



Presentation to the NMFA Oversight Committee (Broadband)

**New Mexico Department of Information
Technology**

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Secretary / State CIO

2 November 2017

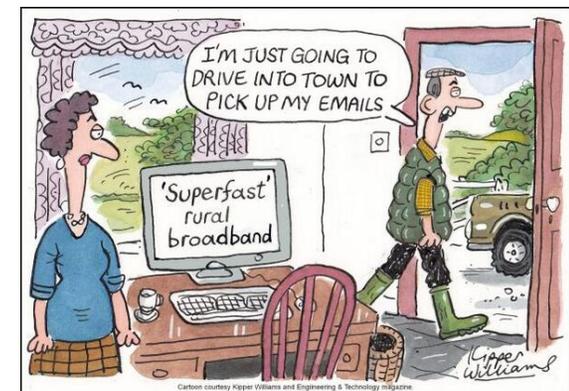


Agenda

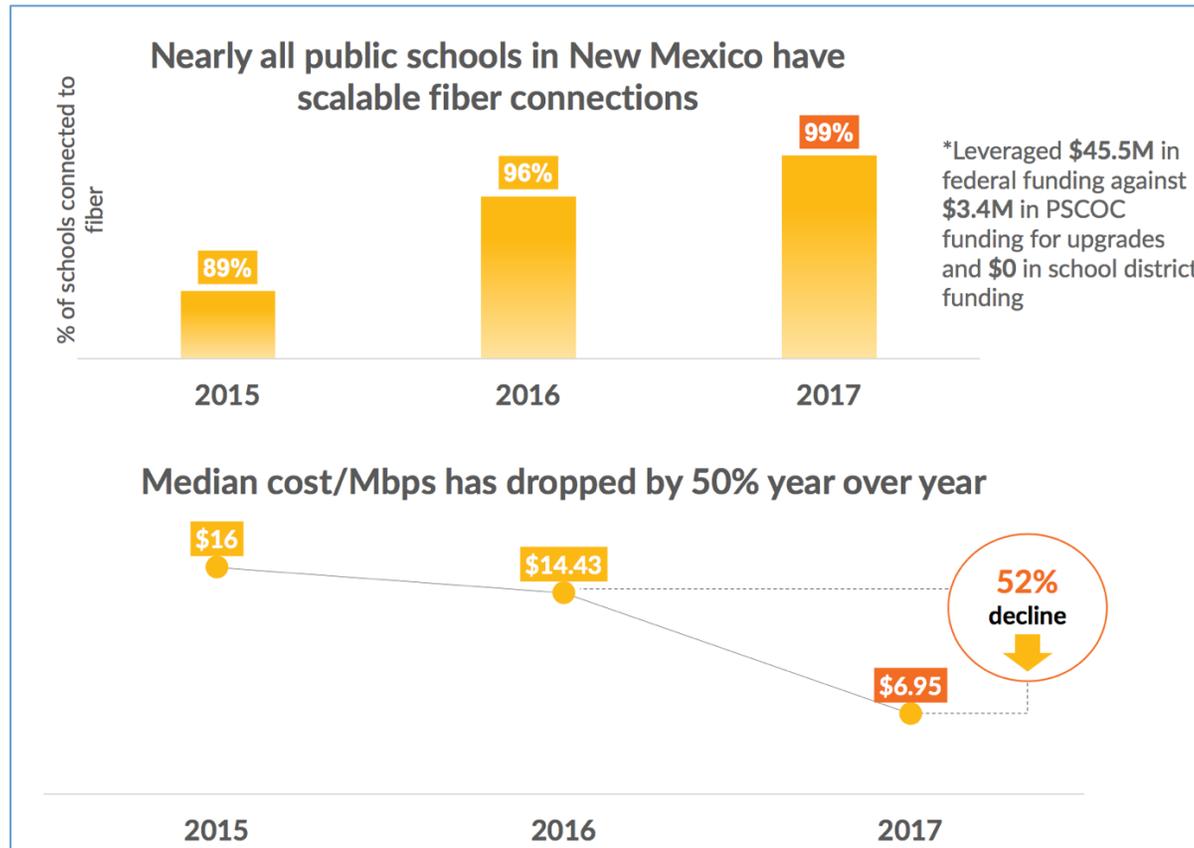
Statewide Broadband Infrastructure: Capital Programs and Projects and Federal and Other Funding Source Availability

- Some Good News Up Front
- A Limited History
- Definitions and Considerations
- Funding Models and Sources
- Programs and Resources
- Questions and (maybe) Answers

- But first . . . Some fun facts



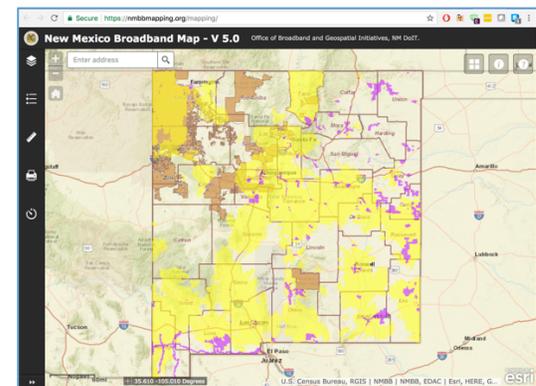
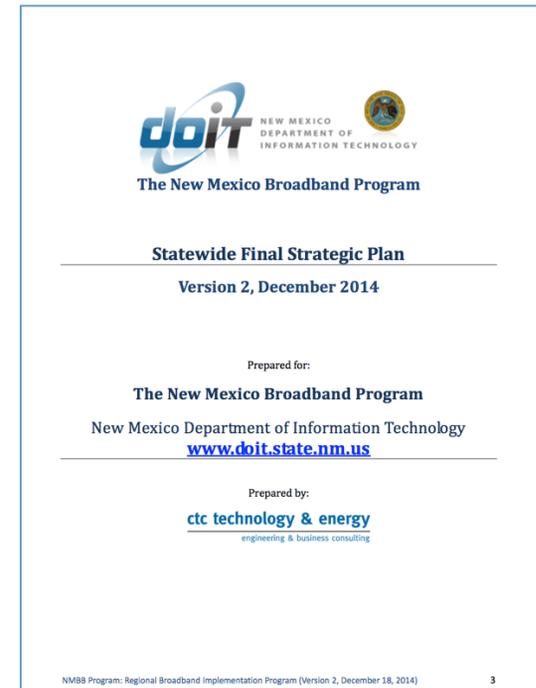
Some Good News Up Front



- Additionally, nearly 2/3 of school districts are paying less for internet this year than they were last year.

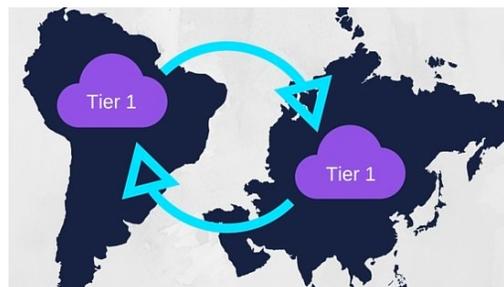
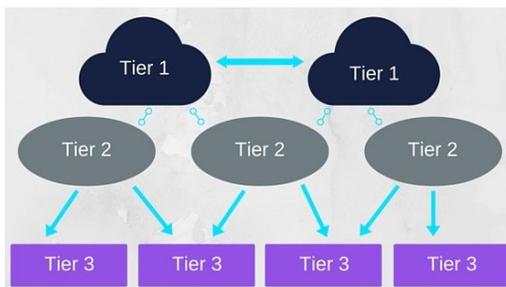
A Limited History

- 2010: The Broadband Technologies Opportunity Program
 - **\$227M** in federal grant monies (**\$44M** to DOIT)
 - Fiber, last-mile, wireless, and sustainable adoption projects
 - New Mexico Broadband Map established
 - 2014: Publication of the Statewide Broadband Strategic Plan
- 2014: Broadband Deficiencies Corrections Program established via SB159
 - Up to **\$50M** over five years to correct deficiencies in broadband infrastructure for public schools
- 2015: Governor Martinez established Broadband for Education Initiative
 - Goal of (affordable) 1Mbps per student by 2018
- 2016: DOIT forms the Office of Broadband and Geospatial Initiatives (**OBTGI**)
- 2017: A flurry of broadband legislation!
 - *Dig-once* included in LEDA
 - Broadband in Local Government Development Act
 - PRC Rural Universal Service Fund Broadband Program
 - Statewide Broadband Network (HB113)



Definitions and Considerations

- *Note, these definitions are imprecise*
- **Broadband:** Per FCC definition, 25Mbps down / 3Mbps up (up from 4Mbps/1Mbps)
- **Fiber:** both *dark* and *lit* fiber
- **FTTP / FTTH:** Fiber to the Premise / Fiber to the Home
- **POP:** Point of Presence, also known as a *demarcation point*
- Distribution (power grid / water system analogies):
 - **Backhaul / Long-haul:** the connection between POPs, or between Tier 1 entities [always Fiber]
 - **Middle-mile:** the connection from the ISP POP to a local distribution point [usually Fiber]
 - **Last-mile:** the connection between Tier 3 customers and the local distribution [just about anything]
 - **Copper-Line:** Most commonly ADSL or Cable (still plenty of legacy: ATM, T1, even some dial-up)
 - **Fixed Wireless:** fixed-antenna ISP
 - **Mobile Wireless:** cellular data service
 - **Others:** satellite, blimps
- Considerations
 - Infrastructure Costs, O&M Costs, Regulatory, Reliability, Right-of-Way



<https://datapath.io/resources/blog/what-is-an-internet-service-provider/>

Funding Models and Sources

- There is **no perfect model**. Demand will *always* outpace availability. Fiber is currently the only 'future proof' technology. "State-wide" can mean many, many different things.
- Moreover, broadband programs are typically *domain limited*
 - E.g., education, telehealth, public-safety, etc.
- Various models for implementing / funding:
 - *Laissez-faire*
 - *Government-Owned/Operated Networks (GON's)*
 - *Government-Funded Projects*
 - *Grants, Loans, Infrastructure*
 - *Government enabled / incentivized*
 - *Collaboratives*
 - *Public-Private Partnerships*
- Hybrid and/or regionalized approaches are common:
 - Dark-fiber builds, Aggregation Points, Procurement Aggregation, etc.
- The **OBGI** takes something of an 'all of the above' approach
 - Planning / Mapping / Analysis
 - Technical Support
 - Public / Private Coordination / Capacity Building
 - Identification and Promotion of Best Practices
 - Maximization of Federal Fund Benefits
 - Digital Literacy and Awareness
 - Forthcoming efforts relative to 2017 HB113



Funding Models and Sources

- There are **numerous** funding sources available to both government and private-sector entities:
- Federal
 - FCC Universal Service Administrative Company (USAC)
 - E-rate (schools / libraries)
 - Rural Health Care
 - Connect America Funds (CAF)
 - Lifeline
 - USDA Rural Utilities Service
 - Rural Broadband Loan Program
 - Community Oriented Connectivity Broadband Grant Program
 - Telecommunications Infrastructure Loans
- State
 - PRC Broadband RUS Fund (\$5M – forthcoming)
 - PSCOC Broadband Deficiencies Corrections Program (BDCP)
 - NMEDD Local Economic Development Act
 - DFA Community Development Block Grants
 - NMFA Loan Program
 - Tribal Infrastructure Fund (TIF)
 - Colonias Infrastructure Fund
- Each with its own set of guidelines, restrictions, matching-fund requirements, repayment schedules (for loans), etc.

Existing Programs and Resources

- DOIT Office of Broadband and Geospatial Initiatives
 - A **wealth** of publications, guidelines, and technical support products available
 - <http://www.doit.state.nm.us/obji.shtml>
- The Governor's Broadband for Education (BB4E) Initiative
 - <http://www.broadband4education.nm.gov/>
- The PSCOC Broadband Deficiency Correction Program (BDCP)
 - <http://www2.nmpsfa.org/it/bdcp.htm>

