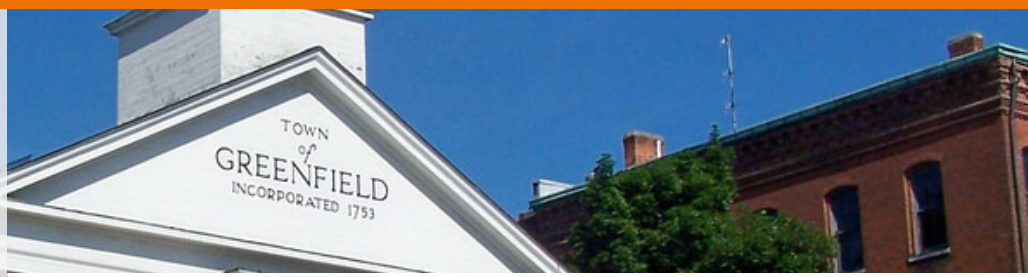
GREENFIELD, MASSACHUSETTS

Ruckus Wi-Fi Solution Offers True Carrier Class Functionality

CASE STUDY



OVERVIEW

Greenfield Community Energy and Technology (GCET) is an Internet Service Provider for the town of Greenfield in western Massachusetts. With companies relying on broadband Internet to conduct virtually all aspects of the business, it was time for the city to deploy a cost effective and reliable network.

REQUIREMENTS

- Provide low cost broadband Internet to the citizens of the city
- Increase network density
- Provide quality Wi-Fi service with uninterrupted service

SOLUTION

- Deployed Ruckus' T710 access points
- Deployed the virtual SmartZone (vSZ)

BENEFITS

- The Ruckus Wi-Fi solution is enabling GCET to deliver high-performance broadband services at competitive pricing benefiting low-income residents
- Increased the quality of coverage to all customers
- Ease of management with the use of the vSZ

CITIZENS OF GREENFIELD RECEIVE FAST, RELIABLE, COST-OPTIMIZED INTERNET ACCESS

Today, reliable broadband Internet access is an essential service for both businesses and residents. Companies rely on broadband Internet to conduct virtually all aspects of the business. Residents view broadband Internet critical to school, research and communicating with family, friends and the outside world. Cities that have widely available reliable broadband Internet access can attract new businesses and citizens more easily. However, many towns still do not have reliable broadband available and that creates challenges in today's digital economy.

THE CHALLENGE

Greenfield, a town in western Massachusetts, is like many other communities. According to Daniel Kelley, general manager of Greenfield Community Energy and Technology (GCET), "Greenfield is a manufacturing town that has lost many jobs over time and is losing residents. One critical challenge facing the town is its lack of reliable, broadband Internet access. The existing broadband infrastructure is outdated and not capable of handling the bandwidth to meet the current requirements for businesses and residents." Due to the rural nature of the town, there has been very little investment in broadband technologies. Roughly 40 percent of the community is underserved for broadband Internet and students lack adequate broadband due to affordability concerns. The lack of broadband access in the city is a hindrance to new businesses and citizens interested in making Greenfield their home.

SOLUTION

Recognizing the need for reliable, broadband Internet access, Greenfield's Mayor William Martin went on a mission to give Internet access to every citizen and business without any cost to the town taxpayers. The city and its citizens created GCET to carry out this mission.

GCET chose the Ruckus T710 outdoor access points (APs) and the virtual SmartZone™ (vSZ) software platform as the Wi-Fi solution because of its excellent performance capability to support requirements today and for the future. The T710 APs support the 802.11ac Wave 2 Standard, allowing GCET to deploy more bandwidth to more devices. These APs also deliver superior coverage via its patented BeamFlex™ antenna system to support multiple concurrent point-to-point connections into homes and businesses, along with critical mobile devices via the Ruckus Hotspot 2.0 solution.

"The Ruckus T710 APs offer true 'Carrier Class' functionality that is designed for network operators. This is critical to optimize the costs of its large scale outdoor deployment and ensure high customer satisfaction across a range of

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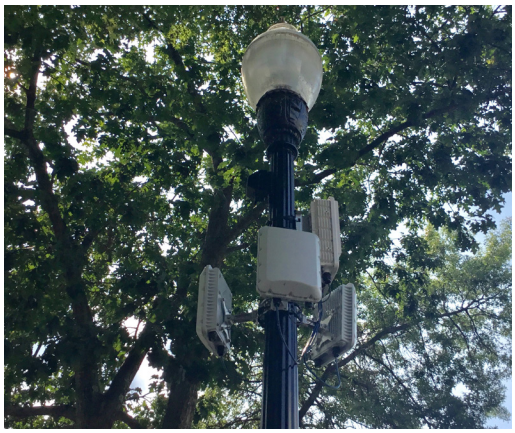

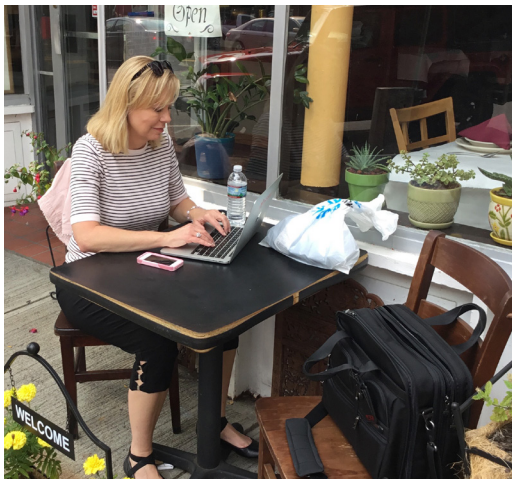

"The Ruckus T710 APs offer true 'Carrier Class' functionality that is built for a Carrier-Class network operators. This is critical to optimize the costs of its large scale outdoor deployment and ensure high customer satisfaction across a range of outdoor environments."

DANIEL KELLEY
Greenfield Community Energy and Technology (GCET), General manager

outdoor environments. The Ruckus T710 allows GCET to implement its Gbps-speed, fixed wireless and Hotspot 2.0 solution as a more effective and cost-optimized alternative to the mainstream broadband FTTH (fiber to the home) solution," stated Kelley.

"The Ruckus Wi-Fi solution provides superior management capabilities including the vSZ controller that enables GCET to scale out and provide redundant management and control, as well as granular licensing and full diagnostic capabilities. GCET is able to leverage the open APIs to pull data out of the vSZ and into the Greenfield data analytic systems for analysis. In addition, we are able to host the management solution on the AWS cloud platform which is critical," continued Kelley.

For broadband services to residential and small/medium sized businesses, a secured fixed wireless connection is utilized to send the Ruckus Internet and Voice Over Internet Protocol (VoIP) services to the home/business. This solution consists of an 802.11ac outdoor transceiver which is placed outside of the home (or even inside the home by a window). The transceiver connects via Ethernet to an indoor 802.11ac AP/gateway that provides Internet and four Ethernet port connections to in-home devices.

The Ruckus Wi-Fi solution enables GCET to deliver high-performance broadband services at competitive prices, which include mobile Internet and phone access within the city limits. This cost-effective pricing benefits low-income residents since they can now obtain high-quality broadband Internet for less than $10/month. A tiered broadband Internet service is available to residents and businesses for prices far below the incumbent operators.

"This will be delivered at no cost to the city or taxpayers," stated Kelley. "GCET competes with the cable and telephone companies by providing superior networks and services at lower costs. GCET is rate-payer, not tax-payer, funded with a sustainable business model built on community reinvestment."

GCET will be able to provide fixed broadband to all business and residential areas and Wi-Fi to people around town through a simple portal login.

In addition to providing broadband Internet service, the solution enables GCET to service less privileged families who are not able to get broadband Internet. "Having no broadband access puts students of these families at a major disadvantage so it is imperative to GCET that these families receive broadband Internet," concluded Kelley.

With the initial Ruckus Wi-Fi deployment consisting of 900 T710s, GCET plans to obtain 90 percent coverage across the town, filling in the gap areas over time. Within a short time, Greenfield residents and businesses will be able to access true broadband Internet with reliable, gigabit speeds.

RUCKUS™ an ARRIS company

350 West Java Dr., Sunnyvale, CA 94089 USA

www.ruckusnetworks.com

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