Leveraging Digital & Social Infrastructure *for* Economic Inclusion

PRESENTED BY

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ABOUT NGIN

New Growth Innovation Network (NGIN) is a knowledge, insight, and innovation hub, supporting economic development practitioners advance inclusive economic growth in their region. Established in 2018, NGIN is a nonprofit organization focused on closing structural opportunity gaps, to ensure that economically disenfranchised people of color, women, and neglected geographies are a core part of regional economic growth and prosperity. NGIN works to drive systemic change through the NGIN community of practitioners, its platform of insights, and innovations.

AUTHORS

The research, insights, and recommendations for this project were developed by Swati Ghosh, Morgan Wortham (Research Fellow) and M. Yasmina McCarty on the NGIN team.

EXPERT STAKEHOLDERS

New Growth Innovation Network engaged expert practitioners (named in the appendix) as well as shared preliminary content for review at a NGIN roundtable, conducted during summer 2022. NGIN is grateful to the stakeholders whose insights and contributions shaped this work.

FUNDING AND DISCLAIMER

Executive Summary

An estimated <u>42 million</u> households in the U.S. lack access to broadband internet or the ability to purchase broadband services even as digital tools and skills have become critical to economic opportunity. Black, Indigenous and People of Color (BIPOC) are disproportionately impacted by this, hampering their long-term ability to generate wealth and close the racial wealth gap. Social and professional networks, or social capital, plays a significant role in supporting economic mobility through job offers and new business contacts. In today's economy, digital access also affects one's ability to maintain and grow their social capital.

Siegel Family Endowment (Siegel) awarded a grant to the New Growth Innovation Network (NGIN) in November 2021 to examine how digital equity[1] and social infrastructure[2] can be leveraged for wealth generation among BIPOC, and the role of economic leaders and organizations – locally and regionally – in advancing more equitable outcomes. NGIN undertook three lines in inquiry:

? In what ways does digital equity support wealth generation, and what is its impact?

? How are communities advancing or planning to advance digital equity, especially through the Infrastructure Investment and Jobs Act (IIJA)?

? How can communities utilize social infrastructure to advance digital equity for BIPOC wealth creation and equitable economic opportunity?

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[1] Digital equity, as defined by the National Digital Inclusion Alliance (NDIA), is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy.

[2] Social infrastructure, as defined by Siegel, includes the communities, organizations, and public spaces that shape the way people connect with each other.

Research shows that wealth generation has strong, positive correlations to educational attainment, entrepreneurship, and property ownership, also known as the pathways for wealth generation. Financial literacy and management is an additional foundational component for maintaining and growing wealth. However, the correlation between digital equity and the potential to generate wealth through any of the above-mentioned pathways varies. Yet, NGIN research shows that irrespective of the pathway, digital skills and digital infrastructure are instrumental in BIPOC workers' and residents' ability to generate wealth.

NGIN also examined multiple models for advancing digital equity and their implementation in various locations across the U.S. The models vary in scale (from neighborhood level to dispersed throughout a state), their level of engagement of the community, and the primary focus (e.g., digital skill building or access to affordable internet connections and/or devices). These are shared as case studies in the report.

Key Takeaways and Opportunities for Action

Challenges in advancing BIPOC wealth creation through digital equity and social infrastructure, include the silos between wealth creation and digital equity organizations, which often don't overlap; models for states driving community engagement (which is a key component for accessing IIJA funding for improving and expanding digital infrastructure) are sparse; lack of disaggregated data impacts program design and implementation; and community-based organizations (i.e., social infrastructure) have limited capacity to advance digital equity and BIPOC wealth creation alone.

NGIN research insights and key takeaways were refined through stakeholder engagement, particularly through a roundtable discussion hosted by NGIN in June 2022 that included local, state, and national experts on digital equity and social infrastructure for advancing BIPOC wealth creation.

THE KEY TAKEAWAYS ARE:

→ Digital equity is necessary but insufficient by itself for advancing BIPOC wealth creation.

→ State pre-emption laws and restrictions on local solutions hamper internet affordability and limit access.

→ BIPOC wealth generation needs to be an intentional goal of digital equity plans in order to drive change.

→ Community engagement should be top priority in the design, development, and implementation of digital equity programs and services.

→ Engaging the social infrastructure to promote digital equity and wealth creation can be mutually reinforcing.

→ Sustaining long-term digital participation and empowerment would depend on how new-users in BIPOC communities continue to engage with the digital world.

⚡ Leaders at the local and regional level therefore have an opportunity to embed digital equity in all major economic advancement initiatives as well as explore ways to sustain long-term digital participation by empowering people and places.

Introduction

Access to reliable and robust broadband internet is fundamental to work, life, and generating wealth in today's economy. Digital tools are widely seen as crucial to increase economic mobility – for individuals and communities alike. From job postings and use of digital skills in jobs across industry sectors, to virtual learning and completing homework assignments, to the use of social media for building online communities and getting news, use of technology and digital tools is ubiquitous in modern life.

But access to digital infrastructure is not uniformly enjoyed by all: an estimated 42 million households in the U.S. lack broadband internet or the ability to purchase broadband services. Research by the National Digital Inclusion Alliance (NDIA) shows that Americans who lack home broadband service for reasons other than network availability are disproportionately people of color. Certain demographic groups such as the elderly or non-English speakers face additional barriers to digital inclusion including relevance of content, digital literacy, safety while being online, etc. A Pew Research study found that 1) the digital divide is more about consumer adoption than it is about network deployment; 2) the problem extends to non-rural and rural areas alike, and; 3) household economics is a larger driver of non-adoption decisions than geography (i.e., affordability is a bigger factor than availability of broadband). Although historic in nature and scope, only $65 billion (or roughly five percent) of the funding from the $1.2 trillion Infrastructure Investment and Jobs Act (IIJA) is designated for broadband infrastructure and digital equity.

There is also widespread acknowledgement that social and professional networks play a huge part in securing job offers or new business contracts. MIT research shows that the more "open" and "diverse" an individual's social network, the greater their income on average. The research in fact found that incomes varied less for different levels of education than it did for diversity of networks. It also suggests that from an economic development standpoint, communities with more diverse and open networks are linked to higher economic growth patterns. A Brookings study found that "race is the most important and consistent differentiator of social networks" – whites and men have more racially homogenous networks on average as compared to Black, Indigenous and People of Color (BIPOC) and women when it comes to networks that are related to economic mobility factors: jobs, housing and education. And yet there are limited efforts by economic and community development practitioners to invest in social infrastructure (including social networks built or sustained through digital means) for economic advancement.

In the October 2020 publication "Infrastructure: Building the World We Deserve", Siegel Family Endowment (Siegel) laid out a new way of looking at infrastructure, with three dimensions:

- Physical infrastructure, the built world, or the basic structures and networks necessary for a modern society to function effectively;
- Digital infrastructure, the data, hardware and software, coding, and operating systems that make up the digital world, as well as the assets through which that world is transmitted: cell towers, broadband cables, computer networks, and satellites; and
- Social infrastructure, the communities, organizations, and public spaces that shape the way people connect with each other.

Siegel awarded a grant to the New Growth Innovation Network (NGIN) in November 2021 to examine how digital equity (which is broader than digital infrastructure, and explained below) and social infrastructure, as defined above, can be leveraged for wealth generation among BIPOC, and the role of economic leaders and organizations – locally and regionally – in advancing more equitable outcomes. NGIN undertook three lines in inquiry:

(?) In what ways does digital equity support wealth generation, and what is its impact?

(?) How are communities advancing or planning to advance digital equity, especially through the Infrastructure Investment and Jobs Act (IIJA)?

(?) How can communities utilize social infrastructure to advance digital equity for BIPOC wealth creation and equitable economic opportunity?

The project approach included desk research, stakeholder engagement interviews with national experts as well as local and regional leaders from digital equity focused organizations, wealth creation organizations, and community-based organizations. Additionally, NGIN conducted a roundtable of local and national leaders to synthesize insights and recommendations for action.

Digital equity, as defined by the National Digital Inclusion Alliance (NDIA), is "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services."

Wealth Generation through Digital Equity and Social Infrastructure

NDIA views digital equity as a goal to be achieved, not a current reality. Several components are necessary to achieve that goal:

- ➔ Affordable and reliable broadband internet

- ➔ Devices that allow users to connect digitally and meet their needs

- ➔ Skills to use digital tools safely and efficiently

- ➔ Quality content and applications to encourage participation and usage of digital tools

- ➔ Technical support for troubleshooting

There are many other definitions of digital equity, most of which include at least the first three components. Yet, users can take full advantage of digital technologies only when all these conditions are met. Many communities, including BIPOC, underinvested urban neighborhoods, and rural and tribal areas face systemic barriers in accessing and utilizing digital infrastructure and digital tools. These barriers must be dismantled to unlock the full potential of technology to support wealth creation.

Pathways for Wealth Generation and Digital Equity

Broadly speaking, research shows there are three main historical pathways for individuals to generate wealth – education, entrepreneurship and employment, and property ownership. It should be noted that home ownership is the primary category, but commercial property ownership should not be discounted. Financial literacy and management are key foundational components as well.

Digital tools exist within each of these pathways to support BIPOC wealth generation, though the correlation between the utilization of digital tools and outcomes is not equally strong across all. Additionally, not all workers and residents have equal access to digital infrastructure and tools, hampering wealth creation. BIPOC workers, residents of poorer urban neighborhoods, and rural communities struggle with underinvestment and face systemic barriers in fully participating in the digital economy.

Notwithstanding any progress that individuals can make towards wealth generation and economic mobility, systemic barriers will continue to counteract that progress and neutralize outcomes. Intentional, anti-racist systems and policies are needed to not only unlock the potential for BIPOC wealth generation at-scale, but also to create the enabling conditions for equitable outcomes.

"There are no actions that Black Americans can take unilaterally that will have much of an effect on reducing the racial wealth gap. For the gap to be closed, America must undergo a vast social transformation produced by the adoption of bold national policies....." – Prof. William "Sandy" Darrity, *Duke University*

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EDUCATION

There is a long established and strong positive correlation between higher educational attainment and earnings, although benefits of higher education accrue more for whites and males than other demographic groups. Digital skills – which can range from using internet tools for research, to emailing and digital marketing, to coding and web-based design – often result in higher salaries and career progression. Brookings found that gaining digital skills has significant and positive effects on real annual wages even when controlling for education level, and that the wage premium for computer skills nearly doubled between 2002 and 2016.

However, digital skills are not equally prevalent across demographic groups. A study by the National Skills Coalition found that while Black workers comprise 12 percent of the worker population, they represent 15 percent of the workers with no digital skills and 21 percent of workers with limited skills. Similarly, Latino workers comprise 14 percent of worker population, but represent 35 percent of workers with no digital skills and 20 percent with limited skills. Conversely, 17 percent of all Black workers have no digital skills and 32 percent of Latino workers have no digital skills.

Lack of high-speed broadband connectivity at home also impacts educational outcomes. Even though research around learning outcomes of virtual learning is mixed, lack of reliable internet connectivity at home impacts students' ability to fully participate in academics in an increasingly digital world, also known as the "homework gap". Black and Latino adults are much more likely to not have a laptop and/or broadband internet at home as compared to their White counterparts; many also contend that this is a major disadvantage for them.

Overall, even as society values digital skills and ready to pay higher wages to workers with these skills, BIPOC workers are much more likely to lack digital skills and lack the means and support to acquire those skills, thus hampering their ability to effectively partake in the digital economy.

ENTREPRENEURSHIP

Entrepreneurship and wealth creation is also strongly correlated. Digitally advanced small businesses realize four times more revenue growth and earn two times as much revenue per employee. However, the same study also showed that pre-pandemic, at least 80 percent of entrepreneurs were not fully utilizing the digital business tools available in the market to support small businesses. Additionally, one in five small businesses report that their employees lack digital skills necessary for conducting business online with a greater skills gap for BIPOC entrepreneurs.

Digital skills and basic digital literacy are necessary for most jobs now, and digital access is needed to even apply for and obtain entry-level employment. Limited connectivity and devices at home among lower-income households, particularly BIPOC, therefore affects their ability to apply for jobs.

Research also shows that "76% of Blacks and 62% of Hispanics could get shut out or be under prepared for 86% of jobs in the U.S. by 2045. If this digital racial gap is not addressed, in one generation alone, digitization could render the country's minorities into an unemployment abyss."

HOME OWNERSHIP

Home ownership, and property ownership more broadly, has long been considered among the best mechanisms for wealth creation across all income levels. For BIPOC households, it holds the vast majority of their wealth (71 percent of BIPOC wealth on average is held in equity in home, compared to 51 percent for white households). The relationship between digital equity and home ownership, however, is not well studied.

But there is research demonstrating the value of digital access and digital skills for households living in Department of Housing and Urban Development (HUD) assisted housing, i.e., low-income rental housing. These households have particularly low connectivity rates, limited device access, and other barriers to Internet access. HUD offers a promising platform, ConnectHomeUSA, to significantly increase digital inclusion rates and improve residents' quality of life for program participants.

More research is necessary to better understand the role of digital equity in advancing wealth creation through home ownership and housing.

FINANCIAL LITERACY AND MANAGEMENT

Wealth begets wealth, and a key to growing it is effective wealth management. Financial literacy is considered crucial to unlocking the underline foundation of economic prosperity. Understanding basic financial principles is the first step, but research points to a racial gap in financial literacy, with Black, Latino and Native American populations tending to have lower financial literary rates as compared to White and Asian population groups. Lack of digital financial skills is an added barrier to creating or improving livelihoods through the digital economy.

In conclusion, irrespective of the pathway for wealth creation, lack of digital skills and lack of access to digital infrastructure hampers BIPOC workers' and residents' ability to create wealth.
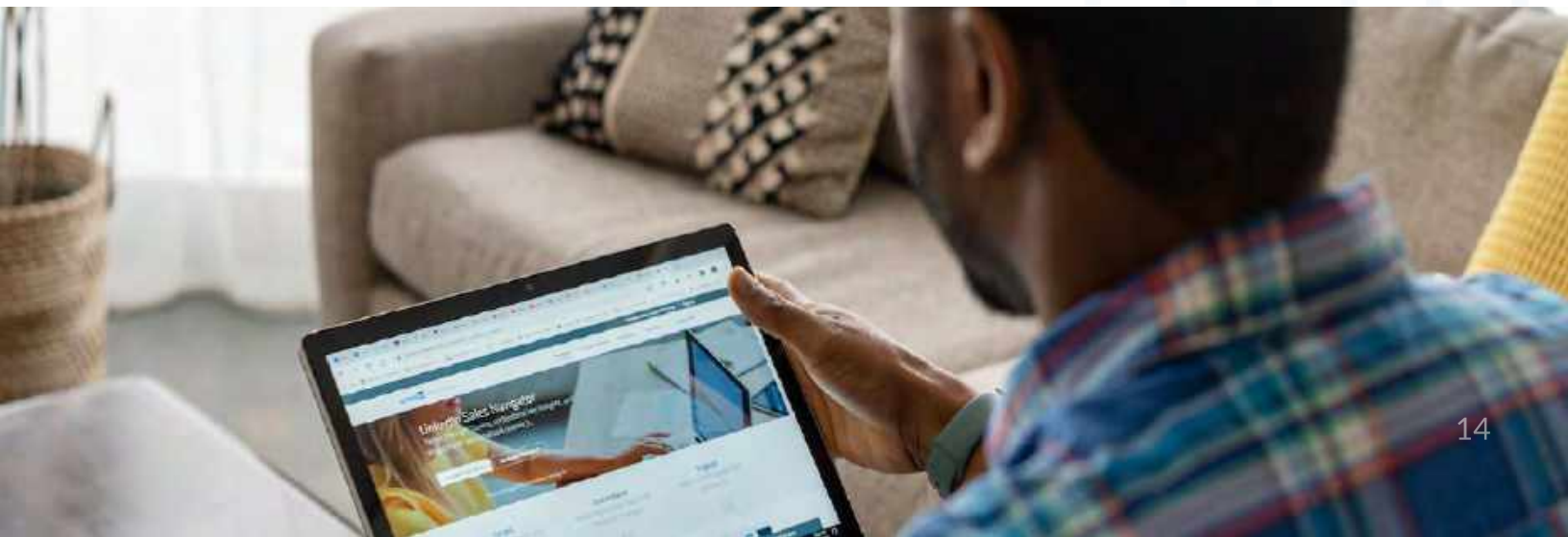
Social Infrastructure and Wealth Creation

Research on the role of social infrastructure in wealth creation, BIPOC or otherwise, is practically nonexistent. It is partly complicated by the differences in definitions of social infrastructure, where some definitions refer to it as the support systems that help workers do their jobs, such as childcare or home-based services for the elderly (Washington Center for Equitable Growth), while the academic literature predominantly references "social capital" as one's loose personal or professional ties that can help with job searches or business contracts. Further research on the connection between social infrastructure as defined by Siegel (i.e., community-based organizations for the purposes of this report) and access to wealth creating opportunities is needed.

Yet, research on an individual's social capital and access to wealth creating opportunities provides some insights on the disparity in outcomes for BIPOC workers and residents.

Social capital is an integral conduit for economic mobility, according to a Brooking's study. Professional social capital can provide access to information and resources to help advance one's working and learning journeys. In the current labor market, "as much as 80 percent of jobs are filled through networking, which leaves [workers] from less privileged backgrounds at a disadvantage," say JFFLabs Executive Director Kristina Francis and Andy Chan of Wake Forest University. Although Blacks and Whites both benefit from a network-based job search, the approach doesn't translate to job offers for black workers as often as their white counterparts.

Research on the translation of social capital to other types of wealth generating opportunities, such as housing or financial management, is unclear.

Emerging Challenges to Advance BIPOC Wealth Creation Through Social and Digital Infrastructure

Addressing the persistent and widening racial wealth gap is a goal for many communities and organizations in the U.S. Advancing digital equity is a key component and a variety of local, regional, and national organizations are deeply involved in this work. The historic federal Infrastructure Bill's (IIJA) $65 billion investment for broadband infrastructure is much needed and the emphasis on digital equity and community engagement is very welcome. However, challenges remain in advancing digital equity and BIPOC wealth creation.

MODELS FOR STATES DRIVING COMMUNITY ENGAGEMENT ARE SPARSE

State governments have been charged with developing digital equity plans as a conduit for accessing funding to build broadband infrastructure. Experts, however, contend that disinvested communities are at risk of being left out as states prepare their digital equity plans because states don't typically directly engage private citizens, especially from disinvested communities, in their decision-making processes. Some states are partnering with universities while others are pulling together coalitions of myriad stakeholders that in some cases include community leaders. Direct engagement of underserved workers and residents is key to ensure an equitable planning process, but success models are sparse.

WEALTH CREATION ORGANIZATIONS AND DIGITAL EQUITY ORGANIZATIONS OFTEN DON'T OVERLAP

There is a lack of collaboration among digital equity organizations and organizations focused on wealth creation such as economic development organizations, chambers of commerce, institutions of higher education, etc. NGIN research finds that most digital equity organizations are primarily focused on infrastructure provision, digital skills training and/or providing affordable internet plans and devices. There are only a few communities like Charlotte, NC, that have taken NDIA's Digital Navigators program a step further to not only help with digital connectivity issues but also connect participants to other services such as workforce training or rental housing assistance. But mostly around the country, digital equity and wealth generation organizations don't overlap.

Conversely, educational institutions, hospitals, small business service providers, etc. are trying to address the digital divide because doing so is essential for them to continue providing their services. The trend accelerated the COVID-19 pandemic, though it started much earlier.

LACK OF DISAGGREGATED DATA AFFECTS PROGRAM DESIGN AND IMPLEMENTATION

The Federal Communications Commission (FCC's) maps of internet and mobile service coverage have been woefully inadequate and inaccurate for the longest time. Lack of disaggregated data at the sub-local level that can help organizations and decision makers understand the digital divide within a community (who is impacted, what they lack, etc.) is a huge hurdle for designing and implementing programs and interventions. In some cases, communities such as San Antonio, are deploying expensive, in-person data collection methodologies to fully understand the extent of the digital divide in their community, which are then used as inputs for decision making and planning. Although the FCC launched an updated map in late 2021, many concerns from previous versions were not addressed, highlighting the need for granular data to advance digital equity at local levels.

COMMUNITY-BASED ORGANIZATIONS (SOCIAL INFRASTRUCTURE) HAVE LIMITED CAPACITY TO ADVANCE DIGITAL EQUITY AND BIPOC WEALTH CREATION ALONE

NGIN research shows that at the community level, capacity of individual civic organizations to advance inclusive economic strategies – be it digital equity or otherwise – is constrained. It is often the biggest area of need in many communities, especially small and midsize cities. This can include lack of training, lack of data and/or technical skills to conduct analyses, limited staff, limited resources, etc. Therefore, their ability to connect with organizations and/ or support the delivery of programs outside of their organizational mandate is restricted. Collaboration is often the best possible pathway forward.

Promising Policies and Models to Advance Digital Equity

Communities are experimenting with new models and utilizing the opportunities afforded by the tech industry to change the historical narrative around BIPOC wealth creation. Innovative approaches to advance digital equity are recognizing the need to go beyond the basic three-pronged approach (broadband access, computing devices, and digital literacy) to also include technical support services and useful content. Yet, wealth creation – especially for BIPOC – is a goal for only a few.

NGIN analyzed several digital inclusion plans developed mostly at the local level prior to the IIJA, as well as a variety of models and frameworks for advancing digital equity, ranging from neighborhood-level, small scale programs to broader, complex regional ecosystems with multiple stakeholders. These are offered here as examples of how communities are addressing the digital divide locally and regionally and can be used as inspiration for wider adoption across the country.

NEIGHBORHOOD LEVEL
Locals developing their communities' internal capacity to build and maintain community wireless networks in underserved neighborhoods.

Detroit, MI

COMMUNITY-BASED ORGANIZATIONS
Public-private effort by grassroots organizations to advance digital inclusion in high-need neighborhoods through extensive data collection efforts

San Antonio, TX

ECOSYSTEM LEVEL
Utilizing a deep understanding of the inter-related systems and implementing a strategy which aims to restructure those systems.

Kansas City, MO
Kansas City, KS
Tulsa, OK

DIGITAL NAVIGATORS
Working with individuals to identify and assist in meeting their unique technology needs.

Maine
Charlotte, NC

Neighborhood Approach

Locals developing their communities' internal capacity to build and maintain community wireless networks in historically excluded neighborhoods.

DETROIT, MI

Detroit Community Technology Project recognizes access to the internet as part of the fundamental human right to communicate. They are working to ensure fair access to technology through their Equitable Internet Initiative (EII). EII supports historically marginalized residents to build and maintain neighborhood-governed internet infrastructure that fosters accessibility, consent, safety, and resilience. The complementary Digital Stewards Program trains neighborhood leaders as apprentices and provides them with the technical and community organizing skills to design, build, and maintain the community wireless networks. It is a highly consultative process that engages neighborhood residents at each step of the process.

Community-Based Organizations Approach

Public-private effort by grassroots organizations to advance digital inclusion in high-need neighborhoods through extensive data collection efforts

SAN ANTONIO, TX

The Digital Inclusion Alliance of San Antonio (DIASA) was founded in 2016 although the efforts around digital inclusion started a few years earlier with HUD's ConnectHome program. DIASA is a public-private coalition that aims to advance digital inclusion for educational opportunities, competitive employment, financial prosperity, and greater community participation.

City of San Antonio in partnership with the University of Texas at San Antonio and community-based organizations undertook an extensive effort to gather data from residents impacted by the digital divide in 2019. Although state pre-emption laws significantly restricted local solutions prior to the pandemic, the effort was targeted to develop a more detailed understanding of the needs and gaps at the neighborhood level. The university deployed student teams throughout the city to gather responses to the Digital Inclusion Survey and Assessment.

Questions included level of connectivity at home, devices, comfort level of using internet for various activities, etc. The questionnaire design was informed by an advisory committee comprising of local community-based organizations, local libraries, residents, and other stakeholders. Additional efforts were made to gather responses such as through focus groups, providing monetary incentives, marketing through public radio and grocery stores, placement of survey forms in senior and youth centers, targeting high need neighborhoods, etc. The survey was also made available in Spanish. Additional data from National Equity Atlas helped understand disparities based on income, race, educational attainment, etc. The effort was funded by the city and county.

The timing of the effort could not have been more fortuitous. At the start of the pandemic, the city worked with three school systems to connect students beyond the classroom, based on needs highlighted through the data. DIASA has also shared the data and methodology with the state to inform the development of their digital equity plan.

DIASA is now encouraging the city to implement the Digital Navigators program and connect it to the local 311 program, in large part driven by the deeper understanding of local needs and gaps highlighted through the data collection efforts.

Ecosystem Approach

Utilizing a deep understanding of the inter-related systems and implementing a strategy which aims to restructure those systems.

KANSAS CITY, MO AND KANSAS CITY, KS

Kansas City has a substantial legacy dedicated to digital infrastructure, beginning with becoming the first Google Fiber Community in 2011. It was also evident early on that without dedicated efforts to address issues of digital exclusion, the benefits would not accrue to all residents equally. KC Digital Drive was established as a regional coalition to address inequity issues and provide the leadership. The efforts gained traction into taking an ecosystem approach through coalition building between city government, nonprofit partners, for-profit partners, and connector coalitions. The main components of the ecosystem today are:

- The regional coalition, KC Digital Drive, which serves as a connection between the cities and industries in the region to implement a comprehensive strategy.
- The Mid-America Regional Council (MARC) serves as the governing entity and supported the planning efforts for the 2022 Broadband and Digital Equity Investment Strategy, channeling funds where most needed to address the digital divide.

- The <u>Kansas City Coalition for Digital Inclusion</u> fosters digital equity and access to technology by helping individuals get devices, training and/or internet access. It has over 200 members spanning nonprofits, individuals, government entities and businesses.
- Many communities and organizations in the region have their own plans to guide implementation. For example, the Kansas City <u>Digital Equity Strategic Plan</u>, focuses on Kansas City, Missouri, with an emphasis on economic mobility, provides the overall guidance and coordination across the multiple components.

The implementation is not without its challenges. Part of the region that falls within the Kansas state lines continues to face digital inequities. Digital KC NOW, the action arm of Kansas City's digital equity initiative partnered with local nonprofit aSTEAM Village to develop internet point-to-point service where it does not currently exist. <u>aSTEAM Village Inc</u> offers hands-on learning programs and connections to STEM professional/educational organizations to guide and support K-12 students and adults.

TULSA, OK

<u>Black Tech Street</u> (BTS) seeks to reclaim the black economic powerhouse legacy of Black Wall Street and develop a new "global capital of black tech." They argue that the Tulsa economy can, if designed intentionally and inclusively, lead the country in innovation and become a powerful engine of wealth creation for Black entrepreneurs. Technology and digital access, with a focus on Black residents who currently are not a part of the technology sector, underpins the entire approach.

As a fledgling organization founded in 2021 on the centennial of the Tulsa Race Massacre in Greenwood, BTS has designed a strategy to bring a black wealth creation system back to Tulsa.

They engage leaders in tech to leverage their power within current systems and follow this guidance to reform the tech industry's homogeny and lack of inclusivity. Organizations and individuals participate in ecosystem change through three prongs (1) building on the physical footprint of tech in Tulsa, (2) investing liquid capital into Tulsa's tech market, and (3) by calling on networks to influence others to do the same. Strategies within these prongs include:

- Build
  - Co-designing or relocating programs/institutions to Tulsa
  - Encouraging working remotely from Tulsa
  - Opening a second office in Tulsa

- Invest
  - Committing capital for the development of blended funds/mechanisms
  - Investing in the Black Tech Street Initiative
  - Investing in experiential and educational opportunities

- Influence
  - Elevating the narrative of Black Wall Street's rebirth as Black Tech Street
  - Endorsing the emergence of Tulsa's Black tech ecosystem as the new hub for Black economic development
  - Mobilizing national support

Initial successes include partnership with MS Airband to expand broadband coverage, partnership with HP to add seven Tulsa educators as HP Fellows through the Reinvent the Classroom program to bridge the digital learning gap across race, geography, and class through innovative educators, and several partnerships to advance tech in myriad ways in Tulsa.

Digital Navigator Approach

Working with individuals to identify and assist in meeting their unique technology needs.

MAINE

Maine Digital Equity Center's Inclusion Initiative seeks to expand digital literacy services to traditionally underserved populations to provide job training/employment-related education as well as technology training to older adults. Classes fall into three curricula designed for the digital literacy needs of adults where they are in their life – whether it be raising a family, going to school, improving employment opportunities, running a business, or looking forward to retirement and/or aging in place. Partner Onsite Classes Program allow locations throughout Maine to have in-person sessions for Work & Business, Home & Education, and Aging Well with Technology. To complement digital skills building, the Maine Affordable Devices Program provides free devices to Maine residents who are of low to moderate income and are willing to take the classes necessary to improve their digital literacy skills.

CHARLOTTE, NC

The Center for Digital Equity (CDE) in Charlotte, NC (formerly known as Digital Charlotte) focuses on addressing the digital divide in Mecklenburg County by co-creating solutions with residents, and public and private sector partners through a collective impact strategy. It is housed at the Queens University of Charlotte and is an outgrowth of investments and efforts focused on building media literacy and digital equity.

CDE primarily conducts work through an advisory board and a community council. The advisory board is made up of executive level leadership from public and private sector partners to ensure alignment of digital equity initiatives across key sectors. The centerpiece, however, is the community council which produces recommendations on how the county can become more digitally equitable and is comprised of residents and public and private sector partners. Any resident or representative of public or private sector partners operating in the county is able to join the community council.

CDE is deepening its work based on recommendations developed by the community council. The council gathers input both from its council members as well as direct engagement in the community. The precursor to these engagements is trust building. Design and implementation of programs and initiatives has been successful by being proximate to the high need areas and co-creating solutions with local residents. For example, CDE recently implemented the Digital Navigators program as part of the local 311 system and is supplementing it with in-person resources in neighborhoods to advance digital literacy and help signup for the Affordable Connectivity Program (ACP) for devices and broadband internet subscriptions.

Even though CDE programs don't explicitly have an overarching wealth generation framework, program managers envision connecting their work to other ecosystems such as workforce development, entrepreneurship, and financial literacy to enable longer term economic mobility opportunities in the digital economy. They are examining ways for the ecosystems to better connect and for program participants to be able to move more efficiently from one system to the next without having to go through multiple application or intake processes.

Key Takeaways

They key insights garnered here are based on desk research, stakeholder interviews with local and national leaders in digital equity and social infrastructure, as well as a roundtable hosted by NGIN in summer 2022 to further the conversation at the intersection of digital equity, social infrastructure, and BIPOC wealth creation. The roundtable also aimed to inspire action among the stakeholders to advance digital equity and BIPOC wealth creation in their own communities.

→ **Digital equity is necessary but insufficient by itself for advancing BIPOC wealth creation.** NGIN research found sparse evidence of local and regional organizations connecting digital equity investments to wealth creation opportunities. NDIA's Digital Navigators program, for example in Charlotte, is designed to help users with technology related needs, and continue to connect them to additional services and programs that might be useful even after the basic technology needs are met. Integration of a wealth creation framework into the digital navigator's program is a welcome addition with lots of room for scaling throughout the country.

→ **State pre-emption laws and restrictions on local solutions hamper internet affordability and limit access.** Even though the Federal Communications Commission (FCC) considers municipal broadband a best practice solution for providing internet services in underserved and unserved areas, 17 states have pre-emption laws prohibiting municipal broadband development, and another five states have severe restrictions on it. This leaves many residents and workers in underserved areas without any alternatives for affordable internet services or any service at all. Although the IIJA's Affordable Connectivity Program (ACP) provides discounts for internet services and devices to low-income households, many attendees at NGIN's roundtable shared that it might not be enough to make the plans available in their community affordable for all, such as the housing insecure who are unable or hesitant to commit to a monthly subscription. Attendees also shared that for communities that are limited to working with traditional internet service providers (IPs), access and affordability will continue to be a challenge. IIJA is also structured around state-level leadership, and therefore unlikely to help address the issues around state pre-emption.

BIPOC wealth generation needs to be an intentional goal of digital equity plans in order to drive change. Although education and entrepreneurship have strong correlation to BIPOC wealth generation, digital literacy programs (education) and helping BIPOC small businesses with digital connectivity (entrepreneurship) are not enough. Unserved and underserved residents, workers and businesses need added explicit support to connect to wealth building opportunities.

- For example, in a study conducted in Atlanta and LaGrange, Georgia, participants receiving free digital skills training were disappointed when the skills training did not translate to a job offer in the end. Connections to employment, however, are especially difficult now with limited entry level jobs available in the market.

- Skills training organizations should also consider offering programs that help participants update their digital skills on a regular basis in order to stay up to date with ever-changing technology and continue to stay engaged in a digital world.

- Entrepreneurs, on the other hand, need support connecting to new business opportunities as a result of their expanded digital capabilities and/or new markets. NGIN roundtable attendees also recommended focusing on building higher level skills such as Cybertech, artificial intelligence (AI), non-fungible tokens (NFTs), blockchain, etc., especially among minority-owned businesses and BIPOC workers and youth, so that they can tap into emerging wealth creating opportunities and retain wealth over generations.

Community engagement should be top priority in the design, development, and implementation of digital equity programs and services. Community engagement can range from tokenism to limited engagement to effective community power. Many community-based organizations share frustrations that community leaders are often invited to participate as part of community engagement, but merely to provide information or insights, and not engaged in the decision making process. Within the digital equity space, Detroit's Digital Navigators program is often considered a best practice where the community has been fully engaged in the design, development, and implementation of the program, including infrastructure build out, maintenance, design and delivery of digital skills training programs, etc. If the community is not engaged from the design phase, it is difficult to cultivate engagement during the implementation phase or later.

Effective community engagement helps build capacity of organizations and individuals involved over time to address gaps and implement innovative solutions to emerging challenges. NGIN roundtable participants highlighted that community engagement must start by de-prioritizing technology because that disengages people before the process even starts. The point is community engagement, not technology.

OPPORTUNITY FOR ACTION

Embed digital equity in all major initiatives. Economic development organizations and economic leaders in the community have an historic opportunity to advance digital equity locally and regionally. Connecting digital equity investments to workforce training, entrepreneurship development, small business support, etc. will help accelerate wealth building among BIPOC residents and workers.

Engaging the social infrastructure to promote digital equity and wealth creation can be mutually reinforcing. Community based organizations such as libraries, youth centers, worker training organizations, etc. play a critical role in the community, especially in serving low- and middle-income residents, workers, and BIPOC. These organizations can serve as a bridge between digital equity focused organizations and economic development entities. Local leaders can act as catalysts to further strengthen the connections between social infrastructure, digital equity, and wealth creation.

Sustaining long-term digital participation and empowerment would depend on how new users in BIPOC communities continue to engage with the digital world. Therefore, part of the digital equity and wealth creation work should focus on whether there is content available that engages previously excluded people from BIPOC communities. Examples include whether businesses and workers are able to find resources to support themselves, connections to other businesses (or workers), access to markets, access to employment opportunities and job seekers, connections to other residents in the community, etc. Taking it a step further, communities should consider who gets to be a content creator, and if the opportunity is not equally shared across the different demographic groups, then leaders should determine ways to enable greater engagement and participation.

OPPORTUNITY FOR ACTION

Sustain long-term digital participation by empowering people and places. Remove barriers to digital access through policy and targeted investments in unserved and underserved areas to not only enable previously excluded BIPOC residents and workers to utilize digital tools, but also empower them to fully engage in the digital world.

Appendix 1:
List of Interviewees

NAME	ORGANIZATION
Adrianne Furniss and Revati Prasad	*Benton Foundation*
Amalia Deloney	*Deutsch Foundation*
Amy Huffman	*National Digital Inclusion Alliance (NDIA)*
Bruce Clark	*The Center for Digital Equity, Queens University of Charlotte*
Candy Mendoza	*City of San Antonio, TX*
Cheryl Washington	*East Baltimore Dev Initiative*
Colin Rhinesmith	*Digital Equity Research Center*
Darrene Hackler	*Smart Incentives*
Erika Smith	*Microsoft*
Katherine Maher	*Wikimedia (former)*
Lena Geraghty	*NLC*
Leslie Scott	*Internet Access Support Program (Kansas City)*
Marlene Nagel	*MARC*
Miguel Leon	*20 MM Foundation*
Shireen Santosham	*City of San Jose (former)*
Susan Corbett	*Digital Equity Center, Maine*
Tyrance Billingsley	*Black Tech Street, Tulsa*