DIGITAL EQUITY PLAN

Town of Wareham, Massachusetts

August 2024

Acknowledgements

The contributions of the Digital Equity Steering Committee and project stakeholders join the comments of residents and stakeholders who participated in meetings and surveys throughout the Digital Equity planning process.

DIGITAL EQUITY STAKEHOLDERS

- Kenneth Buckland, Director of Planning and Community Development, Town of Wareham
- Brendon Beech, Technology Support/Network Administrator, Town of Wareham
- Jonathan Dickinson, Assistant Town Planner, Town of Wareham
- Marie Olivia, President/CEO Cape Cod Canal Region Chamber of Commerce
- Matthew Underhill, Information Technology Director, Town of Wareham
- Patrick Marshall, Library Director, Wareham Free Library
- Sharon Rice, Director, Council on Aging
- Stephan Rogers, Technology Support/Network Administrator, Town of Wareham Police Department

CONSULTANT TEAM

- Luke Mitchell, Project Manager, VHB
- Julia Mintz, Deputy Project Manager, VHB

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Introduction

Technology is an integral part of modern society, impacting the ability of households, businesses, organizations, and governments to meet the demands and challenges of everyday life effectively. Technology affects our access to essential services and resources (e.g., telehealth, online health records, enrolling in/maintaining social benefits, civic engagement), work and education (e.g., employment, business operations, online learning), and managing personal affairs (e.g., social media, communications, personal finances). Wareham's digital divide, a partition between those with consistent and reliable access to broadband and technology and those without, impacts residents' connectivity and quality of life.

There are connectivity-vulnerable populations in Wareham, including low-income residents, who face challenges of inconsistent or unreliable access to internet service and devices. One such resident attended the first public meeting of the digital equity planning process to share her story. She could not afford a vehicle and navigated for four hours to participate in the meeting. She shared that she does not use the internet to shop but prefers to shop locally for her daily needs and prefers face-to-face interaction when possible. The lesson from her story was clear: the Town should invest in expanding affordable internet options for residents, promoting broadband adoption, and supporting accessible digital literacy training. However, as more households adopt broadband internet, the Town must also ensure essential resources and services are accessible and available for people like this attendee, who may not prefer or have access to digital platforms.

The Town of Wareham embarked on an approximately six-month-long planning process to develop a Digital Equity Plan under the facilitation of MBI and consultation of Vanasse Hangen Brustlin, Inc. (VHB). This plan reflects a wide breadth of stakeholder and community input regarding broadband connectivity, device access, and digital literacy in Wareham. It proposes a shared vision for advancing digital inclusion in the Town. This plan provides a roadmap for the Town to apply for state and federal funding and decision-making related to services and infrastructure that will increase access, adoption, and internet usage throughout the community.

What is Digital Equity?

Internet connectivity is integral to the fabric of modern life for the exchange of commerce and information, access to municipal services and resources, social connectivity, and participation in education and employment. To ensure equal opportunities for active participation in society, democracy, and the economy, it's essential for individuals, households, businesses, and institutions to have access to fast and reliable connectivity. This includes not only internet service but also appropriate devices and the necessary skills to use these resources safely and effectively. Municipalities must understand the nature of the digital divide in their communities, including barriers to accessing broadband internet and devices and the needs of vulnerable populations who cannot consistently afford or access these resources, exacerbating inequalities and creating challenges in everyday life.

The Issue: The Digital Divide

Digital equity planning addresses inequities in access to broadband internet, technology, and supportive resources, also known as the digital divide. The National Digital Inclusion Alliance (NDIA) defines the digital divide as "the gap between those who have affordable access, skills, and support to effectively engage online and those who do not."[1] This gap disproportionately impacts marginalized groups, including households with low incomes, older adults, minority households, people with disabilities, and people in rural areas, all of whom are less likely to have broadband service at home.[2]

According to the U.S. Census, approximately 16 million households nationwide are without an internet subscription, 12 million are without internet access, and eight million are without a computer.[3] Several factors can limit reliable access to internet service with the speed and capacity to accomplish everyday tasks, including the quality and affordability of services provided by internet service providers (ISPs) companies offering subscription internet services. Subscribers can face confusion and unaffordability paying for bundles, including services or equipment they don't need (e.g., internet, television, home phone services).

Even with reliable internet service, users must have consistent access to a web-enabled device and the knowledge and skills necessary to participate online safely and effectively. The affordability, modernity of hardware and software, and appropriateness to the user's needs can restrict device access. The

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[1] National Digital Inclusion Alliance. (n.d.). The Words Behind Our Work: The Source for Definitions of Digital Inclusion Terms. NDIA. https://www.digitalinclusion.org/definitions/

[2] Pew Research Center. (2021). Internet/Broadband Fact Sheet. PewResearch.org. https://www.pewresearch.org/internet/fact-sheet/internet-broadband/?menuItem=2ab2b0be-6364-4d3a-8db7-ae134dbc05cd

[3] United States Census Bureau (2021 ACS 5-Year Estimates). B28002 Presence and Types of Internet Subscriptions in Households. Data.Census.gov. https://data.census.gov/table/ACSDT5Y2021.B28002?q=internet+access

availability of training opportunities and resources, fear or shame associated with learning new skills, and privacy concerns can all limit digital literacy.

The Work: Digital Inclusion

Municipalities can address their digital divide by investing in and pursuing digital inclusion initiatives. Digital inclusion refers to 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)."[4] ICTs, an extension of information technologies (IT), refers to the hardware, software, and systems that comprise our unified communications systems. The NDIA has identified five elements as integral to ensuring all individuals and households can effectively utilize these technologies.

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 to enable and encourage self-sufficiency, participation, and collaboration.

Digital Inclusion requires communities to intentionally address historical, institutional, and structural barriers to access and use technology.

The Goal: Digital Equity

The goal of addressing the digital divide through digital inclusion initiatives is to support digital equity for all individuals and groups within a community. Digital equity is "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy, facilitating lifelong learning and access to essential services."[5] This plan focuses on three pillars of digital equity work, including broadband internet access, device access, and digital literacy. Communities can support digital equity by increasing subscribership to internet service, addressing infrastructural issues, expanding the availability of digital literacy training opportunities, and facilitating access to appropriate devices.

Several types of devices can access the internet and serve as tools for work, school, and social connection, including cellular phones, tablets, and computers, each with benefits and drawbacks for the user. Cellular phones are one of the most portable web-based devices, offering multiple connection options and long battery life, but they cannot replace the functions of a computer. Tablets

[4] See footnote 1
[5] See footnote 1

provide accessibility benefits and long battery life but cannot make calls without a cellular data plan. Laptops and desktop computers are necessary for many jobs and applications and have ample storage. However, computers have a shorter battery life and are the least affordable of these three devices.

Our Process

The Wareham Digital Equity Plan provides a community digital equity needs profile based on stakeholder engagement and publicly available broadband service data assessment. Public input regarding barriers to and opportunities to enhance broadband connectivity in Wareham informed the development of a shared community vision, high-level goals for bridging the Town's digital divide, and actionable recommendations for achieving these goals. This Plan serves as a roadmap for future digital equity work in Wareham, including assessing existing and future funding applicable to the Plan's proposed interventions.

Public Engagement

This plan relies on a breadth of public input collected through stakeholder interviews, public meetings, and public surveying.

Digital Equity Stakeholders

A stakeholder committee, including representatives from the Town of Wareham Department of Planning and Community Development, Department of Information Management Technology, and Police Department, guided the digital equity planning process. The team also interviewed the following local stakeholders, who serve as digital equity champions in providing access to internet service, devices, and supportive resources to the Wareham community.

- Marie Olivia, President/CEO Cape Cod Canal Region Chamber of Commerce
- Patrick Marshall, Library Director, Wareham Free Library
- Sharon Rice, Director, Council on Aging (COA)

Public Meetings

The Team facilitated two public meetings at strategic points throughout the digital equity planning process to disseminate information on ongoing planning efforts and solicit public feedback. Both public meetings were conducted in a hybrid format, allowing in-person and Zoom participation. Both meetings were interactive, including a brief presentation from the Team to disseminate information regarding the planning process, followed by a workshop portion to solicit community feedback.

Public Survey

MBI administered a Statewide Digital Equity Survey to understand better Massachusetts residents' needs regarding internet access and digital equity. As of September 6, 2023, Wareham participants comprised a sample group of 43 responses, all Town residents, all aged 18 years and over.

Community Overview

Municipalities must understand their local and regional contexts and the population's demographic profile to prioritize digital inclusion efforts and appropriately allocate funding and resources. Demographic trends and the geographic distribution of resources in a community can impact the types of resources and services needed to advance digital inclusion.

Local Context

The Town of Wareham, located just west of Cape Cod and approximately 55 miles south of Boston, is situated on the southern coast of Plymouth County, Massachusetts. The Town encompasses several neighborhoods: Onset, Wareham Center, West Wareham, East Wareham, and Weweantic.

Wareham's housing inventory comprises primarily single-unit, detached homes, representing 80% of the Town's total housing stock.[6] Single-unit residential development is prominent throughout South and West Wareham and north of Route 25, contributing to a lower residential density in these areas. There are clusters of higher residential density throughout East Wareham and Wareham Center, notably the Onset and Swifts Beach areas of the Town.

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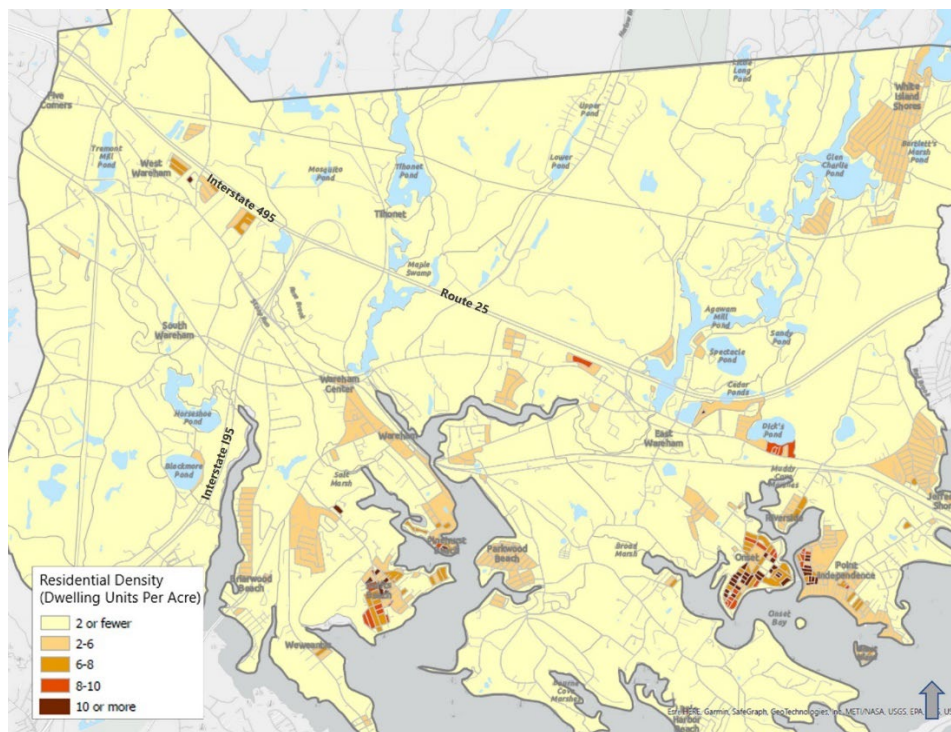
[6] U.S. Census (2020). Selected Housing Characteristics.
https://data.census.gov/table?q=DP04&g=060XX00US2502372985

Public facilities, including the Town Hall, Library, and schools, as well as Community Anchor Institutions, such as acute care facilities, are located primarily in Wareham Center, proximal to several higher-density areas. While a second Onset Branch of the local library system services the Onset area, residences in East and North Wareham lack the same proximity to the majority of local digital equity hubs. These resources are critical for accessing the Internet, devices, and digital literacy instruction outside the home.
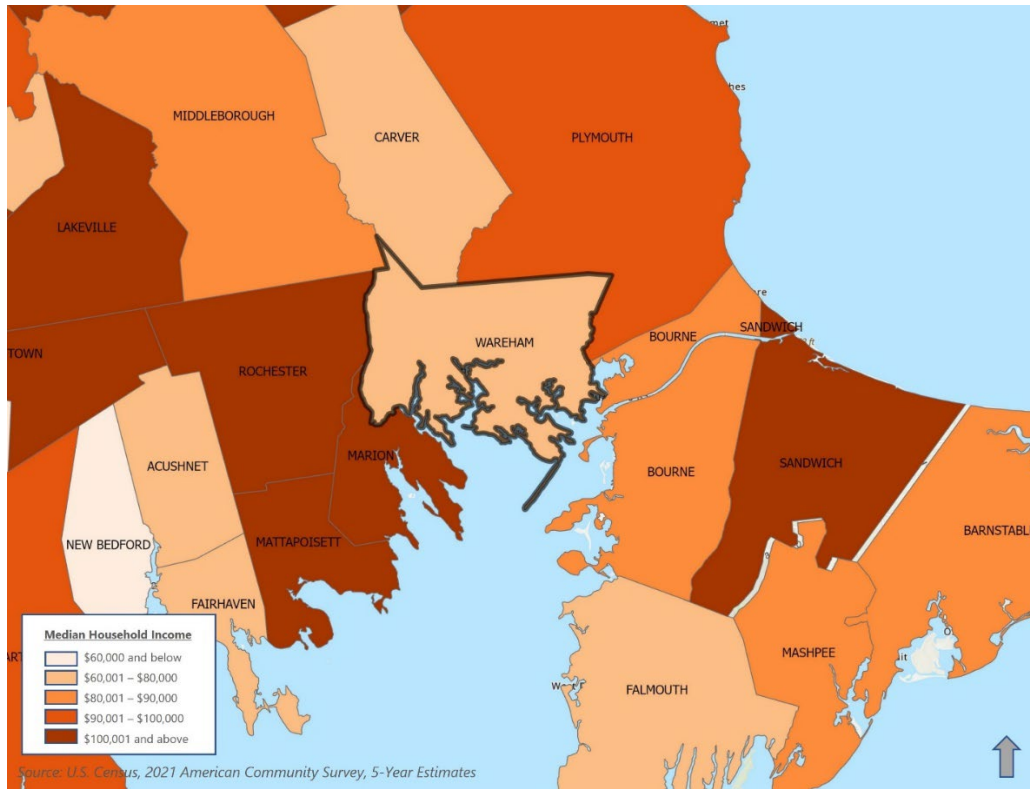
Demographics

Understanding Wareham's demographic profile is critical in planning for the Town's digital equity needs. Wareham's population has grown steadily over the past decade to approximately 23,000. Like many communities across the Commonwealth, Wareham has an aging population, with age groups 65 years and over increasing as an overall percentage of the Town's population. In 2020, the share of Wareham's population over 65 was 8% higher than that of Plymouth County and 10% higher than the State.[7] Wareham's aging population and shrinking younger age groups are mirrored in the Town's declining enrollment rates and shrinking average household size. In the last decade, enrollment in the Wareham Public School District has dropped roughly 26% from 2,508 to 1,847.[8] Supporting all age groups concerning digital literacy and access gaps will be critical. Broadband access, appropriate devices, and digital skills training are essential across age groups, including students and youth, working individuals, and older adults.

In 2021, Wareham's median household income was lower than in several surrounding towns, including Marion, Rochester, Middleborough, Plymouth, and Bourne. Low-income households often face challenges affording reliable broadband connectivity.

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[7] U.S. Census (2020). ACS Demographic and Housing Estimates. https://api.census.gov/data/2020/acs/acs5/profile
[8] Massachusetts Department of Elementary and Secondary Education. (2010-2022). Enrollment Data. https://www.doe.mass.edu/infoservices/reports/enroll/

Approximately 7% of Wareham's total population has an income level below the poverty line, as well as 6% of individuals aged 65 years and over.[9] Barriers to broadband connectivity for low-income households, including unaffordability and digital literacy regarding internet service enrollment and usage, can also be exacerbated by other factors, including language barriers, lack of access to digital equity hubs, and availability of municipal support systems

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[9] U.S. Census (2022). Selected Economic Characteristics.
https://data.census.gov/table?q=DP03:%20Selected%20Economic%20Characteristics&g=060XX00US2502372985

Community Needs

While there are high levels of broadband subscription and device access among Wareham's population, the Town's digital divide impacts vulnerable populations, including older adults and low-income residents. Issues of internet service affordability, quality of customer service among ISPs, access to web-enabled devices, and digital literacy enabling safe and efficient internet usage can impact residents' quality of life and access to essential resources and services. This divide extends to the Town's businesses, where knowledge and skills regarding cybersecurity, IT systems management, and other business development practices vary, particularly among small business owners. Supported by state and federal funding, Wareham should leverage its local and regional digital equity stakeholder network to advance inclusion efforts and address this divide.

Vulnerable Populations

According to Wareham's Council on Aging (COA), the digital divide in Wareham disproportionately impacts older adults and low-income residents, mirroring nationwide trends.[10]

Older Adult Population

The Town's COA provides supportive resources for older adults in Wareham, targeting several barriers to digital equity, including personalized device assistance and outreach regarding internet subsidy programs. While the COVID-19 pandemic forced some older adults to use technology to access telehealth and communicate with loved ones, basic digital literacy levels vary across age groups. However, the COA needs to provide greater capacity to provide dedicated training for older adults to effectively address this digital literacy gap. After losing municipal funding over the past decade, Wareham's COA is working to build capacity by hiring a director and expanding access for older adults to social services (e.g., food stamps and housing assistance). The COA provides individual assistance with various issues, including technology-related questions. However, according to the COA, awareness regarding the Council as a resource is relatively low among the Town's older adult population.

Based in Wareham's Multi-Service Center, the COA offers a free public Wi-Fi network. The cost of internet service in the Town is unaffordable for many older adults, and awareness of internet subsidies, low-cost plans, and affordable devices is relatively low. However, the Multi-Service Center needs modern devices, hardware, and software for public use. The COA has one desktop available for individual assistance with an online task (e.g., completing forms, enrolling in/maintaining social benefits) with the aid of a staff member.

Old Colony Elder Services (OCES) is a regional resource for southeastern Massachusetts, which

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[10] Pew Research Center. (2021). Internet/Broadband Fact Sheet. https://www.pewresearch.org/internet/fact-sheet/internet-broadband/?menuItem=2ab2b0be-6364-4d3a-8db7-ae134dbc05cd

services the Town of Wareham.[11] OCES is one of 23 Aging Services Access Points in the State and offers digital literacy training to older adults enrolled in their programming. There is potential to increase digital literacy training access for older adults in Wareham, both through promoting enrollment in OCES programming, and exploring partnership opportunities between OCES and the Wareham COA.

Educating older adults regarding devices and affordable broadband service must also include education on internet safety. Public meeting attendees and survey respondents in the Wareham community noted concerns regarding cyber threats, to which older adults who did not grow up learning cybersecurity awareness can be particularly vulnerable. 84% of public survey respondents reported concern regarding internet safety. Respondents noted several cyber threats among their top concerns, including online harassment, tracking and surveillance, and scams. The Town should help raise awareness of common scam tactics and online threats. Wareham's Office of Information Management Technology promotes cybersecurity awareness in the Town by distributing a monthly Security Tips Newsletter, which focuses on securing home networks against cyber threats, protecting older adults against cybercrimes and scams, ransomware awareness, and working remotely. Cybersecurity is critical for older adults and institutions, businesses, households, students, and municipal operations.

Low-Income Population

In 2021, Wareham's median household income was lower than in several surrounding towns, including Marion, Rochester, Middleborough, Plymouth, and Bourne. While Wareham has a relatively high percentage of internet access among its total share of households (87%), this percentage is lower than that of the County (91%) and the State (90%). This percentage does not include the Town's approximately 700 households without a broadband internet subscription.[12]

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[11] Old Colony Elder Services. (n.d.). Supporting the Independence & Dignity of Older Adults & Individuals with Disabilities. https://ocesma.org/

[12] U.S. Census Bureau. (2021). SELECTED SOCIAL CHARACTERISTICS IN THE UNITED STATES. American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP02. https://data.census.gov/table/ACSDP5Y2021.DP02?q=DP02&g=040XX00US25_050XX00US25023_060XX00US2502372985

Table 1 – Internet Subscription by Household Income

Household Income	Percentage of Households
Less than $20,000	
With dial-up Internet subscription alone	0%
With a broadband Internet subscription	56%
Without an Internet subscription	44%
$20,000 to $74,999	
With dial-up Internet subscription alone	1%
With a broadband Internet subscription	93%
Without an Internet subscription	7%
$75,000 or more	
With dial-up Internet subscription alone	0%
With a broadband Internet subscription	91%
Without an Internet subscription	10%

Source: US Census 2021 ACS 5-Year Estimates (S2801)

Barriers to household internet access reported among survey respondents include the unaffordability of web-based devices and internet service and the lack of digital literacy needed to navigate the internet and use online tools.

Broadband Access

According to the U.S. Census, Wareham has a high level of residential broadband adoption, with 87% of households reporting having a broadband internet subscription.[13] 95% of public survey respondents reported having internet service in their home, including home wireline connection (87%), data plans for a smartphone, hotspot, or tablet (44%), and bundles with other services such as telephone or TV (74%).

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[13] U.S. Census Bureau. (2021). SELECTED SOCIAL CHARACTERISTICS IN THE UNITED STATES. American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP02. https://data.census.gov/table/ACSDP5Y2021.DP02?q=DP02&g=040XX00US25_050XX00US25023_060XX00US2502 372985

Table 2 – Types of Internet Subscriptions

| Type of Internet Subscription	Percentage of Households
With an Internet subscription	87%
Dial-up with no other type of Internet subscription	0.3%
Broadband of any type	87%
Cellular data plan	76%
Cellular data plan with no other type of Internet subscription	8%
Broadband such as cable, fiber optic or DSL	77%
Satellite Internet service	3%
Without an Internet subscription	13%

Source: US Census 2021 ACS 5-Year Estimates (S2801)

Planning for ubiquitous broadband access in communities requires interaction with the following levels of connection, references to which are often used synonymously.

- **Broadband is a transmission system granting users access to the Internet.** Broadband refers to a high-capacity transmission technique using a wide range of frequencies, cable lines, phone lines, or optical fiber, enabling a large amount of information to be communicated simultaneously.
- **The Internet is a communications network transmitted to users by broadband.** The Internet refers to a global computer network providing information and communication facilities consisting of interconnected networks using standardized communication protocols.
- **Wi-Fi provides users with a wireless broadband connection.** Wireless fidelity, or Wi-Fi, refers to a wireless network connection between devices, broadband, and other devices.

There is a competitive market among ISPs servicing Wareham, with providers including Xfinity, Verizon, HughesNet, Viasat, and OpenCape. OpenCape services Wareham's Town Hall and Fire Department. OpenCape, a Barnstable-based non-profit organization, owns and operates a 100% fiber optic network that provides "reliable and affordable broadband access for businesses, healthcare providers, educational institutions and municipalities" in southeastern Massachusetts and on the Cape.[14]

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[14] OpenCape. (n.d.). *Open Cape 100% Fiber*. https://opencape.org/

Who is your household ISP?

37% Comcast

■ T-Mobile

■ Verizon

60%

3%
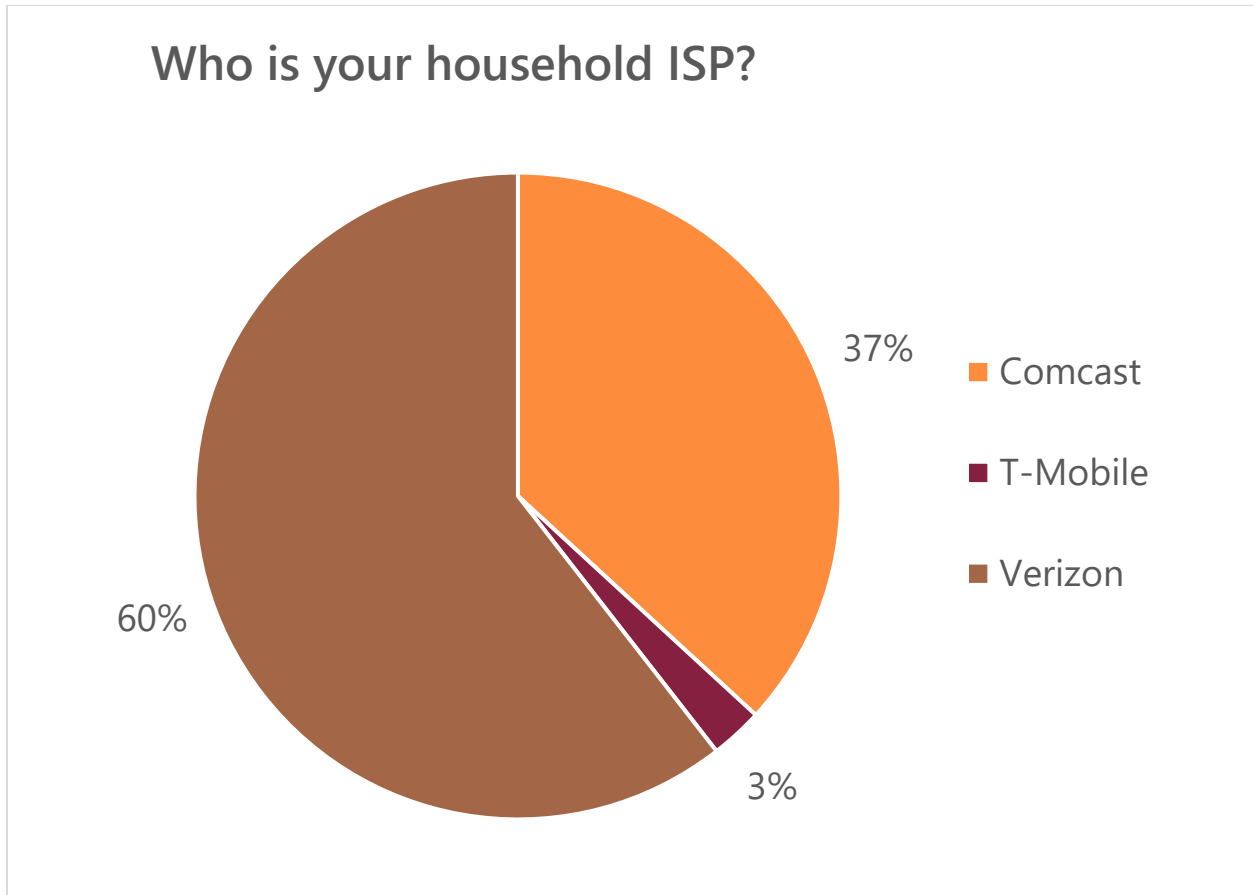
Source: MBI Statewide Digital Equity Survey (Wareham, 09/06/23)

While a variety of local providers can help to control service pricing, the speed and reliability of these networks can vary based on various factors, including geography, infrastructure, building type, number of internet users in a household, and more. Although 72% of public survey respondents reported that their internet service works well enough to meet their household's needs, 23% reported that theirs did not. The Town should work with local ISPs to establish a standard level of customer service to ensure that all households have the support they need to address connectivity issues and understand service options.

Digital Equity Hubs

Digital equity hubs are community facilities supporting digital inclusion, providing publicly accessible Wi-Fi connectivity, devices, and technical expertise. The Wareham Free Library is a digital equity hub in Wareham, consisting of a central facility and a small one-room branch in Onset Village. Both library branches provide a free public Wi-Fi network, which has had approximately 6,000 hits this year. The Library aims to expand public utilization of its Onset Branch and utilization of its Wi-Fi network at both locations, which the Library does not regularly promote.

The Town should promote existing public Wi-Fi access points in the community, including the Library and Multi-Service Center. The Town should also explore opportunities to establish outdoor public access points to service tourists and visitors in locations such as Onset Pier.

Public facilities are critical for community members to access internet services, devices, and technical expertise outside the home. Facilities in Wareham include Town Hall, schools, Wareham Free Library (main branch and Onset branch), and community anchor institutions (e.g., healthcare facilities).
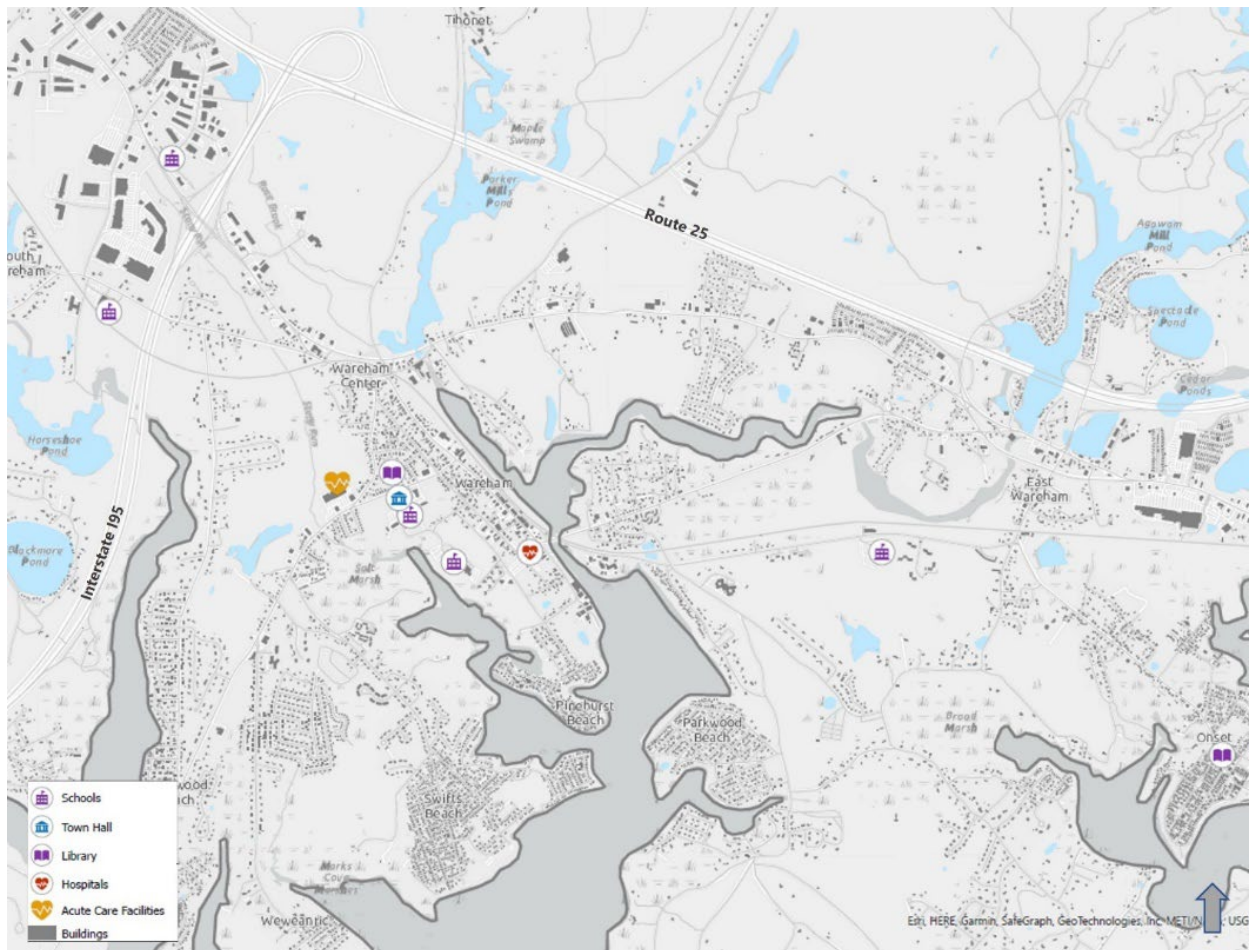
Public Housing

Wareham's Housing Authority provides affordable housing for several internet-vulnerable groups, including older adults, people with disabilities, and moderate—to low-income households. Stakeholders have reported a need for improved broadband connectivity in the Town's housing projects.

Device Access

Wareham has a high level of residential device access, with 94% of households reporting as having a computer, comparable to levels reported for the County (95%) and the State (94%).[15] 9% of public survey respondents reported they do not have the devices necessary to meet their daily household internet usage needs.

Table 3 – Device Access by Households

Computing Devices	Percentage of Households
Has one or more types of computing devices	94%
Desktop or laptop	76%
Smartphone	81%
Tablet or other portable wireless computer	63%
Other Computer	2%
No computer	6%

Source: US Census 2021 ACS 5-Year Estimates (S2801)

74% of public survey respondents indicated they would be able to pay $150 or more for a laptop or desktop computer, and 91% of public survey respondents reported that everyone in their household has access to the devices they need to meet their everyday internet usage needs, including the following internet-enabled devices. **Table 4** outlines device usage trends among public survey respondents, with cell phones and tablets being the most utilized.

Table 4 – Which of the following devices do you use most of the time to connect to the Internet?

Device Type	Percentage of Respondents
Cellphone	79%
Tablet or Similar Device	63%
Laptop Computer	56%
Desktop Computer	28%
Other	9%

Source: MBI Statewide Digital Equity Survey (Wareham, 09/06/23)

Wareham Free Library

The Library provides patrons with basic faxing and scanning capabilities but requires adequate space, computers, and videoconferencing hardware to meet the demand for employee and business support in the Town. There is potential for the Library to expand its capacity to support job seekers and employees. Libraries are critical resources, providing quiet space and technological support for

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[15] See footnote 10

job seekers who increasingly conduct interviews and professional development virtually. Over the next year, the Library will coordinate with municipal IT representatives to address technological needs, including modern hardware and software.

The Library provides resources and assistance for youth, including students. The Library does not currently offer hotspots for patrons. However, there is potential for the Library to partner with Wareham Public Schools (WPS) to develop a shared hotspot circulation system.

Education

WPS is a one-to-one district, assigning Chromebooks to all grades K-12, allowing students in grades 3-12 to take these devices home. The District installs a GoGuardian extension on all student Chromebooks, filtering student internet access. In 2020, the District also provided hotspots for student use, addressing internet gaps in the household and allowing students to access online learning platforms and communicate with their teachers.

WPS' IT Department supports students and educators in utilizing the District's devices. The Department provides resources and training for students, families, and teachers regarding internet safety, hardware and software usage, and learning support tools.

Digital Literacy

Wareham's population has digital literacy gaps in various topics, including basic knowledge of the Internet and standard software platforms, protection against cyber threats, and business IT systems management. Reaching as broad an audience as possible, the Town should support a variety of digital literacy training opportunities and models, including in-person classes, online classes, do-it-yourself training modules, and personalized assistance via a digital navigation system.

Local Training Opportunities

The Wareham Free Library provides digital literacy programming, including basic to intermediate and topic-specific classes (e.g., creating and navigating an email account, browsing the Internet, and understanding how to use devices). The Library has identified a community need for more basic digital literacy training opportunities and personalized, one-on-one assistance for patrons of all ages. Despite increasing public demand, funding and staffing capacity constrain the Library's ability to grow digital literacy support offerings.

According to the U.S. Census, most of Wareham's population speaks English only (94%).[16] Wareham Free Library patrons comprise various language groups, including Brazilian, Portuguese, and Egyptian.

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[16] U.S. Census Bureau. (2021). SELECTED SOCIAL CHARACTERISTICS IN THE UNITED STATES. American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP02.
https://data.census.gov/table/ACSDP5Y2021.DP02?q=DP02&g=060XX00US2502372985

The Library provides a Reading Partners program for early readers focusing on patrons who speak English as a second language (ESL), geared towards Wareham's growing immigrant population.

The Town lacks a dedicated system of digital navigators to provide personalized technology assistance to the Town's population. The NDIA defines digital navigators as "individuals who address the whole digital inclusion process – home connectivity, devices, and digital skills – with community members through repeated interactions."[17] Digital navigators can be "volunteers, cross-trained existing staff, or dedicated new hires who offer guidance on connectivity, devices, and digital skills."[18] Wareham has an existing network of digital equity champions who are currently working to advance digital inclusion locally, including library and COA staff, WPS administration and IT management, business advocates, and municipal staff. The Town can formalize this network of champions to support achieving this Plan's vision, goals, and objectives and develop a network of navigators who can provide trusted support to the community.

<u>Businesses</u>

Wareham has a strong network of small businesses, large job centers, and tourism-related businesses and business centers, totaling an estimated 989 businesses in 2022.[19] Digital literacy and IT systems management vary in the local business community depending on the age group of business owners and the business size. The Library is a resource for employees and businesses, offering publicly accessible workspaces and reliable internet connectivity and collaborating with the Town's business networking group.

The Town offers a permitting guide for small businesses, outlining processes for local permitting and registering new businesses. The Town should expand its communications capacity, grow, and maintain dialogue with local businesses, and promote municipal support resources. Additionally, Wareham has recently established its It's Better Before the Bridges branding campaign promoting the Town's unique assets.[20] Local businesses can improve their online marketing and outreach to support and benefit from this branding effort, informed by proper training and support. The Cape Cod Canal Region Chamber of Commerce communicates with regional businesses regarding business development and training opportunities. Businesses can also take advantage of the Town's branding program.

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[17] National Digital Inclusion Alliance. (n.d.). The Digital Navigator Model: Adding Digital Equity to Our Social Safety Net. https://www.digitalinclusion.org/digital-navigator-model/
[18] See footnote 12
[19] Data Axle (2022). Esri Business Summary. [Data set]. Esri.
[20] Wareham Massachusetts. (n.d.). Discover Wareham: It's Better Before the Bridges. https://discover-wareham.com/

Municipal Outreach

The Town's website provides easy access to critical information regarding municipal resources, including news, announcements, boards and departments, public services and utilities, ALERT Wareham enrollment, and the Town's public comment form. The website organizes resources for quick access by different groups, including residents, businesses, and visitors. As shown in the adjacent image, several Town entities are active on social media platforms, including Instagram, Twitter, and Facebook.

	Instagram	YouTube	Twitter	Facebook
Animal Control				f
Council on Aging				f
Health Department				f
Library				f
Natural Resources	o		t	f
Police			t	f
Public Schools			t	f
Redevelopment Authority				f
Tremont Nail Factory District & Iron Works				f
Tremont Nail Factory Redevelopment				f
Water Pollution Control Facility				f
Onset Fire Department			t	f
Wareham Fire Department				f
Wareham Fire District				f
Community Events Committee				f
Cultural Council				f
Friends of the Wareham Free Library				f
Veterans Council				f
Don't Trash Wareham				f

Town of Wareham Social Media Presence

The Town should diversify its outreach methods to include virtual and non-virtual methods to inform as broad an audience as possible about municipal resources, upcoming events, and digital literacy training opportunities. Non-virtual methods can include mailed outreach (e.g., newsletter, flyer, postcards), tabling in public areas, and coordination with Town departments to avoid siloing different demographic groups.

Digital Equity Vision

The Wareham community, including residents, stakeholders, and local digital equity champions, have collaborated to develop a shared vision for bridging the Town's digital divide. The following vision statement reflects issues and opportunities identified through public engagement and comprises three tenets of digital equity planning: broadband access, digital literacy, and device access.

Recommended Vision Statement

The Town of Wareham will support the digital capacity of its residents, business owners, and stakeholders, facilitating their access to affordable broadband and devices. Digital equity planning will include continued dialogue with the public regarding issues and opportunities, supported by improved townwide communications. The Library, schools, and Council on Aging will be leaders for digital equity in the Wareham community, advocating and providing resources for youth, workers, job seekers, businesses, and older adults.

The Town will support...

Broadband Access *– The Town will monitor broadband infrastructure and ensure affordable, reliable, high-speed broadband plans are available for all residents and business owners.*

Digital Literacy *– The Town will provide a continuum of digital literacy training programs to foster residents' ability to fully utilize the functions of online resources and web-based devices with a focus on employment.*

Device Access *– The Town will support residents' access to well-functioning, up-to-date computers and the capacity to maintain and replace these devices if needed.*

Future Funding

Wareham can leverage numerous state funding opportunities to support digital equity planning initiatives. These funding programs target critical implementation areas of digital equity planning, including expanding access to the Internet and local digital literacy training opportunities.

Statewide Digital Equity Planning

At the State level, MBI is developing a Statewide Digital Equity Plan for Massachusetts, integrating efforts conducted under the Municipal Digital Equity Program (MDEPP). Massachusetts has received funding under the State Digital Equity Planning Grant Program, one of three grant programs established by the $2.75 billion federal Digital Equity Act (DEA). The DEA aims to "promote the achievement of digital equity, support digital inclusion activities, and build capacity for efforts by States relating to the adoption of broadband by residents of those states." MBI anticipates leveraging the statewide plan to implement DEA State Digital Equity Capacity Grant funds toward future planning efforts.

Massachusetts municipalities must understand their digital divide and identify opportunities for advancing digital inclusion to inform statewide planning efforts. This plan provides a roadmap for addressing Wareham's digital divide and identifying implementation areas to inform prioritization and allocation of funding.

Funding Sources

The Town of Wareham can leverage the following funding programs to support the implementation of this plan.

Community Compact Cabinet: Efficiency & Regionalization Grant Program

The Efficiency and Regionalization competitive grant program will provide financial support for government entities interested in implementing regionalization and other efficiency initiatives that allow for long-term sustainability.[21]

The Town can leverage funds through this program to establish a regional hotspot-sharing program between the Wareham Free Library and Wareham Public Schools.

Community Compact Cabinet IT Grant Program

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[21] Commonwealth of Massachusetts. (n.d.). Efficiency & Regionalization grant program. https://www.mass.gov/efficiency-regionalization-grant-program

The Massachusetts Community Compact IT Grant Program provides grants of up to $200,000 to support the implementation of local innovative IT projects, including one-time capital needs related to planning, design, installation, implementation, and initial training.[22]

Wareham can leverage Community Compact Cabinet IT Grant Program funds to improve the Town's online presence or establish smart poles providing free public Wi-Fi access points.

Lead for America: American Connection Corps

The Lead for America American Connection Corp (ACC) is a service membership focused on advancing economic prosperity and bridging the digital divide.[23] The ACC supports broadband development, digital inclusion, and civic leadership in communities through a network of ACC Members who provide critical capacity-building services for the host organization or municipality. MBI has funding to cover host-site funding matches for up to 15 municipalities in Massachusetts.

An ACC Member can work with Wareham to support digital equity planning initiatives. This Member can advance community dialogue regarding community needs beyond the scope of this plan, continuing to identify issues and opportunities through routine surveying and discussions. The Town should apply in early 2025 for a potential Fellow to serve from Fall 2025 to 2026.

Municipal Digital Equity Implementation Program

MBI established the Municipal Digital Equity Implementation Program to enable municipalities to implement local digital equity activities defined in their Digital Equity Plan.[24] This program provides access to a one-time grant of up to $100,000 per municipality to execute a project or projects to increase access and usage of the internet for the populations most impacted by the COVID-19 pandemic.

The Town can leverage funds through MBI's Digital Equity Implementation Program to fund projects, including expansion of digital literacy training opportunities and improving software and hardware available through the Wareham Free Library.

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[22] Commonwealth of Massachusetts. (n.d.). Community Compact IT Grant Program. https://www.mass.gov/community-compact-it-grant-program

[23] American Connection Corps. (n.d.). American Connection Corps. americanconnectioncorps.org. American Connection Corps

[24] Massachusetts Broadband Institute. (n.d.). Municipal Digital Equity Implementation Program. https://broadband.masstech.org/digital-equity-implementation

Plymouth County American Rescue Plan Act (ARPA)

In 2021, the American Rescue Plan Act (ARPA) was signed into law and provided $350 billion of funding to states, territories, tribal, and local governments to respond to the COVID-19 pandemic. This act recognized the need for improved broadband infrastructure, allowing communities to invest in locations where broadband needs are identified.[25]

The Town can leverage ARPA funds to provide free outdoor public Wi-Fi in strategic locations townwide.

Residential Retrofit & Apartment Wi-Fi Programs

The Residential Retrofit Program supports deploying new or updated fiber broadband infrastructure across Massachusetts public and affordable housing properties. MBI provides grant funding covering 100% of eligible capital costs associated with retrofitting or rehabilitating eligible properties and addressing deficient wiring and infrastructure.[26]

MBI is coordinating the Residential Retrofit Program with its existing Apartment Wi-Fi Program, run through the Metropolitan Area Planning Council (MAPC). This program provides funding, project management, and procurement support to construct Wi-Fi networks, providing equivalent or superior service to what is available from commercial ISPs at no cost to residents. Program funding covers all capital costs associated with network design, construction, equipment, and the first year of ongoing operating expenses.

A property may be eligible through both programs; however, it may only be supported by one program.

The Wareham Housing Authority should submit an Expression of Interest to MBI to learn about these programs and determine if there are any opportunities to leverage them to improve Wi-Fi access in the Town's housing apartment buildings.[27]

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[25] Plymouth County ARPA. (n.d.). Broadband Infrastructure.
https://www.plymouthcountyarpa.com/forms/infrastructure-broadband/
[26] Massachusetts Broadband Institute. (n.d.). Residential Retrofit Program.
https://broadband.masstech.org/retrofit
[27] Massachusetts Broadband Institute. (n.d.). Residential Retrofit/Apartment Wi-Fi: Expression of Interest.
https://mbicx.qualtrics.com/jfe/form/SV_3aCFDYWAyTbEBUy

Implementation

The following Implementation Matrix provides a roadmap for the Town of Wareham to actualize the goals and recommendations provided in this Plan, supporting the achievement of the Digital Equity Vision. These actionable strategies are informed by issues and opportunities identified throughout the digital equity planning process and input from municipal staff, local and regional stakeholders, and the Wareham community.

Implementation Matrix

The following matrix outlines the several considerations for implementing the recommended actions, including:

> Champion — the recommended municipal department, board or committee to lead the implementation process.

> Cost — an approximate financial cost (capital or operational), defined as "$" ($0 to $10,000), "$$" ($10,000 - $100,000), "$$$" (more than $100,000).

> Funding Opportunities — potential funding agents or partners that could provide financial support, through grants or direct investment, to implement a certain strategy.

> Timeframe — the anticipated length of time for completion of a given strategy, defined as "Short-term" (less than 2 years), "Medium-term" (2 – 5 years), "Long-term" (more than 5 years).

Goals

Improve the diversity and accessibility of the Town's public outreach.

Improve community internet access.

Expand digital literacy training opportunities.

Expand device access for community members.

Recommendations

1 Improve the diversity and accessibility of the Town's public outreach.

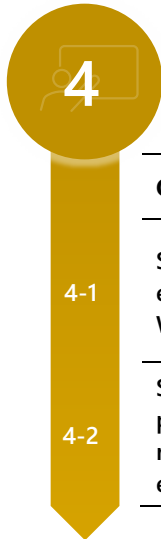|	OBJECTIVE	DESCRIPTION	CHAMPION	COST	FUNDING OPPORTUNITIES	TIMEFRAME
1-1	**Improve the Town's online presence**	Improve the Town's online content, including redesigning the Town's website and expanding the Town's social media presence.	Town of Wareham (Director of Planning & Community Development, IT Director)	$	Community Compact Cabinet IT Grant Program	Short-Term
1-2	**Collaborate with local media outlets**	Collaborate with the local media channels to spread awareness regarding municipal resources, upcoming events, and digital literacy training opportunities.	Town of Wareham (Director of Planning & Community Development, IT Director)	$	N/A	Medium-Term

2   Improve community internet access.

	OBJECTIVE	DESCRIPTION	CHAMPION	COST	FUNDING OPPORTUNITIES	TIMEFRAME
2-1	Provide free outdoor public Wi-Fi	Set up smart poles to provide free Wi-Fi and 4g or 5g coverage at key spots, targeting areas with poor signal (e.g., bus stops, downtown, parks).	Town of Wareham (Director of Planning & Community Development, IT Director)	$$$	Community Compact Cabinet IT Grant Program or Plymouth County ARPA	Long-Term
2-2	Explore expanding Wi-Fi access on public transit	Explore opportunities for collaboration with GATRA.	Town of Wareham (Director of Planning & Community Development), GATRA	$	N/A	Long-Term
2-3	Grow awareness of existing public Wi-Fi access points	Promote existing public Wi-Fi access points in the community (e.g., Wareham Free Library (main branch and Onset branch), coffee shops, Multi-Service Center, Town Hall).	Town of Wareham (Director of Planning & Community Development), Wareham Free Library (Library Director)	$	N/A	Medium-Term
2-4	Advocate for local broadband consumers	Work with local ISPs to establish a standard level of customer service to ensure that all households have the support they need.	Town of Wareham (Director of Planning & Community Development)	$	Lead for America - American Connection Corps	Short-Term
2-6	Establish a hotspot circulation program	Work with the Wareham Free Library and Wareham Public Schools to establish a hotspot sharing program.	Wareham Free Library (Library Director), Wareham Public Schools	$$	Community Compact Cabinet: Efficiency & Regionalization Grant Program	Medium-Term
2-7	Explore funding to improve broadband access for affordable and public housing residents.	Submit an expression of interest regarding MBI's affordable and public housing program options.	Wareham Housing Authority	N/A	Residential Retrofit Program (MBI)/Apartment Wi-Fi Program (MBI/MAPC)	Short -Term

3 Expand digital literacy training opportunities.

	OBJECTIVE	DESCRIPTION	CHAMPION	COST	FUNDING OPPORTUNITIES	TIMEFRAME
3-1	Enable residents to recognize and avoid cyberthreats	Raise awareness regarding cybersecurity best practices, including avoiding common scam tactics and online threats.	Town of Wareham (IT Director), Wareham Free Library (Library Director), Council on Aging (Director)	$	Lead for America - American Connection Corps	Short-Term
3-2	Improve digital literacy among local businessowners	Leverage Cape Cod Canal Region Chamber of Commerce outreach to communicate regarding IT resources to local businesses (e.g., press contacts, newsletter).	Town of Wareham (Director of Planning & Community Development), Cape Cod Canal Region Chamber of Commerce (President/CEO)	$	N/A	Short-Term
3-3	Expand the availability of local digital literacy training opportunities	Support a variety of digital literacy training opportunities/models (e.g., in-person classes, online classes, do-it-yourself modules, personalized assistance via a digital navigator system).	Town of Wareham (Director of Planning & Community Development), Wareham Free Library (Library Director), Council on Aging (Director)	$$	MBI: Municipal Digital Equity Implementation Program or Lead for America - American Connection Corps	Medium-Term
3-4	Promote enrollment in OCES' programming	Promote enrollment in Old Colony Elder Services' digital literacy programming and explore collaboration opportunities with the Wareham Council on Aging.	Council on Aging (Director)	$	N/A	Short-Term

4 Expand device access for community members.

	OBJECTIVE	DESCRIPTION	CHAMPION	COST	FUNDING OPPORTUNITIES	TIMEFRAME
4-1	Support enhancements of WFL technologies	Improve library capacity to support job seekers, businesses, and employees with adequate videoconferencing technology.	Wareham Free Library (Library Director)	$$	MBI: Municipal Digital Equity Implementation Program	Medium-Term
4-2	Support future WFL planning initiatives related to digital equity	Integrate digital equity goals with library's 5-year plan.	Wareham Free Library (Library Director)	$	N/A	Short-Term

Appendices

Stakeholder Interview Notes

› Business Needs
› Library Needs
› Older Adult Needs

Date:	06/12/2023	Notes Taken By:	Luke Mitchell	
Place:	Microsoft Teams	Re:	Stakeholder Interview: Wareham Business Needs	

ATTENDEES:
Luke Mitchell, VHB
Julia Mintz, VHB
Marie Olivia, President/CEO, Cape Cod Canal Region Chamber of Commerce (CCCRCC)
Kenneth Buckland, Town of Wareham

Initial Thoughts

› Marie recommends reaching out to as many businesses as possible to be inclusive in our engagement
› Marie offered to help publicize Digital Equity Plan engagement opportunities (e.g., press contacts, E-News, flyer distribution, newsletter to approx. 1,500 members)
› What's Going on Wareham? - social media page
› Ken highlighted challenges regarding Town communication with businesses on Main Street
› The Town doesn't have a secure method for online communication other than email and the Town's website
› The Town relies mainly on word-of-mouth for public outreach
› There is interest among the Selectman and Redevelopment Authority to expand the Town's communications capacity and have continued dialogue with Town businesses

Please characterize the business community in Wareham and in the broader region.

› Wareham has a range of business types and a proliferation of small businesses
› The digital literacy level of business owners typically depends on age
› Wareham has an industrial park (Wareham Crossing)
› The region has a lot of tourism-related businesses and visitor centers
› There are a couple of large job centers
› Large local and regional employers include the following:
  o South Shore Hospital
  o A.D. Makepeace (largest property owner in Massachusetts)
  o Town House Suites
  o Wareham Crossing retail zones
  o Walmart

What types of challenges do business owners face, that could potentially be addressed in the Digital Equity Plan?

- › Ken is not aware of broadband speed or access challenges on Main Street
- › Marie gets complaints regarding Comcast's services and accessibility
- › With smaller businesses, there is a literacy gap regarding how to work with Fiberoptic in general

What resources does the Town provide to support small businesses?

- › The Town provides a Permit Guide for new and small businesses (e.g., business registration, permit processes for opening a business)
- › The Town generally has a good reputation for supporting businesses
- › There is potential for expanded outreach to the Town's business community. Town communications systems are insufficient.
- › The CCCRCC communicates with businesses regarding business development opportunities

Is there a need for outdoor Wi-Fi in Wareham?

- › It could be helpful to have public Wi-Fi available in Town housing projects
- › Onset Pier could be a potential location for outdoor Wi-Fi

What can be done to support the tourism economy in Wareham?

- › The Town established a branding program a few years back (Its Better Before the Bridges)
- › The region's tourism economy is strong but could has the potential to improve
- › The CCCRCC brings in 3 million people per year, according to USACE

Are internet subscription services available in Wareham?

- › There is no lack of providers available
- › Anything that could bring the price of internet subscriptions down would be helpful
- › People are paying for internet plans but not getting the support they need
- › OpenCape is based in Hyannis/Barnstable County and has clients everywhere throughout the Cape
- › OpenCape is funded by the federal government and is a quasi-public agency that works primarily with the business community

Meeting Notes

Date:	06/15/2023	Notes Taken By:	Luke Mitchell
Place:	Microsoft Teams	Re:	Stakeholder Interview: Library Needs

ATTENDEES:
Luke Mitchell, VHB
Julia Mintz, VHB
Patrick Marshall, Wareham Free Library

Please discuss existing services or programming Wareham Free Library provides concerning (1) broadband access, (2) computer/device access, and (3) digital literacy. What challenges and opportunities exist across these program areas.

› The Library consists of the primary Library and a small one-room branch (relatively small, Wi-Fi in one meeting room, has not had sufficient staff to operate) in Onset Village
› The Library has a public Wi-Fi network, available 24/7, inside and outside – Wi-Fi availability is not promoted super well by the Library
› Wi-Fi usage for this year has received approximately 6,000 hits
› The Library tries to provide resources and assistance for youth. There is potential for a partnership between the schools and the Library.
› The Library has a small reading partners program for early readers (little funding) with a focus on ESL geared toward Wareham's growing immigrant population
› Over the next year, the Library aims to meet with the Town/IT representative to address technology needs (hardware and software are out-of-date)

What are the greatest challenges facing library-goers regarding technology?

› The Library has identified needs for basic trainings (e.g., using Microsoft Office) and device access
› Older adults seek help with completing fuel assistance forms
› Employee/business needs:
   o Supporting work-from-home employees – The Library currently serves as an office away from home, providing internet access and basic fax/scanning capabilities
   o Jobseekers need assistance with the application process (e.g., submitting applications, having quiet space to do an interview)
› People need space/technology for videoconferencing – the Library only has meeting/conference rooms which can't be reserved (no supporting technology, people must bring devices from home for videoconference)
› The Library has the potential to significantly contribute to business growth, as it essentially functions as a business office and should actively advertise its services

Are the resources and programming provided by the Wareham Free Library well-utilized?

› The reference librarian has received approximately 1,700 strictly technology assistance-related questions, and these numbers are increasing

› The Library has provided classes in the past, with some success, but is constrained by funding and staff capacity

› Community demand for technology and digital literacy programming exceeds Library capacity

› During periods of economic downturn, usage of the Library's internet and technology services skyrocket (when $ gets tight, one of the first things people cut is their internet subscription)

› The Library is working to build capacity (currently four full-time professionals, three 20hr/week employees, and one 10hr/week employee)

Date:	06/12/2023	Notes Taken By:	Luke Mitchell
Place:	Microsoft Teams	Re:	Stakeholder Interview: Older Adults Needs

ATTENDEES:
Luke Mitchell, VHB
Julia Mintz, VHB
Sharon Rice, Council on Aging (COA)

Initial Thoughts

› The COA was disbanded/defunded by the Town ten years ago
› In the past four years, the Town has hired a 10hr/week Director (the first Director the Town has had)
› The Town has no social services for older adults, but Sharon has worked to try to expand access for seniors to other services (e.g., food stamps, housing assistance)

What digital/online challenges do Wareham residents age 60+ report?

› There are different levels of digital literacy and interest among various age groups for older adults
› Some older adults had no choice but to use technology during the COVID-19 pandemic for telehealth and communication with family
› Seniors are vulnerable to cyber threats; some seniors won't even answer their phones (worried about scams)
› Need to bring down the cost of internet subscriptions – out of a lot of people's price ranges

What senior services do the Council on Aging/Health Department provide for (1) broadband access, (2) computer/device access, and (3) digital literacy?

› Older adults don't know to come to the COA as a resource for technology assistance
› The COA provides one-on-one attention for older adults on a variety of issues
› The COA does not provide programs that specifically focus on technology and does not have the capacity/resources to provide structured training (even with funding, they likely could not pay an instructor competitively – need someone willing to work with these constraints)
› In a previous position, Sharon worked with a grant-funded trainer to provide support on primary computer (Facebook, email, etc.) and phone usage where people could come in with individual questions and receive tailored attention (don't have same funding in Wareham)
› Older adult and low-income housing options are available in the Town

What outreach methods do the Council on Aging and Health Department utilize for informing Wareham's older adult population of resources and opportunities?

- › Outreach methods depend on what age group you are targeting
    - o 50-50 people who prefer virtual vs physical outreach
    - o Facebook
    - o E-newsletter
    - o Paper mailing (Sharon has a voter list of residents 60+)
- › The hybrid structure works well for public meetings

Are computing devices or public Wi-Fi available through the Multi-Service Center?

- › The COA operates out of the Multi-Service Center and shares this space with other groups
- › No modern devices available
- › If an individual needs to do something online, the COA has a desktop available for use with a staff member

Are Wareham's older adults aware of discount internet subscriptions that may be available to them?

- › The level of awareness is generally pretty low – The COA distributes flyers, but no one came for assistance in setting themselves up with these programs
- › With opportunity comes responsibility – older adults are ignored or exploited. It is not enough to provide technology without education on how to use it as safely as possible
- › It can be hard for older adults who didn't grow up with this to know what to look for to keep themselves safe online
- › Need for dedicated training opportunities