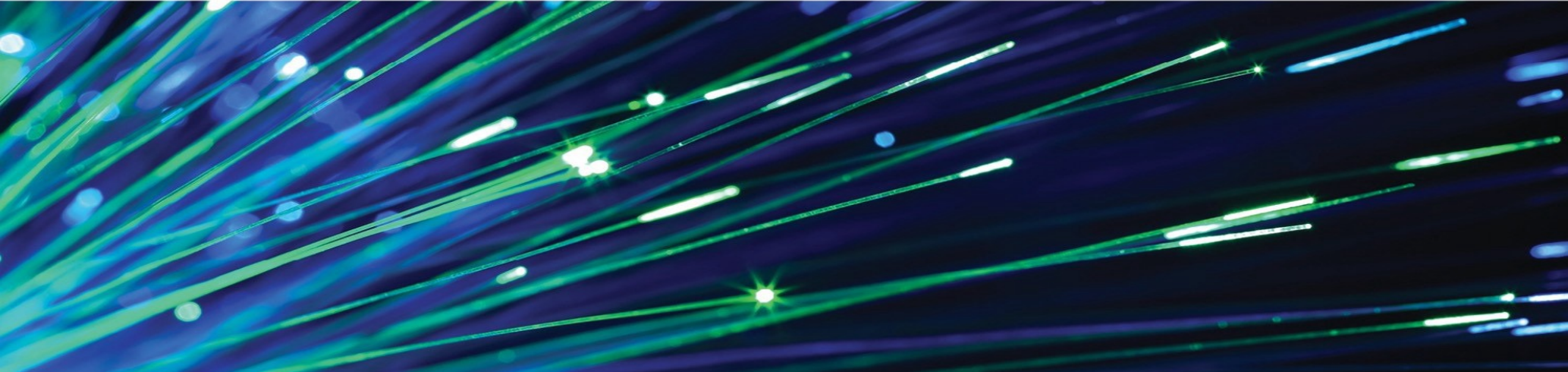greenlight
COMMUNITY BROADBAND

The Need

- A communications network for the future - for everyone
  - Many areas have dialup or no connectivity
  - Slow speeds
  - Poor reliability

Construction

- 2005 - connected all City substations to municipal fiber optic backbone
- 2006 - City asked both incumbent telecommunication providers if they would be interested in partnering to build FTTH network. Both declined.
- 2007 - The City began constructing FTTH network
- 2008 - June 2008, video, voice, and internet service was deployed under the name "Greenlight." By September, Greenlight had over 1,000 members.
- 2009 - access to broadband services is achieved for every home and business in the corporate limits of the City of Wilson.
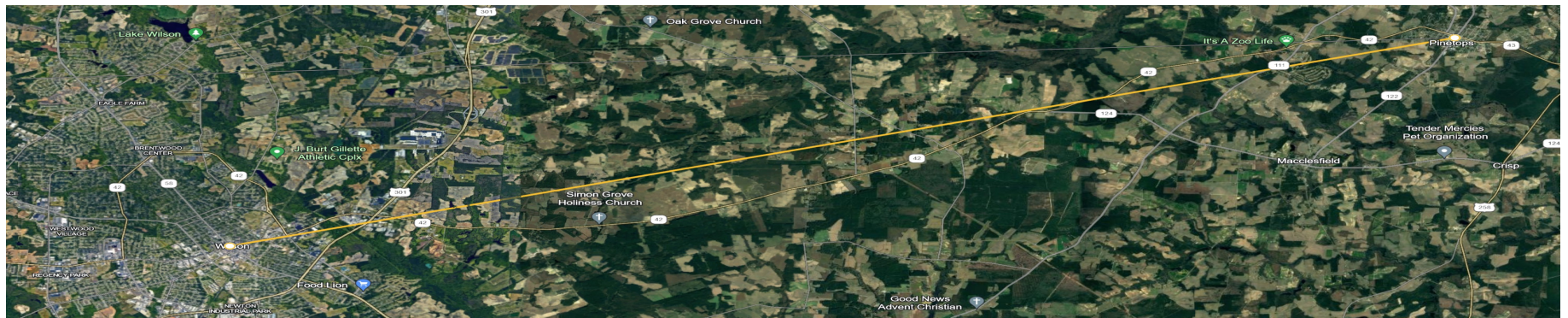

<-1999 2019->

Regulatory Hurdles

- 2011 – H129 is passed.
  - Greenlight is "Grandfathered"
  - State law limits Greenlight's service area to the Wilson County line
  - Electric service area reaches into six surrounding counties
- 2014 – Wilson petitions FCC with request for Greenlight to serve Pinetops and Vick Family Farms in Edgecombe County
  - 7 months later, permission is granted to serve Pinetops and Vick Family Farms

Regulatory Hurdles

- 2017
  - H396 - stop-gap state legislation authorizes Greenlight to continue providing service to Pinetops and Vick Family Farms until a new private sector provider serves these areas with fiber to the home.
- 2018
  - Following H396, a private provider constructs FTTH in Pinetops.
  - This triggers Greenlight's requirement to disconnect their gigabit services
  - Instead, Greenlight sells its Pinetops fiber network to a private sector provider, National Lightnet.

Technology

- 2008
  - Alcatel 7342 GPON Optical Line Terminal (OLT)
  - Alcatel 7750 Service Routers
    - Remote site for core redundancy
  - 1550nm overlay for video
  - 288 count fibers from headend to strategically placed hubs, 1x32 split
  - Speeds of 10Mbps to 100Mbps
  - Consumer Grade wireless routers

Evolving Technology

- 2012
  - Greenlight offers 1 Gbps Metronet to the largest employer in the area
  - Completes fiber ring to all county schools
  - Becomes a POP/Tier 1
- 2013
  - 1 Gbps available to all residential customers
  - Wilson - North Carolina's 1st Gigabit City
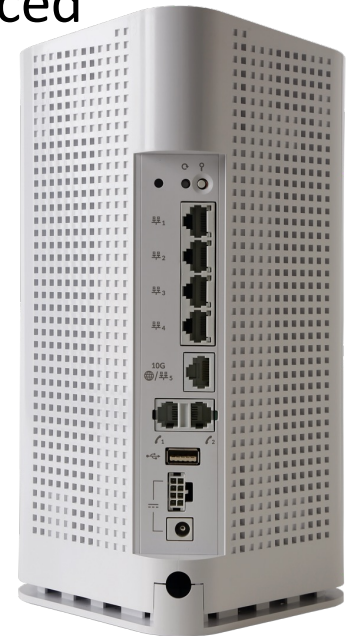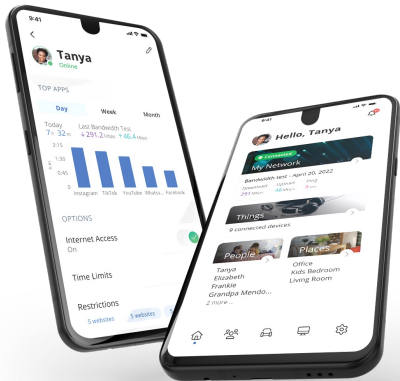
Evolving Technology

- 2020
  - NOKIA 7360 OLT
    - XGS
  - Cisco ASR 9910 Service Routers
  - Transition to streaming TV service
  - Speeds of 100Mbps, 300Mbps, 1Gbps, and 2Gbps
  - Soon to be 300Mbps, 1 Gbps, and "Multi-Gig"
    - Prices have never increased
  - What's next 25G PON – 50G PON?

Evolving Technology

- 2020
  - Internet is Wi-Fi – Wi-Fi is internet
  - Partnered with Calix to include Managed Wi-Fi in some of our most popular tiers, utilizing Wi-Fi 6e technology
  - Allows for a better customer experience and provides advanced troubleshooting tools for Technical Service Representatives.

Curve Ball

- 2020 – COVID-19
- The years of work done leading up to 2020 allowed for a much smoother transition during the pandemic
- Many free wireless access points in public places
- Allowed for an almost seamless transition to remote learning and remote work
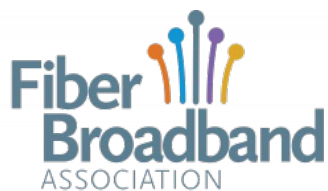
The Future
2024 and beyond

- Navigation East
- Greenlight Education Classes
- RIoT Accelerator Program

The Future
2024 and beyond

- WCC - Fiber Optics Basic Course
  - Fiber Theory – Why Fiber?
  - Fiber cable prep and management
  - Hands-on OTDR training
  - Hands-on Fiber Splicing
  - Careers in the industry

- 25G PON & Beyond – What's Next?