Bridging the Digital Divide: A report on the progress of the Digital Inclusion project

December 2020

Report Sponsored by Quantum Foundation

Bridging the Digital Divide

What are we trying to achieve?

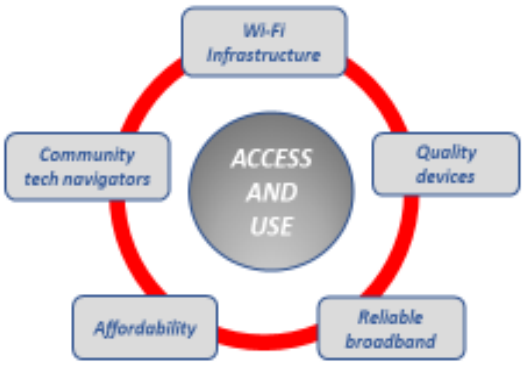
25,000 students are able to connect and learn at home with high-quality broadband.

Every family in the three target areas of Palm Beach County has a quality device and reliable broadband and is using the technology for education, employment, and health.

Everybody in Palm Beach County has access to the internet so that they can participate in the modern economy.

Short term → **Longer term** → **Ultimately**

What is the model?



Who's involved?

40 organizations collaborating to achieve the goals

What progress have we made?

Poles and Wi-Fi mesh radios have been installed in downtown ***Belle Glade*** *to meet long-term affordable broadband needs*

5,600 *internet subscriptions and* ***2,400*** *hotspots have been deployed to meet immediate broadband needs*

Over ***73,000*** *Chromebooks for distance learning have been distributed*

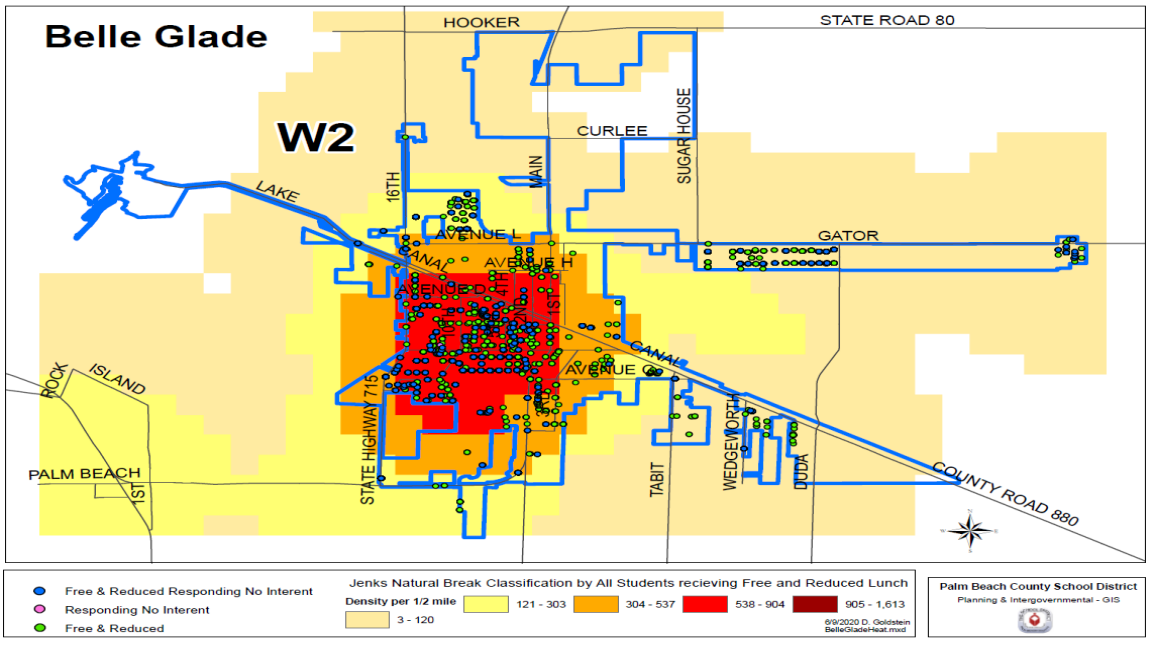
Over ***$60 million*** *in funding committed to implement the model*

Introduction

The Digital Divide project is a collaboration among 40 government, business, philanthropy, and community organizations to increase access to, and usage of, technology for Palm Beach County residents. Without the commitment and collaboration of the partners involved, the effort would have made as much progress as it has. In particular, the Economic Council of Palm Beach County, the Education Foundation of Palm Beach County, Palm Beach County Government, the Palm Beach County School District, and Quantum Foundation have been responsible for implementing the model. (See Appendix D for a complete list of partners.) This report provides a summary of the effort to date: how it began, the model, resources committed, and who is involved. Future reports will document not only progress but also any remaining gaps and outcomes related to access and technology use. Sources for this report include documents provided by the partners and interviews with those involved.

Getting Started

As Palm Beach County implemented stay-at-home orders, the Palm Beach County Commission directed the county administrator to develop workgroups to advise the county government on navigating the pandemic and reopening the county. One workgroup, the Infrastructure Committee, was charged with identifying and filling gaps in infrastructure as internet access became critical due to social distancing. The initial focus was on ensuring that all students could participate in remote learning. The Palm Beach County School District shared heat maps documenting where students were without access; the committee prioritized 50 square miles with the greatest density of students without access: Belle Glade, the mainland area of Rivera Beach, and parts of West Palm Beach. See Appendix A for the remaining heat maps.



Not surprisingly, these were also the areas with high concentrations of families with low incomes. In the short term the school district distributed Chromebooks and hotspots and sponsored internet subscriptions. The long-term solution to fill the gap, however, would require devices and reliable internet that was affordable for families. The county government and the school district had worked on a similar project in the past – using Wi-Fi mesh networks – but on a much smaller scale. Building on that prior experience as well as the existing efforts of the county (which had been working to expand internet access to communities), the school district (which was working to become a 1:1 district[1]), and the Quantum Foundation (which had been focusing on inequity and disparity in the prioritized communities) the committee developed a five-point model.

The Five-Point Model

Although the project has coalesced around the five components listed below, the effort is fluid. When the infrastructure committee meets, partners share updates on their progress, discuss what needs to happen next, and bring new opportunities to the table. For example, the district raised exploring a partnership with a vendor that can recycle and refurbish donated equipment. This would provide a way for local companies to contribute by donating computers and also create a sustainable revenue stream for the Wi-Fi network.

1. Infrastructure

This includes the fiber, radios, and towers necessary to build the Wi-Fi network. See Appendix C for an overview.

2. Quality devices

The district's goal is for every student and every teacher to have access to a laptop with a camera for distance learning. Over 73,000 Chromebooks for distance learning have been distributed and the district has purchased an additional 82,000 devices.

3. Reliable broadband

In the short term the school district provided hotspots and internet subscriptions to families, but the effort is now focusing on the longer-term solution of free Wi-Fi through extenders and the mesh network.

4. Affordability

The fourth component is affordability. In the short term the district is providing hotspots and internet subscriptions as noted; funders such as the Children's Services Council have also provided funding for subscriptions. In the long run, the Wi-Fi network will meet this need.

[1] 1:1 means one device for each student.

5. Community Technology Navigators

The final piece of the model is the community technology navigators. Even with access, research has shown that some families lack skills to use the technology. The community technology navigators will provide in-home technical support and community digital literacy trainings to ensure not only that families can work the technology but use it to make a different in their lives. The effort will be piloted in the western communities of Belle Glade, South Bay, Pahokee, and Canal Point; in West Palm Beach from 1st Street to 59th Street; and the mainland neighborhoods of Riviera Beach. A description of the community technology navigator model is in Appendix B.

In interviews partners emphasized the importance of this component, noting the need to connect residents with resources and provide support. Navigators recruited from each target community will work with community partners to determine which families do not have access and then help those families access the resources provided by the project. Once families have access, the navigators will train them to use the technology for education, employment, telehealth, etc. Each community technology navigator will serve a specific targeted geography to allow them to build relationships with the community and with partners such as nonprofits and schools. For example, the navigators will work with the district's Wi-Fi warriors who are on staff at each school with direct connections to families who need technology.

Evaluation

Although not a component of the model, Quantum Foundation has contracted for an evaluation of the project. There are two evaluation objectives. First, to document the project as it unfolds and identify what worked, what didn't, and gaps. Second, to document outcomes such as access but also the extent to which students and families use the technology and for what purposes, such as education, employment, and health.

Over $65 Million Committed

The resources provided by partners and the generosity of the community have been significant. For example, the Community Foundation of Palm Beach and Martin County provided $200,000 – a notably large grant for the organization – for the community technology navigators, and business partners such as Comcast, AT&T, T-Mobile, Florida Power, SBA Communications, and Florida Crystals are donating infrastructure such as poles and services such as reduced price internet subscriptions. The table on the next page summarizes the resources committed as of September 1, 2020. In July, the Education Foundation joined the effort to take the lead on fundraising with foundations, municipalities, and donors.

	Amount committed as of 9/1/2020
Palm Beach County funding for poles, fiber, and radios	$20,027,089
Palm Beach County School District funding for devices, hotspots, and sponsored internet subscriptions	$45,100,000
Philanthropy for computers, Wi-Fi hotspots, and sponsored internet subscriptions	$1,027,722
Philanthropy for the Community Technology Navigator pilot	$500,000
Community and business partners for summer virtual tutoring	$50,000
Business for infrastructure, services, and hardware for free and/or reduced cost	In-kind

Progress to Date

The graphic on the next page displays key milestones in the project, including the progression of the committee, resources, devices, and access. This does not represent, of course, the effort needed to reach these milestones such as weekly project management meetings, the logistics of distributing devices, and the work to install infrastructure.

Getting the Work Done

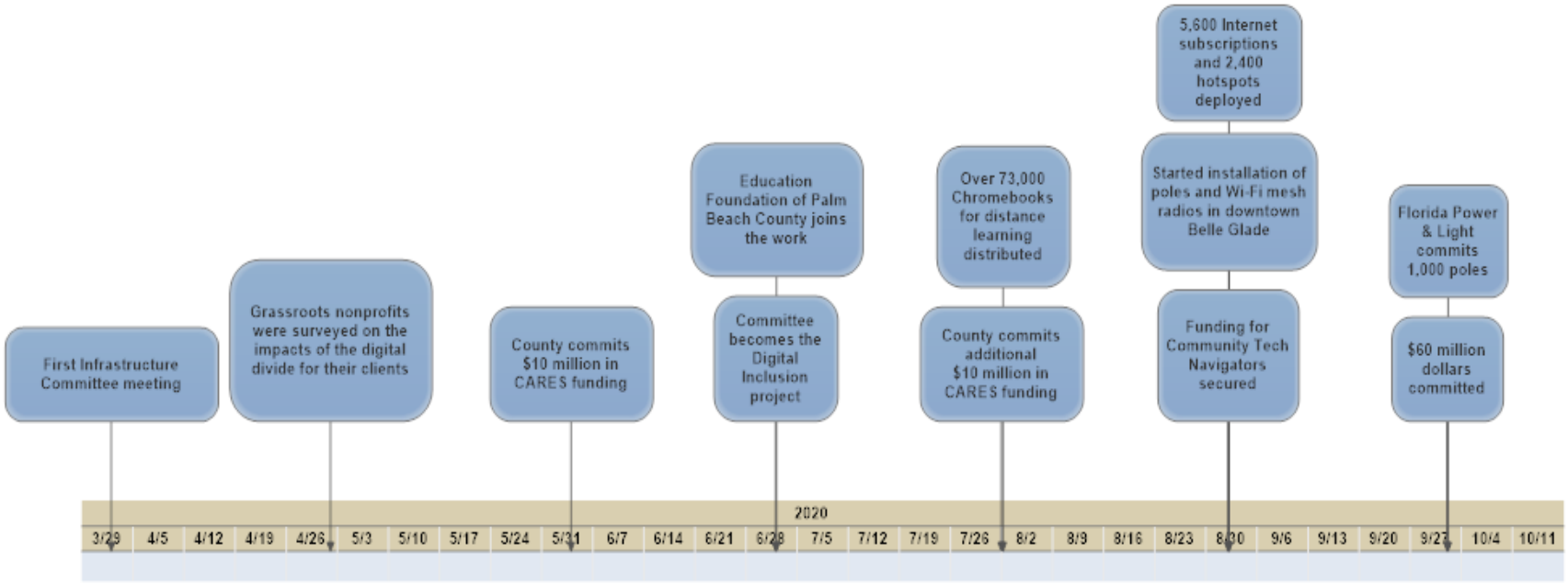
Almost 40 government, education, business, local foundations, national foundations, and community organizations are collaborating to achieve the goals. These partners have been organized into four groups. A list of members in each group is included in Appendix D.

- Infrastructure Committee
- Palm Beach County Funding Coalition
- Community-based organizations
- Regional and national contributors and partners

As described above, the Infrastructure Committee began when the Economic Council of Palm Beach County recruited stakeholders from the public sector, the private sector, and the nonprofit sector in an effort to both understand everyone's existing efforts and share information to solve the access problem. The Palm Beach Funding Coalition has, of course, contributed funding. Community-based organizations are working to deliver complementary programming in communities and provide a conduit to reach families. The regional and national partners have provided funding and/or expertise.

Although some of the partners have worked together before or done similar activities, they are also working with new partners and taking on new roles. For example, most of the

Digital Inclusion Progress to Date



partners have not worked with the telecommunication partners before. And although Quantum Foundation had worked with the community-based partners before, those community-based partners are now collaborating with for-profit leaders and government leaders that they had never worked with before. The school district, of course, has always supported families but has traditionally delivered education inside the school.

The structure has allowed partners to leverage each other's assets. For example, school facilities, community centers, libraries, and county buildings are all being used as launch points for the Wi-Fi network to reduce the time and cost of erecting poles. Intangible assets have been leveraged as well. As one person said, "Six months ago, the county didn't know who they could go to talk to about poles. Today, because we've had these meetings, I can reach out and ask for the right contact." Personal connections have also prompted donations; for example, staff at the school district had a personal connection to a tech company and reached out to get equipment donated.

What's Worked Well and Lessons Learned

Interviewees noted several reasons why the partnership has worked so well to date: a compelling need, the people involved, and consistent and transparent communication. Interviewees noted that all the partners immediately recognized the value and the need to do things differently in order to solve the problem. As one interviewee said, "Everyone that participated did it for the greater good. I think everyone went into this thinking: This is COVID-19. We've got to figure this out." Partners are committed to finding what they can do within their own organization that can contribute to the greater good. Throughout the interviews, interviewees praised the individuals involved: Michael Butler, Mark Howard, Michelle Jacobs, Jim Gavrilos, and Eric Kelly, noting that "Without those people, we would not be as far as we are right now." And as one interviewee added, "Pam and Don Kay put the icing on the cake with FPL."

Interviewees cited consistent and transparent communication as another reason why the partnership has worked so well: "We're all talking to each other, we've identified common goals, and we're collaborating in order to meet those goals." For example, in addition to the Infrastructure Committee meetings, there are weekly meetings between the county and the school district and ongoing phone and email communication between the county, the district, and the Education Foundation. But more than frequency, interviewees noted that "Trust has been built. Authentic, transparent communication has taken place and that has worked extremely, extremely well."

Lessons learned to date include the importance of consistent, open communication as noted above; technical challenges; and working with multiple municipalities. Both the county and

the school district are fully committed to the project but had to navigate the legal requirements to allow the county to install root radios on school property. There have also been permitting delays due to environmental regulations. Although municipalities have been responsive and eager to participate, there is a challenge in both figuring out each municipality's decision-making process and then coordinating the actual activities, although as one interviewee noted, "It hasn't been a huge obstacle but we just need to be thoughtful about it." The need to spend the CARES dollars by December 31, 2020 is not a lesson learned but is a challenge.

When Everyone Can

Although each partner had a slightly different perspective, the impetus for getting involved was the 25,000 students from low income areas who lacked internet access. As one interviewee said, "When we went to remote learning at the end of March those kids were going to start to fall through the cracks. And that's why this group got together because we wanted to ensure that we could do everything possible to mitigate that." Over the past year, the Quantum Foundation had been making concentrated investments to account for the unequal distribution of social determinants of health and the resulting health disparities in specific areas of the county. The heat maps developed by the district of where students without access resided graphically illustrated the disparities documented by Quantum Foundation's research: The areas with no technology are also the areas with low educational levels, higher unemployment, poor health outcomes, and a lower life expectancy. While this was not surprising, this connection admittedly was not something Quantum Foundation truly saw prior to this effort.

"If you don't have access, you can't participate in the modern economy."

Early in the pandemic, another of the workgroups was focused on reopening underserved communities; that workgroup folded into the Infrastructure Committee after the county reopened and while other workgroups are now less active, the expanded Infrastructure Committee has continued the conversation about the digital divide and the impact it has on Palm Beach County families. As the work unfolded, the effort was renamed the Digital Inclusion project because while providing access for the first 50 square miles (approximately 25,000 students) will be completed by the end of the school year, there are still another 50 square miles with a high density of students and families that need internet access. Partners are committed to continuing until all families have access and can use technology to improve education, employment, and health. As multiple partners noted, "If you don't have access, you can't participate in the modern economy." This collective effort has since taken on the more traditional "digital equity" label.

When asked what success would look like, partners had both shorter-term and longer-term definitions that were remarkably consistent.

What would success look like?

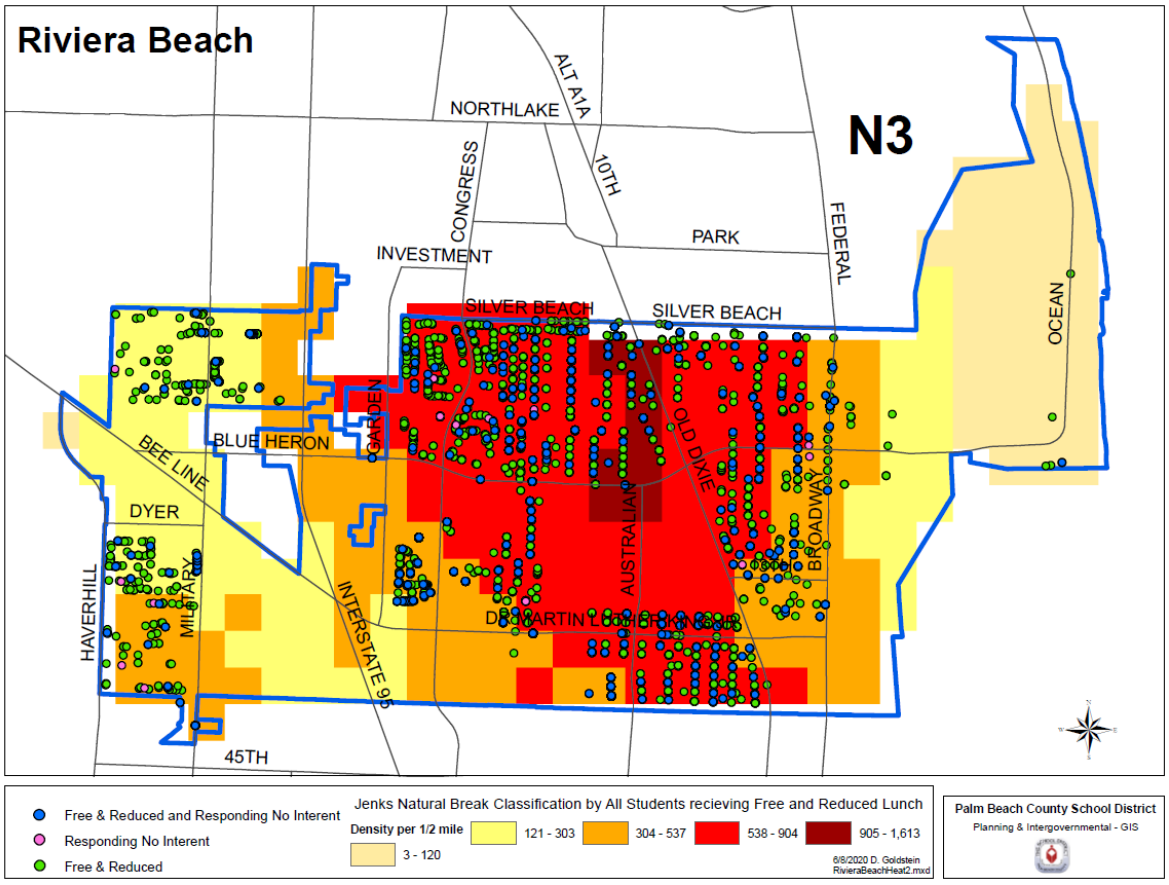
Longer term----------Shorter term	
	25,000 students are able to connect and learn at home with high-quality broadband.
	Every family in the three target areas of Palm Beach County has a quality device, reliable broadband, and knows how to use the technology.
	Families in the three target areas are using the technology for education, employment, and health.
	Everybody in Palm Beach County has access to the internet so that they can participate in the modern economy.

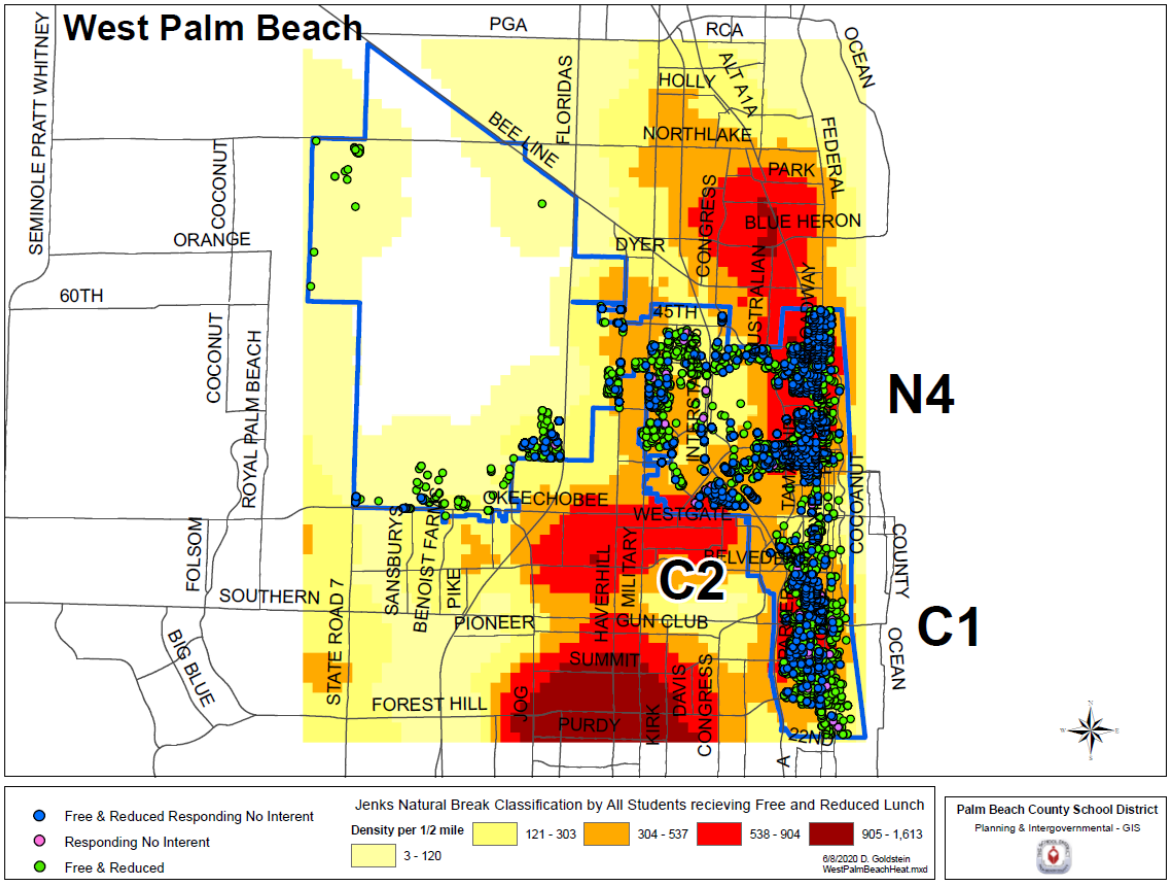
Partners noted the potential long-term impact on the lives of Palm Beach County residents as the project continues to evolve towards a long-term effort of connecting families. This connectivity has the potential to impact multiple determinants of health – education, employment, income, access to health care, and transportation – all of which ultimately impact health. For example, one person said, "I don't think we've had a chance to do anything quite as exciting as bringing together this platform for digital access. It's not new but it's taken us into a different sphere of what we can accomplish." Another put it more simply: "This is without a doubt, the most impactful work I've ever done."

What's Next?

The project is continuing implementing the five components of the model. The next evaluation report will be prepared in January to document progress made through that time. In the spring, a third report will both document progress and initial outcomes.

Appendix A: Heat Maps of Targeted Geographies




West Palm Beach
PGA
RCA
OCEAN
SEMINOLE PRATT WHITNEY
FLORIDAS
ALT A1A
HOLLY
BEE LINE
NORTHLAKE
FEDERAL
PARK
COCONUT
CONGRESS
BLUE HERON
ORANGE
DYER
AUSTRALIAN
60TH
45TH
COCONUT
ROYAL PALM BEACH
INTERS
N4
OKEECHOBEE
WESTGATE
SANSBURY'S
BENOIST FARMS
PIKE
MILITARY
HAVERHILL
C2
FOLSOM
SOUTHERN
PIONEER
GUN CLUB
COUNTY
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STATE ROAD 7
BIG BLUE
SUMMIT
OCEAN
FOREST HILL
JOG
DAVIS
PURDY
KIRK
CONGRESS
22ND
Free & Reduced Responding No Interent
Responding No Interent
Free & Reduced
Jenks Natural Break Classification by All Students recieving Free and Reduced Lunch
Density per 1/2 mile
3 - 120
121 - 303
304 - 537
538 - 904
905 - 1,613
6/8/2020 D. Goldstein
WestPalmBeachHeat.mxd
Palm Beach County School District
Planning & Intergovernmental - GIS

Appendix B: Community Navigation Model

Access Alone Is Not Enough

The Digital Divide project will build infrastructure, provide quality devices, ensure reliable broadband, and make services affordable for families in three targeted areas of Palm Beach County. Research has documented, however, that providing access is not enough: Some residents lack skills and face other barriers in using that technology for education, employment, and health.

The community navigator model is being implemented by Community Partners of South Florida. Funding is being provided by the Community Foundation for Palm Beach and Martin Counties, Knight Foundation and Quantum Foundation. Community Partners of South Florida will hire and deploy Community Technology Navigators to work full time in a targeted geography to provide technical support, case management, and digital literacy trainings to community residents.

In-home technical support
Community Partners of South Florida will partner with community agencies and school staff to identify households that are "technology vulnerable." Community technology navigators will then:

- place technology and short-term internet access into the "technology vulnerable" homes,
- remove barriers to effectively using technology, and
- provide in-person tutorials on a range of subjects including how to navigate their technology, logging into Google Classrooms, using Zoom, and accessing telehealth.

Community digital literacy trainings
Trainings provided in the community will include topics such as accessing telehealth, monitoring health virtually, applying for health-related benefits, filing unemployment claims, job training, online banking, and applying for housing assistance.

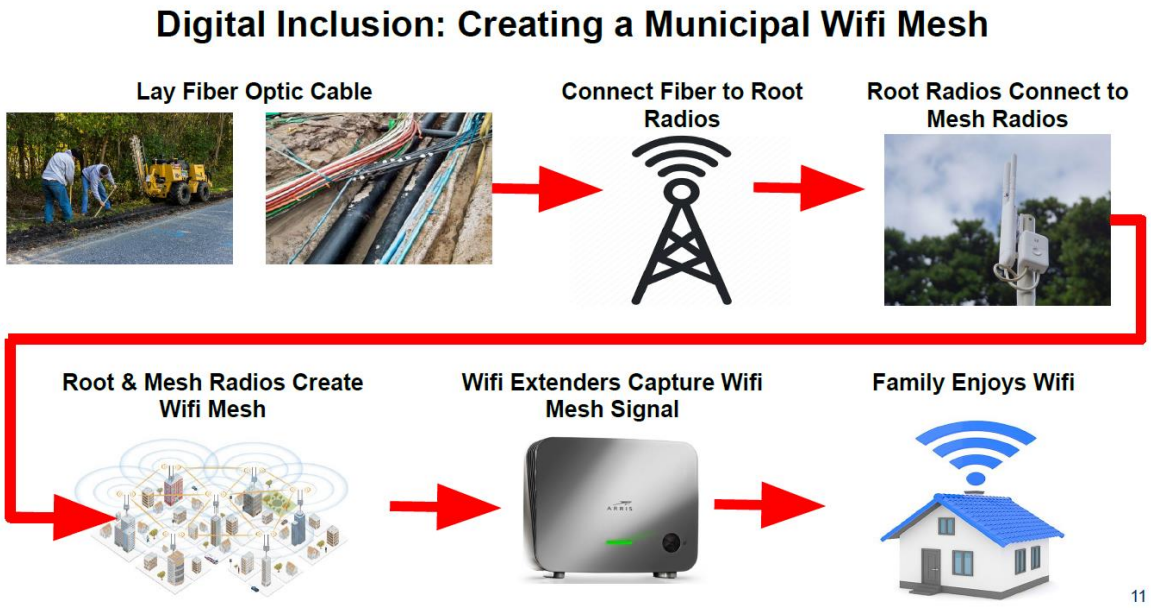
Community relationships and partnerships
Community technology navigators will serve a specific targeted geography to allow them to build relationships with the community and with partners such as nonprofits and schools.

Working in direct connection with the school district, the project manager will manage the distribution of quality devices and reliable internet service to get them to families in the targeted geographies.

Local implementation partner groups comprised of nonprofit service providers, education administrators, neighborhood stakeholders, community technology navigators, and community health workers active in the community will ensure the voice of the community is represented and that the services meet community needs. While many of these groups have been working independently of one another, the shift to digital learning and virtual health has created added incentive for these groups to coalesce. The Quantum Foundation and Community Partners of South Florida are working to connect and convene these groups.

Appendix C: The Wi-Fi Network

A WiFi mesh network is created by connecting fiber optic cable to root radios. Then, the root radios are connected to mesh radios which provide the WiFi signal to users within the municipality. Identified families will be provided a WiFi extender to capture the signal and broadcast the internet connection within their residence.



Source: The School District of Palm Beach County

Appendix D: Partners

Palm Beach County Infrastructure Committee Work Group and Stakeholders:

Palm Beach County
Economic Council of Palm Beach County
The Palm Beach County School District
Education Foundation of Palm Beach County
Quantum Foundation
Business Development Board of Palm Beach County
Palm Beach County Information Systems Services
Comcast
AT&T
T-Mobile
SBA Communications Corp.
Florida Crystals
Bank of America
Florida Power & Light
Palm Beach County Chamber of Commerce
Federal Communications Commission

Palm Beach County Funding Coalition:

Education Foundation of Palm Beach County
Community Foundation for Palm Beach and Martin Counties
John S. and James L. Knight Foundation Fund of the Community Foundation
United Way of Palm Beach County
Mary and Robert Pew Public Education Fund
Town of Palm Beach United Way
Children's Services Council of Palm Beach County
Lost Tree Foundation
The Fredrick A. DeLuca Foundation

Nonprofit/Community Based Organizations:

Community Partners of South Florida
West Palm Beach Police Athletic League
Northend RISE
BRIDGES
Suits for Seniors
Inner City Innovators
Memory Trees Charitable Foundation
BeWellPBC
Healthier Together
Urban League of Palm Beach County

Regional/National Contributors/Partners:

Florida Chamber Foundation
Purpose Built Communities
Florida Blue
KNACK