



LAKE COUNTY

BROADBAND & DIGITAL EQUITY ACTION PLAN

2023

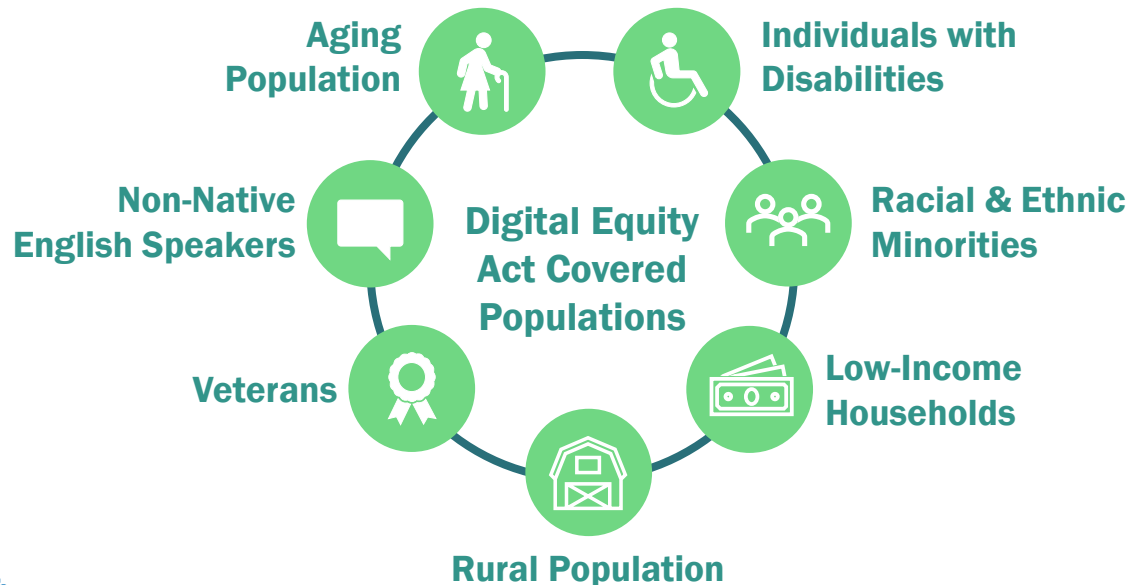
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Executive Summary

The internet has become an integral part of our everyday lives – providing crucial opportunities for education, healthcare, work, business growth, access to social services, entertainment, civic engagement and more. As more of our essential services move online, the COVID-19 pandemic further highlighted the gap between those with high-speed internet – and those without an internet connection, the means to access one, or the skills to participate in our increasingly digital society.

This digital divide perpetuates inequities, with the most disadvantaged communities typically seeing the lowest rates of internet access and adoption. In Lake County, there is a significant correlation between broadband adoption, race, and income.



These challenges impact many county households, especially across our rural and low-income communities. Some residents have limited access to the internet or no access at all, some lack computers or devices needed to get online, and others have called for support in learning how to securely navigate digital devices or access online services.

Quick facts:

8%

County households without a broadband subscription of any kind¹

14%

County households without a desktop or laptop computer

Lake County is committed to closing the digital divide through actionable strategies and projects to increase local coordination, expand high-speed infrastructure, remove barriers to internet access, improve device and subscription affordability, promote digital literacy and realize the County's vision for digital equity and inclusion. **The Lake County Broadband and Digital Equity Action Plan provides a roadmap for achieving this vision.**

Our Vision: A connected, thriving, and inclusive Lake County where the internet is accessible and affordable and where all residents are equipped with the resources needed to participate in an increasingly digital society.

Executive Summary



As part of Lake County’s new Digital Growth Initiative, we are pleased to share the Lake County Broadband and Digital Equity Action Plan. The Plan

was developed over several phases that involved stakeholder and community engagement, research and data analysis to develop a current state assessment of broadband and digital equity, and the creation of a strategic framework development to guide the County’s solutions. The Plan identifies current internet availability, affordability, and digital inclusion gaps – and provides strategic recommendations for addressing these gaps across the core goals **Availability & Access, Affordability & Adoption, and Governance & Sustainability.**

This is an important point in time for Lake County to plan for broadband and digital equity improvements. The federal government has dedicated billions of dollars of funding through the Broadband, Equity Access, and the Deployment Grant Program (BEAD) and the Digital Equity Act (DEA). These federal and state programs seek to improve broadband access, fiber availability, and digital equity programming. The State of Illinois is currently in the process of planning for the disbursement of its BEAD funding – and will prioritize the deployment of broadband to large swaths of the state that lack any existing infrastructure. Only locations categorized as unserved or underserved by the FCC and state are eligible for BEAD funding. Currently, **98%** of county locations are considered “served” by high-speed broadband. We do not anticipate that substantial BEAD funding will be available to Lake County.

To effectively execute the recommendations in this plan, the County is committed to actively collaborating with its network of partners and stakeholders. Coordination with agencies and organizations across the county will be essential to support the sustainability of broadband and digital equity initiatives beyond the current federal stimulus period.

While implementing the Broadband and Digital Equity Action Plan will require resources and collaboration, increasing broadband access, adoption, and digital equity opportunities will not only benefit unserved and marginalized communities but will also support the County’s strategic goals across economic development, public health, education, infrastructure, and more – **forwarding our mission of providing exceptional services and support for Lake County’s people, communities, and environments.**



Lake County offices in Libertyville, Illinois.

The Lake County Broadband and Digital Equity Action Plan aims to build on and strengthen existing County strategies and initiatives

Efforts to bridge the digital divide can help to drive County priorities across economic development, infrastructure, health, racial equity, and more

Why it Matters

Closing the digital divide generates wide-ranging impacts for Lake County residents, businesses, and communities:

- **Promotes economic prosperity.** Access to broadband enables access to jobs, promotes upward mobility, encourages business growth, and leads to a more resilient economy. Data shows that people who qualify for jobs that require even one digital skill can earn an average of 23% more.¹
- **Improves social, economic, and health outcomes for marginalized communities.** By democratizing access to education, social networks, public health, and government services, broadband and digital equity improve outcomes for traditionally marginalized communities – with research showing a significant positive correlation between broadband access, adoption, and improved health outcomes. Broadband is considered a core social determinant of health.²
- **Increase access and opportunity for disconnected households.** In an increasingly digital world, access to high-speed broadband (and the skills to effectively utilize it) often determine who has access to opportunities. In Illinois, 90% of all jobs reported require digital skills.³ Broadband can serve as an equalizer – without access, existing inequalities may be further exacerbated.

The Broadband & Digital Equity Action Plan aligns with strategic County goals and local planning efforts



Broadband refers to “high-speed internet access that is always on and faster than dial-up.”⁴ Served locations are those with access to 100/20 Mbps speeds or higher.⁵

Digital Equity is where “all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy.”⁶

Three key inputs informed the development of the final Lake County Broadband and Digital Equity Action Plan



Internal and external **stakeholder interviews**, a dedicated focus group meeting, stakeholder questionnaires, and a public community meeting were conducted to gather insight on the county's current broadband and digital equity landscape, **understand on-the-ground challenges**, and identify county priorities. This included gathering key feedback from the County's **Special Committee on Broadband**.

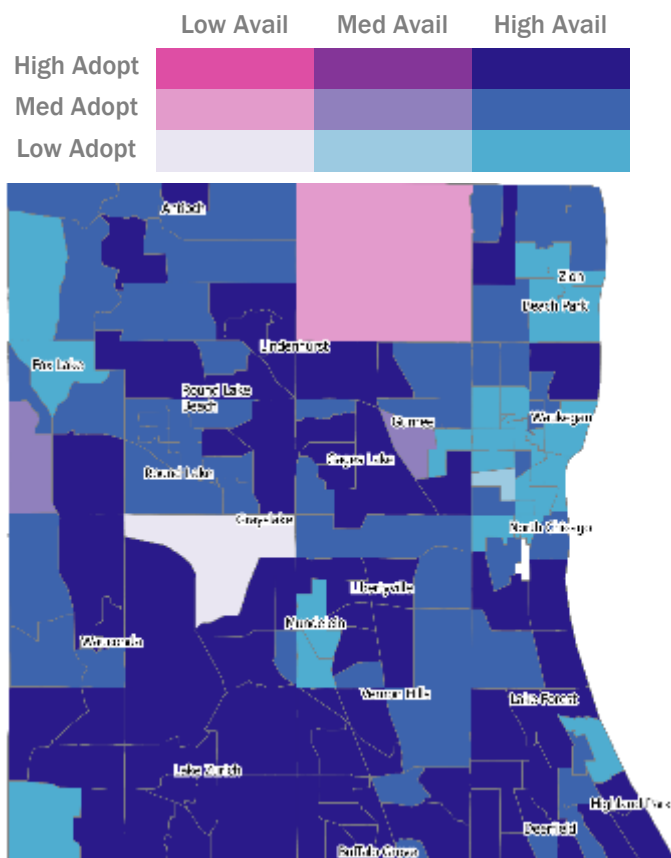
Research, mapping, data analysis, peer benchmarking, and stakeholder insights informed the current state assessment report. This report identifies **needs and gaps related to broadband adoption, affordability and access** as well as key opportunities for improvement. The report can serve as an internal resource for tracking progress on the County's digital equity goals.

Visioning and goal setting discussions, review of existing strategic County priorities, and **leading practices research** led to the development of a strategic framework that serves as the foundation for the Broadband and Digital Equity Action Plan. This framework guided the development of **targeted and actionable strategies** to address gaps, guide resource allocation, and inform decision-making.

Guided by insights from stakeholder and community engagement, the current state assessment, and the strategic plan framework, the final **Broadband and Digital Equity Action Plan** outlines the County's path to providing high-speed, reliable and affordable internet to all Lake County residents.

Disconnected pockets of low broadband availability and socioeconomic gaps in broadband adoption perpetuate the Lake County digital divide

Bivariate Map of Broadband Infrastructure Availability and Adoption by Census Tract¹



The lowest rates of broadband adoption are concentrated in communities that face compounding socioeconomic challenges, further widening inequities.

Areas of low broadband adoption present the largest digital equity challenge for Lake County. While areas near Waukegan, North Chicago, Zion and Beach Park have high levels of broadband availability, they face barriers to broadband adoption. Close to **34,000 Lake County residents reside in “high vulnerability” census tracts**, defined as areas where more than 30% of households are without a wireline subscription, do not own a desktop or laptop, live below the poverty level, and belong to a racial or ethnic minority.²



Broadband infrastructure is available across much of the county, but gaps in access to high-speed service still exist for many residents.

3,870 Lake County locations are considered “unserved” or “underserved” by high-speed broadband infrastructure.⁴ According to the Federal Communications Commission (FCC), a broadband serviceable location (BSL) is “a business or residential location at which broadband internet access service is, or can be, installed.”⁵ Clusters of unserved and underserved locations can be seen across Lake County – with the greatest availability gaps observed in the Village of Grayslake, Newport Township, and Old Mill Creek. Residents in these areas generally have fewer options for ISPs (one or no providers), limited access to high-speed technologies (no access to fiber or cable), and experience slower speeds (less than 100 Mbps download and 20 Mbps upload).



Future-proof fiber infrastructure that can support the demands of a growing digital world remains limited in Lake County.

Access to fiber is limited in Lake County; an estimated **93% of all locations lack a fiber connection**.⁶ Fiber is considered a future-proof technology because of its ability to be scaled up to meet higher connectivity demands. Additionally, fiber is the fastest internet technology in the market and is the only technology that can deliver service at symmetrical speeds.

Source: [1] The bivariate map was constructed using household broadband subscription rates from the 2021 ACS 5-year Summary Estimates and percent of BSLs served by 100/20 Mbps internet at the census tract level from the FCC BDC data. A natural breaks method was used to account for the distribution of data. [2] US Census ACS 2017-2021. We have defined “high vulnerability census tracts” as those where more than 30% of the tract population does not have a wireline broadband subscription, more than 30% of tract families live below 150% of the federal poverty level, more than 25% of tract households do not own a laptop or desktop, and more than half of the tract population belongs to a racial or ethnic minority. [3] This includes 3,870 locations categorized as unserved or underserved according to the most recently available FCC fabric data. This number does not include the 371 locations served only by fixed-wireless internet. While these fixed-wireless-only locations are considered “served” for the purposes of BEAD funding allocations, Lake County considers these locations to be underserved, given the limitations of fixed wireless service in providing reliable network speeds. [4] FCC [5] FCC BDC data.

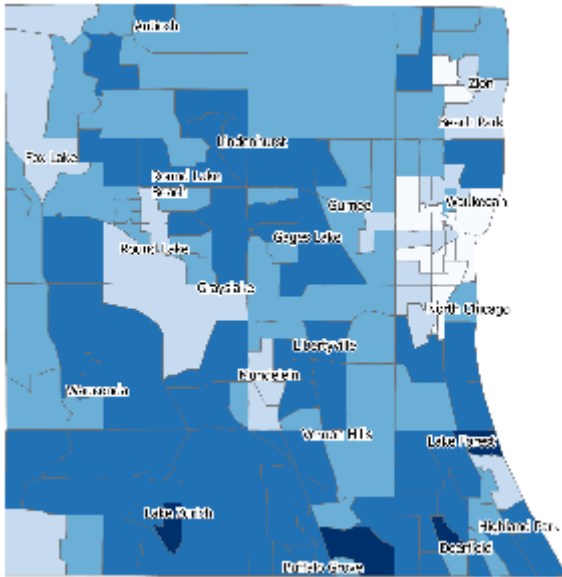
19,400 Lake County households lack a broadband subscription of any kind, while 36,000 households do not own a computer

Meaningful broadband adoption is “daily access to the internet 1) at speeds, quality and capacity required to accomplish common tasks, 2) with the digital skills necessary to participate online, and 3) on a personal device and secure, convenient network”¹

Key Takeaways

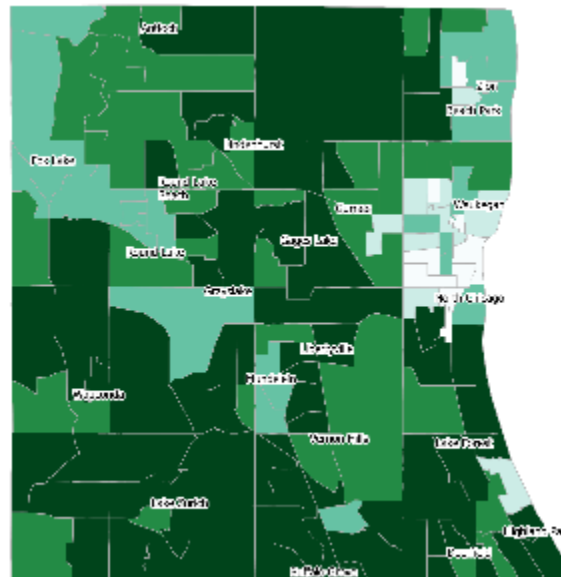
Broadband Subscription such as Fiber, Cable, or DSL by Census Tract

≤ 65%	65 - 75%	75- 85%	85- 90%	> 95%
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Desktop or Laptop Computer Ownership by Census Tract

≤ 60%	> 60% ≤ 70%	> 70% ≤ 80%	> 80% ≤ 90%	> 90%
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Sources: US Census ACS 2017-2021, The broadband subscription map does not include broadband subscriptions through cellular plans;
[1] NDIA

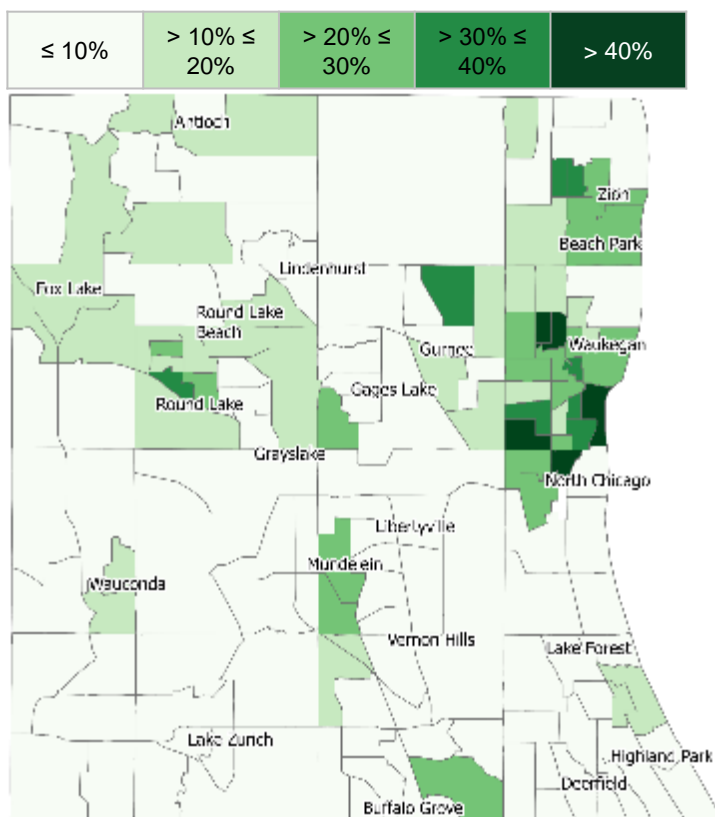
- **Approximately 19,400 (8%) households do not have a broadband subscription of any kind, including through a cell phone’s data plan. In addition, approximately 47,600 (19%) households do not have access to an at-home broadband subscription such as cable, fiber or DSL.** Without access to a high-speed (>100/20 Mbps) and reliable broadband connection, households may be unable to perform essential activities such as remote working, online learning, telehealth and accessing other key social services.
- **Broadband adoption is not uniform and pockets within the county – particularly near Waukegan, Zion, and North Chicago – exhibit rates lower than 75%.**
- **More than 35,800 (14%) households do not own a desktop or laptop.** Access to personal desktops or laptops enables numerous opportunities such as online education for students and expanded job prospects through remote working. Similar to device broadband subscriptions, the lowest rates of device ownership are concentrated in the Waukegan, North Chicago and Zion areas.
- Importantly, **more than 11,000 (4%) households in Lake County do not own a digital device of any kind** including a smartphone, desktop, laptop, tablet or any other computer and **more than 14,000 households (6%) rely on a smartphone as their only digital device.**

Affordability is a significant barrier to broadband adoption and device ownership, driving digital inequity among low-income families

In Lake County, 28% of households with annual incomes below \$20,000 did not have a broadband subscription, compared with just 3% of those with incomes greater than \$70,000 a year

Key Takeaways

Percent Low-Income Families by Census Tract



Source: US Census ACS 2017-2021; publicly-available ISP plan information [1] State of Illinois Initial Proposal Volume 2

- Research and stakeholder feedback confirm that affordability is a significant barrier to broadband adoption for low-income families in Lake County.** Analysis reveals a strong negative correlation between the percentage of low-income families and broadband subscription rates, meaning that census tracts with high percentages of low-income families correspond to census tracts with low broadband subscription rates. Approximately 18,600 (10%) families in Lake County have incomes that fall below 150% of the poverty threshold.
- Across the county, income varies by race and ethnicity, and geographic location – and compounding income disparities are concentrated in certain communities.** While the county’s overall median household income is \$97,127, White households see a median income of \$104,218, compared to a median of \$52,495 amongst African American households and \$67,619 for Hispanic or Latino households. The median household income in Waukegan, Zion and North Chicago is close to \$58,000.
- The typical monthly price for internet service above 100 Mbps download speeds ranges from \$50 to \$100 in Lake County, among major providers.** The State of Illinois considers the monthly price of \$100 for symmetrical 1Gbps service to be affordable for middle-class households. In their BEAD Initial Proposal, the State defines a middle-class income range as \$48,136 to \$144,410. ¹ In Lake County, more than one-quarter (26%) of households have a median income below \$50,000. For many low-income and cost-burdened households, the price of internet may be prohibitive to broadband adoption.
- Median monthly housing costs are higher in Lake County than State of Illinois averages.** Additionally, 46% (28,636) of county renter-occupied households, and 26% (32,790) of owner-occupied households, are considered cost-burdened, spending 30% or more of their income on housing.

46%

of renter households are considered cost-burdened

8.4%

of households are receiving SNAP benefits

10%

of families have incomes that fall below 150% of the federal poverty level

Stakeholder feedback emphasized the digital equity challenges faced by residents – while highlighting active organizations and existing assets



Stakeholder and Community Engagement

One-on-One Stakeholder Interviews

One-on-one interviews provided the opportunity for stakeholders from more than 20 entities to provide their insights on the current state of Lake County broadband and digital equity and the impact to their organization's operations. Stakeholders included County departments, elected officials, state and federal agencies, libraries, educational institutions, public housing agencies, non-profit organizations, and internet service providers (ISPs), among others.

Questionnaire

A questionnaire for government agencies, ISPs, elected officials, and other stakeholder groups garnered feedback from across the county. Questionnaire responses identified existing digital inclusion activities throughout the county and highlighted communities currently facing digital equity challenges.

Focus Group Meeting

A Focus Group meeting of key stakeholders was convened to help identify potential strategy areas and collaboration opportunities for Lake County and partner organizations, providing direction for final plan recommendations.

Community Meeting

Community members from across the county came together at a public meeting to discuss their lived experiences and what role Lake County should take in addressing the digital divide.



Lake County Voices



"In many areas, the issue is about adoption and affordability"

"People without digital skills lose out...[we] need to be more conscious of local people who aren't digitally educated"

"Digital literacy efforts targeting seniors and the Spanish-speaking community would make my life easier"

"It's a lot of buffering and dropped signal...it is not just bad... it is all the time...[we] feel cut off from things"

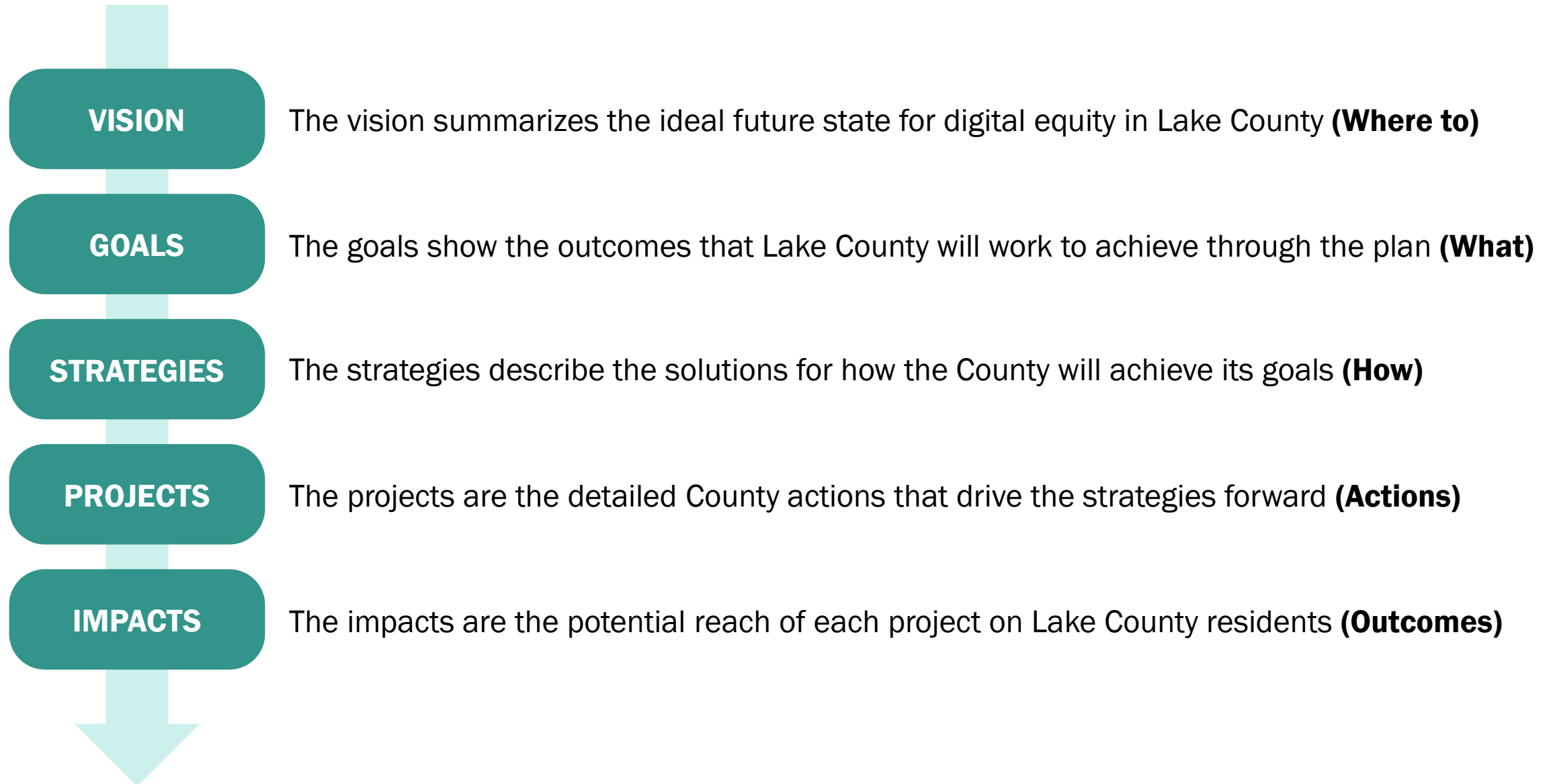
"[We] need to convene organizations to ensure [we] are addressing actual needs"



Strong Partnership Potential

The Lake County Broadband and Digital Equity Action Plan is designed to facilitate coordination between existing organizations that are already active in the digital inclusion space, such as Connect Lake County, United Way of Lake County, the Regional Office of Education, RAILS, Mano a Mano, College of Lake County, Lake County Housing Authority, the Job Center of Lake County, and more. **These organizations (and others) represent important possible partners for plan projects.**

How to read the Broadband and Digital Equity Action Plan



To close the digital divide in Lake County, the Broadband and Digital Equity Action Plan includes three core goals and seven actionable strategies

VISION

A connected, thriving, and inclusive Lake County where the internet is accessible and affordable and where all residents are equipped with the resources needed to participate in an increasingly digital society.

GOALS

GOAL 1.

Availability & Access

Expand countywide access to reliable, high-speed broadband infrastructure

GOAL 2.

Adoption & Affordability

Remove barriers to affordable internet, device access, and digital skills training

GOAL 3.

Governance & Sustainability

Build an ecosystem of local partners to drive digital inclusion efforts

STRATEGIES

- 1 Facilitate expansion of broadband service to un- and underserved areas
- 2 Enact policies to streamline broadband infrastructure deployment
- 3 Increase, free public internet access in high-need areas

- 4 Increase access to affordable internet and digital devices
- 5 Improve digital literacy and training opportunities

- 6 Create a governing structure for the coordination of county broadband and digital equity activities
- 7 Establish a funding mechanism to support long-term sustainability

Availability & Access: Expand countywide access to reliable, high-speed broadband infrastructure

The County can improve access to high-speed broadband through implementing broadband friendly policies, supporting infrastructure deployment, and improving public Wi-Fi access in high-need areas

STRATEGY

1 Facilitate expansion of broadband service to un- and underserved areas

2 Enact policies to streamline broadband infrastructure deployment

3 Increase free, public internet access in high-need areas

PROJECTS

1-1 Support the BEAD Process

Engage with ISPs through the BEAD process to connect all unserved and underserved locations in Lake County.

2-1 Implement a Dig Once Policy

Create a Lake County Dig Once Policy to increase project coordination among departments and agencies and require (or encourage) that relevant parties are given the opportunity to install broadband infrastructure during planned infrastructure projects such as roadway construction to minimize right-of-way disruptions.

3-1 Pilot Public Wi-Fi Hotspots

Expand access to free public Wi-Fi in communities with low broadband adoption rates and broadband affordability challenges, while making outdoor spaces more digitally connected, by installing Wi-Fi hotspots at public buildings and community anchor institutions.

IMPACT

Provide access to broadband for 3,000+ previously unserved and underserved locations

Potential cost savings of up to 33% per mile for infrastructure projects

Provide 30 pilot locations with free outdoor public Wi-Fi, with the goal of cross-county expansion

KPIs

of served county locations (locations with access to $\geq 100/20$ Mbps broadband speeds)

of feet of conduit/fiber installed

of county public Wi-Fi hotspots

Adoption & Affordability: Remove barriers to affordable internet, device access, and digital skills training

The County can build-on existing programming to improve equitable access to affordable high-speed internet and connected devices, while delivering important digital literacy support

STRATEGY

4 Increase access to affordable internet and digital devices

5 Improve digital literacy and training opportunities

PROJECTS

4-1 Device Distribution Campaign

Partner with nonprofits and private entities to expand distribution of low-cost and free digital devices to households in need, including recycled County devices.

4-2 ACP Outreach & Enrollment Campaign

Conduct a countywide effort to raise awareness regarding the FCC's Affordable Connectivity Program (ACP) and assist eligible households with applications.

Note: ACP program funding could run out in 2024 if the program is not continued by Congress.

5-1 Expand Digital Navigators

Facilitate a larger network of local digital navigators to provide a range of support services to residents, particularly in areas with low broadband adoption and other equity challenges.

5-2 Coordinate Digital Literacy Programming

Take an increased role in coordinating and expanding digital literacy programming and promoting digital literacy training opportunities across the county.

IMPACT

Potential to provide 3,000+ residents with devices

Potential to reach 50,000+ unenrolled households

One Digital Navigator can reach more than 100 residents per year

Digital literacy programs can help residents find new employment

KPIs

of households that own a computer

of households with a broadband subscription; # of ACP households

of residents served by digital navigators

of students enrolled in technology degrees or certification programs

Governance & Sustainability: Build an ecosystem of local partners to drive digital inclusion efforts

The County can serve as a leader and convener of local stakeholders to deliver broadband and digital equity programming in a collaborative and sustainable way

STRATEGY

6 Create a governing structure for the coordination of county broadband and digital equity activities

7 Establish a funding mechanism to support long-term project sustainability

PROJECTS

6-1 Hire a Digital Equity Manager and Broadband Coordinator

Hire two dedicated County staff for initial three-year terms (through 2026) to oversee and help drive implementation of the Plan's strategies and projects.

6-2 Create a County-led Broadband and Digital Equity Coalition

Assemble a coalition of local partners and stakeholders to coordinate and support digital inclusion strategies.

6-3 Launch a Digital Equity Resource Website

Create a digital equity resource website that provides centralized information about the county's available digital equity assets, internet affordability programs, and partner organizations.

7-1 Establish a Digital Equity Fund

Create a centralized fund to enable the County to make ongoing, strategic investments in meeting digital equity goals via a local granting process.

IMPACT

Primary point of contact for digital inclusion efforts

Increased coordination among partner organizations

Increased visibility of existing programs and resources

Leverage additional funding through public and philanthropic grants

KPIs

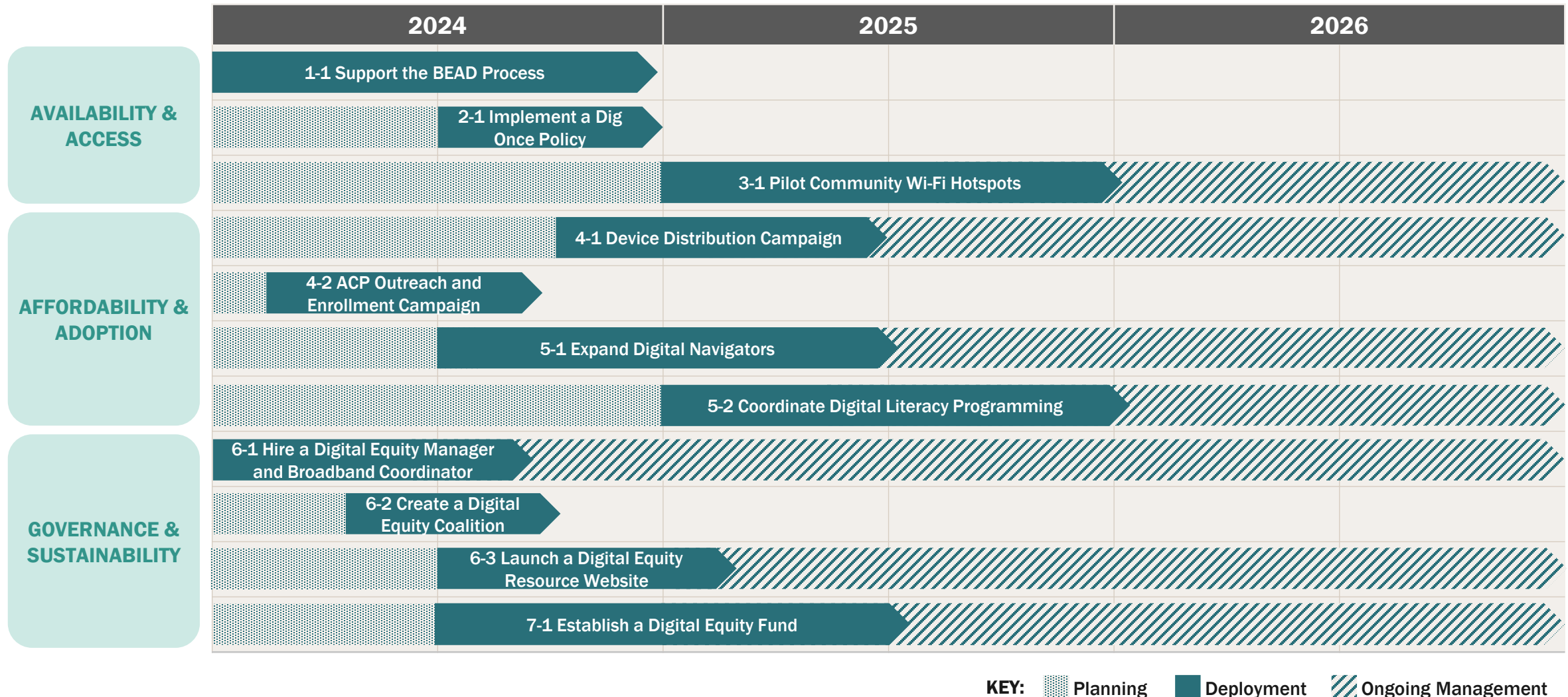
of projects implemented

of projects implemented

of digital equity resources available online

of organizations/projects receiving funding; \$ of funding granted to community organizations

The Plan includes a mix of short-, medium-, and long-term projects – with key implementation activities over the next three years



Lake County can take on the role of a convener to drive and coordinate implementation of the Broadband and Digital Equity Action Plan

What does a “convener” do?

- **Identifies and builds a coalition of partners** to own and implement broadband and digital equity projects
- **Establishes project priorities and agendas**, applies for funding (public and private) and coordinates with implementation partners
- **Liases with the NTIA and Illinois Office of Broadband**, and oversees grant funding allocations (ex. BEAD, DEA)
- **Dedicates some level of funding** to incentivize private sector buy-in
- **Provides policy guidance or technical assistance** as needed to support stakeholders
- **Facilitates access to infrastructure** where feasible and compliant with Illinois and federal regulations
- **Leverages important know-how** of existing ecosystem of county stakeholders
- **Tracks overall progress** toward digital inclusion goals

★ Leading Practices

Places like Cook County, IL; Los Angeles County, CA; Baltimore County, MD, Hamilton County, TN, Kansas City, MO; Hennepin County, MN; Philadelphia, PA; and Detroit, MI have hired **dedicated staff** (such as Digital Equity Directors, Managers) and/or created **centralized teams** (Digital Inclusion Offices) to help coordinate broadband and digital equity activities.¹

💬 Stakeholder Insights

County stakeholders have expressed interest in **increased County coordination** of broadband and digital equity solutions.

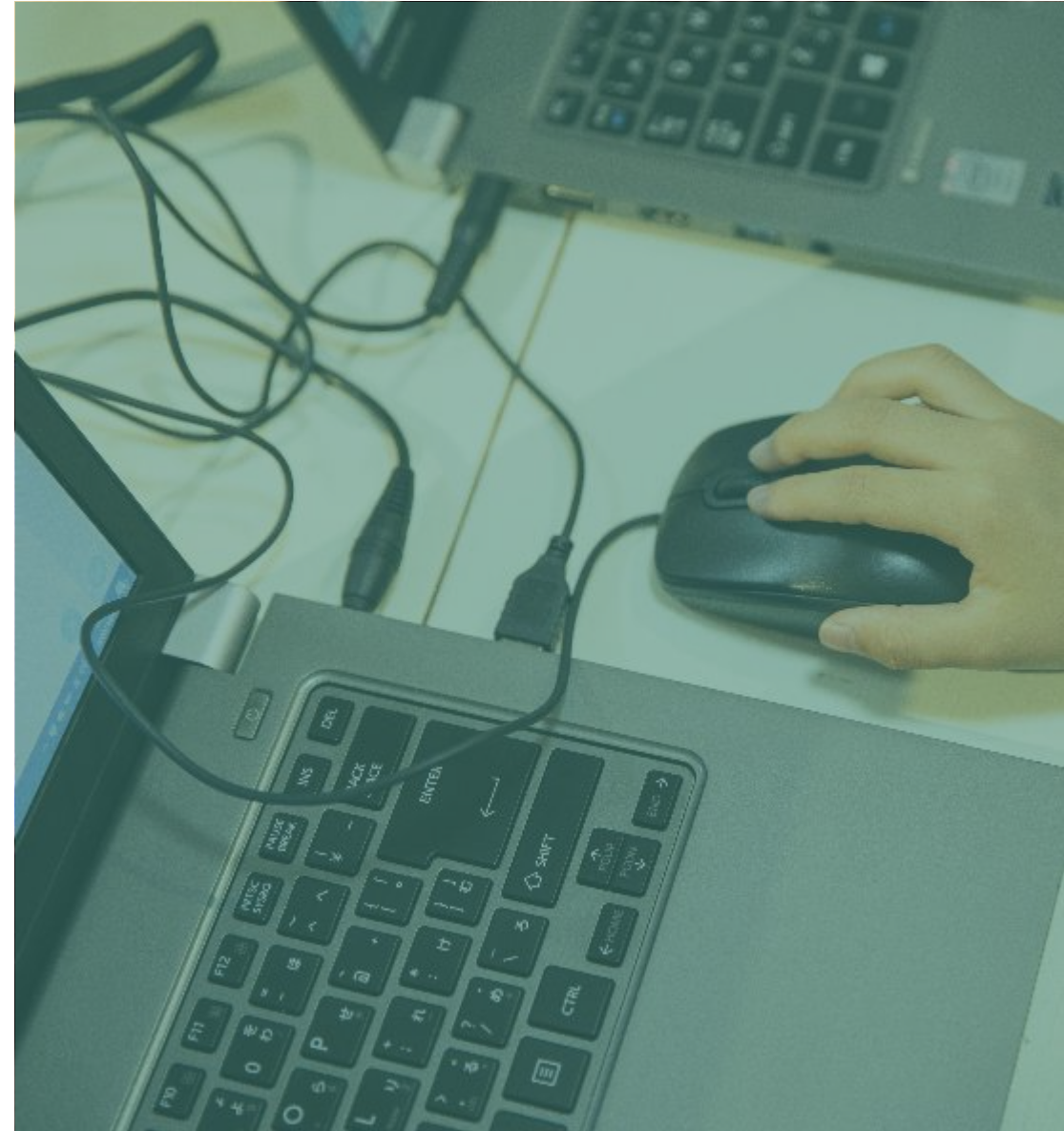
Closing

The Broadband and Digital Equity Action Plan will support Lake County's strategic priorities: expanding economic opportunities, advancing modern infrastructure, and building inclusive and resilient communities.

The plan provides a blueprint for Lake County to bridge the digital divide, outlining guiding strategies and a set of projects for implementation over the next three years. Collaborating with local governments and partner organizations across the county will be essential in order to promote the long-term sustainability of the Plan's actions and initiatives.

We cannot do this work alone! Our next steps include:

- **Hiring Dedicated Implementation Staff.** Hire a Digital Equity Manager to drive plan implementation and a Broadband Coordinator to serve as the primary point of contact during the BEAD process.
- **Establishing a Broadband and Digital Equity Coalition.** Convene relevant stakeholders and partners and create a mechanism for implementing the plan and overseeing progress. The coalition will consist of government, nonprofit and private organizations, establishing the County's position as a convener and coordinator of these important cross-county efforts.
- **Developing Implementation Plans.** Collaborate with partners to establish next steps for implementing the Plan's proposed strategies and projects.
- **Promoting Public Transparency.** Create a process to regularly report on plan progress.



Acknowledgements

Lake County gratefully acknowledges the important contributions to this Plan provided by the following people and organizations:

Lake County & Affiliated Agencies

Lake County Board

Gary Gibson, County Administrator

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Department of Transportation

Department of Planning, Building & Development

Department of Public Works

Department of Community Development

Emergency Management Agency

Health Department

Job Center of Lake County/Workforce Development Agency

Regional Office of Education

19th Judicial Circuit Court

Lake County Special Committee on Broadband

Jennifer Clark, Chair

Carissa Casbon, Vice Chair

Adam Schlick, Member

Angelo Kyle, Member

Esiah Campos, Member

Gina Roberts, Member

Kevin Hunter, Member

Local Organizations & Community Partners

United Way of Lake County

Lake County Housing Authority

Lake County Partners

Lake County Municipal League

Connect Lake County

Mano a Mano Family Resource Center

College of Lake County

The Benton Institute

Reaching Across Illinois Library System (RAILS)

PADS Lake County

Lake County Community Foundation

Boys & Girls Club of Lake County

Heart of the City

PCs for People

Lake County would also like to recognize the State of Illinois Office of Broadband, the National Telecommunications and Information Administration, Lake County's schools and libraries, local municipalities and townships, and the many residents whose important insights and feedback helped shaped this Plan.



LAKE COUNTY
**DIGITAL
GROWTH
INITIATIVE**