

Spotlight City: Wilson, NC

About Wilson's Broadband Work

The City of Wilson is a community of about 50,000 people, located halfway between New York and Florida, which has evolved from being known as the world's largest tobacco market to being North Carolina's first Gigabit City. Since 2008, Wilson has owned and operated a gigabit, symmetrical, fiber to the home network called "Greenlight" that is available to every home and business in the community. It utilizes this next generation internet infrastructure to ensure that all its businesses and residents can remain competitive in the global, knowledge-based economy, including providing free 100 Mbps symmetrical access to its computer labs in public housing neighborhoods and public library, and free wifi throughout the downtown as well as many public parks.

What Drove Wilson's Decision?

Greenlight is driven by three guiding principles: supporting the economic health of the community, improving the delivery of city services, and enhancing the quality of life for the citizens of Wilson. These guiding principles and Wilson's long history of public ownership of critical infrastructure, including water, gas, and electricity, shaped the perspective of its city leadership as it assessed the impact of 21st century global forces on its local economy. Tobacco and textile industries had moved overseas; markets were globalizing, not localizing, and the new century economy was heavily dependent on information exchange. Even internally, the City saw its municipal needs acutely sensitive to the speed with which data flowed. The responsiveness and effectiveness of its police and fire safety services, for example, was impacted by how quickly locational data could be updated. City leaders researched the question of how to be competitive in this environment, how could they best deliver municipal community services and enhance the opportunities for its businesses and residents. The answer was to deploy the next generation of information infrastructure: fiber to the home. This was a natural outgrowth of Wilson's municipal electric provisioning -- the municipality was already providing utility services. It owned poles. It had billing systems. It owned the trucks. It employed electrical technicians.

What Challenges Did Wilson Have to Overcome?

Due to the visionary leadership of Wilson's city council, the community was significantly ahead of the national curve on the deployment of next generation broadband technology. This meant the community had to blaze new trails, learn by doing and lead on the bleeding edge. At the time of their fiber network construction, the technology and expertise of the day was in cable video and hybrid coax cable systems, not fiber to the home. The word broadband did not really exist. And fiber optics, while well-known in the defense industry, was just starting to be noticed by municipal electric utilities because of the downward spiral in its cost and improvements in associated installation and operational equipment.

Deploying a technology superior to hybrid coaxial systems also meant being seen as a competitive threat. For four years, Wilson found itself lobbying at the state legislature against a legislative campaign to prohibit it, and all North Carolina municipalities, from providing these next generation broadband services to their citizens and businesses. In the fourth year, the municipalities lost this battle, and specific to Wilson, the law limited its broadband service area to only one of the six counties it serves with electricity.

How Has Broadband Benefitted Wilson?

Next Generation Economic Development: Local control over world class broadband infrastructure in a global information economy has moved Wilson to the top of the list for places that offer affordable, modern next generation lifestyles. The community has seen the beginning of this metamorphosis with the immigration of creative class entrepreneurs and businesses whose livelihoods depend on maximum upload capacity. Examples include companies like ExodusFX.com, a special effects film company, who literally scoured the world for affordable housing and high capacity symmetrical broadband service and chose Wilson; radiologists who moved to Wilson because they wanted to work from home, web designers, video artists and photographers who could finally upload their massive data files in minutes not days. Few communities in the country offer Wilson's small business incubator services that provide Gigabit symmetrical speed, a fully equipped office with desk phone, file cabinets, mail room, 24/7 security, and front desk receptionist for \$250/month.

Local Control: Next generation infrastructure under full control of the local community means the community's mission critical services will always be responsive to the needs of the local community, rather than be controlled by the short-term profit needs of a corporation headquartered states or countries away. This local flexibility has allowed Greenlight, for example, to respond to the needs of its small businesses, by providing single-event, on demand, large bandwidth increases, returning the customer to its regular service the next day. It has meant being able to provide Gigabit speeds to every school in the Wilson County public school district, and 10 Gigabit service to its administration offices. It has ensured that anyone in the community who needs 100 Mbps free access to the network can find it at the public library or even at community centers in the public housing neighborhoods.

Local ownership has also meant keeping all revenues local and facilitating the multiplier effect of local spending. This includes bringing e-rate revenues into the community instead of them never touching North Carolina soil. Local ownership has also meant that Wilson's businesses and residents are all served by local employees who are members of the community, whom they see in church, at the soccer field, or at the baseball stadium. That level of eye to eye accessibility ensures responsive customer service.

No One Left Behind: For Wilson, being able to offer the fastest residential speeds in the world to the least privileged members of the community means being able to catalyze their self-reliance and self-determination. Community ownership of the local broadband network has meant the municipality has been able to offer free 100 Mbps symmetrical service in its public housing neighborhoods, to the public library and to after-school youth programs, ensuring that a lack of income to own a car or a computer does not get in the way of long term educational and job opportunities.

Effective Public Services: Wilson has learned that local community control over its mission critical infrastructure has also facilitated increased effectiveness for Wilson's public safety staff. For example, prior to the completion of its municipal fiber network, city staff were required to physically drive CD ROM updates of all pre-incident and pre-plan surveys to the City's fire and police stations. (Such information is used for responding to fires, trouble calls or emergencies and includes data such as fire hydrant locations, water flow charts, architectural drawings, building surveys and geophysical photographs. It is data critical for saving and protecting both public and public safety officials' lives.) The productivity cost for staff to drive this data around town was self-evident, pulling them away from their daily responsibilities, and desks, for a large portion of their work week. Imagine the difference now with the Gigabit fiber capacity in place. These updates can be done repeatedly, spontaneously and rapidly,

guaranteeing the latest information is available for Wilson's public safety officials to ensure its community's safety.

Beyond being able to access massive amounts of critical public data quickly, Wilson's public safety officials have also been able to significantly enhance their agility and responsiveness during the numerous large community events for which the City is widely known. Safety officials are able to easily hang high definition cameras from various fiber points throughout the community to survey for potential welfare, health or traffic hazards.

What Lessons Has Wilson Learned?

These are snippets of wisdom picked up along the way:

Reach out and talk to other communities who have already gone down this path; utilize their 20/20 hindsight. Listen to them carefully.

Don't reinvent the wheel. Building a fiber to the home project is not the time to be pilot testing newly designed equipment.

There is no one model for a community. All models must be explored and all potential partners and stakeholders need to be engaged.

If you conclude that the best model for your community is direct service provisioning, don't be afraid to approach a fiber deployment in phases, an approach which will allow you to establish your resources and embed your expertise, and design the network for possible later expansion. Consider building the municipal fiber backbone network first and moving municipal and public services to it; once your expertise and infrastructure is established, then reach out further into the community, whether this is to just the business community or the entire population.

Especially for municipal utilities - recognize you will be entering a competitive service area. This will require a whole new mindset from being the sole provider in your community.

Maintain community support across all sectors. Let your community know they are the owners of this new network, that means locally owned, and establish local pride and constant education.

What Does the Future Hold for Wilson?

Wilson's Greenlight operation will continue to develop innovative applications through the use of its Gigabit network that will support the economic health of the community, improve the delivery of city services, and enhance the quality of life for the citizens of Wilson. Interwoven into these goals is the desire to use this critical infrastructure to create seamless access to world class broadband speeds from any location in the community, to reduce, and ultimately remove, any potential digital divide in the community, and to provide every technology incentive to keep our young people in the community throughout their lifetime. As reflected in the words of Matt Edwards, the Executive Director of SPOT, one of the after school programs that Greenlight supports with free next generation broadband service, "Let's be honest...when it comes to technology...the kids are teaching us. Our role is to bring them access to the world and to guide them in that adventure. Greenlight makes that easy."