



# HOMEGROWN TOOLS

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## for ECONOMIC DEVELOPMENT

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Homegrown Tools tells the story of small towns that have successfully stimulated private investment and job creation. The tool is meant to connect public officials, practitioners, and researchers to successful small town economic development strategies and inspire small towns to leverage their unique assets. Homegrown Tools is managed by NCGrowth, an EDA University Center at UNC Chapel Hill, in partnership with the UNC School of Government, the Federal Reserve Bank of Richmond, the NC Rural Center, and the UNC Department of City and Regional Planning.

**HOMETOWN  
STRONG**

COMMUNITY FOCUSED PARTNERSHIPS



# Wilson County, North Carolina

Points of Interest	County Data
Population (2019)	81,801
Municipal budget (2020-2021) source: wilson-co.com	\$103,803,536
Per capita income (2019)	\$24,273
Median household income (2019)	\$42,850
Poverty rate (2019)	21.1%
Minority population (2019)	53.2%
Proximity to urban center: Raleigh	54 miles
Proximity to interstate/highway: I-795	8 miles
Economic Development Strategy	Broadband, Workforce Development

## Time Frame for Implementation: 2019-2022

### Synopsis

After building Greenlight, North Carolina’s first and only community-owned fiber network, Wilson County needed fiber technicians to install and maintain the network’s growing infrastructure. To meet this workforce need, Wilson County leveraged its unique assets in the tech industry to develop fiber optics training for anyone looking to develop skills in the industry. The fiber optics training program was such a success that in 2019 the County worked to expand the program and increase access to it. By leveraging its existing strengths in tech and creating workforce opportunities for residents, the County worked to expand tech opportunities across the region.<sup>1</sup>

<sup>1</sup> GigEast Exchange – December. “Fiber-Rich Wilson Moves Forward with Advanced Workforce Training.” WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

## Introduction

Greenlight, Wilson County's community internet is the only locally owned fiber network in the state of North Carolina. Community members support Greenlight through service fees. In 2019, Greenlight partnered with Wilson Community College and Gig East to kickstart a fiber optics training program to train workers in this emerging industry and to stake a claim as a key fiber optics center in North Carolina. The county developed a 10-week training course and a four-and-a-half-day intensive boot camp. These programs provide hands-on training for important skills in the fiber technology industry such as building fiber enclosures and splicing fiber. Participants come from all over North Carolina, and those who can't drive back and forth to Wilson County for the 10-week program can stay in town for the four-and-a-half-day intensive course.<sup>2</sup> As more companies offer remote work, establishing strong fiber optics across the state is becoming increasingly necessary for rural economies to remain competitive. Building on the county's expertise in fiber and tech infrastructure, the training program continues to develop and meet the needs of North Carolinians.



## The Community and its History

Wilson County was formed on February 14, 1855 from Edgecombe, Nash, Johnston, and Wayne Counties.<sup>3</sup> The County Seat, also named Wilson, was established prior to the county's formation in 1848, along the Raleigh to Wilmington railroad. The town's formation was an effort by state senators Wyatt Moye and Joshua

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2 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

3 North Carolina Counties (to access links to NCpedia articles for all 100 counties) by Elizabeth Bayley. "Wilson County." NCpedia. Accessed July 16, 2020

Barnes, both of Edgecombe County, to combine two train stops, Toisnot Depot and Hickory Grove.<sup>4</sup> The new county of Wilson had accessible routes to both major cities, transforming the area into a viable trading town. Both the county and the town were named after Louis Dicken Wilson, a well-known politician and military officer who died in the Mexican American War. Since its formation, Wilson County has proven to be adaptable yet well rooted in its sense of place and history.<sup>5</sup>

Wilson County provides a varied landscape for its residents. The land is flat and coastal on the eastern half, and hilly on the western side which is closer to the piedmont region of North Carolina. The Contentnea Creek runs through the county, and swampland consumes portions of the region, although there is much less swampland now than there was decades ago.<sup>6</sup> This rich natural land created an abundant agricultural industry. While the cotton industry dominated the region for much of the 18th and 19th centuries, the county switched to tobacco around 1890. By 1920, Wilson was known as “The World’s Greatest Tobacco Market.” Today, the agricultural industry produces on average more than \$100 million each year.<sup>7 8</sup>



Wilson County today offers an eclectic mix of activities and industries for its residents. The area is heralded for its pork barbecue, the North Carolina Baseball Museum, and the annual Whirligig Festival which showcases folk art from around the region. The festival is named after Whirligigs, created by local artist Vollis Simpson, which are 20-50 feet tall and incorporate road signs, ceiling fans, and other scrap materials. This community celebration takes place each November and features artists who work with re-purposed, recycled, and reused materials. History is preserved in the Lucas-Barnes House, built in 1853 and the James Scarborough house, dating back to 1821.<sup>9</sup> While the agricultural industry continues to see success, Wilson has opened its door to pharmaceutical industries, life science research, and building supply manufacturers.<sup>10</sup> Wilson is also home to one of the fastest internet companies in the state.

4 “U.S. Census Bureau QuickFacts: Wilson County, North Carolina.” Census Bureau QuickFacts. Accessed July 17, 2020. <https://www.census.gov/quickfacts/fact/table/wilsoncountynorthcarolina/AGE295219>

5 Website design and web development by Mango Web Design. <http://mangowebdesign.com/> “Wilson County (1855).” North Carolina History Project. Accessed July 16, 2020

6 “U.S. Census Bureau QuickFacts: Wilson County, North Carolina.” Census Bureau QuickFacts. Accessed July 17, 2020. <https://www.census.gov/quickfacts/fact/table/wilsoncountynorthcarolina/AGE295219>

7 USDA. (2017). Wilson County North Carolina. United States Department of Agriculture. [https://www.nass.usda.gov/Publications/AgCensus/2017/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37195.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/North_Carolina/cp37195.pdf)

8 “U.S. Census Bureau QuickFacts: Wilson County, North Carolina.” Census Bureau QuickFacts. Accessed July 17, 2020. <https://www.census.gov/quickfacts/fact/table/wilsoncountynorthcarolina/AGE295219>

9 See also: North Carolina Counties (to access links to NCPedia articles for all 100 counties) by Elizabeth Bayley. “Wilson County.” NCPedia. Accessed July 16, 2020. <https://www.ncpedia.org/geography/wilson>

10 Our History, Wilson County. Accessed July 16, 2020. <https://www.wilson-co.com/our-county/brief-history-of-wilson-county>.

The community owned fiber-to-the-home network created job opportunities, advanced the capabilities of previously existing companies, and continues to serve over 10,800 households.<sup>11</sup> With advanced technology, a deep sense of community engagement, and a dedication to preserving the culture of the region, Wilson County has proven itself to be a forward-thinking community with a diversified economy.

## The Strategy

As North Carolina's first Gigabit City, meaning broadband is available citywide at speeds of 1 gigabit per second or faster,<sup>12</sup> Wilson is known for its community owned and operated internet system called Greenlight.<sup>13</sup>

Greenlight was established in 2008 after Wilson County was refused faster internet by Time Warner Cable. Internet companies such as Time Warner Cable are unlikely to expand high speed internet in rural communities because rural regions are more spread out, making it more expensive to provide internet. After Time Warner Cable's refusal, Wilson established its own thriving internet infrastructure, Greenlight Community Broadband. While many legislatures, including North Carolina's, have since banned municipal-run internet in response to opposition from large, influential internet companies, Greenlight was grandfathered in and is exempt from the prohibitive legislation. Despite being grandfathered in, a federal appeals court decision from 2016 prohibits Wilson from expanding Greenlight to serve neighboring communities.<sup>14</sup>

To fund the creation of Greenlight, the City of Wilson took out a \$30 million loan.<sup>15</sup> By 2011, three years after being established, Greenlight's revenues from membership costs surpassed its expenses making it financially self-sufficient.<sup>16</sup>

After becoming financially stable, the County's next challenge was to ensure that the region's emerging fiber optics industry had a dependable, well-trained workforce to maintain and expand the fiberoptic network. To address this challenge, Greenlight partnered with Wilson Community College and Gig East Exchange (a community space for tech innovators) to develop the fiber-optics training program. The program's goal was to develop a strong local workforce as well as establish Wilson County as the premier fiber-optics center in North Carolina.<sup>17</sup>

The program started out as a 10-week pilot course called "Fiber Optic Basics." The course was led by Greenlight employees and companies that manufacture and supply fiber-optics materials. With the goal of empowering and leveraging the skills required to build a strong, emerging workforce, accessibility was a key concern for the program coordinators. While most fiber optics training courses can cost thousands of dollars, Greenlight priced the entire course at a minimal \$140. The 10-week program received overwhelmingly positive feedback, leading to discussions of continuing and expanding the program.

11 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

12 Maddox, T. (2016, October 26). The path to becoming a gigabit city. ZDNet. <https://www.zdnet.com/article/the-path-to-becoming-a-gigabit-city/#:~:text=Many%20cities%20recognize%20the%20value,businesses%20to%20thrive%20and%20expand>

13 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

14 Brodtkin, J. (2016, August 10). States win the right to limit municipal broadband, beating FCC in court. Ars Technica. <https://arstechnica.com/tech-policy/2016/08/in-blow-to-muni-broadband-fcc-loses-bid-to-overturn-state-laws/>

15 One North Carolina city built their own internet company. How local governments with millions in COVID relief could do the same. (2021, August 26). Erie News Now | WICU and WSEE in Erie, PA.

16 History | Greenlight Community Broadband. (2019). Greenlightnc.Com. Retrieved January 9, 2022, from <https://www.greenlightnc.com/about-us/history>

17 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

The initial 10-week program quickly reached capacity with some participants driving as much as four hours a day to attend.<sup>18</sup> To decrease travel time for these participants and increase accessibility, Greenlight created a shorter “boot camp” version of the program where students attend class eight hours a day for four and a half days. The cost for the “boot camp” version of the training remained low at \$145. The shorter version also quickly reached capacity. Since the shorter course was designed to encourage participants to stay in Wilson for the entirety of the boot camp, it allowed participants to engage with local hotels, bars, and restaurants. Like the 10-week training, the boot camp pulled participants from all over the state, the farthest driving four and a half hours from Asheville.<sup>19</sup> Topics discussed in both courses include the history of fiber optics, the manufacturing process, and specific electronic processes.

Despite the intensive nature of the trainings and the wide range of subjects covered, participants responded with an enthusiasm to learn. According to Gene Scott, Greenlight’s general manager, “energy levels in the classroom definitely peaked when the hands-on training began.”<sup>20</sup> The popularity of the program is evidenced by the fact that the classes quickly fill up every time it is offered.<sup>21</sup>

Moving forward, Wilson County will investigate other ways to expand training options. Wilson County’s community owned internet system has tapped into a key market as the need for high speed and well-functioning internet continues

to expand. Rural communities specifically have an interest in advancing the capabilities of their internet systems. Even though it is illegal for Wilson to expand community broadband outside of the county, these jobs are in high demand from private internet service providers across North Carolina. Communities across the state and the country are expanding broadband access to provide opportunities for work, commerce, and education.<sup>22</sup> Since the COVID-19 pandemic has emphasized the need for connectivity, states are using American Rescue Plan Act (ARPA) money to expand broadband access. Within ARPA, states can seek the \$10 billion Capital Projects Fund to invest in capital assets such as broadband that enable work, education, and health monitoring. States can also seek money from the \$350 billion State and Local Fiscal Recovery Fund, which can be used for necessary infrastructure investments including broadband.<sup>23</sup> With new broadband infrastructure being funded and built across the country, many job opportunities are available to participants in Wilson’s training program.

As such, the program has plans to build on the already existing early college program by creating a two-year fiber optics track through the Wilson Academy of Applied Technology’s High School.<sup>24</sup> As part of this program, students would graduate high school with an associate degree in fiber optics. This program will provide Wilson County with a well-trained workforce that can enter well-paying careers as fiber splicers, premise installers, and technicians. This program will also ensure that the number of fiber optics experts will grow throughout the region and

18 “Greenlight Community Broadband Leads Fiber Training in Wilson, North Carolina.” Community broadband networks. Accessed July 16, 2020. <https://muninetworks.org/content/greenlight-community-broadband-leads-fiber-training-wilson-north-carolina>

19 GigEast Exchange – December. “Fiber-Rich Wilson Moves Forward with Advanced Workforce Training.” WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

20 GigEast Exchange – December. “Fiber-Rich Wilson Moves Forward with Advanced Workforce Training.” WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

21 “Greenlight Community Broadband Leads Fiber Training in Wilson, North Carolina.” Community broadband networks. Accessed July 16, 2020. <https://muninetworks.org/content/greenlight-community-broadband-leads-fiber-training-wilson-north-carolina>

22 National Governors Association. (2021, September 14). Governors’ Broadband Investments are Creating Jobs. Retrieved April 10, 2022, from <https://www.nga.org/news/commentary/governors-broadband-investments-are-creating-jobs/>

23 How States Are Using Pandemic Relief Funds to Boost Broadband Access. (2021, December 6). The Pew Charitable Trusts. Retrieved April 10, 2022, from <https://www.pewtrusts.org/en/research-and-analysis/articles/2021/12/06/how-states-are-using-pandemic-relief-funds-to-boost-broadband-access>

24 GigEast Exchange – December. “Fiber-Rich Wilson Moves Forward with Advanced Workforce Training.” WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

the state. Wilson County now has one of the fastest internet speeds in the state, a reputation as a tech hub, booming infrastructure, and ample job opportunities.

## The Outcomes

- Setting Wilson County apart as a leader in fiber optic technology in North Carolina.
- Increasing the number of skilled employees in fiber optics by providing low-cost and convenient training and by including a two-year track for high school students.
- Providing training for individuals throughout North Carolina, not just in Wilson County.
- Creating and strengthening partnerships between Greenlight, Wilson Community College, and Gig East Exchange that will continue to create learning and job opportunities in Wilson County and throughout the region.

## How and Why the Strategy is Working

**Community-owned infrastructure.** The success of Wilson County's fiber optics training program can be attributed to investment in its community-owned internet, Greenlight. The implementation and continued maintenance of Greenlight ensures that fully trained, fiber optics staff as well as strong internet infrastructure are readily available in Wilson County. These resources provided the backbone for the training itself. The program's design and development could be handled by Wilson County and its residents due to this industry specific expertise.

**Unique Partnerships.** While Greenlight provided the technical and fiber optics expertise, partnerships with Wilson Community College and Gig East ensured the successful development of the 10-week course and the boot camp.<sup>25</sup> Gig East is Wilson County's tech networking and events center. All three groups brought different realms of expertise to the development of the training program. Together they managed the logistics of in-person instruction, promoted the course through interested communication lines and networks, and provided participants with a high-quality course on fiber optics.

## Lessons Learned from the Story

**The value of hands-on training.** Throughout both the 10-week course and the boot camp, instructors discovered that participants preferred hands on fiber optics engagement over classroom instruction.<sup>26</sup> Not only did participants enjoy the hands-on training more, but it allowed for a better understanding of the intricate processes. Moving forward, hands on training could come to be a larger part of the course to increase interest and comprehension.

**Interest in internet training programs.** With a lack of strong broadband and poor internet access presenting itself as a pressing issue, the need for this technical training is as important as ever. Both the 10-week course and the boot camp were full of hardworking students who traveled across the state to access this opportunity. There is no shortage of individuals and groups who want to learn about how to increase internet accessibility for their communities. Many participants even expressed interest in further learning, demonstrating the need for even more technical and specialized coursework.

25 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

26 GigEast Exchange – December. "Fiber-Rich Wilson Moves Forward with Advanced Workforce Training." WRAL Techwire, December 13, 2019. <https://www.wraltechwire.com/2019/12/12/fiber-rich-wilson-moves-forward-with-advanced-workforce-training/>

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