



THE LANDSCAPE OF DIGITAL EQUITY IN WESTERN NEW YORK:

An Incomplete Picture





INTENDED PURPOSE

The original intent of this report was to consolidate what exists so we have a better sense of what information we have and what information we need to gather. It was hoped that by looking across studies that a single picture could be created of the digital landscape. There is not, however, a combination of reports that accomplishes that intent. As a result, this report draws from what is available and offers guidance on tendencies and likely considerations.

This report was prepared by Program Savvy Consulting for the WNY Digital Equity Coalition, funded by Schmidt Futures, and administered by the National Digital Inclusion Alliance.

OVERVIEW

There are two significant studies related to digital equity, the Digital Equity Roadmap which covers 8 counties in WNY and the Orleans Digital Literacy Initiative which is an extensive look within Orleans County.

The Digital Equity Roadmap (referred to in this report as the DE Roadmap) for The John R. Oishei Foundation and Western NY Region by Community Tech New York (CTNY) was primarily focused on the accessibility of broadband and devices and how the income, race, and geography of a person often led to poorer availability. While other areas were discussed, the most robust information and focus were in these areas.

The main purpose of the Orleans Digital Literacy Initiative (referred to in this report as the Orleans DLI) is to address digital literacy as the Orleans County community begins to increase its access to both broadband and devices.

There are several other reports which provide limited information about digital equity in WNY. These other reports often offered one or two data points (such as percentages of access in a county, or impact of the digital divide on efforts such as caregiving, or plans for future expansion of Broadband).

While there was no singular report or combination of reports that provided significant insight into what is happening across WNY, what this research into existing reports did provide is high-level understandings which are useful for planning and a greater understanding of the barriers a lack of broadband/devices/digital literacy/support create especially for those individuals with low income, living in certain isolated areas, and people of color. People with disabilities were also referenced but there was not a significant focus on this population.

Orleans County demonstrated the impact of poor internet connectivity across many areas: schools, business, agriculture, healthcare, community services (government and nonprofit) and economic development. They examined the impact of poor digital literacy to the above areas and also included the unemployed and safety. Orleans County also designed a robust community effort to address digital literacy around two key areas: training and integrating digital literacy community mentors to address digital literacy gaps, and, a public campaign to engage the community in digital literacy and better internet access. They have measured the first year impact which will be reflected later in this report.

There is no other WNY community that has had as extensive a report. It is likely, however, that many of the trends and findings true for Orleans County would be mirrored by other communities, especially rural communities.

What follows are several topics related to digital equity and the information available from various reports. We reference page numbers from reports for those interested in seeing the original documentation or to explore a topic further.



BROADBAND AND DEVICE ACCESS

The Digital Equity Roadmap (DE Roadmap) was created to determine what variety of factors have led to the lack of digital literacy and justice within the region. This report found that:

- 17% of the people in the 8 WNY counties lack access to broadband with large fluctuations depending on geography, income, and race.
- The digital divide is both urban and rural with low broadband access areas corresponding to low and moderate income areas. The relationship between decreasing income and decreasing connectivity holds across various geographies, both urban and rural (figures available to indicate this on pages 14 - 15).
- Even in areas where broadband exists, a high percentage of households have low connectivity (up to one type of internet connectivity, including cell phone data). This condition also worsens as income decreases.
- In rural areas, the lack of access is mostly related to broadband availability where in urban areas the barrier is primarily cost.
- The digital divide disproportionately impacts communities of color. Table 2 on page 17 demonstrates this. In Erie County, 25% of the African American population lacks broadband.
- One in every 10 households across the region lacks a computing device to access the internet. More data on access to devices by county can be found in DE Roadmap - Table 1, page 16. The range of device access is from 10% - 17%, but that does not fully show that in some smaller areas within counties, the lack of access to devices exceeds 40%.
- During COVID-19, there were efforts to connect families with school-aged children to equipment needed for education, but these efforts seem to have decreased since the lightening up of the pandemic. There were not significant efforts to provide equipment to adults who often needed equipment access during COVID for employment and day-to-day living as influenced by social distancing.

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The Orleans Digital Literacy Initiative (Orleans DLI) led by the United Way of Orleans County set out to strengthen digital literacy and influence internet access. Their plans were built on extensive research in their county of the barriers and resources. Their findings revealed that the limited access to internet, economic barriers, and a lack of digital skills presented a threat to local residents' abilities to utilize and understand technology.

A few other reports also reinforced the findings in Orleans County. Findings:

- Only 22% of respondents to the Orleans community survey said that their internet was “very reliable.” (This community survey included responses from over 3,000 people.)
- 27% of respondents said their internet was either “spotty” or “did not work well at all”, and 50% had “occasional problems.”
- 46% of respondents gave a resounding “yes!” when asked if their internet got worse when multiple devices were being used.
- Over 80% of respondents from the grower survey agree that poor internet interferes with their farm production.
- $\frac{1}{3}$ of the respondents who attempted to have a telemed appointment were not able to connect at all or were not able to use video. This finding was supported by the Caregiver Navigation Report for Southern Tier Health Care System.
- 13% of employees who were asked to work from home were unable to do so because of a lack of access to the internet.
- 2,396 addresses in Niagara and Orleans County combined do not have internet service. (Source: Niagara-Orleans Regional Alliance) and 7.1% of the Orleans County and 7.7% of the Niagara County population does not have a computing device in their home (Source: NYS Digital Equity Portal, out of Cornell).
- 35% of respondents leave their home to use the internet for school, work, or other activities, but this may be uncomfortable for individuals if the conversation needs to be private, such as doctor appointments or support groups. Also, this had security implications for sensitivities and private information, and public Wi-Fi is not secure.



2,396

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Source: Niagara-Orleans
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Source: NYS Digital Equity Portal

DISABILITY ACCESSIBILITY

Device distribution has been mostly focused on school-aged children and does not address special needs populations. Accessible technology is expensive, such as for those who are blind or visually impaired (DE Roadmap). Individuals with disabilities living in congregate settings often do not have internet set up at home. During the height of COVID-19, there were many restrictions on visitation, causing the visits to move largely online, except only about 20% of those living in these conditions had access to the internet. Government-sponsored phones are often given to individuals with disabilities, except these phones are often flip phones with a limited amount of data (Orleans DLI).

People Inc. is currently developing a program for individuals with Intellectual/Developmental Disabilities to understand digital safety, where workshops will be introduced in order to show individuals how to address concerns and reduce any exposure to the dangers that may be found on the internet (WNY Digital Equity Coalition and CHSA).

EXISTING MAPS

The Orleans DLI contains a map of Internet Gaps in Orleans, Appendix F, while the DE Roadmap has service maps of Erie County, pages 12 and 13 and internet connectivity maps of 9 WNY counties on pages 65 - 69.

Other maps that provide insight into broadband availability include the New York State Digital Equity Portal hosted at Cornell University, and the recently released New York State Broadband Map compiled by the New York State Public Service Commission. The NYS Digital Equity Portal relies heavily on Census Bureau data supplemented by data from the Federal Communications. The NYS Public Service Commission map draws mostly on data provided by the internet service providers (ISPs) themselves.

PROVIDERS

Source: BroadbandNow.com

Niagara	ErieNet, Spectrum
Erie	Verizon, Spectrum, HughesNet, ErieNet
Chautauqua	Spectrum, Windstream, Viasat, HughesNet, DFT Communications, Consolidated Communications
Cattaraugus	ION, Level3, Time Warner, Verizon, Allegany County Project, Fiber Loops, Southern Tier Network, DFT Communications, and Southern Tier Wireless (CF)
Allegany	Spectrum, Verizon, Viasat, HughesNet, T-Mobile, Armstrong
Wyoming	Spectrum, HughesNet, Viasat, EarthLink, Frontier
Genesee	Spectrum, Verizon, Viasat, HughesNet, T-Mobile, Empire Access, Empire Telephone
Orleans	Spectrum, Verizon, Viasat, HughesNet, T-Mobile

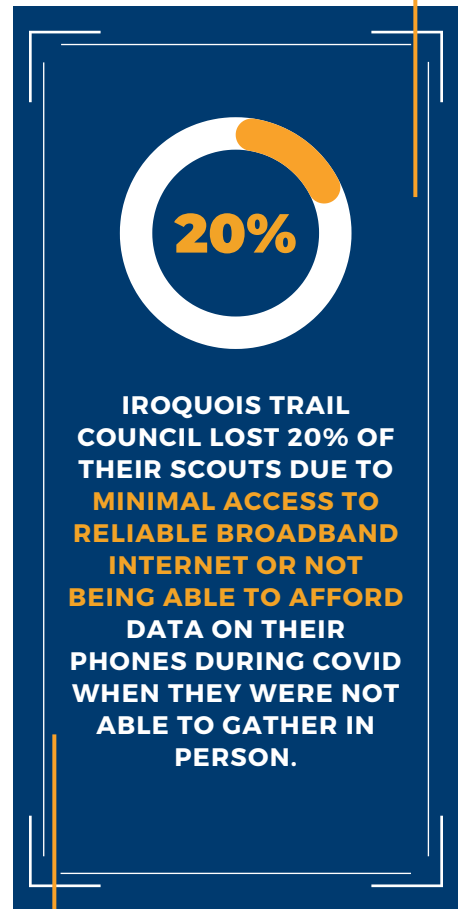
COST

In the community survey conducted by the Orleans DLI, it was found that only 15% of respondents either had the option to buy a higher level of internet services, they already had the highest level of internet speed (19%), or nothing else was available. Of those who have not upgraded their internet, 60% indicated the reason is that it is too costly.

Jim McMullen of the Iroquois Trail Council of the Boy Scouts of America said they lost 20% of their scouts due to minimal access to reliable broadband internet or not being able to afford data on their phones during COVID when they were not able to gather in person (Orleans DLI).

There are two major approaches to closing connectivity gaps to include subsidy programs (subsidizes internet service providers to provide low-cost internet service) and the development of new physical infrastructure in underserved areas, such as the expansion of existing technology or deploying new types of infrastructure. Sometimes equipment is provided, but no financial resources are available to cover monthly fees to access the internet to make the device usable (DE Roadmap).

Some wages do not support the added cost of working from home, such as the expenses of a good laptop or good internet connection, leading to less and less of a person's income going towards other bills, such as grocery shopping, rent, or other utilities (Orleans DLI).



PROGRAMS AND RESOURCES

COVID-19 brought about significant funding for broadband through federal legislation (CARES Act; The American Rescue Plan Act; Infrastructure) and New York State. The full impact of this work is unclear at this time.

Almost \$3.8 million of federal funding has gone towards the Niagara-Orleans Wireless Broadband Initiative as of March 2022, with RTO to be centered as the main internet provider through this funding.

The 2021 American Rescue Plan Act (ARPA) and Infrastructure Investment and Jobs Act (IIJA) both included provisions intended to promote broadband connectivity for all Americans. Portions of the \$350 billion allocated to the State and Local Fiscal Recovery Fund under ARPA can be used by state, local, and Tribal governments to expand access to affordable broadband. As of June 2022, more than \$25 million in ARPA funds have supported capital broadband infrastructure projects, the FCC's Emergency Connectivity Fund, and other broadband affordability and digital literacy initiatives nationwide. New York State is applying \$345 million in ARPA funds to its ConnectALL initiative.

In Western New York, ARPA funds from Niagara and Orleans Counties are being used to support wireless broadband expansion, and Erie County is resuscitating ErieNet, a county-wide fiber optic backbone. Jamestown, in Chautauqua County is also considering a municipal broadband project fueled by ARPA funds.

IJA includes \$65 billion to help ensure wider access to high-speed internet service through expanded broadband infrastructure. New York State is slated to receive a minimum of \$100 million to help expand broadband coverage, and more than 5 million New York State residents will be eligible for Affordable Connectivity Program (ACP) broadband subsidies.

The ACP provides monthly subsidies of up to \$30 to eligible households, and up to \$75 for households on qualifying Tribal lands. Additionally, eligible households can receive a one-time discount of \$100 to purchase a laptop, desktop, or tablet from participating providers.

DIGITAL LITERACY

Technology use is increasingly becoming important in many places of employment, including manufacturing, farming, and service industries. Training on the use of technology is usually predicated on an employee or a candidate for a position having basic digital literacy skills. But these basic skills are not easy to obtain for those without good exposure to them in previous jobs or school. As more work is being done remotely, digital literacy skills are essential as employees need to be able to troubleshoot additional challenges without the onsite support of an IT department.

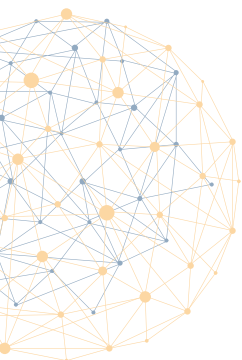
Digital literacy programs are deemed important to those attempting to support the community, such as library systems and nonprofits. Many citizens believe these programs have, they are not abundant across WNY (DE Roadmap).

There is an exception to this gap in digital literacy efforts. In Orleans County, the Orleans Digital Literacy Initiative followed up their 2021 assessment and report with efforts to increase digital literacy with two key strategies:

1. Community Mentors that successfully facilitate digital literacy in Orleans County
2. A Public Campaign that engages the community in digital literacy and the availability of better internet access

Orleans DLI contracted with VIA Evaluation to measure the outcomes of those efforts. They addressed six investigative questions:

1. What populations of community members are being served by ODLI programming?
2. How are mentoring experiences organized? (initial engagement, planning, location, environment, length of time, etc.)
3. What types of services or lessons are most requested and taught to participants?
4. What are participants', mentors', and community site staff's perceptions about the mentoring experiences?
5. What observations have been made in regard to changes in participants' digital literacy?
6. What additional approaches should be considered to enhance success of the ODLI?



The methodology and full description of the following key insights as well as Recommendations can be obtained in the report through The United Way of Orleans County (ORLEANS DIGITAL LITERACY INITIATIVE: Key Insights and Recommendations. Year 1 Report Brief, Delivered July 2022 by VIA Evaluation)

1. Mentors, participants, and site staff reported positive reflections on the planning, usefulness, effectiveness, and overall success of mentoring sessions.
2. There are some common barriers to progress in sessions.
3. Computer and smart phone operation were the most common mentorship needs.
4. Pre-populated mentoring options were infrequently selected.

The ongoing efforts in Orleans County can serve as a model for key learnings for efforts being considered throughout the region

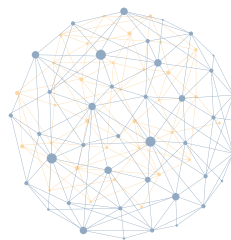
TECHNICAL SUPPORT

When Orleans County implemented hotspots throughout the county, they were implemented without instructions for residents on how to use them. Without these instructions, many residents were unable to use the new hotspots that were provided to them. In the 2021 survey of Orleans County residents, 73% of students indicated that they needed some help with technology, but only 44% of those students had an adult in the house who could help them. Students need access to more support in order to help them better understand the technology they utilize for their education.

COMMUNITY GAPS IN KNOWLEDGE OR RESOURCES

Most programs designed to connect to broadband are directed toward school-aged access to school programming. The same infrastructure is not used for seniors, those with a low income, or those with disabilities. Sometimes the source of the funding is a barrier to reaching extended audiences. There is information about potential programs but the progress, continuation, or outcomes of some programs are unknown nor centrally located. Many internet providers offer low-cost programs for those who qualify, but not many people know about them and they are not easily accessed. There is also generally poor awareness of the Affordable Connectivity Plan and its benefits.

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RESOURCES

Good resources are few and far between. 211 WNY receives calls from community members requesting support in accessing reduced pricing on internet or devices. Many of the recommendations from the Digital Equity Roadmap Report reference the need for centralized resources. It seems that 211 WNY, which has the infrastructure to field such calls, is already addressing those requests. It seems reasonable that entities looking to expand the community's access to digital equity would further utilize 211 WNY versus creating another system. And, many people struggling with issues related to Digital Equity will have other concerns and the Contact Center Staff at 211 WNY are trained to assess and support other needs.



The DE Roadmap reported that they did not see any creative ways to support people with limited digital skills (as of October 2021), however, during this time there were public offerings in Orleans County that were focused on digital literacy that were not referenced in the report. (Examples: training of community digital literacy mentors; community trainings; social media focus.) This demonstrates that finding what exists is not easy. How do you know what you don't know?

The NYS Library published a document entitled Achieving Digital Equity in New York State: An Outline for Collaborative Change, which outlines a strategic plan for the NYSED regarding digital equity. It also discusses two summits held with experts and stakeholders regarding digital equity and its impact (<https://www.nysl.nysed.gov/libdev/DigitalEquityNY.pdf>).

Other Resources (shared in the reviewed reports) include:

- Libraries have been and continue to be a reliable source for technology training. For example, the four libraries in Orleans County provide digital literacy support and Nioga Libraries' Mobile Tech van provides 10 laptops, portable broadband internet, and a trainer to assist in teaching digital literacy.
- The BEST Center at Genesee Community College provides high quality digital training at a reasonable cost.
- The Orleans County Job Development counselors connect job seekers with existing resources to meet their need around digital literacy.
- As described above (under the Digital Literacy section), there are efforts to provide Digital Literacy Mentors throughout Orleans County.
- ErieNet Business Plan, preliminary draft:
https://www3.erie.gov/economicdevelopment/sites/www3.erie.gov/economicdevelopment/files/2022-04/erienet_preliminary_business_plan_04-19-2022_v2.pdf
- Southern Tier West Wireless Broadband: explains the purchase and installation of broadband equipment, and who it will effect, in southwestern New York

RECOMMENDATIONS FOR THE COMMUNITY

The Digital Equity Roadmap has many recommendations for community efforts that are based on their work. Areas focus on topics such as resource lists, creating hotspot lending programs, purchasing and distribution of devices, and the development of a shared digital equity vision to help attract funding to the region. (For a summary of recommendations, see pages 41 and 42 in DE Roadmap.) As discussed earlier, 211-WNY provides an opportunity to achieve the goal of centralization since they are already engaged in sharing community information on digital equity.

It is also recommended that the efforts in Orleans County are considered as a local model for digital literacy efforts and efforts to address gaps in broadband access. While it is likely that other communities are doing similar work, Orleans has an infrastructure for both doing the work and measuring the impact.

It is important to understand how federal and state funding is being allocated. Is there an opportunity for community-driven decision making in order to ensure digital equity and justice concerns are key to the work?

RELEVANT REPORTS AND SOURCES

- Digital Equity Roadmap for the John R. Oishei Foundation and WNY Region: Community Tech NY, October 2021 (Referenced as DE Roadmap)
 - Methodology included publicly available information, 13 in-depth interviews, and two workshops including leaders from the Oishei Leaders of Color Cohort (24 individuals)
- Orleans Digital Literacy Initiative (Referenced as Orleans DLI)
 - Methodology included 45 interviews, 10 focus groups, and a community-wide survey completed by 3,006 people.
- July 2020 Cattaraugus Focus, May 2022 (CF)
- ErieNet (EN): <https://wnydigitalequity.link/ErieNet>
- Buffalo News (BN): <https://wnydigitalequity.link/bnno>
- More information on Niagara-Orleans Wireless Broadband Initiative (RTO): <https://wnydigitalequity.link/howbi>
- Caregiver Navigation Report for Southern Tier Health Care System (CNR)
- NYS Digital Equity Portal (DEP): <https://wnydigitalequity.link/8tr>
- WNY Digital Equity Coalition (DEC): <https://docs.google.com/document/d/1ppPYffl80Hv0ilg1xtEHKvHCICpAKqE3vI86OQpYzpQ/edit>
- ORLEANS DIGITAL LITERACY INITIATIVE: Key Insights and Recommendations. Year 1 Report Brief, Delivered July 2022 by VIA Evaluation

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Equity
Coalition

