



# ***A BROADBAND DISCUSSION ON BUILDING NEW MEXICO'S (NM) FUTURE TOGETHER***

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OF BROADBAND ACCESS AND EXPANSION

# WELCOME

- Welcome to first in a series of Tribal Coverings on Broadband
- Collaboration is cornerstone to achieving 100% connectivity
- Thank you for participating in building a robust Middle Mile to enable Last Mile completion
- Congratulations On Tribal Broadband Connectivity Awards! - More to come in a Rolling Fashion
- Moving Forward in Faith - Honoring NM's Past & Building NM's Future

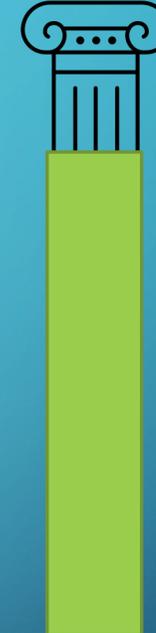
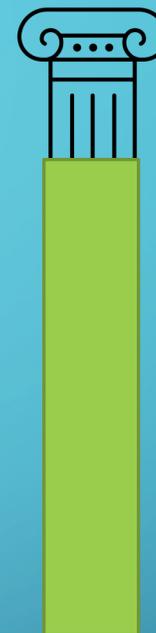
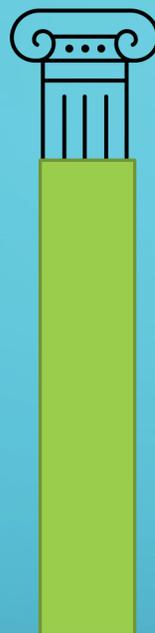
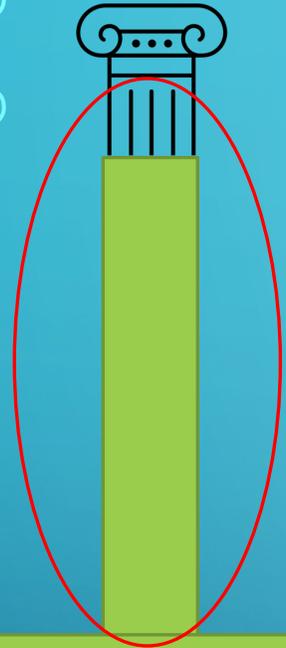
# ACRONYMS

- NTIA- National Telecommunications and Information Administration
- BEAD – Broadband Access Equity and Deployment
- ARPA – American Rescue Plan Act of 2021
- TCP- Tribal broadband Connect Program
- CNMC - Connect New Mexico Council
- USDA- US Dept of Agriculture
- FTTH/FTTP – Fiber to the Home/Fiber to the Premise

# GOALS FOR TODAY

- Communication
- Coordination
- Listening
- Middle Mile Planning
- Understanding Network Build Plans
- Dialog on Importance of Accurate Mapping
- Networking - Fun, Food, and Fellowship

# THE FIVE OBAE PILLARS



## Foster Collaboration and Partnerships:

(e.g., SEN, PEN, RFN, Connect NM Council, Tribes and Pueblos, P3s, ISPs, Telcos, Coops, Counties, Border states, Nonprofits, Coalitions, Consortiums, Collectives, etc.)

## Support a Robust Fiber State-wide Middle Mile

## Plan the Foundation for Broadband (BB) Connectivity within 5-Year Period

Create and Adopt Innovative Approaches (e.g., Spectrum, best practices, lessons learned, best in class tools)

Nurture Alternative Technologies (e.g., MM Wireless, HAPS, Satellite, Photoelectronics, Mesh Networks, etc.)

Robust middle mile provides framework for last mile in rural areas but alternative technologies help leap-frog timeline .

# 100% CONNECTIVITY: >\$1B FUNDING ENABLES BB BUILDOUT

## NTIA Digital Equity Funds

- ✓ Submitted plan July 12. Releases \$740K Planning Funds
- ✓ Engaged SME contractors for community + tribal outreach and Digital Equity (DE) Planning
- Outreach and detailed planning September 2022 - September 2023
- Submit detailed plan October 01 2023. Releases DE implementation funds
- Implement DE Plan October 2023 - 2025

\$30M+\*

## NTIA BEAD Funds

- ✓ Submitted GOV Letter of Intent (LOI) July 18.
- ✓ Submitted plan August 15. Releases \$5M planning funds
- Submit detailed plan May 2023. Releases broadband infrastructure funds
- Award grants when funding released
- Implement Last Mile 2024+

\$\$700M+\*

## NTIA MM Funds

- Architecting State-Coordinated Statewide MM Plan. ISP or ISP coalitions may submit independently.
- On track for September 30 submittal. Releases middle mile infrastructure funds.
- Award Grants when funding released
- Implement Middle Mile 2023+

\$\$50M -100M\*

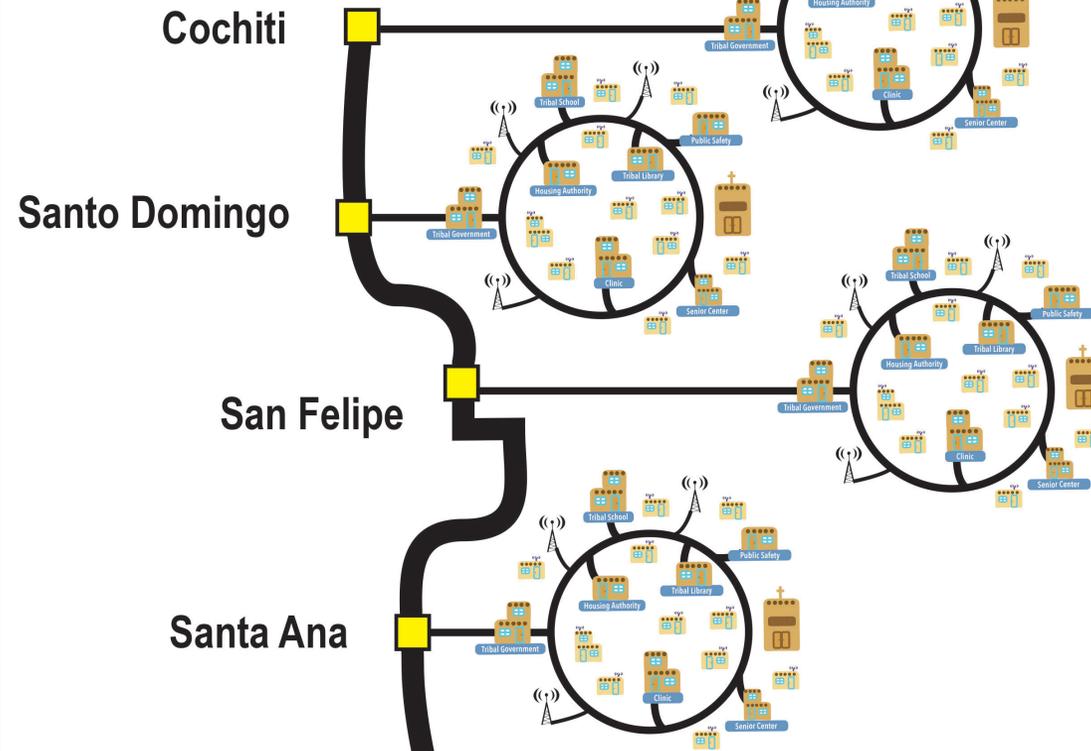
\*estimates

# 100% CONNECTIVITY: >\$1B FUNDING ENABLES BB BUILDOUT (CONTINUED)

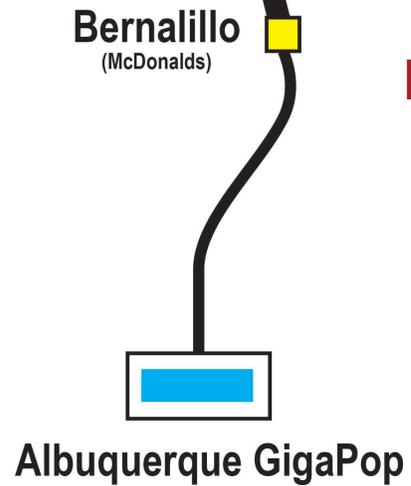
Connect NM Council	<ul style="list-style-type: none"><li>✓ Council members appointed, Interim Chair Selected and Established Six Working Groups</li><li>✓ Allocated \$70M by Legislature for MM and Last Mile deployment</li><li>• Rulemaking in process</li><li>• Award Grants 2023+</li></ul>	\$70M
ARPA	<ul style="list-style-type: none"><li>✓ Developed Pilot Grant Program, application and scoring criteria</li><li>✓ On track for <u>Week of August 8</u> Notice of Funding Opportunity (NOFO)</li><li>• Award Round 1 of grants starting Fall 2022</li><li>• Implement Middle Mile/Last Mile 2022+</li></ul>	\$123M
Tribal Connect Fund	<ul style="list-style-type: none"><li>✓ Announcement of Round 1 <u>August 11</u> \$146M – 5 applications won</li><li>• Round 2 - rolling</li><li>• Implementation 2022+</li></ul>	\$200M*
USDA Funds	<ul style="list-style-type: none"><li>✓ Six NM Awardees announced for loans and grants</li><li>• Implementation 2022+</li></ul>	\$57M

\* estimate

# Example Middle Mile



# Example Last Mile



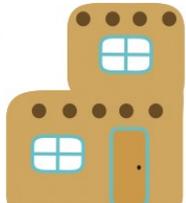
**Core Network** - Switches, routers, firewalls, etc. that control the flow of information

*Best to separate from the tribal network for security*

**Network Operations Center -**

The NOC monitors the performance of the network

*Opportunity for multiple Pueblos to share a NOC*

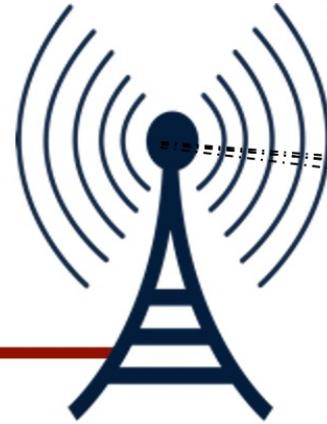


Network Operations Center

**Backhaul -**

High-speed Internet pipe delivering the flow of information which can be fiber, microwave or satellite

*Eleven of 19 Pueblos have installed fiber optic backhaul networks*



**Spectrum** - Electromagnetic frequencies that broadcast Internet

**Unlicensed Frequencies** free, limited to line of site

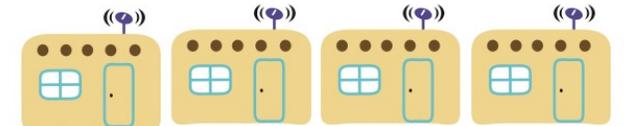
**Licensed Frequencies** require participation in FCC processes and bear potential costs

**2.5 GHz** in 2020, 20 NM Tribes apply for license for dedicated use in the first ever FCC Tribal Priority Window

**Vertical Assets -**

Towers, rooftops, to place base stations and antennas. Require a power source

*Using existing vertical assets saves money and time in construction and permits*



**Customer Premise Equipment -**

CPEs send and receive Internet traffic

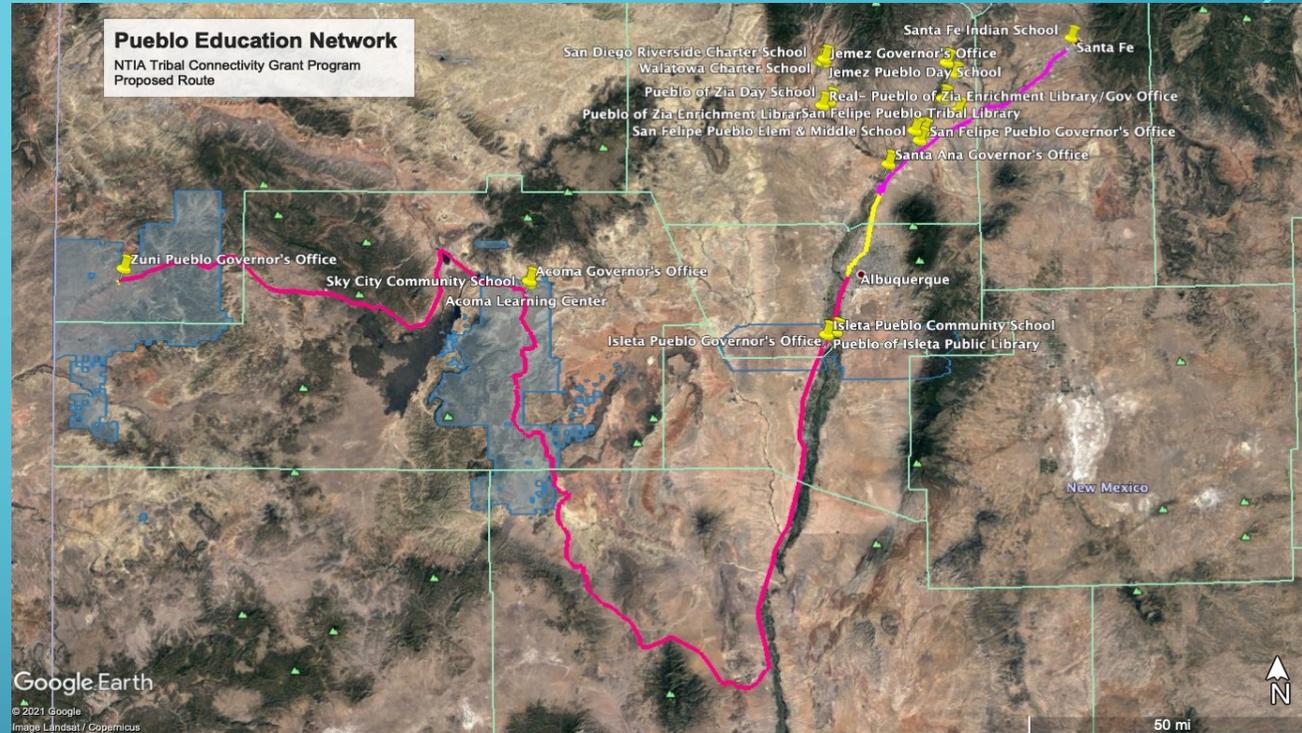
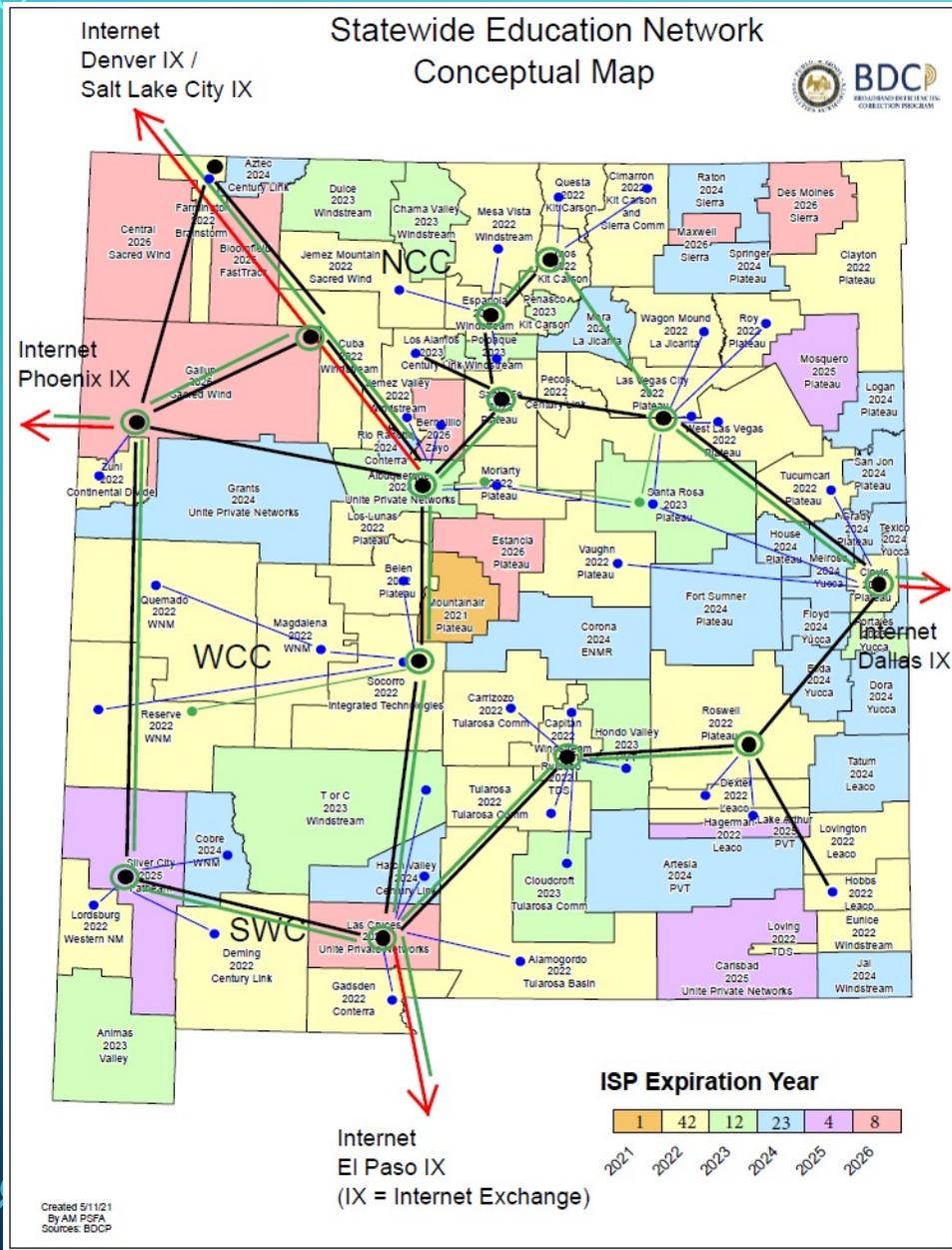
*~ \$150 per home for equipment plus tribal labor*

# STATEWIDE EDUCATION NETWORK (SEN)

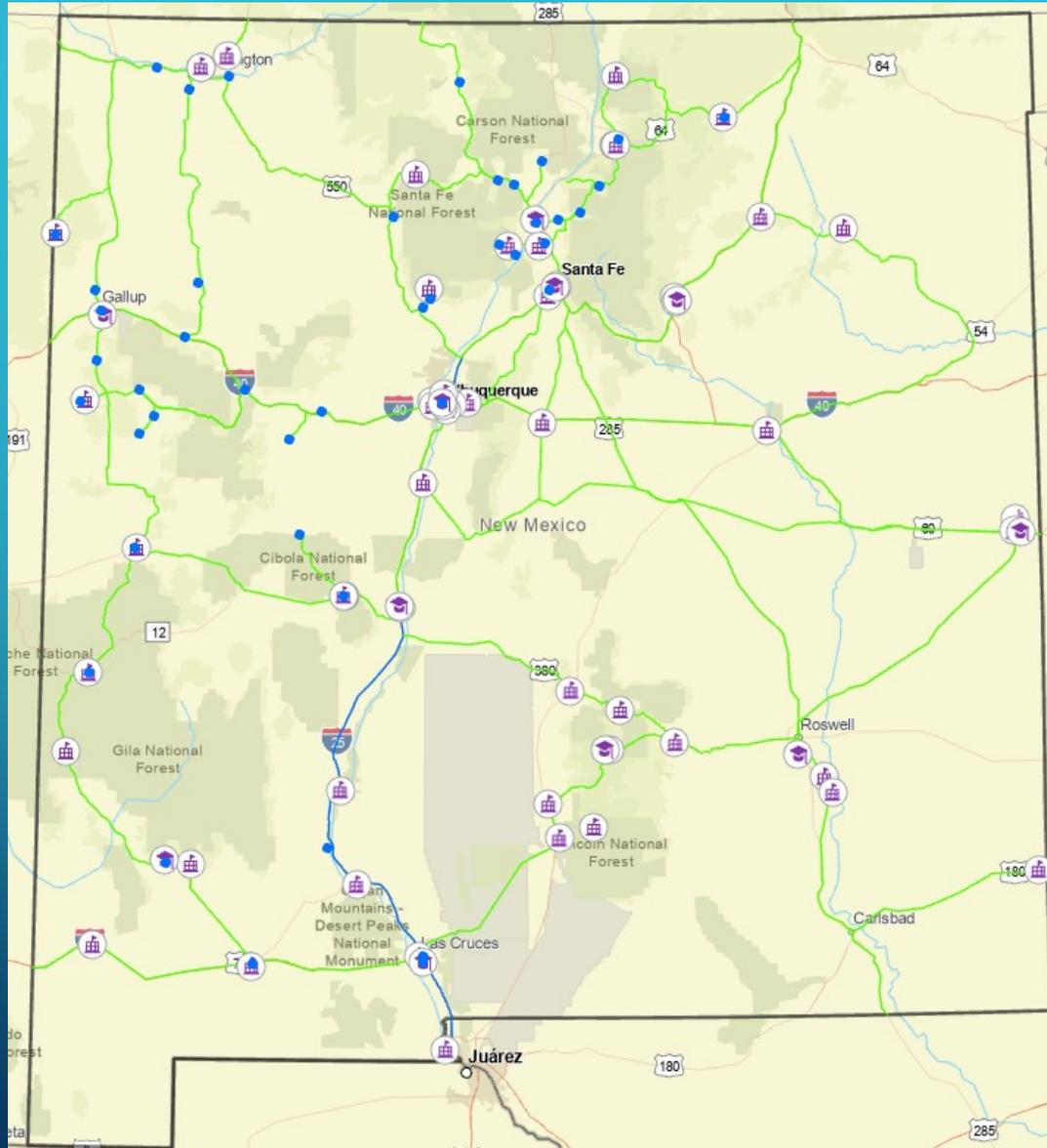
Bringing digital equity to New Mexico students – wherever they are!



# SEN and PEN: Foundation to Middle Mile



# The Vision: New Mexico's Robust Middle Mile Network



## Planning for Future Phases:

- Phase 1 is centered on key corridors and closing “rings” to help resiliency
- Phases 2-4 in research stage and will be developed within the next two months.
- Engaging private sector on proposed new routes under review.
- Analyze critical corridors and extremely high-cost regions for expansion

 SEN Hub Site

 SEN School Site

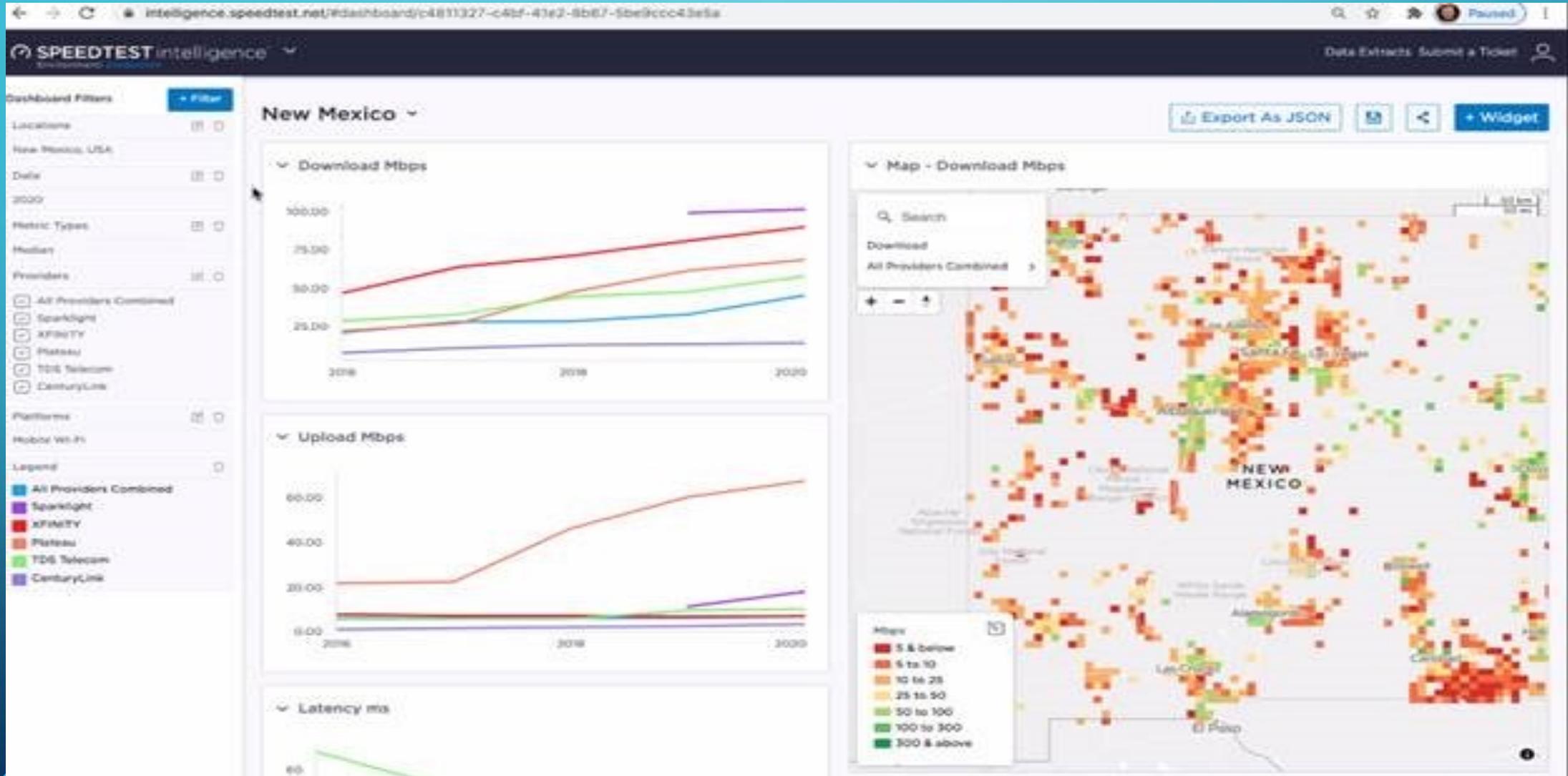
 Data Center

 Priority MM Route

 Other Possible MM Route

# DOIT SPEED TEST MAP

<https://www.doit.nm.gov/programs/broadband/new-mexico-broadband-speed-quality-testing/>



Accurate Maps are Foundation to Capturing Funding



QUESTIONS?

The background is a blue gradient with white circuit-like lines in the corners. The lines consist of straight segments and small circles, resembling a network or data flow diagram.

WRAP-UP

# RURAL SITE VISITS: IYANBITO AND WINGATE



# WRAP-UP AT END OF DAY

- Thank you for the taking time to join today!
- State of NM is committed to 100% Connectivity and Digital Equity
- Today's tribal convening is a first of a series to make sure tribes have all the information to access opportunities
- If there are tribal staff that need to be here, please make sure we get a name and contact information so we can add to the list serve
- This is a huge initiative with a lot of complicated moving parts, and it will take our collective effort to realize success together
- New Mexico has been described as one of the hardest states to connect- we are up for the challenge to overcome barriers
- We look forward to feedback and building strong partnerships
- Thank you again and drive safely home 😊