for Community Anchor Institutions, to assess CAIs' broadband connectivity. The survey asks about barriers to broadband access, whether the CAI provides public access points and Wi-Fi, and speeds of the CAI's current internet subscription.
3. Continue collaborating with Connected Nation to include K-12 schools among CAIs—with eventual expansion to P-20, healthcare, and public safety facilities—and to verify current information about gigabit symmetric service across Illinois.

Through these three approaches, the state can set a baseline for the current broadband services for CAIs across the state. Based on the Illinois Broadband Map published in November 2022 (Figure 5), gigabit symmetrical service is concentrated in West Central, Northeast, North Central, and Southeast Illinois.²²⁴ In some regions, entire counties lack access to gigabit symmetrical service, indicating that the cost to connect all CAIs to gigabit symmetrical service could be high. The Illinois Broadband Map currently shows the location of every library in Illinois. The gigabit symmetrical service (Figure 6) map shows that many libraries lack access to this service.²²⁵ The state will continue to work with Connected Nation to identify the locations of all K-12 schools and health-related entities and to build a similar picture of the current gigabit symmetrical service.

²²³ [Illinois Overview](#), Connect K-12

²²⁴ [The Illinois Broadband Map](#), November 2022

²²⁵ [The Illinois Broadband Map](#), November 2022

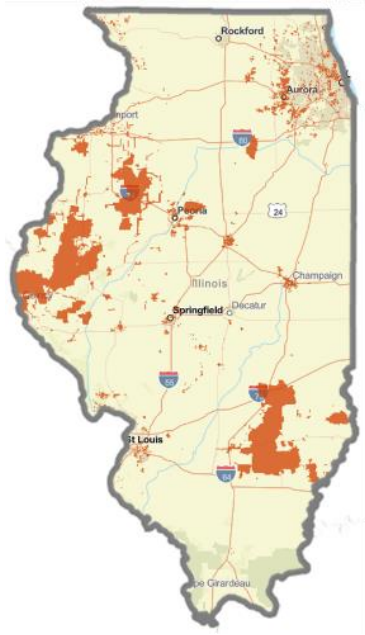


Figure 5. View of locations offering gigabit symmetrical service (orange) in Illinois based on the Illinois Broadband Map (published in November 2022)

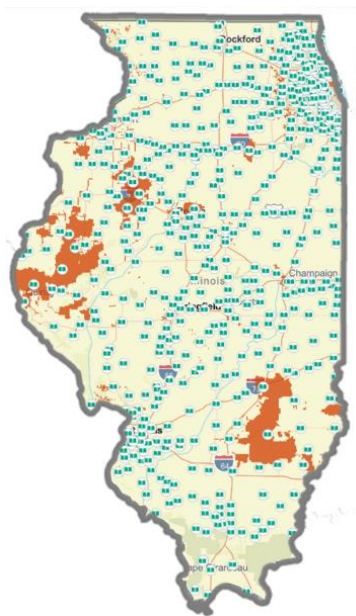


Figure 6. View of locations offering gigabit symmetrical service (orange) in Illinois overlaid with locations of libraries throughout the state based on the Illinois Broadband Map (published in November 2022)

During the pandemic, some municipalities used federal funding to expand access to CAIs and middle-mile infrastructure. The **Southwest Region Broadband READY Report** highlights the Urbana Champaign Big Broadband not-for-profit initiative, which brought connection speeds to every school, medical facility, firehouse, and library in the two cities, as well as thousands of residences and hundreds of businesses. The initiative is a partnership with i3 Broadband and has provided broadband as a municipal service to CAIs and underserved communities.²²⁶

The **Chicago-Southland Fiber Network** was founded by the South Suburban Mayors & Managers Association with the help of State of Illinois and Cook County. Currently, CSFN serves a variety of customers including Cook County courthouses, south suburban regional hospitals and clinics, municipal governments, public safety agencies, community colleges and universities, and economic development organizations to encourage community adoption at cheaper rates than commercial providers.²²⁷ Municipalities and county leaders can serve as an avenue for deployment and adoption of at least one gigabit symmetrical service for CAIs and model after the Chicago-Southland Fiber Network or other non-profit networks supporting municipalities in Illinois.

3.4.1.3 Solutions to funding barriers in designated “high-cost areas”

Aligned to the BEAD NOFO, Illinois may first prioritize deploying fiber to the end-user where possible in unserved locations and then underserved locations. The state may also prioritize gigabit symmetric service to CAIs with remaining funds once service to all unserved and underserved locations has been ensured. “High-cost areas” for Illinois are expected to be determined by the NTIA for BEAD funding allocation, and as described in the NOFO, will be areas where 80% of BSLs are unserved locations. When considering proposals for broadband deployment in these areas, the state could see more unserved locations where the cost of building out broadband service is a higher-capital expenditure (capex) due to (1) the remote location of the area, (2) a lack of population density, (3) unique topography, and (4) a high rate of poverty.

²²⁶ Southwest Region Broadband READY Report, 2022

²²⁷ [Chicago Southland Fiber Network](#), Urban Communications, Inc.

The “Extremely High Cost Per Location Threshold”²²⁸ may help address these funding barriers while also enabling Illinois to subsidize deployment of the best available technology.²²⁹ Using a combination of fiber-optic cable, fixed wireless, and satellite deployment for “high-cost areas” that meet the threshold could allow Illinois to overcome funding barriers that may discourage providers from applying to deploy broadband in these areas. An initial view on a potential threshold in Illinois, is detailed in Section 5.6.

For projects that exceed the Extremely High Cost Per Location Threshold, the state may conduct due diligence on the long-term financial sustainability of proposed alternatives to fiber deployment, since some non-fiber networks have higher costs and need ongoing investment to replace obsolete equipment.²³⁰

3.4.1.4 Development of a dedicated broadband office or government structure to integrate broadband efforts in Illinois

The Illinois Office of Broadband oversees broadband deployment and associated programming across the state. The office was established in 2019 and is housed in the Department of Commerce and Economic Opportunity. The IOB, which currently comprises two full-time employees, hopes to expand its capacity in the future by adding staff and consultant support.²³¹ The IOB has broadened its technical capabilities by establishing strategic collaborations to increase the office’s reach and activities and by leveraging partnerships with non-full-time fellowships. In addition to the director, the office includes a grants manager and two Illini Science Policy Scholars as of April 2023.²³² At the time of this report, the office had begun its search for an assistant director, BEAD director, and DE director.

The IOB relies on a growing strategic partnership, the Illinois Broadband Lab, to build capacity and coordinate efforts to meet BEAD requirements.²³³ In addition, the office has set up strategic collaborations with the Illinois-based Benton Institute for Broadband & Society, Heartland

²²⁸ NTIA BEAD NOFO

²²⁹ Additional details in Section 4.1.1.6

²³⁰ [Broadband Infrastructure Playbook, Implementing BEAD and other Broadband Deployment Programs](#), NTCA-The Rural Broadband Association, June 2022

²³¹ [A Busy Summer for Broadband](#), Illinois Broadband Connections, August 2022

²³² [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

²³³ [A Busy Summer for Broadband](#), Illinois Broadband Connections, August 2022

Forward, the Illinois Innovation Network, University of Illinois Extension Services, and the nonprofit PCs for People.

To further integrate broadband efforts in Illinois, the IOB may create an Illinois Digital Inclusion Coordinator position. The Illinois Digital Inclusion Coordinator could be included in overall statewide broadband planning and in addressing the digital inclusion implications of broadband policy initiatives and other state policy initiatives that rely on broadband (such as government service delivery). The coordinator could develop relationships, partnerships, and programs to promote digital inclusion across the state.²³⁴

3.4.1.5 Legislative and/or regulatory considerations to help overcome barriers or to accelerate infrastructure deployment

Over the past few years, the State of Illinois has considered several pieces of legislation related to overcoming barriers or accelerating infrastructure deployment.

On April 19, 2022, Governor J.B. Pritzker signed the 2023 Illinois state budget into law. Included in the legislation is the Broadband Infrastructure Advancement Act (P.A. 102-0699), which outlines the state's overarching procedures to use expected federal dollars to support broadband deployment projects. The Broadband Infrastructure Advancement Act is intended to be executed in compliance and consistency with the Infrastructure Investment and Jobs Act.²³⁵ The Broadband Infrastructure Advancement Act now requires the IOB to share any required NTIA communication with the Legislative Budget Oversight Commission prior to submission to the federal government. The IOB must also establish program eligibility and selection criteria by administrative rules for any grants for broadband deployment, expansion, access, affordability, and improvement projects.²³⁶

In the 2021 – 2022 session, the Illinois General Assembly considered HB3275, the Illinois Low Income Broadband Assistance Program Act. This bill would have required the DCEO to establish an Illinois Low Income Broadband Assistance Program to ensure that broadband service is

²³⁴ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

²³⁵ [\(220 ILCS 81/\) Broadband Infrastructure Advancement Act](#)

²³⁶ [Illinois's Approach to Infrastructure Investment and Jobs Act Broadband Programs](#), May 2022

available and affordable to low-income families so that they can access remote learning and work platforms.²³⁷ This bill was not passed but did demonstrate recognition of the need for a wider range of low-cost options for low-income families in Illinois.

In the 2021 – 2022 session, the Illinois General Assembly also considered SB1900, the Illinois Public-Private Partnerships Act. If similar legislation were to be considered in the future, it could impact broadband deployment, as the state could deploy broadband across Illinois through a public-private partnership. The legislation could stipulate that public and private entities agree on requirements related to transparency between parties, oversight of projects, compliance with state and federal law, and considerations concerning local jurisdictions when negotiating their partnerships.²³⁸ The proposed legislation did not take effect.

In addition to these important legislative moments, other broadband-related regulations have been considered or passed in the State of Illinois (Table 12). Several of these were identified using the Pew Charitable Trusts’ state broadband policy explorer.²³⁹

Table 12: List of laws or regulations that affect broadband infrastructure deployment in Illinois

Type of legislation or regulation	Legislation or regulation name	Summary ²⁴⁰
Competition	<u>(220 ILCS 5/) Public Utilities Act</u>	Section 13-804 states that the Illinois Commerce Commission does not regulate broadband services, including rates, terms, conditions, quality of service, availability, and classification. The law resolves regulatory uncertainty for broadband infrastructure investment. Section scheduled to be repealed on December 31, 2026.
	<u>(220 ILCS 5/) Public Utilities Act</u>	Section 21-1101 states that providers cannot deny access to service to potential residential subscribers because of race or income in the area where potential subscribers live. Additionally, the legislation requires certain providers to provide wireline broadband services to 90% of subscribers within their service area by December 31, 2008, or to pay into the Digital Elimination Infrastructure fund.

²³⁷ [Bill Status of HB3275](#)

²³⁸ [Bill Status of SB1900](#)

²³⁹ [State Broadband Policy Explorer](#)

²⁴⁰ Summaries sourced from Pew Charitable Trusts’ [State Broadband Policy Explorer](#)

Type of legislation or regulation	Legislation or regulation name	Summary ²⁴⁰
	<u>(220 ILCS 5/) Public Utilities Act</u>	Section 21-1201 prevents the representative of a multi-unit dwelling from interfering with a tenant’s right to receive cable or a related service, including broadband, from a holder with state-issued authorization. The representative may require compensation for property access for installation, operation, and maintenance. This section is scheduled to be repealed on December 26, 2026.
	<u>(765 ILCS 605/) Condominium Property Act</u>	Section 605/14.3 provides an easement for laying cable television or high-speed Internet cable for condominiums if more than half of unit owners agree at a meeting called for such a purpose, unless different procedures are provided in the condominium instrument.
	<u>(765 ILCS 605/) Condominium Property Act</u>	Section 605/18.4 states that condominium board managers’ duties include recording the granting of an easement for high-speed internet cable and, if available and approved by the condominium board, purchasing bulk high-speed internet service for all condominium units on a bulk identical service and equal-cost basis.
Definition	<u>(220 ILCS 5/) Public Utilities Act</u>	Section 21-201 defines broadband service as a high-speed service connection to the public internet capable of supporting, in at least one direction, a speed in excess of 200 kilobits per second (kbps) to the network demarcation point at the subscriber's premises.
Infrastructure deployment	<u>(50 ILCS 840/) Small Wireless Facilities Deployment Act</u>	ILCS 840 addresses the deployment of wireless technology to ensure that providers of wireless access have a fair and predictable process for the deployment of small wireless facilities in a manner consistent with the character of the area in which the small wireless facilities are deployed. This act specifies how local authorities may regulate the collocation of small wireless facilities.
	<u>Code and Regulation 2.23 Broadband Infrastructure</u>	The Illinois Housing Development Authority (IHDA) finances the creation and preservation of affordable housing throughout the State of Illinois to increase the supply of decent and safe places for people of low and moderate means to live. In 2021, the IHDA released its Standards for Architectural Planning and Construction to be used to develop the IHDA’s minimum quality standard, which is used to evaluate the plans, specifications, and other relevant data of proposed housing developments. Code and Regulation 2.23 addresses broadband infrastructure. Per Department of Housing and Urban

Type of legislation or regulation	Legislation or regulation name	Summary ²⁴⁰
		Development Docket No. FR 5890–F–02 Narrowing the Digital Divide, HUD-funded new construction and substantial rehabilitation of multi-family rental housing requires installation of broadband infrastructure. This means that, for HUD-funded projects, broadband infrastructure must be installed for new construction projects of a building with more than four rental units.
Infrastructure funding and financing	HB0062 (220 ILCS 5/) Public Utilities Act (220 ILCS 5/) Public Utilities Act (220 ILCS 5/) Public Utilities Act (220 ILCS 5/) Public Utilities Act	<p>Public Act 101-0029 appropriates \$400 million in state funding to: (1) the DCEO for broadband expansion grants, (2) the Connect Illinois Broadband Deployment Grant Program, and (3) investment in health information technology, telemedicine, distance learning, and public safety from the Build Illinois Bond Fund and the Rebuild Illinois Projects Fund.</p> <p>Section Sec. 13-301.1 establishes the Universal Telephone Service Assistance Program for low-income residential customers. The program intends to increase accessibility of telephone service and broadband internet access through assistance. The section is scheduled to be repealed on December 31, 2026.</p> <p>Section 13-301.2 requires that telecommunications carriers notify end-users that they may participate in funding the Program to Foster Elimination of the Digital Divide through elected contributions. The section is scheduled to be repealed on December 31, 2026.</p> <p>Section 13-301.3 establishes the <u>Digital Divide Elimination Infrastructure Fund</u> (DDEIF), which has been used to deploy broadband technologies through grants administered by the Illinois Commerce Commission. The section is scheduled to be repealed on December 31, 2026.</p> <p>Section 13-502.5 requires that telecommunications carriers facing legal action for improper service classification contribute to the DDEIF.</p>
Infrastructure investment and modernization	(220 ILCS 5/) Public Utilities Act	<p>Section 16-108.5 allows a utility serving more than 1 million customers in Illinois to develop and maintain broadband systems and to deliver broadband services if the utility voluntarily undertakes an infrastructure investment program that meets defined obligations. The utility cannot recover costs through provision of services to its retail customers.</p>

Type of legislation or regulation	Legislation or regulation name	Summary ²⁴⁰
Reporting	(30 ILCS 575/) Business Enterprise for Minorities, Women, and Persons with Disabilities Act	Section 575/8h requires certain telecommunications and communication entities to submit supplier diversity reports to the Illinois Commerce Commission and Business Enterprise Council. The section is scheduled to be repealed on June 30, 2024.
Right of way	(220 ILCS 70/) Crossing of Railroad Right-of-way Act	Section 70/15 establishes a one-time crossing fee for utility providers that are in a railroad right-of-way owned by a land management company and not registered to a rail carrier.
	Illinois Highway Code (605 ILCS 5/)	605 ILCS 5 states that permits are required from the IDOT when working within the right-of-way of an interstate, U.S. state route, Illinois state route, or state-maintained roadway. Internet service providers (ISPs) installing broadband infrastructure over or under highways or state-owned roads could also be subject to the code.
Statewide programs	(220 ILCS 80/) Broadband Advisory Council Act	ILCS 80 establishes the Broadband Advisory Council and its powers and duties, which include exploring ways to use available technologies to offer broadband services to more end-user customers, identifying barriers to broadband adoption among the residents and small businesses of Illinois, and assessing the availability of broadband for low-income households compared to the availability of broadband for other households.

In addition to the above, the City of Rockford serves as an example of municipalities that leverage their regulations to accelerate the deployment of broadband infrastructure. The **Broadband READY Northern Stateline Report** highlights a development agreement made with an out-of-state network that focuses on open-access, community-wide broadband networks. The city allowed the network to use the city’s right-of-way via lease agreement to install a citywide fiber-optic cable network.²⁴¹

²⁴¹ Broadband READY Northern Stateline Report, Region 1 Planning Council, 2021

3.4.1.6 Improved databases to inform broadband deployment

The state has an ongoing partnership with Connected Nation to provide maps showing where broadband service is and where it is not.²⁴² The state has maintained its own broadband map, the interactive Illinois Broadband Map, since 2021. The state intends to continually maintain this map through the IBL. This effort springs from the belief that existing broadband maps available to the public often overstate service and inaccurately indicate that large swaths of rural areas and urban blocks have service. These maps rely on flawed data from the Federal Communications Commission’s Form 477, which reports broadband service levels on a census-block basis.²⁴³

Illinois has also been a member of the National Broadband Availability Map (NBAM) program at the National Telecommunications and Information Administration (NTIA) since 2021. The NBAM is a geographic information system platform that allows for visualization and analysis of federal, state, and commercially available data sets. This includes data from the FCC, U.S. Census Bureau, Universal Service Administrative Company, U.S. Department of Agriculture, Ookla, Measurement Lab, and state governments. NBAM provides users—including administrators from the 18 participating states—with access to data that can inform broadband projects and funding decisions in their states.²⁴⁴

The Illinois Broadband Map does not always align with the FCC data maps, which may show more or less coverage in certain regions compared to the Illinois Broadband Map. As described in the broadband in the Illinois Broadband Connection newsletter, “although both maps rely on provider-submitted data, the Illinois Broadband Map is more timely, granular, and accurate—comparing submitted speeds against speed test results and field validation. In Illinois, the lag between data collection and map publication is considerably smaller, improving accuracy and helping to explain the variation between state and federal approaches”.²⁴⁵

²⁴² [Connected Illinois Round 1 Projects Announced](#), Illinois Broadband Connections, July 2020

²⁴³ [Connected Illinois Round 1 Projects Announced](#), Illinois Broadband Connections, July 2020

²⁴⁴ [Illinois Addresses the Digital Divide](#), Illinois Broadband Connections, August 2020

²⁴⁵ [Illinois Communities Accelerate Toward Better Broadband](#), Illinois Broadband Connections, March 2022

During in-person listening sessions in Southeast Illinois, a resident mentioned that inaccurate provider maps often confuse residents who are trying to procure internet services.²⁴⁶ In a City of Chicago listening session, a participant commented that FCC Broadband maps do not represent reality for multi-unit dwellings with one address but two, three, or four units in the home.²⁴⁷ The state plans to use the BAC—whose members include representatives from AT&T, Comcast, Verizon, Illinois Rural Broadband Communications, Metro Communications, Satellite Broadcasting and Communications Association, and Shelby Electric Coop—to encourage more accurate provider maps and to increase residents’ use of the Illinois Broadband Map when deciding on internet service providers.

3.4.1.7 Increased workforce for deploying broadband

Through federal funding for broadband infrastructure deployment nationwide, thousands of broadband, construction, and electrification jobs are expected to be created. A recent study by the U.S. Government Accountability Office reported mixed indicators of a potential labor shortage and identified various workforce concerns. Unemployment rates for most broadband deployment occupations between 2010 and 2021 were below the average national unemployment rate, indicating a potential labor shortage. However, employment and wage-growth rates for the same period did not indicate a potential labor shortage. Despite this mixed evidence, the report noted that three factors could impact the workforce available to deploy broadband in Illinois: (1) difficulty acquiring skilled broadband deployment workers in rural areas, (2) competition for talent from other federal infrastructure projects in the coming years, and (3) declining supply of employees amid an aging workforce.²⁴⁸ National broadband providers have also noted rising labor shortages as a challenge to broadband deployment.²⁴⁹

The Illinois Manufacturers’ Association recognized in March 2023 that tens of thousands of jobs are available in Illinois.²⁵⁰ In March 2022, the Illinois Department of Labor (IDOL) suspended its COVID-era policy requiring that 90% of employees on public works projects must be Illinois

²⁴⁶ Southeast Listening Sessions on 3/22

²⁴⁷ City of Chicago Listening Session on 4/19

²⁴⁸ [Telecommunications Workforce: Additional Workers Will Be Needed to Deploy Broadband, but Concerns Exist About Availability](#)

²⁴⁹ [Broadband providers have a people problem on their hands](#), May 2022

²⁵⁰ [Illinois Manufacturers’ Association Education Foundation Seeks Measures to Increase Training Opportunities, Strengthen Workforce](#)

residents. As Illinois's statewide unemployment rate fell below 5%, the law was suspended.²⁵¹ While lower unemployment rates point to an improving state economy, they also may signal a lack of available workforce to meet demand when federal broadband infrastructure dollars are deployed.

To investigate the extent of potential workforce shortages, the IBL team developed a model to estimate the supply-demand gaps in the labor needed to install fiber in Illinois from 2022 to 2030 (Figure 7). The workforce demand broadband deployment is expected to generate was estimated using national estimates and insights from Cost Quest Associates (CQA), which reported on the expected number of aerial and buried miles to be deployed in Illinois between 2022 and 2030. Interviews with experts were used to estimate the number of full-time-equivalent (FTE) roles needed to deploy fiber miles during the pre-construction, construction, and post-construction phases. The workforce supply available to deploy broadband was estimated using labor estimates provided by Lightcast. The gap in telecommunication jobs is estimated utilizing national estimates to determine demand from a combination of insights from expert interviews to understand how many people are needed to deploy broadband and the number of miles to be deployed based on CQA data assuming peak deployment in 2026. Expert interviews informed national estimates of assumptions of the deployment crew required for underground/burial cable placement, average output per crew either miles delivered aerial, buried, or underground or fixed wireless towers. Supply is determined utilizing Lightcast/EMSI data for occupational codes (SOC) relevant to broadband deployment. Supply is forecasted utilizing historical data that is available through 2021 through a linear projection.

While not all roles involved in deploying fiber are expected to remain unfilled, routine and manual roles may be difficult to fill in coming years. The shortage of suitable workers is expected to peak between 2025 and 2027, when a large amount of fiber may be installed as funding for both Connect Illinois and BEAD is deployed. The three roles most likely to lack adequate labor supply are laborers, restoration crews, and locators. These roles are involved in the construction and post-construction phases of fiber deployment. Unfortunately, the gaps in supply are

²⁵¹ [IDOL Concludes Enforcement of Employment of Illinois Workers on Public Works Act as Unemployment Rate Falls Below Five Percent](#), March 2022

expected to widen between 2023 and 2026 (Figure 8). As they do so, they will likely be felt not only by the telecommunications industry, but also by the energy, transportation, and construction industries, which all compete for talent and the same skill set in Illinois.²⁵²

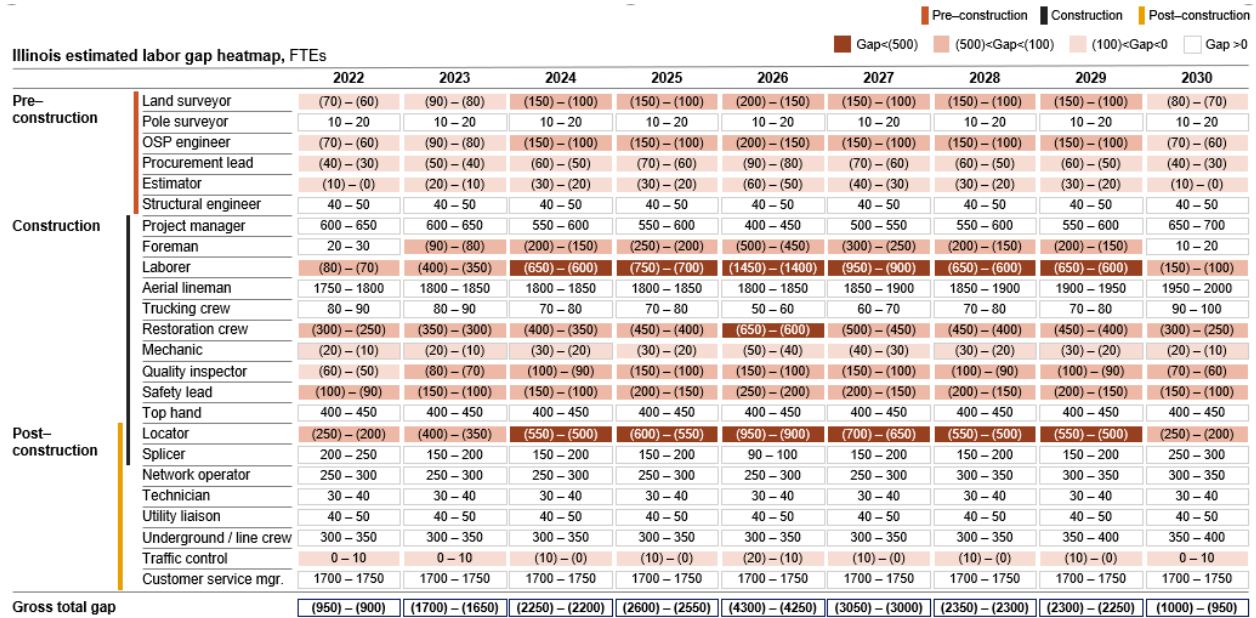


Figure 7. Heatmap of the estimated labor gap (supply-demand) by role in broadband infrastructure deployment ²⁵³

²⁵² Interview with the DCEO Office of Employment and Training

²⁵³ Lightcast Emsi Burning Glass, CostQuest, expert interviews; Assumes peak deployment in 2026 and that talent supply is linear and does not include impact of historical federal funding

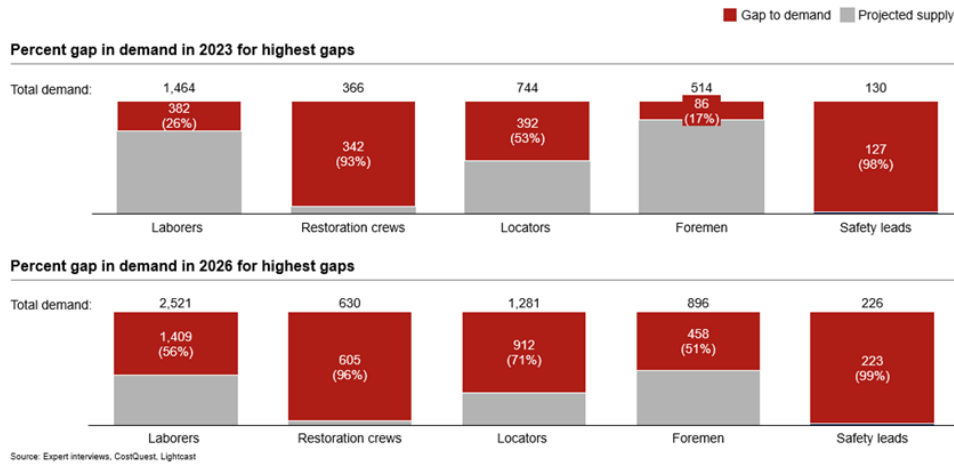


Figure 8. Estimated percent of unmet demand, or gap, for five positions with the highest supply-demand gaps in 2023 and 2026²⁵⁴

While labor crossing lines could address these gaps, the IOB may explore opportunities to work with local community colleges and universities to develop the workforce. To understand the full breadth of post-secondary, broadband-related programs currently offered in Illinois, the state conducted a public search on higher education broadband programs. Using key words like “broadband,” “5G,” “telecommunications,” “wireless,” “fiber optics,” and “internet,” the state was able to find many active programs, courses, programs, and certificates offered by institutions of higher education in Illinois, including both four-year institutions and community colleges. Many of these programs focus on computer networks or IT systems. Since the greatest need is for laborers, restoration crews, locators, foremen, and safety leads in the construction and post-construction phases (Figure 5), the state focused on programs that offer certifications for routine or manual occupations related to broadband. The appendix includes details on the programs offered by College of Lake County, Lincoln Trail College, and Triton College. These programs are either in Southeast or Northeast Illinois and thus could help satisfy a need for more programming across Illinois—especially in areas with a high number of unserved locations. Additionally, community colleges offer all programs that have been identified as source training for key roles in the construction and post-construction phases. This finding highlights the

²⁵⁴ Lightcast Emsi Burning Glass, CostQuest, expert interviews

importance of partnership between the State of Illinois and the Illinois Community College Board (ICCB) in encouraging additional development of workforce pathways to broadband deployment.

The state plans to work with the DCEO's Office of Employment and Training, the DCEO's Office of Minority Economic Empowerment, and the Illinois Department of Labor to address workforce development needs. The following workforce development programs led by the DCEO, IDOL, and the Illinois Community College Board (ICCB) could help support addressing the growing need for a broadband workforce:

- [State of Illinois Workforce Portal](#). This portal provides workforce development resources for individuals, employers, and workforce/education partners. The Illinois workNet portal is an online source of local and statewide resources and tools to help individuals, employers, and workforce/education partners achieve their training and employment goals and for facilitating statewide programs.
- [WIOA Works Illinois](#). This online resource assists business and industry leaders, policy-makers, community organizations, and workforce professionals in achieving success under the Workforce Innovation and Opportunity Act (WIOA).
- [Apprenticeship Illinois](#). This online resource serves as a one-stop shop for information and resources on apprenticeships in Illinois and has 543 U.S. Department of Labor-registered apprenticeship programs. Apprenticeship funding and training assistance support Illinois businesses and employers by providing well-qualified, long-term apprentices to join their payroll in mutually advantageous relationships.²⁵⁵
- [Illinois Works Pre-Apprenticeship Program](#). This grant program provides services free of charge to recruit, pre-screen and provide pre-apprenticeship skills training through a network of community-based, nonprofit organizations. At the completion of the program, participants are expected to gain new skills and to be ready for careers in the construction industry and building trades.

²⁵⁵ [State of Illinois Celebrates National Apprenticeship Week Nov. 14-20](#), November 2022

- [Customized Apprenticeship Programming-Information Technology](#). This project works with partners throughout the state to expand apprenticeship in multiple sectors. The apprenticeship programs primarily focus on the construction and manufacturing trades.

In addition, the IOB expects to launch programs aimed specifically at boosting the broadband workforce in consultation with IDOL, DCEO, and the ICCB, all of which have done considerable work in this area in other sectors. This includes working with the ICCB to expand programs like the Broadband Telecom at Lincoln Trail College to other institutions and identifying other community colleges that teach broadband-related skills that could be desirable to broadband employers.

Investment in the broadband workforce not only facilitates broadband deployment for all Illinoisans, but also could provide those in the broadband industry opportunities for securing a living-wage job after training. As one participant in a listening session noted, *“The fiber industry has a lot of upward mobility; it may be good for people to just get their foot in the door.”*²⁵⁶

3.4.2 Broadband Adoption

3.4.2.1 Improved digital literacy

To develop a top-down perspective on the current state of digital literacy in Illinois, the IOB used three methodologies to estimate the digital literacy nationally:

1. In the 2020 Digital Skills and Trust Report published by EveryoneOn and John Horrigan, a national survey from an online panel was used to estimate digital literacy among low- and lower-middle-income households by asking respondents to assess their level of confidence in successfully completing six online tasks. The report indicated that 35% of respondents from households with incomes less than \$50,000 have low digital literacy skills.²⁵⁷ This report is likely an overestimate for all adults, as low-income households have a higher share of individuals with low digital literacy.²⁵⁸

²⁵⁶ East Central Listening Session on 4/12 – 4/13

²⁵⁷ [Digital Skills and Trust](#), EveryoneOn and John B. Horrigan, PhD, February 2022

²⁵⁸ [A Description of U.S. Adults Who Are Not Digitally Literate](#), U.S. Department of Education, May 2018

2. In its 2020 report, *The New Landscape of Digital Literacy*, the National Skills Coalition estimated the digital literacy of workers ages 16-64. The report defines low digital literacy as having either no or limited digital skills. It estimates that 13% of workers across industries have no digital skills, and 18% have limited digital skills.²⁵⁹
3. A 2016 Pew Research Center report on the *Digital Readiness Gaps* estimates digital literacy by exploring the attitudes and behaviors that influence people’s preparedness for and comfort in using digital tools for learning. The report finds that 33% of adults are “reluctant” to use such tools—meaning that they trust online information but are not confident with devices.²⁶⁰

Based on these estimates—and assuming that the Illinois population mirrors the populations who were assessed—3.1 to 3.3 million Illinoisans over age 18 (about 31-33%) have low digital literacy skills.²⁶¹

In addition to the above, the IBL is collecting Illinois-specific insights on digital literacy through online and phone surveys that are being conducted as part of the IBL’s broader stakeholder engagement effort. Residents were asked about their confidence in completing everyday tasks using the internet.²⁶²

Improved digital literacy—and digital skills, more broadly—is important to economic development in Illinois. The **National Skills Coalition’s *Closing the Digital Skill Divide*** report highlights the strong demand in Illinois for workers with technology skills. Of the 1.7 million Illinois job postings reviewed, 90% of them required some digital skill.²⁶³ These digital skills can vary from foundational skills like spreadsheets, word processing, or basic “computer literacy” to more sophisticated skills needed to work with specific software systems. In the manufacturing, retail, and healthcare industries in Illinois, jobs require more and more digital skills as digital

²⁵⁹ [The New Landscape of Digital Literacy](#), National Skills Coalition, May 2020

²⁶⁰ [Digital Readiness Gaps](#), John B. Horrigan, Pew Research Center, September 2016

²⁶¹ Population and age distribution based on U.S. Census

²⁶² Tasks include creating a resume, finding reliable information about a health or medical condition, taking a course or training to improve job skills, accessing online banking or financial services, accessing or applying for government services, and finding educational content or information

²⁶³ Some digital skills include “definitely digital” skills, like Microsoft Excel or Python, and “likely digital” skills, like bookkeeping and survey design

transformations increase technology demand. In Illinois, these three sectors employ more than 2.5 million workers who are disproportionately likely to be members of racial or ethnic minorities. Members of racial or ethnic minorities often lack access to digital skills and the associated training due to modern-day inequities attributable to historical policies and structural racism.²⁶⁴

Currently, about 31% of workers in the United States lack digital skills. This is disproportionately true for workers whose highest degree is a high school diploma, and such workers are disproportionately members of covered populations.²⁶⁵ Increasing digital skills will improve economic vitality in Illinois, as workers can earn more from jobs that require digital skills compared to those that require none—while also addressing equity gaps among covered populations.²⁶⁶

Local governments and organizations have already taken action to increase broadband adoption and digital skill-building. However, despite current digital literacy and skill-building efforts, more support could further scale and grow digital literacy programming opportunities for residents.

As digital skill-building efforts are expanded to improve digital literacy, digital equity practitioners should remember that technology and digital skills are always advancing. To use new technology, basic skills learned from using older technology are needed, but not everyone has these skills. Prior to the pandemic, a participant in a listening session noted a lack of coordinated effort to teach digital skills. Then, during the pandemic, the need for such skills was suddenly urgent, causing many to feel left behind.²⁶⁷ This feeling triggers anxiety for many when they think about further technological advancement. To overcome this obstacle, practitioners may have to promote basic digital literacy by developing digital literacy curricula that cover a wide range of internet-enabled activities, including turning on a personal computer or device to use the internet.²⁶⁸ Credentialing may also help to address the constant advancement of technology and

²⁶⁴ [Closing the Digital Skill Divide](#), Illinois State Profile, National Skills Coalition, February 2023

²⁶⁵ [The New Landscape of Digital Literacy](#), National Skills Coalition, May 2020; [Closing the Digital Skill Divide](#), National Skills Coalition, February 2023

²⁶⁶ [Closing the Digital Skill Divide](#), National Skills Coalition, February 2023

²⁶⁷ City of Chicago Listening Session, April 19

²⁶⁸ City of Chicago Listening Session, April 19

required digital skills. A credentialing system would give digital equity practitioners a common language to describe technological skills that can be transferred across different experiences.

Even more than anxiety, some feel embarrassment about not knowing how to use internet-enabled devices and lacking digital skills. A listening session participant commented, *“There is importance to addressing the shame and embarrassment that goes along with not knowing these things. Working at a mental health facility, there is a lot of shame with saying you struggle with anxiety or depression. But if you aren’t able to say this to others, you may not be able to access the services you need. The same goes for digital literacy.”*²⁶⁹ A participant in Joliet said, *“My mom calls me every day to help her with her internet issues. She’s a senior with a disability. They don’t have the broad picture of what they can do with the internet.”*²⁷⁰

In addition to providing funding to local governments and local organizations for digital literacy programming, the State of Illinois plans to actively support organizations as they scale up opportunities to build digital literacy. The state plans to work with PCs for People to expand their free, in-person digital skills training classes and workshops to both of its Illinois locations, Greater St. Louis and Cook County. Currently in-person classes are only offered in the St. Paul and Denver locations, while online classes are available throughout the country.²⁷¹

Local governments and organizations have also recognized a need for improved digital literacy among their residents. In the **ConnectLakeCounty Digital Equity Strategic Plan**, survey responses showed that parents—especially in low-income households—do not believe their children have the skills to avoid online harm from bullying and/or false or misleading information. Among caregivers who lived in neighborhoods in higher-poverty census tracts, a notable number disagreed or strongly disagreed that their children had the skills to detect and avoid false/misleading information online (37%), were able to avoid bullying on the internet by their peers (27%) or were able to avoid exposure to graphic violence or pornography (35%). Respondents also expressed concern that they lacked digital literacy skills related to privacy or cybersecurity. When asked if they knew how to recognize or avoid a phishing scam, 17% of 513

²⁶⁹ City of Chicago Listening Session, April 19

²⁷⁰ Northeast Listening Session in Joliet, May 31

²⁷¹ [Free Digital Skills Classes + Workshops](#), PCs for People

respondents disagreed or strongly disagreed. When asked if they knew how to recognize false information online and find credible sources of information, 16% disagreed or strongly disagreed.

The ConnectLakeCounty Digital Equity Strategic Plan also highlights a need for more advanced digital skills. While over 50% of respondents strongly agreed that they could use the internet to complete tasks like setting up an email address, accessing a bank account, adjusting privacy settings, or viewing a student’s grades, only 25% strongly agreed that they could create or manage a personal website.²⁷²

In the **Chicago Digital Equity Plan**, digital literacy is named as one of four barriers to digital equity. The other barriers included limited opportunities to build digital skills, concerns about security and trust, and a lack of perceived need for internet. Almost 60% of participants in the plan’s “Community Conversations” highlighted limited opportunities to build digital knowledge or skills, as well as a lack of confidence in using computers and/or the internet—despite a desire among participants to build knowledge (55%) and skills (7%). Eight percent of participants cited concerns about security or a lack of trust in technology and the internet. Another 7% saw little value or utility in computers or the internet. The Chicago Digital Equity Council’s recommendations for addressing digital literacy needs include continuing to make technology tutors available at Chicago Public Libraries and working with the Chicago Housing Authority’s Digital Inclusion team to offer onsite digital training. Additionally, the plan recommends offering free, basic computer skills classes in libraries through universities that partner with the Chicago Public Schools.²⁷³

The State of Illinois, local governments, and local organizations across Illinois have begun to deploy solutions that the state can support at scale to improve digital literacy:

- The **Southeast Region READY Cohort** deployed a “Train the Trainer” program by creating curriculum and offering accessible, effective digital literacy education experiences in

²⁷² [ConnectLakeCounty Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

²⁷³ [Chicago Digital Equity Plan](#), January 2023

Southeast Illinois. Community partners sent trainers to four educator workshops. These partners then hosted a series of programs within their own smaller community that focused on topics like basic computer use, internet safety, social media, and digital activism. Community partners tailored their onsite programs to suit their community's needs.²⁷⁴

- The **West Central Illinois READY Cohort** conducted cybersecurity and data analytics workshops to help individuals, businesses, and local government entities gain more insights from social media metrics and data mining.²⁷⁵
- The **North Chicago CUSD 187** has focused on training that teaches participants how to use the internet appropriately and how to be as safe as possible on the internet.²⁷⁶ This approach recognizes that digital literacy includes understanding online behaviors and how to best protect oneself online.

3.4.2.2 Increasing household broadband subscriptions

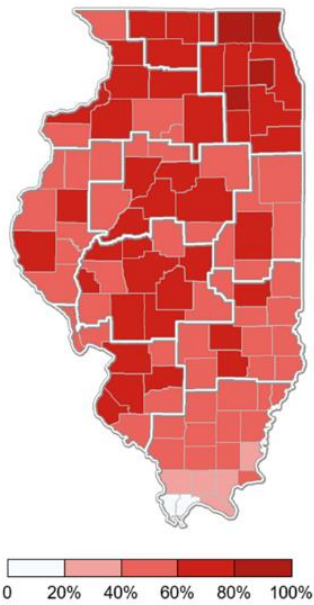
According to the American Community Survey's 5-Year Data (2021), 3.5 million households (72% of all households in Illinois) subscribe to fixed broadband such as cable, fiber-optic, or DSL services. Figure 9 plots the broadband subscription rate by county. The subscription rate is lowest in the Southern region, with 49% of households subscribing to broadband. The top five counties with the lowest subscription rate are all in the Southern region: Alexander County (15%), Pulaski County (19%), Pope County (31%), Union County (32%), and Johnson County (33%). The next three regions with low subscription rates are the Southeast region (58%), the West Central region (60%) and the Central region (63%). In Southeast Illinois, the county with the highest adoption rate is Coles County at 68%, and the county with the lowest adoption rate is Cumberland County at 44%. In West Central Illinois, the county with the highest adoption rate is Adams County at 65%, and the county with the lowest adoption rate is Henderson County at 52%. In Central Illinois, the county with the highest adoption rate is Sangamon County at 65% and the county with the lowest adoption rate is Greene County at 51%.²⁷⁷

²⁷⁴ Broadband READY Southeast Region Report, Eastern Illinois University, 2021

²⁷⁵ West Central Illinois Broadband READY Report, West Illinois University, 2022

²⁷⁶ North Chicago CUSD 187, ICC Final Report Round 2

²⁷⁷ ACS 5-year data (2021)



Source: U.S. Census Bureau ACS 5-Year Data, 2021

Figure 9. Broadband adoption in Illinois. Percentage of households in Illinois with broadband subscriptions, such as cable, fiber optic or DSL, by county

Data on internet use over time from the NTIA Internet Use Survey shows that the share of Illinois households where no one uses the internet at home declined from 32% to 13% from 2009 to 2021. This rate of decline is faster than the average rate of decline in the United States (from 32% to 18% in the same period). When asked why they did not use the internet at home (Figure 10), 67% of households stated that they have no need for or interest in using the internet. This percentage has grown from 41% to 67% in the last 12 years, suggesting that negative perceptions of the relevance of internet access at home is widening adoption gaps in Illinois. The second reason for avoiding internet use at home is cost, cited by 14% of households.²⁷⁸

²⁷⁸ NTIA Internet Use Survey, 2009 to 2021

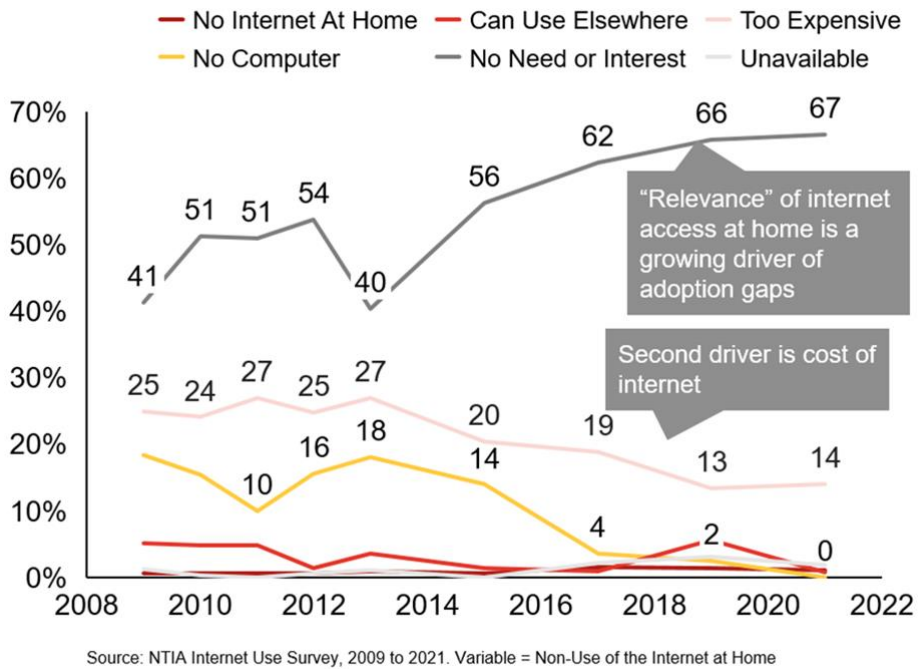


Figure 10. Reasons why Illinois households do not use the internet at home. The percentage of respondents by reason was calculated using the number of households without any home internet divided by the total number of households with no home internet users²⁷⁹

Statewide, the 72% broadband subscription adoption rate is, on average, 22 percentage points lower than broadband availability rate (share of locations with 25/3 Mbps internet)²⁸⁰ and 7 percentage points lower than households with access to internet-enabled devices.²⁸¹ Given how much higher service availability rates are relative to adoption, it is possible that redoubling efforts to boost adoption in communities could increase broadband subscription rates.

At the local level, digital equity coalitions and taskforces have tried to understand the factors that prevent their residents from having home internet service. The **Chicago Digital Equity Plan** established a baseline to work from: 15% of Chicago households do not have internet at home. Its citywide survey, which received over 3,000 resident responses, found the top three reasons

²⁷⁹ NTIA Internet Use Survey, 2019 to 2021
²⁸⁰ FCC Broadband Maps, June 8, 2023
²⁸¹ NTIA internet Use Survey, 2021

why residents lack internet service at home: (1) they use their smart phone instead, (2) they do not have a device to access the internet, and (3) an internet subscription is too expensive.²⁸²

3.4.2.3 Improving the broadband subscription experience of households, businesses, and CAIs

During the statewide listening tour, the State of Illinois heard firsthand about the difficult experiences that residents have had with internet service providers. Community organizations reported that ACP-participating ISPs can be particularly difficult to deal with, citing long wait times, a lack of customer service representatives, and unclear instructions/assistance from ISPs on outages, maintenance requests, and other issues.²⁸³

Local governments across Illinois have also begun to survey their communities to understand their experience with currently deployed broadband, as well as the community sentiment about current broadband subscriptions. Some of these surveys have been conducted through the state-run Accelerate Illinois program and highlighted the following:

- The **Livingston County Broadband Team** surveyed county constituents and received 393 responses, 91% of which came from homes or home businesses. Seventy-seven percent of their respondents reported having to resort to cellular data for internet service. Sixty-four percent of respondents were dissatisfied with the affordability of their current service, 59% of respondents were dissatisfied with the speed of their current service, and 56% were dissatisfied with the reliability of their current service.²⁸⁴
- The **Kankakee County Broadband Plan** received survey responses from residents distributed across the county. When asked about their current internet service, 75% of respondents were dissatisfied with the service's affordability, 72% were dissatisfied with the speed, and 70% were dissatisfied with the reliability.²⁸⁵

²⁸² [Chicago Digital Equity Plan](#), January 2023

²⁸³ City of Chicago Listening Session, April 19

²⁸⁴ Connect Livingston Broadband Plan, Accelerate Illinois Round 2

²⁸⁵ Kankakee County Broadband Plan, Accelerate Illinois Round 2

- The **Jackson County Broadband Plan** shared that 51% of Jackson County respondents were dissatisfied with the reliability of their local internet connection, and 54% were dissatisfied with their local internet speed.²⁸⁶
- In the Connect Champaign County’s **Champaign County Internet Survey**, cost, reliability, and speed emerged as the top factors influencing households’ decisions to subscribe to certain internet services. Some 73.1% of respondents strongly support the idea of extending reliable, high-speed internet access to their area of Champaign, and a combined 61.5% of residents “probably” or “definitely” would subscribe to a new internet service if they were guaranteed faster speeds at a similar cost to what is currently available. Overall, the Internet Quality Index score was determined to be 3.67 on a 1 to 5 scale. This index considers reliability, download and upload speeds, customer service, and the value for the money of the current ISPs in Champaign.²⁸⁷
- The **Whiteside County Broadband Plan** shares the results of its ConnectWhiteside survey, which received about 475 responses. In the survey, a majority of respondents said that reliability and speed were the two most important characteristics of an internet service—more important than having no data caps, cost, and having a choice among multiple providers.²⁸⁸
- The **Village of Elsay’s Accelerate Illinois Final Report** states that 74% of the Village’s residents are unhappy with their service. Sixty-seven percent of survey respondents reported that they are less than satisfied with their service’s reliability, and 63% said they were dissatisfied with their service’s speed.²⁸⁹
- The **Knox County Broadband Plan** shares results from a survey that received 1,031 responses from households (91%), businesses (5%), and multi-unit residences (2%). Sixty-nine percent of respondents reported experience service interruptions in the past. Only 24% of the

²⁸⁶ Jackson County Broadband Plan, Accelerate Illinois Round 1

²⁸⁷ [Champaign County Internet Survey](#), Connect Champaign County, July 2022

²⁸⁸ Whiteside County Broadband Plan, Accelerate Round 1

²⁸⁹ The Historic Village of Elsay, Accelerate Round 1

respondents were extremely satisfied with their internet service’s reliability. For 13% of respondents unreliable service is the reason they are without internet.²⁹⁰

- The **Peoria-Woodford Broadband Planning Report** shares the results of a survey that generated 762 responses from households in Woodford County and 1,239 households in Peoria County. Forty-six percent of Peoria respondents and 47% of Woodford respondents reported dissatisfaction with their internet speeds. Fifty percent of Peoria respondents and 36% of Woodford respondents reported dissatisfaction with their internet service’s reliability.²⁹¹

The state’s three-part goal of reliability, affordability, and fully scalable funding likely can be achieved by deploying BEAD funding, continually maintaining the Illinois Broadband Map, and opening lines of communication and support for providers that are deploying funding. The state plans to hold providers accountable to the service they advertise to their constituents. The need for accountability has also emerged through stakeholder engagement efforts undertaken during the drafting of the IL BEAD Plan (Section 3.4.2.3) and of IL SDEP, as described in Section 4.1.1.5. The state plans to continue to submit fabric and service availability challenges it discovers in an ongoing effort to improve FCC Broadband Maps, as well to make sure that the correct amount of funding is allocated toward improving broadband consumers’ internet service and customer experience in Illinois.²⁹²

Improved customer service and holding internet service providers (ISPs) accountable are especially important for covered populations, who often have less reliable service than their peers. An ICC participant shared the following: *“What we know about the largest ISPs is that they have generally provided minimally acceptable services for low-income residents. The ACP provided a major benefit to providers: an assurance that their bills would be paid timely every month for customers who would normally struggle, but these providers have not been required to be more effective partners.”* This sentiment was echoed in listening sessions. A representative of a community-based organization said that some community members feel as if ISPs do not

²⁹⁰ Knox County Broadband Plan, Accelerate Round 1

²⁹¹ Peoria-Woodford Broadband Planning Report, Accelerate Illinois Round 2

²⁹² See additional details on the outcomes of the FCC Mapping Challenge outcomes in Section 4.1.1.9

prioritize their neighborhoods for infrastructure development in the same way they prioritize other neighborhoods, even though these community members pay the same price as their peers. This situation contributes to general distrust of ISPs and residents' reluctance to participate in ACP programs.²⁹³

3.4.2.4 Increased households, businesses, and CAs with access to internet-capable devices

In an effort to understand the needs and gaps related to internet-capable devices, the State of Illinois defined internet-capable devices as desktops or laptops and did not include smartphones, tablets, or other portable wireless computers. The State's position is that reliance on a smartphone or cellular subscription alone constrains residents' use of the internet for many applications.²⁹⁴ Local communities agree with this; the **Peoria-Woodford Broadband Plan** and the **City of Springfield Illinois Broadband Plan** noted that having a cell phone does not equate to having connectivity.²⁹⁵

Based on the American Community Survey 2021 5-Year Estimates, 79% of Illinoisans, or 3.9 million, have access to either a desktop or laptop (Figure 11). The least access to either a desktop or laptop has been found in the Southern, West Central, and Southeast Illinois regions. In the Southern region, only 64% of residents have access to an internet-capable device, and in both West Central and Southeast Illinois, only 60% of residents have access to an internet-capable device. These three regions also have the lowest broadband adoption rates at 49%, 60%, and 58% respectively. Northeast Illinois leads the state in desktop or laptop access, with rates of 82%.²⁹⁶ These trends show a clear urban and rural divide, as Northeast Illinois is completely urban, while 67%, 100%, and 46% of residents in Southern, Southeast, and West Central Illinois, respectively, live in rural areas.²⁹⁷ These findings are consistent with those presented in the 2020 Affordability Study presented to the BAC.

²⁹³ City of Chicago Listening Session, April 19

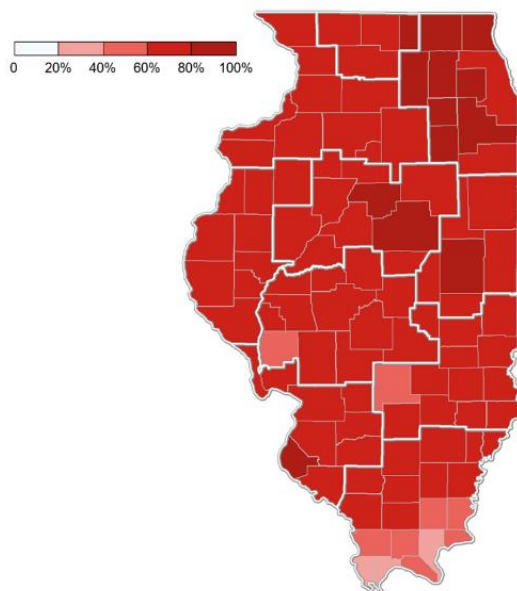
²⁹⁴ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

²⁹⁵ Peoria-Woodford Broadband Planning, Accelerate Round 2; City of Springfield, Illinois Broadband Plan, Accelerate Round 1

²⁹⁶ U.S. Census Bureau ACS 2021 5-Year Estimates

²⁹⁷ The Office of Management and Budget (OMB) designates counties as "Metropolitan," "Micropolitan," or "Neither." A Metropolitan area contains an urban core of 50,000 or more in population, and a Micropolitan area contains an urban core of at least 10,000 (but less than 50,000) in population. All counties that are not part of a Metropolitan Statistical Area (MSA) are considered rural. "Defining Rural Population," U.S. Department of Health and Human Services, U.S. Census Bureau ACS 2021 5-Year Estimates

Residents who participated in listening sessions across the state also expressed frustration about accessing affordable internet-capable devices—not only at home but also through CAIs.²⁹⁸ In Southwest Illinois, listening session participants noted that public libraries in the region have a limited number of computers, resulting in time limits for residents who use the devices. This limited access to devices prevents many residents from taking advantage of the buildings’ internet services.²⁹⁹



Source: U.S. Census Bureau ACS 2021 5-Year Estimates

Figure 11. Percentage of Illinois households with access to internet-enabled devices—a desktop or a computer—by county

Increasing access to internet-capable devices is critical in Illinois, as these devices facilitate internet use for schoolwork, telehealth, and working from home. According to the NTIA Internet Use Survey, Illinoisans (55.1%) use laptop computers more than the US average (49.2%).³⁰⁰ The State of Illinois plans to use its BEAD and State Digital Equity funds to widen the pipeline of computing devices and to find more ways to expand access to low-cost, internet-capable

²⁹⁸ See Section 4.2.1.3

²⁹⁹ Southwest Listening Sessions, March 15-16

³⁰⁰ NTIA Internet Use Survey, 2021

devices.³⁰¹ This plan includes continuing the Computer Equity Network in partnership with PCs for People. The statewide Computer Equity Network receives, refurbishes, and redistributes used computers to those in need. Through its digital equity and inclusion efforts and the stakeholder engagement process associated with the IL BEAD Plan and the State Digital Equity Plan, the state plans to encourage companies and non-profits that attend listening sessions or support planning efforts to join the network. This expansion of the network would allow the state to help local organizations reach as many residents as possible in their efforts to raise awareness and to provide personal computers and equipment to meet digital needs.³⁰² PCs for People—a national non-profit social enterprise that works to provide low-cost, good-quality devices to households and other non-profits—has a large presence in the state that can be leveraged to increase access to internet-capable devices. PCs for People maintains two (Greater St. Louis and Cook County) of its six in-person retail locations in Illinois, which allows eligible residents to purchase low-cost internet-capable devices. The Greater St. Louis location is in the Southwest region, which borders West Central, Southeast, and Southern Illinois. Local organizations can also host distribution events and serve as ongoing pick-up locations.

The state plans to work with its digital equity partners to expand their involvement and partnership with PCs for People, with the aim of broadening the organization’s geographical footprint in the state. The state’s partnership is key to expanding access to internet-capable devices at CAIs, nonprofit organizations, educational institutions, preschools, educational administrative offices, and public museums at an affordable cost.³⁰³

Through the Computer Equity Network, 6,800 low-cost devices were distributed across the 10 economic development regions in fiscal year 2022. Even so, no devices were distributed in 22 counties. The regions with the lowest number of devices distributed were the West Central, Central, and Southeast regions. These three regions have device access rates of 70%, 71%, and 70%, respectively. The IOB hopes that, through the funding received from BEAD and the Digital

³⁰¹ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

³⁰² [Connect Illinois Computer Equity Network](#), DCEO

³⁰³ [PCs for People](#)

Equity Act programs, the Computer Equity Network can continue to expand its geographical footprint and establish a presence in every county in Illinois.

Other local programs provide refurbished or used devices to residents who need more resources in the state. A listening session participant shared that their local program takes laptops that their staff no longer uses and gives them to high-school-age kids who are entering youth programs (high-school age). The program then teaches participants how to apply for jobs, complete resumes, and prepare for college. The participant noted that this program could go further with more resources.³⁰⁴ Additional resources could provide access not only to refurbished devices, but also to new, high-quality devices that could be used over a longer period of time.³⁰⁵

Local broadband reports also mentioned a need for increased access to internet-capable devices. The **Champaign County Broadband Infrastructure Assessment Report** noted that computers are short-lived electronics that typically must be replaced every three to four years. This puts a cost burden on low-income households, as they must pay for not only the device but also the cost of maintenance. Historically computers have been placed in public places like libraries, but this solution compels residents to travel to use the devices, which can be difficult in rural parts of Illinois.³⁰⁶ In the Community Conversations held for the **City of Chicago Digital Equity Plan**, the need for devices and the problem of inadequate devices often came up as recurring themes. Twenty-nine percent of participants mentioned the need for devices, and 14% reported that their current devices did not meet their current needs. To get more devices into its residents' hands, the City of Chicago Digital Equity Council has offered four recommendations, two of which are paired with programs for digital skill-building³⁰⁷:

1. Through a “Chicago Device Pledge” donation campaign, refurbishing retired devices or equipment from the City of Chicago and large Chicago organizations and then redistributing them at a low cost to low-income residents

³⁰⁴ City of Chicago Listening Session, April 19

³⁰⁵ City of Chicago Listening Session, April 19

³⁰⁶ [Champaign Broadband Infrastructure Engineering Assessment Report](#), March 2022

³⁰⁷ [Chicago Digital Equity Plan](#), January 2023

2. Launching a “Train to Own” digital skills program in which residents can earn a device to take home upon completing the program
3. Expanding community classes at City Colleges of Chicago to include a Learn-to-Own Laptop program
4. Creating neighborhood mobile pop-ups to serve as fun tech hubs that bring devices, resources, and digital learning opportunities to communities.

According to the **East Central Illinois Broadband READY Report**, participants in the READY Cohort’s device distribution program found that the devices helped them to advance in their work and career. One participant no longer had to share a work-issued laptop with a co-worker, and another used their device to support job-hunting efforts. Additionally, individuals who received refurbished computing and hotspot devices reported that they were able to improve their digital literacy by taking online classes that taught them how to use the computers or new digital skills.³⁰⁸

Households with multiple members may need access to more than one additional device. The **Tazewell County ICC Planning Team** issued a countywide household survey to understand county residents’ current broadband needs. When asked about device access, 72% of respondents indicated that they had two to five additional devices other than tablets, laptops, or smart phones (TVs, gaming consoles, smart appliances, telemedical equipment, etc.) need to connect to the internet.³⁰⁹ The need for all members of a household to have their own devices was also brought up in listening sessions. In the East Central session, a participant remarked, *“If the person does not have internet, they may not have a device beyond their smartphone. Programs may need to provide internet access coupled with improving device access. Especially if you think about households with single mothers—if you have multiple children that need devices, you need reliable internet coverage and device access to ensure adoption.”*³¹⁰

³⁰⁸ East Central Illinois Broadband READY Report, November 2022

³⁰⁹ Tazewell County Broadband Planning, ICC Round 2

³¹⁰ East Central Listening Sessions, April 12-13

Beyond access to devices, Illinois residents need to have a convenient means of repairing and maintaining devices. The **ConnectLakeCounty Digital Equity Strategy Plan** received survey responses from 513 residents. Device access in Lake County has a clear equity divide, as 98% of survey respondents with an annual income of over \$50,000 had a personal computing device, but only 70% of households with an annual income of less than \$25,000 per year had a personal computing device. The survey also found that 11% of all survey respondents would be unable to replace their computer if it became unusable. For 31%, an unusable device would take six months to replace. In short, 42% of Lake County households cannot use broadband for extended periods due to computer problems rather than internet connectivity issues. Moreover, 75% of low-income respondents go without broadband for extended periods due to computer problems.³¹¹

Other state and region-specific programs to increase access to internet-capable devices and provider-related support include the following:

- The **Broadband READY Northern Stateline Report** describes a loan program created in partnership between the Region 1 Planning Council and Rockford Public Library. The library used grant funding to give patrons more access to Chromebooks that can be borrowed for long-term use.³¹²
- The **North Central Region Broadband READY Report** plans to supply local library districts in the region with 25 “Chromebook Kits” to increase the supply of available devices from eight to 25, thus decreasing wait times for devices.³¹³
- The **West Central Illinois Broadband READY Report** details a partnership with the Reaching Across Illinois Library System (RAILS), the Illinois Heartland Library System (IHLS), and local public libraries to establish Long-Term Evolution (LTE)/5G-enabled Chromebook lending programs in the region. This initiative started two new Chromebook lending programs and expanded two other equipment-lending programs in the region.³¹⁴

³¹¹ [ConnectLakeCounty Digital Equity Strategic Plan](#), Prepared for Connect Waukegan April 2022

³¹² Broadband READY Northern Stateline Report, Region 1 Planning Council, 2021

³¹³ North Central Broadband READY Report, Bloomington Normal EDC

³¹⁴ West Central Illinois Broadband READY Report, West Illinois University, 2022

- The **North Chicago CUSD 187** plans to distribute CPR³ phones to students and families experiencing homelessness.³¹⁵ These mobile devices act as handheld computers to provide access to unlimited internet and hotspot functionality. Agencies, school districts, cities, and non-profits can customize these devices to meet their communities' needs.³¹⁶
- The **Illinois Department of Aging's (IDoA) Illinois Care Connections (ICC) Program** serves individuals over 60 by providing them with technology solutions like an Apple iPad or Android tablet with a case, keyboard, and headphones. The technology is used to increase social engagement and social connection. The devices have applications that support different communication options so that individuals can connect with family, friends, and providers and attend telehealth appointments with doctors.³¹⁷ A brief on the program stated that the technology bundles lowered participants' social loneliness scores, which were measured before and after they received the bundle. For participants between 61 and 80 years of age, the average pre-bundle loneliness score was 7.06 on a 3 to 9 scale in which 6 to 9 means "lonely" and 3 to 5 means "not lonely." The average post-bundle score for this age group was 5.51. For participants 81 years and older, the average pre-bundle score was 6.69, and the average post-bundle score was 6.11.³¹⁸ Generally, 37% of recipients over 60 lowered their loneliness rating after the ICC intervened with the tablet bundle.³¹⁹
- The ICC Program was also available to persons with disabilities in Illinois through the **Illinois Department of Human Services (IDHS) – Division of Developmental Disabilities (DDD)**. Between Spring 2020 and Fall 2021, technology bundles and assistance were provided to 1,207 recipients using CARES Act funding, and an additional 703 individuals with developmental disabilities received bundles after supplemental funding. Eighty-one percent

³¹⁵ North Chicago CUSD 187, Illinois Connected Communities Final Report

³¹⁶ [Premier CPR³](#), Premier Wireless

³¹⁷ [About ICC-Aging](#), Illinois Assistive Technology Program

³¹⁸ To measure loneliness, participants were asked three questions: 1) How often do you feel that you lack companionship? 2) How often do you feel left out? and 3) How often do you feel isolated from others? The three response categories are: hardly ever; some of the time; and often. The scores for each individual question can be added together to provide a possible range of scores from 3 to 9. ([Leveraging Innovation, Collaboration, and Data with Assistive Technology to Reduce Social Isolation and Loneliness: Success Story from Illinois](#), Administration for Community Living)

³¹⁹ [Reducing Social Isolation Through Technology: A Report on the Illinois Care Connections Program](#), August 2021

of the individuals with developmental disabilities reduced their loneliness rating after the ICC intervened with a tablet bundle.³²⁰

3.4.2.5 Increased emphasis on multi-sector strategies for broadband adoption

According to the NTIA Internet Use Survey, 32% of Illinois residents over 15 years old work remotely via the internet. Some 29% of Illinois residents over 15 take classes or participate in job training online.³²¹ Given how integral broadband is to both economic activity and education, the State has prioritized multi-sector engagement on broadband adoption. Wider adoption will empower individuals who work remotely and participate in educational or workforce development opportunities online.

In listening sessions in the Southwest, participants mentioned that farmers need better access to internet service. They also stated that, in addition to expanding broadband access in towns, many rural areas need to be considered for expansion. Schools, too, face challenges due to limited internet access; giving students device access is less effective if they lack the internet services needed to use those devices. During COVID-19, students had to travel to areas where buses served as mobile hotspots or work in fast-food parking lots to complete schoolwork. Broadband adoption solutions for households must include students so that lack of bandwidth or connectivity does not prevent students from learning.³²² A listening session participant reported that other regions, like Southern Illinois, have tried to turn buses into static connectivity centers, but this solution has faltered due to reliability issues.³²³

Illinois State University projects that robust broadband infrastructure could increase average yields from corn and soybean acres by 4% in the five participating Broadband Breakthrough counties: Edgar, Hancock, McLean, Ogle, and Schuyler. This increased crop yield could net a return of over \$42 million per year. If expanding broadband infrastructure for farmers in five counties has such an impact, perhaps this expansion should be applied throughout the state.³²⁴

³²⁰ [Reducing Social Isolation Through Technology: A Report on the Illinois Care Connections Program](#), August 2021

³²¹ NTIA Internet Use Survey, November 2021

³²² Southwest Listening Sessions, March 15-16

³²³ Southeast Listening Sessions, March 22

³²⁴ Broadband Breakthrough: Infrastructure Planning for Rural Farming Communities

In addition to broadband infrastructure, farmers need devices to support farm operations. A listening session participant in East Central commented, *“From a business perspective, farmers are doing pretty well with utilizing applications on their smartphones to conduct their business operations, but it is so much easier on a laptop or computer interface.”*³²⁵

Other sectors are also crucial in increasing broadband adoption in Illinois, as they provide access and have established relationships with local communities:

- Schools and libraries are community centers that can facilitate the distribution of computers and devices and expand internet access to residents. But libraries may lack the grant-writing expertise or capacity needed to successfully apply to grant-based solutions or programs aimed at certain institutions. This challenge highlights the importance of collaboration between governments and libraries on state-sponsored broadband, which libraries can leverage within their local communities.³²⁶
 - Repeatedly during listening sessions, residents described having to travel to parking lots to complete homework and to use the internet for coursework. In one listening session, a participant shared that financial scholarships are available for community colleges, but students need internet access to complete the online applications. Additionally, a friend of this participant had to travel to a restaurant parking lot daily to complete a master’s program because they lacked internet service at home.³²⁷
- Hospitals also need reliable access. In Southwest Illinois, a listening session participant stated that even hospital systems in the region have two internet providers to ensure access if one provider goes out.³²⁸ More than hospitals, patients recognize that internet access and the digital divide contribute to disparate health outcomes. In a statewide townhall on how cancer impacts patients’ lives, participants noted that reliable broadband access can curb negative impacts on unequal health outcomes. The influence of geographic location on

³²⁵ East Central Listening Sessions, April 12-13

³²⁶ [Legislative Update – January 6, 2022](#), Illinois Library Association (ILA)

³²⁷ East Central Listening Sessions, April 12-13

³²⁸ Southwest Listening Sessions, March 15-16

exposure to environmental hazards, internet access and the digital divide, transportation, and food insecurity was brought up by townhall participants.³²⁹

— Healthcare services are becoming increasingly digital, but without broadband access, residents cannot take advantage of them. A listening session participant observed, “Many things are digitally based, such as virtual healthcare. Many rural residents are unable to access these services.”³³⁰

- Small businesses need support with social media, setting up Video conferencing services meetings, and websites.³³¹
- Local governments also need to know what services are available to their residents and to disseminate that information.³³²

Sector-specific strategies are also needed to ensure that the right remote-work tools are deployed in the workplace, and that no single employee is disadvantaged. The Illinois Department of Public Health’s (IDPH) Strategic Plan states that work groups in six priority sectors will monitor the plan’s implementation through virtual and in-person meetings. Cultural and racial benchmarks will be used to integrate cultural and racial considerations into the sectors’ strategic visions. Without the necessary tools for remote work and internet connectivity, members of these teams cannot participate fully in the workplace as the plan is implemented.³³³

The IOB’s Broadband Advisory Council was established by the governor to explore broadband adoption solutions for education, agriculture, telehealth, and economic development. The IOB plans to keep multiple channels of engagement open with state agencies to support their broadband-related goals. Additionally, by engaging with local organizations and partners through the IBL, the IOB plans to support multi-sector strategies for broadband adoption. One example is the Broadband Breakthrough program, which is an agriculture-centric broadband access program tailored to rural and remote areas of Illinois.³³⁴

³²⁹ [Fiscal 2021 in Review Annual Report](#), Illinois Department of Public Health

³³⁰ East Central Listening Sessions on April 12-13

³³¹ Southern Listening Sessions, March 1-2

³³² Southern Listening Sessions, March 1-2

³³³ [Illinois Department of Public Health Strategic Plan](#), November 2020 -2024

³³⁴ [ISA launches ‘Broadband Breakthrough’](#), AgriNews, January 2023

Collaboration among sectors helps residents understand the importance of broadband services. A listening session participant said, *“If there are broadband support programs and subsidies, the best method to improve broadband adoption would be optimizing and reaching people when they are making decisions such as with healthcare or their education.”*³³⁵

Unreliable home internet access interrupts the continuity of learning and prevents access to digital resources that enable remote and hybrid learning. In the **2020 Illinois School District Technology Survey**, 99.3% of school districts reported barriers to home connectivity, which highlights the need for adoption solutions that involve the education sector. The three main types of barriers reported were (1) unavailable internet access (25%), (2) monthly or ongoing internet expenses (32%), and (3) limited bandwidth (23%). To overcome barriers to internet access, 54% of school districts that responded to the survey provided Wi-Fi, hotspots, and cellular-connected devices to support students during remote learning. The State of Illinois, the Illinois State Board of Education (ISBE), and local education agencies (LEA) can work together to develop sustainable solutions to overcome these barriers. Additionally, school-based connectivity barriers like district hardware, monthly expenses, and upfront costs can be surmounted by multi-sector solutions that include the Illinois Century Network.³³⁶ Progress made towards overcoming barriers to home and school-based connectivity can be monitored through the yearly outcomes in the Illinois School District Technology Survey, which is administered by the Learning Technology Center in partnership with the ISBE.³³⁷ The IOB and IBL may coordinate with the ISBE to obtain raw survey data that will help them to monitor the success of education-focused initiatives closely.

The **Illinois Farm Bureau (IFB)**, whose voting membership represents three of every four farmers in the state, has issued talking points that indicate a need for state-wide solutions that increase broadband adoption among farmers and rural communities.³³⁸ The IFB states that its members want better, faster, more reliable, and more affordable broadband service that improves economic development, education, and healthcare in rural areas. As the State of Illinois builds a

³³⁵ East Central Listening Session, April 12-13

³³⁶ [2020 Illinois School District Technology Survey](#), Learning Technology Center of Illinois

³³⁷ [Illinois School District Technology Survey](#)

³³⁸ [Who we are](#), Illinois Farm Bureau

subgrantee process that encourages multi-sector adoption of broadband, it recognizes that (1) IFB members are open to any source of broadband, including wireless; (2) some previous projects only served rural towns without expansion to rural farms and residences; and (3) providers must work with farmers and landowners on broadband installation projects to protect their property rights.³³⁹ This sentiment was echoed by a Farm Bureau representative who attended a listening session in Southwest Illinois. The representative advised internet providers to check in with farmers and landowners when installing broadband infrastructure to make sure that their private property rights are not infringed upon.³⁴⁰ In the East Central listening session, a resident noted that residents' skepticism of the land easement process is warranted based on fiber companies' previous trespasses onto private property during service installations. The resident commented that countywide oversight of the funding distribution plan could help to ensure cohesion and coordination.³⁴¹

The **Champaign County Broadband Infrastructure Engineering Assessment Report** conducted interviews with farmers, who shared that the industry uses smart machinery—mostly John Deere equipment—that relies on broadband. The farmers interviewed used fixed wireless broadband and complained about substandard technology. Most of these farmers wanted broadband services because the current DSL and fixed wireless services are too slow.³⁴²

Connect Champaign County surveyed residents on the current state of their internet service and usage. When asking the 1,108 households about their internet use for work and school, 9.7% responded that they use internet to operate a farm, 19.1% to run a business, 33.3% to apply for jobs, 41.2% to do homework, 43.2% to attend school, and 50.7% to work from home.³⁴³ As working from home becomes more common in the post-pandemic era, residents in Illinois need high-speed internet to work productively. A resident who responded to the **Kaskaskia College Region Accelerate Team Presentation's** regional survey remarked, *"I work from home. If others*

³³⁹ [IFB Weekly: Most Recent Talking Points as of 3/13/23](#), Illinois Farm Bureau

³⁴⁰ Southwest Listening Sessions, March 15-16

³⁴¹ East Central Listening Sessions, April 12-13

³⁴² [Champaign County Broadband Infrastructure Assessment Report](#), March 2022

³⁴³ [Champaign County Internet Survey](#), Connect Champaign County, July 2022

*are home using internet during my workday, it takes longer for things to save, download, or upload. Sometimes during Zooms, I get the 'internet is unstable' message and get kicked out.*³⁴⁴

In the **Broadband for All – Plan for Ogle, Lee, Boone, and Putnam Counties**, one urgent need mentioned is the need for strong internet connectivity in rural communities to support evolving farm operations. Lack of robust broadband severely hampers enhanced innovations on farms.³⁴⁵ Investing in broadband infrastructure promises to yield a big return for Illinois farms.

Small businesses also need support to access high-speed broadband. A resident who responded to the **Whiteside County Broadband Plan** noted, *“Being a small, local business trying to survive the pandemic and rising costs is difficult. Having an option for internet service that works... is important. We need to be able to do our work without the frequent outages and high costs we are currently experiencing. So far, it’s been difficult to find a service that checks all or most of the boxes.”*³⁴⁶ Small businesses are identified as a high-priority segment in the 2019 Illinois economic plan, making it critical to provide them with access to high-speed internet.³⁴⁷ Collaboration is needed with small business owners to understand how to make high-speed internet service accessible so they can successfully run their businesses.

Respondents to the resident surveys issued by Knox and Bond counties highlighted concerns about reliable, high-speed internet and its impact on medical devices. A Bond County resident told the **Bond County Broadband Initiative** that their parent’s diabetic equipment required internet service, but their service was unreliable.³⁴⁸ In the **Knox County Broadband Plan**, a resident shared, *“We had to up the amount of data due to the amount of devices we have, and it slows down the speed and reliability greatly on a daily basis. We have medical devices hooked to it as well, and I don’t like that it’s not reliable.”*³⁴⁹ As medical equipment in homes and health centers increasingly relies on internet connectivity, internet service providers, the state, and

³⁴⁴ Kaskaskia College Region Accelerate Team Presentation, Accelerate Round 2

³⁴⁵ Broadband for All – Ogle, Lee, Boone, and Putnam Counties, Accelerate Illinois Round 2

³⁴⁶ Whiteside County Broadband Plan, Accelerate Illinois Round 1

³⁴⁷ [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), October 2019

³⁴⁸ Bond County Broadband Initiative, Accelerate Illinois Round 2

³⁴⁹ Knox County Broadband Plan, Accelerate Illinois Round 1

health providers must work together to make sure that both providers and patients have the internet service needed to access critical telehealth services.

Many municipal and local governments across Illinois have recognized the importance of good-quality broadband infrastructure for their residents and have embarked on their own planning efforts. **McHenry County's Strategic Plan** includes plans to assess its IT infrastructure to identify options for providing broadband throughout the county. This effort will involve modeling and ascertaining ways to expand services to underserved areas of the county, as well as identifying funding options. The State of Illinois believes that multi-sector collaboration must happen not only across industries but also among various levels of government to ensure that the leaders closest to residents help to determine the best infrastructure for their constituents.³⁵⁰

3.4.3 Broadband Affordability

In listening sessions across the state, participants mentioned high monthly internet service prices. In Southwest Illinois, residents reported paying over \$100 for monthly service, in addition to paying hundreds of dollars for installation.³⁵¹ In Southeast Illinois, residents stated that they pay about \$90 per month for plans.³⁵² In Southern Illinois, one resident pays \$500 for both satellite and phone services. Another resident pays over \$300 for speeds under 100 Mbps.³⁵³ According to a survey conducted by the **Greene County Broadband Committee**, 50% of those without internet service do not have it because it is too expensive.³⁵⁴

Due to data caps, monthly subscription costs only increase as residents complete daily tasks. In the Southwest listening session, households that use more than a certain amount of data experience monthly cost increases.³⁵⁵

Affordable broadband access is especially important for industries that rely heavily on broadband. Depending on how close a farm is to existing broadband services, it can cost farmers

³⁵⁰ [McHenry County 2022 – 2025 Strategic Plan](#)

³⁵¹ Southwest Listening Session on 3/15 – 3/16

³⁵² Southwest Listening Sessions on 3/15 – 3/16

³⁵³ Southern Listening Sessions on 3/1 – 3/2

³⁵⁴ Greene County ICC Update, June 2022, Illinois Connected Communities Round 2

³⁵⁵ Southwest Listening Session on 3/15 – 3/16

thousands of dollars to gain internet access. Farmers are often told they must install their own broadband infrastructure on their property to get service, which is not financially feasible for many residents. When internet is not available, *“farmers are not able to comfortably operate their businesses,”* a participant in the Southwest listening sessions said. Many farms in the region are failing because they lack adequate internet access.³⁵⁶

Residents in Illinois need access not only to affordable broadband plans but also to the accompanying devices necessary to extend coverage, like modems and routers.³⁵⁷ In Southwest Illinois, a resident claimed that it cost hundreds of dollars to update a router, and that the new hardware failed to solve connectivity issues.

Based on residents’ experiences, the IOB wanted to learn more about affordability in broadband subscriptions in Illinois. The organization sampled prices to determine how much individuals across the state typically pay for their subscriptions. Using provider data from the March 2023 FCC Broadband Map, accessed March 21, 2023, the IOB identified providers that offer broadband subscriptions in Illinois. For each provider, technology, and speed combination, 10 locations were randomly selected for price checks on providers’ websites. The lowest non-discounted price for 25Mbps and 100Mbps internet was documented. If the provider set a data cap, the price for 100 GB per month was recorded. The average price of each provider, technology, and speed was tied back to each location. The minimum price for 25Mbps and 100Mbps speeds in each location was calculated by determining the minimum offerings available for that location. The methodology assumed the following:

- The FCC Data Map paints an accurate picture of the maximum speed offered.
- If an affordable plan is available in the sampled locations from a certain provider, technology, or speed combination, it is available for all locations in the same combination.
- The price for the same provider, technology, and speed combination is uniform across the state.

³⁵⁶ Southwest Listening Session on 3/15 – 3/16

³⁵⁷ Southeast Listening Sessions on 3/22

- The upload speeds offered will not be considered, since they are not reported on most providers' websites.
- The long tail of small and regional providers only offers plans for more than \$50.

Based on this process, the IOB was able to paint a preliminary picture of the price of internet service with advertised download speeds of 100Mbps+ (Figure 12) and 25Mbps+ (Figure 13).

DATA AS OF 03/21/2023

Region	% of BSLs	Price of internet for advertised download speed of 100Mbps+			
		Less than \$25	From \$25-50	More than \$50	Not Available
Northeast	56%	0%	97%	1%	2%
Northern Stateline	4%	0%	82%	7%	11%
Northwest	6%	0%	38%	39%	22%
North Central	6%	0%	59%	27%	14%
East Central	3%	0%	51%	39%	11%
Central	6%	0%	53%	31%	16%
West Central	3%	0%	45%	36%	18%
Southeast	3%	0%	12%	60%	28%
Southern	5%	0%	11%	61%	29%
Southwest	7%	0%	74%	13%	13%
Total	100%	0%	77%	15%	9%

Source: Provider distribution based on FCC Data Maps, accessed Mar 21, 2023. Internet price based on desk research.

Figure 12. Landscape of broadband subscription prices for 100+ Mbps download speed

DATA AS OF 03/21/2023

Region	% of BSLs	Price of internet for advertised download speed of 25Mbps+			
		Less than \$25	From \$25-50	More than \$50	Not Available
Northeast	56%	94%	4%	1%	1%
Northern Stateline	4%	72%	25%	1%	2%
Northwest	6%	23%	57%	14%	6%
North Central	6%	56%	25%	14%	6%
East Central	3%	47%	13%	32%	8%
Central	6%	46%	21%	25%	8%
West Central	3%	43%	45%	7%	6%
Southeast	3%	0%	27%	49%	24%
Southern	5%	2%	18%	56%	24%
Southwest	7%	0%	81%	10%	9%
Total	100%	67%	18%	10%	5%

Source: Provider distribution based on FCC Data Maps, accessed Mar 21, 2023. Internet price based on desk research.

Figure 13. Landscape of broadband subscription prices at 25+ Mbps download speed

From this analysis, the following was observed:

- No providers in Illinois offer 100Mbps+ internet service for less than \$25.
- Only one provider in the state offers a 25 Mbps+ download plan for less than \$25; it offers a \$10 plan for cable internet at 2.7 million locations (67%).
- 25 Mbps+ internet is most expensive in the Southern regions and least expensive in the Northern regions.
- 77% of state residents can pay less than \$50 for 100Mbps+, as compared to 85% for 25Mbps.
- 15% of Illinoisans are paying more than \$50 for 100Mbps+ download speeds, mostly in the Southern regions. In Southern Illinois, consumers in 61% of BSLs pay more than \$50 for 100Mbps+ download speeds. In Southeast Illinois, consumers in 60% of BSLs pay more than \$50 for 100Mbps+ download speeds.

The State of Illinois believes that internet prices are higher in Southern Illinois due to a lack of provider competition. In six counties in Southern Illinois and five in Southeast Illinois, more than

60% of BSLs have only one provider offering service. In the Southern region, regional providers offer either no alternative option or less affordable options compared to providers with a larger statewide presence. The four top providers in Illinois account for 70% of provider offerings in the state.

If the State of Illinois were to adopt an affordability standard, regional broadband planning efforts shed light on what residents are willing to pay. Residents in Illinois are willing to pay a range of prices for monthly internet service. When the **Knox County Broadband Plan**, for example, asked survey respondents how much they would pay per month, 50% said they would pay \$25-\$50, 17% said \$75-\$100, and 33% said they would pay more than \$100. The state currently believes that, no matter what customers are willing to pay, Illinois residents should be able to choose at least one affordable plan when selecting internet services.³⁵⁸ Pembroke-Hopkins Park, in its **BroadbandNow! Plan** went as far as to set targets for affordable internet plans to meet its goal of lowering monthly costs for such services. For fixed-wireless internet services, it set a target of \$40 for fixed-wireless subscriptions and \$80 for fiber subscriptions, not including a subscription fee. These targets would be \$10 and \$50 respectively for families who qualify for the FCC's Affordable Connectivity program (ACP).³⁵⁹

These efforts to understand internet subscription prices and feedback from listening sessions have shown the State of Illinois that broadband affordability is a key barrier to achieving universal access for residents. To address this issue, the state explored three potential solutions: (1) encouraging uptake of existing affordability programs (Section 3.4.3.1), (2) increasing financial assistance and implementing affordability programming (Section 3.4.3.2), and (3) considering other approaches to addressing affordability, like increasing provider competition (Section 3.4.3.3).

³⁵⁸ Knox County Broadband Plan, Accelerate Round 1

³⁵⁹ Pembroke-Hopkins Park BroadbandNow! Plan, Accelerate Illinois Round 2

3.4.3.1 Affordable Connectivity Program: Increased financial assistance for low-income consumers

The FCC’s Affordable Connectivity Program (ACP) offers financial assistance to low-income customers who need access to discounted internet service and devices. There are 1.9 million eligible households in Illinois that could enroll in ACP, but only 450,000 have done so.³⁶⁰ With only 24% of eligible households enrolled in ACP as of December 2022, Illinois ranks 29th among states in ACP enrollment.^{361,362}

Counties in the state’s Southern regions have the highest percentages of households that are eligible for ACP (Figure 14).³⁶³ In the Southern region, 53% of households are eligible; in the Southwest region, 38%; and in the Southeast region, 46% of households are eligible for ACP. These include Alexander County (69%), Jackson County (63%), Pulaski County (58%), White County (58%), and Saline County (57%). The Southwest region has the highest percentage of enrolled households of those eligible, at 41%. These numbers indicate that 60,000 households in the Southern region, 40,000 households in the Southeastern region, and 60,000 households in Southwestern region that are eligible to enroll but have not done so.³⁶⁴

³⁶⁰ [Affordable Connectivity Program: USAC ACP Enrollment and Claims Tracker](#), Dec 2022; Methodology from [Estimating participation in the Affordable Connectivity Program \(ACP\)](#), October 2022; “Household eligible” is equivalent to the number of households at/below 200% of the federal poverty level plus those who receive Medicaid or other government medical assistance, Supplemental Security Income, public assistance, or SNAP benefits

³⁶¹ Calculated based on data from [USAC ACP Enrollment and Claims Tracker](#), December 2022 and methodology from [Estimating participation in the Affordable Connectivity Program \(ACP\)](#), October 2022

³⁶² Institute for Local Self-Reliance’s [ACP dashboard](#)

³⁶³ “Household eligible” is equivalent to the number of households at/below 200% of the federal poverty level and those who receive Medicaid or other government medical assistance, Supplemental Security Income, public assistance, or SNAP benefits. See methodology [here](#). Data as of October 2022

³⁶⁴ “Household eligible” is equivalent to the number of households at/below 200% of the federal poverty level plus those who receive Medicaid or other government medical assistance, Supplemental Security Income, public assistance, or SNAP benefits. See [methodology](#). Data U.S. Census Bureau as of October 2022

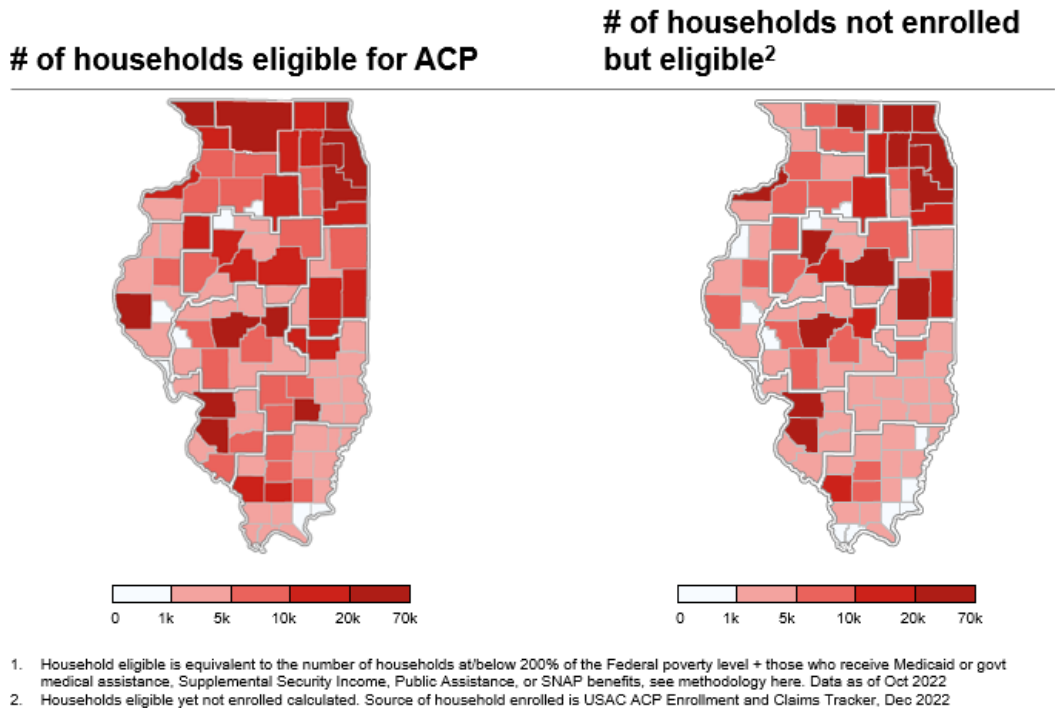


Figure 14. The map on the left shows the number of households that are eligible for ACP in Illinois by county. This map can be compared to the map on the right, which shows the number of households that are eligible but not currently enrolled in ACP by county³⁶⁵

Comparatively, the Northeast region has the highest population density in the state and the lowest percentage of households that are eligible for ACP, at 36%. Among these households, a considerable number have not enrolled. Specifically, 74% of households in Cook County have not enrolled (representing 640,000 households). In DuPage County, the percentage is 85% (65,000 households); in Lake County, 82% (58,000 households); in Kane County, 84% (47,000 households), and in Will County, 78% of eligible households (45,000) have not enrolled.³⁶⁶ The number of unenrolled, eligible households in these five counties represents 45% of the total number of eligible households in the state.³⁶⁷

³⁶⁵ Households eligible yet not enrolled calculated. Source of households enrolled is [USAC ACP Enrollment and Claims Tracker](#), Dec 2022

³⁶⁶ [USAC ACP Enrollment and Claims Tracker](#), December 2022

³⁶⁷ [USAC ACP Enrollment and Claims Tracker](#), December 2022

The majority of major providers in Illinois offer ACP to residents (Figure 15). Seventeen of the top 20 providers statewide and regionally offer ACP on their website. Smaller regional providers participate in the ACP program as well. In the Chicago Digital Equity Coalition Digital Equity Asset Map, Astound Broadband says that it participates in both the ACP and the Chicago Connected initiative to offer families discounted rates for internet access.³⁶⁸ Collectively, these figures indicate that Illinois has an extensive ACP offering through various providers. The focus must now shift to encouraging resident enrollment and supporting them through the enrollment process.

Top state-wide providers (serving 5 or more regions)				Top regional providers (serving 4 or fewer regions)			
Provider	Share ¹	ACP	Price ²	Provider	Share ¹	ACP	Price ²
T-Mobile US	26.1%	✓	\$50	Metronet Holdings	2.2%	✓	\$40
Xfinity	18.0%	✓	\$30	i3 Broadband	0.7%	✓	\$40
AT&T Inc	16.4%	✓	\$60 – 70	Royell Communications, Inc	0.4%	✗	\$55
VERIZON	9.4%	✓	\$50	Cass Cable TV Inc	0.3%	✓	\$75
RCN	6.1%	✓	\$30	Surf Internet	0.3%	✓	\$55
US Cellular	5.8%	✓	N/A	IllinoisNet.com	0.2%	✗	\$89
FRONTIER	3.7%	✓	\$55 – 60	Harrisonville Telephone Company	0.2%	✓	N/A
Mediacom	2.5%	✓	\$30 – 50	Adams TelSystems Inc.	0.2%	✓	\$75
Charter Communications Inc	1.7%	✓	\$30 – 50	Wabash Communications	0.2%	✓	\$76
Rise Broadband	1.0%	✓	\$80	Mid Century Telephone Cooperative	0.2%	✓	N/A
Sparklight	0.8%	✓	\$65	DNA Communications	0.1%	✗	\$100
W A T C H TV	0.7%	✓	\$120	Campus Communications Group	0.1%	✓	\$70

1. Share defined as number of specific provider offerings divided by all provider offerings in the state
 2. Full price for 100Mbps based on provider website checks. N/A indicates either provider does not offer 100Mbps or full price is not available on website. Range indicates different prices are offered in different locations checked.
 Source: Provider share and region categorization based on FCC Data Map, March 2023. ACP categorization based on provider website check.

Figure 15. Breakdown showing whether ACP is offered by one of the top 10 providers—state-wide or regional—in Illinois. For each provider, their share of the available offerings is indicated based on the total number of state providers’ offerings in Illinois. The full price breakdown for 100 Mbps service is also included, based on the price available on the provider’s website. Green checks indicate that ACP is offered

To encourage uptake of the ACP, the IOB and IBL have monthly ACP outreach calls to discuss how to raise awareness of the ACP program and to encourage program enrollment. In future calls, call participants plan to discuss ways to engage community partners in the 19 counties that have lower-than-median ACP enrollment rates despite higher-than-median eligible

households.³⁶⁹ These counties may be primarily located in the Northern and Central counties in Illinois.

The **Whiteside County Broadband Plan** shared survey results highlighting the need for increased ACP awareness at the local level. About 77% of respondents were unaware of any subsidy program for internet service.³⁷⁰ In listening sessions, participants noted that *“a \$30-per-month internet bill is a huge amount given the low median income in this area, especially for people who don't qualify for subsidies but still cannot afford internet service,”* demonstrating the potential limits of the ACP.³⁷¹

3.4.3.2 Increased support for enrollment in assistance programs for low-income consumers

Internet service is out of financial reach for many Illinois households, since many are in areas with a single (often unaffordable) provider. Given broadband adoption gaps along racial, ethnic, and socioeconomic lines, the IOB hopes to support community-driven initiatives that introduce more affordable options, expand choice, and drive broadband adoption.³⁷²

The need for increased enrollment support for low-income customers is noted in broadband-related reports published by local governments and organizations. The **East Central Illinois Broadband READY Preliminary Report** states that households participating in their research program had problems renewing their monthly Emergency Broadband Benefit (EBB) or ACP subscriptions. Households were supported throughout the renewal process, including providing monthly reminders to renew service, resolving forgotten log-in information on the renewal platform, and contacting providers directly when hardware failed. Of the 120 clients who participated in the program, 32 did not renew their subscriptions.³⁷³

The **Connect Waukegan Broadband Assessment**, completed by what is now called the ConnectLakeCounty Taskforce, noted that no active public-private partnerships had been formed to work with internet service providers on broadband assistance programs for low income or at-

³⁶⁹ Universal Service Administrative Company ACP enrollment data and ACS data

³⁷⁰ Whiteside County Broadband Plan, Accelerate Round 1

³⁷¹ Northeast Region Listening Session in Joliet, May 31

³⁷² See Section 3.4.5.2 in this document

³⁷³ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

risk households.³⁷⁴ The assessment highlights the Internet Essentials Partnership Program with Comcast, which provided students and families during COVID-19 with subsidized services and devices. The assessment suggests that private programs could provide funding for internet access to eligible households. Increased community awareness of existing resources and assistance programs is needed and could be accomplished by leveraging local institutions like libraries and community centers.³⁷⁵ Investment in ACP outreach and enrollment efforts has significant cost-savings implications for Illinois residents. ConnectLakeCounty has been able to reach at least 850 households by holding 15 enrollment events through its Digital Navigator. The 70 households that enrolled in ACP through these events are saving a combined \$25,000 annually.³⁷⁶

The **City of Chicago’s Digital Equity Plan** details a need to support customers in navigating broadband subscriptions. Many customers find that available support does not meet their accessibility needs and that it is difficult to meet providers’ restrictive policies. Moreover, they are sometimes confused by the various internet options for consumers.³⁷⁷

There have been several publicly funded broadband initiatives in Illinois over the past decade. The IOB hopes that implementing the IL BEAD Plan will facilitate the deployment of affordable, high-speed, high-quality wireline or wireless networks.³⁷⁸ As mentioned in Section 3.4.1.5 of the IL BEAD Plan, the Illinois General Assembly considered HB3275, the Illinois Low-Income Broadband Assistance Program Act, in their 2021-2022 session. This bill could have required the DCEO to establish a low-income broadband assistance program for Illinois to ensure that broadband service is available and affordable for low-income families so they can access remote learning and work platforms.³⁷⁹ This piece of legislation did not take effect but demonstrates that lawmakers recognize the need for a wider range of low-cost options for low-income families in Illinois.

³⁷⁴ [Connect Waukegan](#)

³⁷⁵ [Connect Waukegan Community Broadband Assessment](#), 2020

³⁷⁶ Connect Waukegan, Illinois Connected Communities Round 2 Cohort – final updates

³⁷⁷ [City of Chicago’s Digital Equity Plan](#), January 2023

³⁷⁸ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

³⁷⁹ [Bill Status of HB3275](#)

In the future, the State of Illinois intends to consider alternative options to providing low-cost internet services to residents across Illinois, leveraging the Broadband Advisory Council.

The state plans to continue promoting the ACP program through its ACP Outreach Grant. The FCC awarded seven Affordable Connectivity Outreach Grants to applicants in Illinois in March 2023. Additionally, through the DCEO's IOB, the state secured \$700,000 in ACP outreach grants from the FCC. These grants will be used to meet the state's goal of deploying a competitive subgrantee program aimed at enrolling an additional 150,000 households in the ACP. Enrollment efforts will span 102 counties over the course of two years.³⁸⁰ In addition to the IOB, six entities—including the City of Chicago and City of Waukegan—received awards. Collectively, these awards represented 3.1% of all ACP outreach grants made through the national competitive outreach program. In total, 197 grants were awarded across all 50 states.³⁸¹ These awards demonstrate a widespread interest in championing ACP outreach and suggest that the state can expect substantial forthcoming support for low-income consumers.

The **City of Chicago's Digital Equity Plan** mentions plans to conduct a coordinated, citywide campaign to increase ACP sign-ups among eligible populations. Community organizations and government institutions will help to execute these plans. The City of Chicago also aims to work with the Chicago Housing Authority to host Affordable Connectivity Program enrollment support through funding received from the FCC Affordable Connectivity Program Grants.³⁸²

The **North Central Region Broadband READY Report** suggests that libraries can serve as hubs for ACP program sign-ups. The READY Cohort plans to enlist and train local library staff and non-profit stakeholders to help library members sign up for the ACP.³⁸³

Kids First Chicago's **Defeating the Digital Divide Report** identified four factors hindering ACP adoption: (1) lack of awareness of the program, (2) lack of clarity about the offerings and processes, (3) distrust in available services, and (4) structural limitations. The report recommends that staff be trained to address these factors, as in the past community-based

³⁸⁰ Adapted from the DCEO's ACP Outreach Grant Application

³⁸¹ [FCC Announces \\$66 million in Affordable Broadband Outreach Grants](#)

³⁸² [City of Chicago Digital Equity Plan](#), January 2023

³⁸³ North Central Region Broadband READY Report, Bloomington Normal EDC

organizations have served as critical navigators for eligible families. These organizations have helped to raise awareness about the program, answer questions about the sign-up process, share details about the program’s robust consumer protections, and served as advocates when service issues arose between families and ISPs. Also noted is a need for budgetary support for CBOs as they hire and train staff to effectively lead community conversations and to address the root causes of low ACP adoption rates.³⁸⁴

3.4.3.3 Increased options for broadband services, including a wider range of low-cost services

Increased broadband competition supported by the State of Illinois could help to make broadband services more affordable. A resident who attended the Southwest Illinois listening sessions noted, *“In rural areas, there is only one option. Even though it is not affordable, we have to buy it. Competition would be nice.”* Four local broadband reports also pointed out the need for more competition, including reports from Champaign County, the City of Waukegan, the City of Harvey, and the City of Chicago.^{385,386,387,388} The **City of Harvey Broadband Strategic Plan** specifically notes that limited competition among internet service providers affects the affordability of broadband service subscriptions. The City’s Broadband Steering Committee mentioned an industry “duopoly” between Comcast and AT&T, which dominate the market. The plan suggests a potential solution: wireless internet service providers (WISPs) could offer hybrid services ranging from Wi-Fi transmission to fiber-optic wireless distribution. WISP services could act as a regional and local competitor to incumbent ISPs.³⁸⁹

The **Champaign County Broadband Infrastructure Engineering Assessment Report** shares the results of an online residential survey that was conducted between December 2021 and January 2022. Forty-seven percent of respondents said they were dissatisfied with their current service providers in the county because the value of the service is not reflected in the price they pay. Most respondents (73%) reported that they support a fiber network in the county with

³⁸⁴ [Defeating the Digital Divide: How Chicago Can Achieve True Digital Equity](#), Kids First Chicago
³⁸⁵ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County IL, March 2022
³⁸⁶ [Connect Waukegan Community Broadband Assessment](#), 2020
³⁸⁷ [City of Harvey’s Broadband Strategic Plan](#), September 2021
³⁸⁸ [City of Chicago’s Digital Equity Plan](#), January 2023
³⁸⁹ [City of Harvey’s Broadband Strategic Plan](#), September 2021

competition (82%), faster speeds (75%), and lower prices (74%)—their top three reasons for supporting new networks. The report states that the desire for increased competition in Champaign County may be linked to a desire for faster speeds and lower prices. The **City of Chicago’s Digital Equity Plan** notes that its Community Conversations revealed concerns about the lack of internet options. Participants not only complained about a lack of choices among providers but also said that certain apartment buildings require their renters to subscribe to certain providers.³⁹⁰

Throughout the drafting of the IL BEAD Plan, the state has been aware that funding for the ACP may run out in coming years. Beyond the ACP program, eligible households may not know about provider-specific discounts for broadband internet access service plans. As detailed in Section 3.3.3 of the Asset Inventory, Comcast/Xfinity, AT&T, and Spectrum all offer discounted internet access subscriptions to qualified users. Policymakers and other stakeholders should raise awareness of these programs. Policymakers should also work with providers to create such programs and to ease the process of qualifying and signing up for these offers.³⁹¹ One challenge is that many of these programs are operated by large, multi-state providers rather than Illinois-specific or local providers. The state plans to use the BAC as a platform to encourage internet service providers to offer assistance programs, since multiple provider representatives are also council members. Additionally, the BAC platform will discuss best practices for encouraging provider competition in the subgrantee process for BEAD funding.

Many residents may not know of the programs offered by internet service providers outside of the ACP. A listening session participant commented, *“There is a local provider offering internet speeds of 100 Mbps, and after the subsidy the service only costs \$5 a month, but many residents do not know about this program.”*³⁹² Also, once residents learn of these offerings, they need reassurance that there are no “catches” involved in receiving the benefits. *“Residents sometimes*

³⁹⁰ [City of Chicago Digital Equity Plan](#), January 2023

³⁹¹ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

³⁹² East Central Listening Session on 4/12 – 4/13

feel that subsidies providing internet for \$5 per month must be too good to be true, or internet at this price will not actually provide them with enough data coverage,” the participant said.³⁹³

Local organizations have begun to explore the possibility of entering into public-private partnerships to increase broadband affordability for residents. **ConnectLakeCounty’s Digital Equity Strategic Plan** suggests that internet services could be made more affordable through partnerships with Comcast and AT&T. These partnerships could offer “Internet Essentials” subscriptions and make bulk-purchase agreements for fiber in low-income apartment buildings. Organizations such as the Waukegan Housing Authority could participate as partners. This type of agreement, like AT&T’s bulk purchase program, can provide symmetrical speeds enabled by fiber service at reasonable prices for multi-unit buildings. To execute this program, a purchase agreement is needed with a single payor who could provide discounts for high-speed data to end-user households. This would allow residents—especially those who live in public housing units—to avoid managing accounts or payments for internet services. This approach does pose one challenge: paying for the program. One option Lake County use is a combination of public and private funders.³⁹⁴

Kids First Chicago (K1C) asked Chicago Public School (CPS) parents how they could be supported during the pandemic. The common theme in parents’ responses was a need for internet access. The **Chicago Connected 2021 Program Impact Report** details the impact of the Chicago Connected Initiative, which provides free internet access to families with the highest need. Prior to Chicago Connected, 27% of eligible families did not have internet service. For 75% of these families, the cost of internet access was too high. Seventy-five percent of now-connected families have a self-reported annual income of less than \$35,000. The Chicago Connected Initiative has secured \$50 million over four years, including \$20 million in philanthropic funding during the first two years. Over 82% of families viewed the Chicago Connected program favorably after signing up.³⁹⁵

³⁹³ East Central Listening Session on 4/12 – 4/13

³⁹⁴ [ConnectLakeCounty Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

³⁹⁵ [Chicago Connected A Year in Review](#), Kids First Chicago

3.4.4 Broadband Access

3.4.4.1 Increased public Wi-Fi, networks, and access points

The State of Illinois used its Drive-Up Wi-Fi Hotspots Map to gain perspective on public Wi-Fi, networks, and access points across Illinois. This data was collected during COVID-19 through a multi-agency collaboration with public and private organizations.³⁹⁶ The state plans to conduct a follow-up exercise to refresh this data through the State Government Broadband Working Group. There are 561 public Wi-Fi hotspots in Illinois; these are provided by schools, libraries, and local ISPs. The top five counties with the highest number of public Wi-Fi hotspots are Cook County (87), Tazewell County (43), Lake County (36), DuPage County (31), and Madison County (20).³⁹⁷

There are 0.11 public Wi-Fi hotspots per 1,000 households in Illinois. Per-capita access to public Wi-Fi is better in the northern regions of the state and worse in the southern regions (Figure 16), mirroring geographic trends in broadband availability and adoption.³⁹⁸

Despite this existing infrastructure, 19 counties still did not offer the public Wi-Fi that was recorded in the Drive-Up Hotspots Map. Six of those counties are in Southern Illinois, and five are in Southeast Illinois. The **Broadband Ready Southeast Region Report** notes that many of the public Wi-Fi hotspots shown on the map in the Southeast region are reserved exclusively for K-12 students or were only temporarily available during COVID-19. The plan suggests that institutions should be offered incentives to continue making hotspots available.³⁹⁹

³⁹⁶ [Illinois Drive-up Wi-Fi Map](#), March 2020

³⁹⁷ [Illinois Drive-Up Hotspots](#)

³⁹⁸ [Illinois Drive-Up Hotspots](#)

³⁹⁹ Broadband READY Southeast Region Report, Eastern Illinois University, 2021

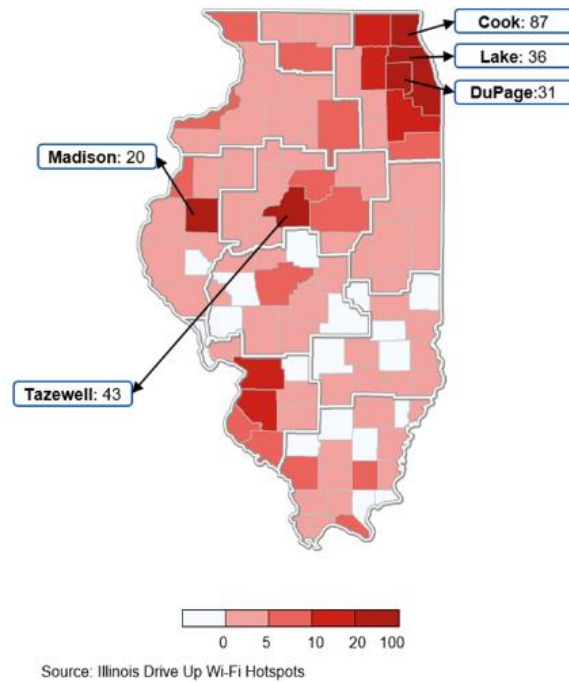


Figure 16. Number of public Wi-Fi hotspots by county in Illinois. Some counties are highlighted because they offer a high number of public Wi-Fi hotspots

The COVID-19 pandemic proved that CAIs like public libraries and municipal facilities are crucial to providing public Wi-Fi, networks, and access points in Illinois. In Southwest Illinois, public libraries and businesses provided internet services that helped students access their classes. Additionally, a local Department of Parks provided picnic tables so that students could complete schoolwork outside buildings that provided free Wi-Fi.

When asked where they would like to have free, public internet services in their communities, residents answered that grocery and retail stores, libraries, community gathering spaces, and bus stops would be good locations for such service.⁴⁰⁰

In addition to expanding access to public Wi-Fi, networks, and access points through CAIs and public buildings, the state is working to establish secure spaces within these locations so that

⁴⁰⁰ East Central Listening Sessions, April 12-13

residents can engage in private activities like accessing their personal finances.⁴⁰¹ The state also plans to work with libraries to expand access to rural areas and to provide that access to all users—not just district residents or library cardholders. More Illinoisans can then use broadband services in their region and across the state rather than being limited to their municipality. The state also aims to identify other CAIs that can offer public Wi-Fi in regions or counties with few public libraries. For example, the **Broadband Ready Southeast Region Report** notes that four counties have only one public library. In rural counties, this often means that residents must travel a long distance to access to public broadband services.⁴⁰²

Municipalities in Illinois are investing in the expansion of public Wi-Fi as well. The Chicago Park District is installing public Wi-Fi at 60 parks using funding from the Chicago Recovery Plan. The initiative seeks to transform local parks into Wi-Fi hubs, providing communities with free, public, high-speed wireless internet.⁴⁰³ Some municipalities, like the **Town of Normal**, have their own inventories of public Wi-Fi offerings, which include several municipal facilities that offer free wireless networks. Additionally, the train station and the Children’s Discovery Museum provide a free outdoor wireless network.⁴⁰⁴

The **ConnectWaukegan Broadband Community Assessment** completed by the ConnectLakeCounty Broadband Taskforce found that some students do not have sufficient access to broadband connectivity because their families do not have internet services. The assessment proposes potential solutions, such as the Waukegan District 60 School Board’s decision to provide devices to students in the 2020-2021 school year. One challenge was observed in this solution: the Wi-Fi hotspots provided to students were temporary. An alternative would be to improve connectivity in public spaces.⁴⁰⁵ The city’s plan also outlines a goal to outfit CAIs with gigabit symmetric speeds that could be used as public, Wi-Fi hotspots for

⁴⁰¹ Southeast Listening Sessions, March 22

⁴⁰² Broadband READY Southeast Region Report, Eastern Illinois University, 2021

⁴⁰³ [Chicago Digital Equity Plan](#), January 2023

⁴⁰⁴ [Access the Town’s Free Public Wi-Fi Networks](#), Town of Normal

⁴⁰⁵ [Connect Waukegan Community Broadband Assessment](#), 2020

better connectivity in public spaces. Additionally, the city proposed that families use the IOB's Drive-Up Wi-Fi Hotspot Map to identify high-speed connections available in Waukegan.⁴⁰⁶

According to the **West Central Illinois Broadband READY Report**, local broadband providers provide Wi-Fi hotspots with free internet access through public parks, sports facilities, and low-income housing developments. Other municipalities could work with their local providers to offer free Wi-Fi hotspots in key community centers.⁴⁰⁷

The **Bond County Broadband Initiative** sets public access locations as a strategic priority. The initiative aims to provide public access to high-speed fiber internet at key locations throughout the county so that residents can find a location within five miles or less. This is an interim step as the county deploys better internet to residents' homes and leverages the county's middle-mile network.⁴⁰⁸

3.4.4.2 Increased cellular connectivity

Illinois residents want to have cellular connectivity so they can perform everyday tasks on mobile devices and smartphones. Cellular connectivity is even more important in emergency situations, when alerts may be sent via text messages or public safety applications. Despite having 4G LTE broadband 5/1 Mbps coverage of nearly one hundred percent, according to the FCC 4G LTE Coverage Map three counties—Calhoun, Pike, and Adams—lack complete coverage due to hilly terrain. Figure 17 shows the 4G LTE mobile coverage areas of the nation's four largest mobile wireless carriers: AT&T Mobile, T-Mobile, United States Cellular Corporation (doing business as UScellular), and Verizon. AT&T and Verizon offer statewide coverage, while T-Mobile and UScellular have a regional focus.

The state assumes that this map paints an idealized picture of current cellular coverage in Illinois, as it represents the coverage a customer may receive when outdoors and stationary. The map does not show where service is available when a user is indoors or in a moving vehicle. The four mobile carriers submitted the data voluntarily, which could result in discrepancies between

⁴⁰⁶ [Connect Waukegan Community Broadband Assessment](#), 2020

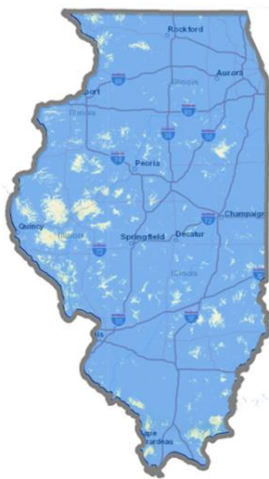
⁴⁰⁷ West Central Illinois Broadband READY Report, West Illinois University, 2022

⁴⁰⁸ Bond County Broadband Initiative, Accelerate Illinois Round 2

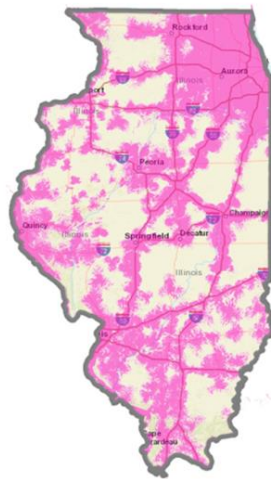
expected and actual services—as has been noted in listening sessions regarding participants’ current broadband coverage. The map is also based on a propagation model, which means that Illinoisans’ actual, on-the-ground experience may vary due to factors such as the device used to connect to the network, cell site capacity, and terrain.⁴⁰⁹

Using the Illinois Broadband Map, the state designates locations where mobile wireless access is available as “LTE Designated,” “5G Designated,” or “5G Ultra” (Figure 19). Similar to the FCC 4G LTE Coverage Map, small pockets in West Central, Central, and Southern Illinois do not have access to 4G LTE or better cellular service.

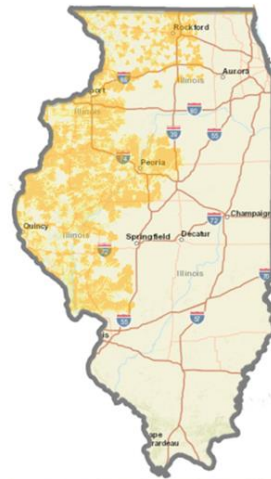
AT&T LTE Data



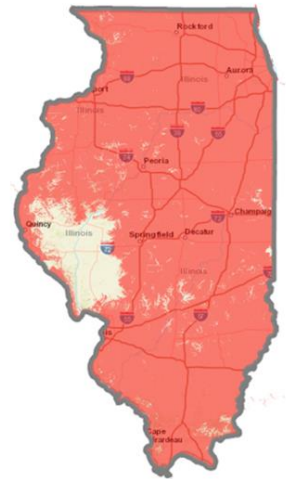
T-Mobile LTE Data



UScellular LTE Data



Verizon LTE Data



Source: FCC 4G LTE Coverage Map (as of May 15, 2021)

Figure 17. Areas in Illinois where the nation’s four largest mobile wireless carriers provide 4G LTE mobile coverage

409 [Mobile LTE Coverage Map](#), FCC

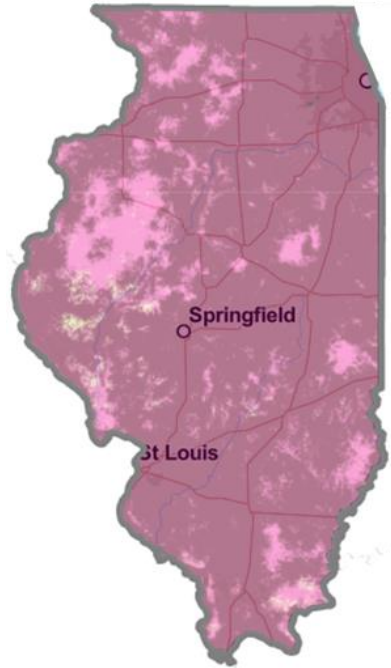


Figure 18. Mobile wireless service in Illinois based on the Illinois Broadband Map. The darker pink color indicates access to 5G Ultra or 5G. Lighter pink indicates access to LTE cellular coverage

Participants in listening sessions in Illinois have expressed frustrations with their cellular connectivity. For example:

- In Southwest Illinois, residents reported that cellular coverage is extremely unreliable in the region. They expressed concerns about a lack of internet and phone coverage and the potential inability to use their devices in an emergency.⁴¹⁰
 - One Southwest resident shared that a neighbor was concerned that they might be unable to call an ambulance due to the limited internet and phone services in their area.⁴¹¹
 - Another Southwest participant tried to text their child during the listening session, but the text could not go through due to lack of cell phone service.⁴¹²

⁴¹⁰ Southwest Listening Sessions, March 15

⁴¹¹ Southwest Listening Sessions, March 15

⁴¹² Southwest Listening Sessions, March 15

The State of Illinois understands that as fiber and high-speed broadband (100/20 Mbps+) is deployed across Illinois, cellular connection will improve. This means that counties that currently do not offer complete coverage and residents who experience challenges with their current coverage can expect faster, more reliable cellular coverage. Verizon has begun to connect its cell sites to already deployed fiber-optic cables as it seeks to improve reliability and performance for its customers.⁴¹³ By deploying fiber, providers can offer its cellular customers better speed and reliability, which are crucial for Illinoisans, especially those in rural areas. Telecommunications providers will also be able to offer bundled voice, internet, and video services through their expanded fiber networks.⁴¹⁴

3.4.5 Digital Equity

To make progress towards digital equity in Illinois, the state plans to invest in workforce development, digital inclusion efforts, and partnerships with key stakeholders, with a focus on underrepresented communities and members of covered populations, as these communities may not have had sufficient opportunity to engage in the digital economy⁴¹⁵. This section describes the current factors affecting digital equity, identifies needs across Illinois, and includes a preliminary list of solutions that the state may consider when addressing the needs and barriers related to digital equity. These solutions include increases in:

- Workforce development training and employment services
- Resources to support digital inclusion
- Engagement with community-based organizations.

⁴¹³ [Verizon now serves nearly 48% of cell sites with owned fiber](#), September 2022

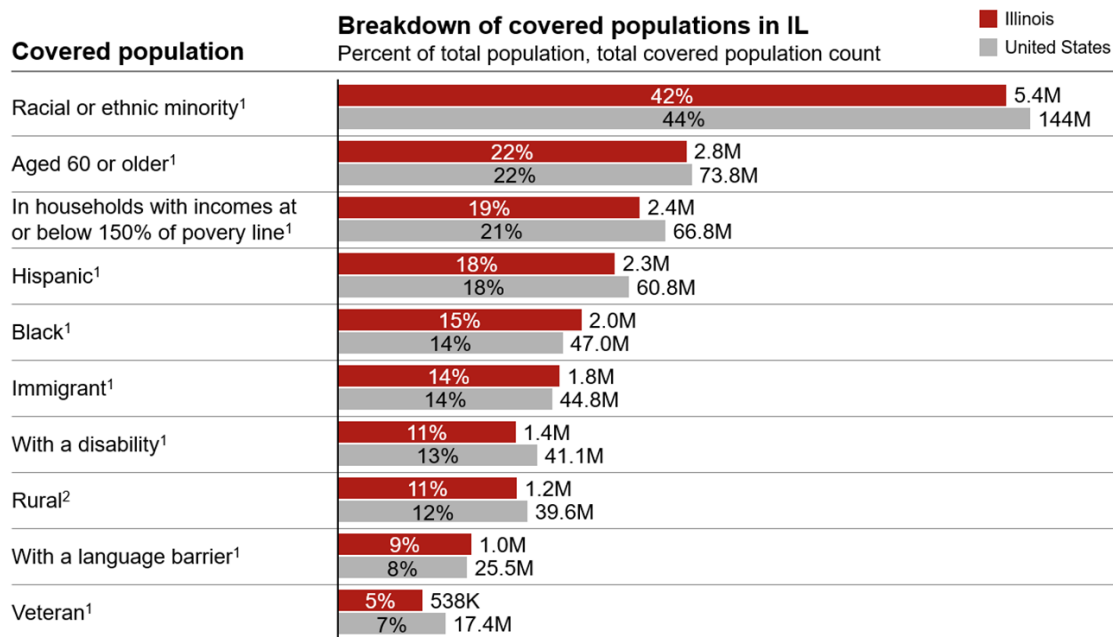
⁴¹⁴ [Types of Broadband Connections](#), FCC

⁴¹⁵ Unrepresented communities are defined in the [BEAD NOFO](#) as low-income households, aging individuals, incarcerated individuals, veterans, persons of color, Indigenous and Native American persons, members of ethnic and religious minorities, women, LGBTQI+ persons, persons with disabilities, persons with limited English proficiency, persons who live in rural areas, and persons otherwise adversely affected by persistent poverty or inequality. Covered populations is defined in the DE NOFO as individuals who live in covered households, or households with income of less than 150% of the FPL; aging individuals; incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility; Veterans; Individuals with disabilities; Individuals with a language barriers, including individuals who are English learners and have low levels of literacy; individuals who are members of a racial or ethnic minority group; and individuals who primarily reside in a rural area. The terms underrepresented communities and communities comprised primarily of individuals belonging to covered populations are used interchangeably throughout this document.

The IL SDEP, which is due to the NTIA in December 2023, expands on this work.

3.4.5.1 Covered Population Needs Assessment: Increased participation in the digital economy by underrepresented communities

According to the Digital Equity Act Population viewer, 78.2% of Illinois’s population is considered to be covered populations.⁴¹⁶ Households in racial or ethnic minorities, individuals over 60 years old, and individuals in households with incomes below 150% of the Federal Poverty Level (FPL) are the largest covered populations in Illinois based on data from the American Community Survey (Figure 19).⁴¹⁷



1. US Census 2021 ACS 5-year
2. US Census 2021 ACS 5-year. [Based on OMB definition of rural](#) as an area or county that is a Micro area (urban core of 10K to 50K people) or outside of a Metro or Micro area
3. [Digital Equity Act Population Viewer](#)

Figure 19. Covered populations in Illinois compared to the national average. Breakdown of percentage of the covered population compared to the total Illinois and national population. Counts represent the size of the covered population in Illinois or nationally. ⁴¹⁸

The state reviewed county-level demographic data from the American Community Survey to determine where covered populations are located in the state. For each demographic group, the

⁴¹⁶ [Digital Equity Act Population View](#), U.S. Census Bureau

⁴¹⁷ U.S. Census 2021 1-Year ACS

⁴¹⁸ U.S. Census 2021 1-Year ACS

proportion of the county's population that identifies with that demographic was calculated. The following was observed for the covered population where county-level data was available:⁴¹⁹

- Racial or ethnic minorities: Individuals who are racial or ethnic minorities make up 40% of the population of five counties: Cook, Kane, Lake, Will (Northeast Illinois), and St. Clair (Southwest Illinois).
 - Hispanic: Individuals who identify as Hispanic, regardless of race, make up more than 20% of the population in six counties: Kane, Cook, Lake, Kendall (Northeast Illinois), Boones (Northern Stateline), and Cass (Central Illinois).
 - African American or Black: Individuals who identify as Black or African American make up more than 20% of the population in five counties: Alexander, Pulaski (Southern Illinois), Cook (Northeast Illinois), St. Clair (Southwest Illinois), and Peoria (North Central Illinois).
- Immigrants or foreign-born individuals: In four counties in Northeast Illinois—Cook, DuPage, Lake, and Kane—more than 17% of the population is made up of immigrants.
- Individuals with a language barrier or individuals with English proficiency of less than “very well”: In three counties—Cook, Kane (Northeast Illinois), and Cass (Central Illinois)—more than 10% of the population has a language barrier.
- Individuals over 60: In 15 counties—Hardin, Pope, Gallatin, Pulaski (Southern Illinois), Henderson, Hancock, Schuyler (West Central Illinois), Jo Daviess, Putnam, Carroll (Northwest Illinois), Calhoun (Southwest Illinois), Stephenson (Northern Stateline), Shelby (Central Illinois), Marshall (North Central Illinois), and Edgar (Southeast Illinois)—more than 30% of the population is more than 60 years of age.
- Individuals with a disability or civilian noninstitutionalized individuals with a disability: In 12 counties—Hardin, Pulaski, Gallatin, Alexander, Perry, Massac, Franklin, Wabash (Southern Illinois), McLean (North Central Illinois), McHenry (Northeast Illinois), McDonough (West Central Illinois), and Calhoun (Southwest Illinois)—more than 20% of the population has a disability.

⁴¹⁹ U.S. Census 2021 1-Year ACS

- Individuals with incomes 150% below the FPL: In 18 counties—Alexander, Jackson, Pulaski, Franklin, White, Pope, Perry, Union, Gallatin, Wayne, Wabash (Southern Illinois), Coles, Fayette, Clay (Southeast Illinois), Vermilion, Champaign (East Central Illinois), Know (West Central Illinois), and Winnebago (Northern Stateline)—more than 25% of the population earns income that is 150% below the FPL.
- Veterans: In ten counties—Pope, Pulaski, Wabash (Southern Illinois), St. Clair, Calhoun (Southwest Illinois), Menard, Greene (Central Illinois), Carroll (Northwest Illinois), Henderson (West Central), and Marshall (North Central Illinois)—more than 10% of the population is a veteran.
- Rural: Sixty-two percent of Illinois’s 102 counties are considered rural, with 100% of Southeast Illinois counties, 67% of Southern Illinois counties, 46% of West Central counties, and 44% of Central Illinois counties falling under the U.S. Office of Budget Management’s (OMB) definition of rural.⁴²⁰

The State of Illinois acknowledges that the proportions of covered populations may change throughout the course of plan implementation. Illinois is one of several midwestern states where suburbs and cities have been impacted by the suburbanization of poverty due national economic downturns. In the suburbs surrounding large metro areas, the low-income population has considerably increased as jobs shift away from urban centers.⁴²¹ The same has happened in smaller metro and non-metropolitan communities. As the IL BEAD Plan and IL SDEP are implemented, the state will continue to assess where its covered populations are located to make sure that funding is directed to communities that need it most.

To participate in the digital economy, communities need both broadband and device access. Covered populations tend to have lower broadband adoption and device access rates compared to non-covered populations. The American Community Survey found that the broadband

⁴²⁰ The Office of Management and Budget (OMB) designates counties as Metropolitan, Micropolitan, or Neither. A Metro area contains a core urban area of 50,000 or more population, and a Micro area contains an urban core of at least 10,000 (but less than 50,000) population. All counties that are not part of a Metropolitan Statistical Area (MSA) are considered rural. – [Defining Rural Population](#), U.S. Department of Health & Human Services (Data: [Core based statistical areas \(CBSAs\) metropolitan divisions, and combined statistical areas \(CSAs\), Mar. 2020](#))

⁴²¹ [The Suburbanization of Poverty: Trends in Metropolitan America, 2000 to 2008](#), January 2010

adoption rate among individuals who make less than 150% of the Federal Poverty Level (FPL) is 54%, as compared to 80% among individuals who make more than 150% of the FPL. Adoption rates are 57% among individuals with a disability and 77% among individuals without a disability. Among individuals who are 60 or older, the adoption rate is 64%, while it is 78% for individuals under 60. Among individuals with a language barrier, the adoption rate is 66%, while the rate is 75% for individuals without such a barrier. The adoption rate among veterans is 67%; among non-veterans it is 73%.⁴²²

In other comparisons, the data on race and ethnicity shows a gap in broadband adoption among Black/African American (65%) and Hispanic populations (72%) when compared to White (76%) and Asian populations (84%).⁴²³ Among households in rural counties in Illinois, the broadband adoption rate is 57%; the statewide rate is 72%.⁴²⁴

When looking at national data, broadband adoption rates based on income level are the same in Illinois and nationally. When Illinois adoption gaps are compared to national gaps, the difference in rates between individuals over 60 and those under 60 in Illinois is 14 percentage points; nationally it is 11 percentage points. The difference between veterans' and non-veterans' adoption rates in Illinois is six percentage points, while nationally the difference is two percentage points.⁴²⁵

The device access⁴²⁶ 59%, compared to 88% for individuals making more than 150% of the FPL.⁴²⁶ The rate is 63% among individuals with a disability, and 84% among individuals without a disability. Individuals who are 60 or older have an access rate of 72%, while 84% of individuals under 60 have device access. The access rate is 73% among individuals with a language barrier, and 82% for individuals without. And finally, 77% of veterans have device access, compared to 81% of non-veterans who have such access.

⁴²² Defined as individuals who speak English well, not well, and not at all

⁴²³ ACS 5-Year Estimates Public Use Microdata Sample 2021

⁴²⁴ U.S. Census 2021 5-Year ACS; OMB Definition of Rural Population

⁴²⁵ ACS 5-Year Estimates Public Use Microdata Sample 2021

⁴²⁶ "Device" was defined as anyone who has access to a desktop or laptop

When looking at race and ethnicity, a gap in device access is evident among Black or African American (68%) and Hispanic populations (82%) when compared to White (84%) and Asian populations (91%).⁴²⁷

When Illinois device access rates are compared to national rates, the difference between veterans and non-veterans in Illinois is four percentage points, while the national difference is zero. The difference between individuals over 60 and those under 60 in Illinois is 12 percentage points; nationally the difference between the two groups is nine percentage points.⁴²⁸ For residents living in rural counties in the Illinois, the device access rate is 69% for rural households, while the statewide access rate among households is 79%.⁴²⁹

Lack of broadband adoption and device access puts residents of rural communities at a competitive disadvantage, as other Illinois residents may take their business elsewhere. Low internet speeds limit the contributions individuals can make in the workplace by using collaborative software, and they prevent businesses from modernizing. Without broadband access, businesses cannot perform operational tasks like placing bulk orders and managing inventory. For farmers, broadband adoption and access to technology are necessary for using timesaving software and hardware outdoors to increase productivity.⁴³⁰ As one listening session participant said, *“The lack of internet decreases the ability for rural people to stay informed, stay connected, stay entertained, work from home, be productive and decreases their property values because people that want to work from home cannot live in the area.”*⁴³¹

Increasing broadband adoption among residents in rural parts of the state opens up opportunities, as residents have more choices among employers when they can work remotely. Adoption also enables residents to access government services like SNAP and FASFA.⁴³² Residents need broadband access to apply to economic relief programs that require online applications.⁴³³ In Southern Illinois, low broadband adoption has caused some residents to leave

⁴²⁷ ACS 5-Year Estimates Public Use Microdata Sample 2021
⁴²⁸ ACS 5-Year Estimates Public Use Microdata Sample 2021
⁴²⁹ U.S. Census 2021 5-Year ACS; OMB Definition of Rural Population
⁴³⁰ Southeast Listening Sessions, March 22
⁴³¹ East Central Listening Sessions, April 12-13
⁴³² Southeast Listening Sessions, March 22
⁴³³ Southern Listening Sessions, March 1-2

the area for places with better connectivity, and residents face higher food prices because of higher operational costs.⁴³⁴

Broadband adoption is not the end goal, however, for covered populations in Illinois; increased broadband access must be paired with the resources to increase digital literacy and inclusion. Many covered populations are currently behind on broadband adoption, which makes deployment a high priority. In other communities with higher adoption rates, the priority is now digital literacy and inclusion. Rather than waiting until broadband is adopted before digital literacy and inclusion for covered populations can be addressed, both priorities must be addressed in parallel so that residents can take full advantage of their increased broadband access and participate in the digital economy.

Among broadband adoption and access programs currently offered by either the local or state government, many covered populations—especially those from low-income or unhoused communities—cannot participate because they are required to have a home address due or to participate in data collection. A listening session participant commented, "*We have children that are homeless who come into our program for help, but they don't have an address to put. We need to be mindful in what data we're pulling.*"⁴³⁵

When thinking about device access for covered populations, the State of Illinois recognizes that device needs may vary by population group. The Illinois CARE Connections (ICC) Program found that individuals over 60 and individuals with developmental disabilities were referred for bundle distribution for different reasons and requested different bundle types. Ninety-two percent of referrals for bundles among individuals over 60 (“Aging”) were aimed at alleviating social isolation and facilitating communication with family. These reasons were cited for 74% of referrals for individuals with developmental disabilities (“DDD”), while 16% of referrals for these individuals were based on a desire for recreational activities. Generally, the individuals with developmental disabilities who received bundles were younger, as 48% of recipients were between 21-40 years old, and 34% were between 41-60 years old. Overall, program participants

⁴³⁴ Southern Listening Sessions, March 1-2

⁴³⁵ Chicago of Chicago Listening Session, April 19

requested iPads (73%) more frequently than Android tablets (27%), but individuals over 60 (32%) requested Android tablets more than individuals with developmental disabilities (23%). More individuals over 60 who participated in the ICC Program also requested keyboards (51%) and hotspots (31%) compared to individuals with developmental disabilities (51% for keyboards, and 18% for hotspots). Seventy-six percent of Aging and DDD recipients had no prior experience with tablets, but 42% of Aging and 55% of DDD recipients reported using their bundle more than five times per week. Eighty percent of Aging recipients also used the accessible directions for operating the tablets, as well as the additional support provided via telephone by the Illinois Assistive Technology Program (IATP) and the University of Chicago-Assistive Technology Unit. This percentage is much higher than the 46% of DDD recipients who used the instructions. This difference could be attributed to the younger ages of the DDD recipients, as well as the fact that these individuals had more access to in-person support from family members.⁴³⁶

The type of device provided to enable device access often depends on recipients' preferred methods for accessing the internet. This fact was echoed by participants in listening sessions. One participant representing a community-based organization observed, *"Some people need a cell phone or tablet because they're more mobile in the day due to their job. Others need a desktop or laptop because they might be a student. To have continued use and individual learning, you have to provide the device that meets their needs; otherwise they won't be used."*⁴³⁷

AARP Illinois published a study in collaboration with Asian Americans Advancing Justice | Chicago, Chicago Urban League, and The Resurrection Project. The study focused on the economic, health, and digital needs of over 50 communities of color, including African American/Black, Hispanic/Latino, Asian American, and Pacific Islander communities. The **Disrupting Disparities Report's** findings are detailed below.⁴³⁸

- Economic security: Older communities of color are more likely to live in poverty than their White counterparts, and they are more apt to work past the age of 64. Accessing telehealth

⁴³⁶ [Reducing Social Isolation Through Technology: A Report on the Illinois CARE Connections Program](#), August 2021

⁴³⁷ City of Chicago Listening Session on 4/19

⁴³⁸ [Disrupt Disparities: Challenges & Solutions for 50+ Illinoisans of Color](#), AARP Illinois, 2020

services is a challenge as well; the study found that telemedicine use rates were lower for African American or Black Medicaid beneficiaries than for White beneficiaries.

- **Health:** Illinoisans can use telehealth services to overcome barriers to healthcare access among communities of color. White neighborhoods are more likely to have concentrated healthcare and pharmacy providers, and White residents are more apt to have access to a car that can take them to those services. Telehealth services must be able to accommodate communities with limited English proficiency; without this capability, patients tend to be less satisfied with care. The report recommends that Illinois target telehealth resources and accessibility measures in communities of color. It further recommends that funding legislation include caregivers and provide funds for internet access and equipment that enables use of telehealth services.
- **Connectivity:** Internet use supports the well-being of older adults by connecting them to health services and information, improving interpersonal connections, and increasing their independence. Broadband adoption among older adults is especially important as government and health services move to online platforms. The report recommends expanding broadband access by supporting municipal broadband networks and by enacting legislation that extends access to all communities.

In Illinois, covered populations include about 9.9 million individuals.⁴³⁹ These populations have lower broadband adoption rates and lower device access rates than non-covered populations. Increased broadband access (and implicitly, increased adoption) tends to boost workforce participation and improve economic outcomes, especially for covered populations. Hence, broadband expansion can increase covered populations' participation in the digital economy.

A study published by the **Illinois Economic Policy Institute** and the **University of Illinois School of Labor and Employment Relations** found that broadband access improves both employment outcomes and worker incomes in Illinois, based on previous census data. Broadband access can potentially raise the probability of being employed by about 1% and the annual income for all

⁴³⁹ [Digital Equity Act Population View](#), U.S. Census Bureau

workers by about 5%. Annual income would increase by about 7% for Black or African American workers and by about 6% for workers in the City of Chicago.⁴⁴⁰

Local broadband-related plans also note challenges and potential solutions to increase participation in the digital economy by underrepresented communities or members of covered populations. The **Chicago Digital Equity Plan** states that a lack of broadband access can hinder economic participation. For instance, while 21% of the over 3,000 respondents to their citywide survey with incomes under \$20,000 aim to get a job, and 21% of respondents are interested in starting a business, nearly 20% do not have internet service at home to pursue these professional goals.⁴⁴¹ The survey also found that black communities and seniors have low adoption rates compared to overall race and age demographics, and that respondents who live in extreme poverty are less likely to have a device or internet service at home. Additional insights from the Chicago Digital Equity Plan citywide survey include:⁴⁴²

- Nearly half of respondents without a device at home have an annual income below \$20,000.
- Nearly 20% of households with income below \$20,000 do not have internet service at home, compared to 3% of households with incomes between \$74,000 and \$99,000.
- Ninety-five percent of Asian and White respondents have home internet service compared to 81% of Black respondents.
- Ninety percent of respondents aged 18-24 have internet service at home, compared to 70% of respondents aged 75 and older.
- Ninety-five percent of 25-34-year-olds having home internet service. This age group has the highest rate of home internet subscriptions among respondents.

The City of Chicago presents two ideas for supporting traditionally underrepresented populations, specifically individuals with language barriers and individuals over 60 years of age. The first idea is setting up a bi-lingual IT help desk to support residents who need help completing online activities in multiple languages. The second is providing a help desk that would

⁴⁴⁰ [The Economic, Fiscal, and Social Effects of Public Investments in Broadband Internet Access in Illinois](#), June 2022

⁴⁴¹ [Chicago Digital Equity Plan](#), January 2023

⁴⁴² [Chicago Digital Equity Plan](#), January 2023

offer both technical and digital navigation support so that community members could access digital inclusion resources and complete processes online. This idea is based on the YMCA IT Help Desk.⁴⁴³ Another idea is to establish an intergenerational training program that would train, hire, and compensate youths for helping adults become more comfortable with technology.⁴⁴⁴

ConnectLakeCounty has determined that for urban and low-income communities, as well as communities with a high number of immigrants, the greatest barriers to digital equity are (1) affordability, (2) low enrollment in existing plans and benefits that provide financial assistance, (3) lack of access to devices beyond the Chromebooks issued by schools, (4) lack of available technical support to service devices, (5) low digital literacy, and (6) inability to secure home internet service due to housing insecurity and demographic or socio-economic barriers.⁴⁴⁵

The **ConnectLakeCounty Digital Equity Strategic Plan** surveyed residents about their one-time and frequent internet uses by household income:

- When asked if they used home internet services for certain activities, including connecting to work (47%), using social media (94%), shopping online (94%), running a home business (21%), attending school/class or doing homework (53%), accessing government information (85%), accessing medical bills (87%), banking or paying bills (87%), accessing home security or other “smart home” devices (29%), listening to music (65%), watching movies or videos (91%), and playing online games (80%). respondents in households with incomes less than \$25,000 said that they have performed these activities at some point.
- When asked if they used home internet services for certain activities, including connecting to work (27%), using social media (63%), shopping online (53%), running a home business (17%), attending school/class or doing homework (59%), accessing government information (35%), accessing medical services (46%), banking or paying bills (69%), accessing home security or other “smart home” devices (23%), listening to music (56%), watching movies or

⁴⁴³ See additional details in the Section 3.3.2 and Section 3.3.5

⁴⁴⁴ [Chicago Digital Equity Plan](#), January 2023

⁴⁴⁵ ConnectWaukegan, Illinois Connected Communities Round 2 Cohort – Final Update

videos (61%), and playing online games (61%), respondents in households with incomes less than \$25,000 reported that they performed these activities frequently.

- When asked if they used home internet services for certain activities, including connecting to work (53%), using social media (95%), shopping online (95%), running a home business (20%), attending school/class or doing homework (65%), accessing government information (83%), accessing medical services (75%), banking or paying bills (95%), accessing home security or other “smart home” devices (55%), listening to music (93%), watching movies or videos (92%), and playing online games (79%), respondents in households with incomes between \$25,000 and \$50,000 said that they have performed these activities at some point.
- When asked if they used home internet services for certain activities, including connecting to work (28%), using social media (82%), shopping online (57%), running a home business (11%), attending school/class or doing homework (40%), accessing government information (21%), accessing medical services (28%), banking or paying bills (72%), accessing home security or other “smart home” devices (38%), listening to music (67%), watching movies or videos (76%), and playing online games (41%), respondents in households with incomes between \$25,000 and \$50,000 reported that they performed these activities frequently.
- When asked if they used home internet services for certain activities, including connecting to work (82%), using social media (97%), shopping online (98%), running a home business (25%), attending school/class or doing homework (53%), accessing government information (85%), accessing medical services (87%), banking or paying bills (96%), accessing home security or other “smart home” devices (68%), listening to music (90%), watching movies or videos (93%), and playing online games (67%), respondents in households with incomes over \$50,000 responded that they have performed these activities at some point.
- When asked if they used home internet services for certain activities, including connecting to work (82%), using social media (97%), shopping online (98%), running a home business (25%), attending school/class or doing homework (53%), accessing government information (85%), accessing medical services (87%), banking or paying bills (96%), accessing home security or other “smart home” devices (68%), listening to music (90%), watching movies or

videos (93%), and playing online games (67%), respondents in households with incomes over \$50,000 reported that they performed these activities frequently.

These survey results from Lake County highlight the necessity of broadband access for covered populations—especially low-income households—and of having the digital skills to use the internet. More so than their higher-income peers, households with incomes under \$25,000 were more likely to use a home internet connection to frequently access essential services like school/classes or homework, medical services, and government information than more affluent households, which used their home internet connection frequently to connect to work, use social media, or watch movies or videos.⁴⁴⁶

Broadband adoption and access are necessary prerequisites for participation in the digital economy. The **Connect Waukegan Community Broadband Assessment** completed by the ConnectLakeCounty Broadband Taskforce notes that the city has a significant population of non-U.S. citizens, which presents challenges for residents who may be ineligible or unwilling to apply for internet services due to the multitude of requirements.⁴⁴⁷ The inability to access broadband subscriptions directly hinders broadband adoption and internet-enabled device access, which in turn affects participation in the digital economy. As the State identifies its non-U.S. citizen population and continues its programming to encourage broadband adoption and access, it plans to support residents without citizenship through application programs for broadband adoption. The state and its partners can provide expertise on navigating programs that include certain requirements that limit the participation of non-U.S. citizens.

Connect Champaign County surveyed its residents about their internet usage and service experience. When asked how they used the internet for personal activities, 62% of households use it for healthcare, 85.3% for personal research, 87.7% for shopping/food, and 92.8% for email/social media.

The **City of Harvey's Broadband Strategic Plan** observes that a low broadband adoption rate makes residents less competitive in the job market and impacts the City's economic

⁴⁴⁶ [ConnectLakeCounty Digital Equity Plan](#), Prepared for ConnectWaukegan, April 2022

⁴⁴⁷ [Connect Waukegan Community Broadband Assessment](#), 2020

competitiveness. Low rates of subscription to broadband services in the City of Harvey are influenced by a shortage of device access and digital literacy skills. These challenges prevent covered populations from fully participating in the digital economy—that is, using information technology to create, adapt, market, or consume goods and services.⁴⁴⁸ The impact of poor internet connectivity on economic opportunities for Illinois residents came up in residents’ survey responses in Jackson County. In the **Jackson County Broadband Plan**, a respondent said that they “*had to quit a job due to poor internet.*”⁴⁴⁹ Broadband adoption is important for all communities in Illinois so that they can participate in the digital economy and society.

Communities that are traditionally underrepresented need skills in digital safety in addition to digital literacy, according to the **East Central Illinois Broadband READY Preliminary Report**. Without digital safety, members of underrepresented communities or covered populations may not feel empowered or safe enough to engage with broadband-enabled technology. The report’s research confirms existing literature that describes how technology can be as much a liability or source of harm as a source of social agency when it comes to vulnerable populations and the local organizations that serve them. Organizations have expressed the need for more “safe spaces” to address technology issues without judgment, while households have shared concerns about predatory and malicious forms of digital tracking. The report states that connecting Illinois equitably requires stronger protections against pernicious forms of predatory digital marketing and profiling practices that target poor and vulnerable populations.⁴⁵⁰

The report also maintains that experiencing technological bias and stigma related to poverty alienates many vulnerable households and the organizations that serve them. These experiences often imply that such households are “broken” and need to be “fixed” by technology, and that middle-class and professional consumers and organizations are the “ideal” or standard users of technology. The report recommends that, beyond addressing individual barriers to technological literacy, adoption, and inclusion, future programs could foster a culture of “digital life and dignity.” These programs could be designed to confer a sense of dignity based on the unique

⁴⁴⁸ [City of Harvey’s Broadband Strategic Plan](#), September 2021

⁴⁴⁹ Jackson County Broadband Plan, Accelerate Illinois Round 1

⁴⁵⁰ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

technological experiences and literacy of marginalized households and service organizations.⁴⁵¹ The State of Illinois plans to address technological bias and poverty-related stigma by working with trusted community organizations. By doing so, the state hopes to overcome a significant barrier to participation in the digital economy for underrepresented communities: mistrust stemming from existing biases and stigmas.

Participating in the digital economy requires the ability to access services and to remain connected to personal networks. The **Bond County Broadband Initiative** conducted a survey of its residents, one of whom responded, *“I am disabled and cannot leave my home without assistance, and having internet would allow me to have more doctor appointments over telehealth. I could also shop from home and stay connected to my friends and family over social media.”*⁴⁵²

3.4.5.2 Increased workforce development training and employment services

As mentioned in Section 3.4.2.1, the National Skills Coalition (NSC) estimates that 90% of jobs in Illinois require a “definite” or “likely” digital skill, highlighting a need for technologically skilled workers in today’s economy.⁴⁵³ Nationwide trends show that, regardless of the education level and years of experience requested in a job posting, a digital skill is likely required for any industry. The NSC found that, for many workers of color, demand for digital skills is rising, and even workers with language barriers need digital skills. Traditionally workers of color have been more concentrated in industries with a lower demand for digital skills, but these industries are increasingly demanding more digital skills. Additionally, workers of color have historically faced occupational segregation in industries that require more digital skills. This segregation poses barriers to economic advancement, as having digital skills typically correlates to higher hourly wages. By addressing the digital skills gap in covered populations in Illinois, Illinois residents can enjoy more economic security, smaller equity gaps, and more job opportunities. In Illinois, if a single adult with no children moves from a job that requires no digital skills to one that requires one digital skill, the resulting combined Federal and State tax revenue is estimated to be an

⁴⁵¹ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁴⁵² Bond County Broadband Initiative, Accelerate Illinois Round 2

⁴⁵³ [Closing the Digital Skill Divide: The Payoff for Workers, Business, and the Economy](#), Amanda Bergson-Shilcock and Roderick Taylor with Nye Hodge

additional \$1,363 per year. For two adults with two children, the increase in combined tax revenue is estimated be \$2,726.⁴⁵⁴

To address the need for more Illinois workers with digital skills, the State of Illinois has taken a three-step approach. First, it set a baseline for the digital literacy rate across covered populations.

The State then identified the causes of low digital literacy among covered populations: gaps in deployment and adoption (i.e., lack of tools) and the inability to access workforce development training and employment services (i.e., capacity-building). The first of these drivers is the cause of the second. Illinois residents need to have internet-enabled devices, access to broadband, and training programs to pursue opportunities that advance digital literacy. Once the necessary tools are in place, residents need to understand the value of learning new skills and building existing skills, as well as the potential impact such skills development could have on their day-to-day life. This objective can be addressed with interventions, such as redoubling efforts to promote digital literacy through existing workforce development programming.

Workforce development programs are important for Illinoisans because *“employers don’t want to spend their time teaching the basic skills, but require the skills for entry-level jobs,”* as a listening session participant observed. The participant maintained that advanced digital literacy should be the top priority in digital equity planning. The participant further noted that spreadsheet classes are very popular, as people want to learn the tools for tasks like budgeting, accounting, and creating a resume.⁴⁵⁵

The State of Illinois could facilitate skills development through apprenticeships. Additionally, the State could reach out to students during their elementary and high school years to expose them to industries in most need of talent. Workforce development programs must be adapted to suit both urban and rural areas of Illinois. In Cook County, many non-profit organizations offer workforce training. In rural areas, such offerings are spread out and rely on community anchor

⁴⁵⁴ [Closing the Digital Skill Divide](#), National Skills Coalition, February 2023

⁴⁵⁵ City of Chicago Listening Session, April 19

institutions like libraries or schools. Workforce development opportunities are needed to address skilled Illinoisans' growing tendency to leave the state.⁴⁵⁶

Illinois has an extensive workforce development system. Some of the current programming at state and local levels is detailed in Section 3.3.5 under “Workforce Development Training and Employment Services.” As broadband investment is distributed throughout Illinois, more jobs are created, increasing the need for workforce development training and employment services. A study published by the **Illinois Economic Policy Institute and the University of Illinois School of Labor and Employment Relations** found that broadband investment in Illinois could create 14,400 jobs, including 5,600 jobs for construction and installation workers.⁴⁵⁷ Offering more workforce development and employment services could develop talent to fill these new jobs. Additionally, workforce development training and employment services could build the necessary digital skills that would prepare workers for these new jobs, most of which require digital skills.⁴⁵⁸

Indeed, the **WIOA Unified State Plan** found that long-term, continuous skills development and digital dexterity outweigh tenure and experience in the future labor market. Moreover, employees need well-developed skills to apply creativity, critical thinking, and digital abilities to solving complex problems.⁴⁵⁹ Workforce development training and employment services are also needed to build the digital literacy and skills that are increasingly required by all industries, as detailed in Section 3.4.2.1.

The IOB is housed within the DCEO, which currently works with the Department of Labor and Illinois Works Review Panel to funnel graduates of pre-apprentice programs into full-time apprentice positions.⁴⁶⁰ The IOB can continue and expand its partnerships with the Illinois Department of Labor to support placement of graduates and students into workforce development training and employment service programs. Additionally, it can work with

⁴⁵⁶ Interview with the DCEO Office of Employment and Training

⁴⁵⁷ [The Economic, Fiscal, and Social Effects of Public Investments in Broadband Internet Access in Illinois](#), June 2022

⁴⁵⁸ See Section 3.4.2.1 for additional details on digital literacy gaps and needs in Illinois.

⁴⁵⁹ [State of Illinois WIOA Unified State Plan, 2020-2024](#)

⁴⁶⁰ State Government Broadband Working Group

community colleges to highlight and develop programs specifically related to broadband deployment.

College and universities in Illinois are another key player in the workforce development ecosystem. The University of Illinois System has a variety of programs and initiatives to build talent in Illinois. Its Discovery Partners Institute trains more than 300 learners, ages 14 to 63, each year for tech jobs in Chicago.⁴⁶¹ Through existing partnerships with universities across Illinois, the IBL plans to offer employment services and to increase workforce development opportunities, including classes and training, to affordably develop residents' skills.

3.4.5.3 More resources to support digital inclusion

More than broadband adoption, Illinoisans need the skills to navigate internet-enabled devices and perform internet-enabled tasks. For many communities, lack of devices and digital literacy skills prevent Illinois residents from making full use of their internet connections.⁴⁶² As a member of the second ICC cohort said, *“There is a need for digital learning and not as much of a need for broadband connections or devices. It is more about what can we do with the devices that make the internet such a resourceful tool.”*⁴⁶³ For example, in the listening sessions in Southwest Illinois, participants observed that residents have difficulty navigating and filling out online applications for state-based programs. Older residents have difficulty completing “For Firearm Owners Identification” (FOID) applications, as they require uploading a photo—a process that some older residents cannot complete because they are not comfortable using digital tools.⁴⁶⁴ Participants in the Southwest listening session observed that training sessions to help elderly residents navigate the internet and use social media safely would be helpful.⁴⁶⁵ Washington County currently offers online classes to elderly residents on digital security and online fraud, but a listening session participant pointed out that courses on digital navigation are needed to facilitate activities like streaming local and national sports.⁴⁶⁶

⁴⁶¹ [Workforce Development: Strengthening the Talent Pipeline](#), University of Illinois System

⁴⁶² City of Chicago Listening Session on 4/19

⁴⁶³ “What Have We Learned?” End of Program Evaluation, Illinois Connected Communities Round 2

⁴⁶⁴ Southwest Listening Sessions, March 15-16

⁴⁶⁵ Southwest Listening Sessions, March 15-16

⁴⁶⁶ Southwest Listening Sessions, March 15-16

Farmers also need digital literacy training. Participants in the Southwest Illinois listening sessions noted that, in the past, farmers have missed training in online farming equipment due to a lack of internet access and digital skills.

Residents need help in navigating medical records that are not provided in standardized formats online.⁴⁶⁷ This concern was also expressed in the Southwest Region Broadband READY Report, which noted that survey respondents were concerned about their ability to use healthcare portals and online services.⁴⁶⁸ Residents must be able to access expanding telehealth services in Illinois as counties begin to institute services like tele-pharmacies in rural parts of the state, like Abingdon.⁴⁶⁹

The state hopes that, by implementing the IL SDEP, Illinois residents can not only have internet-enabled devices connected through the IL BEAD Plan, but also gain the skills to use those devices effectively.⁴⁷⁰

To effectively offer and scale digital inclusion programming across Illinois, funding and resources must be distributed to local organizations that offer these services. A representative of a community-based organization maintained that the organization's biggest obstacle in offering digital learning programs is a shortage of staff. The representative noted that effective programs require one-to-one, individualized support (such as ACP application support), but such support requires a lot of time, effort, and resources (such as staff).⁴⁷¹ Another attendee echoed this sentiment and said that, in their community, many residents are in different stages as they learn technology skills and how to use their personal devices. As a result, classes or group settings can be challenging when attendees' skills and needs vary widely. The same attendee commented that dedicated staff in greater numbers are needed to offer individualized support.⁴⁷²

⁴⁶⁷ Southern Listening Sessions, March 1-2

⁴⁶⁸ Southwest Region Broadband READY Report, 2022

⁴⁶⁹ West Central Illinois Broadband READY Report, West Illinois University, 2022

⁴⁷⁰ ICC Round 2 "What Have We Learned?" End of Program Evaluation

⁴⁷¹ City of Chicago Listening Session, April 19

⁴⁷² City of Chicago Listening Session, April 19

Adequate staffing and investment in human capital—especially from community members—could help to build trust among covered populations.⁴⁷³ Additional staffing would also allow the timing of programs to be more flexible to accommodate the schedules of working adults. A representative of a tech lab organization remarked, *“We only have the money for contractors during the day. That leaves the afternoons and evenings empty. The waitlist for our afternoon and evening programs is very long.”*⁴⁷⁴

Staff also must be trained to provide useful digital inclusion services. A listening session participant noted that they rely on volunteer tutors to provide adult digital literacy services, and these volunteers often do not have sufficient knowledge to provide effective training. Sometimes they even lack digital literacy themselves.⁴⁷⁵

Relevant resources must be accessible for all covered populations. A listening session participant from a community-based organization observed, *“Classes, call centers, tech support should be in different languages, including Spanish but also Polish. The languages offered need to meet community needs; right now, they don’t.”*⁴⁷⁶ Not only does language need to be accounted in these communities, but cultural differences must also be considered. A listening session participant said, *“Cultural differences require adjustments to how information is presented to help different people learn effectively. These things are difficult enough in your own language, so just having translated documents doesn’t help someone to truly feel confident. There needs to be greater attention made towards resources for programming that account for multiple language and cultural differences, not just English and Spanish.”*⁴⁷⁷ The same is true for devices provided to residents. A community-based organization representative who attended a listening session shared that government-provided devices only offered English as the default language, despite their community needing devices with Chinese language capabilities.⁴⁷⁸ Not only are expanded

⁴⁷³ City of Chicago Listening Session, April 19

⁴⁷⁴ City of Chicago Listening Session, April 19

⁴⁷⁵ City of Chicago Listening Session, April 19

⁴⁷⁶ City of Chicago Listening Session, April 19

⁴⁷⁷ City of Chicago Listening Session, April 19

⁴⁷⁸ City of Chicago Listening Session, April 19

digital inclusion programs needed, but also materials and devices in multiple languages, with local cultural relevance.

The IOB has engaged in several projects and initiatives aimed at ensuring broadband and digital inclusion for all in the State of Illinois. Among the projects undertaken by the IOB is the Broadband Regional Engagement for Adoption and Digital Equity, known as Broadband READY. This initiative, which engages local participants at both county and community levels, studied the characteristics of the various DCEO regions and considered the challenges of broadband adoption and digital equity in these regions. The Illinois Broadband READY program convenes inclusive and regionally representative teams covering the state's 10 economic development regions, and it funds local, trusted partners that work toward broadband adoption and digital equity. An example of the work done via Broadband READY grants is the facilitation and hosting of an ever-expanding Digital Equity Coalition, which includes representatives from diverse populations and groups.⁴⁷⁹

When considering how to structure digital inclusion programming, some listening session participants highlighted a need for intergenerational programming. A listening session participant from a community-based organization pointed out that aging individuals are often overlooked in inclusion efforts, yet they face a host of barriers, including low incomes, digital literacy, and—in some cases—not understanding the need for computers and the internet.⁴⁸⁰ Another participant in the listening sessions suggested partnering with the Chicago Public Schools (CPS) to deploy teens in the community to teach older adults.⁴⁸¹ A listening session participant commented, *"Teens can teach seniors how to use different devices well. These programs in particular are effective at helping older tenants know how to pay their rent as it moves to online and access telehealth online."*⁴⁸²

To support communities' digital equity needs, the IOB and program partners are building digital navigator capacity in communities around the state. Navigators work to address the digital

⁴⁷⁹ Adapted from the ACP Outreach Grant Application

⁴⁸⁰ City of Chicago Listening Session on 4/19

⁴⁸¹ City of Chicago Listening Session on 4/19

⁴⁸² City of Chicago Listening Session on 4/19

inclusion process—including home connectivity, devices, and digital skills. Digital navigators assess residents’ needs and connect them to resources that match their households’ lifestyles. These navigators can be volunteers or cross-trained staff who already work in social service agencies, libraries, health care, and elsewhere, and they offer remote and socially distant in-person guidance. The State of Illinois plans to provide the initial cohort with expert training as well as the opportunity to work directly with project partners on establishing resources and digital equity mapping.⁴⁸³ Digital navigators can offer individualized support that responds to the needs of various covered populations.

Members of covered populations face various obstacles to broadband adoption and access, but they may not encounter all of these obstacles at the same time or within the same community. A community-organization representative who participated in the City of Chicago listening sessions reported that they have dealt with organizations that were neither equipped nor prepared to help individuals with disabilities or those who do not speak English fluently. This barrier is especially high for individuals with disabilities, older adults, and those who speak English as a second language.⁴⁸⁴

Another listening session participant maintained that digital navigators can offer valuable training on very specific tasks, with clear end-goals and short-term benefits (such as creating a YouTube account and filing taxes). The participant noted that training in specific tasks helps some people to learn skills and to feel confident about continuing to seek help and practice their skills.⁴⁸⁵

Counties and cities in Illinois have recognized the need for additional programming and resources to support and increase digital inclusion. The **Chicago Digital Equity Plan** conducted Digital Equity Community Conversations to understand the barriers that residents face in accessing the internet, devices, and digital learning tools. These conversations revealed that nearly 60% of all workshop participants have faced barriers to digital literacy because only limited opportunities are available to build skills and confidence in using computers and/or the

⁴⁸³ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

⁴⁸⁴ City of Chicago Listening Session on 4/19

⁴⁸⁵ City of Chicago Listening Session on 4/19

internet. Yet 55% of participants expressed a desire to build their knowledge and skills through programs like accessible classes. This data indicates a possible gap between the needs and desires of the Chicago community and the resources available to support digital literacy. Seventy-five percent of participants in the Community Conversation workshop were from predominantly Black or Latinx communities, and 85% were from either low-or moderate-income communities. The City of Chicago plans to use grant funding to allow community organizations to run educational programs for their community members on computer and digital literacy basics in a “Train to Own” Digital Skills Program and Device Giveaway. Upon completion, program participants will have a basic familiarity with digital skills and earn a device.⁴⁸⁶

The Chicago Digital Equity plan reports that 17% of participants in the Community Conversation workshop discussed accessibility challenges, such as the language spoken and inaccessibility for persons with a disability. The City of Chicago’s plan recommends that the city conduct a current-state assessment of internet provider policies as they relate to accessibility for people with disabilities. The hope is that, through this effort, accessibility can be improved by working with internet service providers and disability advocates to address findings from the current-state assessment.⁴⁸⁷ As programming is introduced to communities, it is important to provide services in the best modality for that community. An ICC participant noted, *“The community is keenly interested in [broadband] services offered. However, grassroots bilingual efforts are critical to reaching the population to educate, engage, and register for said services.”*⁴⁸⁸

The **East Central Illinois Broadband READY Preliminary Report** highlights a need for tailored, sustained support and outreach for vulnerable households who are eligible for device distribution programs. This type of support was needed when participants in the Tech Buddies Program experienced failure in the computing hardware they had received or problems in renewing their monthly broadband subscription via Emergency Broadband Benefit (EBB) or Affordable Connectivity Program (ACP). The East Central Illinois Broadband READY team conducted a pilot program that distributed refurbished computing and new hotspot hardware to

⁴⁸⁶ [Chicago Digital Equity Plan](#), January 2023

⁴⁸⁷ [Chicago Digital Equity Plan](#), January 2023

⁴⁸⁸ ICC Round 2 “What Have We Learned?” End of Program Evaluation

500 vulnerable households in East Central Illinois. The report notes that households need accountability in quality control for scaled distribution of hardware, since the functionality of refurbished hardware cannot be assumed. More support is required to complement efforts to increase device access and to ensure that households and individuals are adequately empowered to understand how to use and maintain devices.⁴⁸⁹

3.4.5.4 Increased engagement with community-based organizations, CAIs, digital inclusion/equity coalitions, state agencies, local community champions, tribal leaders, and federal landowners

Libraries have been identified as key community-based organizations for supporting digital equity programs. An ICC cohort member shared that, while undertaking broadband planning efforts, *“The library was extremely useful in helping us set up a base of recruitment within the community.”*⁴⁹⁰ In the Southwest Illinois listening sessions, residents also identified libraries as good resources of information about local internet access programs. However, libraries may not have the capacity to help residents through the step-by-step process of applications and online searches.⁴⁹¹ Some public libraries in Southwest Illinois do offer courses to help elderly residents develop digital skills, and they do help individuals to complete job applications and online tax forms.⁴⁹² In some communities, libraries have extended their hours so that people can gather for internet-empowered activities, but libraries need increased security on their grounds so that individuals feel comfortable working outside the buildings in the evening.⁴⁹³ Physical safety was a repeated concern for community-based organizations when considering the top barriers their organizations face (e.g., walking to school with a laptop).⁴⁹⁴

Beyond libraries, all local organizations have a part to play in encouraging engagement on digital inclusion. As an attendee said at a statewide listening session, *“The solution is bigger than just*

⁴⁸⁹ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁴⁹⁰ What Have We Learned?” End of Program Evaluation, Illinois Connected Communities Round 2

⁴⁹¹ Southwest Illinois Listening Sessions, March 15-16

⁴⁹² Southwest Illinois Listening Sessions, March 15-16

⁴⁹³ City of Chicago Listening Session, April 19

⁴⁹⁴ City of Chicago Listening Session, April 19

giving people hardware, such as devices and hotspots; bridging the digital divide requires community participation and collaboration.”⁴⁹⁵

Section 3.4.5.3 details some of the avenues that the state already uses to engage with community-based organizations and CAIs. Additionally, state agencies are engaged through the State Government Broadband Working Group, which plans to meet throughout the duration of the stakeholder engagement efforts for this plan.⁴⁹⁶ State agency leaders also attend quarterly meetings of the Broadband Advisory Council. Through the IBL, the IOB engages with the Illinois Innovation Network, a network of the state’s 12 public universities, to collaborate on their economic development initiatives throughout the state, many of which focus on low-income households. The IOB, through the IBL, has tried to build regional partnerships and networks of county-based agencies (housing authorities, libraries, regional planning councils, etc.) and other anchor institutions.⁴⁹⁷

Internet service providers are also committed to participating in the conversation about digital equity. A listening session participant who has worked within the broadband industry for years shared, *“In the world a utility needs to be useful, beneficial, and accessible, and internet is the definition of those things. People who are Black and Brown need internet access, especially outside of their smartphones. Prices are going down and speeds are going up. I want to be a conduit for offering assistance, because the organization I work for is basically giving away internet service for free.”⁴⁹⁸*

By implementing the State Digital Equity Plan, the IOB hopes to support—in partnership with philanthropic organizations—community-based nonprofits that provide digital skills training and tech support for low-income households.⁴⁹⁹ The Asset Inventory (Section 3.3.5) details existing digital equity programming in Illinois. These programs lay the foundation for community support and programs enabling digital equity and inclusion work in Illinois. The state hopes to support these efforts and work with community partners to meet the goals of the IL BEAD Plan and IL

⁴⁹⁵ East Central Listening Sessions, April 12-13

⁴⁹⁶ See Section 5.1 – Stakeholder Engagement Process

⁴⁹⁷ Adapted from the ACP Outreach Grant Application

⁴⁹⁸ East Central Listening Sessions, April 12-13

⁴⁹⁹ [Universal Broadband in Illinois: Studying the Costs of Providing Free and Affordable Service for All Residents](#), December 2020

SDEP. More than local governments, a variety of local and community anchor institutions is eager to engage in broadband deployment and digital equity in Illinois. Of note is the diversity of programs that have applied to become members of the ICC's cohorts. These cohort participants have included school districts, county-level organizations, economic development groups, and community-based organizations, in addition to local governments.

Local digital equity and broadband planning efforts have reinforced the importance of trusted community organizations in reaching covered populations. The **ConnectLakeCounty Digital Equity Strategic Plan** highlights residents in households that make less than \$50,000 a year. These residents are more likely to use libraries or other public buildings to access internet services daily, weekly, or monthly.⁵⁰⁰ The plan further found:

- Eleven percent of residents who live in households with incomes less than \$25,000 and 16% of residents with incomes between \$25,000 and \$50,000 use the internet inside a library at least monthly, compared to 1% of residents who make over \$50,000
- Seven percent of residents who live in households with incomes less than \$25,000, and 3% of residents with incomes between \$25,000 and \$50,000 use the internet inside a library at least weekly, compared to 6% of residents who make over \$50,000
- Twelve percent of residents who live in households with incomes less than \$25,000 and 8% of residents with incomes between \$25,000 and \$50,000 use the internet inside a library at least daily, compared to 2% of residents that make over \$50,000
- Four percent of residents who live in households with incomes less than \$25,000 and 9% of residents with incomes between \$25,000 and \$50,000 use the internet inside a public building, such as a municipal office or senior center, at least monthly, compared to 3% of residents that make over \$50K
- No residents who live in households with incomes less than \$25,000 and 4% of residents with incomes between \$25,000 and \$50,000 use the internet inside a public building at least weekly, compared to 2% of residents who make over \$50,000

⁵⁰⁰ [ConnectLakeCounty Digital Equity Strategic Plan](#), prepared for Connect Waukegan, April 2022

- Eleven percent of residents who live in households with incomes less than \$25,000, and 13% of residents with incomes between \$25,000 and \$50,000 use the internet inside a public building at least daily, compared to 9% of residents who make over \$50,000

The **East Central Illinois Broadband READY Preliminary Report** notes that increased engagement with community organizations is important throughout digital equity efforts, as these organizations can serve as expert resources. Community organizations located across the state offer expertise in the diverse forms of vulnerability that households in their communities face—whether related to class, race, age, ethnicity, language, etc. The trust many households have built with community partners is another asset for the state’s expanded Digital Equity efforts.⁵⁰¹ The **Chicago Digital Equity Plan** reinforces the importance of engaging community anchor institutions to support community technology needs. The citywide survey, which received more than 3,000 resident responses, found that more than 78% of respondents were satisfied or very satisfied with their experience with technology assistance at the library. The survey found that most technology use at the library is for Wi-Fi/internet, followed by printing and using the computer lab.⁵⁰²

Connect Lake County has highlighted the importance of sharing information with and accessing information from other digital equity partners and practitioners to leverage and amplify their current work. This approach also supports the group’s next step of moving the national conversation on digital equity away from “minimally acceptable” and “maximally supported.” The IL SDEP implementation strategy mirrors this approach as it works to strengthen the community of digital equity practitioners to make sure that best practices and resources are being shared during local and coordinated digital equity activities. Any stakeholder who is interested in digital equity—including community-based organizations, CAIs, state agencies, and local governments—may get involved.⁵⁰³

⁵⁰¹ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁵⁰² [Chicago Digital Equity Plan](#), January 2023

⁵⁰³ ConnectWaukegan (rebranded as ConnectLakeCounty in 2023), Illinois Connected Communities Round 2 Cohort – Final Update



4 POTENTIAL OBSTACLES AND BARRIERS

Multiple obstacles and barriers may hinder the State of Illinois as it executes its IL BEAD Plan to close the digital divide in the state. The following subsections outline the overall context and potential issues related to broadband deployment and digital inclusion, as well as the mitigation approaches the state may consider taking to overcome identified obstacles and barriers.

4.1 Potential barriers and obstacles to broadband deployment

4.1.1.1 Legislative and regulatory considerations

Section 3.4.1.5 of the Needs and Gaps Assessment (3.4) describes recent legislation related to broadband within the State of Illinois. Further details on potential barriers associated with those are outlined below:

The IOB is continuing to navigate through the regulatory changes posed by the Prevailing Wage Act (PWA) for Connect Illinois Broadband Grant Program grantees. These regulations could impact the implementation of the IL BEAD Plan through the subgrantees. The PWA is applied to nearly all labor included in Connect Illinois grant-funded work.

Some regions have seen providers in the state discontinue service with perceived, and unspecified, regulatory barriers noted as the motivation. In Southeast Illinois, a large out-of-state distribution cooperative discontinued service, citing the financial strain caused by having to meet regulatory requirements and to upgrade its service. The network of towers, constructed using federal funds and used by an Illinois mobile wireless provider, remained unused as of 2022.⁵⁰⁴

Participants of in-person listening sessions in Southeast Illinois mentioned that city regulatory burdens, such as high permitting costs for building under rail lines, are preventing construction of new infrastructure.⁵⁰⁵ Legislation may be considered to ensure that infrastructure is deployed safely, as residents' private property has been damaged or trespassed on. Providers in the past have not sought permission before entering.⁵⁰⁶

Zoning laws and regulations may also impact broadband deployment, as is highlighted by the **Kaskaskia College Region Accelerate Team** in their broadband deployment plan.⁵⁰⁷

Providers have said that legislative and regulatory requirements are a barrier to deploying broadband across Illinois. In interviews during the **Connect Livingston Broadband Plan**, internet service providers expressly communicated a need to eliminate political red tape.⁵⁰⁸

In addition to the mitigation measures already put into place by the legislation detailed in Section 3.4.1.5, the state may explore additional solutions:

- Investing in educational opportunities that would help providers understand the process and regulations associated with the PWA before grant application deadlines. This education could be supplied through webinars in partnership with the University of Illinois Extension.
- Implementing “dig once” strategies, such as those identified in SB1438, to provide ready-made, buried conduits that could allow future providers to install fiber more easily and cheaply by threading it through existing conduits. This effort may be conducted in

⁵⁰⁴ Coles-Moultrie Electric Cooperative Newsletter, May 2020, per Broadband READY Southeast Region Report, Eastern Illinois University, 2021

⁵⁰⁵ Southeast Listening Sessions on 3/22

⁵⁰⁶ Southeast Listening Sessions, March 22

⁵⁰⁷ Kaskaskia College Region Accelerate Team Presentation

⁵⁰⁸ Connect Livingston Broadband Plan, Accelerate Illinois Round 2

cooperation with the Illinois Department of Transportation to minimize the number and scale of excavations when installing broadband infrastructure.⁵⁰⁹

- In addition, Illinois plans to explore the following mitigation approaches, which include ideas raised through stakeholder engagement:
- Legislation or regulations to ensure effective measures are in place during infrastructure installation, as residents have reported property damage during broadband infrastructure construction.⁵¹⁰
- Collaborating with city and local government to find ways to ease regulations that may increase providers' costs for constructing improved infrastructure. Potential solutions could include subsidies.⁵¹¹
- Exploring ways to enable community ownership of the internet service as a cooperative.⁵¹²

4.1.1.2 Procurement and contracting issues

The State of Illinois has noted a lack of middle-mile infrastructure in certain parts of Illinois. The state has also found that, once an internet service provider has won funding in an area of Illinois, the location can be closed off to other providers.⁵¹³ The state hopes to overcome this contract-defaulting method with its implementation plan outlined in Section 5 of the IL BEAD Plan.

The PWA regulatory considerations being assessed by the Connect Illinois Broadband Grant Program, as detailed in Section 4.1, may impact the contracting process for broadband deployment as well. The PWA requires contractors and subcontractors to pay laborers, workers, and mechanics employed on public works projects no less than the general prevailing rate of wages (consisting of hourly cash wages plus fringe benefits) for similar work in the locality where the work is performed. PWA violators must pay workers the difference between the wage paid and the prevailing wage and are subject to penalties and punitive damages. A contractor or subcontractor found to have violated the PWA on two occasions in a five-year period may be

⁵⁰⁹ [Dig-Once Policies](#), Division of Broadband and Digital Equity, NCDIT; [Minimizing Excavation Through Coordination](#), FHWA Office of Transportation Policy Studies

⁵¹⁰ Southeast Listening Sessions, March 22

⁵¹¹ Southeast Listening Sessions, March 22

⁵¹² City of Chicago Listening Session, April 19

⁵¹³ Interview with the ICN

disbarred from public works projects for four years. Contractors are required to post prevailing wage rates at job sites.⁵¹⁴

Broadband deployment projects are considered public works projects and as such must comply with the PWA. The state may need to educate its subgrantees on the PWA and how it will be enforced so that subgrantees can comply with its required processes and procedures while applying project-specific job titles and paying prevailing wage rates. Subgrantees may be required to understand how to identify the appropriate job classification and wage rates for work funded by BEAD grants to prevent delays in infrastructure deployment. Through the IOB, the state has committed to helping its BEAD subgrantees understand PWA requirements and reporting protocols by increasing education efforts and available engagement capacity for all capital program grantees that are subject to the PWA.

4.1.1.3 Labor shortages

Based on the analysis presented in Section 3.4.1.7 of the IL BEAD Plan, the State of Illinois may expect to experience labor shortages in the future as it relates to broadband deployment. The state may expect to experience workforce challenges, however, if the need for qualified workers increases. A federal report, *Assessment of the Critical Supply Chains Supporting the U.S. Information and Communications Technology Industry*, highlights a strong need for information and communications technology (ICT) workers. The National Infrastructure Contractors Association (NATE) has estimated that only 100 job-ready tower technicians are graduating yearly, yet 14,000 technicians are required needed for current workloads, which are only expected to grow as BEAD funding is allocated. The report also points out that development of an ICT workforce is currently inadequate due to a dearth of education and training programs, especially in rural and underrepresented communities.⁵¹⁵

⁵¹⁴ [Prevailing Wage Act](#), Illinois Department of Labor

⁵¹⁵ [Assessment of the Critical Supply Chains Supporting the U.S. Information and Communications Technology Industry](#), U.S. Department of Commerce and U.S. Department of Homeland Security, February 2022

Vendors have not yet complained of labor shortages to the Illinois K-12 Broadband Network.⁵¹⁶ The state has recognized that it must be prepared to support its subgrantees and to work with those who could encounter labor shortages during broadband deployment.

In 2021, the **Illinois Manufacturers' Association Education Foundation** embarked on a tour to understand the regional workforce challenges its members face. The trends noted could inform the State of Illinois about the labor challenges it may face in the coming years as it implements the IL BEAD Plan. Some common themes emerged on this statewide tour: (1) lack of interest in manufacturing careers, (2) challenges in identifying and recruiting potential employees, (3) redundant and siloed workforce services and programs that result in gaps of services for employers and employees, (4) skills gaps based on the future needs of the manufacturing industry, and (5) schools' limited ability to satisfy workforce and training needs.⁵¹⁷ These barriers—especially that of overlapping workforce programming—could become more pronounced when the BEAD plan is implemented; hence, new or revamped programming for workforce development may be required to build a skilled workforce for broadband deployment. The state could support and develop these programs from a multi-sector standpoint and work with organizations like the Illinois Manufacturers' Association to make sure that programs benefit multiple industries across the state.

The labor shortage may not only impact broadband deployment but could also affect digital equity efforts. The **City of Harvey's Broadband Strategic Plan** reports that the local Harvey Public Library is often understaffed. Requiring libraries to administer digital literacy education and training could thus constrain their participation in other aspects of the strategy.⁵¹⁸ The state may consider the strain on resources that additional programming could put on local organizations. Instead, the state could consider potentially supporting existing efforts or work within the capacity that local organizations offer.

⁵¹⁶ Interview with the Illinois Century Network (ICN)

⁵¹⁷ [Statewide Education & Workforce Policy Tour Report](#), IMA Education Foundation, 2021

⁵¹⁸ [City of Harvey Broadband Strategic Plan](#), September 2021

Illinois plans to explore the following mitigation approaches, in addition to those detailed in Section 3.4.1.7 and Section 5.4:

- Partnering with state agencies to establish and scale broadband-focused training programs through community colleges and local training programs
- Promoting the Telecommunications Industry Registered Apprenticeship Program (TIRAP), in which telecom companies in Illinois offer registered telecom apprenticeships. Sabre Industries, Key Tower LLC, and Future Wireless have committed to offering these apprenticeships in Illinois.⁵¹⁹
- Working with the IDOL and the DCEO to increase the number of IDOL-registered programs for broadband technicians in the state⁵²⁰
- Promoting existing workforce and post-secondary programs for broadband deployment roles in Illinois, with the aim of raising awareness about available pathways to jobs with service providers⁵²¹
- Partnering with standards-based companies to offer fiber installation courses at local community colleges. This approach was brought up at the East Central listening session. Parkland College is bringing DataLynk to its campus to provide fiber-optic training to local residents as a workforce development opportunity.⁵²² This opportunity includes subsidies at cost for students who qualify.

4.1.1.4 Supply chain issues and materials availability

Applicants to the state's Connect Illinois Broadband Grant Program, Round 2 have experienced delays due to inflation and global supply chain issues. Additionally, supply chain issues over the past year have affected the Illinois K-12 Broadband Network, which is managed by the state's Illinois Century Network. Equipment challenges involving circuits and router delays occurred between June and September 2022.⁵²³ The state expects supply chain issues and challenges in

⁵¹⁹ [Telecommunications Industry Recognized Apprenticeship Program \(TIRAP\)](#)

⁵²⁰ See current DOL-registered programs for Broadband Technicians in the appendix

⁵²¹ See current list of Illinois-based post-secondary broadband related programs in the appendix

⁵²² [Fiber Optics Training in Illinois](#), BDI DataLynk

⁵²³ Interviews with the ICN

materials availability for broadband infrastructure installation to increase as multiple states deploy unprecedented levels of federal funding.

The State of Illinois must also work with its subgrantees to comply with Section 70921 of the Build America, Buy America Act, which requires infrastructure projects to meet certain sourcing conditions for materials. A federal report, *Assessment of the Critical Supply Chains Supporting the U.S. Information and Communications Technology Industry*, stated that a large share of fiber optic-cable manufacturing takes place in Asia. The United States' share of global optical cable exports has decreased in recent years. Companies have announced domestic investments to expand the supply of fiber-optic cables, considering recent federal investment in high-speed broadband deployment. Fiber-optic cables have also been subject to supply chain bottlenecks. A 2021 USTelecom request for public comment on the health of supply chains found that for respondents in the communications sector had issues with the fiber-optic cable supply chain and long lead times. These challenges delay production as projects cannot move forward without necessary components.⁵²⁴

Local supply chain issues are considered in the IL BEAD Plan as well, since the state may encounter these challenges during broadband deployment and in digital equity programming. The **Champaign Broadband Infrastructure Assessment Report** notes that the telecom supply chain has been under stress in recent years, causing price increases for fiber and fiber materials in 2021. In the same year, some telecom companies announced aggressive plans to build fiber, but these plans could not be completed due to supply chain challenges. Shortages may be attributed to several factors, including constrained manufacturing capacity and limited raw materials.⁵²⁵ The **Champaign Broadband Infrastructure Assessment Report** notes that the raw materials needed to manufacture key components of fiber cables have been lacking.⁵²⁶

The State of Illinois will explore the following mitigation approaches:

⁵²⁴ [Assessment of the Critical Supply Chains Supporting the U.S. Information and Communications Technology Industry](#), U.S. Department of Commerce and U.S. Department of Homeland Security, February 2022

⁵²⁵ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County IL, March 2022

⁵²⁶ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County IL, March 2022

- Within the NOFO guidelines for extensions to be granted to subgrantees—a one-year extension to the four-year deadline for subgrantees with specific plans for funding, an extension to projects where construction is underway, and extenuating circumstances—Illinois would be flexible in offering grant extensions to account for anticipated supply and material shortages.
- Collaboration with the Chief Procurement Office to support smaller providers/subgrantees through the IOB in securing key materials cost-effectively through the state’s purchasing power.
- Facilitation of knowledge-sharing between providers of U.S.-based fiber-optic cable manufacturers and to share best practices for increasing the supply pipeline
- Guidance when necessary as subgrantees navigate the Build America, Buy America waiver process.

4.1.1.5 Industry participation and provider landscape

The State of Illinois has identified barriers to successful deployment of federal funding for broadband infrastructure and digital equity. Based on listening sessions during stakeholder engagement efforts, these barriers are perceived to include a shortage of options among providers, providers who advertise speeds that do not match residents’ experiences, and a lack of reliable internet access.

On perceived lack of provider options, participants in the Southwest Illinois session emphasized increasing the number of available providers, in addition to deploying infrastructure that supports internet connectivity across all areas in the region.⁵²⁷

On perceived “false advertising” of internet speeds, participants shared their thoughts during listening sessions on provider practices. In Southern Illinois, for example, one resident perceived that Frontier advertised much higher speeds than were provided.⁵²⁸ In Southwest Illinois, a

⁵²⁷ Southwest Listening Sessions on 3/15 – 3/16

⁵²⁸ Southern Listening Sessions on 3/1 – 3/2

listening session participant commented, *“If the speed is advertised as 5G it should be 5G. Give people the internet speeds that were advertised.”*⁵²⁹

On reliable internet access, some participants expressed several opinions during listening sessions. In Southwest Illinois, a resident said that a hotspot purchased through AT&T was more reliable than a previous subscription to an internet service plan.⁵³⁰ Some participants observed that many providers have data caps, which prevents users from performing daily tasks online throughout the month.⁵³¹ Residents mentioned having to participate in video conferencing services meetings via their phone when they ran out of data.⁵³²

Another challenge expressed during listening sessions was the perceived lack of financial incentive for providers to establish or broaden their presence in some regions. In Southwest Illinois, participants reported that some providers have declined requests to expand their services to Washington Park, which a participant described as an impoverished area that providers are reluctant to serve due to a low return on investment and high costs. In the Southeast listening session, participants noted that the areas providers may avoid, such as rural areas, often have a high number of covered populations.⁵³³

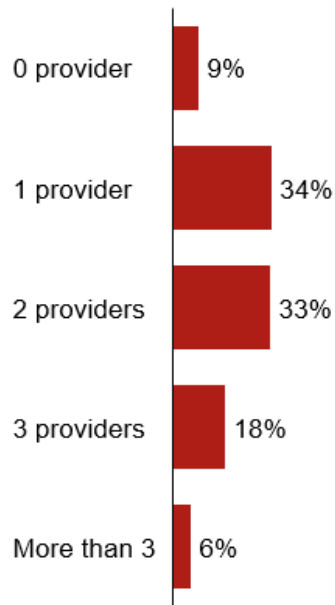
⁵²⁹ Southwest Listening Sessions on 3/15 – 3/16

⁵³⁰ Southwest Listening Sessions on 3/15 – 3/16

⁵³¹ Southwest Listening Sessions on 3/15 – 3/16

⁵³² Southwest Listening Sessions on 3/15 – 3/16

⁵³³ Southeast Listening Sessions on 3/22



Source: FCC Broadband Maps accessed June 8th, 2023

Figure 20. Distribution of the number of providers per location

Based on stakeholders’ feedback about provider competition across the state, this topic was explored further by using the FCC Broadband Map, accessed June 8, 2023, to count the number of providers offering 100/20+ Mbps service across BSLs. Of the 4.2 million BSLs in Illinois, 9% have no providers, 34% have only one provider, 33% have two providers, and 24% have three or more providers (Figure 20). The data shows that half of Illinois residents can choose from two or more providers when evaluating 100/20 Mbps internet services. In the Southeast region, 28% of BSLs have two or more providers, followed by the Southern region, where 27% of BSLs have access to two or more providers, and the East Central region, where 41% of BSLs have access to two or more providers. The competitive landscape of these three regions is analyzed in more detail below.⁵³⁴ Figure 21 shows a breakdown of the number of BSLs with only one provider in Illinois and of the percentage of BSLs with only one provider in Illinois by county.

⁵³⁴ FCC Broadband Maps accessed June 2023

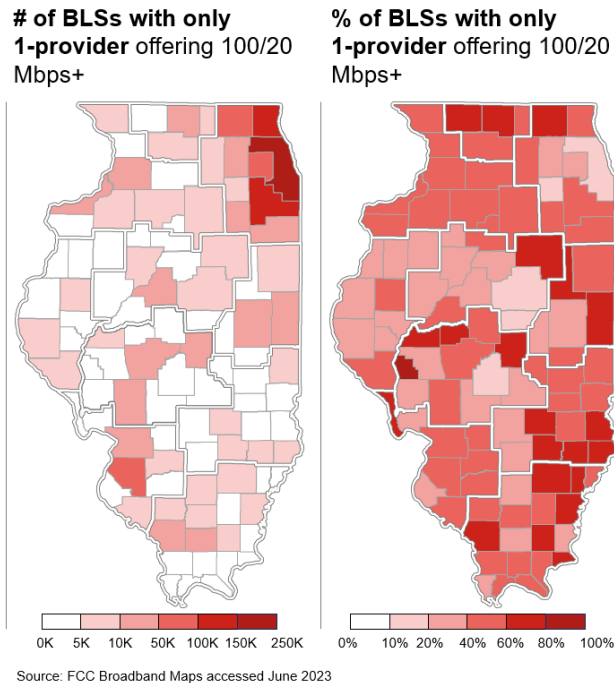


Figure 21. The map on the left shows the number of BSLs with only one provider of 100/20 Mbps+ service in the county. The map on the right shows the percentage of BSLs in a county with only one provider of 100/20 Mbps+ service

In the West Central region, 20% of locations have no providers, and 30% have one provider that offers 100/20 Mbps service. Provider presence in the region is limited compared to the rest of the state. The region has a total of 16 providers that offer any kind of service—under the state average of 28. Five providers offer service to more than 10% of locations in the Southeast region, whereas seven is the state average. Three providers offer service to more than 30% of locations in the Southeast; three is the state average. In terms of technology, the region has less fiber and cable than the rest of the state; only 73% of the region has access to fiber, as compared to the state average of 35%; and 56% has access to cable, as compared to the state average of 87%.⁵³⁵

In the Southern region, 24% of locations have no providers, and 49% have only one provider of 100/20 Mbps service. The region’s provider participation rate is less than that of the rest of the state: a total of 24 providers offer service to the Southern region, four providers offer service to

⁵³⁵ FCC Broadband Maps accessed June 2023

more than 10% of the region, and two providers offer service to more than 30% of the region. The Southern region also has fewer providers that offer fiber and cable services as compared to other regions; 22% of the region has access to fiber, which is 13% lower than the state average, and 56% has access to cable—31% lower than the state average.⁵³⁶

In the Southeast region, 31% of locations have no providers, and 42% have one provider that offers 100/20 Mbps service. The region has 26 providers, eight of which offer service to more than 10% of the region, and one of which offer service to more than 30% of the region. In terms of technology, 35% of the region’s internet services are fiber services in line with the state average.⁵³⁷

Potential local challenges in industry participation are addressed in the Connect Illinois Five-Year Action Plan, as the State of Illinois could encounter these challenges during broadband deployment and digital equity programming. The **Champaign County Broadband Plan Report** expressed concern that ISPs pursuing BEAD funding were not familiar with the local community. This is based on previous experience with ISPs that received funding from the Rural Digital Opportunity Fund (RDOF). The county hopes to address this concern by pursuing a partnership with an ISP or directly pursuing BEAD funding by acting as the ISP.⁵³⁸ The State plans to stay apprised of developments in ISP partnerships with counties, or in counties serving as ISPs, throughout the broadband deployment process. The subgrantee selection process could be designed not to favor “ISPs with strong balance sheets,” as mentioned in the Champaign County report. Encouraging the participation of counties that seek to partner with ISPs or to act as an ISP themselves is being considered as part of the selection process or eligibility criteria for plan funding.

The Connect Waukegan Community Broadband Assessment completed by what is now known as the ConnectLakeCounty Broadband Taskforce notes limited broadband competition in Waukegan, as only two primary internet service providers offer most wireline connections to

⁵³⁶ FCC Broadband Maps accessed June 2023

⁵³⁷ FCC Broadband Maps accessed June 2023

⁵³⁸ [Broadband Plan Report](#), Champaign County IL, March 2022

residents.⁵³⁹ This could pose a challenge when the state gathers subgrantee applications from internet service providers. The Connect Waukegan Community Broadband Assessment suggests that market competition could be expanded or created through incentives that encourage new internet service providers to enter the market. Incentives could involve legislation or agreements.⁵⁴⁰

The City of Harvey Broadband Strategic Plan points out a call for increased competition in its broadband marketplace. Comcast and AT&T are the city’s predominant providers.⁵⁴¹ The Southwest Region Broadband READY Report highlights the results of a resident survey in which a resident observed, *“There are absolutely not sufficient internet services. Even if there are, they (the providers) compete with each other more so than competing for the good of the community.”*⁵⁴²

Lack of service deployment for covered populations was also brought up in multiple community-led broadband planning efforts:

- One resident remarked in the **Broadband for All – Plan for Ogle, Lee, Bone, and Putnam Counties** survey conducted in August 2022, “It [would be] helpful to increase speeds in rural regions that are often ignored due to lower income, lower population, and overall lower educational opportunities. Increasing broadband options to the public in rural areas can greatly reduce the disparity between rural and urban demographics.”⁵⁴³
- In the **Bond County Broadband Initiative** survey, a respondent claimed that, even with multiple providers, the respondent was told that they could not get service because they were outside city limits in a rural area. As a result, they had to choose the only available provider in the region, which offers expensive service.⁵⁴⁴

Participating in grant programs that fund broadband deployment may push providers to enter into or expand their presence in a comparatively underserved or unserved area. Not

⁵³⁹ [Connect Waukegan Community Broadband Assessment](#), 2020

⁵⁴⁰ [Connect Waukegan Community Broadband Assessment](#), 2020

⁵⁴¹ [City of Harvey Broadband Strategic Plan](#), September 2021

⁵⁴² Southwest Region Broadband READY Report, 2022

⁵⁴³ Broadband for All – Plan for Ogle, Lee, Boone and Putnam Counties, Accelerate Illinois Round 2

⁵⁴⁴ Bond County Broadband Initiative, Accelerate Illinois Round 2

participating, on the other hand, may keep them out and thus become a barrier to increased competition and broader choices for consumers. This challenge became evident in efforts to develop the Jackson County Broadband Plan, which involved interviewing providers.⁵⁴⁵

Illinois plans to explore the following ways to mitigate this barrier, including ideas raised during stakeholder engagement:

- Exploring subsidies and incentives for fiber-optic deployment to expand the bandwidth available to Illinoisans
- Finding ways to hold providers accountable for the coverage they advertise on service maps
- Promoting the Illinois Broadband Map as a source of information about provider options in local areas
- Offering financial incentives from the state and local governments in efforts to encourage providers to deploy broadband in rural and impoverished areas
- Conducting provider-focused, ongoing stakeholder engagement exercises throughout the application and broadband deployment processes to ensure compliance with BEAD requirements and satisfaction of consumer needs
- Expanding city-owned utilities where possible to supply fiber, like the City of Springfield. The City of Springfield Broadband Plan states that city-owned City Water, Light, & Power (CWLP) has its own fiber, which is supplied to businesses throughout the Mid-Illinois Medical District.^{546,547,548}

4.1.1.6 Topography and weather

Based on the Illinois Department of Agriculture, about 75% of the state, or 27 million acres, is covered by farmland. The average size of a farm in Illinois is 375 acres. Illinois is a leading producer of soybeans, corn, and swine. Most farm acreage in the state is devoted to grains, including corn and soybeans. Much of Illinois comprises fertile, flat loess. About 89 percent of

⁵⁴⁵ Jackson County Broadband Plan, Accelerate Illinois Round 1

⁵⁴⁶ Southeast Listening Sessions, March 22

⁵⁴⁷ Southwest Listening Sessions, March 15-16

⁵⁴⁸ City of Springfield, Illinois Broadband Plan, Accelerate Illinois Round 1

the state's cropland is considered prime farmland, ranking the state third nationally in total prime farmland acreage.⁵⁴⁹

The State of Illinois recognizes that BSLs throughout Illinois are generally widely dispersed and flat, potentially making it difficult to build underground.⁵⁵⁰ Moreover, the dispersal of the locations may cause the cost of providing universal service to be relatively high.⁵⁵¹

Hilly areas may also pose a challenge. The only counties that do not have nearly 100% cellular coverage or 4G LTE broadband coverage are Calhoun, Pike, and Adams counties, which have hilly regions.⁵⁵²

During in-person listening sessions in Southeast Illinois, some participants noted that close proximity to railroads can cause internet service to be highly variable and unreliable, with almost daily outages.⁵⁵³ In Southern Illinois, internet service depends on satellites due to hilly terrain, but the reliability of that service may be affected when it rains. Some residents also complained that line-of-sight internet is challenging due to the many hills.⁵⁵⁴ In the East Central region, residents cited trees that block internet service and connectivity as a barrier to internet access.⁵⁵⁵

Throughout the state, topography can complicate broadband deployment, as the price of installing broadband infrastructure often depends on terrain (such as flat or rocky terrain). Companies' installation fees can sometimes range between \$25,000-\$50,000 per mile.⁵⁵⁶

In addition to topography, weather conditions can disrupt internet connections in rural areas. In Southwest Illinois, some listening session participants said that wind may affect internet service, and services connected through the water tower often go out during thunderstorms.⁵⁵⁷

⁵⁴⁹ [Facts About Illinois Agriculture](#), Illinois Department of Agriculture

⁵⁵⁰ Interview with the ICN

⁵⁵¹ Interview with the ICN

⁵⁵² FCC 4G LTE Coverage Map (as of May 15, 2021)

⁵⁵³ Southeast Listening Sessions, March 22

⁵⁵⁴ Southern Listening Sessions, March 1-2

⁵⁵⁵ East Central Listening Sessions, April 12-13

⁵⁵⁶ Southwest Listening Sessions, March 15-16

⁵⁵⁷ Southwest Listening Sessions, March 15-16

Inclement weather events like lightning can have effects that prevent residents from accessing critical services at critical moments due to variable and unreliable service.⁵⁵⁸

A listening session participant from Edgar County maintained that providers do not want to deal with the topography in rural areas—especially hills, ravines, and acres of farmland—to provide service to rural residents. The participant claimed that providers instead prefer towns with larger populations.⁵⁵⁹

Topography considerations noted at the local level have been included in the IL BEAD Plan, as the state could encounter these challenges during broadband deployment and digital equity programming. When considering aerial fiber, the **Champaign County Broadband Infrastructure Engineering Assessment** Report notes that the greatest risk for widespread damage to broadband networks in the state comes from ice storms and tornados. These natural events pose less risk to buried fiber networks.⁵⁶⁰ The **Kankakee County Broadband Plan** maintains that a mixed technology solution using underground, aerial, and point-to-point networks is needed for a broadband system due to the county’s geography. Kankakee has the Grand Kankakee Marsh, which includes a floodplain and wetlands.⁵⁶¹ In a survey conducted for the **Connect Elsah Broadband Plan**, respondents who lived in the Village of Elsah, a valley with steep hills, said that they lost their connection eight times a month on average.⁵⁶²

Weather can also prevent reliable broadband connectivity. The **Peoria-Woodford Broadband Planning** committee found in its resident survey that, while residents may have speed, they lose their internet connection regularly during bad weather or outages.⁵⁶³

Mitigation approaches to these natural barriers may include:

- Expanding the middle-mile network to potentially reduce the cost of last-mile deployment in hilly areas or areas at higher elevations

⁵⁵⁸ Southeast Listening Sessions, March 22

⁵⁵⁹ East Central Listening Sessions, April 12-13

⁵⁶⁰ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County IL, March 2022

⁵⁶¹ Kankakee County Broadband Plan, Accelerate Illinois Round 2

⁵⁶² The Historic Village of Elsah, Accelerate Illinois Round 1

⁵⁶³ Peoria-Woodford Broadband Planning, Accelerate Illinois Round 2

- Further engaging stakeholders in areas with topographical challenges to learn communities' preferences for broadband deployment and to tailor last-mile subsidies accordingly.

Illinois plans to explore the feasibility of the following ideas, which have been raised through stakeholder engagement efforts or in community broadband planning efforts:

- Using electric co-ops and electric lines to deliver broadband, as most residents have existing access to electric lines.⁵⁶⁴ This approach is mentioned in the **North Central Region Broadband READY Report**, which mentions rural electric co-ops as an untapped resource that could help overcome the high cost and complexity of building fiber networks.⁵⁶⁵
- Preserving landscapes, where possible, with low-impact, visually neutral base stations and wooden utility or flag poles. This approach was suggested by the CDC of PHP in its **Pembroke-Hopkins Park BroadbandNOW! Plan**, which aims to prioritize environmentally friendly broadband expansion.⁵⁶⁶
- Connecting fiber to vertical assets using fixed wireless technology (an antenna) to deliver high-speed wireless. This option could be used for the last mile in areas with geography that makes running fiber impractical. **Hancock County's Broadband Breakthrough Presentation** recommends this approach and identifies vertical assets that are at least 20 feet tall and 50 or more meters from tree cover.⁵⁶⁷

4.1.1.7 Population density

Illinois's population density ranges from high in some areas of the state, to low in other areas of the state. For example, the Northeast region is completely urban; each county has an urban core comprising 50,000 or more people. In contrast, the Southeast region is completely rural, with no urban cores.⁵⁶⁸ Although 75% of Illinoisans reside in the Chicago Metroland area, 75% of the state's territory extends into the central and southern rural and micropolitan communities.⁵⁶⁹

⁵⁶⁴ Southern Listening Sessions, March 1-2

⁵⁶⁵ North Central Region Broadband READY Report, Bloomington Normal EDC

⁵⁶⁶ Pembroke-Hopkins Park BroadbandNow! Plan, Accelerate Round 2

⁵⁶⁷ [Hancock County Broadband Breakthrough](#), Hancock County Economic Development

⁵⁶⁸ Based on the [OMB and U.S. Census Bureau definition of rural population](#)

⁵⁶⁹ ACP Outreach Grant application

This situation may present challenges in efforts to ensure universal access. The cost of reaching every individual in Illinois may be high, especially in rural areas.

In Southern Illinois, residents believe that, because of the distance between homes, the region has limited options when it comes to providers. Indeed, reaching all locations in the area has been difficult for providers. In listening sessions, some residents shared concerns that living on an “island” off U.S. Route 51 may exclude their area from broadband deployment.⁵⁷⁰ This kind of concern is shared by residents across the state. A listening session participant in the East Central region commented, “*I just want the same level of service that is available to my friends in the city. I want fast and reliable Internet.*”⁵⁷¹

Another participant in the East Central region pointed out that urban and rural communities’ challenges related to the digital divide are different. In rural communities, the main challenge is perceived to be broadband deployment and availability; in urban communities, the main challenge is perceived to be digital inclusion and digital equity among underrepresented communities with low adoption and utilization.⁵⁷²

The Economic, Fiscal, and Social Effects of Public Investments in Broadband Internet Access in Illinois, a report published by a partnership between the Illinois Economic Policy Institute and the University Illinois Urbana – Champaign’s School of Labor and Employment Relations, highlights inequities by location based on population density. The report states that internet infrastructure was initially developed and deployed for densely populated areas and affluent areas, while rural areas are more expensive to serve, since there are fewer people to share the cost of deployment. As a result, the report says, high-income and urban areas tend to have faster, better broadband service than low income and rural communities do.⁵⁷³ The State of Illinois hopes to build a subgrantee process that bridges this urban-rural divide.

The broadband deployment needs of sparsely populated or low-density counties in Illinois are complex when compared to urban counties in the state. For example, in Southeast Illinois, where

⁵⁷⁰ Southern Listening Sessions, March 1-2

⁵⁷¹ East Central Listening Sessions, April 12-13

⁵⁷² East Central Listening Sessions, April 12-13

⁵⁷³ [The Economic, Fiscal, and Social Effects of Public Investments in Broadband Internet Access in Illinois](#), June 2022

all residents live in rural counties, and Southern Illinois, where 67% of residents live in rural counties, 24% of BSLs are classified as unserved locations—the largest proportion of regional BSLs classified as unserved in Illinois.⁵⁷⁴ Southeast Illinois has 13% of Illinois’s unserved locations, and Southern Illinois has 18%.⁵⁷⁵

In addition to the mentioned mitigation approaches that may alleviate topographical and weather challenges, another potential approach is to include line extensions in future rounds of the Connect Illinois Broadband Grant Program. Through it, eligible project areas use state and ARPA Capital Project Funds to subsidize individual connections to existing infrastructure so that rural households and businesses can be connected.

4.1.1.8 Middle-mile availability

Analyses by IOB and IBL have found gaps in the availability of fiber-optic infrastructure for internet connectivity. Illinois’s ICN middle-mile network recognizes a need for expansion to support last-mile and retail service providers, in addition to CAIs. The network can provide last-mile and retail providers with dark fiber and lit services that would enable them to connect to public internet and other services that use internet transport. This would allow last-mile providers’ end-customers—such as households, businesses, and anchor institutions—to access public internet and other services. Expanding the middle-mile network may facilitate providers’ deployment to unserved households through closer connection to the end-user. The ICN has not yet finished its middle-mile expansion to rural and urban areas to support locations that lack a robust provider market.⁵⁷⁶

Municipal and local governments have also invested in their own middle-mile networks to ensure that residents and businesses have access to high-speed broadband. The **McHenry County Connects Initiative** in 2022 released a request for proposal from an internet service provider that could partner with the county to expand its existing fiber network, especially to rural and underserved areas that lack access to reliable service. The county is specifically

⁵⁷⁴ U.S. Census 5-Year ACS 2021; OMB and U.S. Census definition of rural; See Section 3.4.5.2

⁵⁷⁵ FCC Broadband Maps, accessed June 8, 2023

⁵⁷⁶ ICN Middle Mile Expansion Draft, October 2021

interested in deploying a middle-mile fiber-optic network through several segments of the county.⁵⁷⁷

Potential mitigation approaches may include:

- Collaborating with the Middle-Mile Missouri Network Alliance to do business as a (dba) Bluebird Network. This arrangement could enable expansion of middle-mile access through a provider-supported submission for middle-mile funding, for which awarding decisions have yet to be released.
- Supporting local governments that enter into public-private partnerships to apply for the NTIA's Enabling Middle-Mile Broadband Infrastructure Program grant. For example, Lee and Ogle counties have earmarked a collective \$3.7 million for a multi-county project in partnership with Syndeo Networks.⁵⁷⁸
- Expanding entities onboarded to the ICN middle-mile network, which serves P-20 and higher education facilities, public libraries and museums, state and local governments, and broadband service providers.
- Coordinating with the ICN to support completion of middle-mile expansion efforts.

4.1.1.9 View of service availability

As discussed in Section 3.4.1.5, the State of Illinois's position is that, while the FCC Broadband Maps are a source of information about service availability, they are not the only source. The state plans to continue maintaining the Illinois Broadband Map through the IBL. Illinois also continues to participate in the national processes to refine the FCC National Broadband map. For instance, Illinois submitted challenges to the FCC regarding both the BSL fabric and service availability between November 2022 and March 2023 and mobilized Illinoisan residents to do the same. The state also submitted 87,100 BSL fabric challenges in November 2022; 7,763 of those challenges were accepted. In March, the state submitted 20,766 location challenges to the

⁵⁷⁷ [McHenry County moving forward to expand broadband](#), March 2022; [Broadband Network Partnership](#), McHenry County Illinois
⁵⁷⁸ [Lee County, Illinois, commits \\$1.7 million for broadband partnership](#), September 2022

bulk-fabric challenge process. Additionally, 40,771 challenges to fixed-service availability were filed as of April 2023.

The state has created a survey that enables local governments and organizations to ask their constituents and members to submit information for inclusion in the bulk challenge. The state has also disseminated information that allows residents to submit individual challenges, or local governments and organizations with FCC Registration Numbers (FRNs) to submit their own bulk challenges. The state recognizes that the participation of residents and local organizations is important to the challenge process, because these maps directly affect the deployment of funding to areas with limited or no service. The challenges related to service availability are especially important, as they help the state to dispel incorrect assumptions or claims about service availability across BSLs. The state and its partners are concerned that significant gaps may still be present in reporting about both fabric and service availability.

During stakeholder engagement session, various attendees raised concerns as to whether a complete view of service availability in the state can be achieved. A complete, accurate view would directly impact the level of BEAD funding received and the state's ability to close service-availability gaps.

The state plans to explore the following potential mitigation approaches, in addition to those detailed in Section 3.4.1.5:

- Conducting the state challenge processes before future grant rounds
- Maintaining the Illinois Broadband Map
- Extending dissemination of challenge submission guidance to Illinois residents through IBL and partner channels

4.1.1.10 Availability in multi-dwelling units (MDUs)

Due to the variety of MDUs, the cost of deploying broadband services to MDU tenants can range widely. The **Champaign County Broadband Infrastructure Engineering Assessment Report** notes that large, multi-floor MDUs can vary greatly in cost depending on the building's specific characteristics and issues. Consumers have been affected by previous practices in which

landlords have arranged exclusive agreements with ISPs; such agreements have prevented new fiber networks from coming into buildings that have existing ISP relationships. FCC has now ruled that these practices block competition and requires ISPs to disclose to tenants any exclusive marketing arrangement so they can choose other providers. Revenue-sharing agreements between ISPs and landlords are now banned, as are sale-and-leaseback arrangements. While these changes boost the number of choices among providers for tenants, the FCC ruling does not acknowledge bundled broadband.⁵⁷⁹

A few other factors potentially stand in the way of closing availability gaps in MDUs, including ownership of existing communications infrastructure by entities other than the property owner, like a cable company or telephone company. Fiber providers may not want to use wiring or infrastructure owned by another entity due to possible access issues. Moreover, property owners may not be open to the installation of aerial utilities, which results in buried utilities. Installing buried utilities can involve unsafe practices, as private properties are subject to public rights-of-way. Additionally, property owners may find that extending new infrastructure throughout MDUs is not aesthetically pleasing, because the fiber must be secured to the ceiling with protective strips.⁵⁸⁰

Potential mitigation approaches include allocating remaining BEAD funding to the deployment of internet and Wi-Fi infrastructure in eligible, multi-family residential buildings through inside wiring and/or Wi-Fi equipment. This approach may improve the technology deployed in MDUs.⁵⁸¹

4.2 Barriers and obstacles to digital equity and other potential non-deployment factors

4.2.1.1 Affordable Connectivity Program knowledge and enrollment support

As mentioned in Section 3.4.3.1, of the 1.9 million eligible households in Illinois that could enroll in the ACP, 450,000 have done so. This means that 1.5 million households are not currently

⁵⁷⁹ [Champaign County Broadband Infrastructure Engineering Assessment](#) Report, March 2022

⁵⁸⁰ [Champaign County Broadband Infrastructure Engineering Assessment](#) Report, March 2022

⁵⁸¹ BEAD NOFO

enrolled in the ACP.⁵⁸² As of December 2022, 24% of eligible Illinois households were enrolled in ACP.⁵⁸³ This ranks Illinois 29th among states for ACP enrollment rates.⁵⁸⁴

During our listening sessions, the state observed that few participants had heard of the ACP. At one of the sessions in Southwest Illinois, three participants indicated previous knowledge of the program.⁵⁸⁵

Local digital equity practitioners conveyed that that they'd intend to double-down on efforts to drive ACP adoption. The ConnectLakeCounty's Digital Equity Plan notes that residents without Social Security numbers typically require four to six hours of support per enrollment. ACP enrollment also requires the ability to upload documents and manage email—digital literacy skills that some residents did not have.⁵⁸⁶

In addition to the mitigation approaches detailed in Section 3.4.3, the state plans to explore the following approaches based on ideas shared during stakeholder engagement efforts:

- Collaborating with libraries and local community centers to promote and disseminate information about the ACP program and to support residents in signing up⁵⁸⁷
- Engaging digital navigators to meet community needs by providing outreach, enrollment support (such as language assistance), and help with applications
 - This approach is being deployed at a local level in Lake County. **ConnectLakeCounty's Digital Equity Strategy Plan** describes Lake County residents' challenges in enrolling in the ACP due to language barriers or a lack of social navigators. This suggests potential benefit from enrollment assistance, which could be fulfilled by a digital navigator who offers direct assistance. ConnectLakeCounty has already hired a digital navigator to help

⁵⁸² [Affordable Connectivity Program; USAC ACP Enrollment and Claims Tracker](#), Dec 2022; Methodology from [Estimating participation in the Affordable Connectivity Program \(ACP\)](#), October 2022; Household eligible is equivalent to the number of households at/below 200% of the Federal poverty level + those who receive Medicaid or govt medical assistance, Supplemental Security Income, Public Assistance, or SNAP benefits

⁵⁸³ Calculated based on data from [USAC ACP Enrollment and Claims Tracker](#), December 2022 and methodology from [Estimating participation in the Affordable Connectivity Program \(ACP\)](#), October 2022

⁵⁸⁴ Institute for Local Self-Reliance's [ACP dashboard](#)

⁵⁸⁵ Southwest Listening Sessions on 3/15 – 3/16

⁵⁸⁶ [ConnectLakeCounty Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

⁵⁸⁷ Southwest Listening Sessions, March 15-16

community residents enroll. The ConnectLakeCounty approach is to use trusted community places to provide enrollment support. The organization employs a multi-channel strategy that combines in-person work and a central help center for intensive enrollment assistance. The strategy includes customizing communications to best reach targeted populations and developing clear, bilingual communications informing residents where they can receive in-person language assistance and materials.⁵⁸⁸

4.2.1.2 Subscription affordability

The gaps that exist between the current state and digital equity that is tied to broadband affordability are detailed in Section 3.4.3. Based on information in the FCC National Broadband map (accessed March 21, 2023), no locations provide 100 Mbps download speeds for less than \$25. Some 77% of BSLs offer 100 Mbps+ download subscriptions between \$25-\$50. Internet subscriptions vary widely by region and location. In Northeast Illinois, 97% of BSLs can access 100 Mbps+ download speeds for \$25-\$50, and 11% of the BSLs in Southern Illinois offer 100 Mbps+ download speeds within that price range.⁵⁸⁹

Participants in listening sessions shared some of the challenges they had experienced in accessing reliable, affordable internet in Illinois:

- In Southeast Illinois, some participants said they paid between \$90 a month and \$200 a month for service. One participant changed providers due to cost.⁵⁹⁰
- In Southwest Illinois, depending on how close a farm is to existing broadband services, farmers may have to pay thousands of dollars to gain internet access. Farmers reported that they are often told they must install their own broadband infrastructure on their property to get service, which may not be financially feasible for many residents.⁵⁹¹

⁵⁸⁸ [ConnectLakeCounty Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

⁵⁸⁹ Provider distribution based on FCC Broadband Maps, March 2022. For each combination of provider, technology, and speed, 10 locations are randomly selected for price checks on provider websites. The lowest prices for 25Mbps and 100Mbps internet are documented. The average price of each provider, technology, and speed is assigned back to each location. The minimum 25Mbps and 100Mbps price for each location is calculated by taking the minimum for all offers available for that location

⁵⁹⁰ Southeast Listening Sessions, March 22

⁵⁹¹ Southwest Listening Sessions, March 15-16

- In Southwest Illinois, a participant shared that internet costs seem to fluctuate depending on the neighborhood in which residents live. As a result, residents may find themselves needing to continuously negotiate their internet rates back down to the original prices.⁵⁹²
- A Southern Illinois resident pays \$300 per month for a plan that provides download speeds of less than 100 Mbps.⁵⁹³
- City of Chicago participants said that, while introductory prices for plans may be low, those prices quickly jump and are unpredictable.⁵⁹⁴

The current strategy for expanding access in Illinois relies on the Affordable Connectivity Program (ACP), which is likely to run out by mid-2024 if no additional funding is allocated to it.⁵⁹⁵ The state recognizes the potential impact of not extending its strategies for broadband affordability, as outlined in Section 3.4.3.3.

In addition to the mitigation approaches detailed in Section 3.4.3, the state plans to explore the following approaches:

- Supporting outstanding providers in onboarding to the ACP program, as three of the 24 major providers in Illinois do not offer ACP information on their website as of March 2023.
- Requiring ISPs that receive funding from BEAD or the Connect Illinois Broadband Grant Program to offer a more broadly affordable plan statewide.
- Encouraging regions to establish fee structures before broadband deployment to ensure that services are affordable for residents.

4.2.1.3 Device affordability and access

The American Community Survey data shows that 1.05 million and 21% of households in Illinois do not have a desktop or laptop computer.⁵⁹⁶ Additional details on the current state and gaps in access to internet-enabled devices in Illinois are provided in Section 3.4.2.3. Details on device

⁵⁹² Southwest Listening Sessions, March 15-16

⁵⁹³ Southern Listening Sessions, March 1-2

⁵⁹⁴ City of Chicago Listening Session, April 19

⁵⁹⁵ [Policy No-Brainer: Extend The Affordable Connectivity Program For 5 Years With \\$30 Billion](#), Forbes; [Affordable Connectivity Program needs permanent funding](#), The Hill

⁵⁹⁶ U.S. Census ACS 2021 5-Year Estimates

access gaps between covered populations and their non-covered equivalents are shared in Section 3.4.5.2. The state received feedback from some participants in listening sessions that both access to devices and affordability of devices are barriers to digital equity and inclusion regionally. In Southwest Illinois, for example, a participant stated that community spaces do not offer access to devices. Hence, residents without at-home internet access often may not be able to access the internet in these spaces. Libraries have only a limited number of computers, and they limit the amount of time a resident can spend on a device.⁵⁹⁷

In addition to the mitigation approaches detailed in Section 3.4.2.3, the state plans to explore the following approaches:

- Using BEAD funding through subgrantees, implementing a device-subsidy program after service has been deployed to all identified unserved and underserved locations⁵⁹⁸
- Collaborating with CAIs to expand device access onsite
- Continuing the PCs for People partnership to help provide subsidized, refurbished devices to Illinoisans
- Collaborating with the Chief Procurement Office and the Illinois Department of Aging to expand the Illinois Care Connections Program.

4.2.1.4 Digital literacy

Section 3.4.2.1 details the current status and perceived needs and gaps related to digital equity in Illinois. It is currently estimated that between 3.1 million and 3.3 million Illinoisans (31-33%) ages 18 and up have low digital literacy skills, based on national estimations of digital literacy levels.⁵⁹⁹

Some listening session participants noted a need for increased digital literacy skills, especially for covered populations like the elderly. In Southwest Illinois, for example, a participant pointed out that a lack of digital navigation skills is preventing elderly residents from streaming local or

⁵⁹⁷ Southwest Listening Sessions, March 15-16

⁵⁹⁸ BEAD NOFO

⁵⁹⁹ Population and age distribution based on US Census, July 2021; [A Description of U.S. Adults Who Are Not Digitally Literate](#), U.S. Department of Education, May 2018

national sports events. Additionally, many residents may not be comfortable using devices and consequently may not be able to complete online applications for state-based programs, like Firearm Owners Identification (FOID) applications⁶⁰⁰

Potential digital literacy barriers noted at the local level were included in the IL BEAD Plan, as the state could encounter these challenges during broadband deployment and digital equity programming. The **East Central Illinois Broadband READY Preliminary Report** presented findings from their program, which distributed laptops and hotspot packages to low-income households. A potential barrier to adoption they identified was some residents' concern that data collected through the research project could be used to harm them. This obstacle was overcome by explaining the IRB protocol for the project, the principles of anonymization, and prioritization of protections and benefits to vulnerable households.⁶⁰¹ The report also highlighted another potential obstacle: low income households have concerns about their internet privacy and internet tracking activities, which could hinder them from participating in technology-focused programs.

Additionally, the **City of Harvey Broadband Strategic Plan** observed that a lack of digital literacy and computer skills may contribute to low rates of broadband subscription adoption.⁶⁰²

Throughout broadband deployment, it may be beneficial for the state to keep in mind that digital equity efforts to increase literacy may directly affect the number of Illinois residents who subscribe to broadband.

Finally, the **City of Chicago's Digital Equity Plan** identified three key potential barriers to digital literacy: limited opportunities to build skills, security and trust concerns, and lack of perceived need for internet connection.⁶⁰³

In addition to the mitigation approaches detailed in Section 3.4.2.1 and Section 5.4, the state plans to explore the following approaches:

⁶⁰⁰ Southwest Listening Sessions, March 15-16

⁶⁰¹ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁶⁰² [City of Harvey Broadband Strategic Plan](#), September 2021

⁶⁰³ [City of Chicago, Chicago Digital Equity Plan](#), January 2023

- Increasing investment in and expansion of the state-run Digital Navigator Collaboration
- Deploying Broadband READY cohorts to encourage participation in local digital literacy training and programming
- Increasing the presence of digital navigators statewide through the statewide Digital Navigator Program.

In particular, some local communities show interest in digital navigator programs. When asked what solution they would implement to improve technology access, adoption, and/or use in their community in the next six months, an ICC participant from a housing equity organization answered, *“Provide stipends to five high school and college youth to teach adults on technology literacy.”*⁶⁰⁴

4.2.1.5 Limited local digital inclusion programs/expertise

The IOB has engaged in several projects and initiatives aimed at ensuring broadband for all residents of the State of Illinois. Among the projects undertaken by the IOB is the Broadband Regional Engagement for Adoption and Digital Equity, known as “Broadband READY” or “READY.” This initiative, which leverages local participation at county and community levels, studied the particularities of the various DCEO regions and considered the potential challenges of broadband adoption and digital equity in these regions.

The resulting reports identify cost as one of the potential challenges impeding broadband adoption—specifically, the cost of broadband and the possible inability to cover the price of connectivity by some residents. Through the IOB, the state has attempted to make digital access and literacy a top priority and dedicated funding prior to the passage of federal programs, the funding available is insufficient to satisfy all perceived digital needs. Transportation, lack of awareness about a service or benefit, lack of direct service support, low reading/comprehension skills, and an inability to use digital tools are common factors that may prevent low-income households from accessing available services. The IOB currently leverages existing partnerships

⁶⁰⁴ ICC Round 2 “What Have We Learned?” End of Program Evaluation

with economic development regions and counties across the state in the effort to encourage and host local digital inclusion programs.⁶⁰⁵

The IOB plans to extend its programming further so that the Accelerate Illinois and ICC programs have footprints in each of the 10 economic development regions in the state. As of April 2023, the East Central region has no representation in the Accelerate Illinois program, and the Southern region has no representation in the ICC program. Regional participation may increase when the IOB has generated interest in these programs. The state can then shift its focus to ensuring that, within every region, at least one stakeholder from every county participates in these programs as well.

The Broadband Breakthrough program currently has representation from four regions in its first cohort. In future rounds, the state plans to encourage participation from the Southwest, Southern, Central East, Central, Northwest, and Northeast regions, which all have counties that are eligible to participate. To lay the foundation for building community interest and support for community-led digital inclusion programs, the state may work diligently to expand the geographical footprint of its state-led broadband and digital equity planning programs. The absence of this foundation may present a challenge to scaling any effort begun through the IL BEAD Plan and the IL SDEP.

Some residents noted during listening sessions that their communities lack local digital inclusion programming. A participant in the Southwest Illinois listening session said that in-person technological support and digital literacy resources would be more helpful than current resources, which include hotlines. These hotlines are not perceived to adequately support residents in resolving technical issues, according to the participant.⁶⁰⁶

⁶⁰⁵ ACP Outreach Grant application
⁶⁰⁶ Southwest Listening Sessions, March 15-16

In Southwest Illinois, a listening session participant noted that many residents are switching to services like Fire TV and Roku as monthly cable bills increase, but others are not aware of these options and are subject to rising cable company charges.⁶⁰⁷

More than these factors, a lack of investment in digital inclusion programming locally may be attributed to the belief that residents do not need or are not interested in broadband services or digital literacy skills. The NTIA Internet Use Survey results from 2021 show that in 12.5% of Illinois households, no one uses the internet at home. Some 17.3% of these offline households once had home internet service that was used by a member of the household. The primary cause of residents' decision not to adopt broadband is a lack of need or interest in broadband internet services (66.6%), followed by the cost of connection (14%).⁶⁰⁸

An ICC cohort participant observed, *“There is a low value placed on the internet in low-income households based upon their traditionally poor experience in the past—slow speed, poor device, little tech support, and low digital literacy—so, when you ask residents if home internet is important to them, they often say ‘not really’ because it does not add value in their daily life. They do not know what they are missing.”*⁶⁰⁹

Once communities gain interest in digital equity, it would be important to hold that interest. A member of the second ICC cohort commented that gaining and maintaining *“the attention and focus required to make improved broadband a reality”* could be an ongoing challenge.⁶¹⁰ It may be important to build community through collaboration in digital equity programming, because such cooperation may encourage collective support for digital equity programming.

Factors perceived to have stood in the way of local digital inclusion programs, along with local expertise, have been included in the IL BEAD Plan, since the state could encounter these challenges during broadband deployment and digital equity programming. The **East Central Illinois Broadband READY Preliminary Report** identified a technological bias and poverty-related stigma that alienates many vulnerable households and the organizations that serve them.

⁶⁰⁷ Southwest Listening Sessions, March 15-16

⁶⁰⁸ [NTIA Internet Use Survey](#), NTIA

⁶⁰⁹ “What Have We Learned?” End of Program Evaluation, Illinois Connected Communities Round 2

⁶¹⁰ “What Have We Learned?” End of Program Evaluation, Illinois Connected Communities Round 2

Programming, then, may benefit from fostering a culture of “digital life and dignity” that accounts for unique experiences and literacies.⁶¹¹

The report pointed out another perceived obstacle: digital programs varied in how much they included local and county-level community organizations. The report emphasized the importance of recognizing and including a diverse set of local organizations that represent many kinds of vulnerable households.⁶¹² The report also highlighted that residents would benefit from digital literacy trainings and technology support services.⁶¹³ To ensure digital equity, the state may consider having subgrantees undergo digital equity and inclusion training so that local organizations may be better able to design systems that account for poor and marginalized households. The report also noted that the Tech Buddy Program has evolved beyond routine technology troubleshooting to more individually tailored support.⁶¹⁴ But as digital equity programming is further deployed across the state, it may be difficult for subgrantees to adequately tailor their programming to meet the needs of all participants.

The **Lake County Digital Equity Strategic Plan** reached out to various entities to gain additional insights on the county’s needs and gaps. This outreach effort uncovered four key barriers that may be preventing residents from fully making use of the internet: (1) high internet subscription costs and difficulty enrolling in, or lack of awareness of, existing subsidy programs; (2) challenges in affording and maintaining a personal computing device; (3) inadequate computer training programs to meet residents’ demand; and (4) lack of technical support.^{615,616,617}

In addition to the mitigation approaches detailed in Section 3.4.5 and Section 5.4, the state plans to explore the following approaches, some of which were brought up in stakeholder engagement sessions:

⁶¹¹ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁶¹² [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁶¹³ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁶¹⁴ [East Central Illinois Broadband READY Preliminary Report](#), August 2022

⁶¹⁵ See Section 4.2.1.1 for additional details

⁶¹⁶ See Sections 3.4.2.4 and 4.2.1.3 for additional details

⁶¹⁷ [ConnectLakeCounty State Digital Equity Plan](#), Prepared for ConnectWaukegan, April 2022

- Partnering with local, digital-equity-focused organizations and Broadband READY to offer free digital literacy training, both in-person and virtually
- Continuing broadband planning and digital equity capacity-building for community leaders who require teams to (1) understand current and emerging technologies; (2) navigate the politics of public- and private-sector roles; (3) analyze financial models, including public-sector programs; and (4) structure public-private partnership agreements.⁶¹⁸
- Consolidating statewide programs’ asset inventories into a single platform so that communities and residents can get a full view of all programming quickly and efficiently
 - This approach is under consideration at the local level. The **Chicago Digital Equity Plan** recommends that a Public Digital Equity Portal be created to serve as a community-facing, interactive, easy-to-use website that houses digital equity resources, including community assets, opportunities for digital learning, and tools for finding low-cost (e.g., less than \$30 per month) internet service and devices. Chicago may want to consider ensuring that the portal is accessible to people with disabilities.⁶¹⁹
 - Kids First Chicago’s **Defeating the Digital Divide Report** supports this approach and suggests developing and marketing a one-stop shop for free digital learning offerings that build basic technology skills.⁶²⁰
 - Consolidating the state’s broadband deployment and digital equity assets into one repository may be helpful even for digital equity practitioners, many of whom may not be aware of all the services and programs offered to Illinoisans. The **City of Springfield Broadband Plan** noted that the number of services, assistance, and additional offerings available to residents was eye-opening to the Springfield Broadband Cohort, and that communications about these offerings should be improved.⁶²¹
- Sustaining the funding of programs launched using CARES funding to improve access and digital literacy. In Southern Illinois, some listening session participants shared that CARES

⁶¹⁸ [Accelerate: A Community Broadband Planning Program](#), Benton Institute, June 2022

⁶¹⁹ [Chicago Digital Equity Plan](#), January 2023

⁶²⁰ [Defeating the Digital Divide: How Chicago Can Achieve True Digital Equity](#), Kids First Chicago

⁶²¹ City of Springfield, Illinois Broadband Plan, Accelerate Round 1

funding was used to start programs that include education courses for seniors and skills-training for devices.⁶²² The state wants to ensure that these programs are maintained, sustained, and scaled.

- Expanding state-led programming to cover all 102 counties beyond Broadband READY Cohorts
- Expanding access to dedicated spaces with safe, 24/7 access to free public internet⁶²³
- Ensuring flexibility in programming structures and class times to accommodate work schedules and life events. A digital navigator who attended a listening session in Chicago commented that their class sizes are set at a maximum of 15 participants. However, the navigator noted that, because adults have other responsibilities (such as family obligations, childcare, a full-time job, and medical appointments), the digital learning classes are rarely attended by all 15 participants at once.⁶²⁴
- Collaborating with schools to establish after-school, project-based programs to deploy students into the community as digital navigators. In this role, students would help older adults to navigate their devices.
 - This approach is being considered at a local level. **The Community Builder’s Oakwood Shores ICC Final Report** indicates that the next step in becoming an After-School Matter site is to offer youths a paid stipend to teach seniors technology. The organization plans to write a grant proposal to hire four youths to teach adults and seniors technology and to help assemble their desktops.⁶²⁵
- Offering stipends to encourage completion of digital literacy classes or pursuit of digital literacy courses for workforce preparation⁶²⁶

⁶²² Southern Listening Sessions, March 1-2

⁶²³ City of Chicago Listening Session, April 19

⁶²⁴ City of Chicago Listening Session, April 19

⁶²⁵ The Community Builder’s Oakwood Shores, ICC Round 2 Final Report

⁶²⁶ City of Chicago Listening Sessions, April 19

- Encouraging community organizations to cooperatively create community Connection Centers that offer a variety of digital inclusion programs, including device distribution, technical support, ACP outreach and enrollment, and digital literacy classes
 - This approach is being considered and built at a local level through ConnectLakeCounty. **ConnectLakeCounty’s Digital Equity Strategic Plan** emphasizes working with local and state partners, including the IOB, to explore and design a model for a community connection center. This center would be a physical facility to encourage technology adoption and use through device distribution, tech support, and support in ACP enrollment. It would be a “home base” for digital navigators. Such centers can also serve as hubs for digital literacy programming, workforce development and training, and small business support. Successfully executing this approach may require strong community demand, strong interest from committed partners, and a pathway toward funding and implementation.⁶²⁷
- Partnering with accessible spaces to offer digital literacy programming and promoting accommodation or accessibility features (such as elevators and wheelchair ramps) at host sites during sign-up.⁶²⁸

⁶²⁷ [Digital Equity Strategic Plan, Prepared for Connect Waukegan](#), April 2022

⁶²⁸ City of Chicago Listening Session on 4/19



5 IMPLEMENTATION PLAN

5.1 Stakeholder Engagement Process

Prior to the creation of the IL BEAD Plan and the SDEP, through their programming and activities the Illinois Office of Broadband (IOB) and Illinois Bandwidth Lab (IBL) have worked to engage key stakeholders. The IOB’s Broadband Advisory Council includes representation from various internet service providers, state agency officials and legislators, and certain broadband-related stakeholders. It convenes quarterly.⁶²⁹ The IOB and IBL’s Broadband READY program has 10 cohorts aligned to each Economic Development region in the state. This program is designed to identify current digital inequities and to set next steps in creating a digital inclusion ecosystem. This system would be created in regional cooperation with community and economic-development organizations, educators, local leaders, and other related stakeholders.⁶³⁰

Additionally, the IOB’s Accelerate Illinois and Broadband Breakthrough programs encourage community-driven broadband expansion by providing grants and communities with expert

⁶²⁹ [Illinois Broadband Advisory Council](#), Department of Commerce and Economic Opportunity

⁶³⁰ [Broadband READY](#), Department of Commerce and Economic Opportunity

consultation.⁶³¹ The IOB's Illinois Connected Communities program engages communities in a cohort forum to provide best practices, expert consultations, and grants.⁶³²

The IOB keeps stakeholders updated through regular webinars and newsletters, which are produced and distributed in collaboration with the Illinois Extension and the Benton Institute, respectively. Additional programming that engages key Illinois stakeholders is detailed in Table 1 of the IL BEAD Plan in the Existing Programming section (2.1).

The IOB has undertaken comprehensive stakeholder engagement efforts in preparation for broadband deployment programming. The IOB has previously done the same for the development of its 2020 initial strategic plan and for the Connect Illinois Broadband Grant Program.

To create the IL BEAD Plan and the SDEP, the Illinois Office of Broadband's stakeholder engagement process includes listening to, understanding, and collaborating with a broad range of broadband and digital equity stakeholders to: (1) assess and understand broadband needs and barriers, (2) inventory and map existing broadband assets, and (3) learn what works and co-create new solutions.⁶³³ The IOB aims to meet four objectives by engaging key stakeholders:

1. Understand the experiences and perspectives of affected groups to inform the BEAD and State Digital Equity plans
2. Communicate the facts about the federal funding opportunity ahead, the work already being done by the Office of Broadband and the Illinois Broadband Lab to progress towards goals, and the work ahead
3. Enable current partners and build new partnerships with key stakeholders who are committed to the mission of equitable and inclusive broadband access
4. Build long-term capacity for all impacted communities and key stakeholders through support, transparency, and feedback.

⁶³¹ [Accelerate Illinois](#), Department of Commerce and Economic Opportunity

⁶³² [Illinois Connected Communities](#), Department of Commerce and Economic Opportunity

⁶³³ [Core Team Meeting](#), January 2023

Illinois plans to engage five stakeholder groups based on the groups detailed in the BEAD Notice of Funding Opportunity⁶³⁴ during the stakeholder engagement process: (1) government entities, including local government bodies and state agencies; (2) service providers; (3) other private companies, including small businesses; (4) non-profits and community organizations; and (5) residents and the organizations that serve them, with a focus on covered populations.

To identify organizations and entities to target and engage throughout the stakeholder engagement process, the IOB and IBL plan to identify and catalog their existing partners and supporters throughout the state. These partners and supporters include persons and organizations who have previously engaged with the Illinois Broadband Lab during webinars or existing programming.

During the stakeholder engagement planning process, the IOB and IBL plan to review distribution of covered populations and broadband metrics (Figure 22) to understand the diversity of Illinois's regions before engagement begins. The Northeast and Northern Stateline regions have relatively high proportions of individuals with low rates of English literacy, racial minorities, immigrants, and Indigenous persons. The Southern region has low rates of broadband adoption and access to devices, as well as relatively high proportions of unserved Broadband Serviceable Locations (BSLs), individuals with incomes less than 150% of the poverty line, individuals with disabilities, and veterans. The Southeast region has low broadband adoption rates and relatively high proportions of unserved BSLs, individuals with disabilities, and aging individuals.

⁶³⁴ [Broadband Equity, Access, and Deployment Program Notice of Funding Opportunity](#)

Legend¹
■ Top 2 highest proportions
■ Above population median
■ Below population median

	Broadband metrics			Share of each covered population as a proportion of total regional population							
	Unserviced	Broadband adoption ¹	Access to devices	Income less 150% of FPL	Aging ind. (60+)	Veterans	Ind. with disabilities	Ind. with low English literacy	Racial & ethnic minorities ²	Immigrants	Rural
Northeast	1%	76%	82%	18%	21%	4%	10%	11%	52%	19%	0%
Northern Stateline	7%	68%	75%	23%	25%	8%	14%	4%	32%	8%	10%
Northwest	8%	63%	73%	20%	28%	8%	14%	3%	20%	4%	36%
North Central	7%	67%	76%	20%	24%	5%	12%	2%	20%	4%	24%
East Central	9%	65%	78%	24%	22%	6%	11%	4%	29%	8%	22%
Central	8%	63%	71%	21%	26%	8%	14%	1%	19%	2%	44%
West Central	15%	60%	70%	23%	27%	4%	15%	1%	14%	2%	46%
Southeast	22%	58%	70%	22%	26%	6%	16%	1%	9%	1%	100%
Southern	22%	49%	64%	26%	26%	5%	19%	1%	15%	2%	67%
Southwest	9%	68%	75%	18%	24%	20%	14%	1%	26%	2%	23%
Illinois average	6%	72%	79%	19%	22%	5%	11%	9%	42%	14%	11%

1. For broadband adoption and devices access: darkest color indicates lowest proportions, middle color indicates below state average, and light grey indicates above state average
2. Includes Black or African American, American Indian and Alaskan Native, Asian, Native Hawaiian and other Pacific Islander, Some other race, Two or more races, and Hispanic populations
Covered populations excluded: Justice-impacted individuals, LGBTQ+ individuals, women, and rural residents
Units used for analysis: BSLs: unserviced; Households: broadband adoption and access to devices; Individuals: all covered populations
Source: US Census 2021 ACS 5-Year, FCC Maps

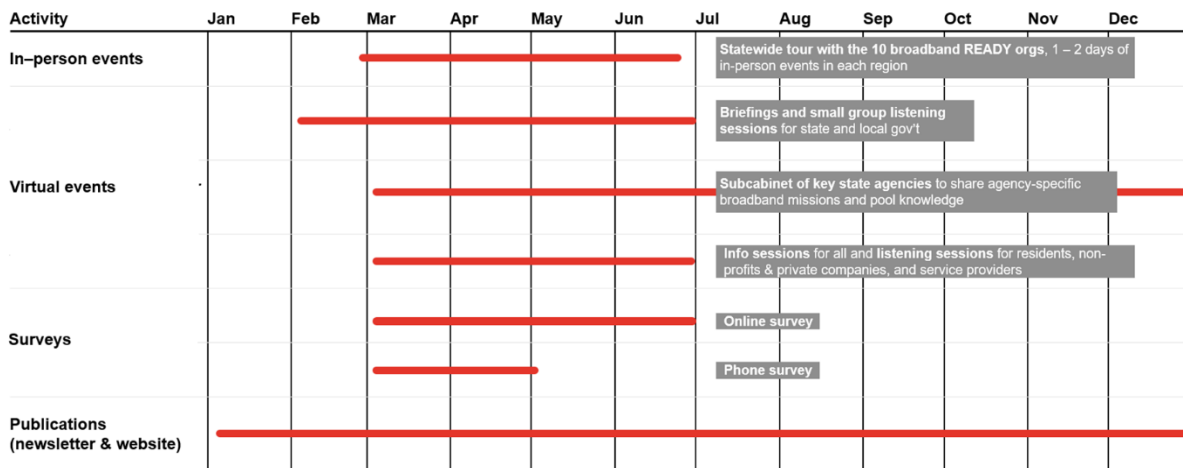
Figure 22. Summary statistics on broadband metrics and covered populations across the 10 regions of Illinois

To engage members of these stakeholder groups, Illinois plans to take on a multi-channel stakeholder engagement process that builds on existing frameworks within the state (Figure 23). This multi-channel effort has begun by engaging one-one-one with local legislators and by conducting conversations and briefings on current broadband efforts across Illinois with local government officials. The State of Illinois plans to invest in activities across multiple modalities to facilitate an inclusive stakeholder engagement process that brings in as many stakeholders as possible from covered populations that have historically been excluded from state planning.

To engage stakeholders from across Illinois, outreach across the following channels is planned during the development of the IL BEAD Plan and IL SDEP:

- In-person events. Through a statewide listening tour, several stakeholder groups—including residents, non-profits, community organizations, small businesses, and local governments—will be invited to participate in in-person listening sessions held within local Illinois communities.

- Virtual events. State government agencies plan to be engaged through a working group. The state government’s broadband subcabinet working group, or the State Government Broadband Working Group, was established at the beginning of the stakeholder engagement process. The broadband subcabinet will meet regularly to discuss the federal funding opportunity and to engage agency leaders with a stake in closing the digital divide. Local governments can also choose to participate in small-group listening sessions. Individual conversations with legislators and local government leaders will be hosted by the Director of the IOB. Briefings on the IOB and IBL for local government governing bodies (such as city councils and county boards) will be offered to local governments as a follow-up to one-on-one conversations. Additionally, virtual listening sessions for key stakeholder groups will provide updates on the Office of Broadband’s and Illinois Broadband Lab’s activities and gather feedback on digital equity and broadband-related experiences. The State plans to host four virtual listening sessions to target four groups: residents, local organizations, internet service providers, and residents who speak Spanish.
- Surveys. The IOB and IBL plan to administer surveys by phone and online. The online survey is expected to be available to members of all stakeholder groups so they can participate in and report on their experience in deploying, using, and promoting broadband. The phone survey will be aimed at Illinois residents, with a goal of 2,500 resident responses. Additionally, the state plans to administer a survey specifically for community anchor institutions (CAIs) to understand their connectivity and how they provide broadband access to the community. Another survey will specifically target public housing authorities (PHAs) to understand the challenges, barriers, and benefits related to broadband access for covered households.
- Publications. The new Illinois Broadband Lab website and social media platform will be launched to disseminate information about stakeholder engagement efforts and updates on the federal funding application process. Additionally, the bi-weekly “Illinois Broadband Connections” newsletter produced by the Benton Institute in partnership with the Office of Broadband will include updates on stakeholder engagement efforts.



Note: current plan as of 02/23/23. Timeline and plan are subject to change.

Figure 23. The IOB and IBL plan to launch a multi-channel stakeholder engagement process during the drafting of the IL BEAD Plan, and to continue engaging with stakeholders once the IL BEAD Plan is complete

The express goal of the in-person listening sessions and phone survey is to reach stakeholders that may not have access to broadband currently, as well as to engage residents, non-profits, and community organizations within their communities. In-person outreach was organized to engage the Illinois Department of Commerce’s Economic Development Regions, which cover all 102 counties in the state. To reduce the burden on community organizations and partners, and to build upon existing community infrastructure, the in-person resident and non-profit engagement efforts are planned around the Economic Development Regions in Illinois. In each region, an existing Broadband READY program is housed under the Office of Broadband. Resident and non-profit engagement events will be planned by the Illinois Broadband Lab in partnership with the Broadband READY team, local government representatives, the University of Illinois Extension, and local organizations. Through these partnerships, Illinois hopes to build upon existing broadband-related efforts in the community and to engage stakeholders through organizations they are familiar with.

The IL BEAD Plan will incorporate the voices heard in stakeholder engagement activities into the following sections of this document: (1) 3.2 – Partnerships, (2) 3.3 – Asset Inventory, (3) 3.4 –

Needs and Gaps Assessment, (4) 4.0 – Obstacles and Barriers, and (5) 5.7 – Alignment.

Throughout engagement with various stakeholders, the state will note major concerns, needs, and gaps related to broadband equity throughout the state of Illinois. Additionally, the state will record existing, ongoing community and local efforts across the state that are related to broadband deployment, access, and equity that contributed to the IL BEAD Plan. The findings from stakeholder engagement efforts conducted as a part of this Five-Year Action Plan will also be used as key inputs for the State Digital Equity Plan.

This IL BEAD Plan was drafted in Spring 2023, and stakeholder engagement events are expected to continue until Summer 2023. Reflections from residents, local organizations, and local governments in all 10 regions of Illinois are not included in this report but will be included in the IL SDEP. They will also inform the Initial Proposal.

The Illinois Office of Broadband and the Illinois Broadband Lab plan to continue their stakeholder engagement efforts through channels established prior to current efforts. For example, the Illinois Office of Broadband convenes the Broadband Advisory Council quarterly. This council includes representatives from various internet service providers, state agency officials and legislators, and certain broadband-related stakeholders. Additionally, the Illinois Office of Broadband plans to continue its State Government Broadband Working Group. Through this group, the State of Illinois plans to monitor the implementation of the IL BEAD Plan to ensure that digital services meet constituents' needs throughout the state. The Illinois Broadband Lab's website and the Office of Broadband's newsletters, which are published in partnership with the Benton Institute for Broadband & Society, will continue to be disseminated and updated regularly.

The Illinois Broadband Lab and Broadband READY teams plan to continue working with the local partners who participated in the stakeholder engagement process. The regional Broadband READY teams will be included throughout the stakeholder engagement process so that local partners can be involved throughout and after the implementation of the IL BEAD Plan.

5.2 Priorities

The state has identified priorities for the IOB to consider as it implements the IL BEAD Plan (Table 13). The state kept these priorities, which align with the vision for broadband deployment and digital inclusion, in mind as it developed the IL BEAD Plan. The State of Illinois views priorities in two ways (1) as a principle directly tied to a goal and (2) as an enabler for achieving a goal.

Table 13: Illinois’s goal-aligned priorities for the implementation of the IL BEAD Plan

Goal	Priorities
A1. By 2030, achieve universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses	<p>Deploying at least 100/20 Mbps high-speed service for residents</p> <ul style="list-style-type: none"> ● Reducing deployment costs and barriers ● Promoting use of existing infrastructure ● Promoting and adopting dig-once policies ● Promoting streamlined permitting processes and cost-effective access to poles, conduits, easements, and rights of way, including the imposition of reasonable access requirements ● Engaging with relevant stakeholders to inform selection of activities to receive federal funding ● Use of public-private partnerships or cooperatives to address the needs of Illinois residents ● Enhancing the subgrantee selection process ● Reducing the cost of broadband service for consumers ● Increasing consumers’ choices among service providers ● Sustaining the ACP as a means of driving down operational expenses for deployment
A2. Connect all Illinois CAIs to at least 1 Gbps symmetrical broadband service by 2028	<p>Deploying gigabit-symmetrical broadband to all schools, libraries, and public health-related entities</p> <ul style="list-style-type: none"> ● Reducing deployment costs and barriers ● Promoting use of existing infrastructure ● Promoting and adopting dig-once policies ● Promoting streamlined permitting processes and cost-effective access to poles, conduits, easements, and rights of way, including the imposition of reasonable access requirements ● Engaging with relevant stakeholders to inform selection of activities to receive federal funding ● Use of public-private partnerships or cooperatives in addressing the needs of Illinois residents ● Enhancing the subgrantee selection process ● Reducing the cost of broadband service for consumers

Goal	Priorities
	<ul style="list-style-type: none"> • Increasing consumers’ choices among service providers • Sustaining the ACP as a means of decreasing providers’ operational expenses for deployment
<p>B1. Achieve universal digital literacy—including basic awareness of online privacy and cybersecurity—with a focus on covered populations</p>	<p>Leveraging partnerships to promote digital inclusion</p> <ul style="list-style-type: none"> • Scaling statewide and local organizations to sustainably lead broadband adoption and digital inclusion programming across the state • Engaging with relevant stakeholders, especially those in covered populations, to understand digital equity and inclusion needs • Putting equity at the center of program design and delivery • Establishing a statewide digital navigator network in each region to provide direct support and capacity
<p>B2. Ensure all Illinoisans, including members of covered populations, have access to affordable subscriptions, devices, and tech support</p>	<p>Increasing access to affordable subscriptions, devices, and technical support</p> <ul style="list-style-type: none"> • Introducing an advisory board to oversee the work and expansion of the Computer Equity Network • Empowering trusted community organizations to conduct localized broadband adoption and digital inclusion programming
<p>B3. Ensure that every student, school, and district within Illinois participates in a sustainable one-to-one initiative</p>	<p>Enabling students to participate fully in any classroom</p> <ul style="list-style-type: none"> • Partnering with institutions (such as ISBE and the Learning Technology Center of Illinois [LTC Illinois]) to ensure that high-speed internet access is available in all P-20 schools • Considering children’s experiences beyond the classroom and across the child development continuum
<p>B4. Increase the use of broadband services to facilitate aging in place</p>	<ul style="list-style-type: none"> • Reducing social loneliness and isolation in seniors⁶³⁵ • Partnering with state agencies, like the IDoA, and local non-profits on broadband-enabled programing • Collaborating with community organizations, like AARP Illinois, who have historical knowledge of systemic inequities
<p>C1. Accelerate the use of digital agriculture applications across rural Illinois</p>	<ul style="list-style-type: none"> • Increasing access and use of digital and Ag Tech applications • Partnering with local non-profits and universities, like the IFB, the Illinois Soybean Association, or Illinois State University to support Illinois farmers in adopting smart agriculture and digital agriculture • Recognizing systemic inequities that have prevented Illinoisans, especially covered populations, from participating fully in agriculture • Supporting a “smart farm” demo or recognition program to highlight fiber-to-the-farm (FTTF) and integrated wireless services

⁶³⁵ State Plan on Aging FY 2022 – FY 2024, Illinois Department of Aging

Goal	Priorities
C2. Expand broadband-empowered opportunities for inclusive workforce development in urban and rural communities throughout Illinois	<ul style="list-style-type: none"> ● Increasing the broadband deployment workforce ● Expanding digital and tech-focused workforce development opportunities ● Partnering with non-profits and state agencies to create workforce development programs that will increase the deployment-skilled workforce and STEM/tech/digitally skilled workforce ● Partner with colleges and universities that offer post-secondary broadband certificates for high-demand roles such as fiber optic technician and mobile maintenance ● Recognizing historic and systemic barriers that prevent Illinoisans from fully participating in workforce development opportunities
C3. Expand access to broadband-empowered health-related services for covered populations—including but not limited to telehealth, telemetry, and remote surgery—across the state of Illinois to provide additional healthcare options to communities throughout Illinois	<ul style="list-style-type: none"> ● Increasing access to healthcare services and technology deployment ● Partnering with non-profits and state agencies—like the Illinois Department of Public Health, Partnership for Connected Illinois (PCI), and Southern Illinois University—to encourage the uptake of telehealth care ● Addressing the challenges facing both patients and the health industry
C4. Expand the use of digital manufacturing applications for small businesses, and/or build use cases for intelligent transportation and smart logistics in regions with the most need	<ul style="list-style-type: none"> ● Empowering the manufacturing and transportation industries through broadband infrastructure, including advances in EV, autonomous vehicles, and connected vehicles ● Partnering with non-profits and state agencies—like the Illinois Department of Transportation (IDOT), DCEO, and the Illinois Center for Transportation (ICT)—to drive manufacturing and transportation growth ● Recognizing public safety challenges and barriers that can be overcome by using IOT applications

5.3 Planned Activities

This section (Table 14) identifies high-level activities that Illinois intends to implement to meet its goals and objectives, including the source of their funding.

Table 14: Activities that Illinois intends to implement

Activities that support universal service	Key player(s) to implement the activities	Funding sources for the activities	Expected outcome(s) for the activities
Run a competitive grant process focused on broadband infrastructure deployment	IOB, IBL, ISPs	Connect Illinois, CPF, CSFRF, BEAD	<ul style="list-style-type: none"> • By 2030, provide universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses • By 2030, ensure that every CAI has access to 1 gigabit symmetrical broadband service
Monitor federal programming, project progress, and completion	ISPs, CAIs, local governments	USDA, CAFII, RDOF, CMC Pilot Program	<ul style="list-style-type: none"> • By 2030, provide universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses • By 2030, ensure that every CAI has access to 1 gigabit symmetrical broadband service
Identify subgrantees and empower local organizations to drive ACP adoption	IOB, IBL, B-READY	ACP Outreach Grant	<ul style="list-style-type: none"> • By 2030, provide universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses
Identify subgrantees to drive digital inclusion	IOB, IBL, CAIs, local governments	BEAD, State Digital Equity Capacity Grant	<ul style="list-style-type: none"> • Achieve universal digital literacy, including basic awareness of online privacy and cybersecurity, with a focus on covered populations • Ensure all Illinoisans, including members of covered populations, have access to affordable subscriptions, devices, and tech support • Ensure that every student, school, and district within Illinois participates in a sustainable one-to-one initiative • Accelerate the use of digital agriculture applications across Illinois • Expand broadband-empowered opportunities for inclusive workforce development in communities throughout Illinois • Expand access to broadband-empowered health-related services—including but not limited to telehealth, telemetry, and remote surgery—to provide additional healthcare options to communities throughout Illinois • Expand use of digital manufacturing applications for small businesses and/or build use cases for

Activities that support universal service	Key player(s) to implement the activities	Funding sources for the activities	Expected outcome(s) for the activities
Run statewide digital equity and inclusion programming	IOB, IBL	Connect Illinois, State Digital Equity Capacity Grant	<p>intelligent transportation and smart logistics in regions with the most need</p> <ul style="list-style-type: none"> • Achieve universal digital literacy, including basic awareness of online privacy and cybersecurity, with a focus on covered populations • Ensure all Illinoisans, including members of covered populations, have access to affordable subscriptions, devices, and tech support

5.4 Key Strategies

The State has identified key strategies that align with the goals and objectives it plans to achieve through the IL BEAD Plan or the IL SDEP. These strategies were drafted to directly inform the development of the Initial and Final proposals for BEAD and the Digital Equity Capacity Build Grant Program RFP.

Below are the key strategies that align with the IL BEAD Plan’s goals:

- A1. By 2030, provide universal access to affordable, reliable, fully scalable high-speed internet service of at least 100/20 Mbps for all Illinois residences and businesses
- a. Expand middle-mile access in areas where such access will substantially reduce last-mile costs.
 - b. Work with relevant state and local agencies (such as IDOT) to incorporate fiber network expansion into forthcoming roadway improvement projects⁶³⁶
 - c. Use public-private partnerships to expand the fiber network⁶³⁷
 - d. Require all ISPs who obtain BEAD funding to offer \$30-\$40 (low-cost) plans throughout their Illinois footprint

⁶³⁶ [Broadband Strategic Plan, City of Harvey](#), September 2021

⁶³⁷ [Broadband Strategic Plan, City of Harvey](#), September 2021

- e. Encourage all ISPs receiving BEAD funding to deploy scalable service to residences and businesses as part of the grant criteria
 - f. Explore setting a higher standard for service (such as 100/100 Mbps) for internet service providers deploying infrastructure.
- A2. Connect all Illinois CAIs to at least 1 Gbps symmetrical broadband service by 2028
- a. Deploy fiber technologies for CAIs to support robust internet access at a higher bandwidth
 - b. Work with organizations like the ICN, ISBE, Illinois Library Association (ILA), and the Office of the Illinois Secretary of State to onboard all public schools and public libraries to the middle-mile network
 - i. The ILA noted that securing state-sponsored, high-speed broadband for public libraries is a legislative focus of the organization. In 2022, the ILA, IOB, and Illinois State Library worked together to start a budget process prior to seeking any legislation.⁶³⁸
 - c. Explore potential public-corporation candidates for middle-mile collaboration and governance
 - d. Partner with state agencies that work directly with CAIs to onboard remaining institutions to the middle-mile network. For example, the Illinois State Comptroller could help onboard community development financial institutions (CDFIs) that serve low-income individuals.
- B1. Achieve universal digital literacy, including basic awareness of online privacy and cybersecurity, with a focus on covered populations
- a. Work through regional structures, like Broadband READY, to support and scale existing programs across the state and create new programs to meet local digital inclusion needs⁶³⁹
 - b. Partner with and support local digital equity coalitions (such as the City of Chicago Digital Equity Coalition, ConnectLakeCounty, and Cook County CODE) to launch and scale identified recommendations for promoting digital equity

⁶³⁸ [Legislative Update -- January 6, 2022](#), ILA
⁶³⁹ [Housing Authority of Champaign County](#)

- i. In some communities, solutions for bridging the digital divide have already been identified, but the communities need the funding to implement these programs. An ICC participant explained, “Solutions are identified, but funding remains the biggest barrier to implementation. Real support at the state level to help communities identify the right funding sources to support their initiatives is critical.” The challenge of capacity-building and sustainability in the form of funding is one the State hopes to address in its implementation of the IL SDEP.⁶⁴⁰
 - c. Scale existing Accelerate Illinois, Broadband Breakthrough, and Illinois Connected Communities (ICC) programs to support local government and local organizations in developing digital equity and broadband strategies
 - d. Work with statewide organizations (such as the Illinois Extension, Illinois Innovation Network, and the Digital Equity Coalition) to promote public events that encourage the use of technology to support civic engagement⁶⁴¹
 - e. Partner with state agencies focused on workforce development (such as the Department of Human Services [IDHS], IDES, and DCEO) to deploy digital literacy training—including cybersecurity and privacy curricula—to students, jobseekers, healthcare workers, and government personnel
 - f. Create a statewide Digital Navigator program to target hard-to-reach and covered populations
 - g. Work with workforce development organizations (such as the Chicago Jobs Council) to develop training for workforce development professionals, and work with organizations that are deploying digital literacy programs that focus disadvantaged job seekers, low-income workers, and covered populations.⁶⁴²
- B2. Ensure all Illinoisans, including members of covered populations, have access to affordable subscriptions, devices, and tech support

⁶⁴⁰ ICC Round 2 “What Have We Learned?” End of Program Evaluation

⁶⁴¹ [Housing Authority of Champaign County](#)

⁶⁴² [Chicago Jobs Council](#); [Public Trainings, Chicago Jobs Council](#); [Closing the Digital Skill Divide, National Skills Coalition](#); NSC’s SkillSPAN State Policy Advocacy Network Illinois Skills for Good Jobs Agenda is led by Chicago Jobs Council

- a. Expand device loans, subsidies, and access points available through CAIs
- b. Scale the Computer Equity Network to continue to provide low-cost devices to communities in need through partnerships with state and local organizations (such as IDHS, IDOA, and ISBE) and continued partnership with PCs for People
- c. Scale the efforts of the Digital Equity Coalition and offer access to digital literacy and skills training—including cyber security and privacy curricula—across the state
- d. Work with library associations and related organizations (such as the ILA and Office of the Illinois Secretary of State) to increase the lending of hotspot devices
- e. Drive ACP adoption through awareness campaigns and targeted partnerships with trusted community partners.

B3. Ensure that every student, school, and district within Illinois participates in a sustainable one-to-one initiative

(Deployment gaps to support broadband access in home and in-classrooms addressed in Goal A1 and A2.)

- a. Support state organizations (such as ISBE and LTC Illinois) in monitoring and rolling out its Computer Literacy Knowledge and Skill Development Continuum⁶⁴³
 - i. In the 2022-2023 school year, all districts began to ensure that students received developmentally appropriate opportunities to gain computer literacy skills at each K-12 grade level. The Computer Literacy Knowledge and Skill Development Continuum is intended to support districts in ensuring that students have developmentally appropriate opportunities to gain computer literacy skills at each grade level.⁶⁴⁴
- b. Work with schools and associated organizations (such as ISBE and LTC Illinois) to offer one-to-one device programs within schools and relevant training to empower students to use devices⁶⁴⁵

⁶⁴³ [Computer Literacy Knowledge and Skill Development Continuum](#), May 2022

⁶⁴⁴ [Computer Literacy Knowledge and Skill Development Continuum](#), May 2022

⁶⁴⁵ [Chicago Jobs Council; Public Trainings, Chicago Jobs Council; Closing the Digital Skill Divide, National Skills Coalition](#); NSC's SkillSPAN State Policy Advocacy Network Illinois Skills for Good Jobs Agenda is led by Chicago Jobs Council

- c. Monitor device access, connectivity, and digital learning progress through surveys (such as the Illinois School District Technology survey)⁶⁴⁶
- d. Collaborate with education agencies (such as ISBE, the Illinois Community College Board [ICCB], City Colleges of Chicago [CCC], and IBHE) to design local, adult-education digital literacy programs for parents and caregivers
- e. Work with education agencies (such as ISBE, ICCB, CCC, and IBHE) to outfit every Illinois classroom with virtual classroom technology over time.⁶⁴⁷

B4. Increase the use of broadband services to facilitate aging in place

- a. Partner with state agencies (such as IDoA) to expand existing programs, like the Illinois Care Connections program, to equip seniors with devices and digital skills to reduce social isolation and loneliness⁶⁴⁸
- b. Partner with statewide organizations (such as IDoA and AARP Illinois) to support senior centers and sites providing day services to adults in delivering remote and/or virtual activities and services⁶⁴⁹
- c. Work with statewide organizations and agencies (such as the Department of Healthcare and Family Services, the Department of Public Health, and AARP Illinois) to remove barriers that limit telehealth for caregivers and loved ones.⁶⁵⁰

C1. Accelerate the use of digital agriculture applications in rural Illinois

- a. Collaborate with Illinois-headquartered John Deere, ISU, and the Illinois Soybean Association to support a “smart farm” demo or recognition program that highlights fiber-to-the-farm (FTTF) and wireless technology services⁶⁵¹

⁶⁴⁶ [Illinois State Board of Education 2020 – 2023 Strategic Plan; 2020 Illinois School District Technology Survey](#), Learning Technology Center for Illinois

⁶⁴⁷ [Virtual Classrooms](#), Center for the Advancement of Teaching Excellence UIC

⁶⁴⁸ [State of Illinois, Department of Aging](#)

⁶⁴⁹ [State of Illinois, Department of Aging](#)

⁶⁵⁰ [Disrupt Disparities: Challenges and Solutions for 50+ Illinoisans of Color; State Plan on Aging FY22 – FY24](#)

⁶⁵¹ [John Deere Launches New Digital Agriculture Hub](#), October 2020; [Precision Ag Technology](#), John Deere

- b. Partner with farming associations, like IFB, to encourage adoption of data-intensive and smart-agriculture farming applications⁶⁵²
- c. Work with statewide, agriculture-focused organizations (such as IFB, ICCB, and the University of Illinois Center for Digital Agriculture) to expand deployment of Ag Tech, smart machinery, and best practices in digital agriculture on rural farms, including providing necessary onboarding resources and training, like digital literacy training⁶⁵³
- d. Collaborate with statewide, agriculture-focused organizations (such as IFB, the University of Illinois Center for Digital Agriculture, and the Illinois Department of Agriculture) to establish a forum for Illinois farmers to troubleshoot various software systems.⁶⁵⁴

C2. Expand broadband-empowered opportunities for inclusive workforce development in communities throughout Illinois, with a focus on covered populations

Investing in broadband deployment workforce to achieve universal broadband access

- a. Through public-private partnerships and state-led workforce programming, like programs run by the DCEO, create new pathways and support existing ones for building a workforce ready to deploy broadband infrastructure
- b. Work with state education agencies (such as ICCB) to explore interest in broadband-focused programs on campus, like Lincoln Trail College’s Broadband Telecom program⁶⁵⁵
- c. Work with state agencies like the DCEO to establish a certification or credential system for programs that offer broadband skills and increase the available workforce for deployment.⁶⁵⁶

Workforce development and digital skills

- a. Support state agencies in implementing the digital literacy components of their strategic plans and programming portfolios, like the digital literacy components of the DCEO’s Office

⁶⁵² [IFB Weekly: Most Recent Talking Points as of 3/13/23](#), Illinois Farm Bureau
⁶⁵³ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County; Center for Digital Agriculture, University of Illinois; [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), 2019
⁶⁵⁴ [Broadband Infrastructure Engineering Assessment Report](#), Champaign County; Center for Digital Agriculture, University of Illinois; [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), 2019
⁶⁵⁵ [Broadband Telecom, Lincoln Trail College](#)
⁶⁵⁶ [Ivy Tech Valparaiso launches Broadband SEAL to Meet IT Industry Demand](#)

of Employment and Training (OET)'s "State of Illinois WIOA Unified State Plan" and workforce programming⁶⁵⁷

- b. Collaborate with manufacturing-focused organizations—like the Illinois Manufacturers' Association (IMA) or the IMA Education Foundation (IMAEF)—to scale programs that increase digital literacy skills in the manufacturing industry's workforce⁶⁵⁸
 - i. The IMEC's report, **How Illinois Manufacturers are Adopting Advanced Technologies**, shares the results of an online survey of manufacturing leaders in Illinois-based companies. The survey captured these leaders' views on their companies' adoption of advanced manufacturing technology. According to the report, 50.4% of employers believe that insufficient talent within their organizations is one of the biggest obstacles in implementing advanced manufacturing technologies.⁶⁵⁹
- c. Support EV- and clean energy-focused initiatives—like the State's Electrify Illinois or DCEO's CEJA Workforce Program—in integrating digital literacy skill-building into their training programs⁶⁶⁰
- d. Collaborate with state agencies (such as DCEO, ICCB, the Illinois Department of Employment Security [IDES], and IDHS) to scale digital literacy and workforce development programs⁶⁶¹
- e. Work with local governments to share best practices for encouraging participation in educational workforce development programs through scholarships, internships, and employer incentives (sourced from the City of Harvey Broadband Strategic Plan⁶⁶²)
- f. Work with state agencies (such as the IDES, the IDES American Job Centers, and DCEO's workNet Center) to include and promote digital economy opportunities communicated with job-seekers.

⁶⁵⁷ Based on 3/20/2023 Weekly IL Broadband Planning Call; [2020 – 2024 State of Illinois WIOA Unified State Plan](#); Workforce Development, DCEO

⁶⁵⁸ Based on 3/20/2023 Weekly IL Broadband Planning Call; [IMAEF Education Foundation Seeks Measures to Increase Training Opportunities, Strengthen Workforce](#)

⁶⁵⁹ [How Illinois Manufacturers are Adopting Advanced Technology: An Insight Report on Automation, Workforce, and Productivity](#), IMEC

⁶⁶⁰ Based on 3/20/2023 Weekly IL Broadband Planning Call; [Training and Degree Programs, Illinois Drives Electric](#); [CEJA Workforce Programs, DCEO](#)

⁶⁶¹ [Broadband Strategic Plan, City of Harvey](#), September 2021

⁶⁶² [IDES IllinoisJobLink.com](#); [Illinois workNET](#)

C3. Expand access to broadband-empowered health-related services—including but not limited to telehealth, telemetry, and remote surgery—to provide additional healthcare options to communities throughout Illinois

Context: Telehealth payment parity legislation permanently enacted in 2021 for services addressing mental health and substance use disorders, as well as for all other telehealth services through 2027⁶⁶³

- a. Collaborate with state agencies and organizations (such as the Illinois Department of Public Health [IDPH], the IDPH’s Community Health Workers [CHW] Review Board, and the IL CHW Association [ILCHWA]) as they build community health worker programming—like the CHW Certification Program and CHW professional development opportunities—to include digital literacy and inclusion training/skill-building to facilitate telehealth access for all Illinoisans⁶⁶⁴
- b. Support higher-education institutions—like SIU through the Governor’s Rural Affairs Council’s (GRAC) Health and Healthcare Access Working Group—in scaling telehealth services and expanding telehealth patient sites to reach medically underserved populations across Illinois⁶⁶⁵
- c. Work through local and state organizations to partner with local libraries to create digital literacy programs that provide information and educate residents on tools designed for digital health⁶⁶⁶
- d. Work with digital equity partners through the Digital Equity Coalition to expand awareness on payment parity in Illinois for telehealth⁶⁶⁷
- e. Support telehealth-focused organizations (such as the Illinois Telehealth Network and the Partnership for a Connected Illinois’s [PCI] Illinois Telehealth Initiative) to scale telemedicine solutions in rural Illinois⁶⁶⁸

⁶⁶³ [Gov. Pritzker Signs Landmark Legislation Expanding Telehealth Access](#); Payment parity requires insurers to reimburse healthcare providers for telehealth with the same payment rates as in-person care

⁶⁶⁴ [Community Health Workers Review Board September 27, 2022 Minutes](#); [Community Health Workers, IDPH](#)

⁶⁶⁵ [Telehealth Services, SIU School of Medicine](#); [Our partners, Telehealth Services, SIU School of Medicine](#); [Governor’s Rural Affairs Council 2022 Annual Report](#)

⁶⁶⁶ [Virtual health for all: Closing the digital divide to expand access, McKinsey & Company, March 2023](#)

⁶⁶⁷ [Community Health Workers Review Board September 27, 2022 Minutes](#); [Community Health Workers, IDPH](#)

⁶⁶⁸ [Illinois Telehealth Initiative, Partnership for a Connected Illinois \(PCI\)](#)

- f. Connect patient advocacy groups (such as AARP Illinois) with local/municipal governments to host community-based discussions on access to telehealth for rural and urban communities, as well as communities of color.⁶⁶⁹

C4. Expand the use of digital manufacturing applications for small businesses and/or build use cases for intelligent transportation and smart logistics in regions with the most need

*Context: DCEO's 2019 Economic Plan names transportation and logistics, manufacturing, and small businesses as key industries for Illinois.*⁶⁷⁰

- a. *Transportation:* Deploy infrastructure and support ITS project scaling by collaborating with institutions across Illinois (such as the Illinois Department of Transportation [IDOT], University of Illinois Urbana-Champaign [UIUC] and the Illinois Center for Transportation [ICT])⁶⁷¹
 - i. The **Livingston County Broadband Team** Planning is prioritizing strategies for future broadband-empowered requirements like smart cities and traffic controls.⁶⁷²
- b. *Transportation:* Deploy infrastructure and work with state agencies (such as IDOT and DCEO) to support Illinois's small and mid-sized transportation companies in implementing track-and-trace technology (sourced from DCEO's 2019 Economic Plan)⁶⁷³
- c. *Public Safety/Transportation:* Work with the institutions across Illinois (such as IDOT, ICT, Southern Illinois University Edwardsville, and state public safety agencies) to promote and scale virtual training opportunities like the IDOT's Online Traffic Incident Management Training for emergency responders, including transportation workers, police, fire fighters, towing professionals, and recovery crews in remote parts of Illinois⁶⁷⁴
- d. *Manufacturing:* Work with manufacturing-focused organizations (such as the Illinois Manufacturers' Association [IMA], the Illinois Manufacturing Excellence Center [IMEC],

⁶⁶⁹ [Disrupt Disparities: Challenges and Solutions for 50+ Illinoisans of Color](#)

⁶⁷⁰ [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), 2019

⁶⁷¹ [Illinois Statewide ITS Strategic Plan, 2019; Illinois Center for Transportation](#)

⁶⁷² Connect Livingston Broadband Plan, Accelerate Illinois Round 2

⁶⁷³ [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), 2019

⁶⁷⁴ [IDOT Offers First-Time Online Training for Emergency Responders in Illinois; IDOT online traffic incident management training helps improve safety for first responders](#)

Illinois Tech’s National Center for Advanced Manufacturing, and the DCEO) to deploy advanced and digital manufacturing techniques to increase automation and productivity, with a focus on small manufacturers, where adoption is lower⁶⁷⁵

- e. *Manufacturing*: Support manufacturing organizations (such as the Illinois Manufacturing Excellence Center) in deploying digital technologies to small manufacturers, with a focus on manufacturers with lower adoption rates⁶⁷⁶
 - i. The IMEC’s report, **How Illinois Manufacturers are Adopting Advanced Technologies**, shares a perspective on small manufacturers’ current adoption of advanced manufacturing technology in Illinois. Some 61.5% of manufacturers that intend to implement advanced manufacturing technologies reported that they had made limited or no progress in such adoption. This finding may indicate the complexity involved in implementing advanced manufacturing applications that rely on operational and information technology integration. Small manufacturers (1 to 49 employees) also lag behind large manufacturers (with 250 or more employees) in having already implemented or intending to implement advanced manufacturing technologies and processes, at 59.2% to 94.4%.⁶⁷⁷
- f. *EV*: Work with statewide organizations and agencies (such as DCEO, IDOT, IMA, and ICT) to support small companies along the electric vehicle supply chain that are moving to Illinois because of the Reimagining Energy and Vehicles in Illinois Act (REV Illinois Act)⁶⁷⁸
- g. *EV*: Work with state agencies to explore how broadband deployment can support a smart grid to address aging energy infrastructure.

5.5 Estimated Timeline for Universal Service

Illinois estimates that it is on track to provide reliable, affordable, high-speed internet throughout the state by the 2030 target set in the IL BEAD Plan (Figure 24). In fact, based on current infrastructure deployment deadlines set by both federal and state-run grant programs,

⁶⁷⁵ [Illinois Manufacturing Excellence Center; National Center for Advanced Manufacturing](#), Illinois Tech

⁶⁷⁶ [How Illinois Manufacturers are Adopting Advanced Technology: An Insight Report on Automation, Workforce, and Productivity](#), IMEC

⁶⁷⁷ [How Illinois Manufacturers are Adopting Advanced Technology: An Insight Report on Automation, Workforce, and Productivity](#), IMEC

⁶⁷⁸ [Reimagining Energy and Vehicles \(REV\) Illinois Program](#)

and on the prioritization of unserved and underserved locations in grant programs, Illinois is on track to meet this deadline at least two years ahead of the 2030 target. This estimated timeline is important because it will likely be affected by the labor-shortage and supply-chain obstacles detailed in Section 4.1.1.4 and 4.1.1.5. The IOB plans to actively work with grantees in state-run and federal grant programs to overcome these barriers. It will apply as needed for exemptions associated with materials availability and if unforeseen obstacles arise.

The timeline for universal service in Illinois is strongly influenced by the federal programs that directly fund service providers' deployment of broadband infrastructure in areas with the most need. The state has tracked the number of locations affected by funding from RDOF Phase I, CAF II, and ReConnect and has taken this information into account when estimating the timeline and cost of achieving universal service (Table 15). Illinois has previously used federal funding from ARPA to supplement state-allocated funding for the Connect Illinois Broadband Grant Program. This grant program has allowed Illinois to navigate through not only instituting a state-run subgrantee process, but also unforeseen legislation and regulatory challenges with the PWA. This experience has prepared the state to quickly distribute and deploy its BEAD funding and to remain on track to deliver universal service by 2030 at the latest.

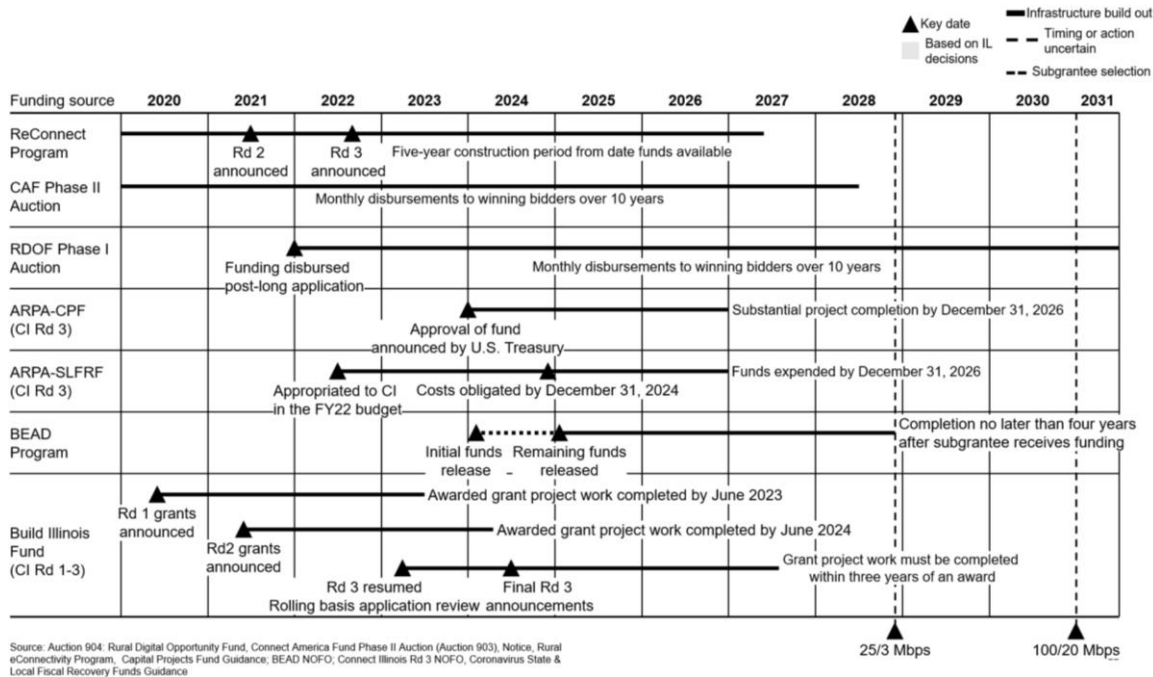


Figure 24. Preliminary timeline for universal service based on infrastructure project deadlines and funding sources available in Illinois. Universal service will be achieved upon completion of funded projects, with the assumption that RDOF projects can provide service before program completion

Table 15: Number of locations impacted by federal or state grant program to date (as of March 2023)⁶⁷⁹

Grant program	Number of impacted unserved locations	Number of impacted underserved locations
RDOF	55,324 ⁶⁸⁰	48,347 ⁶⁸¹
CAF II	14,482	15,924
USDA ReConnect	11,156	9,183
Connect Illinois Broadband Grant Program	--	--

⁶⁷⁹ Need to confirm with Shiyu the source for this

⁶⁸⁰ Excludes defaults

⁶⁸¹ Excludes defaults

5.6 Estimated Cost of Universal Service

Illinois defines “universal service” as providing access to reliable, affordable, low-latency internet services at speeds of least 100/20 Mbps at all broadband-serviceable locations (BSLs) and households. All communities must have at least one community anchor institution (CAI) with at least 1 Gbps symmetrical service.

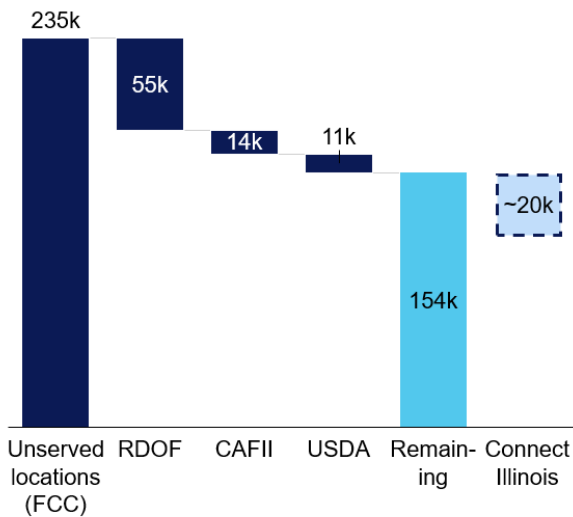
To achieve universal service, Illinois plans to use (1) already disbursed federal broadband funding programs, including RDOF, USDA, CAF II, BEAD; (2) state programs that leverage state and federal funds, including Connect Illinois, State (R1, R2) and Connect Illinois, and ARPA CPF (R3); (3) already received but not yet disbursed funds, including ARPA-CPF, which will be used to fund the Connect Illinois Round 3 grants; (4) anticipated funding sources, including BEAD and RDOF II; and (5) potential, future state-funded rounds of the Connect Illinois program. A summary of already disbursed funding programs, as well as the number of BSLs passed or within a FWA service area is shown in Table 16.

Table 16. Prior Broadband Funding

Source	Total funds	Location impacted ²¹	Minimal speed requirement	Technology requirement
RDOF	\$241M	93k	25/3 Mbps	No requirement
CAF II	\$10M	32k	Minimum performance tier is 10/1 Mbps	No requirement
USDA Reconnect	\$164M	21k	100 Mbps symmetrical	Fixed terrestrial broadband service
Connect IL R1	\$14M	5k	100 Mbps symmetrical	No requirement
Connect IL R2	\$21M	15k	100 Mbps symmetrical	No requirement

The total funding currently allocated to universal coverage is \$587 million toward passing 232K SLs. In addition, Connect Illinois Round 3, which leverages \$350 million in state and federal ARPA funds, was re-opened in March 2023 and will provide funding for expansion of broadband access expansion.

Unserved locations



Underserved locations

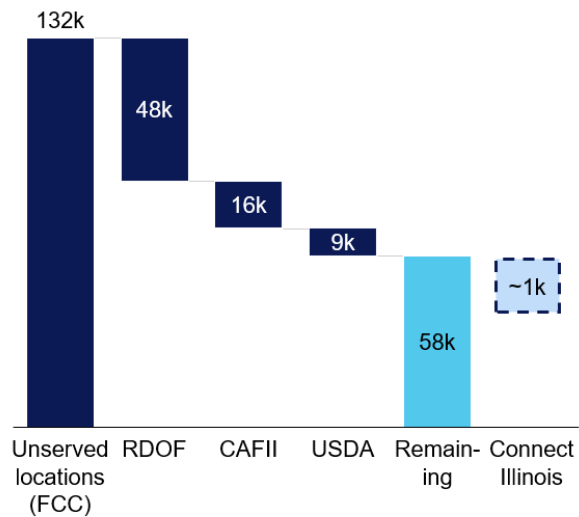


Figure 25. Unserved and underserved locations in Illinois, based on the FCC National Broadband maps, accessed March 21, 2023, Number of Locations

Based on the FCC Broadband Maps accessed June 8, 2023, there are 235,000 unserved locations and 132,000 underserved locations in Illinois.

As shown in Figure 25, after excluding locations served or to be served by RDOF, CAF II, and USDA, there are 114,000 unserved and 133,000 underserved locations that Illinois intends to pass or cover via future rounds of the Connect Illinois program (R3 and future rounds) and BEAD funds.

Table 17 below describes the potential cost of deploying infrastructure across the current 114K unserved and 133K underserved locations across three different deployment scenarios. Each of these deployment scenarios has different assumptions in terms of technology mix, capex multiplier used on top of CQA base cost estimates, greenfield vs brownfield mix, match rate among other estimates. Based on the analysis described below, the state estimates the remaining cost for universal service to be **\$736 million to 2.30 billion**, with 1.48 billion as the average cost of deployment. We anticipate that the cost for universal service will be covered

through a combination of ARPA-CPF, BEAD, and—depending on the BEAD allocation Illinois receives—potentially additional state funding.

Table 17. Deployment cost scenarios (based on assumptions shared by State)

	A: Highest cost deployment	B: Average cost deployment	C: Lowest cost deployment
Technology	100% fiber	95% fiber and 5% fixed wireless	95% fiber and 5% fixed wireless
Capex multiplier for CQA base values	~1.8x (based on comparison between CQA estimates and Connect Illinois Applications)	~1.8x (based on comparison between CQA estimates and Connect Illinois Applications)	None
Greenfield vs. brownfield	All Greenfield	Greenfield to all fiber, and greenfield or brownfield to FWA locations, depending on whether the location has pre-existing FWA providers	Greenfield to all fiber, and greenfield or brownfield to FWA locations, depending on whether the location has pre-existing FWA providers
Match rate	0% match rate	18% implied match rate (based on CQA business case)	25% match rate (BEAD requirement)
Provider Match (millions)	\$0	\$325	\$245
Estimated subsidy	\$2,300M	\$1,481	\$736M

The cost-modeling for this analysis leverages historical Connect Illinois R2 awards and the CostQuest Associates (CQA) investment costs, as well as business-case modeling. CostQuest’s investment-cost modeling is a granular, engineering-based method derived from the Connect America Cost Model (CACM).

Critical assumptions within the investment cost model include:

- Estimated costs reflect the build out of a network to serve all locations in a service area (the area served by a common hub/CO) irrespective of the current availability of broadband in an area
- The cost of the entire network is apportioned to each location based on how that location utilizes the capacity of a specific network component

- **The Greenfield approach** includes all network component costs and views that all components have a long run incremental cost
- **The Brownfield approach** views that some infrastructure may exist, and its upfront cost could be avoided
 - Middle mile plant and most poles and conduit are removed in the Brownfield output for Fiber. Some investment is retained to account for the investment needed to augment existing network.

Critical assumptions in the business case model include:

- A 20-year business case
- Net present value (NPV) accounts for revenue, operating expense, replacement capital, upfront capital, and the cost of money.
 - Revenue is based on the Average Revenue per User, which is a product of the prevailing price of broadband and take rate.
 - › The average price of broadband internet in the United States is assumed to be \$75.⁶⁸²
 - › The take rate is assumed to be 70%.
 - The ongoing cost of the network (including plant-specific and non-specific maintenance and general and administrative expenses) and of customer operations (including customer sales, marketing and support, and bad debt) is associated with operating the network and providing broadband services. The values assumed are sourced from the FCC's CACM/A-CAM efforts.
 - Replacement capital is the capital needed to maintain the network over time. As a plant ages through normal use, it may fail or need replacement. Retirement curves are sourced from the FCC's CACM/A-CAM efforts.

⁶⁸² Assumption aligned with a scenario in which a low-cost plan has not been deployed

- Upfront capital includes labor and materials for a broadband network. It is split into a network component (including broadband optical line terminal equipment in a serving office; fiber cabling between the office and a drop terminal; the structure; splitter equipment; and middle-mile, land, and building investments) and a success-based component (including drop cabling and the Optical Network Terminal located at a customer's premises). Success-based investment applies at the frequency of the take rate.
- The cost of capital is assumed to be 8.5%.

The upper bound of the range for universal service is derived in the context of Illinois's (1) goal to maximize fiber deployment; (2) intent to ensure robust participation from all provider types that can provide high-quality broadband services in the state; (3) intent to award funds via a highly competitive process that incorporates the lessons of recent federal programs in IL, such as RDOF, as well as the Connect Illinois grant program, based on levels of competition seen in R1 and R2 of the Connect Illinois grant program and in the Illinois RDOF results; (4) intent to require service providers that receive funding from the state to offer an affordable (state-wide) plan in the range of \$30-40 per month for a reliable service offering speeds of 100/20 Mbps.

Considering this context, the upper bound on cost is modeled using the CostQuest investment cost for building greenfield fiber to all unserved and underserved locations, with a ~1.8x multiplier on capex. This multiplier is derived from comparing the capex of previous Connect Illinois applications with the capex of those locations in CostQuest's model. A 0% match rate is assumed. This match rate is adjusted downward from the 6% match rate estimated by CostQuest's business case to model the impact of a potentially lower ISP margin. This margin could be smaller due to deploying a low-cost plan and, in a worst-case scenario, having no ACP subsidy or state equivalent.

Estimated subsidy to connect all unserved and underserved locations

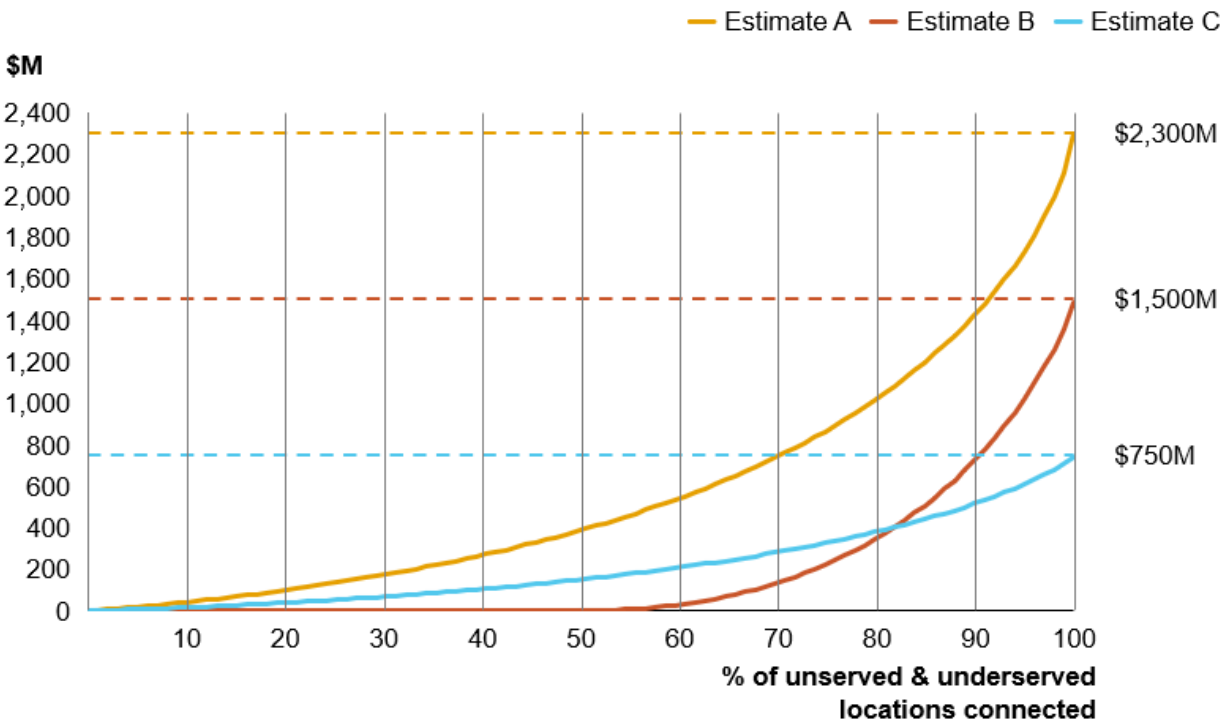


Figure 26. Estimated subsidy that may be required to connect all unserved and underserved locations, millions of dollars

To model the upper bound, we have assumed that the potential ISP contribution will be reduced, which may result in upward pressure on the subsidy required. Hence, for the upper bound, we reduce the 6% CQA match rate to the most extreme assumption of a 0% match.

Estimate A in Figure 26 above shows the upper bound **cost curve** for future deployment to achieve universal service in Illinois, which is the cumulative cost (y-axis) of reaching all unserved and underserved locations. The x-axis corresponds to the cost to pass each Illinois BSL, rank-ordered from least cost to highest cost. The lowest-cost areas of Illinois are in the Northeast and Northern Stateline regions—high-density urban areas that are close to middle-mile access points. By contrast, the highest-cost areas of Illinois are concentrated in the West Central, Northwest, Southern, and Central regions—the low-density rural areas that are farthest from middle-mile access points.

The lower bound on the cost range for universal service is derived in a context similar to the context applied to the upper bound, but with the following adjustments:

1. Illinois maintains its goal to maximize fiber deployment but acknowledges that there may be extremely high-cost areas of the state where no fiber providers compete for funding, and where fixed-wireless providers win the competitive grant program. The full investment would be required for this combination of greenfield fiber costs and greenfield and brownfield fixed wireless costs, and the state would only pay the subsidy required.
2. Levels of competition are high enough for match rates to exceed the CQA-modeled match rate and even to reach the BEAD-recommended 25% match. Note that the resulting subsidies may be larger than the implied RDOF subsidies, as the state does not intend to employ a reverse auction.
3. ISPs model a low-cost plan and assume that the federal ACP subsidy will continue, which slightly decreases the subsidy the state is expected to pay.

Considering this context, our lower bound on cost is modeled using the CostQuest greenfield fiber build-out to 95% of BSLs, and greenfield and brownfield fixed wireless build-out to the remaining 5% of BSLs. The 95% fiber threshold is determined based on the estimated cost of prioritizing fiber deployment while ensuring that all unserved locations are served within the potential BEAD allocation.

Under this estimate, locations where fiber deployment cost exceeds \$16,000 per location may be served by fixed wireless. This dollar amount represents the CQA-estimated capital expenditure without applying the Connect Illinois Capex Multiplier. These locations are primarily located in the Northwest, North Central, and Southern regions. Switching the 5% highest-cost fiber locations to FWA significantly reduces the estimated lower bound. Note that the estimation is done on a location-by-location basis and provides a framework for estimating the cost of different technologies. In actuality, the technology will be deployed at the project-area level, following a similar logic of switching project areas with the highest average fiber-per-location cost to FWA.

Estimate C in Figure 26 above shows the lower-bound **cost curve** for future deployment to achieve universal service in Illinois.

Discussion on the context and assumptions influencing both the upper and lower bounds follows below.

1. **Goal to maximize fiber deployment.** Fiber deployment is a long-held priority of the State of Illinois and is required in the BEAD NOFO. We assume that a fiber provider will compete for all projects, and that Illinois will subsidize the costs to the level dictated by the competitive grant program. In the upper-bound scenario, we assume a 100% fiber build-out, and in the lower-bound scenario, we assume 95% fiber build-out and 5% FWA to locations with highest fiber cost.
2. **Goal to ensure robust participation from all provider types that can provide high-quality broadband services in the state.** This intent translates into using greenfield fiber-build, not brownfield fiber-build, costs to model the upper bound on costs.
3. Plan to award funds via a highly competitive process that incorporates the lessons of recent federal programs in IL, such as RDOF, as well as the Connect Illinois grant program. Results from Rounds 1 and 2 of Connect Illinois showed an average of one to two bids per project area and an average 54% match rate. An analysis comparing the Connect Illinois project areas and all unserved and underserved locations in Illinois shows that previous Connect Illinois applications were in areas where the business case was more attractive. Hence, an average 54% match rate is unlikely for all unserved and underserved locations. Based on a comparison of the relative attractiveness of remaining unserved and underserved locations—and with all other assumptions unchanged—we estimate a BEAD-recommended 25% match for the lower-bound scenario. For the upper-bound scenario, CostQuest’s business-case modeling estimates provider matches from 0% to 100%, with a weighted average of 6%. We further adjust the upper-bound match rate to incorporate the impact of state-wide low-cost plans.
4. **Plan to require service providers to offer a statewide low-cost plan.** Incorporation of a state-wide low-cost plan will impact the uptake rate, average revenue per user (ARPU), the margin

for ISPs, and, consequently, the subsidy required to make their business case positive. Four factors may be considered to determine the potential impact:

- a. **ISP type and footprint:** Relative proportion of large, statewide providers expected to participate in BEAD funding rounds, based on historical participation in RDOF and Connect Illinois R1 and R2. Many such providers may already offer a \$30-50 per month plan. In contrast, smaller, regional providers may not already offer a \$30-\$50 per month plan.
- b. **Impact of ACP (and no ACP) on adoption:** Overall adoption of the low-cost plan may be driven by households' leveraging the federal ACP subsidy. Higher ACP uptake may result in higher overall adoption of the low-cost plan, causing providers to require additional subsidy.
- c. **Impact of uncertainty about ACP duration:** Assuming that ACP funding runs out in 2024, and no state subsidy will be provided to replace the ACP, providers may seek larger subsidies.

5.7 Alignment

5.7.1 Alignment with the Digital Equity Plan

The IOB and state's vision for broadband deployment is rooted in equity. The comprehensive Connect Illinois vision of broadband ubiquity is one of broadband equity—targeting resources to close gaps and expand opportunity for unserved and underserved communities throughout Illinois.⁶⁸³ The visions, goals, and objectives for the state are rooted in equity and a plan to maintain focus on covered populations, digital literacy, and access, which are likewise the focus of the State Digital Equity Plan. Many of the IOB's current efforts are built upon the Illinois Office of Broadband's Broadband READY program with its focus on regional engagement and coordinated activity between higher-education institutions and local initiatives.⁶⁸⁴ The State

⁶⁸³ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

⁶⁸⁴ [Digital Inclusion Week: Highlights Across Illinois](#), Illinois Broadband Connections

Digital Equity Plan focuses on local coordination and capacity-building to empower local Illinois communities to expand access.

The IL BEAD Plan was written in parallel to the state’s State Digital Equity Plan to align vision, strategy, objectives, activities, and timeline. A priority for the IOB was to ensure that communities will not be burdened by duplicative efforts. A stakeholder engagement process was undertaken to align the IL BEAD Plan and the State Digital Equity Plan. Furthermore, the content in the Vision (2.1), Goals and Objectives (2.2), Existing Programs (3.1), Asset Inventory (3.3), Needs and Gaps Assessment (3.4), and the Stakeholder Engagement Process (5.1) sections of this document align with the Vision (2.1), Alignment with Existing Efforts to Improve Outcomes (1.2), Strategy and Objectives (2.2), Asset Inventory (3.1), Needs Assessment (3.2), and the Coordination and Outreach Strategy (4.1) sections of the State Digital Equity Plan.

The hope is that, by implementing the IL BEAD Plan, broadband infrastructure can be deployed throughout the State of Illinois to empower digital equity activities across the state. The state plans to continue its digital equity activities and programming through the Illinois Broadband Lab, which will engage with local communities and build capacity for digital equity efforts across the state.

5.7.2 Alignment with other state priorities

The work of the Illinois Office of Broadband and the Illinois Broadband Advisory Council is meant to achieve the following outcomes, which will support statewide efforts related to telehealth, education, and economic development:⁶⁸⁵

- Expand access to telehealth across the state of Illinois to provide additional healthcare options to communities in rural and urban Illinois alike. Telehealth services will range from primary care to expanded treatment opportunities in areas such as mental health and opioid addiction.

⁶⁸⁵ [Illinois Broadband Advisory Council Annual Legislative Report](#), January 2023

- Increase broadband access—both for in-classroom learning and remote learning at home—throughout Illinois to ensure that students have the tools they need to succeed.
- Expand economic development and opportunity in urban and rural communities throughout Illinois. This investment is intended to support the growth of Illinois’s agricultural economy and information technology sector, to help modernize transportation, and to support the development of entrepreneurs and small business owners.

In 2021, the Governor of Illinois signed a law to increase access to telehealth services across Illinois by requiring insurers to reimburse telehealth at the same rate as in-person care—permanently for mental health and substance use disorder services and through 2027 for all other telehealth services. This law expanded telehealth access throughout the state of Illinois.⁶⁸⁶ This law could directly support the efforts of the IL BEAD Plan as it addresses the insurance issue of payment parity in telehealth services, which can deter providers from offering virtual services.

During the creation of the IL BEAD Plan, the Office of Broadband reviewed the strategic plans of state agencies and identified state goals that rely on or anticipate widespread internet connectivity. Table 18 details other broadband-related, broadband-enabled, and digital equity goals of the state. While writing the IL BEAD Plan, these priorities were top-of-mind for the IOB. The IOB hopes that, by implementing the IL BEAD Plan, universal broadband access will be achieved in Illinois. This is the first step towards achieving the other goals of state agencies. The IOB plans to continue engaging with the Broadband Advisory Council and the newly formed State Government Broadband Working Group to partner in statewide and cross-agency broadband initiatives.

⁶⁸⁶ [Gov. Pritzker Signs Landmark Legislation Expanding Telehealth Access](#), July 2021

Table 18: Details of other state priorities related to broadband

Agency	Plan/report name	Broadband-related, Broadband-enabled, and Digital Equity priorities
Department of Commerce and Economic Opportunity	A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future (October 2019) ⁶⁸⁷	<p>Agribusiness and ag tech</p> <ul style="list-style-type: none"> Expand broadband to unserved and underserved rural areas of the state <p>Energy</p> <ul style="list-style-type: none"> Through investment in broadband, enable utility companies to efficiently distribute electricity and lay the foundation for the energy grid of tomorrow <p>Information technology</p> <ul style="list-style-type: none"> Provide broadband to people interested in creating and growing information technology companies in currently unserved areas <p>Life sciences and healthcare</p> <ul style="list-style-type: none"> Extend broadband to unserved and underserved areas, creating more opportunities to provide healthcare via telehealth technologies <p>Small businesses</p> <ul style="list-style-type: none"> Invest in broadband to expand internet access to entrepreneurs and small business owners across the state so they can expand their reach and customer base
DCEO	State’s WIOA Unified State Plan ⁶⁸⁸	<p>Foster a statewide workforce development system that supports the needs of individuals and businesses and builds a skilled workforce that allows Illinois to compete effectively in the global economy</p> <ul style="list-style-type: none"> <i>Unite workforce development partners around regional cluster strategies:</i> Regional cluster strategies focus resources on the industries with the highest potential to add jobs and increase prosperity in regions across Illinois. These strategies bring together the public and private sectors in each region to build on their unique strengths. <i>Prepare Illinois’s workers for a career, not just a job:</i> Regardless of background, life circumstances, or education level, Illinois workers can prepare for high-demand careers by developing core academic, technical, and essential employability skills throughout their lifetimes.

⁶⁸⁷ [A Plan to Revitalize the Illinois Economy and Build the Workforce of the Future](#), October 2019

⁶⁸⁸ [State of Illinois WIOA Unified State Plan, 2020 – 2024](#)

Agency	Plan/report name	Broadband-related, Broadband-enabled, and Digital Equity priorities
		<ul style="list-style-type: none"> • <i>Connect job-seekers with employers:</i> Assist Illinois businesses in finding the productive workers they need through more efficient training and better services for job-seekers and employers
Department of Aging	State Plan on Aging FY2022 – FY 2024 (July 2021) ⁶⁸⁹	<p>Promote healthy aging and social integration.</p> <ul style="list-style-type: none"> • Senior center and sites offering adult day services plan for and deliver remote and/or virtual activities and services, particularly for marginalized older adults returning to their communities from carceral settings. <p>Expand programming to reduce social isolation and loneliness.</p> <ul style="list-style-type: none"> • Investigate availability of funding from Illinois Broadband Council for internet, Wi-Fi, and other connectivity devices. <p>Expand caregiver and agency support programs that reduce stress and burnout and promote trauma-informed care.</p> <ul style="list-style-type: none"> • Expand the availability of and increase participation in the Savvy Caregiver program for family caregivers of individuals with Alzheimer’s disease who live at home. Consider offering the program virtually, based on guidance from “Savvy Caregiver Tips and Guidelines for Online Group Delivery.”
Illinois Board of Higher Education (IBHE)	A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth (June 2021) ⁶⁹⁰	<p>Support ongoing learning of students and systemic implementation of evidence-informed student support practices.</p> <ul style="list-style-type: none"> • Support meeting students’ basic needs, including housing, food security, mental health/wellness services, and childcare, among others. <p>Expand equitable access, support, and success in rigorous and strategic early college coursework.</p> <ul style="list-style-type: none"> • Build capacity to support Black, Latinx, and rural students’ access to early college through flexible, online, and other delivery options. <p>Expand higher education models of teaching and learning that provide opportunities for students to succeed in the work of the future.</p> <ul style="list-style-type: none"> • Use effective online, hybrid, adaptive, and self-paced learning models.

⁶⁸⁹ [State Plan on Aging FY 2022 – FY 2024](#)

⁶⁹⁰ [A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth](#), 2021

Agency	Plan/report name	Broadband-related, Broadband-enabled, and Digital Equity priorities
		<ul style="list-style-type: none"> • Provide high-quality, experiential, and work-based learning opportunities, internships, and apprenticeships across a variety of sectors. <p>Enhance access to educator preparation programs.</p> <ul style="list-style-type: none"> • Leverage technology tools that allow candidates to practice skills in a virtual, simulated environment before entering a classroom with students; expand fully online programs; and use virtual (remote) supervision.
Illinois State Board of Education (ISBE)	ISBE 2020 – 2023 Strategic Plan ⁶⁹¹	<p>Every child is expected to make significant academic gains each year, increasing their knowledge, skills, and opportunities so that they graduate equipped to pursue a successful future, with special attention paid to addressing historic inequities.</p> <ul style="list-style-type: none"> • Support best practices and continuous quality improvement, including an emphasis on equity and diversity, to support student learning while also addressing remote and blended learning. <ul style="list-style-type: none"> – By the end of the 2021-22 school year, 80% of school districts are expected to provide one device per student.
Department of Veterans’ Affairs (IDVA)	IDVA Strategic Plan 2023 – 2027 (February 2023) ⁶⁹²	<p>Veteran experience</p> <ul style="list-style-type: none"> • Establish digital access to all IDVA services. • Increase virtual access to Veteran Service Officers (VSOs) services.
Illinois Community College Board (ICCB)	Expanding Career Pathway Opportunities in Adult Education, Strategic Five-Year Plan, 2018 – 2023 ⁶⁹³	<p><i>Guiding principle:</i> Promote the use of digital literacy in Adult Education for better transitions to the labor market</p> <p><i>Goal:</i> Lifelong career pathways systems and integrated enabling technologies</p> <p>Adult learning and education, career and technical training, literacy, and digital literacy all represent significant components of the lifelong learning process. Digital literacy and a skilled workforce are key to the state’s sustainable economic development and stability. This strategic goal, in addition to recommending lifelong learning objectives, highlights the underlying need for the continued focus of Illinois Adult Education on digital literacy.</p>

⁶⁹¹ [Illinois State Board of Education 2020-2023 Strategic Plan](#)

⁶⁹² [Illinois Department of Veterans’ Affairs Strategic Plan 2023-2027](#)

⁶⁹³ [Expanding Career Pathway Opportunities in Adult Education, Strategic Five-Year Plan 2018 – 2023](#), January 2018

Agency	Plan/report name	Broadband-related, Broadband-enabled, and Digital Equity priorities
		<ul style="list-style-type: none"> • Use technology to create “just in time” learning opportunities that equip students with strategies to address lifelong learning needs and build workplace skills. • Develop a comprehensive technology framework for Adult Education program design and instruction that meets students’ needs with varied levels of digital literacy and foundational skills. This framework should address the use of technology in providing greater student access, instruction strategies and methods for using technology, and program design models that ensure the flexibility to accommodate the changing technological landscape of the workforce. • Integrate the Illinois Essential Employability Skills Framework, agile learning skills, and technology skills into all levels of instruction to help students become more adaptable to the labor market.
Illinois Department of Human Services (IDHS)	Illinois United for Youth, A Systems-of-Care Initiative Pathway: A Strategic Plan for Children's Mental Health ⁶⁹⁴	<p><i>Mission:</i> To develop a comprehensive strategic plan for integrating the system-of-care philosophy into Illinois's behavioral-health-service delivery model for youths with serious emotional disturbances.</p> <p>Pathway 5: Developing and implementing strategies directed at reducing racial, ethnic, and geographic disparities in service delivery across child-serving systems to support the expansion of the systems-of-care (SOC) approach, thereby improving the cultural and linguistic competence of services</p> <p>Pathway 9: Creating ongoing training and the capacity for technical assistance</p>
Governor’s Rural Affair Council (GRAC)	2022 Annual Report ⁶⁹⁵	<p>Executive mandate:</p> <ul style="list-style-type: none"> • Develop and implement strategies for improving the delivery of state services to rural Illinois • Expand opportunities and enhance the quality of life for rural residents <p>Economic Development and Infrastructure Working Group</p> <ul style="list-style-type: none"> • <i>Strategy:</i> Expand access to affordable broadband so rural residents can take advantage of telecommuting

⁶⁹⁴ [Illinois United for Youth, A Systems of Care Initiative Pathways: A Strategic Plan for Children's Mental Health](#), IDHS

⁶⁹⁵ [Governor’s Rural Affairs Council](#), 2022 Annual Report

Agency	Plan/report name	Broadband-related, Broadband-enabled, and Digital Equity priorities
		<p>opportunities, effectively market businesses, and gain access to healthcare</p> <p>Health and Healthcare Access Working Group</p> <ul style="list-style-type: none"> • Improve access to healthcare by supporting telemedicine and broadband expansion in rural communities through partnerships with local, state, and nongovernmental stakeholders

5.8 Technical Assistance

The State of Illinois plans to work closely with our federal partners throughout BEAD planning and implementation. Areas where supplemental technical assistance could be helpful include but are not limited to:

- **Datasets on infrastructure availability for Community Anchor Institutions:** The FCC National Broadband Maps do not contain service availability information for all CAIs. However, the model challenge process guidance requires states to determine addresses, GIS locations and service availability information to be submitted in the initial proposal. A process and central dataset for this information would enable all states to meet this requirement.
- **Details on terms and conditions for the approval of subgrantee waivers:** The BEAD NOFO lists several subgrantee requirements that may be waived, if NTIA approves. Technical support for subgrantees that includes the specific terms and conditions under which these waivers could be approved would help to reduce complexity in the work ahead for Illinois.



6 CONCLUSION

The Connect Illinois Five-Year Action Plan outlines Illinois’s priorities to increase broadband access for all Illinoisans through broadband deployment and digital equity efforts, so that every resident can actively participate in the growing digital economy. This plan has been informed by direct interaction with stakeholders throughout Illinois, including residents, community organizations, internet service providers, local governments, and state agency representatives. Findings from stakeholder engagement and statewide research have made evident that a digital divide exists in the state of Illinois, and that it disproportionately affects residents who belong to covered populations, including rural communities, low-income households, and racial minorities. The primary goal of this plan is to establish measures that provide unserved and underserved populations with reliable, high-speed broadband access, along with the education and tools necessary to fully leverage digital assets. The state plans to leverage the assets identified and needs assessment conducted for the completion of the IL BEAD Plan in the Initial and Final Proposal for Illinois. In doing so, we hope to ensure that the state can deploy infrastructure to all unserved and underserved locations in Illinois and to the community anchor institutions that many covered populations rely on.

This plan also serves as an execution roadmap for the State of Illinois’s ambitious digital equity goals and plans, which will be enhanced by ongoing collaboration among residents, organizations, agencies, and institutions throughout the state. These ongoing outreach efforts are expected to inform the IL State Digital Equity Plan, which will likely be submitted to the NTIA by December 2023. The world is becoming increasingly digital, and this plan lays the foundation for better outcomes for all Illinoisans in agriculture, education, economic development, telehealth, and other associated industries. The state of Illinois plans to continue to take measures that improve the lives of all Illinoisans, and the IL BEAD Plan is a major step towards accomplishing that goal.

7 APPENDICES

7.1 Breakdown of unserved, underserved, and served BSLs by county in Illinois

7.1.1.1 Northeast Illinois

Northeast Illinois has a total of 2,162,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Cook	1,145	0%	2,226	0%	1,247,049	100%
DeKalb	2,042	26%	612	8%	5,328	67%
DuPage	434	0%	645	0%	257,830	100%
Grund	621	3%	3,061	15%	16,813	82%
Kane	1,617	1%	2,602	2%	150,114	97%
Kankakee	3,015	7%	4,037	9%	35,768	84%
Kendall	985	2%	1,842	4%	38,950	93%
Lake	4,700	9%	2,818	5%	44,612	86%
McHenry	2,687	2%	3,828	3%	103,154	94%
Will	2,157	1%	3,772	2%	218,273	97%
Total	19,403	1%	25,443	1%	2,117,891	98%

Figure 1. Breakdown of the unserved, underserved, and served BSLs by county in Northeast Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.2 Northern Stateline Illinois

Northern Stateline Illinois has a total of ~170,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Boone	974	5%	1,014	5%	17,456	90%
Ogle	4,623	20%	1,586	7%	16,962	73%
Stephenson	3,293	16%	1,617	8%	15,963	75%
Winnebago	2,509	2%	1,838	2%	102,021	96%
Total	11,399	17%	6,055	4%	152,402	90%

Figure 2. Breakdown of the unserved, underserved, and served BSLs by county in Northern Stateline Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.3 Northwest Illinois

Northwest Illinois has a total of ~402,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Bureau	4,245	20%	1,653	14%	11,771	66%
Carroll	2,744	4%	500	30%	6,855	66%
Henry	2,884	5%	1,157	13%	20,078	82%
Jo Daviess	6,022	5%	1,184	35%	11,401	60%
LaSalle	1,166	7%	2,660	11%	212,242	83%
Lee	5,102	5%	3,495	42%	10,541	53%
Mercer	2,969	9%	324	30%	5,719	61%
Putnam	1,404	35%	755	21%	1,630	43%
Rock Island	1,620	2%	591	4%	54,699	94%
Whiteside	3,695	1%	861	18%	21,888	81%
Total	31,851	8%	13,180	3%	356,824	89%

Figure 3. Breakdown of the unserved, underserved, and served BSLs by county in Northwest Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.4 North Central Illinois

North Central Illinois has a total of ~296,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
De Witt	3,262	10%	1,100	3%	27,764	86%
Fulton	2,390	13%	487	3%	15,855	85%
Livingston	1,753	10%	3,978	23%	11,892	67%
Marshall	1,651	23%	897	13%	4,532	64%
Mason	1,195	14%	1,341	16%	5,931	70%
McLean	2,676	4%	3,853	6%	53,582	89%
Peoria	2,428	3%	337	0%	70,997	96%
Stark	1,206	35%	17	0%	2,202	64%
Tazewell	3,131	5%	1,872	3%	52,141	91%
Woodford	1,752	10%	1,723	10%	13,779	80%
Total	21,444	7%	15,605	5%	258,675	87%

Source: FCC Data Map June 2023

Figure 4. Breakdown of the unserved, underserved, and served BSLs by county in North Central Illinois

7.1.1.5 East Central Illinois

East Central Illinois has a total of ~145,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
De Witt	3,262	10%	1,100	3%	27,764	86%
Fulton	2,390	13%	487	3%	15,855	85%
Livingston	1,753	10%	3,978	23%	11,892	67%
Marshall	1,651	23%	897	13%	4,532	64%
Mason	1,195	14%	1,341	16%	5,931	70%
McLean	2,676	4%	3,853	6%	53,582	89%
Peoria	2,428	3%	337	0%	70,997	96%
Stark	1,206	35%	17	0%	2,202	64%
Tazewell	3,131	5%	1,872	3%	52,141	91%
Woodford	1,752	10%	1,723	10%	13,779	80%
Total	21,444	7%	15,605	5%	258,675	87%

Figure 5. Breakdown of the unserved, underserved, and served BSLs by county in East Central Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.6 Central Illinois

Central Illinois has a total of ~251,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Cass	311	5%	922	14%	5,469	82%
Christian	2,468	15%	791	5%	13,084	80%
Greene	806	11%	191	3%	6,534	87%
Logan	585	5%	1,150	9%	11,134	87%
Macon	2,155	5%	1,909	4%	42,962	91%
Macoupin	3,080	13%	2,675	11%	18,166	76%
Menard	1,071	16%	1,437	21%	4,258	63%
Montgomery	1,459	10%	3,392	23%	10,033	67%
Morgan	1,450	9%	1,535	10%	12,792	81%
Sangamon	2,862	3%	2,913	3%	77,863	93%
Scott	438	14%	24	1%	2,602	85%
Shelby	2,986	24%	3,907	31%	5,733	45%
Total	19,671	8%	20,846	8%	210,630	84%

Figure 6. Breakdown of the unserved, underserved, and served BSLs by county in Central Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.7 West Central Illinois

West Central Illinois has a total of ~112,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Adams	2,946	10%	373	1%	26,954	89%
Brown	721	23%	343	11%	2,030	66%
Hancock	1,213	10%	2,168	18%	8,419	71%
Henderson	1,789	36%	227	5%	2,897	59%
Knox	2,098	9%	505	2%	22,021	89%
McDonough	749	6%	206	2%	12,522	93%
Pike	3,765	38%	1,000	10%	5,257	52%
Schuyler	1,642	34%	486	10%	2,636	55%
Warren	2,152	24%	134	1%	6,775	75%
Total	17,075	15%	5,442	5%	89,511	80%

Figure 7. Breakdown of the unserved, underserved, and served BSLs by county in West Central Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.8 Southeast Illinois

Southeast Illinois has a total of ~141,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Clark	4,732	36%	1,156	12%	3,375	51%
Clay	8,123	11%	47	1%	980	89%
Coles	15,691	11%	2,814	14%	2,317	75%
Crawford	6,920	28%	400	4%	2,810	68%
Cumberland	2,760	44%	518	9%	2,626	47%
Edgar	5,514	4%	4,032	41%	373	56%
Effingham	14,667	5%	749	5%	803	90%
Fayette	6,681	30%	958	9%	3,275	61%
Jasper	2,786	45%	391	7%	2,572	48%
Lawrence	5,103	35%	90	1%	2,814	64%
Marion	14,589	23%	465	2%	4,518	75%
Moultrie	4,564	28%	443	6%	1,973	65%
Richland	5,912	30%	67	1%	2,557	69%
Total	98,042	22%	12,130	9%	30,993	69%

Figure 8. Breakdown of the unserved, underserved, and served BSLs by county in Southeast Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.9 Southern Illinois

Southern Illinois has a total of ~193,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Alexander	1,657	44%	365	10%	1,758	44%
Edwards	536	14%	33	1%	3,349	85%
Franklin	3,490	17%	187	1%	16,886	82%
Gallatin	947	27%	160	5%	2,343	68%
Hamilton	1,938	39%	52	1%	3,000	60%
Hardin	991	34%	0	0%	1,905	66%
Jackson	3,079	13%	367	2%	20,053	85%
Jefferson	3,251	18%	279	2%	14,464	80%
Johnson	2,936	43%	258	4%	3,695	54%
Massac	2,913	38%	408	5%	4,258	56%
Perry	2,722	27%	544	5%	6,961	68%
Pope	1,704	53%	84	3%	1,455	45%
Pulaski	735	22%	510	16%	2,030	62%
Saline	2,527	19%	218	2%	10,590	79%
Union	2,423	29%	618	7%	5,358	64%
Wabash	1,769	29%	383	6%	3,857	64%
Wayne	1,740	18%	94	1%	7,939	81%
White	1,185	13%	357	4%	7,374	83%
Williamson	5,440	16%	259	1%	28,135	83%
Total	41,983	22%	5,176	3%	145,410	76%

Figure 9. Breakdown of the unserved, underserved, and served BSLs by county in Southern Illinois (Source: FCC Broadband Maps accessed June 2023)

7.1.1.10 Southwest Illinois

Southwest Illinois has a total of ~297,000 BSLs.

County	Unserved		Underserved		Served	
	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %	BSLs, #	Share of total BSLs in region, %
Bond	3,699	43%	627	7%	4,278	50%
Calhoun	1,648	58%	111	4%	1,089	38%
Clinton	3,809	22%	1,930	11%	11,559	67%
Jersey	1,165	11%	508	5%	8,586	84%
Madison	2,463	2%	1,320	1%	107,586	97%
Monroe	2,277	15%	2,386	16%	10,352	69%
Randolph	4,421	29%	1,432	9%	9,352	62%
St. Clair	4,380	4%	2,774	3%	100,168	93%
Washington	3,557	41%	512	6%	4,661	53%
Total	27,419	9%	11,600	4%	257,631	87%

Figure 10. Breakdown of the unserved, underserved, and served BSLs by county in Southwest Illinois (Source: FCC Broadband Maps accessed June 2023)

7.2 10-Region Stakeholder Engagement Tour

Table 1: Overview of 10-Region Stakeholder Engagement Tour planning partners, events, and attendees by region as of June 2023

Region	Dates	Host sites	Numbers of attendees	Example CAIs and non-profits represented
Southern	3/1 – 3/2	Shawnee Community College; SIU Carbondale	90-100	Agriculture; Government representatives; Economic Development; Education non-profits
Southwest	3/15 – 3/16	SIU East St. Louis; Kaskaskia College	90-100	Agriculture; Government representatives; Local non-elected leaders; Education/schools/
Southeast	3/22	Effingham Extension Office	30-40	County Farm Bureaus (Richland, Effingham, Clay, and Jasper); Illinois Extension; County Boards (Effingham, Jasper, and Bond); City of Effingham

East Central	4/12 – 4/13	Champaign Farm Bureau; Danville Area Community College	90-100	Parkland College; Champaign County Board; High Speed for Edgar County; Urbana-Champaign Big Broadband; Danville Area Community College; High
Northeast – City of Chicago	4/19; 5/3; 5/10	City of Chicago – City Hall; Malcolm X College; Steinmetz College Prep High School, Urban League Chicago	170-180	UChicago Internet Equity Initiative; scaleLIT; YMCA of Metro Chicago; Chicago Urban League; Women Employed; The Northwest Center; Teamwork Englewood; Latinos Progresando; Puerto Rican Cultural Center; Southwest Organizing Project; Project Exploration; Literacy Works; ChiCommons LWCA; Black Star Project
Northeast – Aurora, Libertyville, Kankakee, Joliet, Sugar Grove	5/18, 5/24, 5/25, 5/31,	Waubonsee Community College, Lake County Health Department, Kankakee Public Library, Joliet City Council	180-190	City of Aurora IT Department, Waubonsee Community College Faculty, Local government representatives, U.S. Department of Commerce employee, NTI Network Technologies
Central – Springfield, Decatur	4/25 – 4/26	Macon County Extension Office; Lincoln Library; Innovate Springfield	110-120	IL Heartland Library System, Heritage Behavioral Health Center, Faith Coalition for Common Good, IMC Illinois Migrant Council, Government Representatives
West Central - Macomb	5/3	Macomb City Hall	80-90	Rushville Public Library, Western Illinois University, Memorial Hospital, University of Illinois Extension, Catch A Star Learning Center, Government Representatives
Northern Stateline	05/23	Rockford Public Library, Region 1 Planning Council	10-20	Local Government Representatives, University of

				Illinois Extension, UD Department of Commerce
Northwest – Moline, Morrison	5/9 – 5/10	Rock Island Casino; WIU Quad Cities; Morrison Institute of Technology	50-60	Western Illinois University, Henry County Farm Bureau, Highland Community College, Government Representatives
North Central	5/16 – 5/17	Milner Library, Manual high School, Glen Okay Community Learning Center	110-120	Government Representatives, Normal Public Library, Illinois State University, Farm Bureaus (McLean County, Peoria County), Peoria Public School, Manual High School
Statewide	3/14, 4/21,4/28,5/4,5 /9, 5/23	Virtual	170	Illinois Farm Bureau, Illinois Capital Development Board, Illinois State University, North Park University Library

This table includes listening sessions that took place from March to May 2023, the period in which the IL BEAD Plan was drafted. The Initial Proposal plans to provide a view of the stakeholder engagement events starting in June 2023. The IL SDEP is expected to include an extended view of the stakeholder engagement across the state, including survey results.

7.3 Details on current federally funded infrastructure projects

Table 1: Breakdown of ReConnect Program awardees in Illinois⁶⁹⁶

Round	Applicant (network type)	Total square miles	Funded service area households	Funded service area CAIs	Award amount	Funding category
FY19	Hamilton County Telephone Cooperative Corporation Inc. [Fiber-to-the- Premise (FTTP)]	49.45	603		\$3,431,236	100% Grant

⁶⁹⁶ [ReConnect Program FY 2019 Funding Opportunity Announcement Awardee](#); [ReConnect Program FY 2020 Funding Opportunity Announcement Awardees](#); [ReConnect Program FY 2022 Funding Opportunity Announcement Awardees](#)

Round	Applicant (network type)	Total square miles	Funded service area households	Funded service area CAIs	Award amount	Funding category
FY19	Wabash Telephone Cooperative, Inc. [Fiber-to-the-Home (FTTH)]	102.62	1,684	1 health care facility, 9 educational facilities, and 2 critical community facilities	\$12,780,484	50/50 Loan/Grant Combo
FY20	Jo-Carroll Energy, Inc. (FTTP)	250.96	3,076	1 healthcare facility, 6 essential community facilities, and 10 educational facilities	\$14,046,745	100% Grant
FY20	West Kentucky Rural Telephone Cooperative Corporation, Inc. (FTTP)	167.96 ⁶⁹⁷	3,125	2 educational facilities, 9 essential community facilities, and 2 healthcare facilities	\$11,797,050	100% Grant
FY20	Adams TelSystems, Inc. (FTTP)	22.18	164		\$1,601,730	100% Grant
FY20	Hamilton County Telephone Co-op (FTTP)	272.96	7,942	16 educational facilities, and 12 essential community facilities	\$40,352,682	50/50 Loan/Grant Combo
FY20	Flat Rock Telephone Co-op, Incorporated (non-specified)	38.22	567	1 essential community facility	\$6,544,394	50/50 Loan/Grant Combo
FY22	Shelby Electric Cooperative Inc. (FTTP)	341.5	1,666	511 farms, 61 businesses and 2 educational facilities	\$23,690,245	100% Grant

⁶⁹⁷ Deploying FTTP in rural Kentucky and Illinois

Round	Applicant (network type)	Total square miles	Funded service area households	Funded service area CAIs	Award amount	Funding category
FY22	McDonough Telephone Cooperative (FTTP)	204	669	274 farms and 41 businesses	\$18,066,450	100% Grant
FY22	Hamilton County Telephone Co-Op (FTTP)	182.4	1,260	248 farms and 52 business	\$24,826,724	50/50 Loan/Grant Combo
FY22	Egyptian Telephone Cooperative Association (FTTP)	60.3	458	22 businesses, and 84 farms	\$25,282,255	100% Loan

Table 2: Breakdown of Connect America Fund Phase II Auction (Auction 903) Winning Bidders in Illinois⁶⁹⁸

Applicant company	Total number of census blocks	Total number of locations	Total winning bid amount (over 10 years)	Performance tier
AMG Technology Investment Group LLC	15,022	\$35,329,965.90	\$35,329,965.90	Above Baseline (10,226 locations); Baseline (4,796 locations)
Aristotle Unified Communications	72	\$147,196.40	\$147,196.40	72
Illinois Electric Cooperative	804	\$2,276,419.20	\$2,276,419.20	804
Illinois Fiber Connect, LLC	98	\$310,031.40	\$310,031.40	98
LTD Broadband LLC	145	\$19,462.20	\$19,462.20	145
ShawneeLEC, Inc.	567	\$1,714,708.00	\$1,714,708.00	Gigabit (73 locations); Above Baseline (494 locations)
W.A.T.C.H. TV Company	6,041	\$24,366,144.10	\$24,366,144.10	Above Baseline (3,362 locations); Baseline (2,679 locations)

⁶⁹⁸ [Authorized Auction 903 Long-Form Applicants \(updated 11/17/2022\)](#), Connect America Fund Phase II Auction (Auction 903)

Applicant company	Total number of census blocks	Total number of locations	Total winning bid amount (over 10 years)	Performance tier
Wabash Independent Networks, Inc.	261	\$359,430.20	\$359,430.20	Gigabit
Wisper ISP, Inc	8,907	\$35,079,137.70	\$35,079,137.70	Above Baseline

Table 3: Breakdown of Auction 904: Rural Digital Opportunity Fund Winning Bidders in Illinois⁶⁹⁹

Applicant name	Total number of locations post-default	Total winning bid amount prior to default (over 10 years)	Total winning bid amount post-default (over 10 years)	Performance tier ⁷⁰⁰
AMG Technology Investment Group LLC	68,882	\$193,098,839.90	\$193,002,274.80	Gigabit
CCO Holdings, LLC	501	\$1,029,666.00	\$1,029,666.00	Gigabit
Computer Techniques, Inc. dba CTI Fiber	--	\$8,509.00	--	--
Connect Everyone LLC	--	\$19,233,356.00	--	--
Connecting Rural America	708	\$2,040,864.80	\$2,040,864.80	Gigabit
Consolidated Communications, Inc.	303	\$424,956.00	\$424,956.00	Gigabit
Co-op Connections Consortium	507	\$1,120,026.00	\$1,120,026.00	Gigabit
Frontier Communications Corporation, DIP	3,315	\$10,139,606.70	\$10,139,606.70	Gigabit
Hamilton County Telephone Co-op	2,351	\$7,796,825.30	\$7,796,825.30	Gigabit
Hawaii Dialogix Telecom LLC	--	\$5,687,249.00	--	--
LTD Broadband LLC	--	\$103,247,994.10	--	--
MCC Network Services, LLC	--	\$36,204.00	--	--

⁶⁹⁹ Auction 904: Authorized PN - Performance Tier and Latency Level Summary as of January 13, 2023, FCC; Auction 904: Authorized PN - Applicant-State level Summary as of January 13, 2023, FCC; Rural Digital Opportunity Fund Phase I Auction Results by State/Territory and County, FCC ([Auction 904: Rural Digital Opportunity Fund Results](#), FCC)

⁷⁰⁰ Only listed for providers who've not defaulted

Applicant name	Total number of locations post-default	Total winning bid amount prior to default (over 10 years)	Total winning bid amount post-default (over 10 years)	Performance tier ⁷⁰⁰
Mercury Wireless, Inc.	8,398	\$5,109,552.80	\$4,849,688.20	Gigabit (2,787 locations); Above Baseline (5,611 locations)
NexTier Consortium	815	\$2,646,496.40	\$2,646,496.40	Gigabit
Nova Cablevision, Inc	155	\$785,400.00	\$785,400.00	Gigabit
Rural Electric Cooperative Consortium	6,464	\$16,621,874.50	\$16,600,842.80	Gigabit
Space Exploration Technologies Corp.	--	\$8,325,104.00	--	--
Tennessee Cooperative Group Consortium	268	\$860,082.00	\$860,082.00	Gigabit
Wisper-CABO 904 Consortium	23	\$97,504.20	\$81,815.00	Gigabit

7.4 Details on current broadband-related workforce development programs

Table 1: U.S. Department of Labor Registered Broadband Technician Apprenticeships

Program name	Organization	Training programs offered
Bloomington-Normal Electrical Joint Apprenticeship and Training Committee (JATC)	International Brotherhood of Electrical Workers (IBEW) Local 197	Inside Wireman, Installer Technician
Champaign-Urbana JATC	IBEW Local 601	Industrial, Commercial, Residential and Teledata Electricians
Chicago Electrical Joint Apprenticeship and Training Trust (EJATT)	IBEW 134 + National Electrical Contractors Association (NECA) Chicago	Electrical Construction or Communications
DuPage County Elec. JATC	Joint Apprenticeship Training Committee of DuPage County	Commercial Electrician, Data Technician
IBEW JATC Local 176	NECA-IBEW Local 176 Joint Electrical Apprenticeship and Training Center	Electrical (Inside Wireman) and Video, Data & Voice (Installer-Technician)

Program name	Organization	Training programs offered
IBEW LU117 NECA JATC McHenry & N. Kane Counties	IBEW Local Union 117	Inside Wireman (Electrician), Installer Technician for Telecommunications
Lake County JATC	Lake County JATC	Inside Wireman, Journeyman Continuing Education
Midstate Electrical Training Center	IBEW Local 146	Inside Wireman, Residential Wireman, Voice/Data/Video Installer Technician
NECA/IBEW Local 193 JATC	IBEW 193	Inside Wireman, Residential Wireman, Outside Lineman, Electronic System Technicians
NECA-IBEW Local Union 461 JATC	IBEW Local 461	Inside Wireman, Residential Wireman, Voice/Data/Video Installer Technician
Northern Illinois Electrical Apprenticeship	IBEW Local 364	Construction Electrician, Telecommunication
Peoria Elec. JATC	IBEW 34	Inside Wireman, Residential Wireman, Telecommunications Installer- Technician
Quad City Electrical JATC	Quad City Electric Training Center	Telecommunications
Southwestern Illinois JATC	Southwestern Illinois JATC	Inside Wireman, Telecommunications

Table 2: Select list of Illinois-based post-secondary broadband related certificates programs that issue certificates for high-demand roles

University	Program name	Description
College of Lake County, Lake County	Fiber Optics Technician	This certificate program is designed to provide students the hands-on experience and knowledge needed to prepare for industry certification in fiber optics technology and to find entry level employment in network technology and telecommunications. Additionally, this certificate may be used to broaden the experiences of skilled network and systems administrators to include fiber optic analysis, installation, and testing.
Lincoln Trail College, Crawford County	Broadband Technician	The Broadband Technician certificate prepares students for entry-level positions in the broadband telecommunications industry. Students receive an introduction to telecom basics, telecom electronics, cable splicing, station installation, structured cabling systems, networking fundamentals, and fiber optics. This program consists of three stackable micro-certificates.

University	Program name	Description
Lincoln Trail College, Crawford County	Combination Technician	The Combination Technician micro-certificate is designed to help students gain experience as broadband combination technicians. Students learn to install copper and fiber optic services to businesses and homes. This includes experience installing and configuring network interface devices (NID), optical network terminals (ONT), and maintaining a service vehicle. Troubleshooting and diagnosing various problems experienced by combination technicians is also covered.
Lincoln Trail College, Crawford County	Networking	This micro-certificate is designed to help students gain experience in basic computer hardware, software, and networking as it relates to broadband technology. Students learn to work with various types of computers, cabling, and networking equipment including installation, troubleshooting, and maintenance. Students also have the opportunity to take the industry recognized CompTIA IT Fundamentals certification test as part of this micro-certificate.
Lincoln Trail College, Crawford County	Outside Plant Technician	The Outside Plant Technician micro-certificate is designed to help students gain experience as broadband outside plant technicians. Students learn to install and splice copper and fiber optic cabling. Students also have the opportunity to obtain the nationally recognized Certified Fiber Optic Technician (CFOT) certificate, through the Fiber Optic Association, as part of the coursework. Students are trained on heavy equipment, which includes, bucket truck, derrick digger, and plow operation and maintenance.
Triton College, Cook County	Mobile Maintenance Certificate	The Mobile Maintenance Certificate provides both lecture and hands-on training for facility engineers conducting mobile maintenance at satellite locations in open-air environments. Graduates of the program may seek employment as a facilities engineer, operating engineer, chief engineer, maintenance foreman, or as a building maintenance supervisor working in settings involving complex systems.