A DIGITAL EQUITY PLAN

FOR THE CITY OF PHILADELPHIA

JANUARY 2022

Office of Innovation & Technology

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LETTER FROM
THE CIO

The internet is a utility, a necessity to modern life for the exchange of information, commerce, and access to government services. Philadelphia does not lack for access to broadband internet. Fiber and coaxial cables sprawl through underground conduits across the city, nearly mirroring the network of water and gas lines. Yet Philadelphia experiences a digital divide between households that can consistently afford subscriptions to high quality broadband services and those who cannot-the "subscription vulnerable." The divide is even starker for residents who experience periodic homelessness or housing insecurity, both which elevate the challenges of selecting and maintaining even the most basic and low-cost internet service. The pandemic has made the digital divide and its inequities and consequences for day-to-day survival a visible reality, if not a visceral experience, for all Philadelphians. When schools, offices, and stores are shuttered and non-emergency medical services move online, those without consistent and reliable internet access are cut off from the world—not just from information, but from nearly all interactions necessary to learn, buy goods, stay connected with jobs and family, and access government services.

This Digital Equity Plan for the City of Philadelphia represents the City's commitment to addressing the inequities that contribute to the digital divide including issues of affordability, digital literacy and support, housing insecurity, and language, cultural, and racial barriers. The Plan builds upon a strong foundation of work established by the City's Office of Innovation and Technology (OIT). For over a decade, OIT has led intergovernmental teams to tackle the digital divide. First, OIT developed the KEYSPOT network of public computing centers, followed by establishing the Digital Literacy Alliance and coordinating the release of over $1,000,000 in grants to community-based organizations. At the onset of the pandemic, OIT collaborated closely with the Mayor's Office of Education and philanthropic and corporate partners to develop PHLConnectED, the City's program that has provided over 18,000 free internet connections to pre-K through 12 grade households. All these efforts have had an impact, and the digital divide is gradually closing. In 2021, the City commissioned an assessment of household internet use and found that 84 percent of households now have wired, in-home broadband - up from 70 percent in 2019.

Through this Plan, OIT will evolve and expand its resources in partnership with other City agencies to lead on initiatives such as identifying dedicated funding sources for PHLConnectED and hotspot lending programs, while also fortifying and expanding the Digital Navigators model across the city. Other initiatives will include exploring local solutions to increase the number of low-cost, high quality broadband services available to the subscription vulnerable, equipping all City recreation centers with public Wi-Fi, and supporting an entity to scale up and manage PHLDonateTech to increase the volume of devices distributed to residents in need. Finally, benchmarking will play a key role. The City will invest in on-going data collection to measure the impacts and effectiveness of digital equity programs.

My sincere thanks to the team responsible for the creation of this plan. It is because of their passion, skill, and hard work that many impactful digital equity programs are already underway and are making a difference in the lives of Philadelphians.

Best Regards,

Mark Wheeler

Mark Wheeler
Chief Information Officer for the City of Philadelphia

INTRODUCTION
& BACKGROUND

State of Philadelphia

In October 2021, the City of Philadelphia publicly released <u>"Connecting Philadelphia: 2021 Household Internet Assessment Survey,"</u> a new, up-to-date report that provides a clear picture of the state of digital access in Philadelphia today. Philadelphia is one of just a few cities across the nation that took this important step to assess its current digital divide. This data provides the city with a starting point that informs the scope of our Digital Equity Plan and ensures we reach those who have been unable to take advantage of the digital world. The report indicates the following:

1

Significant progress has been made since the pandemic began. As of July 2021, broadband adoption in Philadelphia is higher than it was two years ago. Free and discount programs have been crucial levers supporting this progress.

2

Programs like PHLConnectED and other discount internet access programs make a difference. This is especially true for K-12 and low-income households, with 21% of K-12 households taking advantage of these programs.

3

The public is largely unaware of available discount programs. Many residents who could take advantage of programs like Comcast's Internet Essentials and PHLConnectED do not know about them.

4

"Subscription vulnerability" is a real concern for Philadelphians. Broadband consumers are subscription vulnerable if they:

» have experienced service interruption during the pandemic;

» would have difficulty keeping their internet service without a discount; and/or

» are low-income (single-person household income of under ~$20,000/year).

5

Affordability is the key barrier to access. Although other barriers were listed, a plurality cited affordability when asked to identify the most important reason someone does not have high-speed internet at home.

6

Groups with the lowest home broadband adoption follow national patterns. Senior, African American, Hispanic, and low-income residents are less likely to have home broadband or access to a working device.

KEY DATA FROM
"CONNECTING PHILADELPHIA"

84% of Philadelphia households have wired, high-speed broadband, an increase from 70% in 2019.

Only 75% of Philadelphia households have a working desktop or laptop computer, which is necessary for many essential online tasks.

Discount programs account for a **9-percentage** point increase in broadband adoption in Philadelphia and a **21%** point increase in adoption for K-12 households.

33% of Philadelphians are estimated to be subscription vulnerable.

42% said that affordability of internet service or cost of the device was the most important reason they don't have internet access.

75% of low-income residents said over $20/month for internet access would be too high.

WHAT IS
DIGITAL EQUITY?

The condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy.

- National Digital Inclusion Alliance

The goals and strategies in this plan serve as a roadmap for Philadelphia to achieve a baseline of **digital equity** across the city over the next five years. Recent progress resulted from specific programs that address affordability and access (like PHLConnectED). These programs should be sustained over time to ensure that we reach those who need support to get and stay connected. Despite this progress, over 96,000 Philadelphia households[1] are still without broadband access at home. The COVID-19 pandemic further highlighted the importance of at-home internet access for full participation in school and the labor force. The Federal Reserve Bank of Philadelphia found "a 27-percentage point gap in labor force participation between workers with and without an at-home broadband computer in Philadelphia." Wired, in-home broadband remains the ideal standard for providing the fastest and most reliable high-capacity internet connectivity to enable an entire household to be online at the same time. With new expectations for remote work and school, coupled with the reality of housing insecurity, high-capacity, ubiquitous wireless networks will also be critical and necessary to close the digital divide. Both high-capacity wired and wireless solutions must be affordable for all residents. The federal government is investing in digital equity and broadband access. Philadelphia should act now to take advantage of these new funds.

Addressing Challenges and Barriers

Input from partners and community members revealed key challenges that Philadelphia will need to address. These challenges include difficulty in reaching the three key pillars of digital equity: Internet Access, Devices, and Digital Literacy. If Philadelphia is to prepare its workforce with digital access and skills and ensure every resident has full ability to use the digital world, the City will need to address the following challenges:

1

Affordability. The affordable price point for internet for nearly one-third of Philadelphians is between $10-20/month, and even this price may be too high for some residents. Maintaining programs like PHLConnectED and taking full advantage of the new federal Affordable Connectivity Program will be essential in closing affordability gaps.

2

Speed. The current Federal Communications Commission (FCC) defines broadband at 25/3 megabits per second (mbps), a speed insufficient for today's household needs[2]. Philadelphia's wired solutions now exceed this FCC minimum, but overall Internet Service Provider (ISP) speeds should increase to a minimum standard of 100/20mbps, the speed identified in the Infrastructure Investment and Jobs Act[3].

3

Limited internet options. Limited wired ISP consumer options exist in Philadelphia, and only one costs under $20/month. Philadelphia needs more low-cost, wired and wireless solutions that don't cut off or degrade service because of data caps. Additionally, subscribers may accrue debt with one provider and then find themselves without other affordable options.

4

Housing vulnerability. Housing insecure residents require reliable internet access beyond fixed, wired broadband to buildings. This includes ensuring reliable, fast Wi-Fi access across neighborhoods outside of Center City or other high-income zip codes.

5

Prohibition on municipal networks. The City of Philadelphia is prohibited by state law from establishing a municipal network but could leverage its assets through public-private partnerships to enable community-based organizations or small and Minority, Women, Disadvantaged Business Enterprise (MWDBE) local businesses to setup and run neighborhood wireless networks for home access.

6

Intersecting barriers or needs. Many community members face multiple challenges that might include limited English proficiency, physical or intellectual disabilities, and limited literacy skills. Connecting with local trusted partners who have built strong relationships with community members is critical in supporting these intersecting challenges.

7

Limited human touchpoints. Those with limited digital access and skills rely on human touchpoints when getting connected or engaging online. While time-intensive and resource-heavy, a human, high-touch network must be in place to provide a range of support offered in person, on the phone, and in print to residents—particularly for those with limited English proficiency, seniors, the home-bound, and people with disabilities.[4]

Key Populations

The strategies and initiatives outlined in the City's Digital Equity Plan do not note all specific populations in need because barriers to access are varied and complex. Instead, the "Connecting Philadelphia" internet assessment report helps identify the largest gaps in internet and device access. Populations in need, according to this report, include:

- » K-12 households
- » Seniors
- » African American households
- » Hispanic households
- » Multi-lingual households
- » Low-income residents

K-12 households

- **9%** or **12,000 households** still lack home broadband subscription.
- **8%** or **11,000 households** lack any computing device.
- **14%** of K-12 Hispanic households lack any computing device.

African American and Hispanic Households

- **82%** of Black and **77%** of Hispanic households have a broadband subscription compared to **88%** of White households.
- **67%** of Spanish-speaking Hispanic households have a broadband subscription.
- **78%** of Black and **71%** of Hispanic households have a working computing device compared to **86%** of White households.
- **58%** of Spanish-speaking Hispanic household have a working device.

Seniors

- **67%** of seniors 65 and older have a broadband subscription.
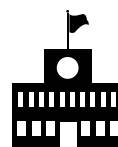- **59%** have a working device.

However, community members and contributors to this plan shared that initiatives and programs must be available and inclusive for all residents, regardless of immigration status or other challenges. Although not an exhaustive list, some additional key populations that were repeatedly mentioned by advocates and/or where research demonstrates there is a need for more intensive services, include:

- » Adult Education learners and Workforce students[5]
- » Immigrants, undocumented residents, and refugee households[6]
- » People who are currently incarcerated and returning citizens[7]
- » People with disabilities[8]
- » People with chronic or complex medical conditions/medically fragile residents[9]
- » People who are homeless or experiencing housing insecurity[10]
- » Small business owners

Low-income residents

- **71%** of those who make under $20k/year have a broadband subscription.
- **63%** have a working device.

Educational Attainment

- **64%** of those without a high school degree have a broadband subscription.
- **53%** have a working device.

Historical and Current Digital Inclusion Initiatives

The City of Philadelphia has been engaged in digital equity work for over fifteen years, beginning with the Wireless Philadelphia effort to bring low-cost wireless access to everyone. This initial effort produced a strong group of local digital equity advocates that later enabled Philadelphia to win two large grants under the Obama Administration's Broadband Technology Opportunities Program (BTOP).

Through these grants, the City launched in 2011 its network of public computing centers (PCCs), (called KEYSPOTS) in recreation centers, community-based organizations, and Free Library locations with a suite of digital literacy programs offered by dozens of local providers. During the pandemic, some of these centers served as Access Centers for remote learning while others closed. City PCCs will reopen in 2022 and be known as Keyspot Innovation and Technology (KIT) Centers. Today, the City manages a portfolio of digital equity programs that have enabled thousands of Philadelphians to access the Internet, find a working device, or receive digital literacy training.

KEYSPOT Innovation and Technology (KIT) Centers

- Provides community technology access and enhanced digital skills programming at recreation centers.
- Offers public access to computers, digital literacy training, and pathways into Adult Education and Workforce programs.
- Funded through a public-private partnership
- Managed by Office of Children and Families Adult Education and Philadelphia Parks and Recreation.
- Re-launching in 2022.

The Digital Literacy Alliance (DLA)

- Established in 2016 and facilitated by the City to address digital inclusion needs.
- Serves as a grantmaking and advisory body that has distributed over $1M in funds to local community-based organizations for innovative digital literacy projects.
- Seeded by the City's cable franchise agreement with Comcast (enables the franchise holder to use the City's "rights-of-way" to operate its system and deliver cable service) and supported by funds from industry and philanthropy.
- Managed by the Office of Innovation and Technology and the Mayor's Fund of Philadelphia.

PHLDonateTech

- Established by the City to encourage residents and businesses to donate, recycle, and provide computers to families and people in need across Philadelphia.
- Fund established from local business partnerships in late 2020.
- Over 2,000 devices were donated and over 500 were refurbished and provided to residents in 6 months.
- Managed by Office of Innovation and Technology and the Mayor's Fund of Philadelphia.

Digital Navigator Program

- Funded by the DLA as an emergency response to the COVID pandemic in mid-2020.
- Provides helplines via three community-based organizations for digital case management services to help connect residents to internet access, devices, and training.
- Conducted over 2,000 interactions with residents and distributed over 200 devices in just one year.
- Managed by the Office of Innovation and Technology in partnership with the United Way of Greater Philadelphia and Southern New Jersey.

PHLConnectED

- Helps pre-K–12 families access free and reliable internet connectivity and established in mid-2020.
- Established in mid-2020 in response to the pandemic.
- Provided over 19,000 internet connections to pre-K12 students and households as of fall 2021.
- Made possible by a collaborative effort from private businesses, philanthropy, the City of Philadelphia, and partnerships with the School District of Philadelphia, Charter, and Independent Mission Schools.
- Managed by the Office of Innovation and Technology and the Mayor's Office of Education.

The Digital Equity Plan builds on the success of these programs and identifies strategies for the next five years to sustain and expand them. Some of these strategies will fall under the work of government while others may lie within the scope of Philadelphia's anchor institutions. Success will ultimately rely on partnerships between government, private businesses, anchor institutions, and Philadelphia's highly adaptive community-based organizations.

The Planning Process

To design the Digital Equity Plan, the City of Philadelphia's Office of Innovation and Technology engaged in a year-long process to solicit feedback from digital inclusion providers, community advocates, school staff and leadership, residents, philanthropy, higher education, healthcare providers, and industry partners. The City formed the **Digital Equity Coordinating Committee** (DECC), an internal City group that brought together 15 different City departments, offices, and quasi-City entities and began to hold monthly meetings to share information and solicit feedback *(see Appendix B).* Similarly, OIT engaged in a parallel process with its existing **Digital Literacy Alliance** to gather feedback from over 30 external partners in digital inclusion across Philadelphia *(see Appendix B).* Members of both the DECC and the DLA chose to participate in at least one of four workstreams focused on specific priority areas around digital equity. These workstreams included:

1. Access and Support for K-12 Families

2. Public Computer Centers, Digital Literacy, and Workforce

3. City-wide Infrastructure and Access for All

4. Policy, Advocacy, and Long-term Funding

Workstream Chairs reached out to a wide network of additional community members and City partners to join sessions to expand the expertise of the groups and provide critical feedback. The City also convened a **Digital Health Equity Taskforce** to gather key insights from the healthcare sector. Using a design-thinking process, the City led workstream meetings to gather feedback on what was currently working, what was missing, and to imagine creatively what is needed to achieve digital equity in Philadelphia. OIT also collaborated with the PHL Service Design Studio (SDS) and Mayor's Office of Civic Engagement and Volunteer Service (MOCEVS) to support the development of an Equitable Community Engagement Toolkit for the City. OIT connected the project team with community-based organizations and practitioners from the Digital Navigators Program and Digital Literacy Alliance (DLA). Through a focus group with practitioners and seven resident workshops, they were able to ask deeper questions about digital access needs, barriers, and recommendations for how the City could better work with communities without digital access. Lastly, the City commissioned the aforementioned "Connecting Philadelphia" internet assessment to provide an overall household survey of Philadelphia residents to understand the current digital divide in Philadelphia, provide a benchmark to demonstrate progress, and understand the primary barriers residents faced to accessing the digital world.

ENGAGEMENT BY
THE NUMBERS

135+
individuals participated in meetings or design-thinking workshops

20+
meetings held

2,503
residents interviewed for household survey

GOALS, STRATEGIES, &
LONG-TERM INITIATIVES

GOALS &
STRATEGIES

GOAL 1

DEVICES

Philadelphians can access appropriate and affordable technology devices.

KEY
STRATEGIES

- Increase bulk purchasing and grants for devices.

- Develop and support a network of Public Computer Centers (PCCs) as digital inclusion hubs.

- Expand a system of computer recycling, refurbishing and community tech support.

GOAL 2

CONNECTIVITY

Philadelphians can access and afford the internet connectivity they need.

KEY
STRATEGIES

- Establish sustainable household-based models for internet subsidies.

- Facilitate sustainable community-based networks to increase public Wi-Fi and free or low-cost broadband.

- Encourage the expansion of high quality, low-cost broadband subscription options by commercial ISP and wireless providers operating in Philadelphia.

GOAL 3

TRAINING & WORKFORCE

Philadelphians develop the digital skills necessary for work and life.

KEY
STRATEGIES

- Provide community-based Digital Navigation services across the city.

- Build a coordinated system of Digital Literacy providers with clear pathways into adult education and workforce programs.

- Standardize gateway digital literacy assessments, curriculum, and training across Philadelphia providers.

- Ensure multi-lingual outreach and programs are available to residents.

GOAL 4

ECOSYSTEM

Philadelphia grows and sustains the capacity and infrastructure required to increase digital equity.

KEY
STRATEGIES

- Build the capacity of municipal government to advance digital equity.

- Establish consistent benchmarking and data collection to inform strategic planning.

- Seed capacity for non-City entities to advance digital equity.

- Establish and promote best practices around software applications and tools.

DEVICE

Philadelphians can access appropriate and affordable technology devices.

GOAL 1

A "device" refers to a laptop, desktop, tablet, or smartphone. The pandemic demonstrated that having one or more working internet devices in a household was a necessity for residents. 12% of Philadelphia households lack any device including a mobile phone and 19% still do not have any working computer, laptop, desktop, or tablet. This translates to approximately 75,000 households that need a device.

Some populations continue to lag significantly in device access, including low-income residents, seniors, and Spanish-speaking Hispanic residents, with cost being the number one barrier. While a smart phone may be useful for some online tasks and telehealth, research has shown that reliance exclusively on smartphones in wireless service plans is associated with poorer outcomes for students and a reduction in labor participation.[11][12]

Getting more working, large-screen devices into the hands of Philadelphia residents must be a top priority, and the strategy will depend on the population.[13] While everyone should have access to a mobile phone, healthcare providers and elder care advocates suggest that a tablet, for its simplicity of use, may be a better option to meet the needs of seniors to connect with their healthcare provider or their families. For students, a laptop will be necessary to close the homework gap.[14] A laptop or a desktop would likely best serve working adults. Overwhelmingly, the City found that residents also need low-cost or free technical support to ensure devices are working properly and to extend their lifespan.

KEY
STRATEGIES

1. Increase bulk purchasing and grants for devices

Bulk purchasing enables the acquisition of numerous devices at the lowest cost and with quick distribution. Philadelphia schools' successful effort to purchase and distribute devices demonstrates that bulk purchasing is effective, but we need a sustainable model that will allow the distribution of funds to organizations with specific community needs. Although this solution will likely cost anywhere from $200-800/device, it is the surest method to quickly deliver quality devices to those in need.

5-YEAR
INITIATIVES

■ **All Local Education Agencies (LEAs) maintain 1:1 device ratio for K-12 students.** The K-12 sector made substantial progress in 2020/21, with 92% of households having access to a laptop, desktop, or tablet. However, while many LEAs purchased and distributed devices quickly during the pandemic, not all had the resources to do so and instead relied on private philanthropy or one-time COVID relief funds to accomplish this. The City will continue to advocate for and support LEAs in taking advantage of federal and state funds, such as the FCC's Emergency Connectivity Fund, to ensure that every student has an appropriate learning device.

■ **All adult learners enrolled in adult literacy, digital literacy, and/or workforce classes are provided with devices.** Over 850 adult learners are enrolled in programs across the city to improve their literacy and over 2,500 youth and adults are typically enrolled in occupational or workforce training programs. Another 15,000+ individuals are involved with the workforce system through CareerLink services or accessing the online training portal. Many are required to participate in those programs to maintain life-sustaining benefits. By ensuring these residents have access to working devices, Philadelphia will substantially close the device gap for those who need devices immediately and thereby increase labor force participation.

■ **The Free Library of Philadelphia, the Community Device Fund, and other anchor institutions will leverage bulk purchasing power to distribute devices to residents.** While schools, workforce systems, and adult education organizations have provided devices, other large anchor institutions can also bulk purchase equipment and distribute it quickly. The Free Library, through federal programs like the Emergency Connectivity Fund, can offer thousands of devices to those in need. The Community Device Fund, created by the Office of Innovation and Technology (OIT) and the Mayor's Fund for Philadelphia during the pandemic, can leverage its grant-making abilities and the City's bulk purchasing power to ensure local groups have devices. Additionally, healthcare institutions can bulk purchase and distribute devices that meet their patients' needs.

HAPPENING
NOW

- Office of Children and Families (OCF) provided grants for devices to adult education and digital literacy providers.

- Free Library of Philadelphia (FLP) will use federal dollars to bulk purchase and distribute over 5,600 tablets.

- Local Educational Agencies (LEAs) will use federal dollars to sustain a 1:1 student device ratio.

KEY
STRATEGIES

2. Develop and support a network of Public Computing Centers as digital inclusion hubs

Residents who participated in the City's Equitable Community Engagement Toolkit project expressed that more human touchpoints are necessary when accessing or using technology. [15] The City's network of KIT Centers, libraries, and community-based Public Computer Centers (PCCs) remains critical infrastructure for Philadelphians to access a variety of devices and learn how to use them. Over a five-year period prior to the pandemic, the KEYSPOT network recorded over 400,000 uses by residents. Investing in a city-wide network of PCCs with open access hours and paid staff trained to help residents with on-demand digital needs remains a priority.

5-YEAR INITIATIVES

■ **Expand the City's high-quality PCC network to priority neighborhoods and for multi-lingual populations.** Creating a coordinated system of PCCs with connections to workforce and adult education, including digital literacy, devices, connectivity, and digital navigation, is key to expanding digital access throughout high-need neighborhoods. Adding additional recreation centers as KIT Centers will be a priority. The City will also work to coordinate with Philadelphia Housing Authority (PHA) locations, Free Library branches, CareerLink centers, and community-based organizations where people already go for trusted resources to ensure that access, quality services, and referrals to adult education and workforce programs are available in neighborhoods with the greatest need.

■ **Establish and sustain innovative device access programs.** Laptop lending, mobile labs, pop-up computer gardens, and kiosks are all examples of worthy projects that can get devices to those hardest to reach. These innovative projects will require sustained operations to make them reliable and effective sources of devices for the community rather than one-time distribution efforts.

HAPPENING NOW

- PPR will re-open 8 public computer centers as KEYSPOT Innovation and Technology (KIT) Centers in 2022 with 8 more planned in the following year.

- OCF and OIT will create technology refresh policies and standardize software across funded PCCs.

- OCF will identify all PCC public hours at both City and CBO locations to share on a public website.

> "We can have everything online but they also have to have people on the ground that are communicating things."
>
> *- Community member who participated in the Equitable Community Engagement Toolkit focus group*

KEY
STRATEGIES

3. Expand a system of computer recycling, refurbishing and community tech support

One key gap identified by our stakeholders was the lack of a large-scale recycling and refurbishing initiative. Philadelphia currently has several small groups providing a limited number of devices to the community, but this work needs further seeding and growth. Technical support is also a critical gap, particularly the IT help desk support around diagnosing and repairing non-functional devices. A community technical support program across Philadelphia is needed, and refurbishment organizations with experience in reformatting computers and bringing them to life have the expertise to spearhead this effort.

5-YEAR
INITIATIVES

■ **Establish a non-city entity to coordinate and manage a large-scale, city-wide recycling, refurbishing, and community technical support operation.** The City is committed to helping an entity take over PHLDonateTech and scale it up into a large city-wide effort. A successful model requires deep knowledge of technology recyclers, the profit model, building relationships with corporate entities willing to recycle and donate their equipment, security and data wiping standards, and a robust model of workforce development to train employees on technical support. Philadelphia currently lacks a cohesive model and relies on small refurbishers to handle a few hundred devices at most. Establishing a primary entity to coordinate this effort will be transformative for Philadelphia residents.

■ **All LEAs have a solution or the internal capacity for repair/technical support for student devices.** As LEAs take on responsibility for 1:1 device purchasing and distribution, they will also need to create or find repair and technical support systems to enable students to swap out equipment easily. The School District of Philadelphia has successfully established this process, but many other smaller school entities need support to create long-

term and sustainable solutions. This may mean contracting with an entity to help schools manage the process, create in-house IT workforce training programs for students to learn how to repair equipment, and/or leverage available state and federal funding. The City will continue to work with schools to provide best practices or identify resources to help them develop the right solution.

HAPPENING
NOW

- PHLDonateTech coordinates refurbishers and will distribute over 1000 devices to residents.

- SDP and LEAs create tech centers and some school-level support to help with repair/fix of devices.

CONNECTIVITY
Philadelphians can access and afford the internet connectivity they need

GOAL 2

Philadelphians need access to high-quality, affordable broadband internet to thrive. The strategies below reflect three areas of priority for the City: 1) continue to offer and promote available subsidies to those who need internet the most, 2) expand access to fast, public Wi-Fi, and 3) encourage the marketplace to offer low-cost plans at robust speeds.

Philadelphia made significant progress during the pandemic, with 84% of Philadelphians now connected through wireline broadband in 2021 compared to 70% before the pandemic. This gap closed even further among K-12 households, with 91% connected to wireline broadband due in part to PHLConnectED. Disparities in access persist, however, and low-income residents, Black and Hispanic residents, and older residents continue to show lower rates of connectivity.

As mentioned previously, Philadelphia remains limited in wired broadband options, with only one Internet Service Provider (ISP) covering the entire city and only one low-cost program at less than $20/month. Wired options alone cannot solve the problem for residents

who are housing insecure, live in shared dwellings, or rent rooms without access to a direct wired line. Furthermore, long-time distrust of government and corporations and the fear of consequences -from debt collection to deportation- prevents many from signing up for available options. Ultimately, solutions must include robust, ubiquitous, and fast Wi-Fi to meet residents where they are and wherever they go.

Affordability remains the most-cited reason Philadelphians do not connect to the internet with over 75% of residents saying that paying over $20/month for internet is too expensive. The FCC's temporary Emergency Broadband Benefit (EBB) provided the first national subsidy for broadband and has supported over 72,000 households [16] in Philadelphia with their internet bills as of November 2021. As the Emergency Broadband Benefit transitions to the longer-term Affordable Connectivity Program, Philadelphians who are considered "subscription vulnerable" (34% of our population) will likely need this type of subsidy to maintain internet service over time.

KEY
STRATEGIES

1. Establish sustainable household-based models for internet subsidies

Programs that provide free or low-cost internet are effective and support maintenance of service over time for subscription vulnerable residents. Our household internet assessment estimated that Philadelphia's rate of broadband access would be only 75% without these programs overall and only 70% in K-12 households. The new Affordable Connectivity Program (formerly the Emergency Broadband Benefit) can keep residents connected if they know about it.

5-YEAR
INITIATIVES

■ **PHLConnectED maintains free, high-speed internet to any pre-K-12 households who need it.** The City aims to ensure that all pre-K-12 households have reliable, fast internet access. PHLConnectED and other internet subsidy programs make it easier for households to sign up by reducing enrollment steps, removing eligibility verification, and expanding eligibility. Program partners and community members also suggest providing devices with internet subscriptions directly to students and offering subsidies to households from multiple internet service providers.

■ **Dedicated funding and support are available for mobile hotspot lending programs for residents.** Distribution of mobile hotspots quickly and effectively provides residents with internet access. Although not suitable as a whole-household solution, mobile hotspots without data caps offer many benefits because they are easy to activate and offer good mobility. The Free Library of Philadelphia (FLP) is using the Emergency Connectivity Fund (ECF) in 2021 to bulk purchase hotspots and tablets for distribution. Sustaining this type of bulk purchase program over time will be critical to reaching our most vulnerable residents.

■ **City establishes a long-term sustainable fund to continue broadband subsidies for residents in need.** The City will attempt to create a long-term funding stream to sustain PHLConnectED, expand subsidies to other residents that face barriers to the federal programs (i.e., undocumented residents), and support bulk purchase of internet solutions like mobile hotspots. The City will consider federal and state funding, study the monetization of municipal assets, and develop public-private partnerships to establish this fund. Connecting internet access to other available benefit and utility subsidy programs may also alleviate barriers.

HAPPENING
NOW

- PHLConnectED will provide over 20,000 internet connections to pre-k-12 households in need.

- The Free Library will distribute 5600 hotspots to residents without internet.

- The City will distribute hotspots to enrolled CCP, workforce, and adult education students in need.

17

KEY
STRATEGIES

2. Facilitate sustainable community-based networks to increase public Wi-Fi and free or low-cost broadband. Internet subsidies are costly, and Philadelphia should explore local solutions to increase connectivity options and bring costs down. Philadelphia currently has two major wired broadband providers, and only one fully covers the city. To offer residents additional options, the City can consider how it can use its assets to facilitate community networks.

5-YEAR
INITIATIVES

■ **City enables every recreation center to serve as a Digital Anchor Institution with a fiber network and ubiquitous Wi-Fi to the surrounding campus.** The City's network of 200+ recreation centers offers an ideal way to reach every neighborhood, and without wiring our centers with high-capacity broadband we face an infrastructure shortfall. The City can unify its recreation center connectivity with one high-capacity fiber network and the resulting campus-wide Wi-Fi signal will also benefit the surrounding neighborhood.

■ **City pilots use of its assets to facilitate community-led wireless networks.** Working with public and private partners, the City can enable new, fixed wireless networks using municipal buildings, transportation infrastructure, street furniture, and other assets. These innovative wireless solutions follow a similar path to those planned in New York City and Baltimore, all of which hope to galvanize market competition through community-led innovation. If successful, neighborhoods that previously lacked choices would gain an opportunity for low-cost/free and robust home internet.

HAPPENING
NOW

- 8 Parks and Recreation KIT Centers will open with high-bandwidth Wi-Fi and a planned expansion to 8 more will happen in the following year.

- The City will convene vendors to explore monetizing city assets for digital equity needs.

- The Digital Literacy Alliance is funding the Philly Community Wireless Project for two years to set up a wireless mesh network in the Norris Square neighborhood of North Philadelphia.

KEY
STRATEGIES

3. **Encourage the expansion of high-quality, low-cost broadband subscription options by commercial ISP and wireless providers operating in Philadelphia.**

The Philadelphia Household Internet Assessment Survey demonstrated that the key price point for internet affordability for 75% of low-income Philadelphians is at or below $20/month. For Philadelphia to be competitive and attract global investment, all residents must have access to and be able to afford fast and reliable broadband. The City recommends the speed identified by the National Telecommunications and Information Administration's broadband funding opportunities for new broadband infrastructure [17], 100/20mbps, regardless of one's ability to pay. In its regulatory and community-building relationships with ISPs, telecoms, and wireless providers, the City will encourage them to offer an easily accessible plan for low-income residents at or lower than this $20/month price point with speeds and data coverage suitable for a multi-person household.

5-YEAR
INITIATIVES

■ **City elevates digital equity solutions in franchise agreements and through other contract opportunities with telecoms and ISPs.** The City will raise the challenge of digital equity during any franchise negotiations or other contract opportunities with local providers. By elevating the challenges Philadelphia residents face—such as affordable internet options, full wireline access across the city, and sufficient internet speeds—the City may be able to establish new partnerships that effectively address these challenges.

■ **ISPs and wireless providers offer a quality internet plan for under $20/month for low-income residents.** Research and advocates suggest that minimum speeds required today for a household are between 25mbps download/12mbps upload [18] and 30mbps symmetrical (30mbps download/30 mbps upload)[19] while the National Telecommunications and Information Administration's (NTIA) guidance for federal funding for new broadband infrastructure requires service not less than 100/20 mbps. Current low-income plans offered in Philadelphia are either too expensive, do not offer the NTIA's minimum upload speed, or do not offer a wireless data plan robust enough to cover more than a week of use without incurring fees. The City calls for ISPs and wireless providers to offer the NTIA standard of 100/20 mbps and encourages them to go beyond this by 2027 to provide a $20 or less monthly plan for low-income residents that offers speeds of 100/100mbps without data caps.

GOAL 3

TRAINING & WORKFORCE

Philadelphians develop the digital skills necessary for work and life

National estimates suggest up to 16% of adults are not sufficiently comfortable or competent enough with technology to use a computer. [20] Furthermore, the National Skills Coalition finds that nearly one-third of workers have limited or no digital skills. [21] This limitation correlates directly with educational attainment (41% of those with a high school degree but no college degree are not digitally literate). [22] On average, adults who lack digital literacy are less educated, older, and more likely to be Black, Hispanic, or foreign-born. An adult's labor force participation is also impacted by digital literacy, with adults who are not digitally literate showing a lower rate of labor force participation and working in lower skilled jobs. [23] This digital literacy gap has profound implications for Philadelphia where 12% of adults do not have a high school degree and about 7 out of 10 adults in Philadelphia are likely to struggle with complex literacy or numeracy tasks.

As a result, access to a working computer and reliable internet is not always sufficient for ensuring that households can use the internet for school or work. Training on "gateway digital skills," or foundational digital skills such as internet basics and email, is important, and research has shown that this training significantly increases the likelihood that people will use the Internet for educational and career purposes. [24] For over 10 years, the City has supported digital literacy classes through its KEYSPOT program and the Digital Literacy Alliance's grantmaking capabilities. The City aims to expand its digital literacy efforts and connect it directly with Philadelphia's adult literacy and workforce systems.

KEY
STRATEGIES

1. **Provide community-based digital navigation services across the city**

In Philadelphia, a "Digital Navigator" acts as a digital support specialist who can provide remote or in-person support to households on accessing and using technology. Digital Navigators are people with an expertise in technology options for residents. They can assist with finding free or low-cost devices, identify affordable internet access, provide limited skills support in navigating online forms or telehealth visits, and serve as referral points into more formal digital literacy training. During the process of building the City of Philadelphia's Equitable Community Engagement Toolkit, residents expressed a need for dedicated personal support when learning how to navigate online. Digital Navigators start by helping with one question or need, and after building trust with the client can serve as a bridge to more robust support and training.

5-YEAR
INITIATIVES

- **City-wide Digital Navigation is sustainably funded and expanded across sectors as an accredited training module.** Philadelphia's Digital Navigator program served over 700 unique callers in one year and helped over 200 residents find free computers. They have also served as key partners in signing up eligible residents for PHLConnectED and the FCC's temporary Emergency Broadband Benefit program (transitioning to the longer-term Affordable Connectivity Program). Sustaining and building on this work will offer residents a consistent point of access to get the help they need. Contributors and community members have noted the need to incorporate Digital Navigator roles or skills throughout different sectors including the Free Library, healthcare and behavioral health settings, and schools. Developing a standard Digital Navigation curriculum recognized by industry and aligned to college credit programs will foster coordination of services and increase the likelihood that Navigators will have the expertise to provide quality services.

- **All LEAs develop plans and resources to provide support to students and families for school-required digital tools.** Schools are increasingly using digital tools to support learning, including student and parent portals, Google Classroom, Zoom, and a variety of assessment tools. The pandemic demonstrated that as primary points of contact, schools often provide 1:1 support to students and caregivers to access these digital tools without dedicated support or resources to do so. The City can work with LEAs to create plans, establish best practices, and leverage state and federal resources to offer digital navigation and digital skill support services. In addition, the City can train school staff on how and where to refer caregivers to the city's network of digital literacy and adult education classes when schools cannot provide this type of support.

■ **Digital navigation skills are built into healthcare roles.** When the Digital Health Equity Taskforce convened, participants frequently cited digital navigation as a top priority of the healthcare sector. Several hospitals and clinics are piloting digital navigator roles as key components of their health equity strategies. The City can help develop and support models as well as share best practices in conjunction with Philadelphia healthcare providers to offer lasting benefits to patients struggling with patient portals, telehealth visits, and using recommended digital tools to improve their health.

HAPPENING
NOW

- Digital Navigators pilot launched in spring of 2020 and continues to maintain helplines. They will also train other direct support professionals.

- PHLConnectED will provide grants to LEAs to offer creative school-based digital support programs for caregivers.

- DLA funds Digital Navigator pilot in healthcare setting and builds best practices through the Digital Health Equity Taskforce.

KEY
STRATEGIES

2. **Build a coordinated system of digital literacy providers with clear pathways into adult education and workforce programs**

    Philadelphia is fortunate to have an ecosystem of over 50 digital literacy providers. This network is due in part to the initial KEYSPOT network, the Digital Literacy Alliance that has funded local organizations since 2016, and the network of Adult Education and Workforce providers. Many of these organizations struggle to sustain these programs, however, offering them inconsistently and only when resources become available. Additionally, Philadelphia lacks coordination of its digital literacy providers, making it harder to ensure that assessments and quality curriculum lead to increased competencies and sustainable jobs.

5-YEAR
INITIATIVES

■ **Multi-year digital literacy funding is available for Community Based Organizations to offer gateway digital literacy courses and pathways into workforce training.** Few opportunities exist in Philadelphia for multi-year digital literacy funding to support those with limited or no digital literacy skills. Without stable funding, organizations are unable to build and maintain the expertise of their trainers or create and publicize regular schedules of digital literacy courses. Further, without these gateway skills, residents are unable to move into workforce programs. The City intends to seek state and federal funding to complement its continued philanthropic and private sector partnerships to support a range of gateway courses and increase the number of digital literacy providers that offer them.

■ **Digital literacy programs (from elementary school to postsecondary education) align technology skills with those needed in the workplace.** Digital literacy curricula—from gateway skills to industry specific competencies—must align to industry needs to broaden the talent pipeline, with particular attention to the growing technology sector in Philadelphia. Moving beyond gateway skills, the City plans to work closely with Philadelphia Works and other workforce partners to raise awareness of potential technology careers among under-represented populations (specifically women and people of color) and foster close partnerships between educational systems and employers to ensure that residents learn the necessary skills for success in the workforce.

■ **The Digital Literacy Alliance (DLA) identifies sustainable funding and expands its grantmaking to seed innovative digital inclusion initiatives.** The DLA has provided community organizations and schools with opportunities to test new, innovative programs, and tackle digital literacy challenges in unique ways. Using the 2021 Philadelphia Internet Household Assessment Survey as a guide, the DLA is a unique City entity with flexibility to direct grants to key populations or focus on specific needs that are not addressed elsewhere. Ensuring the DLA has sufficient long-term funding to continue providing these opportunities will position Philadelphia well as technology changes and new practices are needed.

HAPPENING
NOW

- OCF Adult Education will offer coordinated digital literacy assessments and training at the 8 KIT Centers.

- OCF Adult Education is providing CBOs and their clients free access to Northstar, a web-based tool focused on improving digital literacy skills with assessments and matched curriculum.

- PHL CareerPortal is available at all KIT Centers.

"
We already have a language barrier. When you add on... digital literacy skills, then it becomes a double or triple barrier. 🙸

- Community member who participated in the Equitable Community Engagement Toolkit focus group

KEY
STRATEGIES

3. **Standardize gateway digital literacy assessments, curriculum, and training across Philadelphia providers**

    Partners across the education and workforce systems emphasized the need to align and standardize digital literacy offerings in Philadelphia. Without a standardized digital literacy assessment (like the Comprehensive Adult Student Assessment Systems CASAS for adult literacy), the City will not know the literacy level at which residents began and the competencies they have gained over time. And, without a standard curriculum, the City cannot ensure quality digital literacy support or help Philadelphia's digital literacy providers train employees on best practices.

5-YEAR
INITIATIVES

■ **Adopt the Northstar assessment standard across Philadelphia's provider community.** Northstar Digital Literacy assessment and standards were developed by Literacy Minnesota and are used by over 1,860 Adult Basic Education programs, colleges, nonprofits, workforce centers, government agencies, and businesses. Northstar offers a set of standards for gateway digital literacy skills, online and proctor-led assessments, instructor-led curricula (which can be adapted to the English for Speakers of Other Languages (ESOL) classroom), certificates, and badges that can be used to demonstrate competency to employers and schools. The Office of Children and Families' Adult Education program, working alongside the Free Library and Philadelphia Works, seeks to align digital literacy programs in Philadelphia. As a result, residents will be able to go to any public computer center, CareerLink, or library branch to resume training where they left off and avoid doing the same segment multiple times.

■ **Create a public website for digital literacy courses and a city-wide database for Community-Based Organization course referrals.** Residents need to know when and where digital skills classes are taught and how to enroll in them. Additionally, Philadelphia's Community-Based Organizations should have a system for referring people into classes. These systems will enable a more seamless process for identifying digital literacy courses and enrolling participants.

HAPPENING
NOW

- City creates a master Digital Literacy Plan.

- OCF Adult Education implements Northstar system across city providers.

KEY
STRATEGIES

4. Ensure multilingual outreach and programs are available to residents

Multilingual residents have diverse needs, and barriers to internet and computer access are widely reported by local advocates. The Philadelphia Household Internet Assessment Survey showed that 67% of residents who took the survey in Spanish have broadband at home, a much lower rate than for Hispanic residents who opted to take the survey in English (83%). Only 58% of those who took the survey in Spanish had a working desktop, laptop, or tablet, compared with 78% of Hispanic residents who took the survey in English. Residents and advocates consistently report difficulty signing up for low-cost or free internet service through the available providers because of language barriers, and participants in the City's Equitable Community Engagement Toolkit project report difficulty accessing City information that's only available online and in English. When distributing grant funds, opening new public computer centers, or developing new digital inclusion programs, the City should consider neighborhoods and communities that have multilingual populations to reduce barriers across Philadelphia.

5-YEAR
INITIATIVES

■ **Provide multilingual digital navigation and increase access to multilingual digital literacy content.** All residents regardless of spoken language should have access to digital support and skills training. To address this challenge, the OCF Adult Education program is investing in the process of internationalizing the Northstar program, which will allow translation into other languages (beginning with Spanish). Once this initial language capability is established, the City plans to integrate other high-priority languages and ensure all residents have equal access to resources. In addition, the City can fund through its DLA grants and/or City contracts trusted community providers that can offer digital literacy programs to a cross-section of immigrant and multilingual residents.

■ **Ensure digital inclusion program outreach and materials are offered in multiple languages.** Federal and local digital inclusion programs, like the new Affordable Connectivity Program, PHLConnectED, and other digital literacy programs should ensure that multilingual outreach teams and language lines are available. These efforts can be costly but should be included in program budgets to ensure that information reaches residents regardless of English proficiency. Additionally, promotional materials should be translated into languages beyond the 2–3 most common and distributed to community networks serving non-English speaking populations.

HAPPENING
NOW

- DLA is funding 7 organizations that are working with limited English proficiency communities for a two-year grant round.

- PHLConnectED outreach and digital navigator teams reach and support a range of multilingual communities.

- OCF Adult Education is investing in Northstar translation into Spanish.

ECOSYSTEM
Philadelphia grows and sustains the capacity and infrastructure required to increase digital equity

GOAL 4

According to the National Digital Inclusion Alliance, a Digital Inclusion Ecosystem "is a combination of programs and policies that meet a geographic community's unique and diverse needs. It also has "coordinating entities [that] work together in an ecosystem to address all aspects of the digital divide, including affordable broadband, devices, and skills."[25] This Digital Equity Plan offers a roadmap to developing a stronger ecosystem in Philadelphia, with the City leading these efforts and collaborating closely with its community partners, digital inclusion advocates, industry partners, and anchor institutions. A successful ecosystem demands full engagement and dedication to digital equity to build sustainable programs to close the digital divide.

INDICATORS OF A STRONG
DIGITAL INCLUSION ECOSYSTEM

- Existence of programs and policies addressing all aspects of the digital divide, including:
  - ›› Affordable and subsidized broadband service options that meet the community's needs;
  - ›› Affordable and subsidized device ownership programs that meet the community's needs;
  - ›› Multilingual digital literacy and digital skill trainings that meet the community's needs;
  - ›› Hardware and software technical support; and
  - ›› Digital navigation services to guide residents to the above services.
- Collaboration: entities providing local digital inclusion services, policymakers, advocates, social service providers and community leaders co-create solutions in partnership with the community.

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KEY
STRATEGIES

1. Build the capacity of municipal government to advance digital equity

The City of Philadelphia has been actively engaged in digital equity work since the mid-2000s. Since then, it has created and managed the KEYSPOT network, the Digital Literacy Alliance, PHLConnectED, PHLDonateTech, and the Digital Navigator network. Through this Digital Equity Plan, the City intends to further develop its initiatives to support the larger ecosystem across departments, in collaboration with community partners and at a state and federal level.

5-YEAR
INITIATIVES

■ **The City manages a comprehensive portfolio of Digital Equity programs sustainably funded across administrations.** The strategies laid out under Goals 1-3 in this Plan will require ongoing investment. By formalizing digital equity as a policy focus via Executive Order and sustaining Digital Equity resources and staff within OIT, the City will ensure administrative support and capacity for addressing digital equity cross-departmentally and across administrations. In particular, the City will continue to manage and expand:

1. The KIT Centers, community PCCs, and a network of digital literacy providers;
2. The Digital Literacy Alliance to seed funds for innovative projects;
3. PHLConnectED to ensure student internet access and extend this model to other residents in need; and
4. The Digital Navigator network.

■ **The City advocates at state and local levels on behalf of digital equity for municipalities.** The City's Digital Equity team can track federal and state programs and investments for Philadelphia. The team will also work with the Mayor's Policy Office, City Council, and state and federal representatives to understand and address the City's needs and positions. This will be crucial over the next five years with the passage of the federal government's Infrastructure and Jobs Act that directs substantial investment to broadband and digital equity work.

■ **The City creates a revenue generating stream to support its portfolio of digital equity programs.** The City will work to identify federal and state funding streams to support the initiatives described in this Digital Equity Plan. Additionally, the City can work toward an investment strategy, using city assets and other revenue generating methods, that will ensure ongoing funds are available for digital equity initiatives. This City-generated revenue will allow flexibility and can be used to support initiatives and programs not covered by federal or state funding, such as ensuring that digital equity programs are available and open regardless of immigration status or other barriers.

HAPPENING
NOW

• The City establishes a Digital Equity unit with resources to focus on the issue.

• The City convenes working groups to achieve goals of the Digital Equity Plan.

• The City works with the philanthropic and private sectors to support funding priorities outlined in the Digital Equity Plan.

KEY
STRATEGIES

2. Establish consistent benchmarking and data collection to inform strategic planning

The City cannot rely on old or inaccurate data when addressing the digital divide. Publicly available data is currently derived from the census-based American Community Survey, which is published a year and a half after collection, and from the Federal Communications Commission. Both sources have significant limitations in analyzing the locations and speeds of fiber and wireless broadband access and understanding barriers to access.[26][27] In 2021, the City commissioned its own report, "Connecting Philadelphia: 2021 Household Internet Assessment Survey," to provide a timely, accurate scope of the digital divide in Philadelphia. Ongoing and robust data collection and analysis will be required for the City to appropriately direct its resources to digital equity.

5-YEAR
INITIATIVES

- **Conduct an annual household internet and device survey to identify gaps and measure progress.** The City can incorporate the survey questions asked in the Philadelphia Household Internet Assessment Survey into an annual measure of digital equity. Yearly data collection will provide the City with accurate and timely information that can be used to evaluate our programs and determine improvements.

- **Collect infrastructure data and develop tools that can improve digital equity.** To supplement available FCC data, the City can collect data about new and existing infrastructure and better map gaps in citywide fiber and wireless service. Additionally, the City can collect and identify City assets to allow more equitable deployment, resourcing, and delivery of city services. For example, developing tools that flag facility projects or assets with the potential for increasing internet connectivity or that have been requested for business use and could improve internet infrastructure. Working with our SmartCityPHL program, the City can identify data from emerging technology solutions to improve digital equity.

HAPPENING
NOW

- The City published a Philadelphia Household Internet Assessment benchmarking study.

- PHLConnectED creates data repository for impact analysis.

- A digital equity dashboard is available to the public via OpenDataPhilly.

KEY
STRATEGIES

3. Seed capacity for non-City entities to advance digital equity

Digital equity stakeholders consistently note that Philadelphia lacks a strong non-governmental digital equity leader to coordinate with the City on a unified vision. Many nonprofits and educational institutions have a role in this work, but none are solely dedicated to digital equity work or have the capacity to lead across a range of needs: devices, internet access, digital skills, and advocacy. A key strategy over the next five years will be identifying and seeding one or more non-City entities to focus solely on digital equity work in Philadelphia. Two entities may be most ideal to tackle this issue: one focused on coalition-building, training, and advocacy, and the other focused on a large-scale recycling, refurbishing, and community technical support operation (noted above in Goal 1).

5-YEAR
INITIATIVES

- **Identify and fund an independent entity to focus on coalition-building, program coordination, and state and federal advocacy.** The City is committed to facilitating the creation of an entity that can coordinate the following:

  » regional digital inclusion programs and initiatives;

  » capacity building and training support for local nonprofits with digital inclusion programs; and

  » advocacy for Philadelphia's digital equity needs at the local, state, and federal levels.

  Multiple organizations in the city serve this function for other core human rights issues, notably education, housing, and healthcare, but Philadelphia lacks leading organizations focused solely on digital equity. Establishing this organization or entity will be crucial to address Philadelphia's needs beyond a pandemic and across mayoral administrations.

- **Establish an independent entity to coordinate and manage a large-scale, city-wide recycling, refurbishing, and community technical support operation**. See Goal 1, Strategy 3, page 16.

HAPPENING
NOW

- The City will work with potential funders to develop a scope of services for a non-City entity to coordinate digital equity resources and advocacy.

- The City will work to identify funds for a lead entity to manage a city-wide refurbishing and community tech support operation.

30

KEY
STRATEGIES

4. Establish and promote best practices around software applications and tools

It is easy to overlook the digital systems residents must navigate to obtain services. Many government services are moving online, algorithms shape who is left out or impacted by large systems, and healthcare centers ask patients to use complex online portals to access their doctor or medication refills. Advocates from the healthcare and educational sectors and from community focus groups consistently note that online and digital systems should be built by and with significant input from the communities who use them and must be multilingual, simple, and ADA accessible. Additionally, online systems should not be the sole option for residents because some will inevitably be left behind. Analog options—hotlines, in-person supports, and paper applications— must be available until we achieve full digital equity across Philadelphia.

5-YEAR
INITIATIVES

■ **Incorporate subsidized broadband programs into a broader universal benefits application.** The City should make it easier for residents to sign up for benefits for which they are entitled, including those related to accessing the Internet. City programs like PHLConnectED could be included in a broader universal benefits application so that a household applying for one benefit is alerted to its eligibility for another. For example, people applying for the Low Income Home Energy Assistance Program (LIHEAP) or a housing voucher can be informed that they qualify for another benefit. Connecting benefits and reducing the need to complete multiple applications will improve resident interactions with technology.

■ **Create best practices for departments moving to web-based forms or applications to support residents with low-digital literacy skills.** Any online form or system that residents interact with should be multilingual, intuitive, and compliant with standards for people with varying abilities. Additionally, departments should recognize the human element needed by many residents to access and use these systems. Older adults who participated in the City's Equitable Community Engagement Toolkit project recommended providing human support to fill out online forms, particularly for vital services and programs, and the PHL Service Design Studio makes a standard recommendation that departments create opportunities for residents to provide feedback on improving these systems.

■ **Work with the health sector on best practices for engaging residents in telehealth or digital health care tools.** The Digital Health Equity Taskforce is acutely attuned to the pervasive problem among healthcare providers that their systems are not designed from patient perspectives. The pandemic demonstrated that reliance on patient portals or access to registration for vaccines through online systems are deeply inequitable and inadequate. The City's digital equity team is committed to working with healthcare providers to build best practices and create systems that patients can use.

POINTS OF
ADVOCACY

How do we advance our Digital Equity Plan? Three areas of advocacy are key for the City and its stakeholders if the work is to move forward.

1

Funding Initiatives. The achievements of this plan rely on stable funding. Seed funding can advance new, innovative projects, but existing and successful programs require a foundation of reliable funding to continue and improve the work. Substantial new funding from federal programs such as the American Rescue Plan Act and the Infrastructure Investment and Jobs Act could be directed toward the following:

›› **PHLConnectED:** to continue providing free internet to our pre-K-12 sector.

›› **Digital Navigators:** to offer city-wide personal support.

›› **The KIT Centers:** to provide public computing centers for residents in need of access.

›› **Devices with tech support:** to provide residents with working technology.

›› **Digital Literacy Providers:** to offer a suite of digital literacy training and programs.

›› **High-capacity fiber to Recreation Centers with Wi-Fi to the surrounding campus:** to offer residents public internet access.

›› **Low-Cost, Community-led Wireless Networks:** to ensure residents have affordable access to the Internet.

2

State Engagement. The bulk of new federal funding will go to the Commonwealth of Pennsylvania and then be distributed or granted to local municipalities or specific projects. The Commonwealth and the City of Philadelphia should engage with one another as the Commonwealth develops policies for distributing new federal dollars.

3

Public-Private Partnerships. Our business and private industry partners should engage in digital equity work. This attention will benefit the city as well as the organizations themselves if customers can access their services online. Every entity—from ISPs to hospitals to banks—has a stake in this work and should work with the City to address it.

APPENDICES

APPENDIX A:
DEFINITIONS

Broadband–the FCC definition of broadband is currently 25mbps download and 3mbps upload speeds of internet access. Broadband can be wired (ie. Fiber) or wireless (ie. Cellular) networks. [28]

Broadband adoption–residential subscribership to high-speed Internet access. For those in the field working to increase the digital capacity of communities, broadband adoption is daily access to the Internet at speeds, quality, and capacity necessary to accomplish common tasks, with the digital skills necessary to participate online, and on a personal device and secure convenient network.[29]

Device–a laptop, desktop, tablet, or smartphone. A smartphone should be considered alongside the need for one of the three other devices and is often insufficient as the only device in a household for many daily tasks.[30]

Digital Equity–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. [31]

Digital Inclusion–the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes 5 elements: 1) affordable, robust broadband internet service; 2) internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed.[32]

Digital Literacy–the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.[33] All humans, regardless of education, income, and background must update and master new digital skills as technologies evolve. Digital literacy training can start at a proficiency level with "gateway" or foundational skills such as internet basics or using email, or it can include a mastery of software specific competencies such as Microsoft or Google software, or it can include more advanced classes in IT certifications or industry-specific technology competencies.

Digital Navigators–digital support staff who provide remote or in-person one-to-one dedicated support to households on accessing and using technology. Digital Navigators are trusted guides that address the whole digital inclusion process–home connectivity, devices, and digital skills–with community members through repeated interactions.

Fixed wireless, mesh networks, LTE or CBRS networks–cconnectivity models that bridge the "last mile" between a fiber internet backbone and the subscriber. Fixed wireless uses stationary wireless technology. Wireless mesh networks are an interconnection of routers and nodes to that allows information to be carried across the network and every node contributes to the network resources. Long Term Evolution (LTE) is a wireless standard (4G) used by most cell phone companies to deliver cellular wireless services, most often to mobile phones or mobile hotspots. CBRS (Citizens Broadband Radio Service) refers to available radio spectrum that can be used to deliver high speed internet through radio towers.

Public Computer Center (PCC) –a computer lab with scheduled open access hours and staffed support to help residents use technology. Philadelphia has a network of public computer centers that have been known as "KEYSPOTs," "KIT (Keyspot Innovation and Technology) Centers," and as "hotspots" by the Free Library of Philadelphia.

Subscription Vulnerable–describes households that meet the following criteria:

- Experienced service interruption in the pandemic;

- Say it would be difficult to keep service without a discount; and/or

- Are low-income (e.g., incomes under $20,000 annually).

Technical Support– an advice service provided, usually over the phone, to help people who have problems using a computer."[36] Tech support can refer to a range of IT help desk support that includes: Level 1: support such as resetting a password, re-booting a device, and/or finding/opening/manipulating an application on a device; Level 2/3: support such as troubleshooting, diagnosing and/or fixing a software, hardware, or connectivity problem with a device or with peripheral devices that are not working properly, fixing or replacing a part of a device, running virus software, and/or re-installing an operating system. This level of support is sometimes known as "break/fix" and requires a more skilled technician. Technical support is distinguished in this report from digital navigation, which can help residents on how to use properly working common software, an application, or basic functions of their device.

APPENDIX B:
COMMUNITY ENGAGEMENT

The Office of Innovation and Technology is grateful to all those external institutions, advocates, community members, and City representatives who were able to participate in workstreams, meetings, community feedback sessions, focus groups, and our internet household survey.

Digital Equity Coordinating Committee

The Digital Equity Coordinating Committee is comprised of individuals designated from specific City Departments and/or quasi-city agencies engaged in and committed to ensuring digital equity for all Philadelphians. The Coordinating Committee works across departments to advance solutions and ensure the incorporation of multiple experiences and perspectives while developing and implementing a digital equity on behalf of the City of Philadelphia.

The Mission of the Digital Equity Coordinating Committee is to develop and operationalize a digital equity strategy for the City of Philadelphia that will enable all Philadelphia households in need to access reliable, high-speed internet and the devices necessary to use it. The strategy should also ensure that residents know how to use this technology for their own needs to foster a better and more competitive workforce, improve health outcomes, increase engagement in school, and improve the civic life of Philadelphians.

Members include individuals representing the following offices:

- Department of Commerce
- Department of Health and Human Services
- Department of Public Health
- Office of Children and Families
- Office of Community Empowerment and Opportunity
- Office of Immigrant Affairs
- Office of Innovation and Technology
- Office of the Director of Finance
- Office of Transportation, Infrastructure, and Sustainability
- Mayor's Commission for People with Disabilities
- Mayor's Office of Diversity and Inclusion
- Mayor's Office of Education
- Mayor's Policy Office
- Philadelphia Housing Authority
- Philadelphia Parks and Recreation

Digital Literacy Alliance

The Digital Literacy Alliance is comprised of thought leaders from Philadelphia corporations, nonprofits, government, universities, and foundations who are committed to digital equity and who have been engaged in digital equity work for a significant period of time.

The Mission of the Digital Literacy Alliance is to create a broad coalition of institutional stakeholders that works to alleviate the digital divide in Philadelphia. This coalition develops strategy, manages an existing seed fund, raises additional funding, and evaluates/oversees funded programs with the assistance of relevant stakeholders and committee members.

Members include individuals representing the following agencies, corporations, and entities:

- AFRICOM-Philly

- AT&T
- Ceiba
- City Council
- Coded by Kids
- Comcast
- Drexel University Office of University and Community Partnerships
- Federal Reserve Bank of PA
- Free Library of Philadelphia
- Independence Public Media Foundation
- JEVS Human Services
- Liberty Resources
- Mayor's Fund of Philadelphia

- Movement Alliance Project
- Philadelphia Works
- School District of Philadelphia
- SOWN Supporting Older Adults and their Families
- Steppingstone Scholars
- Temple University Computer Recycling Center
- T-Mobile
- Verizon
- WHYY

Additional Community Engagement

Workstreams invited and engaged various smaller groups including School District of Philadelphia representatives across schools and departments, representatives from charter schools, community organizations, and foundations to gain more perspective on challenges facing specific populations and solicit ideas on how to best support residents across the city.

- Beyond Literacy
- Boy's Latin of Philadelphia
- The ExCITe Center at Drexel University
- Folk Arts-Cultural Treasures Charter School
- Freire Charter School and TECH Freire Charter School
- GreenLight Fund
- Independence Charter Schools
- Independence Mission Schools
- Mastery Schools
- Philadelphia Academy Charter School
- Philadelphia Charters for Excellence
- Philadelphia Charter School Office
- Philadelphia Electrical & Technology Charter High School
- Philadelphia Performing Arts Charter School
- Philadelphia School Partnership
- Public Citizens for Children and Youth
- Russell Byers Charter School
- SEAMACC
- String Theory Schools
- Technology Learning Collaborative
- United Way of Greater Philadelphia and Southern New Jersey

In addition to these community advocates, the Philadelphia Household Internet Assessment research team invited community advocates and practitioners focused on addressing digital equity issues on behalf of residents to attend one of two, 90-minute, virtual feedback sessions. The goal of these meetings was to help inform the design of the resident survey. The full list can be found in the report.

PHL Service Design Studio and the Mayor's Office of Civic Engagement and Volunteer Service

OIT collaborated with the PHL Service Design Studio and the Mayor's Office of Civic Engagement and Volunteer Service to support the development of an Equitable Community Engagement Toolkit project in collaboration with City engagement staff, community groups, and Philadelphia residents. The Toolkit is a citywide initiative that will shape how the City of Philadelphia thinks about, plans for, and facilitates engagement with the communities we serve. It will include a vision and guiding principles, strategies and tools, evaluation resources, training, and a cultivated community of practitioners made up of City engagement staff and community members. All guidance will be accessible online within the phila.gov platform. To design the Toolkit, PHL Service Design studio conducted focus groups with digital inclusion practitioners and held seven resident workshops to ask deeper questions about digital access needs, barriers, and recommendations for how the City could better work with communities without digital access. These focus groups and workshops greatly helped inform the Digital Equity Plan.

Digital Health Equity Taskforce:

The Digital Health Equity Taskforce convened three times during 2021. Representatives from multiple departments within hospital systems and universities were represented. For simplicity, the name of the hospital or educational institution with representatives is listed below rather than individual departments within those institutions. Overall, 40 people working in health care, behavioral health, or public health participated in conversations with the Office of Innovation and Technology. These included:

- CARIE
- Children's Hospital of Philadelphia
- CHOP PolicyLab
- City of Philadelphia Department of Behavioral Health and Intellectual disAbility Services
- City of Philadelphia Department of Public Health
- Drexel Dornsife School of Public Health
- Drexel University College of Medicine
- Esperanza Health Center
- Generations Online
- Health Federation
- Hospital of the University of Pennsylvania
- Jefferson University Hospital
- Philadelphia FIGHT Community Health Centers
- St. Mary's Medical Center
- Temple University Hospital

FOOTNOTES

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