Bridging the Digital Divide with the Center for Inclusive Innovation

Research Findings and Recommendations for Addressing Digital Connectivity Inequality in the Portland Metropolitan Region

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> **" Universal, affordable, open, high-performance broadband is an important ingredient for a more just America, a healthier society, and an economy that offers true opportunity for everyone."**
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> - Benton Institute for Broadband & Society
> Digital Beat, February 7, 2022

Executive Summary

The Center for Inclusive Innovation (centii.org) is a Portland Metropolitan Statistical Area coalition of public, private, nonprofit, and philanthropic members that operates on the premise that everyone, regardless of background or ability, should have the right to participate in technology advances and the freedom to innovate using online technology. Portland also sponsors the Digital Inclusion Network, a CENTII partner critical for bringing together disparate voices.

Mobilized by Dwayne Johnson, CENTII works to address the long-standing disconnect between anti-discrimination policy and the provision of economic and career-building opportunities for historically marginalized communities. Digital connectivity is especially important to vulnerable populations such as the elderly, the working poor and the disabled, as well as for entrepreneurial small businesses.

And the time to act locally is now to take advantage of growing national support for digital inclusion. The National Digital Inclusion Alliance (NDIA) met in Portland the week of February 14, 2022. The National Telecommunications and Information Administration (NTIA) will support broadband with $65 billion in grant programs as part of the Infrastructure, Investment and Jobs Act from 2021 through 2026 (congress.gov). They will fund three specific efforts at the national and state levels to strengthen short-term local actions.

1.   The Broadband Equity, Access, and Deployment (BEAD) Program

2.   The Enabling Middle Mile Broadband Infrastructure Program

3.   The State Digital Equity Planning Grant Program

The NTIA is making these investments because they believe *"everyone in America can use high-performance broadband as soon as possible. Universal, affordable, open, high-performance broadband is an important ingredient for a more just America, a healthier society, and an economy that offers true opportunity for everyone."*[1]

While direct discrimination is illegal and considered socially reprehensible, many tools for self-empowerment, including digital access, remain inaccessible through systemic exclusions and inequities affecting Black, Indigenous, and People of Color (BIPOC) communities; the disabled; women; and LGBTQ+ individuals. The onset of the COVID-19 pandemic exposed and widened historical digital disparities and underscored its effects on the health and well-being of underserved communities. As a result, many entities in the public and private sectors rushed to address these conditions. Even before COVID in 2016, the City of Portland, Multnomah County, and the Multnomah County Library committed to the Digital Equity Action Plan (DEAP) to identify community-developed strategies and monitoring mechanisms. However, DEAP currently lacks the capacity to update and implement its strategies to ensure the effectiveness of efforts to mitigate these deep-seated problems.

In 2020, CENTII began a research project to assess both pandemic crisis-based and longer-term efforts to mitigate digital disparities. This project documents the experiences of more than twenty organizations that attempted to adapt or improve strategies and services to address the digital divide during the pandemic as short-term, crisis-funded deployments ended.

Researchers gathered information showing that those efforts resulted in tens of thousands of Portland regional residents receiving aid in digital connectivity and access to needed services. There are substantial examples of success with programs having a positive impact, but they also provide a picture of siloed efforts due to a lack of regional coordination. For instance, CBOs working in multiple jurisdictions such as Multnomah and Washington Counties, the City of Portland, Beaverton, and Gresham, had to navigate not only Federal requirements but also parallel local services with delivery requirements. In the future, however, as all organizations have common goals under the Digital Equity Action plan, there are opportunities for better coordination and cooperation.

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[1]   Benton Institute for Broadband & Society, Digital Beat. *How NTIA Can Use Its Historic Investment to Ensure Universal Broadband*. February 7, 2022

Researchers found that many government and funding agencies depend on dispersing resources through Community Based Organizations (CBOs), relying on existing CBO-based relationships with underserved communities. While a commendable amount of activity was undertaken, CBOs and other community-facing entities were themselves coping with the effects of the pandemic. Their ability to provide services was exacerbated by 1) inadequate capacity in both staffing and funding to effectively provide new services; 2) limited planning and funding for training both providers and recipients in the use of new technologies and services; and 3) the inability of a remote workforce to maintain strong ties with community members who rely on in-person interactions to receive their services.

The findings of this research suggest that local and regional efforts to address the digital divide require support from collaborative efforts such as the Center for Inclusive Innovation to coordinate the successful involvement of the many stakeholders in the public, private, and nonprofit sectors. CENTII plans to incorporate these research findings into its work of building coalitions to implement real-world bridges across the digital divide.

This research project was made possible by the Meyer Memorial Trust's generous support and visionary commitment to building stronger communities, and by CENTII's fiscal sponsor, NTEN.

Research Team

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Research Objectives

The research team aimed to survey as many stakeholder organizations as possible, to assess both pandemic crisis-based and longer-term efforts to mitigate digital disparities, and to identify opportunities to adapt or improve strategies and services. The team identified four research objectives:

1. Support digital inclusion efforts by assessing current dynamics.
2. Engage community stakeholders.
3. Identify one or two defensible opportunities for action.
4. Propose next steps.

Background

Digital equity requires access, affordability, and adoption.

- **Access** means putting in place the physical infrastructure to provide all households with high-speed internet. Access can be achieved through the efforts of a wide range of private sector service providers, coupled with targeted public investment in unserved and underserved areas.

- **Affordability** is a challenge because, while prices for laptops such as Chromebooks now make it feasible for many families to have at least one device that can connect to their home's internet, connectivity providers don't allow competitors to access their existing infrastructure. There is no regulation of monopoly power, no regulation of prices. Comcast earns an estimated $100 billion a year in revenue, more than half of which is profit.[2] Affordability can currently be achieved by leveraging federal subsidies to those who otherwise would be unable to afford access at typical commercial rates, but there is no guarantee that federal funding will continue. In that case, customers' needs will have to be met by alternative service providers.

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[2] For the nine months ending September 30, 2021, revenue increased 13.4% to $86 billion compared to 2020. Net income attributable to Comcast increased 55.2% to $11.1 billion. Source: Comcast 4Q 2021 Earnings. cmcsa.com news release.

- **Adoption** is a particular challenge in communities disproportionately impacted by the COVID pandemic. Additional effort is required to increase people's awareness and get them to sign up for and adopt digital technology. Achieving local digital equity requires providing community-based technical assistance, equipment, and software, and promoting internet benefits and skills training for those not now connected.

In response to these challenges, the City of Portland, Multnomah County, and Multnomah County Library committed to a Digital Equity Action Plan (DEAP) in 2016. The purpose of the DEAP framework was to build a digital inclusion network to help communities bridge the digital divide.

DEAP's mission is to close that divide for excluded members of our community with affordable access, training, and tools (portlandoregon.gov/oct/article/643895.) DEAP's vision is to bring barrier-free access to high-speed broadband internet at home and school, as well as access to an affordable computing device and the training to use both effectively. The goal is to reach all residents of Multnomah County. A diverse, county-wide, community-based work group engages with community and neighborhood leaders to develop and implement their local Digital Equity Action Plans.

DEAP's primary measures of success are 1) ensuring access to affordable, high-speed internet and devices for those in need; 2) providing training and support to ensure that everyone has the skills to use digital technology to enhance their quality of life; 3) empowering community partners to bridge the digital divide through funding, coordination, training, and staff resources; 4) creating opportunities for jobs in the digital economy for underserved populations; and 5) building a policy framework that supports digital equity and meaningful internet adoption, leading to better community outcomes.

Building on DEAP's achievements, agencies such as the Portland Bureau of Development Services, the Portland Housing Bureau, and Multnomah County are all helping to provide connectivity access and devices. Despite these significant efforts toward digital inclusion, intended users are often unaware of the services available or are intimidated and unprepared to take advantage of them. Deploying technology and broadband access requires concerted efforts at the state and local levels. Robust connectivity is essential but prohibitively expensive for many. The Federal

Communications Commission (FCC) defines high-speed internet as 25 Mbps[3] for download speed and 3 Mbps for upload speed. This is an insufficient baseline for all applications and is not fast by most standards. In Portland, where most standard plans offered by major providers start at 50 Mbps for downloads, customers can expect to pay at least $30 per month for the cheapest plan with CenturyLink. For families making minimum wage, this represents a significant expense, in addition to the cost of computers, smartphones, and tablets.

The Center for Inclusive Innovation

The Portland Metro Center for Inclusive Innovation (centii.org) was created to bring together a coalition of stakeholders from the tech industry, the public sector, philanthropy, education, the nonprofit sector, and organizations representing communities underserved by the tech sector. Together, they are taking decisive, collaborative, and measurable actions to serve the needs of those communities by increasing their access to digital technology and Oregon's innovation ecosystem. Ultimately, CENTII aims to create a framework that supports diverse knowledge, processes, policies, and strategies addressing people's innovation needs locally, regionally, and across Oregon and Southwest Washington. To that end, the coalition undertook this research to understand better the needs and challenges of digital inclusion in underserved areas.

Findings

The following research findings contextualize the scope and impact of local and Federal efforts and their relationship to government and the community at large.

Featured Success: City of Portland Digital Divide Technology Kit Project

The most significant publicly funded program during the COVID pandemic in Oregon was the City of Portland's Digital Divide Technology Kit (Tech Kit) Project, funded with resources from the City's COVID-Response CARES Act. Through the Tech Kit project, the city distributed more than 4,000 devices and more than 8,400 Visa gift cards to help cover the cost of internet service for one year.

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[3]   Mbps: units of measurement for network bandwidth and throughput.

- 500 LTE Chromebooks with unlimited data plans

- 3,000 Chromebooks with basic training

- 547 iPads and protective cases with assistive tools such as styluses and keyboards for people with disabilities

- Warranties for all devices

- 8,429 Internet assistance cards to cover the cost of service for one year

- Basic training and support in different languages

- Training materials on the Smart City website

The Digital Divide Tech Kit project, led by the Bureau of Planning and Sustainability and the Office for Community Technology, was dependent on partnerships with 24 community-based organizations (CBOs). Partners submitted applications to receive kits that they then distributed to members of their communities. To be eligible, CBOs had to serve the needs of frontline low-income communities, BIPOC communities, and individuals with disabilities. CBOs were free to decide how to select their recipients. The program was novel and extraordinary in its scope but admittedly capable of making only a small dent in addressing the needs of community members disproportionately affected by the COVID pandemic and the digital divide. Because the need exceeded demand, the Tech Kit project could only fulfill requests for 17% of available Chromebooks, 10% of iPads, and 36% of internet assistance cards. The City of Portland has since committed $3.5 million of American Rescue Plan Act (ARPA) funding to the Office for Community Technology to continue the project.

The CENTII project team interviewed three Tech Kit participating partner organizations:

- **Bradley Angle**, an organization serving community members experiencing domestic violence, disbursed 50 laptops, including five with built-in LTE service, for 1-year. They also distributed nearly as many internet assistance cards (VISA gift cards worth $365) to help pay the cost of internet service for a year. The organization received further funding for laptops from the Department of Justice and indicated that most recipients were comfortable using the devices; advocates were available for those who needed extra support.

- **North by Northeast Community Health Center**, a nonprofit medical clinic devoted to African American/Black health, received 100 Tech Kits (a computer and

a Visa gift card) plus an additional 100 Visa gift cards. They have no complaints about the program and say it was well run. The clinic also received funding for devices from Intel and the Metro government organization for telehealth purposes.

- **Masjed As-Saber and Islamic Center of Portland** distributed ninety-five Chromebooks and five iPads. They called the program a success and are hopeful there will be future projects allowing them to distribute more resources.

Additional Successful Benchmark Programs

The project identified substantial examples of successful programs having a positive impact. However, as noted below, the research findings also draw a picture of over-lapping efforts and resources due to a lack of regional coordination.

The federal Emergency Broadband Benefit (EBB) program and its transition into the national Affordable Connectivity Program (ACP) were critical, especially during the pandemic. Local efforts were made to inform CBOs of the program's existence, educate their staff, and help them promote it within their communities. Congress has increased the EBB budget from $3.2 billion in 2021 to $14.2 billion in 2022. The program should continue for at least several years, bringing more certainty to digital inclusion practitioners and households who were hesitant to adopt EBB due to its temporary status. The Federal Communications Commission (FCC) has been authorized to provide grants to outreach partners such as CBOs. However, the agency has yet to determine what that process will look like.

During the pandemic, it became apparent that the costs of maintaining an internet connection obstructed the ability of many people to work remotely, book critical appointments, and have children participate in school and do homework. The same can be said for disruptions caused by severe weather and other regional crises. In recognition of this situation, stakeholders throughout the Portland Metro area used federal and local funding and developed partnerships to provide affordable or free broadband and devices to low-income families and individuals.

Given the dramatic effects of the pandemic on all students in the public school system, a significant emphasis was placed on connecting students. Programs made available in Portland Public Schools (PPS) included:

- **PPS** provided Chromebooks and hotspots to students. At the time of the interviews, the district handed out more than 27,000 Chromebooks and 8,000 hotspots to families. This was done at four distribution centers and a drive-through service at the digital office.

- **Verizon Innovative Learning Schools** equipped students and teachers at certain middle and high schools with a device and a data plan, should they not have reliable internet at home. At PPS, students in the program also meet with an instructional coach. In addition, the program provides training for teachers on how to best leverage technology in the classroom.[4] Originally implemented in 2020, Verizon Innovative Learning Schools was expanded in 2021.

- **T-Mobile** offered an unlimited data option in recognition of students' need for sufficient bandwidth to complete assignments and conduct research. T-Mobile also highlighted other programs on offer: Project 10 Million offers school districts high-speed internet and one free mobile hotspot per student enrolled in the National School Lunch Program. The hotspot provides enough data for up to 320 hours of online virtual learning. Programs like this are essential given that a hotspot can otherwise retail for $90 in addition to a monthly service fee.

The need for broadband and digital devices extends far beyond school districts. Public agencies, nonprofit organizations, and private companies rolled out programs to help the public get connected.

- **Multnomah County Library** started a "Chromebook and Hotspot" lending program. Initially, loans were for three months at a time. This was later increased to six months. There are no participant fees or fines associated with the program, which is dependent on the library's partnerships with CBOs. To ensure that resources are distributed equitably, organizations can refer community members using an online form on the library's website. The program is designed to serve those individuals most affected by the COVID pandemic. The library also used funds from the American Rescue Plan (ARP) to distribute $5 million worth of Chromebooks and iPads to community members.

- **Comcast** partnered with Portland Community College (PCC) to hand out 250 Dell Chromebooks to students named recipients of the PCC Foundation's Bridges to the Future Scholarship.

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4   verizon.digitalpromise.org

Connectivity and Accessibility Are Imperative

Unanimously, every stakeholder confirmed the importance of providing digital connectivity, including access to digital devices and broadband service, so residents can be aware of critical information, work remotely, and communicate in a rapidly evolving public sphere. In addition to connectivity, stakeholders said adopting digital technologies is essential, even where there is hesitation surrounding their use due to cost or lack of training. Successful adoption depends on input from historically marginalized individuals and communities and the organizations representing them.

Portland Public Schools and Comcast referenced a Boston Consulting Group study titled *Boosting Broadband Adoption and Remote K-12 Education in Low-Income Households*[5] as a guide for technology adoption in public schools. This report found that even when students are back in the classroom, "closing the digital divide remains essential because schools are increasingly using online platforms for learning, and jobs are increasingly requiring digital skills."[6] The report elaborates that despite significant federal funding for digital inclusion throughout the pandemic via programs such as the Coronavirus Aid Relief, the Economic Security Act, the Coronavirus Response and Relief Supplemental Appropriations Act, and the American Rescue Plan, long-term solutions "*must ensure that broadband internet access is available to all households, that service is affordable, and that adoption challenges related to relevance, digital skills, and trust are fully addressed.*"[7] The report noted that simply connecting students is not sufficient. Even if 100% of students are connected, that does not account for the quality of students' home life and their workspace. The study concluded that trust, awareness, and stable housing all impact one's ability to have an internet connection and to use devices.

Stakeholders identified COVID as a significant culprit of the present connectivity crisis. As a result, they have made efforts to address public health holistically, understanding that people have been experiencing more stress during this period. However, many citizens are unaware of the help available without digital connectivity.

- **Portland Fire & Rescue** provided COVID testing, vaccines to 30,000 people through a partnership with Multnomah County, and a medication-on-wheels service. These benefits were primarily intended for the unhoused, BIPOC, and

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[5] Boston Consulting Group, bcg.com, Goodchild, Hill, Kalmus, Lee, Webb. May 2021
[6] Ibid
[7] Ibid

historically marginalized groups but were also made available to the public at large when capacity allowed.

- **North by Northeast Community Health Center** provided vaccinations to their community starting in March 2020. Vaccines were provided by the Oregon Health Authority.

- **Multnomah County Health Department** provided vaccination workshops for community partners. Because many people don't have sick leave or adequate economic support, the department also offered wrap-around services to allow people to stay home without worry. They helped distribute up to a month's worth of food, utilities, and rent assistance. These services were also provided with funds from the *Bienestar de la Familia* program intended primarily for the Latino/Latina community.

While it may be possible to obtain a low-cost device and use it long-term, at-home broadband requires an unavoidable monthly expense. While the Tech Kit program was limited in scope due to funding, other local and federal programs helped subsidize broadband.

- **Office for Community Technology (OCT)** used CARES Act funding to buy Visa gift cards for community members and distributed over 8,000 cards worth $365 each, enough to cover a year of internet service.

- **Personal Telco Project** provided numerous open-access free-to-the-end-user networks around the City of Portland, thanks to donors. However, the coverage is limited and doesn't reach all communities in need.

- **Multnomah County Library** used CARES Act funding to distribute Visa gift cards to individuals in East Portland to help them pay internet bills.

- **Multnomah County Library** and the Office for Community Technology (OCT) helped promote the availability of the federally funded Emergency Broadband Benefit (EBB) program, which provides low-income households at or below 135% of federal poverty guidelines with a discount on internet service up to $50 per month plus up to $100 to buy a laptop, desktop computer, or tablet through a participating provider. Through additional funding provided by the Infrastructure Investment and Jobs Act, the EBB is now being called the Affordable Connectivity

Program. It extends the subsidy to qualifying households beyond the COVID pandemic but reduces the monthly discount to $30/month.

- **OCT, Portland Public Schools, WorkSystems, ChickTech,** and others became sponsored service providers of the low-cost Comcast Internet Essentials service. Through sponsored service agreements, Comcast provides a path for public agencies to cover the cost of Internet Essentials service for individuals and families in the community who struggle to pay the $9.95/month service cost. Each organization entered into separate agreements with Comcast that allowed the "sponsor" to pay the monthly cost of service to keep individuals and families connected for at least a year in most cases. For example, when the Portland Public Schools Foundation ran out of funding to keep its 100 families connected, OCT was able to transfer the accounts to its sponsored service agreement to ensure students and their families would stay connected until December 2022. Individuals and families selected to receive the subsidized service also had to qualify for programs such as the National School Lunch Program, housing assistance, Medicaid, SNAP, Supplemental Security Income, or Federal Pell Grants. People who met the qualifying low-income criteria could also sign up individually.

Connectivity is More Than Just Broadband Access

A major issue reported by CBOs is their limited administrative capacity. Programs and grants that provide funds for distribution to help community members with internet connections and devices do not include adequate support for the attendant increase in administration and training needs. At the same time, a recurring theme throughout interviews with government and technology company stakeholders is their reliance on CBOs to provide services. Generally, public agencies don't provide services directly to the community; they route resources through CBOs with long-standing relationships and reputations in their service areas. Multnomah County stressed that partnerships with CBOs are crucial to getting residents connected to broadband and helping them navigate publicly funded programs.

However, CBOs are already overburdened. Fifty percent have fewer than six full-time employees to serve frequently overlooked community members. For many, the pandemic increased demand for services beyond their limited financial and administrative capacity. They indicated that their funding to run programs that disburse publicly and privately-funded resources is insufficient.

- **Bradley Angle** explained that while they had funding to distribute resources, they didn't have the organizational capacity to provide training on how to use devices and broadband. They elaborated that the government is paying CBOs very little to administer programs. It takes six hours to administer every dollar they receive because of the additional administrative responsibilities the funding comes with. They could accept more public money to maintain their programs, but they cannot afford to if that funding drains staff energy and causes their services to diminish in quality.

- **ChickTech** did not receive any general operational funding from public sources during the pandemic. Given the resources it takes to run an organization, they suggested fewer restrictions on using grant money for operational expenses. ChickTech also characterized the reporting process for many grants from public and private sources as overwhelming, cumbersome, and time-consuming.

In the interest of time and grant requirements, funding and resources are sometimes disbursed too quickly without regard to a small organization's limited capacity. To ensure productive working relationships between CBOs and public and private service providers in the future, it would be beneficial to simplify reporting requirements for trusted partners and direct needed resources so that organizations can hire and pay staff a living wage. Federal funding sources come with administrative requirements for data collection from CBOs. They do receive limited operational funding from local sources for help with data collection, but it is not enough to offset the entire burden of costly reporting, especially when there is little time to respond. For instance, Federal timelines are outside local control—$5 million was granted for tech projects under the Federal CARES Act, but The City of Portland did not receive its allocation until July, 2021. As the spending deadline was December 21, 2021, there were only four months left to set up the process for regional disbursement and monitoring of funds.

Providing resources that help people connect is essential, but people also have other needs that indirectly impact their ability to connect digitally. Housing security, the health of small businesses, and access to educational and cultural resources all impact people's ability to use broadband and digital devices or even consider adopting them. Achieving universal connection to broadband is the end goal, but providers also need to ensure that everyone can access services regardless of their current broadband connection or digital literacy. To this end, stakeholders indicated that they are making or developing the following adaptations to their services:

- **Portland Bureau of Development Services** is currently remodeling its development center to ensure they provide services equitably. They will create customer kiosks to provide specific services to customers without digital access. The bureau is searching for a new, safer location for people to participate in meetings during the pandemic and into the future.

- **Portland Housing Bureau** believes there is a need for inclusive outreach. Services during the pandemic have been available through an online application. They are used mainly by white individuals; however, individuals referred to them by community partners are primarily people of color. They must maintain a low-tech service model to reach everyone during the pandemic.

- **Multnomah County Communications** engaged stakeholders through multiple channels during the pandemic, especially regarding the Earthquake-Ready Burnside Bridge Project. These included community liaisons, virtual outreach such as briefings and advisory committees, email newsletters, and other media. Not all communities can be reached in this manner, however. The county also engaged community members via radio and TV advertisements to reach specific cultural groups.

- **Racial and Ethnic Approaches to Community Health Program (REACH)** made a call center available.

- **The Multnomah County Library** is developing a program that will provide computers, Wi-Fi hotspots, and stable broadband access to individuals who don't have them. The Library noted that locating online services is often confusing even for digitally literate individuals.

- **ChickTech** shared that the region needs a database of resources offered by government agencies and community-based organizations. They cited the Chicago Learning Exchange (chicagolx.org), which creates a network of educators, parents, employers, technologists, and researchers, as a potential model for the City of Portland to emulate.

- **Mt. Hood Cable Regulatory Commission** funded Multnomah County Library to build a resource database of digital inclusion services as part of its Learning Exchange. Broader promotion of this valuable resource would be beneficial. See digitalinclusionnetwork.net.

- **Free Geek** is a local nonprofit that diverts technology that would otherwise be recycled or thrown out, refurbishes it, and gives it back to community members at no or low cost. While the computers provided by Free Geek are not new, they are sufficient for most people's needs.

Small Businesses Need Digital Lifelines

Small businesses are the cornerstone of Portland's economy. Ninety-five percent of all Portland regional firms are "small businesses that contribute to wealth creation and the economic vitality of our region. These firms employ more than 255,000 people with a payroll of approximately $2.1 billion."[8] Small businesses are especially important in the BIPOC community. For communities historically excluded from the workforce (and previously even from living in the state), small businesses have been a critical source of wealth creation. During the pandemic, many small businesses struggled, and the Chinese community that relies heavily on the hard-hit restaurant industry experienced significant difficulty. To help businesses make payments and attract customers during the economic downturn, city agencies provided an array of new and expanded services, including:

- **Small Business Relief Fund,** sponsored by the CARES Act and managed by Prosper Portland, allocated $15 million for small businesses and for block grants to CBOs. The City's Equity Toolkit guided the program with the knowledge that BIPOC citizens have experienced the most significant impacts of the pandemic. The fund distributed $3.4 million to the restaurant and bar industry, $1.9 million to childcare providers, and $1.1 million to the personal services industry.

- **The Mercatus Digital Marketing Program**, powered by Prosper Portland, provides up to four hours of marketing consulting, a marketing roadmap, free workshops year-round, and $1,000 to invest in digital marketing efforts.

- **Shop Small PDX** is a website by Prosper Portland to promote small businesses by encouraging Portlanders to shop locally.

- **Prosper Portland** received $1.2 million in recreational cannabis tax funds to support BIPOC cannabis business owners who have historically been the most harmed by cannabis criminalization. The goal is to help build generational wealth via the legal cannabis industry.

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8   portland.gov/citycode/article/5834

- **The Inclusive Business Resource Center**, sponsored by Prosper Portland, provides financing, business advising, business services, networking, workshops, and peer-to-peer learning opportunities. Their funds also supported My People's Market, a marketplace that advances opportunities for business owners of color by connecting them to the travel industry and other professionals who can help them expand and scale their businesses.

- **Prosper Portland** created a repair program for businesses experiencing vandalism. This was especially relevant during the protests of summer 2020.

- **The Portland Bureau of Development Services** made temporary changes to the zoning code to allow businesses to use parking lots and roadsides for food trucks and restaurant and bar seating areas.

- **The Portland Water Bureau** implemented the SPUR program in June 2020, allocating $1.6 million to provide financial support to Portland's small businesses through one-time credit on sewer/stormwater/water bills. SPUR prioritized businesses owned by BIPOC citizens as well as women, childcare providers, and businesses opened as part of Phase 1 of the state's reopening plan. The Bureau incorporated community feedback to improve their application process to ensure that resources were available to those who needed them most. Improvements included lengthening the application window and providing translated versions of the website. They also hired the consulting firm Community Engagement Liaisons to conduct outreach to BIPOC communities.

Digital Access Basics: Housing & Health

Stable housing is perhaps the most important contributor to well-being besides food access. It provides a potential place to work from, but it is also important to have an address when applying for jobs. The Portland Housing Bureau created a variety of programs during the pandemic to support Portlanders struggling to find affordable housing. These included a foreclosure counseling and prevention program, a rent assistance program, and $500 gift cards to support people struggling to pay rent. United Way was a partner for this program and ran the online application portal.

Programs run by three organizations mentioned above—Portland Fire & Rescue, the North by Northeast Community Health Center, and the Multnomah County Health Department—made substantial impacts in this area. Like all public and private providers, they must be accessible via a telephone hotline for stakeholders without

an internet connection or who prefer to reach someone by phone. In some neighbor-hoods, the county sent people to knock on doors and visit culturally specific locations such as grocery stores to bring awareness of available services. CBOs have been crucial to their outreach efforts.

One of the most straightforward ways stakeholders provided services during the pandemic was by making their existing resources more accessible.

- **Portland Public Schools,** given the shift to remote learning, made resources such as their Technology Help Desk and Device Repair services available to families instead of keeping it open only for staff.

- **The Multnomah County Library** boosted its Wi-Fi with antennas so they could be used outside its buildings for free. Books and e-materials are expensive, and many people rely on the library not only for novels but also for textbooks and educational materials. When the library was closed, it focused more on providing e-materials. These were also made available to students whose ID cards were allowed to work as library cards. Unfortunately, the level of funding allocated to the Library during COVID may not be sustainable in the future.

- **Open Signal**, a media arts center in Portland that supports public access tele-vision, started doing curbside checkouts of their equipment.

- **Comcast** opened its public Wi-Fi hotspots to the public during the pandemic to provide easy access for thousands of community members across the Portland Metro area.

Listen To Learn & Teach

Community voices must be heard to ensure solutions reflect community needs. Consistent feedback from stakeholders indicates programs must be developed collaboratively to ensure they are relevant and successful. The Office for Community Technology stated that forums such as the COVID-19 Response Digital Divide Work-group helped underserved groups specify the resources they needed. Workshop participants included community members and representatives from government and CBOs.

T-Mobile also spoke to the need for collaboration. The company noted that groups like the Digital Inclusion Network, sponsored by the City of Portland, Multnomah

County, and the Multnomah County Library, are critical for bringing together disparate voices.

Stakeholders also shared that training is crucial. For instance, there is insufficient knowledge about online accessibility for the disabled. Under the Americans with Disabilities Act, developers should employ a human-centered design that considers the abilities of even the most marginalized people. Devices, internet access, and information are also more effective if the provider is trained in creating accessible information. The Portland Office of Equity and Human Rights (portlandoregon.gov/oehr/) noted that training is needed so that communication is accessible to all constituents and there are clear standards for accessibility.

Many bureaus are taking steps to train their workforce to operate efficiently in a remote environment. For example, Portland Fire & Rescue rolled out a bureau-wide training on how to provide non-emergency services digitally.

"What we've got here is a failure to communicate."

Although stakeholders have been able to adjust to reach as many community members as possible, the rapidly evolving nature of the pandemic has left issues such as relevant multi-lingual/multicultural communications unaddressed. For example, due to cultural norms, some communities are unlikely to ask for direct help from the public sector, even when they need it. It's also preferable not to oversaturate people with information, so officials should choose their communications carefully. Multnomah County Communications explained that their messaging hasn't always resonated with all community members. For example, the Chinese community did not believe early pandemic messaging; they were telling each other not to worry because they were following pandemic coverage from China that presented a more dire situation. According to the Oregon Chinese Coalition, the pandemic is the first time Portland's Chinese community has asked for assistance. There is a desperate need for help in the restaurant-reliant Asian community.

The Multnomah County Health Department stated that it was unprepared for the number of people from different communities who would be relying on its services. While they had extensive information available online, most of it was in English only. They found that many people who speak English as a second language had difficulty signing up for doctor's appointments online.

The Multnomah County Government found itself unprepared to move to virtual methods of communicating with those in vulnerable communities who have spotty internet access or limited English language skills. This hurt many Portland communities, illuminating the need for digital equity and technological support in their own languages. To mitigate these issues, community organizations should work together to address them head-on. Digital equity cannot be achieved without direct intervention from the community to resolve systemic challenges.

To improve digital communication and instill a better understanding of connectivity in the community going forward, Multnomah County has hired a Digital Access Coordinator to serve as project manager and community convener for broadband programs county-wide. That person will help members develop, refine, and implement their Digital Equity Action Plans.

Regional Voices & Views: Selected Insights About Digital Access

- **Portland Office of Equity & Human Rights:** Connectivity is critical. Availability of information means nothing if people don't have accessibility: a device and an internet connection. Broadband is especially important for seniors, disabled people, the working poor, and minorities.

- **Office for Community Technology:** The pandemic highlighted that for folks to stay digitally connected and be informed about emergency preparedness, they need a home internet connection.

- **Multnomah County Library:** The library has done extensive outreach in marginalized communities and found that technology access is the highest priority for many of them. There are still tens of thousands of people who don't have internet access. They need a device, access to broadband service, training, and support. Temporary access is also an issue. People might be provided with only six to eight months of access before needing to choose between paying bills such as rent and paying for internet access.

- **Multnomah County Communications:** Digital connectivity is important. It's otherwise difficult to offer benefits such as meals or to encourage folks to attend meetings in a virtual format during a pandemic.

- **Multnomah County Health Department:** Access to technology is helpful for accessing services offered by the health department, including vaccine information.

- **Prosper Portland:** Access to high-speed internet is important because community members are isolated without it and unable to benefit from available resources.

- **Portland Bureau of Planning and Sustainability:** It is important to get high-speed internet and devices into people's hands because we will fall behind as a region without the inclusion of all citizens in economic prosperity. Small businesses and good jobs are essential to social stability.

- **North by Northeast Community Health Center:** Access to fast, high-quality internet at home is the most significant need, followed by access to a reliable device.

Conclusions

Based on feedback from stakeholder interviewees, there is no question that connecting community members to digital devices and broadband service is an overarching priority. It is increasingly important to ensure that everyone has access to critical information. However, stakeholders noted that connecting everyone is neither quick nor easy. Even when people are connected, there is no guarantee that they will prefer virtual communication or online work. Solutions must be designed to ensure long-term connectivity while also considering people's varied personal circumstances.

There is also the issue of how to reach people once they are connected. During crises, new information must be communicated in a manner that does not confuse the consumer. Targeted correspondence should be personal to ensure that residents feel like they are being adequately engaged with and listened to. Stakeholders believe that agencies need to be cognizant that some individuals only speak English as a second language. They should also take steps to train employees on effective online communication. The Digital Inclusion Network and CENTII can also improve communications by hosting discussion forums among different stakeholders.

The four objectives of this research were to: 1) Support digital inclusion efforts by assessing current dynamics; 2) Engage community stakeholders; 3) Identify defensible opportunities for action; and 4) Propose next steps. The following conclusions reflect those objectives and come directly from community stakeholders engaged in bridging the digital divide. Recommended priorities and suggested next steps follow, based on these significant conclusions:

1. **It is critical to ensure that efforts reflect local priorities and needs,** as well as a broad-based understanding of how community members will benefit.

2. **New infrastructure is key to supporting ubiquitous, equitable, high-speed connectivity,** which relies on fiber optics requiring high-capacity lines capable of transmitting high bandwidth at very fast speeds.

3. **CBOs are relied upon without adequate compensation.** The situation needs to be rectified via capacity grants and streamlined administrative requirements. CBOs offer important services to culturally specific and marginalized communities, and thus adequate compensation and support for their services are crucial for supporting the policies and goals of government and funding agencies. However, the demand on CBO staff to provide technology training in addition to their primary services and administrative responsibilities, without added resources, puts undue strain on a critical part of the lifeline for underserved communities. The Digital Inclusion Fund is launching the Community Digital Navigators Pilot Project to support these needs.

4. **Broadband access needs to be seen as an essential service, just like electricity.** It must be a national and local priority to ensure that all Americans, regardless of race, gender, nationality, or creed, have high-speed internet access and the devices and tools needed to help them learn and work online. Diversity and inclusion in the workplace must begin with the hiring process and be cognizant of the digital divide. Equal access is the only way to level the playing field when it comes to work, education, and economic equality.

Recommended Priority Actions & Next Steps

1. **The primary priority for closing the digital divide is to foster greater collaboration among partners and work together to influence policy.** Coordinating efforts across the broad two-state Portland Metropolitan Area requires a committed champion, such as the Center for Inclusive Innovation (CENTII), with the connections to engage the state, the U.S. government, private agencies, and corporate support as well as philanthropy. All those resources are needed to eliminate the digital divide and ensure that workers, students, and small businesses have equal access to opportunities for success and the opportunity to contribute to our community's economy.

2. **We must build stronger networks such as the Digital Inclusion Network.** A role model is the Chicago Learning Exchange. CLX connects educators, parents, employers, technologists, and researchers. It ignites innovation through grants; champions ways to remake learning; and equips educators, youth, and families with skills demanded in the digital age. Their work affects individuals, organizations, and systems. Educators, young people, parents, museums, libraries, nonprofits, advocacy groups, after-school programs, and community-based organizations work together to achieve digital equality.

3. **CBOs are at the heart of digital inclusion efforts, but that is not usually their primary mission, nor are they adequately resourced to shoulder much of the relevant costs.** They need access to capacity grants to address the administrative requirements that accompany the funding they receive and to hire adequate staff to meet their commitments.

4. **The ability to access information virtually requires a sustainable, high-quality service that ensures digital equity among all communities.** It would be a wise investment for a public entity to build an open-access service provider, as the Portland Water Bureau did. Multnomah County spends nearly $500 million a year on telecommunications services.

5. **Digital access is critical for small businesses, the heart and soul of local communities, to thrive and grow.** Lack of digital connectivity limits their financial viability as well as their ability to create new jobs and reach new customers in

local communities. Specific resources should be allocated to small businesses to ensure they have access to and are knowledgeable about digital technology. Local access to digital marketing techniques such as how to build a website would be beneficial, as would connection to PCC Climb's small business advisory services. Small business employees must also have the ability and opportunity to work remotely or access resources online from work, thus bettering their ability to participate in the workforce and contribute to the economy.

6. **There must still be publicly accessible options to fill service gaps and help people become accustomed to accessing information online.** Solutions can include:

   a. Maintaining language-appropriate low-tech outreach methods such as mailers and door-to-door contact to reach communities with low technology adoption rates.

   b. Remodeling service centers to provide information and more intuitively for individuals without digital access.

   c. Building pop-up centers to provide temporary access and teach people how to use different technologies.

7. **Creating, supporting, and expanding databases of resources** offered by government agencies and community-based organizations such as the one offered by the Digital Inclusion Network can accelerate regional communications. The Multnomah County Library now has a version available at digitalinclusionnetwork.net

CENTII's next actionable step is to help build capacity in CBOs and to develop a framework ensuring community members are adequately served with digital access. We will work with CBOs, funders, and public and private sector organizations to identify specific services, document the process, and measure effectiveness in ways other governments and agencies can use. We'll look at similar research in Washington and Clackamas counties and cities such as Gresham, Hillsboro, and Wilsonville to evaluate regional similarities and differences. In this way, we can improve digital inclusion while increasing understanding of digital technologies' positive impact on the region. For more information see centii.org

Research Methods

Qualitative semi-structured research interviews were held with representatives from twenty-four Portland Metropolitan Area organizations (see Participants Chart, Appendix A, page 25). Interviewees included community residents attempting to use services and agency providers trying to reach the community at large. While evaluating stakeholder feedback, the research team employed a Diversity, Equity, Inclusion and Accessibility (DEIA) nexus to identify a workable process for interviewing stakeholders, coding qualitative and quantitative data, and developing recommendations for future community actions. This approach examines how institutional structures are created as a means of challenging institutionalized forms of inequity.

Limitations

This study was limited by access to stakeholders. Researchers initially distributed a survey in the greater Portland region, which achieved a minimal response from recipients dealing with the impact of the pandemic. Researchers then attempted to contact 36% of potential participants at 16% of organizations. Of that potential pool of respondents, 72% agreed to be interviewed by phone. While the switch to virtual work was comprehensive across the region, it nonetheless made it more difficult to reach and schedule conversations with potential respondents. Siloed teams, staffing shortages, restructuring of public agencies and nonprofit boards, and the general chaos associated with life during the pandemic also resulted in diminished availability of and access to personnel. Due to these limitations in data collection, this report does not present information from every program working on digital equity in Portland. However, the project team is confident that the results represent the perspectives of major stakeholders. The results also capture a representative portion of the successful efforts to provide digital access to underserved communities, bringing forward the necessary next steps to bridge the digital divide.

Appendix A: Participants Chart

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
CITY OF PORTLAND		
Portland Office of Equity & Human Rights	**Jonathan Simeone** - Disability Equity Specialist	The Office of Equity and Human Rights provides education and technical support to City staff and elected officials, leading to recognition and removal of systemic barriers to fair and just distribution of resources, access, and opportunity, starting with issues of race and disability.
Portland Public Schools	**Don Wolff** - Chief Technology Officer	PPS educates all children to their highest potential to be productive, respectful, self-reliant, and responsible citizens who value the richness of diversity.
Prosper Portland	**Amanda Park**- Project Manager, Entrepreneurship and Community Economic Development **Shawn Uhlman** - Communications Manager **Shea Flaherty Betin** - Economic Development Director	Prosper Portland is committed to growing quality jobs, advancing opportunities for prosperity, creating vibrant neighborhoods and communities, and collaborating with partners to create an equitable city.

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
Portland Water Bureau	**Sarah Santner** - Water Efficiency and Affordability Manager	The Water Bureau works to build and maintain a water system that enhances public health and safety and contributes to the economic vitality and livability of the Portland metropolitan region.
Portland Bureau of Development Services	**Mark Fetters** - Facilities & Safety Section Manager **Matt Wickstrom** - Senior Planner **Elshad Hajiyev** - Deputy Director, Business Operations & Finance Services	The Bureau of Development Services promotes safety, livability, and economic vitality through efficient and collaborative application of building and development codes.
Portland Fire & Rescue	**Becky Lamboley-Haese** - Equity Manager **Tim Matthews** - Deputy Chief	Portland Fire & Rescue proactively, safely, and aggressively protects life, property, and the environment.
Portland Bureau of Planning and Sustainability	**Christine Kendrick** - Smart City PDX Coordinator	The PBPS takes action to shape the future of Portland and advance climate protection for a more prosperous, healthy, equitable, and resilient city now and for future generations.
Portland Bureau of Technology Services	**Jeffrey Baer** - Chief Technology Officer	PBTS delivers strategic leadership through effective, innovative, reliable, and secure technology services for our stakeholders.

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
Office for Community Technology	**Rebecca Gibbons** - Strategic Initiatives Manager	The Office for Community Technology builds community capacity and champions investments and public policy in a rapidly changing communications technology, utility and broadband landscape to keep our local communities economically and culturally healthy.
Portland Housing Bureau	**Matthew Tschabold** - Equity and Affordable Housing Policy	Portland Housing Bureau works toward the vision that all Portlanders can find affordable homes and have equitable access to housing.

Multnomah County

Multnomah County Library	**Jon Warona** - Director of Content Strategies **Alonso Melendez** - Digital Equity and Inclusion Coordinator **Shawn Cunningham** - Director of Communications and Strategic Initiatives **Matthew Timberlake** - Information Technology Portfolio Manager	The library empowers the community to learn and create. Priorities: • Helping people find work and develop career skills • Supporting education and learning for all ages • Enhancing and diversifying virtual services • Technology training, access, and assistance for all • Creating and maintaining safe and healthy spaces

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
Multnomah County Communications	**Mike Pullen** - Communications Coordinator **Diego Basabe** - Senior Communications Strategist, culturally specific Public Information Officer **Tara Bowen-Biggs** - Program Communications Specialist	The Multnomah County Communications Office provides timely news and information for county residents and journalists.
Multnomah County Health Department	**Beth Poteet** – Senior Program Specialist, Community Partnerships & Capacity Building	The Health Department works with communities to advance health equity, protect the most vulnerable, and promote health and wellness for everyone.
Department of County Assets	**Kim Garcia** - Strategic Initiatives Coordinator	The department provides staff with the tools, technology, and space they need to serve the residents of Multnomah County.
Information Technology, Multnomah County Department of Assets	**Jacob Farkas** - Program Manager	One of the most innovative government IT organizations in the nation, dynamically aligning with emerging industry trends.

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
COMMUNITY-BASED ORGANIZATIONS		
Bradley Angle	**Bri Condon** - Executive Director	Bradley Angle's mission is to serve all people affected by domestic violence. We do this by placing people experiencing, or at risk of, domestic violence at the center of our services and providing them with safety, education, empowerment, healing, and hope.
Oregon Chinese Coalition	**Hongcheng Zhao** - Chairman of The Board	OCC works to build a connected and united Chinese community that embraces diverse socio-economic backgrounds, political beliefs and religious and cultural traditions.
North by Northeast Community Health Center	**Suzy Jeffreys** - Executive Director	North by Northeast Community Health Center is the only medical clinic in Oregon devoted to African American/Black health.
Islamic Center of Portland, Masjed As-Saber	**Rabah Khamis** - President	Masjed As-Saber, the largest mosque in Portland, is also a community center that provides resources to the Muslim community.

STAKEHOLDER	INDIVIDUALS	STAKEHOLDER COMMUNITY ROLE
Personal Telco Project	**Russell Senior** - President	The Personal Telco Project is a Portland nonprofit dedicated to the idea that users have a central role in how their communications networks are operated. Personal Telco builds networks for their communities and helps educate others about how they can help too.
ChickTech	**Katie SanFilippo** - Chief Executive Officer	ChickTech was founded in 2012 to engage youth and adults of marginalized genders in the technology industry while working to create a better technology culture for all.
Open Signal	**Elisa Barrios** - Director of Equity & Community Media	Open Signal is a media arts center in Portland. It carries a vision for community-driven media focused on creativity, technology, and social change.
TECHNOLOGY COMPANIES		
T-Mobile	**Matthew Lee** - Government Account Manager	T-Mobile provides hotspots and mobile devices.
Comcast	**Marion Haynes** - Vice President of External Affairs, Oregon & Southwest Washington	Comcast provides broadband service.

Appendix B: Benchmarked Success - Chattanooga, Tennessee

A relevant example of achieving digital equity is Chattanooga's high-speed, community-wide fiber optic network. According to new, independent research, it has delivered economic and social benefits worth over $2.69 billion in its first decade.[9] The network, launched in 2010, was built by the city-owned utility Electric Power Board of Chattanooga (EPB) to support an advanced smart grid power distribution system. A 2020 Pew Research study[10] found that this new infrastructure helped bridge the digital divide, support job creation, and reduce carbon emissions. Adding greater connectivity to the city also reduced waste and a need for more skilled city workers. According to the Pew report, the network directly supported the creation and retention of 9,516 jobs, about forty percent of all jobs created in Hamilton County, Tennessee, during the study period.

The network is also credited with keeping the local unemployment rate low. According to data from the U.S. Bureau of Labor Statistics[11], Hamilton County's unemployment rate was 4.7 percent in November 2021, compared to Tennessee's at 5.3 percent and the U.S. overall at 6.7 percent. Particularly during the COVID crisis, broadband helped many businesses' employees transition to working remotely. TN's EPB deployment faced obstacles, including legal challenges from both the telecom industry and the state of Tennessee. But they succeeded. Deploying a fiber optic network and launching new services entails all the complications and challenges one would expect from a large-scale project. However, EPB developed a proven business model along with a range of services to make it easier for communities to participate.

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[9] cities-today.com, Feb. 26, 2021

[10] pewtrusts.org. Feb 8, 2022. America's Digital Divide

[11] bls.gov, Hamilton County TN employment rate Dec 2021 – May 2022