Communities Rally To Bridge the Digital Divide

Nonprofits and municipalities work to get low-income residents access to the internet.

By Lisa Gonzalez / *Institute for Local Self-Reliance*

MOTIVATED TO CONNECT THE MOTOR CITY

The economic roller coasters that hit Detroit over the years left scars that especially harmed lower-income neighborhoods. Today, poor internet service compounds those neighborhoods' disadvantages, but community organizers are working to expand internet access there.

Detroit's Equitable Internet Initiative (EII) grew out of a collaboration between the Detroit Community Technology Project (DCTP) and Allied Media Projects. Although its initial goal was to help low-income residents gain access to technology and get online, the initiative now also provides training, jobs and community organizing.

The drive to improve internet access in Detroit neighborhoods goes back to 2008. Organizers created a community program with a special focus on internet access, sharing tech resources to get people online. One of its key goals was to help Detroiters progress from being online consumers to being information or content producers while maintaining and expanding the sense of community.

In 2012, the group established a program to train community members to design and deploy community wireless networks. At that time, an estimated 40 percent of Detroiters had no internet access, and 60 percent had speeds below the FCC broadband definition.

Diana Nucera, the director of DCTP, says the group began with wireless mesh technology and built seven small networks, called the EII Resiliency Network. However, the need outpaced their initial capacity, and DCTP now purchases a gigabit of wholesale bandwidth.

To bring the connection to people in the neighborhoods, EII works with community organizations willing to share their resources. It began by collaborating with groups that promoted digital literacy and had a vested interest in better community connectivity. Nucera recalled that the project combined engineering and organizing; leaders of DCTP excel at both. For instance, they did not just have to place nodes on rooftops but also had to "organize rooftop real estate." She explains:

> A lot of people could just do a business transaction that rents the rooftop, but we've been working with community groups, and churches in particular, because they all have steeples, and looking at this as how to do

an exchange – like, "Would you like some internet in exchange for use of your rooftop?"

Churches and a local radio station were some of the first locations where EII established major nodes for the network.

'DIGITAL STEWARDS' DEPLOY WIRELESS NETWORKS

EII trains people from the neighborhoods as "digital stewards" to deploy fixed wireless infrastructure; the curriculum typically involves a three-month program. These local stewards recruit others to participate in mapping and surveying their neighborhoods to understand where internet is needed and how people plan to use it. They then deploy networks based on need. Stewards are hired part-time for two-year stints.

Building off the existing EII point-to-point fixed wireless infrastructure, the stewards build a wireless distribution network and bring connections into the homes of neighborhood residents. Stewards find customers, connect them and establish payment methods.

To make internet access affordable for everyone who wants it, rates are established on a sliding scale from $0 to $50 per month, depending on the economic situation of each neighborhood. As of fall 2018, each network served approximately 50 homes, with the goal of reaching 250 by 2021 to be self-sustaining.

To extend the reach of the distribution network, EII stewards use portable network kits. DCTP also installed a solar charging station prototype and plans to install five to seven more. In addition to bringing affordable connectivity to people living in neighborhoods served by the EII network, program leaders want to establish resilient infrastructure that will withstand natural disasters or power failures. Additionally, using solar power avoids adding to the monthly electric bills of those hosting the nodes.

Other communities whose citizens lack adequate internet access have studied DCTP and the EII Resiliency Network and are watching their success. According to Nucera, the projects succeed because of their diversity, their inclusion and their ability to approach an old problem from a new perspective. She adds, "This work takes time and love. So if you're going to go for it, make sure you have those two things."

NEWARK FINDS THE ANSWER DEEP UNDERGROUND

In 2015, Newark, New Jersey, made significant headway in advancing better local connectivity by tapping into the dark fiber under the city. The city had recently launched Newark Fiber to serve local businesses and wanted to use this publicly owned resource for a second purpose as well: helping low-income residents access the internet.

Georgia King Village (GKV), a low-income apartment complex, is managed by the Newark Housing Authority (NHA) and owned by private developer, L+M Development Partners. Several years ago, NHA installed fiber infrastructure in the buildings to improve safety and reduce communications costs.

By tapping into the existing fiber infrastructure and Newark Fiber resources, the city established Wi-Fi in all the buildings. In April 2018, Newark Fiber finished connecting the two GKV campus towers to the network to provide backhaul for Wi-Fi to all 172 units. The service provides download speeds of 50 to 100 Mbps and is free for residents. Prior to the installation of the Wi-Fi network, residents purchased internet access directly from Comcast or Verizon.

Josh Weisstuch of L+M Partners estimates that residents paid between $60 and $120 per month for those connections.

Weisstuch says, "GKV is a 100 percent low-income building. About 70 percent are very-low income residents. Providing a service like free internet to such residents not only frees up the limited amounts of money for households but [also] provides a resource that is quickly becoming a necessity in today's world. We all know how important affordable housing is to cities across the country; the addition of subsidized, reliable internet will help in children's education, searching for jobs and more."

Many GKV residents use vouchers to pay for their housing, and L+M Partners is willing to supply funding to connect them, partly because

The Wilson (North Carolina) Housing Authority's first digital learning class. Wilson's Greenlight serves Housing Authority properties at low cost.

Newark Fiber rates are so reasonable. L+M Partners believes the Newark philanthropic community will help connect more public housing campuses to Newark Fiber in the future.

GREENLIGHT MEANS 'GO,' REGARDLESS OF INCOME

Greenlight, the publicly owned network in Wilson, North Carolina, approached the community's digital divide problem from several angles. In late 2016, the community network, which has been offering FTTH in Wilson since 2008, began providing symmetrical 40 Mbps for $10 per month to public housing residents. The Wilson Housing Authority provides routers to residents at no charge.

In addition, Greenlight offers a prepaid internet access program, which is a lifeline for people who have poor credit or an outstanding balance from unpaid past bills. Subscribers can establish and maintain an account for Greenlight service simply by maintaining minimal amounts in their accounts.

With this approach, subscribers can schedule internet access by the day,

stretching their budgets. When their accounts run down, they have to make a deposit to use the internet again. If they have past due balances, some of the deposit will be used to pay down the bill and the rest will be used for internet access on the days they specify. Unlike a system in which the provider simply shuts off delinquent accounts until they are fully current, the Wilson system allows subscribers to slowly improve their credit over time.

The program benefits subscribers, and it benefits Greenlight as well by reducing the amount of churn. By increasing subscribers' ability to pay through a flexible approach, Greenlight experiences fewer disconnects and reconnects. Most important, it empowers more people in Wilson to take advantage of modern technology to create new opportunities for themselves. ❖

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