



Town of

TOWN OF ORLEANS

Digital Equity Plan

Project Background

ACKNOWLEDGEMENTS

The Town of Orleans Municipal Digital Equity Plan was made possible through funding from the Massachusetts Broadband Institute (MBI) and the Massachusetts Technology Collaborative (MassTech) as a grantee under the Municipal Digital Equity Planning Program. Funding for this statewide program was provided through Massachusetts American Rescue Plan Act (ARPA) State Fiscal Recovery Funds.

Many individuals across the Town of Orleans played a critical role in developing this plan. This includes leadership, staff, and volunteers from the following entities: the Town Planning Department, the Council on Aging and Senior Center, Snow Library, Nauset Public Schools, Orleans Housing Authority, Cape Cod Technology Council, and Rock Harbor Village.

The Cape Cod Commission was pleased to partner with the Town of Orleans in the development of this municipal digital equity plan and looks forward to supporting implementation strategies and opportunities for regional collaboration.



Figure 1: Jonathan Young Windmill, Orleans



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A stylized map of the state of Massachusetts is centered on the page. The map is rendered in a dark blue color. Overlaid on the map and the entire background is a network of glowing white lines connecting various points, suggesting a digital or communication network. The background also features horizontal light blue streaks and a gradient from light blue at the top to a darker blue at the bottom. The text 'INTRODUCTION & TOWN VISION' is written in a bold, white, sans-serif font across the middle of the map.

INTRODUCTION & TOWN VISION

Project Background

INTRODUCTION

During the COVID-19 pandemic, when many activities related to work, school, public service, and healthcare moved to a virtual setting, inequities were exposed related to how communities experience the internet and technology. These inequities constitute the digital divide – the gap between those who have access to, and ability to use, the internet and computing devices, and those who do not. Today, the ability to engage in the digital world varies broadly across our communities, with digital inequities inhibiting many from meeting their civic, social, educational, health, and employment needs.

As the digital world continues to advance, all community members must have the opportunity to meaningfully engage with the internet and technology to thrive professionally, academically, civically, socially, and personally. Advancing digital equity will require universal internet connectivity, device adoption, and digital skills.

Digital equity is essential for healthy, engaged, and thriving communities. Municipalities, community organizations, and other actors across our communities have a critical role to play in making digital inclusion a reality for all.

What is Digital Equity?

“The condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.”

National Digital Inclusion Alliance

Key components of digital equity include:



Internet Connection: Do all populations experience internet connection that is affordable, fast, and reliable? Can all populations access the internet?



Devices: Do all populations have devices that are adequate, needs-appropriate? Are devices affordable or otherwise accessible?



Literacy and Skills: Do all populations have the ability to use technology and the internet to achieve their needs? Do concerns around trust, privacy, and safety exist?

Project Background

Following the passage of An Act Relative to Immediate COVID-19 Recovery Needs, also known as the Massachusetts “ARPA 1.0” legislation (codified as Chapter 102 of the Acts of 2021), a Broadband Innovation Fund was established to bridge the digital divide as a component of the Commonwealth’s COVID-19 recovery and response efforts.

The [Massachusetts Broadband Institute](https://broadband.masstech.org/)¹ (MBI), a division of the Massachusetts Technology Collaborative, has led the planning process and development of a statewide digital equity plan known as the “[Massachusetts Internet for All Plan](https://broadband.masstech.org/mainternetforallplan)”². It is also leading the deployment of roughly \$530 million in state and federal funding to expand high-speed internet access and digital equity programming across the state over the next two fiscal years.

To fully understand local digital equity needs, MBI established a Municipal Digital Equity Grant Planning Program (“Municipal Planning Program”). This program enables municipalities across the state to engage in digital equity planning activities that ultimately yield a town-adopted digital equity plan. Municipalities select a pre-qualified planning service provider, such as the Cape Cod Commission, to support the development of their digital equity plan.

¹ <https://broadband.masstech.org/>

² <https://broadband.masstech.org/mainternetforallplan>

Massachusetts State Digital Equity Plan

Massachusetts Broadband Institute

Project Purpose

Project Purpose

The Cape Cod Commission (Commission) assisted the Town of Orleans in this planning effort to assess the digital divide in its community and to develop a Municipal Digital Equity Plan. The purpose of the plan is to understand the current landscape of digital equity in Orleans, to prepare the town for future funding opportunities, and to help guide equitable implementation to ensure that all benefit from infrastructural and programmatic investments.

The Municipal Digital Equity Plan is designed to accomplish two goals:

- Guide municipal decision-making and investments to increase access, adoption, and usage of the internet for the populations most affected by the COVID-19 pandemic; and,
- Prepare municipalities to submit grant proposals to existing or forthcoming state or federal programs to support digital equity activities.

The Town of Orleans Digital Equity Plan includes a community-driven vision for digital equity and inclusion, an overview of existing conditions of the current state of digital equity in Orleans, a description of the community engagement process, and recommendations and solutions based on the sum of these findings.

Considerations throughout the development of this plan were contextualized through the three primary components of digital equity: connectivity, devices, and skills. This plan also considers community-wide challenges and solutions within this framework.

Recommendations and strategies derived from this plan will lay a foundation for access to future implementation funding, which, in addition to MBI's implementation programs, may be derived from public, philanthropic, or private sources.



Vision and Goals

The Town of Orleans strives for a future where digital equity is regarded as a basic right and where connectivity to the digital world is considered an essential service. Digital inclusion efforts will be integrated into all aspects of personal and community life, with entities across Town working collaboratively to provide services that are needs-responsive and empowering for all community members, particularly those who are underserved.

GOALS

To achieve the community's vision, the Town of Orleans should strive to meet key goals.

All community members across the Town of Orleans will:

- Equitably access an array of internet *connectivity* options, both within their homes and across key community locations, that is affordable, consistent, and of reliable service quality. Community members will be empowered to address connectivity challenges when they arise.
- Easily access the *technology and devices* needed to fully engage in community life and will understand where to go for publicly available devices or for individualized support with their own devices.

- Possess the *digital skills*, vocabulary, and confidence necessary to safely participate in the digital world and access essential services, supported by needs-responsive and accessible educational opportunities that will ensure continued learning as the internet and technology progress.

Entities across the Town of Orleans will:

- Gain capacity, funding, and resources to enhance existing programs and advance new solutions to achieve these goals.
- Function in collaboration, partnering with neighboring communities and participating in regional efforts, to provide complementary and community-responsive services.

The background features a network of thin white lines connecting small white dots, overlaid on a dark blue gradient. Several thick, glowing blue horizontal bars of varying lengths and opacities are scattered across the scene, creating a sense of digital connectivity and data flow.

CURRENT STATE OF DIGITAL EQUITY

Setting

Table 1: Key Demographic Information for Orleans. (Various Sources)

POPULATION	HOUSEHOLDS	HOUSEHOLD SIZE	HOUSING UNITS	MEDIAN SALES PRICE	HOUSEHOLD INCOME (<i>median</i>)	MEDIAN AGE
6,322	3,004	2.07	5,944	\$865,000 (2023)	\$89,375	63.2

EXISTING DIGITAL EQUITY CONDITIONS

INTRODUCTION

Digital equity efforts seek to ensure everyone has the same access and opportunities to the information technology needed for full participation in society, democracy, and the economy. As such, a core element of this planning process was to understand the Town of Orleans on a community level – who lives in town and what conditions may impact the ability of Orleans community members to experience digital equity. This planning process also required an understanding of connectivity conditions that may impact community access to the digital word.

Setting

Orleans balances its position as the economic hub of the Lower Cape, which it balances alongside a need and desire to preserve its history and natural beauty. Reliable internet connectivity is necessary for both the town’s vitality as a regionally important economic center and its attractiveness for year-round and part-time residents, as well as visitors.

Seasonal properties in Orleans constitute nearly half of all housing units (47%); this is just one indicator that represents a significant increase in the town’s seasonal population. This dynamic presents challenges for municipal infrastructure, such as water and sewer, as they require capacity to handle peak seasonal needs which far exceed year-round needs. The same holds true for private infrastructure, such as broadband and cellular services.

Orleans is the third oldest Cape town by median age (63.2) and has a lower percentage of residents under the age of 18 (12.9%) than the county (14.5%) and state (19.6%).

People

People

To ensure resources are directed at bridging the digital divide for those who are most in need, the federal Digital Equity Act of 2021 identified certain populations that are more likely to have trouble accessing and using broadband internet. These include:

- Low-income households (at or below 150% of the federal poverty level)
- Aging individuals (60 and older)
- Incarcerated individuals
- Veterans
- People with disabilities
- People with language barriers (limited English proficiency or low literacy levels)
- Members of racial or ethnic minority groups
- Rural residents

In [Visions of Digital Equity](#), the Benton Institute offers an outline of how covered populations experience the digital divide. While some of these dynamics are described in the section to follow, referencing this report will provide a

Covered Populations

Defined by Digital Equity Act of 2021

- ★ Low-income households
- ★ Aging individuals (60 and older)
- ★ Incarcerated individuals
- ★ Veterans
- ★ People with disabilities
- ★ People with language barriers
- ★ Racial and ethnic minorities
- ★ Rural inhabitants

Underrepresented Communities

Defined by Broadband, Equity, Access and Deployment (BEAD) Program

- ★ Indigenous and Native American individuals
- ★ Members of ethnic and religious minorities
- ★ Women
- ★ LGBTQI+ individuals
- ★ Persons of color
- ★ People adversely affected by persistent poverty or inequality

more complete understanding of the disproportionate challenges faced by these populations.³

The Broadband, Equity, and Access Deployment Program also identified key populations to consider throughout digital equity planning efforts. These populations are reflected in the “Underrepresented Communities” portion of the table.

For the purposes of this planning effort, Commission staff explored data and experiences from populations that are particularly present in the Town of Orleans, with a focus on Covered Populations. Generally, the Town of Orleans’s demographics reflect the entirety of the Barnstable County region, with a few variances discussed further in the sections that follow. More detailed demographic data and maps can be found in the appendix.

AGING INDIVIDUALS

Cape Cod is a popular retirement destination, which provides a consistent influx of aging residents and boosts median ages higher than the state and nation. The county’s median age is 54.5 years. Orleans is among the top three Cape communities for median age at 63.2 years, which is far higher than Massachusetts (39.8 years) and the nation (38.5 years).

The U.S. Census Bureau measures the Age Dependency Ratio, which considers the number of individuals in a community who are outside of working years in comparison with those who are a working age. According to this calculation, working age is considered to be within the range of ages 18 to 64; those who are younger than 18 and older than 65 are dependent on the economically active

AGE DIVERSITY

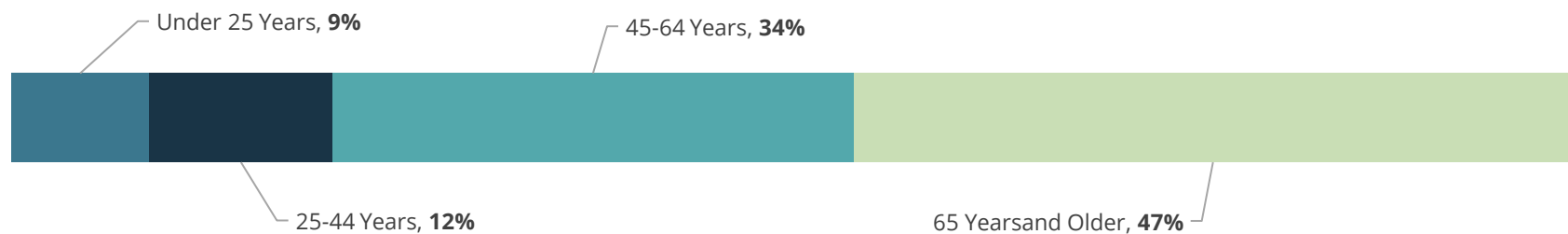


Figure 2: Age Diversity in Orleans

³ [Visions of Digital Equity](#), the Benton Institute for Broadband and Society, August 2023.

People

segment of the population to some extent. A high Age Dependency Ratio can have implications for social support systems, healthcare needs, and workforce sustainability. For example, social services such as Councils on Aging may feel particularly exacerbated in a community with a high Age Dependency Ratio.

In Orleans, as with the rest of the Cape, a higher-than-average number of aging residents drives a higher Age Dependency Ratio of 147.7. This means that for every 100 residents presumed to be in the workforce (those aged 18 to 64), there are 148 outside of it, both younger and older. The State ratio is 58.

Orleans's aging population is reflected in other data. More than 60% of all households have at least one person over 65. Close to 42% of households reported retirement income.

One area where Orleans does not follow typical trends is in individuals with a disability. While the town as a whole has a higher percentage of individuals with a disability (14.3%) than both the county and state, its percentage of individuals 65 and older with a disability (22.6%) is lower than both. In fact, taken individually, each age bracket shows a lower percentage of individuals with disabilities. It's the proportion of aging individuals in Orleans that skews the aggregated town wide numbers higher than state and county percentages.

From a digital equity perspective, a larger aging population may represent skills and knowledge gaps in how to use internet-based systems and an understanding of what represents quality internet service. This may be especially true for aging residents living alone without family nearby or strong social networks. This is likely to be a particularly acute problem in Orleans, where 24.1% of all year-round households are composed of someone aged 65 or older and living alone.

MEMBERS OF RACIAL OR ETHNIC MINORITY GROUPS

Practices of historical underinvestment and systemic discrimination that create social disparities in areas such as housing, education, and wealth also contribute to digital inquieties that may be experienced by members of racial or ethnic minority groups.

Orleans is less diverse racially and ethnically than the county, with 97.3% of its population identifying as White alone. The second highest percentage of one race is Asian (0.9%), followed by Black or African American (0.2%). ACS data indicates there are no Native American individuals living in Orleans.

Orleans's enrolled student population demonstrates greater racial and ethnic diversity than the town as a whole. This appears to be a trend across towns in Barnstable County and may be indicative of greater diversity in the

ORLEANS POPULATION BY RACE N=6,322

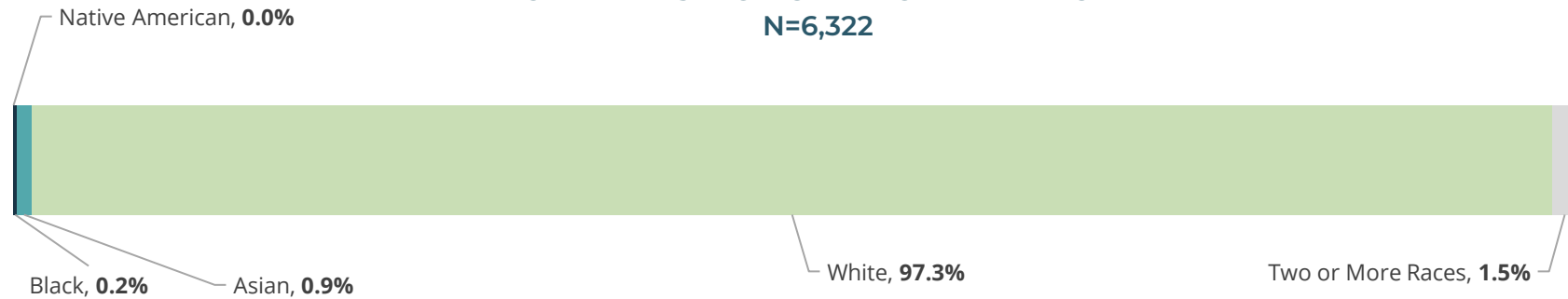


Figure 3: Population by Race in Sandwich

population of families with school-aged children. Enrollment data indicates that 4% of students identify as Black, 1% as Asian, 6% as Multiracial, 1% as Native American, and 77% as White. Additionally, 9% of students speak a first language that is not English.

Enrollment data for Orleans Public Schools adds important details to the town's demographic picture. Orleans is part of the Nauset Regional School District for grades 5 to 12. This leaves the town's kindergarten through Grade 4 enrollment of 145 (2022-23) as the only Orleans-specific population available for analysis.

ORLEANS PUBLIC SCHOOLS POPULATION BY RACE N=145

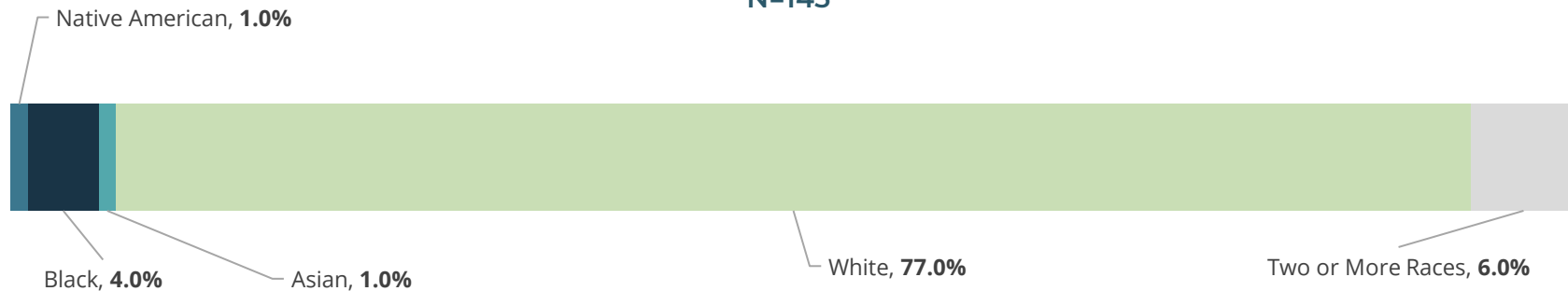


Figure 4: School Enrollment by Race in Sandwich

People

INCOME

HOUSEHOLDS PER INCOME BRACKET

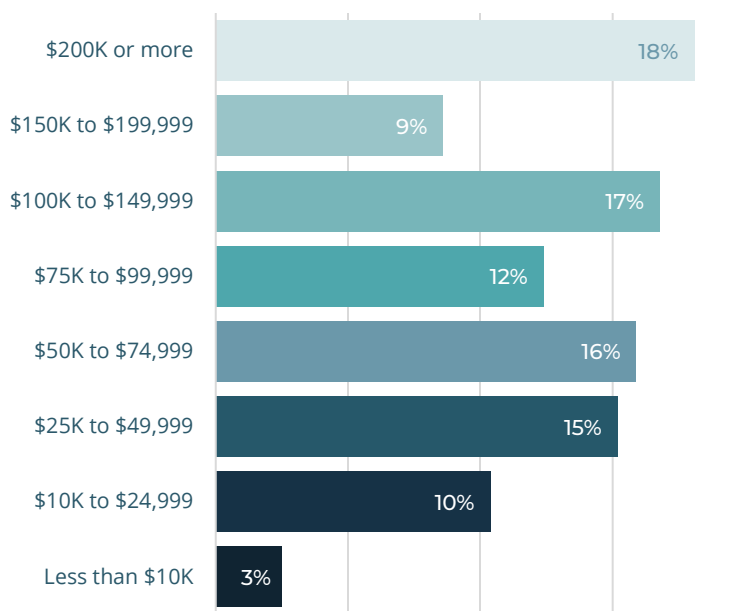


Figure 5: Households per income bracket in Orleans

Income significantly impacts an individual or family's experience within the digital world, with a greater household income offering the ability to afford high-quality internet plans, own effective devices, and experience

opportunities to advance digital skills. Low-income households may have greater difficulty affording and accessing the internet and technology needed to achieve basic stability or to thrive.

Orleans's \$89,375 median household income is slightly below the County's median household income of \$90,477. It includes a lower percentage of households reporting wage and salary earnings (63.4%), which is below the state (79%) than the county (70%). The lower percentage is in line with a community that has a larger aging population. Correspondingly, the number of households in Orleans reporting retirement income (41.7%) is higher relative to the rest of Cape Cod, and nearly twice the state (21.6%).

The aggregated town wide data tends to hide the disparity between its two Census tracts, which generally divide the western and eastern parts of Orleans.

Tract 104, the western side, is less affluent and has higher rates of food stamp/SNAP benefit use and twice the level of individuals experiencing poverty than Tract 105 on the eastern side of town. It's notable that Tract 104 has a higher median age, 64.9 vs 60.2, which may also be a contributing factor to the income disparities.

Approximately 39% of students enrolled in Orleans Public Schools (K-4) qualify as low-income. It is likely that these households experience challenges accessing the digital world, such as affording broadband.

Orleans	Census Tract 104	Census Tract 105
Total Households	1,587	1,417
Total Population	3,342	2,980
Median Age	64.6	60.2
Median Household Income	\$78,232	\$99,403
Average Household Income	\$104,850	\$185,511
Households with Earnings	914 (58%)	990 (70%)
<i>Average</i>	\$87,499	\$137,854
Households with Social Security	898 (57%)	788 (56%)
<i>Average</i>	\$28,084	\$29,544
Households with Retirement Income	666 (42%)	587 (41%)
<i>Average</i>	\$41,952	\$56,665

Table 2: Orleans Census Tract comparisons (2022 ACS 5-Year Estimates)

PEOPLE WITH DISABILITIES

In June of 2022, the U.S. Department of Labor released a [report](#) describing the intersection between having a disability and internet subscription affordability and access, internet use, and employment outcomes, demonstrating inequities experienced by people with disabilities.⁴

As a whole, Orleans has a higher percentage of individuals with a disability (14.3%) than the county (13.8%) and state (11.9%), Orleans's aging population with a disability (22.6%) is lower than county (25.6%), state (30.5%), and national (33.3%) percentages. As noted in the "Aging Individual Section," the high proportion of older residents pushes the town wide disability numbers higher than the state and county, but when reviewed by age groups, it is lower for each on a percentage basis.

VETERANS

Orleans's 6.9% veteran population is on par with the county, state, and nation. Additionally, 24% of Orleans veterans report having a disability and 83.5% are 65 years old or above. These combined characteristics are likely to lead to heightened digital equity challenges for Orleans's veterans.

⁴ Disability and the Digital Divide: Internet Subscriptions, Internet Use and Employment Outcomes, Office of Disability Employment Policy, U.S. Department of Labor, June 2022.

Housing

Housing

Of the 5,944 housing units in Orleans, 51% are occupied year-round, with a lower percentage of rentals (21%) than most other towns across Barnstable County.

More than half of these rental households are considered cost burdened, spending more than 30% of their monthly income on housing.

The percentage of seasonal housing stock in Barnstable County is among the highest in the United States, ranking fifth among 1,000 counties with populations of at least

50,000. In counties with more than 200,000 year-round residents, Barnstable County ranks first.

In Orleans, just under half of all units (46.8%) are used seasonally.

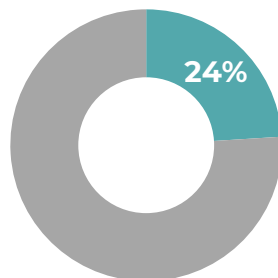
Understanding Orleans’s housing landscape supports the identification of barriers to achieving digital equity for residents. For example, internet service providers may develop and maintain broadband infrastructure to align with year-round housing needs, which may not account for seasonal population growth. This may contribute to poor connectivity, particularly in highly seasonal neighborhoods, during peak summer months.

HOUSING STOCK

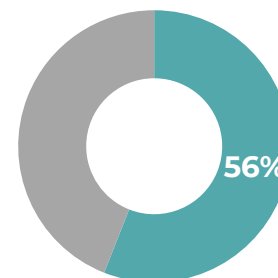
In Orleans, 84% of residential properties are single family homes; about 13% are multifamily properties. Like the region, the vast majority of housing units in the town were built between 1950 and 1999. Less than 13% of Orleans housing stock was built in the 2000s.

Housing Cost Burdened

A household is considered cost burdened when housing costs exceed more than 30% of monthly income. *(ACS 2022 5-year Estimates)*



OWNERS spending at least 30% monthly



RENTERS spending at least 30% monthly

Additionally, housing challenges can serve as an indicator for other digital equity barriers, particularly when considering how the cost burden and the affordability gap may impact a resident's financial stability. Housing authorities across the state are eligible for funding and infrastructure programs to support digital equity for residents, which should be considered in towns such as Orleans with a high housing cost burden. These programs are further described in the Funding subsection within the *Implementation* chapter of this plan.

Connectivity

Massachusetts has among the highest percentages of broadband served locations in the country, meaning its overall number of unserved and underserved locations is relatively low compared to other states, with some exceptions. Orleans's connectivity profile based on [Federal Communication Commission](#)⁵ (FCC) and [Massachusetts Broadband Institute](#)⁶ (MBI) broadband maps more or less aligns with the statewide landscape, with wide availability of service.

Accurate connectivity data is essential to the deployment of Broadband Equity, Access, and Deployment (BEAD) funding. The datasets serving as the basis of these determinations

have gone through periodic updates during the compilation of this existing conditions assessment. In each instance the number of both unserved and underserved locations within Orleans has been reduced, meaning more locations have been determined to be served.

The state provided an opportunity for communities to challenge the broadband availability maps as part of the state's broadband funding opportunities.

There is no one source to measure or verify available internet speeds, but taken together, current data on the experience of Orleans internet users indicate pockets of poor performance with broad variability.

⁵ Link to Federal Communications National Broadband Map: <https://broadbandmap.fcc.gov/area-zsummary/fixed?version=jun2023&geoid=250018>

⁶ Link to Massachusetts Broadband Institute Broadband Map: <https://mapping.massbroadband.org/map/>

Connectivity

Table 3: Providers Serving Orleans by Availability

Provider	Technology	Advertised Download	Advertised Upload	BSLs	with Service	% with Service
Comcast	Cable	1200	35	4,746	4,730	99.7%
T-Mobile	Fixed Wireless	25	3	4,746	1,147	24.1%
T-Mobile	Fixed Wireless	100	20	4,746	607	12.8%
Verizon	Fixed Wireless	300	20	4,746	368	7.8 %
Verizon	Fixed Wireless	200	30	4,746	60	1.3%
Verizon	Fixed Wireless	50	5	4,746	375	7.9%
Verizon	Fixed Wireless	10	1	4,746	306	6.4%

SOURCE: FCC National Broadband Map Download. <https://broadbandmap.fcc.gov/data-download>

Data reviewed from multiple sources and in-person expressions of dissatisfaction during outreach sessions indicate a mismatch between stated availability of broadband and how many Orleans users experience the Internet.

MBI provided a year’s worth of download speed data from Ookla, a company that provides internet speed data and analysis. This data set covers users’ tests taken from December 2021 to November 2022, with about 3,700 tests by more than 750 users within the Town of Orleans (summary table in Appendix).

An analysis of these tests shows about 25% of all Orleans tests would qualify as underserved, which is lower than all tests for Barnstable County (28%).

In Orleans and Cape-wide there is a correlation between areas with higher percentages of seasonal housing and lower internet connection speeds. This may indicate that related infrastructure does not account for higher peak season usage, which may degrade overall performance.

While poor connectivity and a lack of competition can be barriers to digital inclusion, they can also exacerbate other factors, particularly for residents with limited digital skills

and inadequate access to needs-appropriate technology and devices.

An ad hoc committee in Orleans researched broadband availability, options, costs, provider interviews and conducted a business and resident survey. The committee reported its findings and recommendations, most of which align with the data and characterizations presented here, to the select board in October 2022.

DEVICES AND CONNECTIONS

The vast majority of Orleans households have one or more computing devices (97.0%) and some form of broadband internet connections (96.8%).

Desktop and laptop computers are found in 87.2% of homes, with 4.8% relying on them as their only computing device. Smartphone (86.7%) and tablet (73.3%) adoption is consistent with the county, state and federal percentages.

Table 4: Types of Household Internet Subscriptions

Service Type	Orleans		County		State	
	Total	Percent	Total	Percent	Total	Percent
With an Internet subscription	2,909	96.8%	101,544	94.7%	2,601,334	93.0%
Without an Internet subscription	95	3.2%	5,643	5.3%	196,442	7.0%
Dial-up with no other type of Internet subscription	0	0.0%	57	0.1%	2,843	0.1%
Broadband of any type	2,909	96.8%	101,487	94.7%	2,598,491	92.9%
Cellular data plan	2,512	83.6%	94,332	88.0%	2,431,572	86.9%
Cellular data plan with no other type of Internet subscription	206	6.9%	9,084	8.5%	261,234	9.3%
Broadband such as cable, fiber optic or DSL	2,676	89.1%	90,886	84.8%	2,295,043	82.0%
Satellite Internet service	97	3.2%	3,828	3.6%	89,830	3.2%

Connectivity

The number of households with no computers (3.0%) is consistent with but lower than county (3.3%), state (4.1%) and national (4.3%) figures. It also represents a significant decrease (i.e. more homes with computers) since the start of the pandemic (7.5% in 2019).

Post-pandemic data demonstrates that the Orleans' households are trending positively for increased connectivity. A comparison between 2019 and 2022 American Community Survey data shows that more residents have adopted in-home devices and internet subscriptions.

Approximately 79% of Orleans households have the possibility of redundant internet access through cellular data plans in addition to their primary internet subscription. Approximately 6.9% of households only have a cellular plan for internet access, which is lower than county and state percentages.

ACP AND AFFORDABILITY

The Affordable Connectivity Program (ACP) was an FCC benefit program that helped households afford the broadband they need for work, school, and more.

ACP provides:

- Service discount up to \$30/month
- Service discount up to \$75/month on qualifying Tribal lands

- Device discount up to \$100 for a qualifying device

The percentage of Orleans households without internet access (3.2%) is lower than the county (5.3%). Households with less than \$20,000 in annual income include the greatest percentage of households without internet (11.8%). This is a little more than half of county, state, and national percentages for such households.

Commission staff estimated that 19% of all Orleans households would have qualified for ACP based on income. While there are many ways for households to qualify, including participation in other government aid programs, Medicare enrollment, or veteran status, income serves as a good proxy for eligibility. Only a quarter of eligible households have taken advantage of the ACP.

The future of the Affordable Connectivity Program is contingent upon federal action. As of this writing, the program has ended and likely creates a financial burden for the families in Orleans who relied on the ACP subsidy to support their internet connection. ACP eligibility and uptake data remains useful because it can inform an understanding of populations struggling to afford internet access.

MASSACHUSETTS BROADBAND INSTITUTE SURVEY

The Massachusetts Broadband Institute (MBI) developed a statewide digital equity survey to inform the Massachusetts

Information Gaps

Digital Equity Plan and municipal digital equity planning efforts. The survey was primarily distributed digitally through online publicity (e-newsletters and social media) and was self-selecting in nature. As a result, for the Town of Orleans and many municipalities, the survey did not provide a representative sample of the population. In Orleans, 111 surveys were taken, and respondents skewed older and less diverse than the town as a whole.

Acknowledging these limitations, the survey generally aligns with community members feedback and datasets analyzed throughout this project. Survey responses may be used alongside other data points to inform implementation priorities. Notable findings include:

- Roughly a third of respondents found that paying for their internet bill was somewhat or very hard.
- 97% reported being somewhat or very concerned about internet safety. Concerns included personal data security (96%), being scammed (65%), being tracked or surveilled (60%) and online harassment (38%).
- 24% indicated their internet service was not good enough to meet household needs.
- The most common devices used to regularly access the internet were smart phones (83%) and laptops (74%).
- Asked what types of digital skills support they would be most interested in, 48% indicated self-training modules, 23% for online courses, and 30% for form

of in-person support, either classes (14%) or from a friend or instructor (16%).

- A majority of respondents (96%) reported that all members of their households have access to devices to meet their everyday needs.

Information Gaps

While many sources were reviewed in the compilation of the above data, information gaps still exist and data will continue to change. Ongoing data collection is recommended for Orleans in the continued pursuit of advancing digital equity. Commission staff recommend continued data collection in the following areas:

- The Massachusetts Broadband Institute's Statewide Digital Equity Survey was well taken by residents in Orleans. However, young families were underrepresented in respondents. To better understand the digital equity landscape specific to young families, further distribution of the survey or a similar survey is recommended.
- This project explored covered populations identified by the Digital Equity Act. However, the federal Broadband, Equity, Access, and Deployment (BEAD) program identified "underrepresented communities" who also face heightened barriers to achieving digital equity. Continued exploration of data related to the experiences of these populations would benefit implementation strategies.

COMMUNITY ENGAGEMENT



Process Overview

COMMUNITY ENGAGEMENT

Process Overview

Community engagement was central to the development of the Town of Orleans Digital Equity Plan. Feedback, experiences, and perspectives shared by community members and stakeholders directly inform the *Key Findings* and *Implementation* sections that follow.

To develop an effective community engagement strategy, a municipal project team was formed to provide initial guidance during the project launch. This team offered

direction on key stakeholders to engage and outreach strategies that work for residents of the Town of Orleans. Commission staff then implemented a diverse range of community engagement activities.

A particular goal of this planning process was to engage individuals and organizations representing covered populations— communities who are particularly impacted by the digital divide.

Key community engagement activities included:

- Survey distribution
- Stakeholder interviews
- Community pop-up events
- Community workshop



111

SURVEY RESPONSES



4

COMMUNITY EVENTS



170+

RESIDENTS ENGAGED

Project Kickoff

On January 26, 2024, Commission staff facilitated a project kickoff meeting with leaders identified through project coordination with the Town Planning Department and Town Administration. The purpose of the kickoff meeting was to build a shared understanding about the Municipal Digital Equity Plan project, present and discuss data related to existing conditions in the Town of Orleans, identify local digital equity assets, and elicit feedback related to effective community engagement strategies. This meeting was foundational to subsequent digital equity planning activities. Meeting attendees included representatives of the following entities:

- Orleans Planning Department
- Orleans Council on Aging and Senior Center
- Snow Library
- Orleans Housing Authority
- Orleans Management Information Services
- Nauset Middle School
- Orleans Elementary School
- Cape Cod Commission

Survey Distribution

Commission staff utilized the Massachusetts Broadband Institute Statewide Digital Equity Survey to gain feedback from residents about their experiences with the internet

and technology. The survey link was shared with members of the municipal project kickoff team and was available at community engagement activities. Survey responses have been incorporated into existing conditions data and have informed recommendations within this plan.

Stakeholder Interviews

At the project kickoff, participants identified individuals and organizations that would be critical to engage throughout the digital equity planning process. Commission staff hosted one-on-one meetings and/or shared a stakeholder survey with these key entities.

Through this activity, Commission staff shared information about the digital equity planning process, learned about barriers and opportunities to achieving digital equity, heard about the stakeholder's vision for digital equity within their own organization and the Town of Orleans, and considered how to promote the community workshop and other opportunities to engage with the project within stakeholder's individual community.

- Participating stakeholder entities included:
- Nauset Public Schools: Information Technology Department
- Orleans Council on Aging and Senior Center
- Snow Library
- Orleans Chamber of Commerce
- Lower Cape TV

Community Pop-Ups

- Orleans Housing Authority
- Orleans Management Information Services
- Orleans Elementary School
- Nauset Middle School
- Community Development Partnership

Community Pop-Ups

Commission staff endeavored to reach community members “where they are at” by offering information and feedback tables at community events and key locations.

The purpose of community pop-ups was to inform the community about the digital equity planning process, share an invitation to the community workshop, and gain feedback from residents about barriers and opportunities they experience within the digital world.

Community pop-ups included:

- Snow Library, March 21 & 28, 2024
- Rock Harbor Village, March 21, 2024

Each pop-up activity purposefully offered an opportunity to interact with a different segment of the community in order to gain diverse perspectives. For example, the Snow Library pop-up was targeted towards both aging adults who attend the library’s Lifetime Learning Program and families who avail of library resources and activities throughout the day. The pop-up at Rock Harbor Village, hosted in partnership

with POAH, offered an opportunity for focus group type conversation with Rock Harbor Village residents.



Community Workshop



A public community workshop was held at the Orleans Senior Center on April 9, 2024 at 5:30pm for residents, community members, and stakeholders. As the hallmark activity within the digital equity planning process, the workshop provided a platform for participants to share essential feedback that directly informed the digital equity plan.

Cape Cod Commission and Town of Orleans staff welcomed participants by providing an overview of the project and background about broadband and digital equity work within a national, statewide, and local context.

Commission staff presented on data related to Orleans' digital equity landscape, further explored in the *State of Digital Equity* section of this plan.

Commission staff then facilitated three exercises to gain feedback from participants:

ASSET MAPPING ACTIVITY

The first exercise was an asset mapping activity, the purpose of which was for participants to identify individuals, groups/organizations, programs, and municipal efforts that advance digital equity and inclusion within the community. These assets have been outlined within the *Key Findings* section of this plan and are considered within the plan's recommendations.

BARRIERS & OPPORTUNITIES EXERCISE

In the next group exercise, participants dove further into digital equity barriers and opportunities specific to the Town of Orleans. Commission staff shared prompting questions and captured participant feedback on flipcharts. Data from this exercise provides the foundation for the *Key Findings* and *Implementation Recommendations* sections.

VISION & GOAL SETTING EXERCISE

The final exercise focused on developing a shared vision and goal statement for the plan, feedback from which

Additional Outreach Strategies

shapes the Vision and Goals outlined in the *Introduction* of this plan. Participants were first asked to share words or brief statements that reflect an ideal state for achieving the three pillars of digital equity. Residents were also asked to share responses to questions related to achieving a vision for digital equity in Orleans.



Additional Outreach Strategies

Public comment form: A comment form was available on the Commission’s project webpage during the project planning period. Public feedback was incorporated into plan development.

Outreach Toolkit: A publicity toolkit, including newsletter copy, graphics, social media language, and posters, was available on the online project page and was shared with key stakeholders. Bookmarks, posters, and postcards promoting the community workshop were left at key locations across town. Examples of outreach materials are available in the Appendix.

Media: A press release was jointly issued by the Cape Cod Commission and the Town of Orleans. The project was featured in local media, with a segment appearing on Lower Cape TV and with additional publicity from the Cape Cod Chronicle and the Cape Cod Times. The goal of media publicity was to increase community awareness about the planning process and opportunities for participation.

The background is a gradient of blue, transitioning from a lighter cyan at the top to a darker blue at the bottom. Overlaid on this are several horizontal bars of varying lengths and opacities, some appearing as glowing streaks. A network diagram is also present, consisting of several nodes (small circles) connected by thin lines, forming a complex web of connections. The text 'KEY FINDINGS' is centered in the lower half of the image.

KEY FINDINGS

KEY FINDINGS

Overview

Throughout the digital equity planning process, residents, community members, and stakeholders shared their unique perspectives related to digital equity. Individuals reported barriers and challenges to achieving digital equity, as well as assets and strengths that will support the advancement of digital equity currently and into the future. The following section synthesizes feedback shared with Cape Cod Commission staff.

Barriers and Challenges

The barriers and challenges outlined below are categorized within four areas that are essential to achieving digital equity: connectivity, devices, skills, and community. Many challenges have a ripple effect and, in reality, impact multiple areas of digital equity. For example, connectivity challenges in the home will also impact an individual's ability to build the skills needed to achieve personal or professional goals.

CONNECTIVITY

Inadequate internet and cellular service in Orleans

Community members reported poor internet service and cellular coverage in their homes and across key locations in town, negatively impacting the overall connectivity of the town.

With regards to internet service, residents reported that speed strength is unreliable, with download speed seeming to be more of an issue than upload speeds. Residents reported service outages and interruptions. Community leaders reported slow internet speeds at key locations, including housing authority properties such as Tonset Woods.

In terms of cellular coverage, inadequate service includes "dark zones" where coverage does not seem to be present, posing safety hazards and negatively impacting economic, recreational, and social activities (for example, service issues were identified at beaches, popular community spaces, restaurants and venues, and other places of gathering).

Residents reported that poor connectivity impacts daily life, including ability to work from home, conduct business, participate in community activities, socialize, and seek needed services. Residents reported that these problems are significantly exacerbated during the busy summer

Barriers and Challenges

months in times of great seasonal population growth. Geography, infrastructural concerns, and a lack of competition were also identified by residents as contributing factors towards unsatisfactory service.

Lack of Internet Service Provider Competition Impacts Affordability, Quality, and User Experience

Residents reported that a lack of competition contributes to unaffordable and unsatisfactory internet service. Residents frequently reported that they spend more than they would like on their current internet plan, but lack affordable options or leverage required to negotiate more reasonable prices. Residents also reported that the lack of competition seems to yield poor internet service quality, especially when taken into comparison against their personal experiences in towns outside of Barnstable County. Generally, the lack of competition seems to exacerbate issues highlighted above in *Inadequate Internet and Cellular Service in Orleans*.

Overcomplicated internet service packages and ineffective communication with providers

Residents frequently reported that internet service provider options and bundles are “overcomplicated,” and attributed personal connectivity issues and overall discomfort with the internet and computing devices to barriers with understanding internet packages and services. Residents reported that they are currently left to “figure it out

[themselves]” and that trustworthy, unbiased support for selecting and maintaining an appropriate internet service package is lacking.

Barriers to understanding packages and services are exacerbated by communication challenges when communicating with internet service provider (ISP) customer service staff, particularly over the phone. Residents reported language and vocabulary barriers when talking about the internet and computing devices to ISP customer service staff, and often felt that terminology is used that they do not fully understand. Residents reported that ineffective communication with ISPs can lead to unwelcome outcomes, including unresolved connectivity issues, purchasing a bundle that exceeds or does not meet actual needs, overpaying for internet service, and losing trust with the internet service provider. Generally, residents feel that they do not have consistent support when a connectivity issue occurs and often do not know where to turn.

Shortage of Financial Assistance Programs or Support for Accessing Affordable Internet Service

Residents reported that current programs to subsidize internet subscriptions are not sufficient, particularly with the recent conclusion of the Affordable Connectivity Program (ACP). While the Affordable Connectivity Program provided some level of relief, access to the program was time-intensive and not straightforward. Residents who would have benefitted from the ACP reported that they

Barriers and Challenges

were unaware of it as an option. Residents who previously benefited from the ACP reported uncertainty about their ability to afford internet services or concern around the personal financial impact as the program has closed. Some residents reported benefiting from the Comcast Internet Essentials Program, but this program was not universally adopted by residents who would presumably be eligible. Furthermore, significant variations in internet service costs were reported for residents with similar financial positions and service needs. With a median age exceeding both state and national averages, community leaders expressed concern that many aging residents may lack income required to reasonably afford internet services.

Moreover, existing programs do not address core issues with expensive internet service provision or socioeconomic factors that contribute to financial instability. Existing solutions that community members are aware of seem to provide a band-aid rather than solving the core systemic inequities that impact connectivity.

DEVICES

Device ownership concerns

Many community members generally seemed satisfied with their personal ownership of computing and cellular devices, with a few specific exceptions that are worth noting given the challenges they may pose:

- As reported by municipal staff and residents themselves, some community members rely on track phones, which provide users with security in cases where they cannot afford or would prefer not to use a smartphone. However, many practices that are becoming increasingly commonplace (such as the use of QR codes) are not accessible using a track phone, which may cause frustration or other negative impacts. Community leaders expressed that a smartphone is often necessary to fully participate in society, but not all have access.
- School staff expressed specific concerns around device ownership for families, citing that in some instances a school-issued ChromeBook serves as the primary household device, which may not be needs-appropriate for all family members or could create strains when multiple family members need access.
- Individuals who lack a laptop, computer, or tablet may rely on a cellular device as their primary computing device, which can pose a challenge when trying to complete complex activities – such as completing digital paperwork while on a phone call or in a virtual meeting.
- Aging residents shared that there is a lack of awareness around which devices are most appropriate to own and use on an individual basis. Barriers to understanding devices can have negative

Barriers and Challenges

impacts, including feelings of frustration, giving up on device ownership entirely, or selecting a device that is not appropriate, which can lead to digital waste, economic strain, security concerns, and other negative consequences.

Generally, community members shared that devices are needed for economic participation, but there are barriers to purchasing the most appropriate device at an affordable price and there is a general lack of awareness around which devices are most appropriate to own and use on an individual level.

Device usability challenges

Community members frequently expressed concern about keeping up with changes to computing devices and technology. Community members reported that devices and operating systems seem to be updated constantly and it is difficult to stay on top of these changes. Aging individuals shared that while keeping up with new devices may be second nature to a younger generation, in many cases they may benefit from greater guidance or education. At this point, it seems that there are limited accessible and affordable community resources to do so.

Device affordability and waste

Community members expressed concerns around the relationship between device affordability and longevity. Community members reported that although devices are often expensive, they do not seem to have a long lifespan,

especially as technology continues to advance. As devices age, they become slow and outdated, which has a ripple effect in terms of digital skills and access to essential needs. Community members shared concern on keeping up with the latest technology from both an ownership/affordability and skills-based perspective. Other community members were equally concerned about what happens to their digital waste and how this may pose environmental hazards or contribute to climate change.

DIGITAL SKILLS AND LITERACY

Safety, security, and trust-based concerns

Community members frequently reported safety, security, and trust-based concerns related to internet use. While some community members attribute these concerns to a lack of personal skills, many expressed worries over cybersecurity and falling victim to internet and phone scams. Many community members have already experienced a threat to internet safety or privacy or knew someone who had. In particular, community members reported fears related to using social media, identifying phony websites, and discerning real communications from scam communications.

Community members report high personal risks in this area, including losing data and unintentionally revealing critical personal information such as social security and bank details. Community members expressed fears that

Barriers and Challenges

scams and digital threats will increase in efficacy given the influence of Artificial Intelligence (AI). Security threats impact willingness to access essential services, such as banking and healthcare. Notably, a handful of community members reported that they do not engage at all in the digital world due to these threats.

Safety concerns also exacerbate existing skills-based insecurities and self-doubts when using the internet and accompanying technology. Many community members reported a general “fear of the unknown” when engaging with technology and a consequential lack of interest in learning new digital skills, which is in part due to the potential risks of engagement. Generally, safety, security, and trust-based concerns intensify existing knowledge gaps, particularly as the digital world continues to advance and as sign-ups and provision of essential services are increasingly offered solely through digital means.

Broad digital skills barriers experienced by covered populations, including a lack of programming to address community need

Many community members reported insufficient skills in using the internet and devices. Skills challenges were acutely reported by community members representing and practitioners supporting covered and underrepresented populations, including aging individuals, low-income individuals, individuals with disabilities, and individuals who are housing insecure.

In particular, community members reported trouble using devices they already own, such as iPhones, tablets and iPads, to complete both essential services and to satisfy social and recreational needs. Technical barriers included everything from basic troubleshooting or internet and device operations to completing online forms such as those through the Registry of Motor Vehicles (RMV) or MyChart. This also included personal needs such as taking a photo, using an application, or sending a message to family and friends.

Community members reported a need for increased workshops or courses to collectively address skills challenges and build community, particularly including those that teach internet and computer basics and that are easily affordable and accessible. While there is a strong local 1-to-1 skills program offered at the Council on Aging for aging adults, community needs seem to outweigh current program availability and capacity. Educational needs are not limited to aging adults in town, but also extend to other covered populations, parents of school-aged children, and residents with an age just short of the “aging individuals” threshold.

Community members also reported desire for a go-to person to call for technical assistance, a need for individualized programs that meet them “where they are at” from both a skills and physical perspective (such as those that provide transportation or that are located on-site), and for programs that provide support using their

Barriers and Challenges

own devices. Community leaders expressed concern about covered populations being left behind from a skills perspective as the digital world advances.

Digital inequities foster feelings of Isolation and frustration

Orleans residents frequently reported feelings of isolation or a lack of inclusion within the digital world. For example, at a community pop-up event, one resident shared, “I am not part of the digital age,” while another shared “there is an overabundance of information [related to the internet].” These quotes are representative of broader sentiment which exists particularly amongst the community’s aging adult population. Feelings of isolation or frustration are coupled with a perception that there are inadequate support services from internet service providers and tech companies when problems arise. Residents will benefit from community-driven solutions that meet them where they are at both in the physical and skills-based sense.

COMMUNITY***Lack of awareness of existing resources***

Many community members are aware of resources that exist through digital equity assets, such as those available at Snow Public Library and the Orleans Senior Center. However, community members, community leaders, and practitioners were not equally informed about existing resources, programs, and services. For example,

community members occasionally expressed desire for a program that already existed either within the Town of Orleans or a neighboring community.

Digital inequities within public services and communications

Generally, stakeholders reported that digital equity values are not universally incorporated across townwide activities, communications, strategies, and plans. For example, residents reported digital equity-related barriers to accessing town services and communications, such as town services that rely heavily on internet-based communications (like QR codes) without providing alternative methods to reach all residents with diverse media preferences. Residents report that it can be difficult to navigate town services, and other public services, as tools to access these services are increasingly digitized. While it is important for municipal, nonprofit, and other public services to leverage the digital world to maximize efficiencies and reach a broad audience, it is also helpful to employ accompanying strategies to ensure that no one is left behind.

Implementation, network building, and funding challenges

Community leaders report that challenges to effective implementation include barriers to accessing funding opportunities and a lack of cohesive strategy or network (be it municipal, regional, or sector-based) in this area. In

Assets and Strengths

terms of funding opportunities, grant applications can be onerous and often involve a short turnaround time. Community leaders reported that a lack of staff capacity and technical knowledge may impact their ability to access funding. In terms of a cohesive strategy or network, community leaders reported that increased collaboration amongst practitioners is needed to best address the digital divide, but there is currently a lack of capacity to operationalize effective collaboration.

Assets and Strengths

Building on strengths and assets will be key to advancing digital inclusion efforts in the Town of Orleans into the future. In some cases, digital equity solutions may be derived by expanding, enhancing, or referring to already existing programs. Comparing challenges and barriers against current assets and solutions is key to identifying existing gaps and opportunities, and can ultimately yield long-term strategies for bridging the digital divide.

DIGITAL EQUITY ASSETS

Stakeholders and community members conducted an asset mapping exercise at the project kickoff and at the community workshop, which were consolidated by Cape Cod Commission staff. Many identified assets will play a critical role in advancing recommendations described in the Implementation chapter.

Complementing practice established by the Massachusetts Broadband Institute, assets are divided into three primary categories: Individuals, Groups/Organizations, and Programs, with an additional category included for Other.

As identified by community members, entities that will be key to helping address the Town of Orleans' digital divide include the following:

Individuals

- Reference librarians
- Council on Aging staff and tech support volunteers/educators
- Community educators
- Local students
- Members of the Orleans ad-hoc broadband committee

Programs and Initiatives

- Free public internet access at key community locations
- Sip & Swipe Café and other programs offered at the Senior Center/Council on Aging
- Comcast Internet Essentials program
- Programming and resources at Snow Public Library

Organizations

- Nauset Public Schools (including Director of Technology)

Assets and Strengths

- Human and social services agencies including: Community Development Partnership, Homeless Prevention Council, Lower Cape Outreach Council, Cape Cod Children's Place
- Rock Harbor Village
- Orleans Town Media
- Town of Orleans Human Services Committee
- Nauset Newcomers
- Local housing board and associations
- Snow Public Library
- Orleans Senior Center/Council on Aging
- Local schools, including Nauset Public Schools, Cape Cod Regional Technical High School, and Cape Cod Community College
- Mobile Mac Doctors
- PC Mobile Doctors

Other

- Local business presence for larger companies like Staples, Comcast, and Verizon
- Cape Cod Technology Council

DIGITAL EQUITY STRENGTHS

Digital equity strengths that already exist across the Town of Orleans were identified throughout the community engagement process. Oftentimes, these strengths are

strategies and activities implemented by one or multiple digital equity assets, identified above.

Experience gained from prior municipal efforts and commitment from community leaders

The Town of Orleans will benefit from the solid backbone of knowledge, expertise, and commitment that already exists across the community. In particular, Orleans boasts advocates who are passionate and knowledgeable about digital equity issues coupled with municipal and community-based staff with solid content expertise.

Orleans will also benefit from its geography, as it is home or within close proximity to a number of strong nonprofit organizations supporting covered populations. This includes Homeless Prevention Council, Community Development Partnership, and Lower Cape Outreach Council – all of whom were engaged in this planning process and expressed an understanding of the digital inequities experienced by those they serve.

As a result of the above, there are already many groups and individuals across the Town of Orleans providing support to residents in need through programs, services, resources, and referrals. Municipal and community-based staff and volunteers recognize digital inequity as a key issue that impacts service at all levels. Staff and volunteers often triage internet and technology challenges experienced by constituents to some extent, in addition to providing formal programs (described further below). Leveraging local

Assets and Strengths

expertise and commitment will be key to advancing the recommendations offered within the Implementation section of this digital equity plan.

Established digital equity services and programs

The Town of Orleans has a solid foundation of digital equity services, programs, expertise, and advocates that can be leveraged to advance solutions into the future. This includes the following highlights:

Orleans Council on Aging/Senior Center offers the Sip & Swipe Café, various workshops related to navigating technology and the internet, and volunteers who can provide 1-to-1 technology support. Staff are strong advocates for digital equity.

Snow Public Library offers free public Wi-Fi access, public computers, hotspots for lending, public printers, technical device support, support for downloading eMaterials, and informal support for folks who are using the internet, such as filling out online applications and forms.

Technology is well-integrated into student academic experience at both Nauset Public Schools and Cape Cod Regional Technical High School. Both school systems have IT staff that are available to help students and families with school-related technology needs. Students benefit from technology lending programs through the schools, which are adapted to be age appropriate. The schools offer hotspots, but comment that these are not very popular. Schools have benefited from the federal programs E-Rate:

Universal Service Program for Schools and Libraries and the Emergency Connectivity Fund. The school system is committed to continuing digital equity efforts and is undergoing a more comprehensive planning process around this topic overall to drive future investments.

A handful of private businesses in and near the Town of Orleans offer support with technology and the internet.

Finally, the Town of Orleans has community media outlets that could be further leveraged to advance digital equity initiatives, such as Lower Cape TV.

Opportunities to incorporate digital equity into town planning and initiatives

Broadly, community leaders and residents shared a belief that this is the “right time” to focus on incorporating digital equity across town and community activities. There are many initiatives across town that will benefit from consideration of digital equity within planning, such as municipal housing and other community projects, including considerations around the library. Digital inclusion will support all of this community development and will support related socioeconomic gains by offering a competitive advantage and promoting workforce retention. As the driving force behind the municipal digital equity plan, Town Planning staff are well-positioned to identify opportunities where digital equity solutions augment broader community efforts.

Existing partnerships and networks

Throughout the planning process, community members and stakeholders identified already-existing partnerships that could be advanced to further digital inclusion. While this includes partnership examples within the Town of Orleans, this may also include regional partnerships and peer-learning opportunities.

For example, the library is a member of the CLAMS Library Network, a non-profit cooperative association of libraries from across Cape Cod and the Islands. The mission and activities of this network are intrinsically linked with digital equity values and goals. The CLAMS Library Network and associated libraries were identified as a regional digital equity asset within the Massachusetts Statewide Digital

Equity Plan. Many libraries within the network are offering innovative digital equity programs and resources; continued participation will benefit Snow Public Library in advancing their own digital equity strategy.

Similarly, the Senior Center/Council on Aging is a member of the COAST network, which is comprised of COA leaders from across the region. As another entity committed to advancing digital inclusion for aging adults, participation in COAST is beneficial to digital equity efforts within the Town of Orleans.

The background is a vibrant blue gradient. It features a network of thin white lines connecting small white dots, creating a web-like structure. Overlaid on this are several thick, horizontal, glowing blue bars of varying lengths and opacities, some appearing as if they are moving or blurred. The overall effect is one of dynamic digital connectivity.

IMPLEMENTATION

IMPLEMENTATION

Overview

This section provides recommendations and related actions to address the challenges and opportunities outlined in *Key Findings* and are similarly categorized by four components essential to achieving digital equity: connectivity, devices, skills, and community. Recommendations seek to advance the vision and goals for this digital equity plan as developed by community members, further described in the *Introduction*. This section also provides considerations on how the Town of Orleans can measure its progress in advancing digital equity for community members through the execution of this plan.

The majority of these recommendations require expanded capacity for key entities. Additionally, in many cases, digital equity cannot be furthered without increased funding. The *Funding Opportunities* section below describes funding mechanisms and strategies identified by Cape Cod Commission staff.

Generally, recommendations provided to the Town of Orleans will ring true for municipalities across Barnstable County. For example, many recommendations developed for the Town of Orleans are also found in other Barnstable County Municipal Digital Equity Plans. Municipal leadership across the region should consider opportunities for peer-

learning, cost-sharing, and streamlined strategies. Cape Cod Commission staff are available to support the consideration of regionalized solutions.

Recommendations

CONNECTIVITY

Promote public Wi-Fi availability

Community members frequently identified a need for increased public Wi-Fi at key town locations. Expanding public Wi-Fi availability will benefit residents, tourists, and business owners, supporting economic growth and recreational activity. Community members also commented that spotty cellular coverage across town led to safety concerns in the event of an emergency. Providing public Wi-Fi in key locations can mitigate risks as it offers a means of communication.

Generally, the Town of Orleans should work with key community locations, which may include partnership with public, private, and nonprofit entities, to ensure that public Wi-Fi availability and strength accommodate needs of the general public and is of a high and consistent quality. The town should consider opportunities to offer free public Wi-Fi along key economic corridors (such as along Main Street and within village centers) and at popular recreational spaces (such as the beaches, bike trail, and community parks).

Recommendations

The Town of Orleans may also consider mapping existing public Wi-Fi locations across town and offering this resource for community members. For example, the Chocolate Sparrow Café was referenced by community members as a prime location to access the internet. Likely, current locations offering public Wi-Fi will be private businesses (such as cafes, restaurants, and shops). Developing a simple, user-friendly resources for individuals to view existing Wi-Fi locations will likely yield benefits for those entities (such as an increase in business).

Incorporate connectivity within other municipal planning and construction efforts

Connectivity should be incorporated within the planning and operations of municipally operated or managed properties. In particular, as new municipal property development is underway, opportunities to extend broadband or internet access within these spaces will be critical to ensuring digital equity into the future. This may include residential buildings as well as community buildings (such as community centers and libraries) and applies to both new builds and those that would require retrofitting.

Opportunities to connect residents and community members to the digital world should be incorporated within early planning and budgeting phases of projects. Prioritizing connectivity is forward-thinking and will ultimately yield health, social, and economic benefits for the community into the future.

A similar consideration is to ensure that equitable service is available across all municipal locations. This will ensure operational consistency across town departments and services, and will also improve experiences by community members availing of municipal services and spaces (such as staff, residents, committee members, and volunteers).

Encourage internet service provider competition

A lack of competition was frequently cited as a contributing factor to unreliable, unaffordable, and spotty internet service. This is true both within the Town of Orleans and broadly across the region. The Town of Orleans should work in collaboration with municipalities and advocates across the region to encourage increased internet service provider competition. The town should explore opportunities to attract new providers to the area with an aim to increase affordability, speeds, and service quality. In particular, the town should investigate opportunities to encourage the extension of broadband to all residents and businesses in town by supporting the efforts of providers who are offering new fiber-to-home and fiber-to-business opportunities.

Organize and advocate for improved internet service provision

Internet service reliability and affordability were dominant concerns reported by residents throughout the community engagement process, backed by both quantitative and qualitative data. Again, this is true both within the Town of

Recommendations

Orleans and broadly across the region. The Town of Orleans should explore how to provide a platform for residents to share internet service challenges and consider a structure to track internet service provider performance quality, infrastructure, and accountability. This could take the form of a town committee, task force, or the development of a local coalition that involves public, private, and nonprofit representation. This may also take the form of continued participation in regional and intermunicipal efforts; for example, coordination conversations hosted by the Cape Cod Technology Council.

Municipally led coordination and continued data collection in this area will also provide a stronger foundation for grant applications and open the door to new funding opportunities. Increased public awareness, such as community education campaigns and platforms for discussion, will help to organize around connectivity solutions.

DEVICES

Coordinate public computing device offerings through partnerships

Introducing new public device lending programs would support the 3% of Orleans residents without a device or those who lack a needs-appropriate device. Libraries across Barnstable County vary in device lending programs and policies. While Snow Public Library offers strong on-site

computing device offerings, they currently do not offer ChromeBooks or other similar devices for lending.

Weighing potential losses or risks against the benefits of operationalizing such a program should be considered. Peer-learning with other libraries across the region could be conducted to learn if other communities have considered this type of program.

Nauset Public Schools and Cape Cod Regional Technical High School facilitate robust computing device lending for students. Within Nauset Public Schools, devices are needs-appropriate (for example, tablets for younger students). IT staff are thoughtful about computing device recycling and repurposing options, maximizing devices the school system purchases to the best extent possible. A pilot lending program, such as one where refurbished and/or retired school devices are offered to residents through the local library, could be explored.

Implementing and operating this type of program may require additional library and school staff time. Additional staff capacity should be built into the introduction of a device lending program. In particular, the library should ensure that on-site staff have the technical ability to support residents with devices available for loan.

The Town of Orleans may also consider other options for device lending, which could include working with other towns to create a regional device lending program, either through the library system or another entity, as this

Recommendations

approach could reduce risks or losses experienced by individual towns.

Monitor and promote hotspot lending programs

While data demonstrates that residents across the Town of Orleans are relatively well-connected from a device access perspective, it is critical to continue making devices available to residents in need. This includes hotspots that may help to mitigate connectivity issues.

Currently, hotspots are available for lending to community members through the Snow Public Library and to students and their families through Nauset Public Schools. Library staff report that their available hotspots are very popular and are frequently checked out. While some are used by local residents, many are also used by individuals from other towns given lengthy waitlists or a lack of hotspots in their own community. Nauset Public Schools report that its hotspots are not particularly popular with families.

Additional hotspots could be purchased to accommodate community need, in addition to greater coordination across all entities offering hotspots to maximize existing resources. For example, a family in need of a hotspot with children attending Nauset Public Schools could be bridged to a loaner through the school, rather than the library.

Additionally, municipal staff and community-based organizations supporting covered populations should receive education about existing hotspot lending offerings

across town. This will help ensure constituents are appropriately directed when connectivity issues occur.

Library and school staff should continue to monitor the popularity of available hotspots. If hotspots are continually checked out from the library, even with the additional recent purchase, the library may consider opportunities to foster a regional collaboration around hotspot lending to maximize efficiencies.

Solutions to address device obsolescence and waste

Residents reported concern around device longevity and waste. Existing solutions to address digital waste could be employed by the Town of Orleans to increase device longevity for residents and reduce waste.

Fixit Clinic is an organization that partners with libraries and other community organizations to disassemble, troubleshoot, and repair broken goods (including technology and electronics) as part of the broader Right-to-Repair movement to reduce consumption and promote sustainability. The neighboring Town of Brewster's library has expertise with this program and could provide peer support to Snow Public Library in considering this solution.

The Town of Orleans could partner with Cape Cod Regional Technical High School to offer a service where IT students troubleshoot technology and electronic issues that residents are experiencing to determine if a device is actually obsolete. In instances where students are able to

repair a device, this would potentially increase device longevity for residents and reduce costs while also supporting school curriculum.

Generally, entities across the Town of Orleans will have policies and solutions in place for repairing or replacing their own devices (such as Nauset Public Schools). Entities across the Town of Orleans may meet to learn about each other's protocols in order to share best practices and consider solutions or tips that could be extended to residents more broadly.

DIGITAL SKILLS AND LITERACY

Promote existing and increase one-to-one, in-person support services

Community members frequently reported a need for one-to-one technology support to improve personal device use, troubleshoot issues, and achieve individual goals. At present, the Senior Center offers this type of support through the Sip & Swipe Café, which is a grant-funded program intended to provide education in a comfortable small group setting over coffee to help bridge the technology divide for older adults. Meanwhile, at Snow Public Library, librarians support patrons with internet and technology needs on a drop-in basis. It is recommended that both entities continue to offer these services, monitoring community need and adjusting offerings as necessary.

In the case of the library, formalizing one-to-one services would be beneficial. Additionally, the library may consider augmenting this service with complementary digital skills programming, such as workshops or educational speakers. These programs should be developed with consideration to covered population needs within the Town of Orleans as well as broader community or municipal goals.

One-to-one offerings, along with other digital equity courses and programs, should be well-publicized online, in paper formats, and through the town's government access channels. Throughout all outreach, it would be beneficial to connect directly with local organizations supporting covered populations to let them know of this service.

Community members shared innovative ideas that could be employed by municipal or community organizations with one-to-one service provision. A few examples are below:

- Intergenerational programming that would bridge students from the local high schools (Cape Cod Regional Technical High School and Nauset Public Schools) with aging adults in need of technical support. Based on prior stakeholder experience, such a model would require students to be well-trained in order to effectively communicate with and support individuals enrolled in the program. Such a model could include a period of training on communicating with aging adults from Senior Center staff for students prior to program

Recommendations

- implementation. Such a program should be first established as a pilot with satisfaction surveys utilized as a tool to measure efficacy.
- Technology audits to help individuals holistically understand the technologies they have and the skills they need to achieve personal goals. Technology audits should be provided by a tech savvy professional – for example, Senior Center technology support volunteers or in partnership with local experts such as internet service provider staff.
 - Small group classes that are welcoming and geared toward providing individualized attention to device use and skills training. Classes could include accomplishing a very specific task, such as taking and sending a photo to a loved one. Classes would complement efforts at the Senior Center Sip & Swipe Cafe and Elder Services of Cape Cod and Islands Senior Planet courses by focusing on specific content areas for greater learning (for example, how to use MyChart).
 - Drop-in hours for one-to-one support and/or a regularly operating digital support hotline.
 - Partnerships with local major retailers (such as the Comcast/Xfinity store and Staples) to provide expert technology support through tutorials or one-to-one services.

- Expansion of the Sip & Swipe Cafe model to take the program “on the road” to different venues across the community.
- Increased drop-in hours for one-to-one support and/or a regularly operating digital support hotline.

Implementation of one-to-one programming should not fall to one entity alone – there are a number of municipal, community-based, private, and health/human services agencies that should be part of this ecosystem. Coordination of programming can be fostered by developing a stronger digital equity network, described further below.

Develop a digital equity network to strengthen public service and awareness

As described in *Digital Equity Strengths*, there are many programs already offered within and nearby the Town of Orleans that address digital skills and literacy. However, throughout the community engagement process, residents and practitioners alike lacked awareness of all existing services and resources. There is both a regional and local need for greater collaboration and coordination among entities that are bridging the digital divide.

Increasing public awareness and interagency communication is necessary to ensure that community members are aware of opportunities designed to support their digital needs. Trusted service providers across Orleans and the region should familiarize themselves with

Recommendations

digital equity offerings so they can properly direct their constituents to already-existing programs. An inventory of digital equity service providers should be retained, updated, and distributed across relevant entities. The development of a digital equity network within the Town of Orleans and across the region would provide a consistent platform to achieve greater peer-learning, public awareness, and interagency communication.

There is momentum for this work regionally, so the Town of Orleans should continue to stay keyed into these developments to ensure that local work is complementary and efficient rather than duplicative.

With that in mind, specific to the Town of Orleans, a digital equity network or working group could be operationalized by facilitating regular meetings between key entities that focus specifically on components of digital equity. Scheduled communication would be an effective way to ensure that services across town are complementary, needs-responsive, and not duplicative. By gaining a greater understanding of existing resources and services, participating entities can further train staff and volunteers to make cross-organizational referrals to constituents. This could also serve as a platform to build a digital skills service continuum and to further identify and address existing gaps in resources and services.

An effective digital equity network or working group for the Town of Orleans may include key digital equity assets such as the Orleans Council on Aging/Senior Center, Snow Public Library, Nauset Public Schools, Cape Cod Regional

Technical High School, Orleans Town Planning, Orleans Town Media, and the Orleans Housing Authority. A stronger digital equity network may also involve representation from or streamlined communication with broader organizations such as Lower Cape TV, Orleans Chamber of Commerce, and community-based organizations such as Homeless Prevention Council, Community Development Partnership, and Lower Cape Outreach Council. Regular facilitation by a lead entity would be required to ensure sustainability and success of this group.

Organizational capacity may be one barrier to achieving this goal, particularly where burden may lie heaviest on the facilitating entity. A solution to alleviate this would be developing a streamlined system for resource and information sharing among participating entities, such as a webpage, shared drive, listserv, or other database/communications platform.

Provide workshops and facilitate community-wide actions to address internet safety, privacy, and security concerns

Concerns around safety, privacy, and security arose as a major theme throughout the community engagement process. One-to-one tech offerings and other digital programs throughout town should always include security and safety as a core value of service provision. For example, teaching a resident how to use a financial banking

Recommendations

app should also include components of safe online banking and scam identification.

Regular workshops covering online safety should be continued, expanded, or introduced in a coordinated fashion through entities such as the library, Senior Center, schools, and local community organizations. Workshops may target specific digital threats – such as how to identify a fraudulent email – and should also provide broad opportunity for residents to receive support with individual concerns. As these internet safety concerns may be of a personal or sensitive nature, workshops should foster a comfortable, safe space and should be accompanied by opportunities for one-on-one conversations.

Involving public safety officers in addition to those with technical expertise will be helpful in providing this service. For example, the Orleans Police Department should continue its efforts to flag scams for residents on social media and other platforms. The town should consider opportunities to further coordinate between municipal departments so that vulnerable community members are notified when a local scam is identified.

Generally, residents would benefit from increased communal education around digital safety and security that is practical, grounded in access to essential services and security tools (such as helping individuals install antivirus software), and unintimidating for new learners. Often, residents identified safety concerns as a primary reason for not using the internet or technology. Pursuing the above

recommendations will be key to ensuring that community members trust themselves to use the internet and technology to achieve their everyday needs.

Intentionally integrate digital equity and social service goals

Many essential services require online engagement and entities across the Town of Orleans reported that they often lack the capacity to fully support community members who need assistance with these activities. Municipal entities and community organizations should provide services that advance both social service and digital equity goals, acknowledging that the two often go hand-in-hand. For example, the library could host sessions on completing online immigration forms in partnership with immigration attorneys or legal service providers, partnering with local congregations, schools, and human services organizations to reach this target population. As another example, the Senior Center could host workshops using MyChart in partnership with a healthcare agency such as Cape Cod Healthcare or local community health centers.

Entities across the Town of Orleans with access to digital resources may intentionally build partnerships with entities supporting covered populations to create needs-responsive programming. For example, Cape Cod Regional Technical High School shared an interest in supporting the community by offering or hosting a night-time or after-school computer skills program, which could be a component of a job-skills or educational offering for a local

human services agency. This example is particularly advantageous because the school offers a trusted, comfortable space for learning with strong technical infrastructure. Considerations when developing partnerships may also include developing outreach and feedback mechanisms that are responsive to the unique needs of the target audience.

Explore digital navigation models and offerings

To further skills-based recommendations, the Town of Orleans may need to build greater capacity to support digital equity initiatives. This could include the identification of a volunteer, contractor, or staff member to support the operationalization of these recommendations, to provide direct technical support to individuals within the community, and to build a stronger digital equity network will increase the likelihood of sustained digital inclusion into the future.

Positions such as this are frequently referred to as *digital navigators*. Digital navigators can play a role with connecting residents to appropriate and affordable internet options (such as the Comcast Internet Essentials or NOW Internet plans), support access to essential services, and support one-to-one skills-based learning. The Town of Orleans should explore opportunities to introduce digital navigators into service provision, which could include augmenting current staff with appropriate training. The Town of Orleans can play a leadership role in initiating a regional digital navigation program, which would yield increased benefits and efficiencies.

COMMUNITY

Foster communal language and understanding on topics related to the internet and devices to increase resident literacy, ability, safety, and trust

Feelings of distrust, discomfort, and fear when using the internet and devices were frequently reported by residents throughout the community engagement process. Often, this was attributed to an insufficient understanding of language and terminology associated with the internet and devices.

The Town of Orleans should intentionally strive to build a shared language around the digital world. Helping community members better understand the language around the internet and technology will generally empower those who feel isolated and frustrated by what appears to be complex or specialized terminology. This can be achieved by offering welcoming language-specific workshops, courses, or tutorials; by ensuring that town staff and volunteers use simple language and provide explanations when discussing technology and the internet; and through a community education campaign led by a municipal entity such as the library or Senior Center.

Ultimately, this effort will help residents better understand existing services and resources, identify where they must build their own skills and literacy, utilize the internet safely, and support communication with internet service and technology providers.

Recommendations

Center digital equity in municipal and community-based communications

Community outreach and information sharing for digital equity programs should be diversely offered and should meet the target audience “where they are at” in the technical sense.

For example, while municipal entities will want to take advantage of digital tools (such as the town website, e-newsletters, social media) across public communications, the Town could provide literature, workshops, or other tutorials on using these digital tools to ensure residents are well-equipped to access important town updates. This could also take the form of a video, which could be linked within newsletters or broadcast on Lower Cape TV. Generally, Lower Cape TV is a strong asset in this area; municipal and community-based entities should partner with Lower Cape TV to consider creative or innovative opportunities to bring digital equity resources and information to community members in need.

Municipal entities should be aware of potential barriers that covered populations may have accessing information and ensure these are addressed as outreach strategies are developed. Outreach strategies that incorporate diverse platforms for communication and feedback will help bridge such barriers and ensure broad engagement. For example, QR codes may create a barrier for some populations in accessing essential information and should be accompanied by instructions or alternative communication.

Understanding how to better operationalize digital equity in municipal and community-based communications may require training from outside sources. Step-by-step training sessions could be offered to staff for municipal and community employees responsible for outreach and communications so that they are fully trained in this area.

Center digital equity in municipal and community-based services

Digital equity values must be baked into all levels of municipal planning, programming, and policy. Municipal services will better meet diverse community member needs if staff have opportunities to increase their understanding of challenges that community members may face with the internet and technology and adopt best practices to address these challenges. This digital equity plan can serve as a catalyst and educational platform for the Town of Orleans and partnering agencies to strengthen existing services, to train staff and volunteers, and to develop best practices and universal policies for the future.

Municipal and community services and programs should be provided in a manner that is accommodating for diverse digital needs whenever appropriate. For example, offering sign-ups for programs online, over the phone, and in-person or mitigating the use of complex online forms without an alternative for in-person support. This acknowledges connectivity or skills-based barriers faced by members of the community.

Recommendations

When digital equity issues arise, community members often lean on municipal and community-based staff and volunteers to resolve emergencies or for informal tech support. It is important to remember that not all staff and volunteers are equally equipped to provide this level of service. Municipal and community-based entities should prioritize technical education for staff and volunteers, so they are empowered to best support residents.

Develop methods and structure to measure progress

As further described below in *Measuring Success*, the Town of Orleans should consider what constitutes success within the implementation of specific recommendations above, as well as the future execution of this plan. Entities assigned with implementation activities should identify immediate and long-term goals to guide the development of any given offering. Progress and results within individual activities could be monitored through the development of a digital equity network, as described above. The Town of Orleans may look to previous successful community efforts as a foundation for building out appropriate methods and structures to measure progress in advancing digital equity.

Support regional collaboration

There is tremendous opportunity for increased regional collaboration to further digital equity services and resources across Cape Cod. However, making space for new, effective partnerships is often “easier said than done.”

While this recommendation is not specific to the Town of Orleans alone, Orleans can take a leadership role in initiating collaborations, such as those described below:

- Regional or statewide opportunities to develop a digital equity coalition to support education on best practices, peer-to-peer information sharing, and the creation of more streamlined programming.
- A digital navigator program to address challenges shared by community members within the Town of Orleans and across the region. While digital navigation was not a significant focus of this planning process, this need has also arisen in other local municipal digital equity plans. Opportunities to introduce digital navigation into communities should be considered by municipal, regional, state, and non-governmental entities.
- Increasing public understanding and resource sharing on existing regional or subregional services that advance digital equity, such as those available through community health centers, as this will be key to building new services into the future.
- Leveraging existing partnerships such as those through the COAST and CLAMS networks (described in *Key Findings*) and the public schools. Intentionally baking digital equity conversations into existing platforms may provide a starting place for increased peer-learning and service building discussions.

Recommendations

Table 5: Table of Recommendations

Category	Recommendation	Action	Champion	Funding	Page
CONNECTIVITY	Promote public Wi-Fi availability	Expand public Wi-Fi at key town locations to support residents, tourists, and businesses, considering safety concerns during emergencies.	Town planning, town administration, community anchor institutions (library, COA, housing authority, schools), municipal departments (such as Natural Resources), partnerships with community organizations.	Municipal Digital Equity Implementation Program, MAPC Apartment Wi-Fi Program, and Residential Retrofit Program. Will become an ongoing expense.	45
CONNECTIVITY	Promote public Wi-Fi availability	Map public Wi-Fi availability and create a user-friendly resource for residents.	Town administration, town planning, community advocates and organizations.	Municipal Digital Equity Implementation Program	45
CONNECTIVITY	Incorporate connectivity within other municipal planning and construction efforts	Integrate broadband access into municipal property developments and retrofits.	Town planning, town administration, selectboard, town committees and departments supporting property development.	MAPC Apartment Wi-Fi Program and Residential Retrofit Program. Will become an ongoing expense.	46
CONNECTIVITY	Encourage internet service provider competition	Encourage new providers to improve affordability, speeds, and service quality.	Town administration, town planning, selectboard, and community advocates	N/A, but participation in BEAD challenge process will support this effort.	46

Recommendations

CONNECTIVITY	Organize and advocate for improved internet service provision	Establish a platform for residents to share internet service challenges and track provider performance.	Town administration, town planning, selectboard, and community advocates	N/A	45
DEVICES	Coordinate public computing device offerings through partnerships	Explore lending programs for devices, potentially using recycled devices and partnerships between local entities to maximize resources. Consider regional collaborations to reduce financial and capacity barriers.	Snow Public Library, Nauset Public Schools, Cape Cod Regional Technical High School, Orleans Senior Center, Orleans IT staff, town procurement staff, with support from regional and municipal partners.	Municipal Digital Equity Implementation Program, philanthropic, and private sources. Will become an ongoing expense.	47
DEVICES	Monitor and promote hotspot lending programs	Coordinate hotspot lending programs across town entities. Educate municipal and community-based staff about availability of hotspots across town.	Snow Public Library, Nauset Public Schools, Orleans Senior Center, with support from regional and municipal partners.	Municipal Digital Equity Implementation Program, philanthropic, and private sources. Will become an ongoing expense.	47
DEVICES	Solutions to address device obsolescence and waste	Partner with organizations to repair and recycle technology, increasing device longevity. Utilize programs like Fixit Clinic to repair broken devices and consider communal	Snow Public Library, Nauset Public Schools, with support from regional and municipal partners.	Municipal Digital Equity Implementation Program, philanthropic, and private sources. Consider partnership with Fixit Clinic.	48

Recommendations

		advocacy for financial assistance programs.			
DIGITAL SKILLS AND LITERACY	Promote existing and increase one-to-one, in-person support services	Continue and formalize one-to-one tech support services, including workshops and educational programming.	Orleans Senior Center, Snow Public Library, Rock Harbor Village, Orleans Housing Authority, with support from other local digital equity service providers.	Municipal Digital Equity Implementation Program, philanthropic, and private sources. Investigate AARP Community Challenge Grants, the Cape Cod Foundation, philanthropy through local banks, the Point32 Health Foundation, charitable giving programs through Internet Service Providers, and funding through the Executive Office of Elder Affairs. Will become an ongoing expense.	49
DIGITAL SKILLS AND LITERACY	Develop a digital equity network to strengthen public service and awareness	Create a digital equity network for greater collaboration and awareness among service providers and to reduce programmatic, financial, and capacity gaps.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning and tapping into regional efforts.	Explore funding opportunities as needed.	50
DIGITAL SKILLS AND LITERACY	Provide workshops to address internet	Develop workshops and other educational	Orleans Senior Center, Orleans Polic	Municipal Digital Equity Implementation Program,	51

Recommendations

	safety, privacy, and security concerns	opportunities covering the various elements of online safety.	Department, Snow Public Library, Orleans Housing Authority, Rock Harbor Village, and interested community-based organizations.	philanthropic, and private sources. Investigate AARP Community Challenge Grants, the Cape Cod Foundation, philanthropy through local banks, the Point32 Health Foundation, charitable giving programs through Internet Service Providers, and funding through the Executive Office of Elder Affairs. Will become an ongoing expense.	
DIGITAL SKILLS AND LITERACY	Intentionally integrate digital equity and social service goals	Partner with entities to provide digital skills training alongside essential social services.	Orleans Senior Center, local community-based organizations, and Snow Public Library.	Explore funding opportunities as needed.	52
DIGITAL SKILLS AND LITERACY	Explore digital navigation models and offerings	Introduce digital navigators to support digital equity initiatives and provide direct technical assistance. May align with regional initiatives or an effort that spans multiple municipalities.	Town planning and interested municipal and community-based entities (which could include Snow Public Library, Orleans Senior Center, Orleans Housing Authority, and Rock Harbor Village)	Explore future state and federal funding opportunities.	53

Recommendations

COMMUNITY	Foster communal language and understanding on digital topics	Build a shared language around the digital world to empower residents. This could include workshops or an educational campaign to improve residents’ understanding of digital terminology.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning.	N/A	53
COMMUNITY	Center digital equity in municipal and community-based communications	Diversify outreach and communications strategies to align with digital equity values, ensuring that all staff are trained on best practices.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning.	Explore funding opportunities as needed.	53
COMMUNITY	Center digital equity in municipal and community-based services	Integrate digital equity into all municipal planning, programming, and policy, with staff training on digital challenges.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning.	Explore funding opportunities as needed.	54
COMMUNITY	Develop methods and structure to measure progress	Identify goals and monitor progress through a coordinated network.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning.	Explore funding opportunities as needed.	55

Recommendations

COMMUNITY	Support regional collaboration	Initiate and participate in regional collaborations to further digital equity, such as coalitions and navigator programs.	Municipal and community-based entities supporting digital equity service provision, with leadership from town planning.	N/A	55
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Funding Opportunities

Funding Opportunities

Digital equity initiatives across the country are supported by a combination of government (federal, state, and municipal), philanthropic, and private sector funding streams. The Town of Orleans can leverage a number of currently existing funding opportunities to advance the above recommendations and should continue to learn about funding streams as they are developed.

MASSACHUSETTS DIGITAL EQUITY FUNDING CONTEXT

Through the federal Digital Equity Act (a component of the Infrastructure Investment and Jobs Act), \$2.75 billion in funding has been allocated towards the development and support of digital equity programs across the country. Massachusetts received a \$1 million planning grant to develop the statewide digital equity plan, a process that was implemented through the Massachusetts Broadband Institute (MBI). The statewide digital equity plan lays the foundation for the advancement of future digital equity funding streams, which will be operationalized through a combination of forthcoming federal and state funding and coordinated through the Massachusetts Broadband Institute.

For example, state-allocated American Rescue Plan Act (ARPA) funding has supported the advancement of a Municipal Digital Equity Implementation Grant Program. As a participant within MBI’s Municipal Digital Equity Planning Program, the Town of Orleans is eligible to apply for up to \$100,000 to operationalize and pilot strategies identified in this digital equity plan through the Municipal Digital Equity Implementation Program. As of June 8, 2024, the Town reserved \$56,603.77 for this implementation effort. The Cape Cod Commission is available to continue supporting the Town of Orleans within this funding process, which could include supporting the Town in prioritizing the below recommendations, developing an application for the Massachusetts Broadband Institute, connecting with strategic partners, and planning next steps for action in greater detail.

Additionally, the federal administration and the Department of Commerce’s National Telecommunications and Information Administration (NTIA) has allocated \$14.1 million to Massachusetts from the State Digital Equity Capacity Grant Program, an “Internet for All” initiative designed to give individuals and communities the tools, skills, and opportunities they need for meaningful access to high-speed internet service. This funding will support the implementation of the statewide digital equity plan, which will likely include grants to municipalities and community-based organizations looking to further work identified in municipal digital equity plans.

DIGITAL EQUITY PARTNERSHIPS PROGRAM

Following the passage of An Act Relative to Immediate COVID-19 Recovery Needs, also known as Massachusetts “ARPA 1.0” legislation, a \$50 million Broadband Innovation Fund was established to bridge the digital divide as a component of the Commonwealth’s COVID recovery and response efforts.⁷ MBI has funded 9 organizations through the Digital Equity Partnerships Program. The following programs are most relevant to potential projects within the Town of Orleans:

- Metropolitan Area Planning Council Apartment Wi-Fi Program: this program provides funding, project management, and procurement support to fund the construction of Wi-Fi networks which provide residents with equal or superior service than what is available from commercial ISPs, at no cost to residents. Funding covers all capital costs associated with network design, construction, and equipment, and the first year of ongoing operating expenses.⁸
- Massachusetts League of Community Health Centers: Federally Qualified Health Centers (FQHCs) Telehealth Consortium to help 35 health centers

⁷ Massachusetts Broadband Institute, Digital Equity Partnerships Program: <https://broadband.masstech.org/partnerships>

⁸ Metropolitan Area Planning Council, Apartment Wi-Fi: <https://www.mapc.org/our-work/expertise/digital-equity/apartment-wi-fi/>

across the state support telehealth services. The FQHCs Telehealth Consortium will provide the required staff capacity, training and coaching resources, oversight, and evaluation to screen patients at FQHCs for digital access needs.⁹ The Town of Orleans should learn about how local qualifying health centers are operationalizing this funding to support residents of Orleans and consider opportunities for partnership.

While the grant solicitation is now closed for the Digital Equity Partnerships Program, the Town of Orleans may consider opportunities to tap into the above programs. Connecting with the other funded agencies may provide useful peer learnings or resources.

BROADBAND EQUITY ACCESS DEPLOYMENT (BEAD) PROGRAM

Massachusetts was awarded \$147 million in BEAD funding to close remaining gaps in unserved and underserved locations. The draft proposal for awarding grants from these funds is heavily weighted toward existing services providers, whether private or public. The opportunity for municipalities not presently providing Internet services will

⁹ Healey-Driscoll Administration Awards \$20 Million to Boost Digital Equity: <https://broadband.masstech.org/news/healey-driscoll-administration-awards-20-million-boost-digital-equity>

Funding Opportunities

be in the challenge process, which provides an opportunity to dispute coverage availability, as characterized for funding eligibility. Residents, as well as municipal and community-based entities, throughout the Town of Orleans should consider participating in the challenge program.

CAPITAL PROJECTS FUND (CPF)

GAP Network Grant Program: is intended to connect remaining unserved and underserved locations in advance of grants from the Broadband Equity, Access, and Deployment program. Several ISPs submitted applications for GAP Networks Grant Program funding as a way to provide service to unserved and underserved locations in several towns across the Cape. It does not appear that Orleans was among the towns for round one of the applications, but if presented with an opportunity in the future, the town should consider lending its support to a future application.

Residential Retrofit Program: this program deploys state of the art broadband infrastructure to Affordable Housing properties across Massachusetts. MBI will make available grants covering 100% of eligible capital costs associated with the retrofit of eligible properties. This program and the previously described MAPC Apartment Wi-Fi Program share the same expression of interest form for entities looking to pursue either opportunity.

MUNICIPAL FIBER GRANT PROGRAM

The Municipal Fiber Grant program is a competitive grant program that supports the closing of critical gaps that exist in municipal networks. Focused on connecting municipality-owned facilities, it assists municipalities in achieving many critical goals associated with municipal fiber networks. Grants to a single town can be up to \$250,000, and up to \$500,000 for joint applications.

The Town of Orleans was awarded a \$250,000 grant to connect various municipal facilities to the existing municipal fiber network. Improvements to the town's network infrastructure will ensure that connectivity for town staff does not become a barrier on its own.

AMERICAN CONNECTION CORPS

MBI has partnered with the American Connection Corps program offered through Lead for America to establish a digital equity fellowship opportunity in Massachusetts, with funding available to place fellows at organizations across the Commonwealth. Digital equity fellows will support the development of digital inclusion programs by providing strategy, organization, and administration to hosting entities.

Commission staff recommend a regional, interagency, or intermunicipal approach for pursuit of this program. The program requires a lead agency to host the digital equity

fellows, and entities within the Town of Orleans may be well-positioned to support this effort given the completion of this digital equity plan.

RESIDENTIAL AFFORDABILITY PROGRAMS

As described in *Current State of Digital Equity*, the Affordability Connectivity Program was recently concluded. Entities throughout the Town of Orleans should identify organizations to support eligible residents in accessing both the Lifeline and Comcast Internet Essentials programs. Social workers, case managers, guidance counselors, and other professionals who work 1-on-1 with individuals and families to access subsidy programs are particularly well positioned to support enrollment in this type of program.

LEVERAGING ADDITIONAL FUNDING STREAMS

There are a number of public and philanthropic funding streams that are not specific to digital equity, but that could be accessed to further digital equity goals. For example, community-based organizations have accessed Community Development Block Grants (CDBG), a federal Housing and

Urban Development funding stream that is administered locally, to provide digital literacy classes.¹⁰

Workforce development funding streams are another good avenue to pursue, given the connection between digital adoption and participation in the workforce. Similarly, educational funding streams and programs, particularly including those that benefit covered populations, may be aligned with digital equity goals.

Entities across the Town of Orleans or that benefit the Orleans community may be eligible for diverse funding streams that ultimately further digital equity. By developing a stronger digital equity network across town assets, the Town can learn of and strategically approach funding and programmatic opportunities.

Measuring Success

Measuring the successful implementation of this digital equity plan will require tracking existing individual programs, services, or strategies as well as those that may be initiated as a result of this plan. Coordination and information-sharing between involved entities will be critical in order to ensure that these activities are successful on a community-wide level. The Town of Orleans may identify a lead staff member or entity to identify and

¹⁰Massachusetts Executive Office of Housing and Livable Communities, Community Development, Planning, and Funding:

<https://www.mass.gov/info-details/community-development-block-grant-cdbg#how-to-apply->

Continued Learning

coordinate methods for the Town to employ in measuring the progress of this plan's implementation.

Understanding the success of individual digital equity activities will vary dependent upon the nature of that initiative or offering. Generally, identification of goals and measurement tools should guide the development of each activity. Targets should be set related to immediate outcomes that are tied to community need (for example, intended number of community members to benefit from any given program). Long-term goals for each activity should also tie in with an overarching, town-wide vision as identified through this digital equity plan.

Successful implementation of this plan will be continuous and evolving work, as residents move into and out of the community, as community members move along the continuum of digital equity, and as the digital world continues to progress.

Continued Learning

Ongoing learning is key to addressing the digital divide, particularly as the digital world will continue to advance. Commission staff have identified particular areas that were not addressed through this planning process, listed below:

- Emergency communications: the Town of Orleans should continue to consider how emergency communications must evolve to better reach

residents who are impacted by the digital divide. Digital equity should not be assumed when planning emergency communications.

- Data collection: as detailed in *Current State of Digital Equity* section, the Town of Orleans should continue to track connectivity and demographic data as it relates to digital equity. The Town of Orleans should also consider opportunities for targeted data collection that advances that which is already known or to fill information gaps.
- Bringing all key entities and populations into the fold of digital equity planning and implementation: the Town of Orleans has a number of assets that could be further leveraged in digital equity planning and implementation, such as health and human services agencies. There are a number of assets and populations who were likely underrepresented within this planning process, but who have a critical part to play in digital inclusion.
- Staying tied into regional efforts: there is momentum across the region for continued digital equity learning, collaboration, and implementation. Leaders within the Town of Orleans should continue to stay connected to regional efforts to maximize peer learning opportunities and available resources.

Advancing Digital Equity in Orleans

Throughout the planning process, community members, leaders, and organizations across the Town of Orleans demonstrated leadership, expertise, and commitment to advancing digital equity across municipal and community services. Advancing digital equity in Orleans will require continued dedication and collaboration from actors at all levels, including municipal, regional, and state entities, community-based, nonprofit, and private sector organizations, and individual advocates.

Through this planning process, the Town has identified challenges that comprise and exacerbate the digital divide locally and regionally as well as strengths that can be leveraged to support digital inclusion. Equipped with qualitative and quantitative data and an analysis of findings and recommendations, the Town of Orleans can convene stakeholders and engage the public to prioritize implementation strategies and near- and long-term solutions. By working in partnership with organizations across the region, the Town of Orleans is well-positioned to lead the way in fostering a more inclusive digital future for all.