CITY AND COUNTY OF SAN FRANCISCO

DIGITAL EQUITY
STRATEGIC PLAN
2019-2024
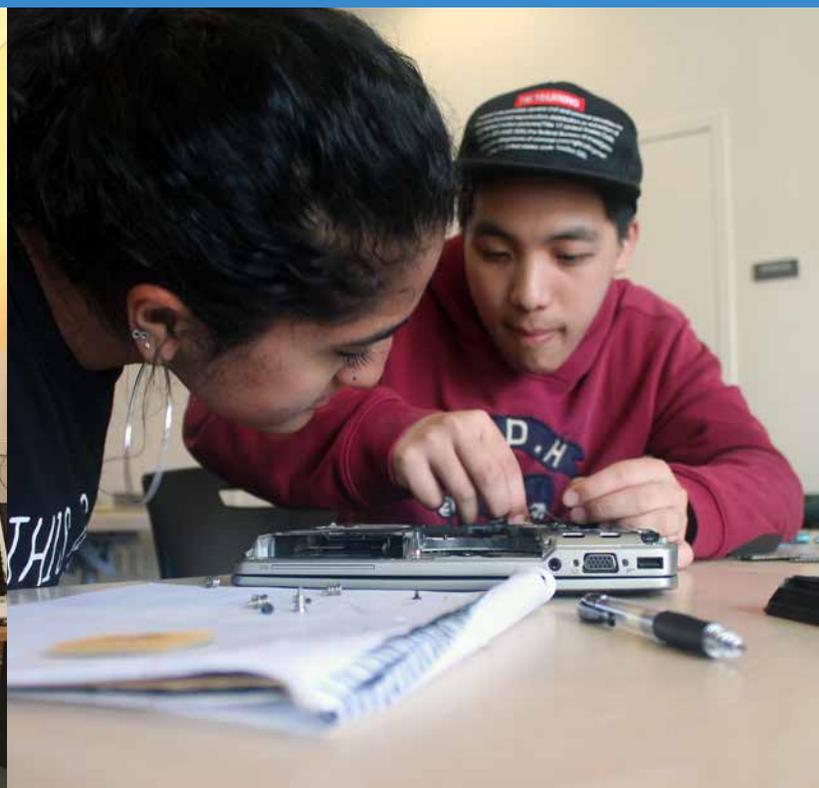
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MESSAGE FROM THE CITY AND COUNTY OF SAN FRANCISCO

In San Francisco, we believe that all residents should have the ability to access the Internet. We are committed to building a society that helps our most vulnerable residents connect to the wealth of opportunities and resources now available through technology. It is my great pleasure to share San Francisco's plan to accomplish this through the City's Digital Equity Strategic Plan.

The Internet has transformed our society in more ways than one. Digital tools are now standard in our workforce, schools, health care, and City services. Yet not everyone has the same ability to access or benefit from these advances. It has never been more important to bridge the divides in Internet access and digital literacy.

San Francisco's Digital Equity Strategic Plan is a starting point to change the status quo to a more connected community. From the beginning, our strategy has been built with our community. Through interviews and interactive workshops, hundreds of residents and dozens of stakeholder organizations have provided input on where services are needed most. Over the next five years, San Francisco's strategic efforts will focus on three main areas:

- **Expand affordable, high-quality Internet access through strategic partnerships.** This includes bringing free, high-speed Internet service to affordable housing residents throughout San Francisco.

- **Launch digital literacy innovation programs** to test novel new ways to provide technology training and support in high-need communities.

- **Establish central leadership and accountability for measurable change.** This should take the form of a Digital Equity Scorecard and an open coalition with resources to support community-based organizations and residents with technology needs.

Guiding all of this work will be our principles of equity, deep community engagement, agility, and inclusion.

San Francisco's Digital Equity Plan is ambitious and builds on the progress we have already made in recent years. We look forward to working with all of our diverse communities and stakeholders to achieve digital equity in San Francisco.

London N. Breed
Mayor, City and County of San Francisco

EXECUTIVE SUMMARY

The electricity of the 21st century. A prerequisite for full and meaningful participation in our economy and society. A civil right.

The Internet and digital technologies are now widely recognized as vital necessities in our modern world. Still, over 100,000 San Franciscans today either lack broadband home Internet or basic digital skills, with those who are low-income, senior, limited English proficient, or having a disability most at risk. With digitalization remaking the workforce, schools, health care, City services and even the Census, the City has a responsibility for bridging this digital divide and ensuring all residents have the digital tools and skills to be successful.

To fully understand these issues and how to best address them, the City Administrator's Office, Committee on Information Technology (COIT), and Mayor's Office of Housing and Community Development (MOHCD) initiated a strategic planning and research process in early 2018. We conducted a citywide, representative sample survey of over 1,000 residents, followed by a community needs assessment with over 400 participants at community fairs, affordable housing meetings, food pantries, schools, and community centers. More than 80 non-profit, government, and private sector stakeholder organizations participated throughout the process. Along with planning and research, the City also tested new programs to offer free Internet access at select affordable housing communities and refurbished computers and a variety of digital skills classes at workforce centers, libraries, and housing sites. These pilots produced important lessons on how to most effectively address the technology needs of our residents.

The result of this work is the Digital Equity Strategic Plan. Building on the City's existing efforts and experience in areas like the provision of free Wi-Fi in public spaces and digital literacy classes at libraries and community centers, this plan defines our goals, strategies, and commitment for advancing digital equity over the next five years.

Vision and Guiding Principles

Our vision for digital equity is: ***Full and equitable access to digital technology and its benefits so all San Francisco residents and communities can thrive, regardless of demographics.***

Reflecting the City's values and the approaches needed to fully address this issue, our work will be guided by four principles: ***Equity (not equality), Deep Community Engagement, Agility, and Inclusiveness.***

Goals, Strategies, and Approaches

The Digital Equity Strategic Plan is divided into three major goals, each with its own strategy and approaches to consider. Inspired by the Results Based Accountability framework, progress towards each goal will be tracked using a panel of population level and program level measures.

Goal 1: Access. All San Franciscans have affordable, reliable, and high-quality Internet access.

Strategy: *Spur strategic partnerships for affordable, high-quality access*

Approaches:
1. **Bring affordable connectivity to affordable housing communities:** Partnering with Internet Service Providers (ISPs) and housing providers, the City should expand existing efforts to offer high-quality free or low-cost Internet access to our residents living in affordable housing.

2. **Expand and promote low-cost Internet options:** The City should work with ISPs and public agencies at the local, state, and federal levels to develop and promote low-cost Internet options that meet the needs of our residents.

3. **Create a pipeline for device refurbishment and redistribution:** The City should create a program for City departments and companies to donate surplus computing devices for refurbishment and distribution in high-need communities.

4. **Strengthen the safety net for technology access:** The City should ensure neighborhood hubs like libraries and community centers are properly equipped with robust Internet and technology facilities to serve as a connectivity safety net for all residents.

Goal 2: Digital Skills and Usage. All San Francisco residents have the necessary digital literacy to use technology in the most beneficial ways.

Strategy: *Launch a digital literacy innovation program*

Approaches:
1. **Community-led innovation challenges:** Modeled after the City's successful Startup in Residence (STIR) program, the digital literacy innovation program is designed to test and scale new approaches for overcoming long-standing barriers to digital literacy training and support. It starts with community-led innovation challenges, where residents will identify discrete problems in technology adoption and skill-building for new ideas to help solve.

2. **Establish a Digital Equity Innovation Fund:** This fund should then provide grants for organizations to pilot ideas selected to address each challenge.

3. **Form a pool of sponsors:** Each challenge should have a sponsor, drawn initially from City departments, to support pilots evaluated to be effective. Sponsoring innovations can help improve services for those already working on digital equity and help new organizations get involved.

Goal 3: Long-term impact. All San Francisco communities experience the long-term benefits of technology because of a sustained and systematic approach across City services.

Strategy: *Establish central leadership and accountability for digital equity*

Approaches:

1. **Develop a Digital Equity Scorecard and Annual Reporting:** The City should conduct digital divide surveys regularly and make data on Internet adoption and training publicly available on a new Digital Equity Scorecard. An accountability report should be produced and presented annually to City leaders and members of the public.

2. **Form a coalition for digital equity collaboration and input:** The City should convene an open coalition of organizations working to advance digital equity. This coalition can provide support to City departments seeking to incorporate digital equity services to align with their charters and missions.

3. **Build technology capacity of community-based organizations:** To ensure trusted community providers are able to assist residents with technology needs, the City should develop and offer centralized resources like the Digital Equity Playbook and train-the-trainer workshops for community-based organizations.

Photo courtesy of <dev/Mission>.

INTRODUCTION

"Remember when they used to say computers were supposed to be for everybody? What happened? Where's that at today?" –
Resident at Holly Courts, an SF affordable housing community

What if every San Franciscan had what many of us take for granted in our lives – technology at our fingertips and the know-how to use it? What could it mean for our city if every resident could reach their full potential with technology and enhance their quality of life?

San Francisco is committed to achieving a diverse, equitable, and inclusive city. Equity is a value that is growing in urgency and focus in the face of the stark disparities our city, like many others, faces. Equity has been identified by Mayor Breed as a Citywide Strategic Initiative, with emphasis placed on services that "reflect the value that each person deserves an opportunity to thrive in a diverse and inclusive city."

While access to technology has become increasingly important for accessing opportunity, San Francisco's digital divide still persists today. About 1 in 8 residents still lack high-speed home Internet service, 1 in 7 families in public school lack a computer connected to the Internet at home, and 1 in 7 residents lack basic digital literacy such as the ability to send email or use a search engine. In particular, many who are low-income, limited English proficient, senior, and/or have a disability struggle to have reliable high-quality service and to learn the skills to reap its full benefits. Internet access and digital literacy are essential infrastructure for the 21st century. As more education, workforce, health care, and City services move online, digital inequities threaten to worsen existing inequities in all areas.

San Francisco is currently engaged in a variety of efforts to bridge this divide. The Department of Aging and Adult Services' nationally recognized SF Connected program provides computer labs and training to seniors and adults with disabilities at over 50 locations citywide. The Department of Technology's #SFWiFi service offers free public Wi-Fi along Market St. and at 33 parks, plazas, and open spaces. The SF Public Library system provides free Wi-Fi and computer assistance at all branches, and organizes a Connect with Tech Week every year to promote digital access and skill-building. The City's workforce development programs provide digital skill classes designed for job seekers, as well as specialized training and employment assistance for those interested in tech careers. And the San Francisco Unified School District is working to ensure that all of the city's public schools are equipped with up-to-date technology and that children are taught crucial digital skills by incorporating computer science throughout their curriculum.

This Strategic Plan defines the City's commitment to digital equity over the next 5 years. This commitment recognizes that high-quality reliable Internet access is no longer a nice-to-have option but is a must-have for everyone. This commitment prioritizes those residents with the greatest disparities, in order to achieve equal outcomes. And this commitment thinks beyond point solutions to system-minded design to address primary barriers to greater digital inclusion and their root causes.

The following document outlines our goals, measures, and strategies to achieve this vision for all San Franciscans. The Digital Equity Strategic Plan is the City's roadmap to make a measurable difference in digital equity within the next 5 years.

A Vision for Digital Equity

Full and equitable access to digital technology and its benefits so all San Francisco residents and communities can thrive, regardless of demographics.

Guiding Principles

The following guiding principles shape how the City should approach digital equity. They were used to develop our strategies and should define how we'll work moving forward. These principles reflect the City's values and our desire to get to the heart of this persistent issue.

1. **Equity, not equality:** We will prioritize residents and communities in need of the most support to be fully connected. To achieve equitable outcomes, we need to look at demographics such as race which currently predict inequities.

2. **Deep community engagement:** Our work must meaningfully engage the communities we serve and partner with them to find solutions.

3. **Be agile:** We will try new things to learn and continuously improve through rigorous evaluation. We will strive to not only address the digital equity needs of today, but also keep an eye towards emerging technology trends and keep pace.

4. **Be inclusive:** Our programs will respect and account for the unique needs of our residents, including language, disability, and any historical barriers.
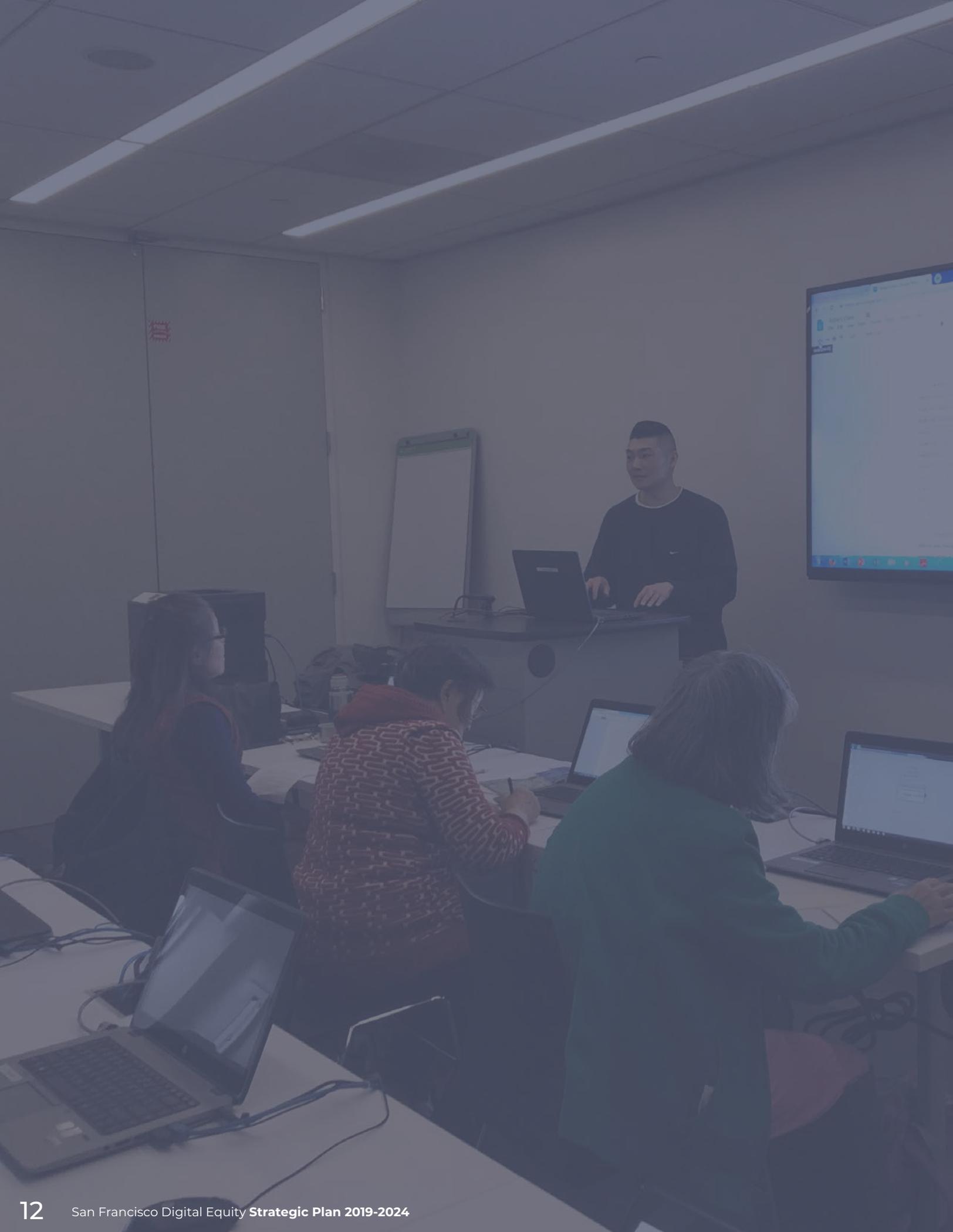
Our Process & Findings

In early 2018, the City Administrator's Office and Committee on Information Technology's Office of Digital Equity conducted the citywide Digital Divide Survey, which looked at technology usage, access, skills, barriers, and perceptions among a representative sample of over 1,000 San Franciscans. This study found the most significant – and consistent – gaps in technology usage, access, and skills among four demographic groups: residents who are low-income, senior, limited English proficient, or have a disability. For instance, roughly a quarter of low-income residents and seniors do not use the Internet at all. When it comes to high-speed home Internet or mobile access, rates for the four demographic groups are 10 to 28 percentage points lower than the city average. And less than two-thirds of residents belonging to the four groups were characterized as Internet users with basic digital skills, compared to 86% of the general population. Significant gaps also existed across racial categories (Black and Latino) and geographies, particularly among communities of color. (See Appendix A for summary tables of key statistics.)

Next, the strategic planning process began. We engaged and sought input from over 400 residents and 50 stakeholder organizations. Using the survey as guidance, we focused on residents from the four demographic groups with highest need. Racial and geographic considerations were overlaid as well. (See Appendix B for map of community engagement events and list of stakeholder organizations who provided input.)

The process was divided into three phases:

- **Phase 1: Stakeholder engagement and needs assessment**

In Phase 1, we sought to better understand residents' technology needs and barriers in more detail. To reach our target audience, we held focus groups and one-on-one conversations (in English and other languages) throughout the city at affordable housing sites, workforce centers, food pantries, community fairs, disability centers, schools, and community centers. We also met with leaders from City agencies, community-based organizations (CBOs), Internet service providers (ISPs), and technology companies to learn more about gaps they have observed and what they wanted to see from a citywide strategic plan.

- **Phase 2: The Digital Equity Summit**

The Digital Equity Summit convened stakeholders to discuss Phase 1 findings and generate ideas in response to three key prompts:

1. **How do we achieve equitable access?**

2. **How do we accommodate the multitude of training requests, especially given the diversity of training barriers?**

3. **How can we achieve long-term success?**

A total of 75 representatives participated from state and local government, community-

based organizations, philanthropy, and private sector companies. (For more on the event, see Appendix C: Digital Equity Summit Report.)

- **Phase 3: Community Feedback**

In Phase 3, we presented ideas from the Summit to residents and asked for their feedback in terms of priorities and suggested changes.

Key findings

Throughout this process, we engaged hundreds of San Franciscans who faced significant technology challenges. Key themes emerged:

Nearly all stakeholders agreed on the importance of technology
Residents agreed that technology has become a basic necessity in today's world. Without adequate access or digital skills, they felt they would miss out on important services and opportunities.

Affordability is the most commonly cited challenge for the less connected.
Internet, computers, and up-to-date mobile devices are too expensive for many residents, leading to lower subscription and ownership levels in low-income communities. Residents find it difficult to meet both upfront and ongoing maintenance costs. Many unconnected residents had access in the past but could no longer afford their monthly Internet bill or to repair or replace their devices when broken or outdated.

Even among residents with access, many were unable to afford reliable connections with sufficient bandwidth or devices to meet their needs. Data caps and data throttling were often cited barriers among mobile-reliant residents. Parents and educators were concerned about children needing to complete homework on smartphones because they could not afford a computer and broadband at home.

Residents have a wide range of digital literacy needs
Residents in our target communities felt they needed to learn a wide range of digital skills, both general and specific. Many expressed a desire to learn the basic functions of using a computer or smartphone and the Internet more effectively. Others knew the basics but felt they needed more advanced digital skills to get better jobs. There was also high demand for trainings on specific topics like online safety, protecting privacy, and tools for parents to monitor their children's usage.

A multitude of barriers impact digital literacy
While demand was high for more digital skills, even motivated residents cited significant barriers to learning:

- **Unreliable or difficult access:** Those lacking reliable access cited the inability to practice and reinforce the skills learned.

- **Learning curve:** The feeling that technology is just too complicated to learn. Especially common among older residents.

- **Language:** Immigrants find it too hard to learn to use technology without knowing English.

- **Time and competing priorities:** Many said they struggle to find the time to take a class. Especially common among working parents and people with disabilities.

Challenges in sustaining programs to address the digital divide
Some community-based organizations have described the digital divide as a "hot potato" in their organizations. It's an important issue that they want to help address, but target programs get passed along with no long-term ownership. Most organizations have core missions in areas like workforce development, housing, or family services; only a handful of organizations have digital equity as part of their core mission and services.

In their own words

Importance of technology
- *"Technology is a necessity. People need to have access to understand what's available to them and what's going on. State, county, city government – all their services are now online."* – Resident at a Tenderloin computer lab

- *"You just need to know how to use a computer in this day and age and time. Everyone needs it now, everything moved to the computer."* – Resident at Western Addition affordable housing

Affordability challenges
- *"I had Internet a few years ago but dumped it because it was too expensive. Now I mostly go to the library and a local church to use their computers."* – Job-seeker at workforce center

- *"When we need to do something for the kids' schoolwork, it just keeps loading and loading. It's just too slow."* – Parent at Visitacion Valley school event who subscribes to discount Internet service for low-income families

- *"We can't afford DSL or cable, we just have our smartphones. And it doesn't have enough data for my kids to do their homework. My daughter tried to get on last night to do her homework, but it was really slow because we used all the data. It says it's unlimited but it's not."* – Resident at Hunters Point affordable housing meeting

- *"My son is using my old phone right now with a broken screen. Do you know how hard it is to practice typing on a phone with a broken screen? It's so frustrating for him when it doesn't work. We know it would solve so many issues in the house if we had a laptop, but we just can't afford one."* – Parent at Visitacion Valley school event

Digital literacy needs
- *"I want to learn all the basics, from the ground up. We don't want to have to rely on our kids."* – Resident at OMI community meeting

- *"I am very confused about apps. I don't know how to put apps on my phone, how to use them, what app is safe to use and what isn't safe to use, and what will link me to things that I don't want to be linked to. So I've stayed clear, but I would like to know more about it."* – Resident at center serving people with disabilities

- *"The last 14 months I've been unemployed. And I'm one of those people, because of my age, I don't have all the computer skills that I need to work in an office, and yet I'm at the age where people don't see me as someone they want to invest the time to teach this stuff to."* – Resident at a center serving older adults

Digital literacy barriers
- *"What's the point of going to a class if we can't get online at home. You need to build the habits, otherwise you'll never learn."* – Resident at Tenderloin SRO meeting

- *"I went to a few computer classes out on 3rd Street but they were all in English. I just couldn't follow it. It's not that people in this neighborhood don't want to learn, because they do. It's that they're afraid to go. They're afraid because they don't know English."* – Resident at neighborhood food pantry

Photo courtesy of Community Living Campaign.

Goals Overview

The Digital Equity Strategic Plan aims to achieve 3 goals:

- **Goal 1: Access.** All San Franciscans have affordable, reliable, and high-quality Internet access.

- **Goal 2: Digital Skills and Usage.** All San Franciscans have the necessary digital literacy to use technology in the most beneficial ways.

- **Goal 3: Long-term impact.** All San Francisco communities experience the long-term benefits of technology because of a sustained and systematic approach across City services.

Goal 1:
Quality Access

- Availability
- Adoption
- Reliability
- Sufficiency

Goal 2:
Digital Skills & Usage

- Basic usage and digital skills
- Use of beneficial applications and services
- Advanced digital skills

Goal 3:
Long-term impact

- Improved educational, employment, or health outcomes
- Improved quality of life
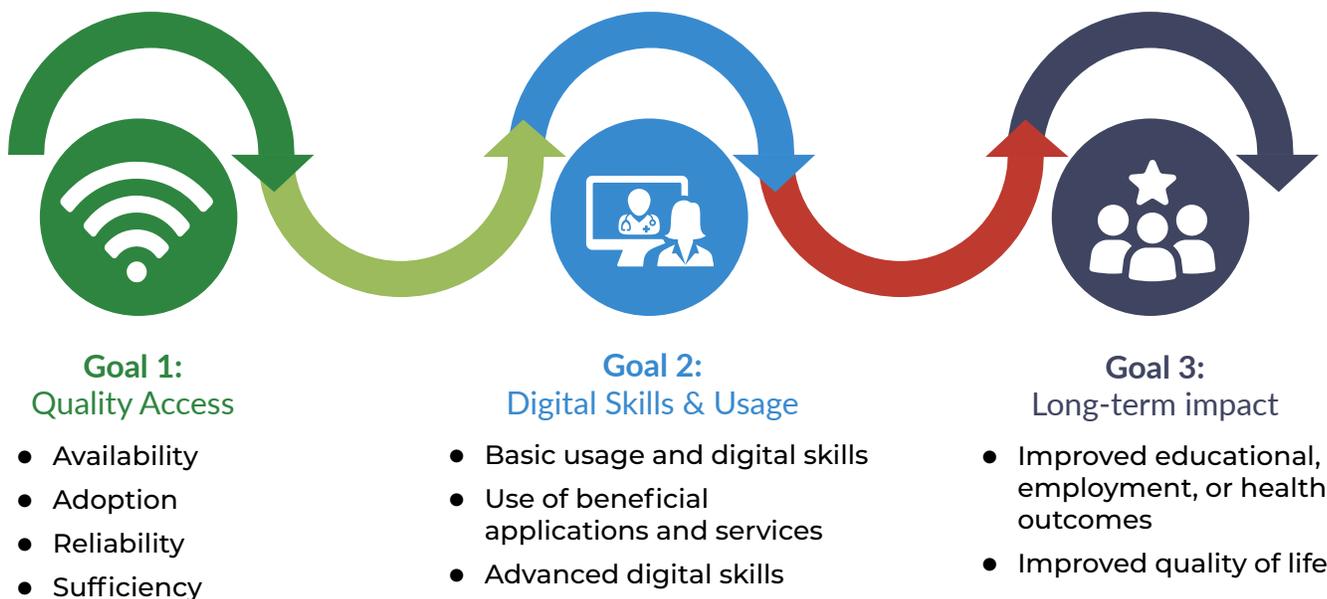
All goals are combined with specific strategies and performance measures to track progress. Using the Results Based Accountability approach, performance indicators are established for each goal at two levels:

- **Population level indicators:** Measure changes occurring at the citywide population level. These are things we hope to influence through City programs, systemic changes, and ripple effects, but which stretch beyond the direct control of the City.

- **Program level indicators:** Measure performance of City-sponsored programs and initiatives. These are things within the City's direct control.

Goal 1: Access. All San Franciscans have affordable, reliable, and high-quality Internet access.

About the Measures

A focus on the number of San Franciscans with high-quality access[1] that meets their needs, reflecting the vision for digital equity of "full and equitable access to digital technology and its benefits." Because high-quality access is multidimensional, we should measure availability, adoption, reliability, and sufficiency.

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[1] Studies on the digital divide have typically prioritized home broadband adoption rates. While we should continue to monitor this, we expect the distinction between home and mobile access to become less important in coming years with the buildout of next generation networks and digital services adopting "mobile first" strategies. It is important for all residents to have personal Internet access, whether through mobile or home broadband, and not have to travel to get access, which places an additional burden on those least able to bear it.

Population Measures		
Measure	**Description**	**5-year Target**
Availability: All households have affordable high-speed Internet available.	Availability of 25 Mbps Internet for $15/month for all households[2].	At least one 25 Mbps for $15/month Internet plan available for all households.
Adoption: Residents have high-quality access and devices.	• % of residents with high-speed home internet • % of residents with mobile access/data plan • % of residents with smartphone, tablet, laptop, desktop or other computing device • % of SFUSD families with a computer and high-speed Internet at home	Increase access rates by[3] : • 20% for low-income residents • 20% for people with disabilities • 10% for the limited English proficient • 10% for seniors • 10% for SFUSD families
Reliability: Residents have reliable connections[4].	% of residents with access who report at least 3 continuous days within the past year without access due to data caps, unpaid bills, inability to afford device repair, or other problems	Among those with access, 95% of low-income residents and families report no instances of 3 continuous days without access in past year.
Sufficiency: Residents have connections and devices with sufficient speed and functionality to meet their needs.	Self-reported ownership of sufficient device and connection to meet needs	Among those with access, 95% of target population (low-income residents and families, people with disabilities, limited English proficient, and seniors) report having a sufficient device and connection that meets their needs

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[2] In 2015, the Federal Communications Commission set 25 Mbps as the speed standard for broadband Internet, citing their research on market trends and technical requirements for increasingly commonplace services like high-definition video streaming and videoconferencing. In our needs assessment, a majority of residents who lacked home Internet could pay $15 per month for broadband service. Our goal is for these plans to be available for all households.

[3] These are the subgroups most likely to lack access. Based on current research, low-income residents and families and people with disabilities have the lowest rates of access and should be prioritized. Residents may belong in multiple subgroups.

[4] Having reliable Internet access is nearly as important as having reliable electricity. Low-income residents and families commonly struggle to maintain ongoing access due to monthly costs, maintenance costs, and data caps (particularly those associated with lower cost mobile plans).

Program Measures	
Measure	**5-year Target**
Number of residents connected to high-speed home Internet from City initiatives	15,000 residents
Number of residents receiving a device from City initiatives	5,000 residents
Self-reported satisfaction with speed and quality of connection or device received from City initiatives	95% of recipients satisfied or very satisfied
Self-reported satisfaction among recipient families having the necessary technology at home to support their children's education.	95% of families receiving access and/or devices satisfied with the technology to support their children's education

Goal 1 Strategy: Spur strategic partnerships for affordable, high-quality access.

The most commonly cited barrier to digital equity is affordability. To make the greatest impact, the City should form strategic partnerships with technology companies, wireless carriers, ISPs, and community-based organizations to offer all residents affordable access to essential technology, from adequate devices to reliable high-speed Internet connections.

Approaches:

Bring affordable connectivity to affordable housing communities

Over 27,000 households currently live in our city's affordable housing communities. Working in conjunction with a local ISP and housing developers, the City has been able to provide free fiber Internet connectivity through its Fiber to Housing program to over 1,500 households thus far.

Our priority should be connecting higher density housing developments serving low and very low-income residents (those with household income levels at or below 50% Area Median Income). We plan to connect housing communities to our fiber network, with all units having access either from a wired connection or through a managed wireless service.

Additionally, all newly constructed or renovated units should have inside wiring capable of connecting to high-speed Internet from multiple providers, promoting greater choice and affordability.

Expand and promote low-cost Internet options

The City should work with ISPs and public agencies at the local, state, and federal levels to develop and raise awareness of low-cost Internet options that meet the needs of our target communities. Possibilities include allowing greater use of City assets like fiber optic facilities to help ISPs expand their networks to provide affordable access, particularly in underserved neighborhoods. In addition, we may partner with companies to explore the use of emerging wireless technologies to overcome traditional hurdles of network buildout.

Create a pipeline for device refurbishment and redistribution

To ensure all residents have access to up-to-date and well-functioning computing devices, the City should create a pipeline for City departments and companies to donate surplus computers, tablets, and smartphones. Donated devices should be directed to partner organizations for refurbishment and distribution in high-need communities.

Strengthen the safety net for technology access

The City should work across departments to ensure our afterschool programs, community centers, and other neighborhood hubs are equipped with robust high-speed Internet and the most useful and relevant hardware and software for their communities. Even with our best efforts, we know that not all residents will be able to personally maintain the level of access they need at all times. Trusted spaces that provide services such as libraries form an important safety net for connectivity.

Computers, Internet access, and other public technology services already available at sites like libraries and SF Connected centers should continue to be updated and maintained. Additional sites should be furnished with technology to expand our safety net to reach more residents.

Goal 2: Digital Skills and Usage. All San Francisco residents have the necessary digital literacy to use technology in the most beneficial ways.

About the Measures

The City is working to help residents learn a broad spectrum of key digital skills, including basic computer and Internet usage, online safety and privacy, work-related skills, and the ability to use important digital services.

We will track the number of San Franciscans able to use technology effectively, taking a holistic view of digital literacy that accounts for the ability to perform essential tasks, use technology in ways to enhance quality of life, and safeguard against common pitfalls like online scams, malware, and misinformation.

Population Measures

Measure	Description	5-year Target
Basic digital literacy: Residents able to perform essential tasks, e.g. sending email or using a search engine, and basic understanding of online safety.	% with basic digital literacy	15% increase in basic digital literacy rate among target population (low-income residents, people with disabilities, limited English proficient, and seniors)
Beneficial usage: Residents use technology to enhance their quality of life.	% of residents using technology for at least 2 beneficial use cases, including for health, employment, education, civic engagement, and accessing government services.	100% of target population Internet users meet this criteria.
Intermediate skills: Residents with more advanced skills in areas like cybersecurity, privacy, and information literacy.	· % of residents skilled in cybersecurity · % of residents skilled in online privacy · % of residents skilled in information literacy	10% increase in each skill area among target population.

Program Measures

Measure	5-year Target
Number of residents completing City-sponsored trainings -- basic digital skills, online safety, privacy, information literacy, and advanced skill trainings	5,000 participants from the target population completing digital skills training
Self-reported satisfaction with quality of training	90% of participants report being satisfied or very satisfied with quality of training
Self-reported proficiency using technology	90% of participants report increase in proficiency using technology

Goal 2 Strategy: Launch a digital literacy innovation program

During community engagements, residents and community-based organizations alike expressed the need for new approaches to filling gaps in digital literacy training and tech support services.

To test, evaluate, and sustain effective solutions for addressing digital literacy and support gaps, the City should introduce a new community-driven innovation program modeled after the City's lauded Startup in Residence (STIR) program. Through this program, we plan to partner with members of the community, CBOs, City departments, private sector companies, and philanthropic organizations to develop innovative, effective, and scalable approaches for digital equity.

Community challenge sourcing → **Sponsor identified for each challenge** → **Organization selected to pilot solution to the challenge** → **Pilots funded by Digital Equity Innovation grants** → **If successful, pilot sustained for multiple years**
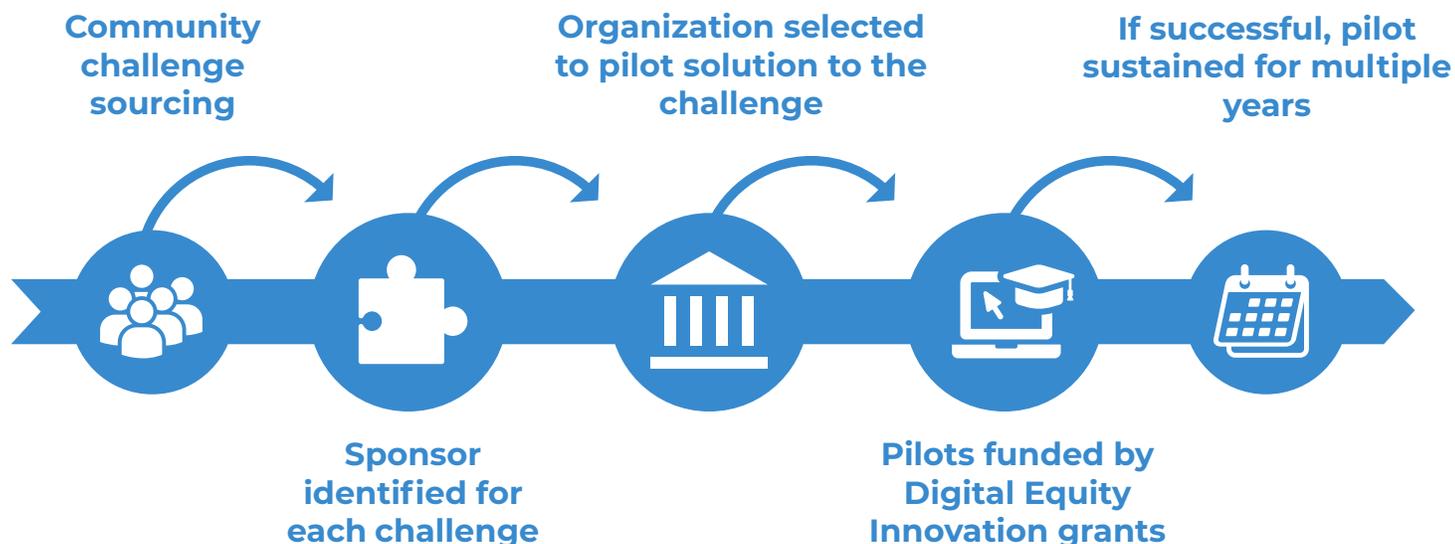
Approaches:

Community-led innovation challenges

Convene residents and community-based organizations in target neighborhoods to develop digital literacy challenges for pilots to help solve. Challenges are discrete problems or barriers to technology adoption and skill-building that could benefit from trials of new or untested ideas. Engaging residents and CBOs in this process helps to ensure that we work on high-priority issues identified by the communities we aim to serve.

Based on our prior stakeholder engagement and needs assessment, themes for potential challenges may include:

Theme	Sample challenge
Online Safety	How might we assist less digitally literate residents who have been victimized by online scams or malware attacks?
Education	How might we teach parents with limited English proficiency digital skills to better guide their children's online interactions, which are mostly in English?
Disability	How might we help people with disabilities learn to use technology, given the learning curve and cost of assistive technology?
Workforce Development	How might we teach more advanced digital skills to low-income working adults to help further their careers?

Establish a Digital Equity Innovation Fund

The City should provide grants to organizations to fund selected pilot ideas during a 1-year period. Similar to leading digital equity funds in other cities, grants are expected to be in the $25,000-$50,000 range.

During this time, grantees should be part of a cohort to share lessons learned and projects should be evaluated to assess effectiveness.

Form a pool of sponsors

Our pool of sponsors should come from City departments initially, but may later expand to include philanthropic and private sector organizations. Sponsoring innovations can help improve services in organizations already involved in digital equity or be the gateway for new organizations to get involved. In essence, this program offers sponsoring departments and organizations an avenue for testing new ideas to providing technology training or support that are in alignment with their existing institutional goals and programs. By helping to sustain and scale effective innovations, sponsors help us institutionalize digital literacy into the city fabric and share stewardship for digital equity.

Goal 3: Long-term impact. All San Francisco communities experience the long-term benefits of technology because of a sustained and systematic approach across City services.

About the Measures

Adequate access and digital literacy are rapidly moving targets -- devices and skills sufficient today will probably be outdated five years from now. To ensure residents can benefit from technology in the long run, we will develop sustainable programs to provide residents with ongoing support. These programs must also be coordinated with efforts to improve outcomes and service in other sectors like workforce development, education, and health.

The City should measure the ways technology and technology-related programs benefit residents in tangible impact areas over time.

Population Measures		
Measure	**Description**	**5-year Target**
Employment: Residents experience personal benefits of technology for employment	• % of residents citing the lack of technology access or skill as barriers to employment	10% reduction among target population (low-income residents and families, people with disabilities, limited English proficient, and seniors)
Quality of life: Residents experience enhanced quality of life through use of technology	• % of residents who saved money or time through the use of specific digital services, such as online banking, government services, and telehealth • % of residents who feel more connected to friends and/or family by using the Internet	10% increase in each rate among target population.

Program Measures	
Measure	**5-year Target**
Workforce development: % of City workforce development clients citing the lack of technology access or skill as barriers to employment	Less than 10% of City workforce development clients citing the lack of technology access or skill as barriers to employment
Health: % of SF Health Network patients participating in telehealth[5]	20% increase among target population
Housing: % of affordable housing applications submitted through the DAHLIA online housing portal[6]	100% of affordable housing applications submitted through online portal
Education: Parents with a child in public school who agree and strongly agree that families are informed, included, and involved as partners and decision makers in the education of our children[7]	20% increase among target population

Goal 3 Strategy: Establish central leadership and accountability for digital equity

With dozens of City agencies, CBOs, and companies interested in or already working on digital equity in some form, establishing a robust leadership structure will be vital to our long-term success. The ideal structure should provide direction and accountability, improve knowledge sharing, and build collective capacity and expertise.

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[5] From virtual doctor visits to remote patient monitoring, Internet-enabled health care services (telehealth) have the potential to transform health care for the better. Studies have found that roughly half of all physician visits can be performed via video conferencing. Such telehealth solutions produce better health outcomes for patients and can cut the cost of the average doctor's visit by 75%. Residents who lack reliable access to care, including those facing mobility challenges or resource constraints, stand to gain the most from telehealth programs. Through a coordinated effort, we will work to expand telehealth among our target population enrolled in the City's health care system for all residents – the SF Health Network.

[6] The City's DAHLIA online housing portal streamlines the affordable housing application process, making it much easier for residents to submit their application. By providing reliable Internet access and digital skills training, we will enable more eligible residents in need of housing to apply.

[7] The school district's online family portal allows parents to check their children's grades and attendance and communicate with schools. Increasing adoption of the portal can strengthen the ties between parents and schools.

Approaches:

Develop a Digital Equity Scorecard and Annual Reporting

For performance monitoring and benchmarking, the City should conduct citywide digital divide surveys every 2-3 years and collect annually data on Internet adoption and training participation from ISPs and training providers. This data should be summarized in a Digital Equity Scorecard and made publicly available.

Every year, an accountability report should be produced for the Mayor's Office and Board of Supervisors on the City's progress towards digital equity goals and recommended changes. Results from the report should be presented to City leaders, key department heads, stakeholders, and members of the public at an annual meeting.

Form a coalition for digital equity collaboration and input

The City should form a coalition of organizations working to advance digital equity. The coalition will meet regularly to share ideas, develop partnership opportunities, and provide input on proposed programs or policy questions for City leadership. This group would include key stakeholders from all sectors but be kept open for all interested organizations to join. All City departments who serve digitally-excluded communities should be encouraged to participate and designate a representative. Through this network, more departments would be encouraged and supported to find ways to incorporate digital equity services in alignment with their missions and desired outcomes.

The coalition could help organize and expand citywide events like the SF Public Library's Connect with Tech Week to increase visibility and awareness of digital equity programs. It should also lead future strategic planning processes.

Build technology capacity of CBOs

Many CBOs who work with target groups expressed a need for more technology-specific training for their staff before they're able to deliver such services. The City should engage subject matter experts to develop guidelines and standards for Internet adoption and digital literacy, then disseminate this information to stakeholders in the form of centralized resources (like future iterations of the Digital Equity Playbook) and train-the-trainer workshops.

Acknowledgements

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Human Rights Commission	Sami Iwata
Mayor's Office of Housing and Community Development	Alex Banh

Advisory Committee

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Department of Technology	Linda Gerull
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Office of the City Administrator	Ken Bukowski
San Francisco Public Library	Michael Lambert, Kate Eppler

Appendices

Appendix A: Digital Divide Survey Key Indicators

Below are summary charts of key indicators from the City's 2018 Digital Divide Survey. The survey was administered by Corey, Canapary & Galanis (CC&G) to a random sample of 1,051 residents. Surveys were completed in English, Spanish, Chinese (both Cantonese and Mandarin), and Tagalog. This sample size is associated with a margin of sampling error of +/- 2.94% at the 95% confidence level.

Internet Usage
By select subgroups

	% use Internet at home	% used Internet in past 6 months		% use Internet at home	% used Internet in past 6 months
Overall	92%	94%			
Age: 18-24	93%	97%	**Household Income:**		
25-34	97%	99%	Under $25,000	71%	75%
35-44	98%	99%	$25,000-$50,000	89%	95%
45-54	93%	98%	$50,000-$100,000	96%	98%
55-64	91%	93%	$100,000-$200,000	98%	99%
65 & Up	76%	77%	Over $200,000	100%	100%
Race/Ethnicity: Asian/Pacific Islander	91%	93%	**Primary language spoken at home:** English	94%	96%
Black	81%	86%	Other than English	83%	87%
Latino	83%	92%			
White	96%	96%			

High speed home Internet connectivity[8]
By select subgroups

	% with high speed home Internet		% with high speed home Internet
Overall	87%		
Age: 18-24	91%	**Household Income:** Under $25,000	59%
25-34	90%	$25,000-$50,000	82%
35-44	96%	$50,000-$100,000	94%
45-54	88%	$100,000-$200,000	96%
55-64	88%	Over $200,000	98%
65 & Up	72%		
Race/Ethnicity: Asian/Pacific Islander	85%	**Primary language spoken at home:** English	91%
Black	75%	Other than English	71%
Latino	78%		
White	92%		

Smartphones and Data Plans[9]
By select subgroups

	% use smartphone	% use smartphone with data plan		% use smartphone	% use smartphone with data plan
Overall	93%	88%			
Age: 18-24	99%	94%	**Household Income:** Under $25,000	79%	68%
25-34	99%	96%	$25,000-$50,000	91%	85%
35-44	100%	98%	$50,000-$100,000	97%	93%
45-54	98%	94%	$100,000-$200,000	97%	94%
55-64	87%	81%	Over $200,000	100%	98%
65 & Up	73%	**60%**			
Race/Ethnicity: Asian/Pacific Islander	92%	85%	**Primary language spoken at home:** English	94%	90%
Black	88%	82%	Other than English	90%	78%
Latino	94%	85%			
White	94%	90%			

[8] Based on Question 8: "Do you have a high speed home internet connection such as cable internet or DSL?"

[9] Based on Question 4C "Do you access the Internet AT HOME using a Smartphone such as an iPhone or Android phone?" or Question 6 "Is your cellphone a Smartphone (such as an iPhone or Android phone)?"

## Internet Usage & Basic Digital Literacy[10]
By select subgroups

Subgroup	Internet User & Basic Digital Literacy	Internet User Only	Non User
Overall	86%	8%	6%
LATINO	76%	16%	8%
NON-ENGLISH	63%	26%	11%
65 & UP	60%	17%	23%
<$25	53%	22%	25%

■ Non User
■ Internet User Only
■ Internet User & Basic Digital Literacy
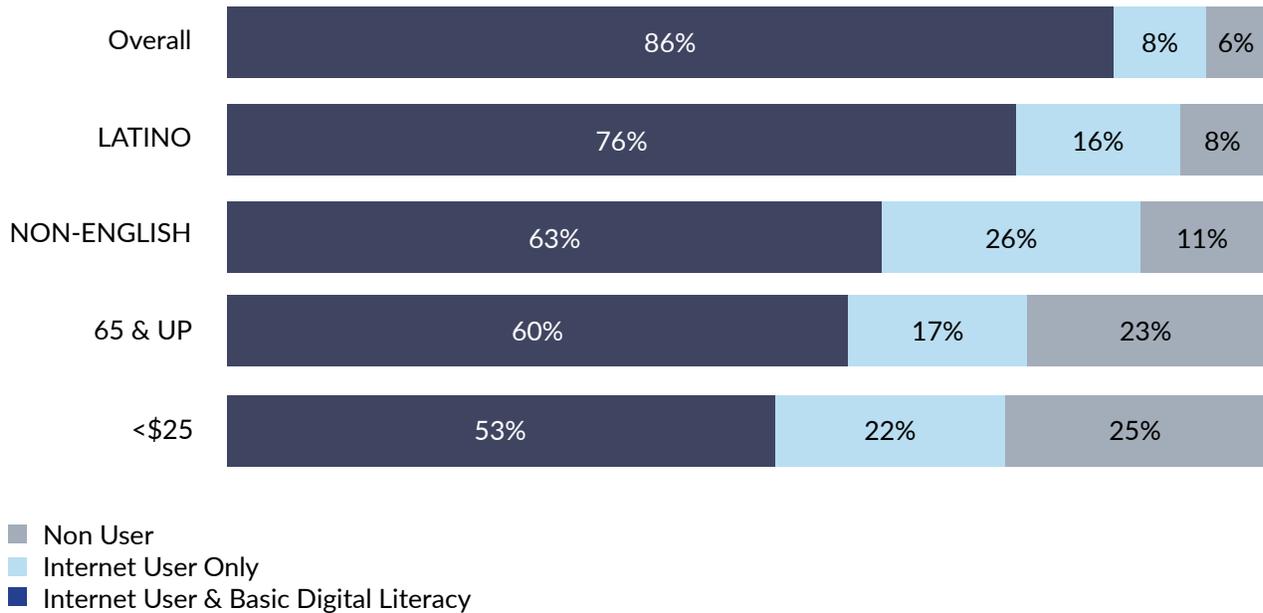
Internet Usage, Access, & Skills
By disability status

	Disability	No Disability
Use Internet at all	63%	96%
Use Internet at home	61%	94%
High Speed home Internet	52%	89%
Have smartphone	67%	94%
Smartphone with data plan	58%	89%
Internet user with basic digital literacy	43%	88%

■ Disability
■ No Disability

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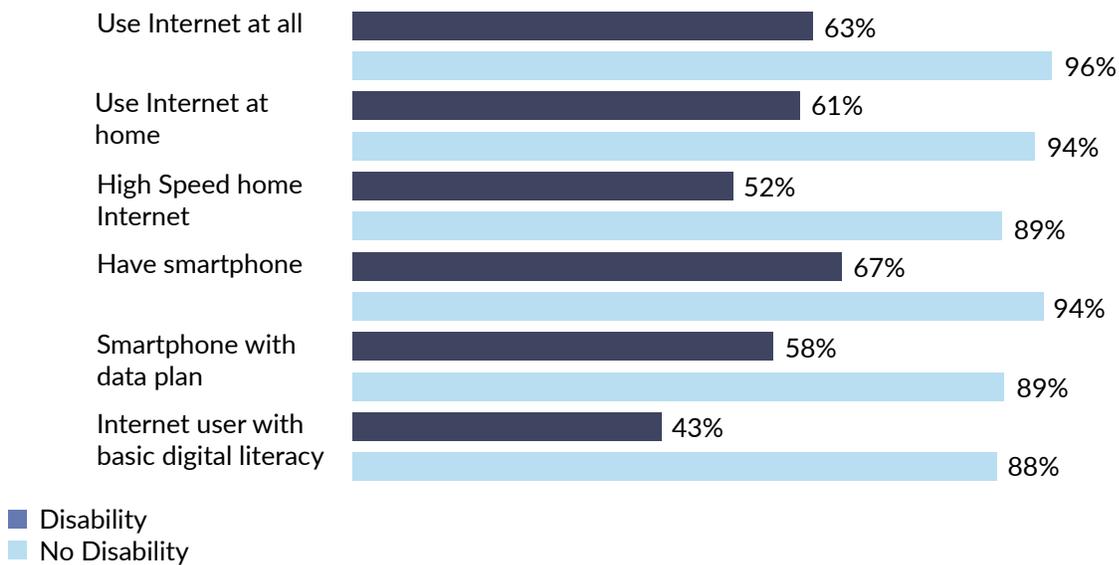
[10] In BBC Learning and Ipsos MORI's digital skills research, the basic digital skills threshold is defined as "an ability to send and receive emails, use a search engine, browse the internet, and fill out an online application form."

Available at:

http://www.bbc.co.uk/corporate2/insidethebbc/whatwedo/learning/audienceresearch#heading-basic-digital-skills-november-2014

Appendix B: Stakeholder Engagement

Organizations engaged during strategic planning process

Non-profits & community-based organizations	
America Works	Mission Bit
APA Family Support Services	Mission Economic Development Agency (MEDA)
BAVC	MyPath
Bayview YMCA	Positive Resource Center (PRC)
BMAGIC	Samaschool
Cameron House	SF Housing Development Corporation
Chinatown CDC	SF Internet Society (ISOC)
Chinatown YMCA	SF Tech Council
Chinese for Affirmative Action	ShelterTech
Chinese Newcomers Service Center	Stride Center
CivicMakers	Success Center
Code Tenderloin	Tech Exchange
Community Housing Partnership	Techtonica
Community Living Campaign	Tenderloin Tech Lab
Community Tech Network (CTN)	The Arc
dev/Mission	The Specialists Guild
ECS-SF	TNDC
Excelsior Works!	TURN
FACES SF	Urban Services YMCA
Felton Institute/Family Service Agency (FSA)	Vietnamese Youth Development Center (VYDC)
Five Keys Adult Charter School	Vis Valley Beacon Center
Goodwill of SF, San Mateo, & Marin	Vis Valley Family Center
Healthright 360	Vis Valley Village
Homeownership SF	Women's Building
JVS	Wu Yee Children's Services
Lighthouse for the Blind	Young Community Developers (YCD)
Metta Fund	

City departments & local government entities
City College of San Francisco (CCSF)
Department of Aging and Adult Services (DAAS)
Department of Children, Youth, and Their Families (DCYF)
Department of Public Health (DPH)
Department of Technology (DT)
Human Services Agency (HSA)
Mayor's Office of Housing and Community Development (MOHCD)
Mayor's Office on Disability
Office of Civic Engagement and Immigrant Affairs (OCEIA)
Office of Civic Innovation
Office of Economic and Workforce Development (OEWD)
Our Children Our Families Council
San Francisco Public Library (SFPL)
San Francisco Unified School District (SFUSD)
UCSF Center for Vulnerable Populations

Private sector
AT&T
Comcast
Diginido Labs
Dropbox
Google
Ground Floor Public Affairs
Microsoft
Monkeybrains
Postmates
sf.citi
Shake Technologies
Sonic
Twitter

Non-local government entities
California Public Utilities Commission
City of Boston
City of Chicago
City of New York
City of San Jose
City of Seattle
Cuyahoga Metropolitan Housing Authority
District of Columbia
Housing Authority City of Austin
National Telecommunications and Information Administration
Tampa Housing Authority
U.S. Department of Housing and Urban Development

Map of community engagement activities

Community engagement activities were conducted in neighborhoods with greater disparities in technology access or skill. In all, we held focus groups or conducted individual interviews in 33 locations.
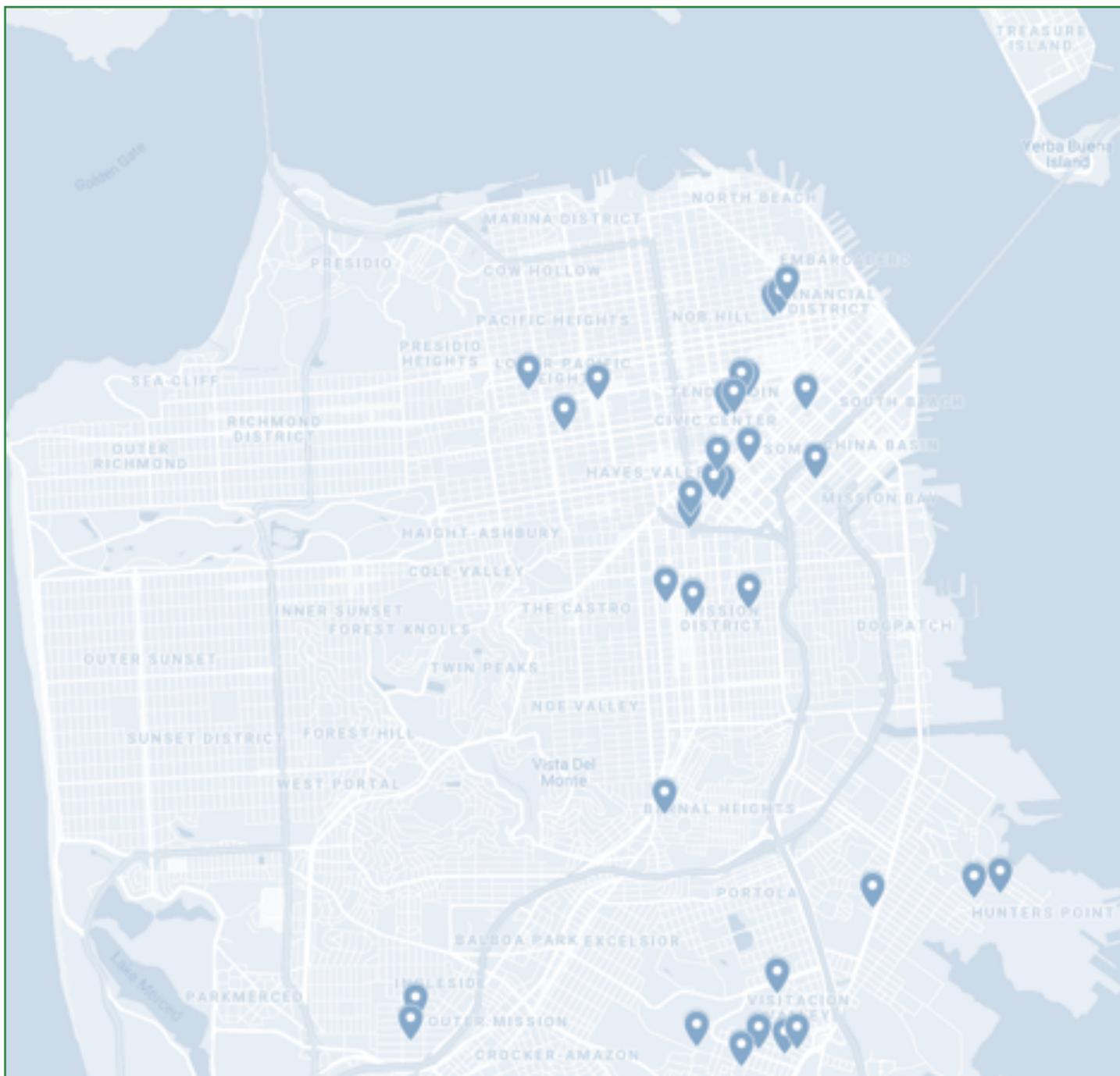
Appendix C: Digital Equity Summit Report

The Digital Equity Summit was held on October 26, 2018 with a total of 75 representatives from state and local government, community-based organizations, philanthropy, and private sector companies in attendance.

Pre-Survey
To help develop a common understanding and definition of digital equity, Summit attendees were asked to define digital equity in a pre-event survey. Three themes emerged:

- **A "level playing field" for access:** *Attendees described digital equity as equal access to technology regardless of demographic criteria such as income, age, or neighborhood.*

- **More support given to those who need it:** *Attendees made clear that equity requires additional tools and assistance to be offered to residents who are most "digitally challenged."*

- **Technology used in service of greater outcomes:** *Attendees described the connection between technology and greater life outcomes such as civic participation, connections to friends and relatives, accomplishing personal goals, and success in the job market.*

Understanding the Problem
The Office of Digital Equity presented findings from the citywide Digital Divide Survey indicating that though technology adoption is high for the general SF population, significant disparities exist for residents who are low-income, senior, limited English proficient, or have a disability. They then presented findings from the community needs assessment, which sought to draw a more nuanced picture of residents' technology needs and barriers.

Activity 1: Overcoming Constraints

In the first activity, participants were asked to generate ideas for addressing issues surfaced during the needs assessment. Issues were framed in the following statements:

- "We can't have equitable access because adequate technology is not affordable for many residents at current market prices."

- "We can't help all residents learn digital skills because of the multitude of training needs and requests."

- "We can't help all residents learn digital skills because there are too many different barriers."

- "We can't achieve long-term success because we face challenges like 'moving targets' and 'fleetingness.'"

- "We can't achieve long-term success because of the 'hot potato' issue."

Activity 2: Developing Projects

In the second activity, participants were asked to select top ideas to develop into more detailed project plans. Well-received proposals include:

- Designating an umbrella organization for digital equity

- Sliding-scale Internet pricing

- Establishing community-based "tech hubs" to distribute refurbished devices, combining tech repair, refurbishment, and IT jobs training

- Holding a Digital Equity Annual Conference for CBOs and providers to learn and share information

- Develop better digital literacy programs with more academic and community engagement

Overall, many attendees believed that it would be important to continue to convene to make a collective impact.

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