Internet Connectivity

Catawba County Board of Commissioners

December 5, 2016

AGENDA

1. KEY OBJECTIVES & TERMS
2. CURRENT STATE
3. POTENTIAL STRATEGIES
4. MOVING FORWARD


KEY OBJECTIVES
& TERMS

ALIGNING OBJECTIVES

Internet connectivity is not an end unto itself;
it is a ***means to an end***.

- Enhance business attraction and retention while supporting small business incubation and start up.
- Improve educational outcomes by closing the "homework gap" through access solutions.
- Enhance public access through ensuring connectivity at and between major community institutions.

GROUNDING PRINCIPLES

1. Any solution must be market-driven and financially sustainable.
2. Getting in the business of providing internet connectivity directly to citizens falls outside the role of County government.

NC POLICY ENVIRONMENT

- In 2007, the NC General Assembly shifted local governments' franchising authority for cable services exclusively to the State.
  - > In effect, this removed the County's ability to influence local providers' decisions on where and how services should be offered.

- North Carolina law also prohibits counties from providing internet services directly to consumers. (This prohibition does not apply to municipalities, however – which is why the cities of Wilson and Salisbury are offer these services.)

KEY TERMS

HIGH-SPEED INTERNET

BROADBAND

ACCESS

ADOPTION

KEY TERMS

High-Speed Internet

Federal Communications Commission (FCC) defines as minimum speed threshold of 25 Mbps (megabits per second) download / 3 Mbps upload.

Some FCC programs like "Connect America" use thresholds of 10 Mbps download / 1 Mbps upload.

There is common recognition that these speeds will soon be insufficient to support high-bandwidth activities like file streaming, graphic design, etc.

KEY TERMS

Broadband

Another term for bandwidth – or the amount of data that can be sent through a connection – to access high-speed internet connectivity.

Broadband includes several specific transmission technologies: DSL, Cable Modem, Fiber, Wireless, Satellite, etc.

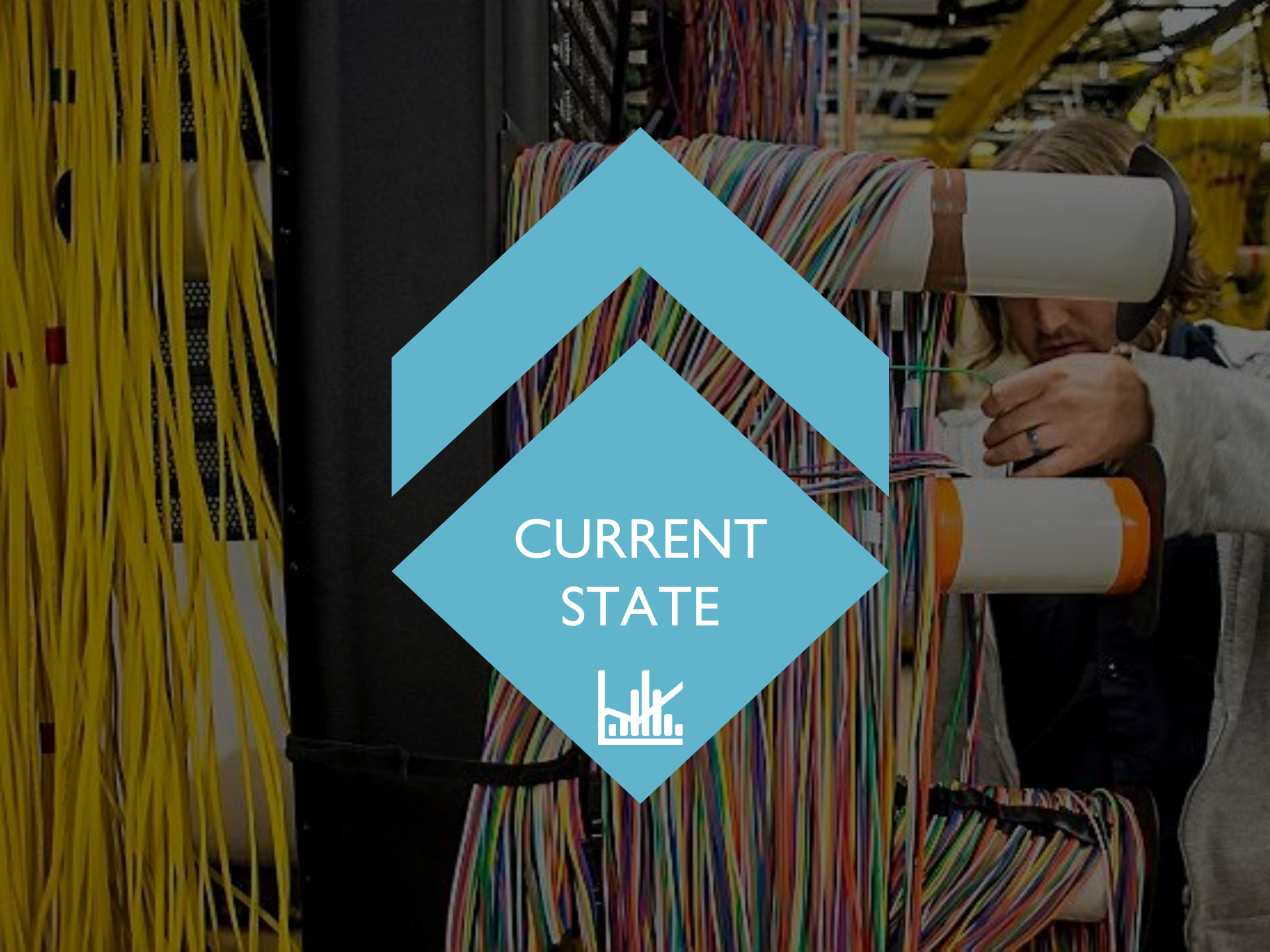
KEY TERMS

Access

Measures availability of high-speed connections

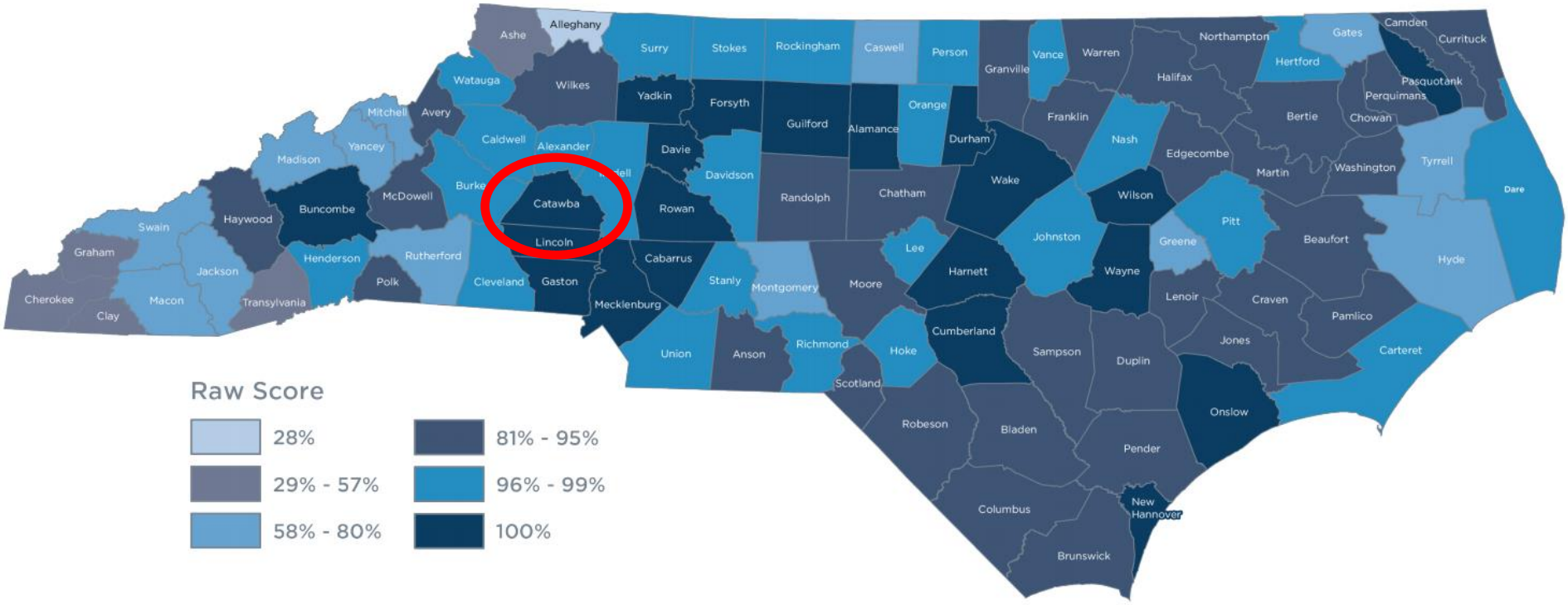
Adoption

Measures subscription rates among the homes and businesses with available connection options


CURRENT
STATE

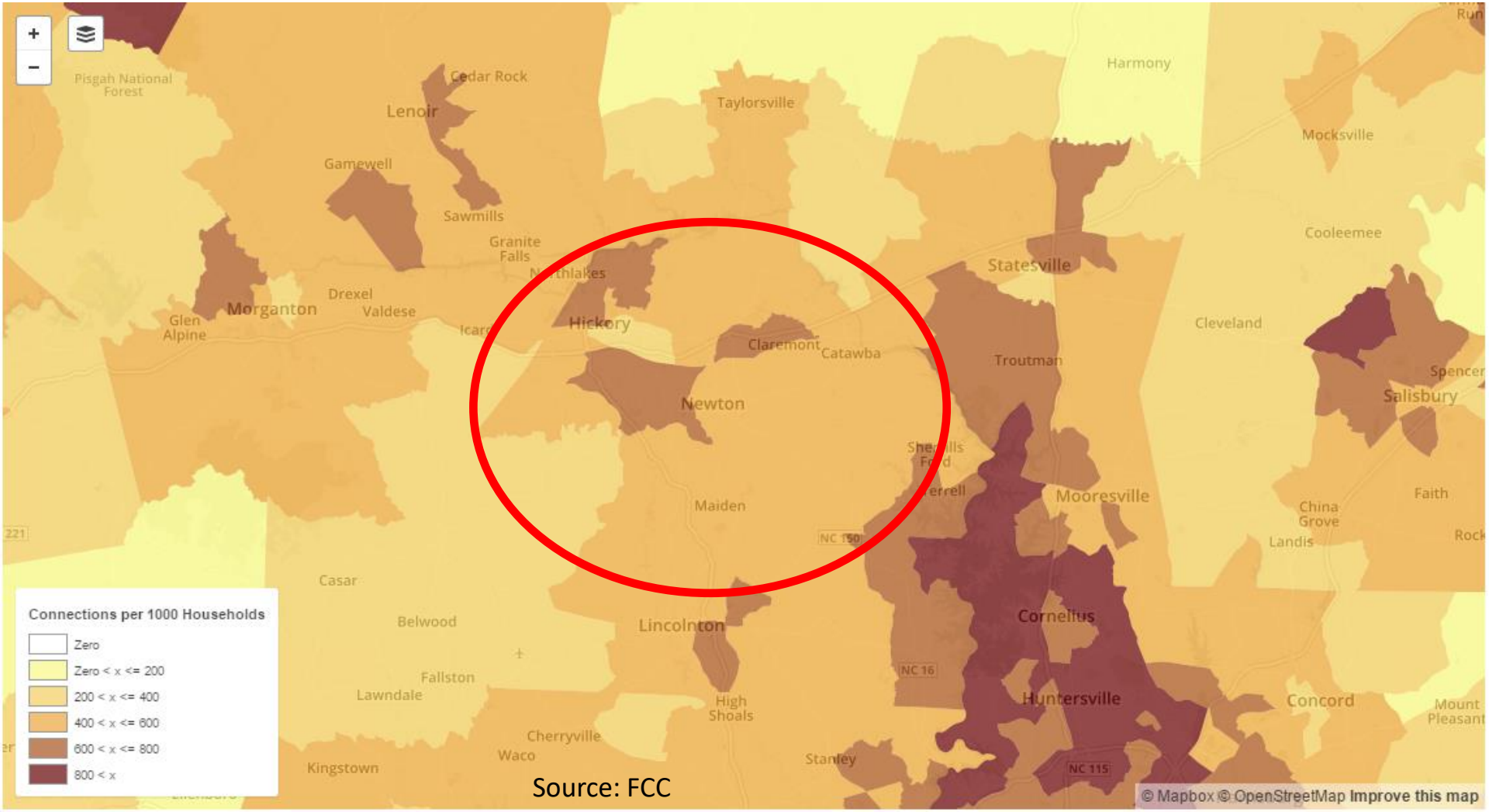
ACCESS MAP

NC Broadband data indicates *100% of Catawba County* has 25 Mbps download speeds available



ADOPTION/ACCESS MAP

Residential connections of at least 10 Mbps per 1,000 households:



Source: FCC

EXISTING ASSETS AND PROGRAMS

COUNTY FIBER RING

EDC TELECOM SURVEY

MCNC NETWORK

DOWNTOWN WI-FI

MOBILE HOT SPOT LENDING

FEDERAL E-RATE FUNDING

COUNTY FIBER RING

In 1997-98, the County installed a modern fiber ring connecting major County facilities to the Government Center, as well as linking the municipalities of Claremont, Conover, Hickory, Longview, Maiden, Newton, and the WPCOG.

This enabled the County to initiate an internet consortium administered through the WPCOG, which provides partner municipalities with internet and VOIP phone service (where requested) at 50% of current market rates for similar connections.

EDC TELECOM STUDY

In 2011, the EDC contracted with ECC Technologies to perform an inventory of the broadband / telecommunications infrastructure and services for 10 key economic development sites within the County as well as educational and public safety infrastructure.

"Overall, Catawba County has considerable telecommunications infrastructure within its boundaries… Catawba County is generally well-served and well-positioned competitively." *– excerpt from Executive Summary*

MCNC NETWORK

Since 2010, MCNC – a Durham-based non-profit – has been building a statewide fiber network called North Carolina Region Education Network (NCREN) providing connectivity to school districts and colleges across the state.

In Catawba County, the MCNC network is in place in each school district and at CVCC, but the districts are not linked together. MCNC has been very responsive to requests to increase bandwidth as necessary.

MOBILE HOT SPOT LENDING

This year, Catawba County Libraries was awarded a 1-year $47,233 State Library Services and Technology Act grant to purchase 40 laptop devices and 30 Wi-Fi hotspots for checkout. This equipment will be deployed in the next few weeks.

The Library is working in collaboration with all 3 school systems to target these devices towards students struggling academically who would benefit from access to technology at home.

In addition to the equipment provided through this grant, the Library also has a limited number of tablets available for check-out.

POTENTIAL STRATEGIES

WI-FI ENABLED SCHOOL BUSES

Installation of on-board Wi-Fi to provide students with Internet access to work on class assignments while traveling to and from school.
Estimated cost: roughly $15,000 per bus

Case Study: Riverside, CA

- District outfitted two school buses as mobile hotspots, with plans to outfit 90 by the project's end.
- Buses are parked overnight at sites throughout the community that lack connectivity on a rotating basis.

Case Study: Decatur, AL

- District eliminating textbooks during digital conversion.
- Piloting Wi-Fi on school buses.
- Working to identify students without access to the Internet at home, parking buses in targeted neighborhoods as Wi-Fi hubs.

DIG ONCE FOR EFFICIENT BUILDING

"Dig Once" policies are a collection of approaches used by local governments that aim to get conduit, fiber, and other assets placed in the ground at a very low cost as part of other projects.

These approaches span a continuum in terms of the role of local government in driving installation of key telecommunications infrastructure.

LEVELS OF GOV'T INVOLVEMENT

Level 1

- Local government requires developer to notify service providers when the ground is open to ensure awareness of the opportunity to install conduit / fiber. (Hong Kong)

Level 2

- Local government requires developer to fund and install conduit, which is deeded to the local government after project completion.
  - A. In targeted areas, for strategic purposes. (Mt. Vernon, WA; Lawrence, KS)
  - B. Throughout the community. (Poulsbo, WA; Sandy, OR; Santa Monica, CA)

Level 3

- Local government funds installation of conduit and fiber throughout community and, once completed, leases to service providers. (City & County of San Francisco)
- Local government requires developer to extend fiber/fiber pathways from right-of-way to building, along with internal cabling or pathways inside the structure. (Loma Linda, CA)

DIG ONCE FOR EFFICIENT BUILDING

Based on the examples provided in the previous slide…

What role (if any) is the BOC comfortable playing?


MOVING
FORWARD

MOVING FORWARD

The Library is developing a grant application to launch a mobile library, which would include an outreach librarian, mobile devices for check-out, and mobile Wi-Fi that could move throughout the community to bring connectivity into underserved areas with sub-par access.

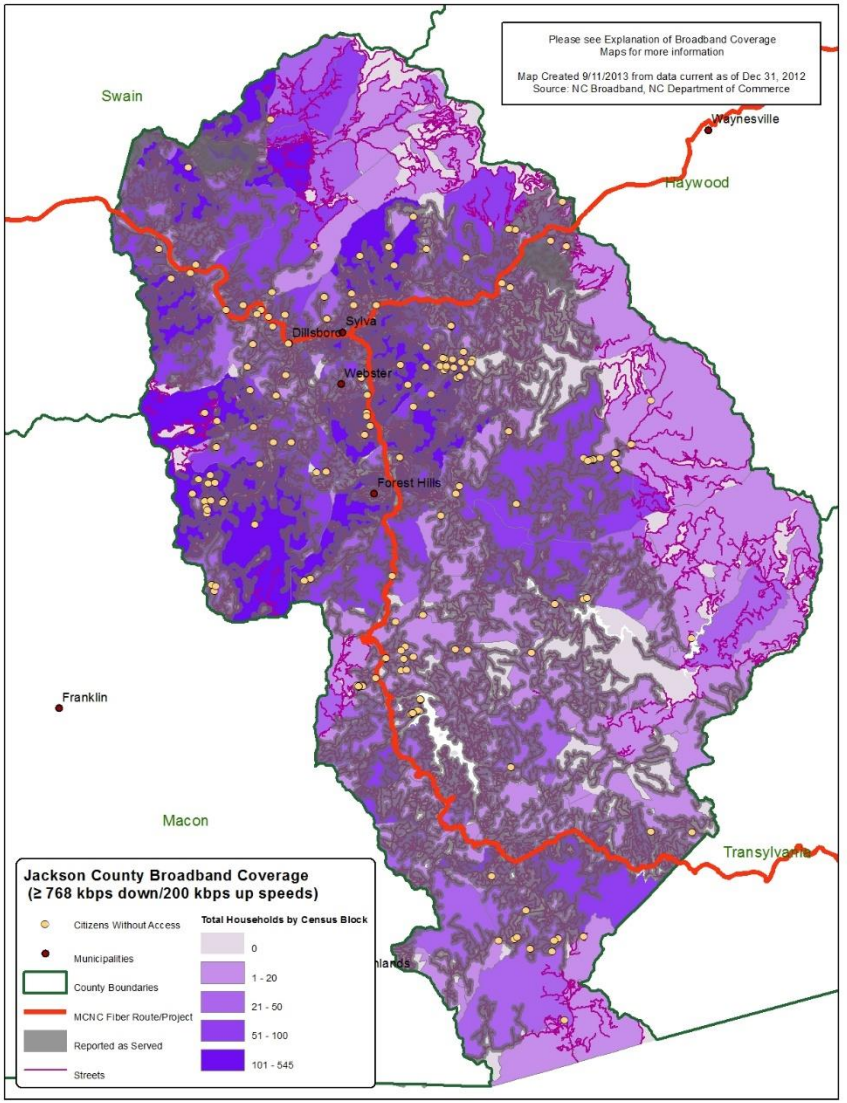
Additionally, the Library will continue to pilot the mobile hot-spot program.

Are any of the strategies discussed earlier of interest to you?

PILOT BROADBAND SURVEY

With input from schools, partner with ncBroadband to identify a high-potential pilot area for a broadband survey to gain a deeper understanding of the market dynamics at work

As an example of results, Jackson County completed a broadband survey in 2012.



Questions? Comments?