CITY OF ST. LOUIS

DIGITAL INCLUSION ACTION PLAN

2023

Executive Summary

Internet access has become integral to many aspects of modern life – from healthcare, to education, to banking, and of course, entertainment. The COVID-19 pandemic accelerated these trends and further heightened awareness of the importance of internet access. In doing so, it highlighted the gap between those who have access to the internet, devices such as computers, and the skills to participate in an increasingly digital society, and those who do not – known as the digital divide.

The St. Louis Digital Divide Report (published in 2022) found that nearly half of households in St. Louis City and County are impacted by at least one aspect of the digital divide. To ensure equal access to the resources of a modern economy, the City is motivated to close that gap.

The Office of the Mayor in partnership with St. Louis Development Corporation (SLDC) developed the Digital Inclusion Action Plan to ensure St. Louis is equipped with a proactive, long-term plan that can achieve the vision for digital equity in St Louis.

This document establishes the City's vision and outlines the plan to achieve it. The City and its partners will use this Plan as a blueprint for future programs and initiatives as they seek to close the digital divide.

Our vision:

> **"Removing the barriers to internet access so that every resident in the City of St. Louis has the opportunity to learn, work, and thrive."**

Executive Summary

St. Louis Digital Inclusion Action Plan establishes a blueprint for how the City can bridge the digital divide in St. Louis. It was developed over several phases, beginning with a deep dive into the current state of broadband and digital inclusion in St. Louis that built on the findings of the 2022 Digital Divide Report. It also included research on leading practices from around the country,

Community engagement was also a key input for the creation of the Action Plan. The Action Plan, and the recommendations within it, were informed by the priorities and concerns raised by community-based organizations and residents within the City through over 60 interviews, in-person listening sessions, and a city-wide survey.

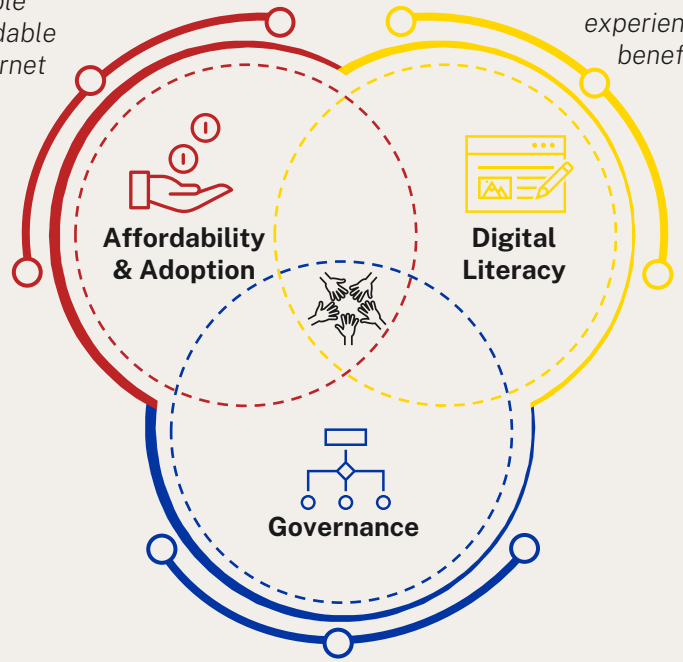
What was clear from this work is that the City of St. Louis has a vibrant ecosystem of community stakeholders activated on issues related to the digital divide; **this Plan seeks to provide direction and coordination to help grow these efforts** so that every city resident has an opportunity to succeed. The distillation of this work has resulted in a list of 10 priority actions for the City and its partners to take forward.

As the internet and digital technology evolves, digital equity standards will need to continuously improve. This Plan recognizes that digital equity requires good governance and collective action from the community to address existing and future challenges – and will not just be solved by the City alone.

Goals and strategies in this plan to close the digital divide in St. Louis:

Our Goal:
Improve equitable access to affordable high-speed internet and connected devices

Our Goal:
Enable residents to experience the long-term benefits of technology



Our Goal:
Empower city government, business, and non-profit stakeholders to coordinate and collaborate to tackle the digital divide

This work builds on existing City strategies focused on equity, economic development, and economic justice

BUILDING ON EXISTING CITY INITIATIVES...

Digital equity
is the ***desired state*** in which all individuals have the information technology capacity that is needed for full participation in society and the economy

Digital inclusion
refers to the ***actions taken*** to achieve digital equity

Things to know about broadband...

What fiber technology enables:

Fiber is the only technology that can reliably reach 100/100 Mbps, the speed needed for a family or business to conduct economic and educational activities online.

Federally funded broadband infrastructure grants programs prioritize fiber technology

The **Broadband, Equity, Access, and Deployment (BEAD) Grant Program**, administered by NTIA, expressly prioritizes projects designed to provide fiber connectivity to the end user. Fiber is the preferred technology of NTIA because it will ensure that the network can easily scale speeds over time to meet evolving connectivity needs.

Likewise, **ARPA Capital Projects Fund (CPF)**, administered by U.S. Treasury, supports fiber. In accordance with U.S. Treasury guidance, **Missouri's Broadband Infrastructure Grant Program**, a CPF-funded program, stipulates that funds must be used for construction and deployment of broadband infrastructure designed to deliver service that reliably meets or exceeds symmetrical speeds of 100/100 Mbps.

Three key sets of inputs were used to develop the Digital Inclusion Action Plan

Stakeholder and Community Engagement

Interviews with internal and external stakeholders, community meetings, and a broadband and digital inclusion survey were conducted to gather insight and input on the current state of broadband and digital inclusion, understand residents lived experience, and identify city priorities.

Infrastructure Mapping and Assessment

Research, mapping, and data analysis combined with stakeholder input informed an assessment of the current broadband and digital inclusion landscape in the city to understand gaps and opportunities for improvement.

Strategic Visioning and Framework Development

Developed a strategic framework for how the City can help close the digital divide and a set of tactical projects to help guide resource allocation and decision-making.

Stakeholder and community engagement has been integral to the creation of the Digital Inclusion Action Plan

Over 60 stakeholder interviews across 45 unique entities were conducted. Stakeholders included both City and non-City government entities, non-profit organizations, internet service providers (ISPs), and private companies, among others.

A Working Group consisting of 20 leaders working in this space were convened to provide input and direction to the Plan. The group met monthly to support engagement and research activities, review research findings, and provide direction to the recommendations for the Digital Inclusion Action Plan.

Eight in-person and one virtual community meeting were held in neighborhoods identified with low internet adoption. Additionally, a city-wide survey was conducted that gathered over 336 responses from city residents, businesses, and non-profit organizations.

25% of survey respondents were dissatisfied with their internet reliability and only 23% of respondents had fiber

"I only have the internet because of my granddaughter"

"We live in a digital desert"

79% were comfortable attending virtual doctor's appointments

"Jobs need fundamental digital skills... even tradesmen need tech"

Half of respondents without internet said it was too expensive

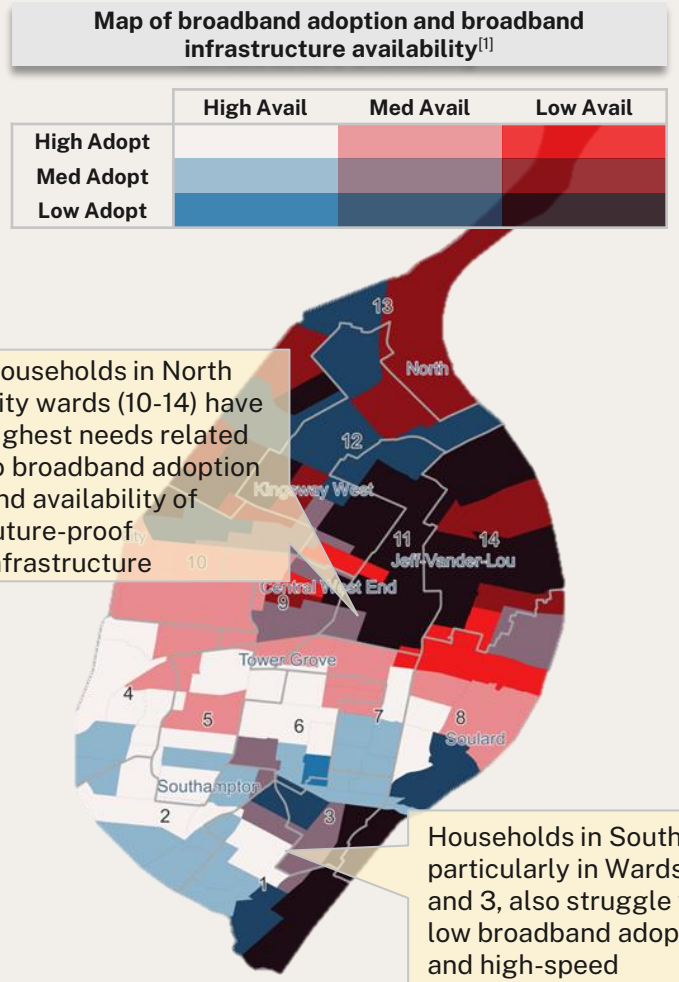
"Leadership must come from the City, but others in the community have a role to play too"

Only ***8%*** of respondents had applied to the Affordable Connectivity Program (ACP)

"[There is a] lack of awareness that ACP [or other programs] exist"

Analysis of the city's infrastructure highlights the need to tackle broadband availability and adoption gaps in North City

Map of broadband adoption and broadband infrastructure availability[1]



Households in North City wards (10-14) have highest needs related to broadband adoption and availability of future-proof infrastructure

Households in South City, particularly in Wards 1 and 3, also struggle with low broadband adoption and high-speed broadband availability

1 There is broadband infrastructure access in St. Louis, but it is not widely accessible, nor is it future-proof.

Although 99% of the city is considered 'served' (100/20 Mbps) based on FCC data and current state and federal funding guidelines, the technologies underlying that service are largely cable, fixed wireless, and DSL[2]. An estimated 46% of broadband serviceable locations (47,315 BSLs) in the city lack a fiber connection.

2 North City does not have the means to adopt and effectively use the broadband infrastructure that exists and faces income and other social barriers to adoption.

An estimated 30% of households in North City (defined as wards 10-14) lack a broadband internet subscription (13,230 households) and 20% percent of households in North City are only using a smartphone to access the internet (8,938 households) compared to 14% of households across the city (19,467 households). North City only accounts for 30% of households in St. Louis, but nearly half of the households in St. Louis that do not have a device (46%) that can be reliably used to access remote education, apply for jobs, or work remotely.

3 The City can better coordinate the ecosystem of stakeholders to target areas identified with low future-proof infrastructure and low internet adoption.

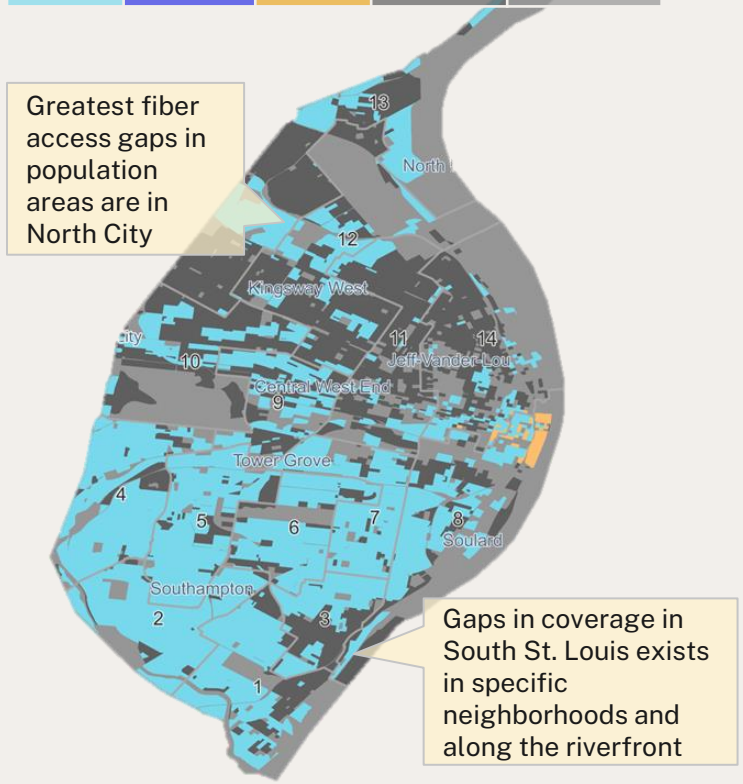
In order to expand fiber infrastructure in North City, St. Louis will need to identify partners and infrastructure projects that can feasibly be implemented given policy and funding parameters. On the adoption side, the City can look to expand and improve access to resources such as the Affordable Connectivity Program (ACP), digital literacy classes, and digital workforce training, to ensure that internet access and digital skills are not a barrier for residents to engage and participate in modern society.

Notes: [1] A bivariate map was constructed using household broadband internet subscription rates (2021 ACS 5-year Summary Estimates) and percent of broadband serviceable locations with maximum advertised services offerings 100/100 Mbps at the census tract level (FCC BDC Fixed Broadband Availability Public Data).
[2] Based on FCC BDC Fixed Broadband Availability Data, 99% of broadband serviceable locations in the City of St. Louis are served at 100/20 Mbps.

1 99% of St. Louis is 'served', but 46% of the city lacks future-proof fiber technology[1]

Fiber plans by speed threshold[2]

High (≥ 100/20 Mbps)	Medium (≥ 25/3 and < 100/20 Mbps)	Low (< 25/3 Mbps)	No fiber plans – Populated area	No plans – Unpopulated area



If fiber infrastructure is not expanded in St. Louis, communities in North St. Louis risk being left behind as broadband technologies and connectivity needs advance

Key findings

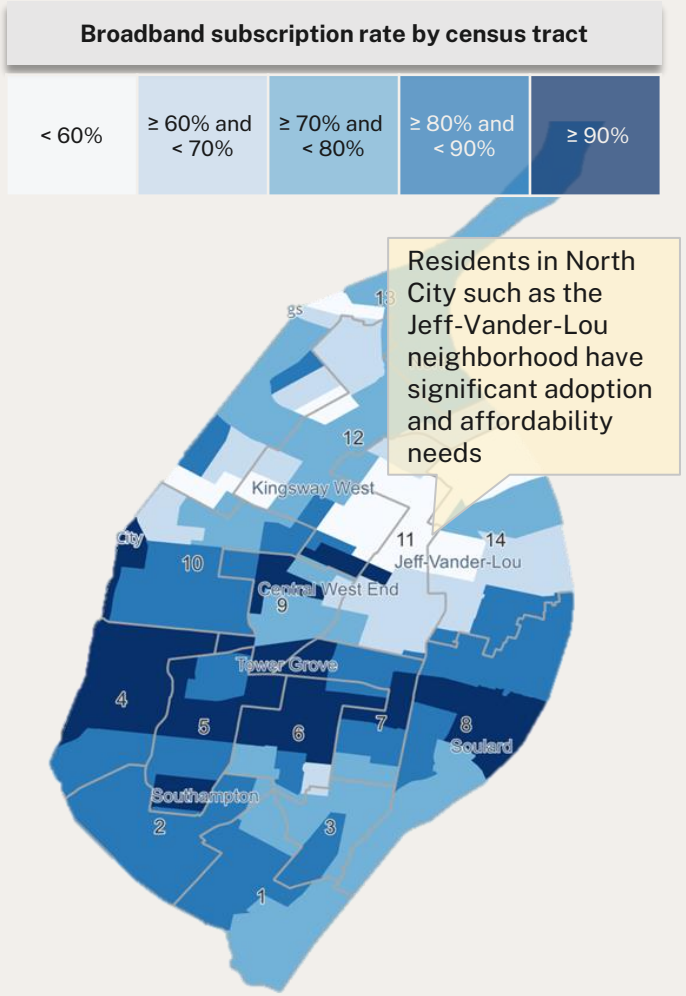
- 19% of households in St. Louis do not have a broadband internet subscription
- There are 11 census tracts (9,491 BSLs) across 5 wards (10, 11, 12, 13, 14), all in North City, that have no access to service that meets or exceed 100/100 Mbps
- Although 99% of BSLs have a cable connection, an estimated 43% of residential locations (39,766 BSLs) and 75% of business locations (5,565 BSLs) in St. Louis remain without a fiber connection
- The city is limited in its ability to unilaterally deploy a municipal fiber network and can consider partnering with an ISP to expand last-mile fiber buildouts to keep pace with modern speed requirements

Insight from stakeholders and local voices

Broadband access and digital redlining reflect the 'Delmar Divide,' with low income, predominantly Black neighborhoods in North City lacking fiber offerings. The City should target investment in areas that have historically received less investment and been excluded from economic opportunities enabled by broadband.

Notes: [1] City fiber coverage measured based on broadband serviceable locations (BSL) where at least one internet service provider offers fiber service. A BSL is "a business or residential location in the United States at which mass-market fixed broadband Internet access service is, or can be, installed" (FCC 2023). A BSL is classified as 'served' if at least one internet service provider offers a broadband internet plan (e.g., fiber, cable, DSL, fixed wireless) at or above 100/20 Mbps (FCC BDC Fixed Broadband Availability Public Data).
[2] City fiber coverage aggregated at the census block level (FCC BDC Fixed Broadband Availability Public Data).

2 30% of households in North City do not have any broadband internet subscription, including a wireless cellular plan[1]

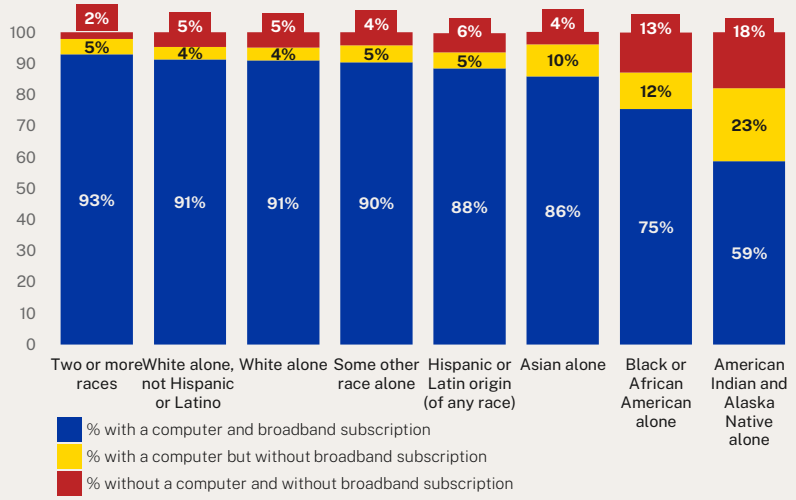


North City residents do not have the means to adopt and effectively use existing broadband infrastructure, likely a result of persistent social and structural barriers

Key findings

- 30% of households (13,230) in North City wards (10, 11, 12, 13, 14) do not have a broadband internet subscription. In highest need census tracts, the percentage of households can exceed 40%
- Household access to the internet varies by race: 13% of Black households do not have a computer compared to 5% of white households. Among Black households with a computer, 12% do not have a broadband internet subscription compared to 4% of white households

Broadband Internet Subscriptions by Race and Computer Ownership[2]



Insight from stakeholders and local voices

Residents need but may not be able to afford internet and devices, as evidenced by increased demand for WiFi hotspots and digital devices available for loan through St. Louis Public Libraries.

Notes: [1] Percent of households with a broadband internet subscription (2021 ACS 5-Year Summary Estimates).
[2] Percent of households with a broadband internet subscription by race and computer ownership (2021 ACS 5-Year Summary Estimates)

3 St. Louis already has a rich ecosystem of organizations focused on related issues and existing assets to build upon

Piggybacking off current assets and amplifying existing initiatives will reduce duplication and maximize the return for the City's efforts in closing the digital divide

Existing investments planned in priority areas

Initiatives like Project Connect, Learning Labs, and Brickline Greenway can be in sync with digital inclusion activities.

St. Louis Public Library (SLPL) device program

SLPL has been running a successful device distribution program for the past several years using COVID relief funds; however, the funds are running out.

Multiple organizations that are active

Organizations like NPower, Urban League, and TechSTL represent possible partners for initiatives that the City undertakes.

Alignment with economic justice and workforce development

Achieving digital equity enables many of the goals in the Economic Justice Action Plan.

City-owned fiber infrastructure

City-owned fiber infrastructure is distributed across much of the city and could potentially be used for public WiFi or middle mile.

Affordable Connectivity Program (ACP)

Program offered by the Federal Communications Commission (FCC) which reduces the cost of internet service and devices for eligible households.

The Digital Inclusion Action plan focuses on three goals to achieve its vision and bridge the digital divide

VISION

Remove the barriers to internet access so that every resident in St. Louis has the opportunity to learn, work, and thrive

GOALS

GOVERNANCE

Empower City government, business, and community stakeholders to collaborate in closing the digital divide

AFFORDABILITY & ADOPTION

Improve equitable access to affordable high-speed internet and connected devices

DIGITAL LITERACY & TRAINING

Enable residents to experience the long-term benefits of technology

STRATEGIES

GOV1 The City establishes a structure and operating model for the data-driven coordination of digital inclusion efforts

GOV2 The City maximizes external sources of funding to leverage its own funds into digital inclusion

GOV3 The City collaborates seamlessly with business and community stakeholders to spread awareness of new and existing resources, learn iteratively, and drive action

AA1 The City strives to minimize the economic and social barriers to accessing and adopting high-speed internet

AA2 The City expands residents access to adequate connected devices needed to learn, work, and perform vital online activities

AA3 The City works to ensure that community anchor institutions have high-speed fiber connections and public WiFi networks

DLT1 The City removes roadblocks for residents seeking opportunities to work and participate in the digital economy

DLT2 The City facilitates technical support and digital skills trainings that are widely available and tailored to the needs of different groups

DLT3 The City enhances resources that residents can rely on for assistance getting online

Governance Goal: Empower City government, business, and community stakeholders to collaborate in closing the digital divide

The City has a unique role to play, but seeks partnership with business and community stakeholders to deliver digital inclusion programs and initiatives in a data-driven and sustainable way

STRATEGIES	NEAR-TERM PROJECTS THAT DRIVE THE STRATEGIES FORWARD	BENEFITS
GOV1 The City establishes a structure and operating model for the data-driven coordination of digital inclusion efforts	**GOV1-1 Hire a Digital Equity Manager** The City does not currently have an individual dedicated to broadband and digital inclusion. Hiring a dedicated, full-time resource to oversee and drive the implementation of the Digital Inclusion Action Plan is essential.	• Node and single point of contact and coordination that enables other projects
GOV2 The City maximizes external sources of funding to leverage its own funds into digital inclusion	**GOV1-2 Facilitate Capital Project Investment & Planning for Digital Inclusion** There are several ways the City can encourage and facilitate further investment in digital infrastructure, including creating partnerships to reach areas of need, leveraging its fiber as middle mile, and expanding its 'dig once' policy to help reduce the cost of buildouts over time, spur competition among ISPs, and improve connectivity.	• Potential **cost savings of 15-33% per mile** and potential to entice providers to serve thousands of households
GOV3 The City collaborates seamlessly with business and community stakeholders to learn iteratively and drive action	**GOV2-1 Establish a Digital Inclusion Fund** Creating a centralized fund will enable the City to make strategic investment decisions that balance funding of core programs with incentivizing project innovation. Monies from the fund can be flexibly used to invest in city and community-based projects aligned with broadband and digital inclusion goals.	• Leverages **up to 5x** additional funding through private and philanthropic sources of funding
	GOV3-1 Create a Digital Equity Asset Platform This project would address the information gap by helping make aware the range of programs and resources that currently exist to support city residents, businesses, and organizations get online. It also provides a structure to continually gather and analyze program data.	• Increases visibility of existing programs/services/resources and increase their uptake

Affordability & Adoption Goal: Improve equitable access to affordable high-speed internet and connected devices

The City seeks to leverage existing assets and programs to minimize the economic and social barriers to digital adoption, as well as deliver new community WiFi infrastructure pilots to areas of need

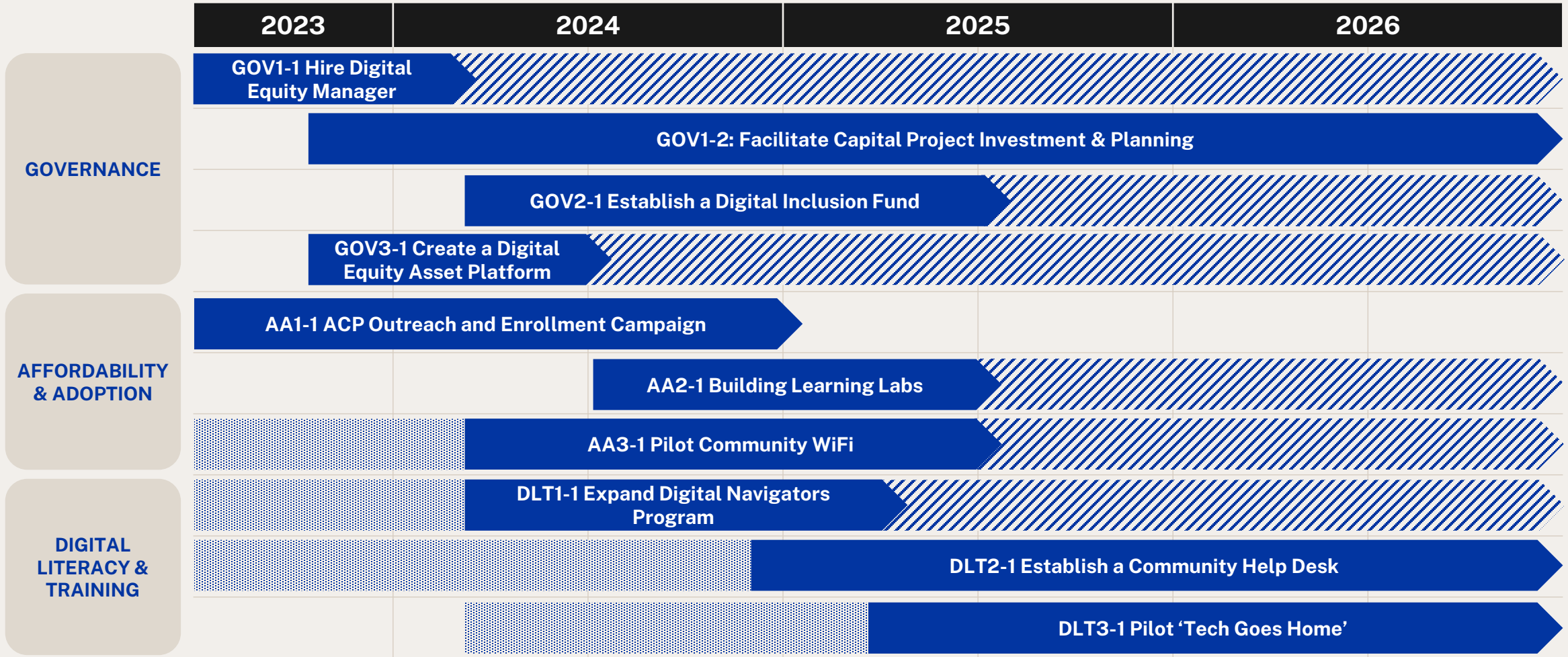
STRATEGIES	NEAR-TERM PROJECTS THAT DRIVE THE STRATEGIES FORWARD	BENEFITS
AA1 The City strives to minimize the economic and social barriers to accessing and adopting high-speed internet	**AA1-1 ACP Outreach and Enrollment Campaign** There are an estimated 47,000 households that are eligible for ACP benefits but are not currently enrolled in this program. This comes out to $4.7 million in device support and a minimum of $1.4 million in monthly service support that may still be available to St. Louis residents. The City will conduct a multipronged, citywide Affordable Connectivity Program (ACP) outreach and enrollment campaign to reach St. Louis residents that are either unaware of the program or need assistance applying.	• Bring ACP enrollments for eligible households **up to 50%** (overall city enrollment is estimated at 39%, although some areas have achieved 64%)
AA2 The City expands access to adequate connected devices needed to learn, work, and perform vital online activities	**AA2-1 Building Learning Labs** There are few locations beyond the St. Louis Public Libraries where residents can go to use a computer and the internet. Creating Learning Labs at select recreation centers with computer access, training, additional supplies, and technical support to increase the knowledge skills, and abilities for youth and adult populations.	• From comparable programs in other cities, a Learning Labs programs in St. Louis has the potential to reach **1,500+ individuals per year**
AA3 The City works to ensure that community anchor institutions have high-speed fiber connections and public WiFi networks	**AA3-1 Pilot Community WiFi** Leverage the City's fiber network to pilot community WiFi through Dr. Martin Luther King ("MLK") corridor and at city parks. The City can deploy proof-of-concept public WiFi in a location to assess usage and other maintenance factors of setting up and maintaining access points at multiple locations throughout the city.	• **5,000+ households and 100+ business units** that were previously unserved by broadband will be connected to community WiFi

Digital Literacy & Training Goal: Enable residents to experience the long-term benefits of technology

The City seeks to provide resources and assistance, working intimately with communities to upskill the digital literacy of St. Louis residents that empower them to secure tangible social and economic benefits

STRATEGIES	NEAR-TERM PROJECTS THAT DRIVE THE STRATEGIES FORWARD	BENEFITS
DLT1 The City removes roadblocks for residents seeking opportunities to work and participate in the digital economy **DLT2** The City facilitates technical support and digital skills trainings that are widely available and tailored to the needs of different groups **DLT3** The City enhances resources that residents can rely on for assistance getting online	**DLT1-1 Expand Digital Navigators Program** The City can develop a system of digital navigators to provide a range of support services to residents, businesses, and organizations. Digital navigators are typically embedded in organizations such as libraries, health clinics, social service agencies, and community-based organizations where they serve as trusted resources to help individuals get online and access critical services. **DLT2-1 Establish a Community Help Desk** The City can establish an in-person and virtual community help desk (could also be mobile) to help residents of St. Louis utilize technology. The community help desk will be staffed by digital navigators who can provide residents with ad-hoc support such as signing up for ACP or connecting them to other available programs and resources. **DLT3-1 Pilot 'Tech Goes Home'** Tech Goes Home is a program that pairs digital literacy training with a free/low-cost device and sometimes a temporary internet plan. St. Louis can apply this model to existing digital literacy programs or through a new digital literacy program.	• Digital Navigators have the potential to have **2,000+ interactions** with residents, helping **1 in 3 find a new job or increase their income**, and help 2 in 3 obtain better internet service • A Community Help Desk has the potential to assist **500+ individuals per year** • A 'Tech Goes Home' program has the potential to assist **2,500+ individuals per year**

The 10 projects identified in this Digital Inclusion Action Plan will be implemented over the course of the next 36 months



Call to action

The City of St. Louis is taking bold steps in closing the digital divide and achieving digital equity; we welcome the participation of business and community stakeholders and residents to get there together

Achieving this Plan in line with the City's vision will produce widespread economic benefits and have a transformational impact on residents' quality of life.

Based on an analysis of potential economic impacts of universal broadband, getting all St. Louisans connected and establishing equitable access citywide could result in up to 4,500 new entrants to the labor force, up to a $50 million increase in household income, and up to $305 million in incremental Gross Domestic Product.

Ensuring digital equity is not a choice, but an imperative. The internet is essential; every St. Louisan must be able to access and use the internet to its full potential. The City can play a pivotal role in making this happen.

Our critical next steps include:

Build on the momentum created through this plan by establishing a Working Group. The Working Group (comprised of both City and non-City staff) will iterate and take forward the initiatives proposed in this plan.

Develop a detailed workplan. This document lays out a framework and proposed initiatives, but implementation will require specific engagement from a variety of stakeholders to establish timeline and required resources.

Ensure accountability through good governance. Creating a governance structure will ensure a key point of accountability and that progress is made against our vision and metrics.

Report on progress. From the outset, the City will trial initiatives through pilot programs and track progress against agreed metrics to ensure the proposed initiatives in the plan are delivering the results we need and expect.

But, the City cannot accomplish this work on its own. By working together – with you – we can make St. Louis a leader in ensuring digital equity for all our residents.

Let's get to work!

The Citywide benefits the Digital Inclusion Action Plan will deliver:

$305m in additional City GDP

equivalent to a 0.16% increase across the city

$50m in additional Household income

equivalent to $1,850 per household in the city

4,500 increase in labor participation

helping those affected by the digital divide back into the labor force

Consultant analysis (2023) based on "Connecting the Dots of Ohio's Broadband Policy" (Rembert et al. 2017); "A Human Approach to Closing the Digital Divide" (Kalmus et al. 2022); "Broadband Subscription, Computer Access, and Labor Market Attachment Across U.S. Metros" (Sanchez et al. 2021); and "The Contribution of Fixed Broadband to the Economic Growth of the United States between 2010 and 2020" (Katz and Jung 2022)

Acknowledgements

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St. Louis Development Corporation
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Key Contributors

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