

Community-Led Broadband

ElectriCities Connections Summit

February 20, 2020



Overview



- Key terms
- Types of technology
- Partnerships
- Legal landscape
- Role of local leaders
- Resources



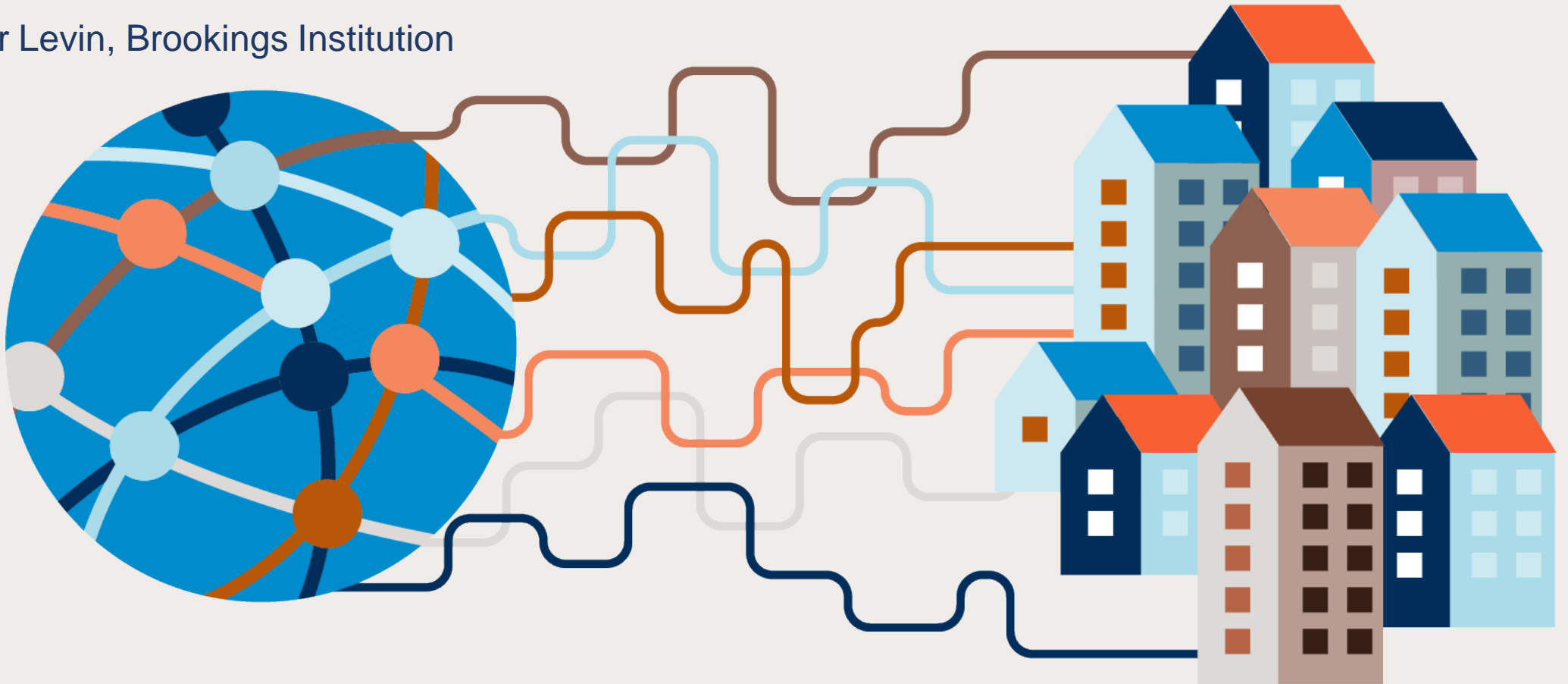
Leaping the Digital Divide

*Encouraging Policies and Partnership to Improve Broadband Access
Across North Carolina*

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Foreword by Blair Levin, Brookings Institution



Key Terms



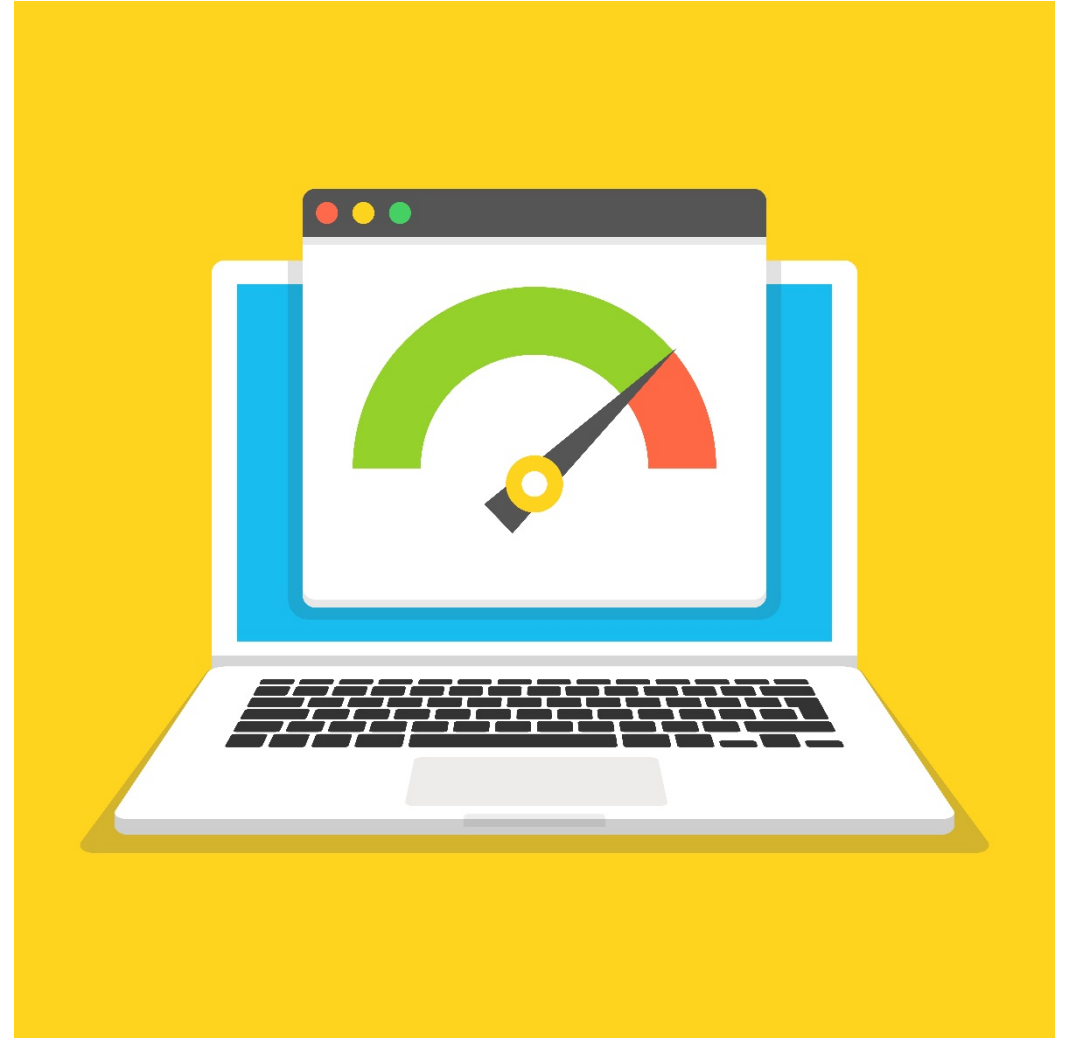
- What is broadband?
- Type of technology?
- Internet speed?
 - FCC definition: 25/3 Mbps

B R O A D B A N D

Key Terms



- Describing internet speed
 - Megabits
 - Download/upload
 - Gigabit
 - 1,000 Mb
 - Symmetrical speeds

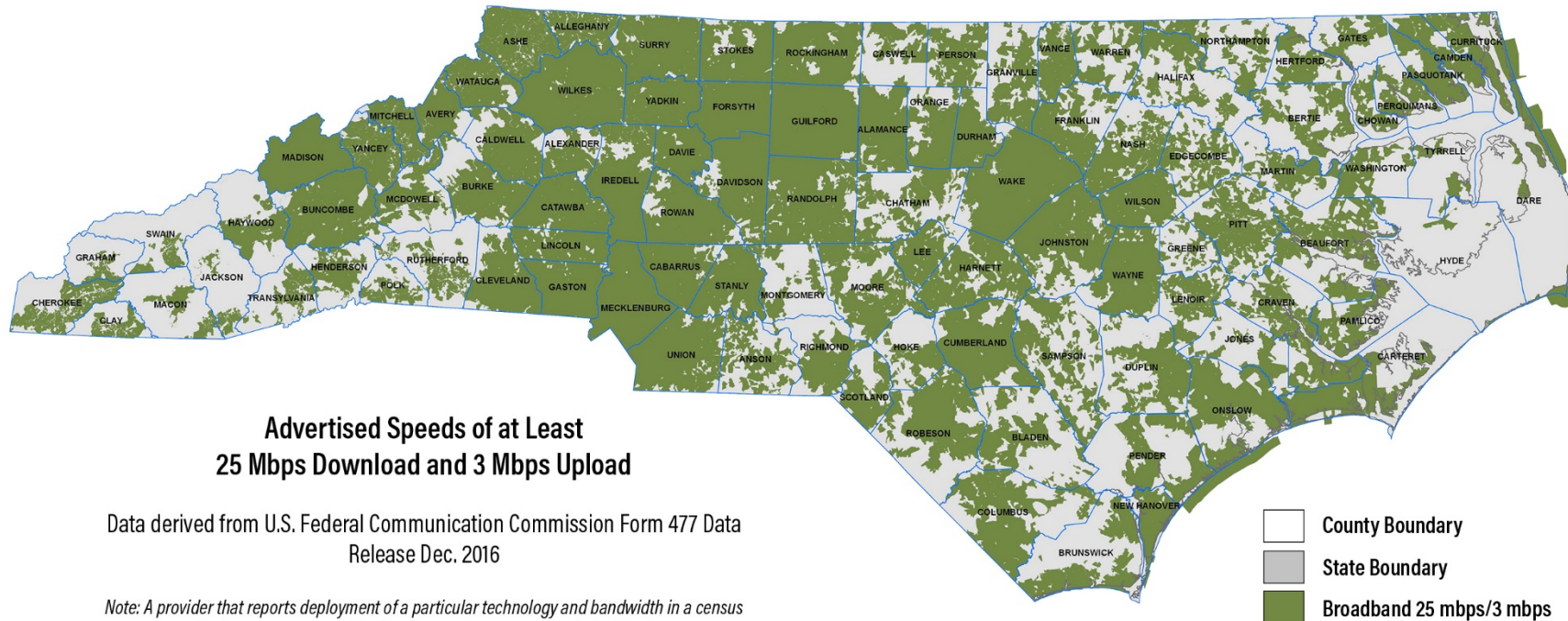


Key Terms



- FCC data is inaccurate, overstates level of service

BROADBAND SERVICE INVENTORY FOR NORTH CAROLINA

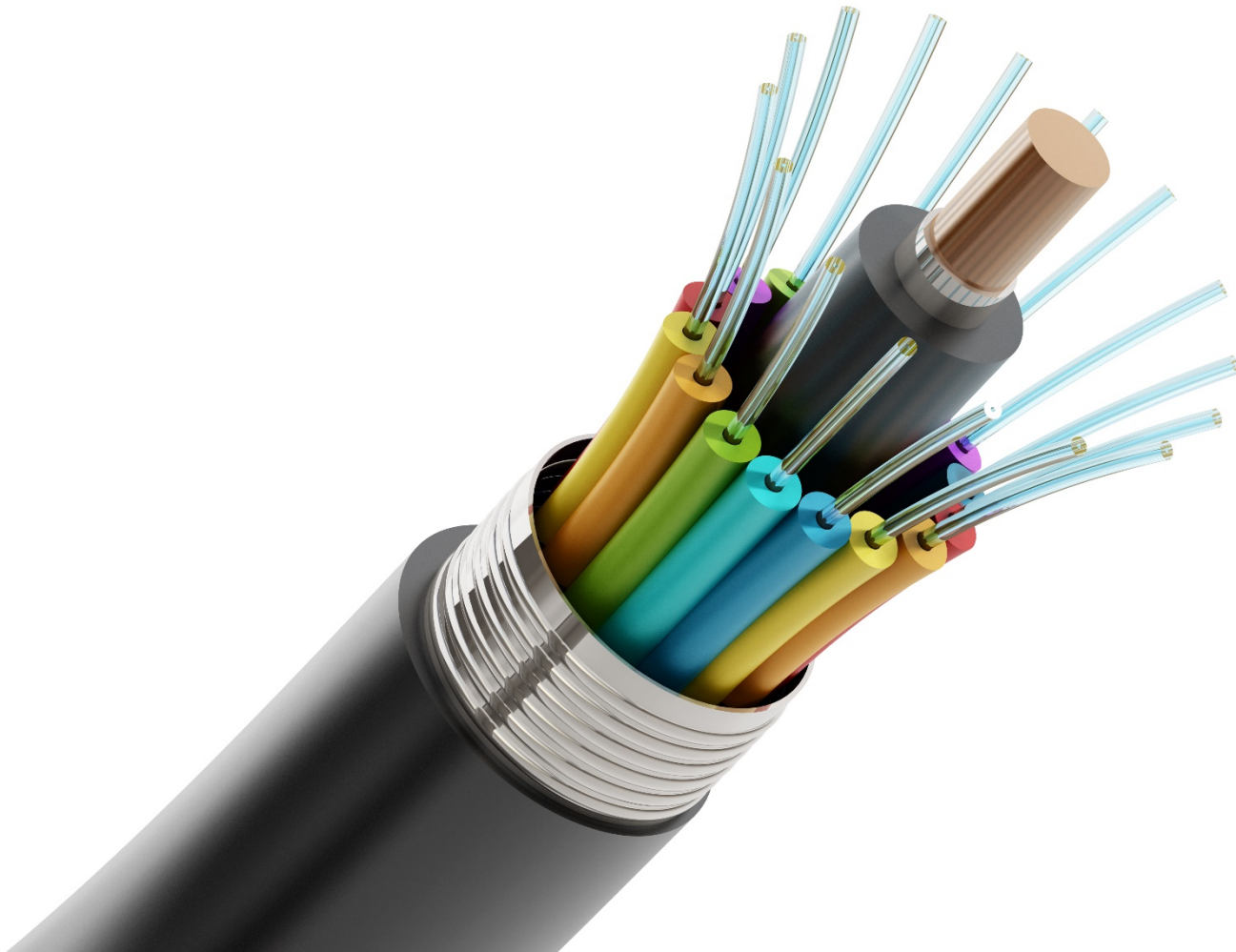


Key Terms

The background image shows a construction site for fiber optic infrastructure. Several large, grey, flexible conduits are laid out in a trench. Bundles of orange fiber optic cables are visible, some coiled and others running straight. Two orange buoys are attached to the cables. The ground is a mix of brown soil and grey gravel.

- Broadband infrastructure
 - Middle mile/last mile
 - Dark fiber/lit fiber
 - Backhaul/electronics
 - Conduit
 - Wireless vs. wi-fi

Types of Technology



- Fiber

- Future-proof technology
- Enormous bandwidth at symmetrical speeds
- No interference
- No amplifiers
- No corrosion

Types of Technology

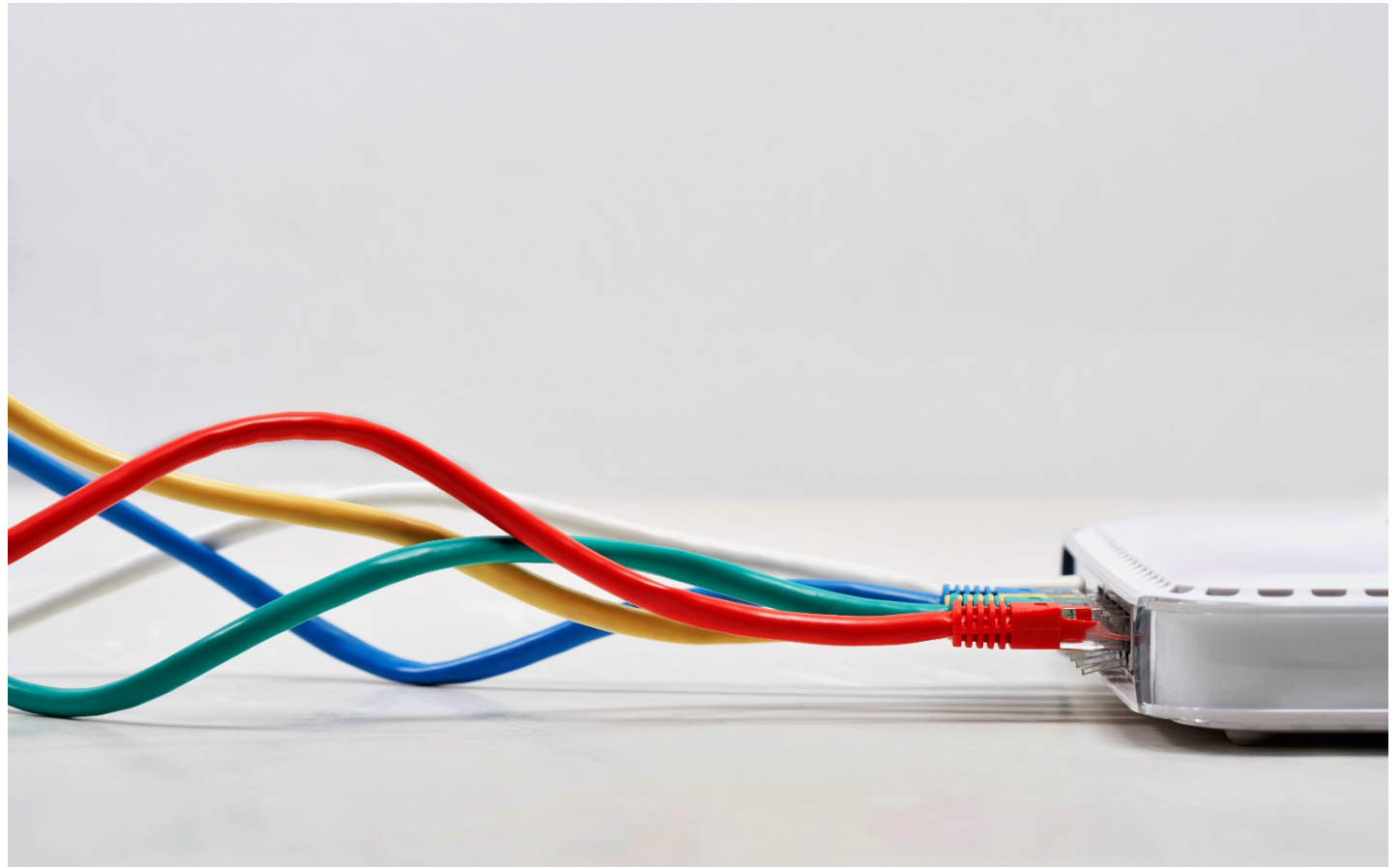


- Cable
 - Primary means for broadband in U.S. now (it's ubiquitous)
 - Larger bandwidth than all other technologies besides fiber, though it is still limited
 - Rush-hour slowdowns

Types of Technology



- DSL
 - Copper phone lines
 - Ubiquitous, but obsolete
 - Extremely limited bandwidth
 - Interference
 - Signal loss



Types of Technology

- Fixed wireless
 - Antennas on base station near customer → send signals wirelessly
 - Used as a last-mile solution in low-density areas
 - Limited bandwidth
 - Rush-hour slowdowns
 - Need line of sight to function → subject to interference from vegetation, buildings, weather



Types of Technology



- 3G/4G LTE mobile broadband
 - Platform for most mobile services
 - Can be faster than many residential speeds
 - Severely limited upload speeds
 - Not reliable
 - Expensive/data caps

A close-up photograph of a laptop keyboard. A key with the letters 'LTE' is prominently displayed in the foreground. The background shows other keys and a dark blue overlay containing a white Wi-Fi symbol.

LTE

Partnerships



- Why public-private partnerships?
 - Revenue stream
 - Cost of building infrastructure is high
 - Public partner may lack expertise to operate system & serve customers
 - Desire to serve unprofitable areas → digital inclusion goals
 - Public entities historically invest in infrastructure with a long life span & wide community benefits

Partnerships



- Who are typical partners?
 - Internet service providers (ISP's) are the private partners
 - Public partners
 - Local governments (cities, counties)
 - Schools, colleges & universities
 - Nonprofit partners
 - Electric/telephone cooperatives
 - MCNC
 - Others



Legal Landscape



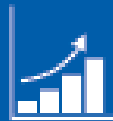
- Law is different for cities and counties
- But is gray for both types of local governments
- Clarity in the law is needed so both have authorities necessary for partnerships
- Electric co-ops needed statutory changes, too



Legal Landscape



Local Governments Need Explicit Authority to:



Raise money for broadband infrastructure, including taxes and borrowed funds.



Spend money on broadband infrastructure.



Lease infrastructure to the private and non-profit entities that will operate and profit from using the infrastructure.

Legal Landscape



- Strategies local governments may undertake now
 - Streamline permitting to accelerate ISPs' access to right of way
 - Prequalify third-party inspectors
 - Publish useful data
 - Perform timely, accurate w/s locates
 - Offer space in government buildings
 - Recruit customers



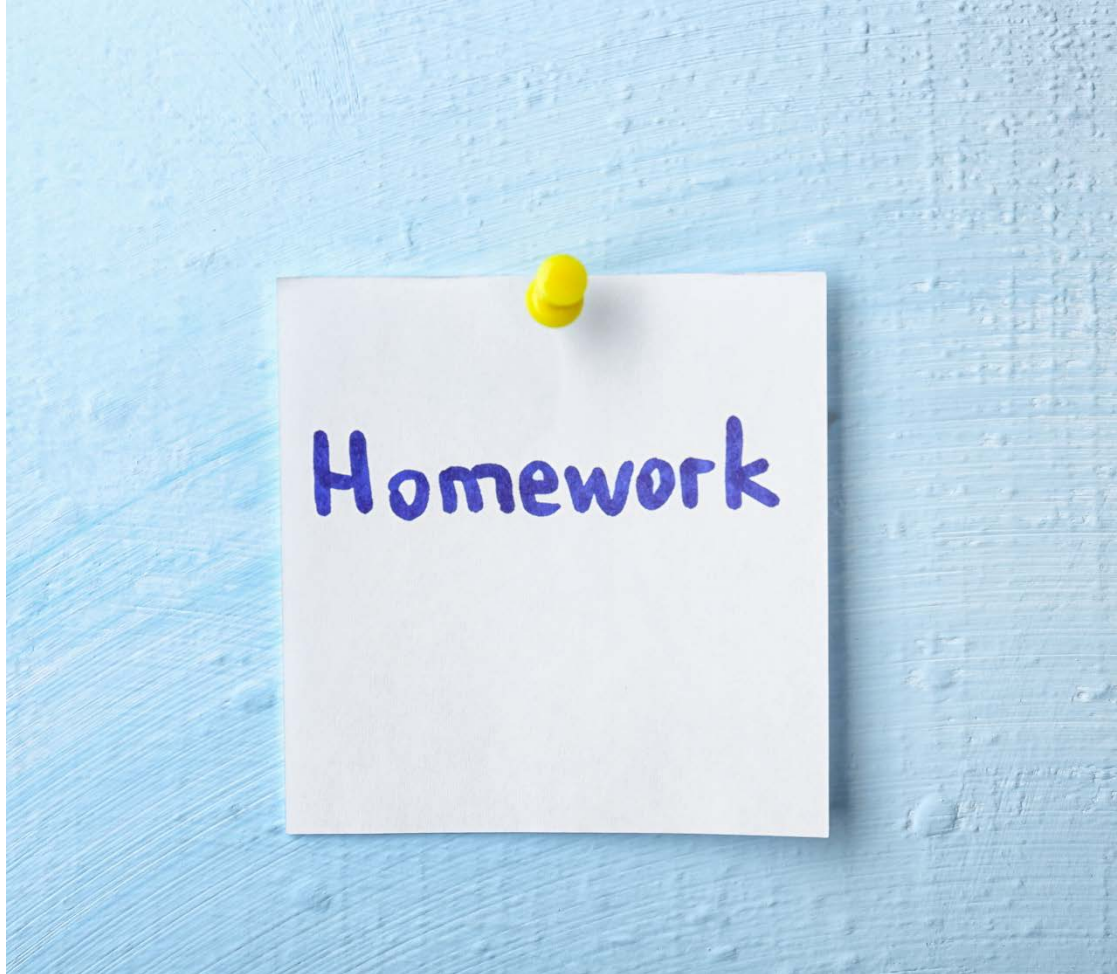
Legal Landscape



- Strategies N.C. General Assembly may authorize
 - Require installation of fiber in all new building construction
 - Dig-once policy
 - One-touch make-ready policy
 - Grant program
 - Require NCDOT & NCRR fiber installation in all construction
 - Digital literacy programs
 - Subsidies for low-income subscribers



Role of Local Leaders



- Do your homework
 - Learn the issue, key terminology
 - Seek out experts
 - Know limitations of the law
 - Inventory locally-owned assets

Role of Local Leaders



- 
- A man in a dark suit is seen from the back, gesturing with his right hand towards a large, blurred audience seated in a hall. The audience is diverse in age and appearance, and the setting appears to be a formal event or conference.
- Build a business case
 - Lead your community's effort
 - Identify community partners
 - Map service area
 - Identify funding
 - Solicit private partners
 - Recruit large customers
 - Educate public
 - Survey community for potential subscribers

Role of Local Leaders

- Advocate for better public policy
 - Describe the need → use data
 - Show what investments your community is already making
 - Know what you need
 - Bring all community & private partners into policy discussions
 - Emphasize local government's experience in building infrastructure

Advocacy



Resources



- NC Broadband Infrastructure Office (NCBIO)
 - Free technical assistance
 - Toolkits
 - Mapping tool
- Institute for Local Self-Reliance (ILSR)
 - Data
 - Case studies
 - Grassroots tools, handouts
- CLIC-NC, Next Century Cities
 - Connect with national experts
 - Issue briefs



Contact



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