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BroadbaND 2024!

Bismarck State College
National Energy Center of Excellence
1200 Schafer St, Bismarck, ND 58501

August 29th, 2024

Connecting Rural America – and Keeping it Connected

Keynote Address

NTCA's Michael Romano will detail North Dakota's success in broadband deployment and the challenges it may face as it works to connect remaining unserved locations. He will discuss programmatic issues and challenges that the state will need to navigate to unlock the full benefits of this effort.

Michael Romano
Executive Vice President, NTCA – The Rural Broadband Association

BroadbaND 2024!

Connecting Rural America – *and Keeping it Connected*

BroadbaND 2024! Summit

www.ntca.org

NTCA — THE RURAL BROADBAND ASSOCIATION
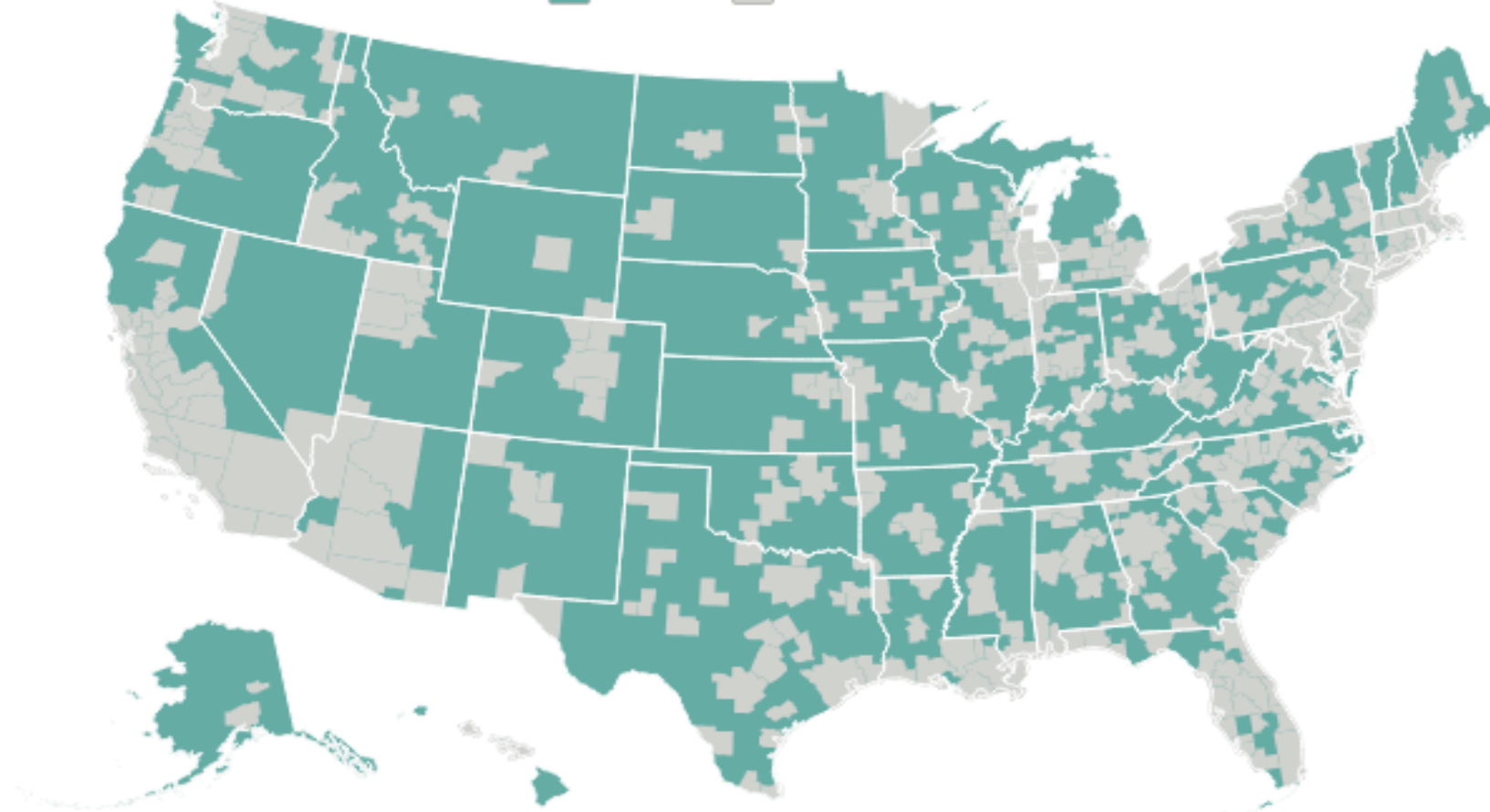
Some Context

Areas classified as rural under the nonmetro definition

Rural   Not rural

Source: 2019 CBSA classification by the OMB

CENTER ON RURAL INNOVATION
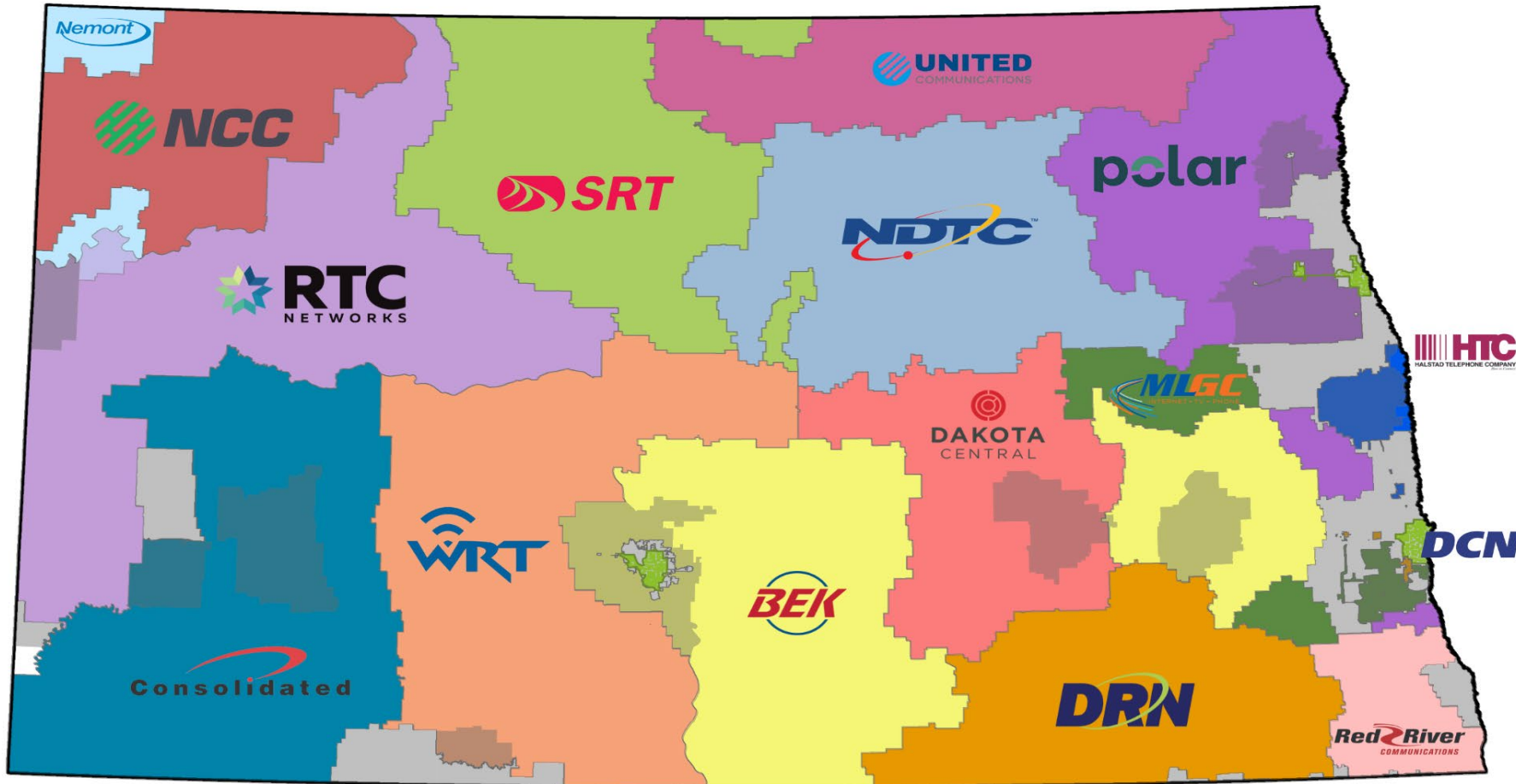
Fiber Buildouts in Progress
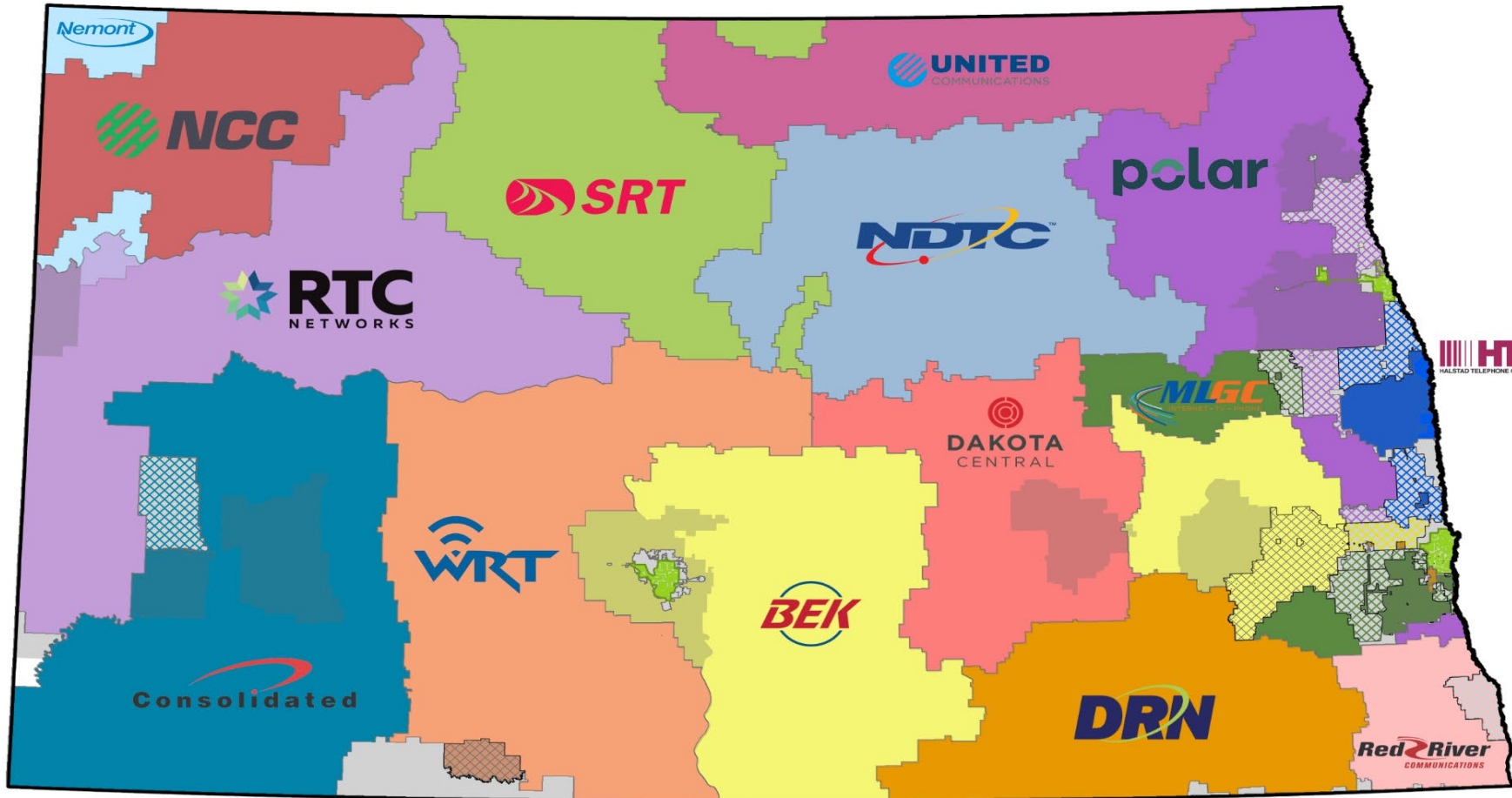
Challenges of Serving Rural Markets

- **Distance**

- **Density**

- **Distraction!**

- **Also**
  - Topography
  - Terrain
  - Regulatory Barriers

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Persistence – and Progress

- **FCC Broadband Data - 2014**
  - Nationwide Fixed @ 25/3+ – 89.4%; Rural – 60.3%
  - ND @ 25/3+ – 86%; Rural – 63%

- **FCC Broadband Data - 2018**
  - Nationwide Fixed @ 25/3+ – 94.4%; Rural – 77.7%
  - ND @ 25/3+ – 94%; Rural – 89.5%

- **FCC Broadband Data - 2022**
  - Nationwide Fixed @ <u>100/20+</u> – 92.8%; Rural – 72%
  - ND @ 100/20+ – 98.2%; Rural – 95.9% (<u>4th place in both!</u>)

Relative Size in sq. mi.

More Context – NTCA Nationally

- **83.5% FTTP (up from 58% in 2018)**

- **67.1% Gig+ (up from 23.4% in 2018)**

- **84% 100 Mbps+ (up from 57.3% in 2018)**

- **58.6% subscribe to 100 Mbps+ (up from 15.7% in 2018)**

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Fig 1.3 Fiber Deployments by Provider Type (2016 – 2023)
Total Fiber Locations Passed[1]
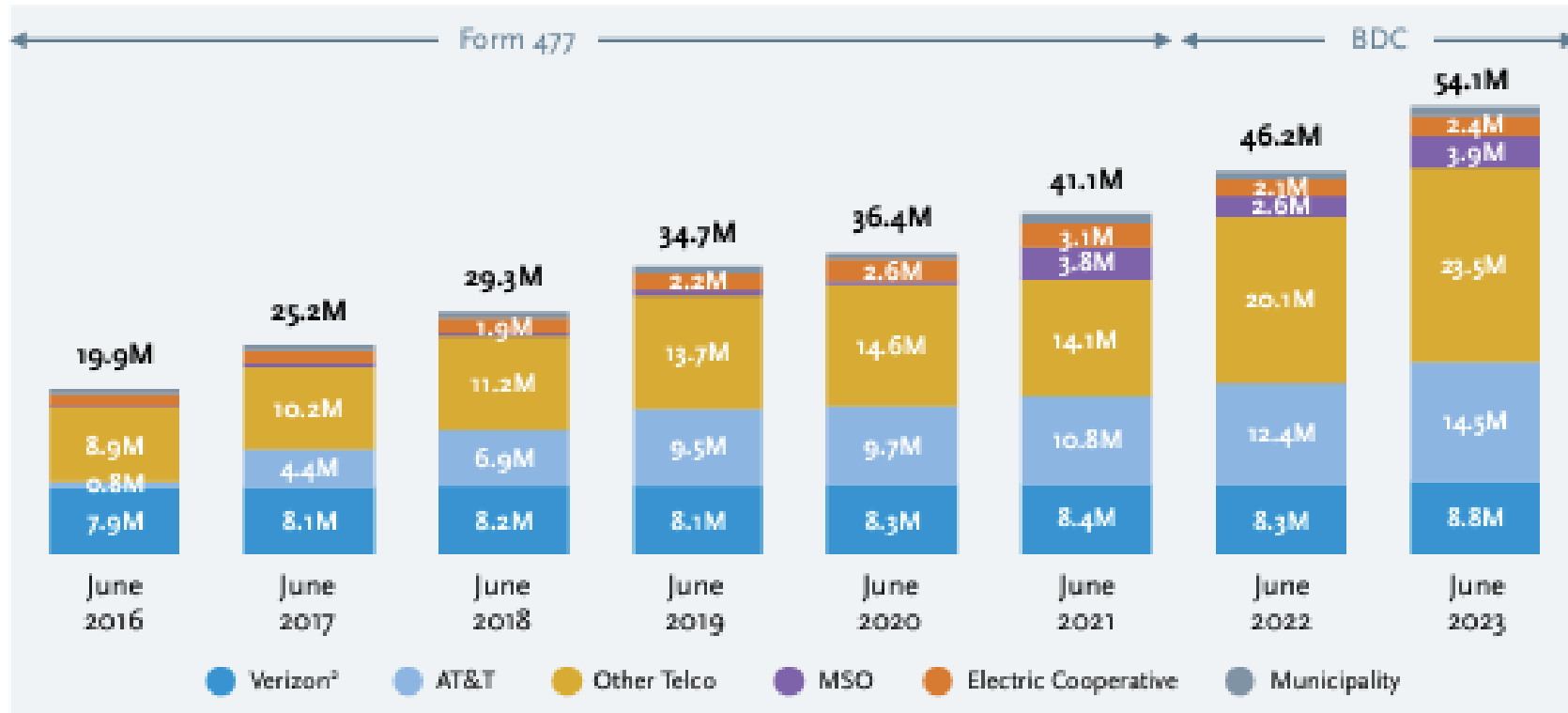
Credit: Fiber Broadband Association/Cartesian, Fiber Deployment Annual Report, 2023

What Drove Such Progress - Historically

- **Private Capital**
  - 1990s – small providers joined to buy Bell Co. rural serving areas
  - 2022 – $102.4B in private U.S. broadband investment per USTelecom Broadband Capex Report

- **USDA Rural Utilities Service Loans**
  - Tens of billions of $ originated over many decades

- **FCC Universal Service Fund (USF) Support**
  - $185.6M for ND in 2023; $180.6M for ND in 2022
  - $4.27B distributed nationwide in 2023

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What Has Driven Such Progress - Recently

- **Everything on the prior slide, plus . . .**
- Community Connect Grants, BIP, and BTOP
- ReConnect Grants
- CARES Act Grants
- SLFRF Grants
- CPF Grants
- *And BEAD to come!*

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A Digression – Loans vs Grants vs USF

- **Loans – e.g., RUS, Private Banks, Coop. Lenders, Farm Credit**
  - Construction (and sometimes acquisition) capital
  - Must be repaid with interest; usually longer-term for rural networks

- **Grants – e.g., Community Connect to BEAD**
  - Take the place of loans (and may be combined with them)
  - Construction capital – no need to payback, but often require match %

- **FCC USF Support**
  - <u>NOT</u> a grant; <u>NOT</u> a loan; <u>NOT</u> upfront capital at all
  - Covers costs to keep rates affordable – make the business case to invest

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A Digression – Loans vs Grants vs USF

- ***"You could give me 100 cents on the dollar . . ."***

- **The Economics of USF – 2023 Survey**
  - Without USF, rural providers would have to charge $101 more per month
  - Without USF, rural providers would cancel 80%+ of future investments
  - Without USF, nearly half of rural providers would default on deployment loans within 3 years

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With Progress, What Remains Gets Harder

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And the Rules Matter . . .

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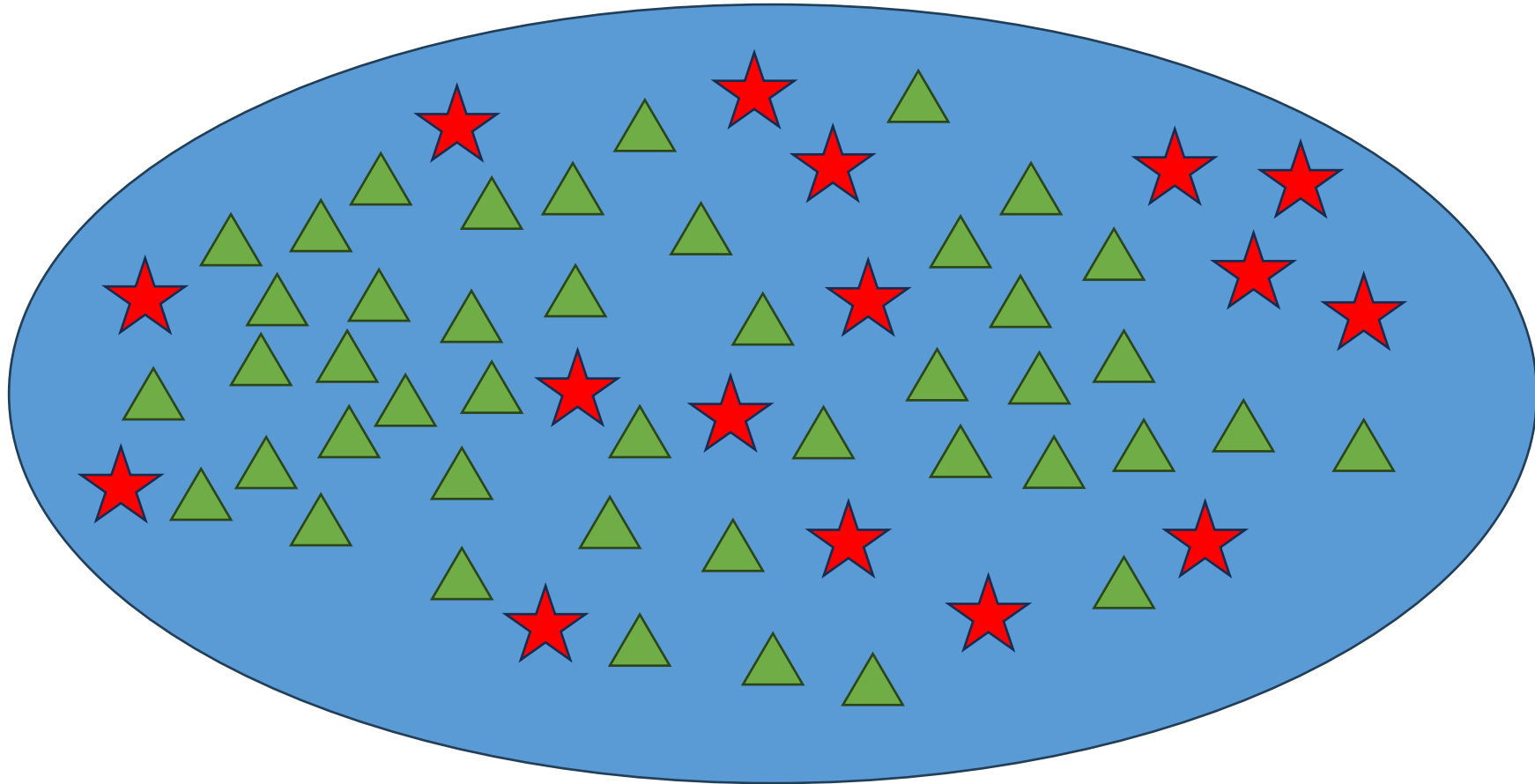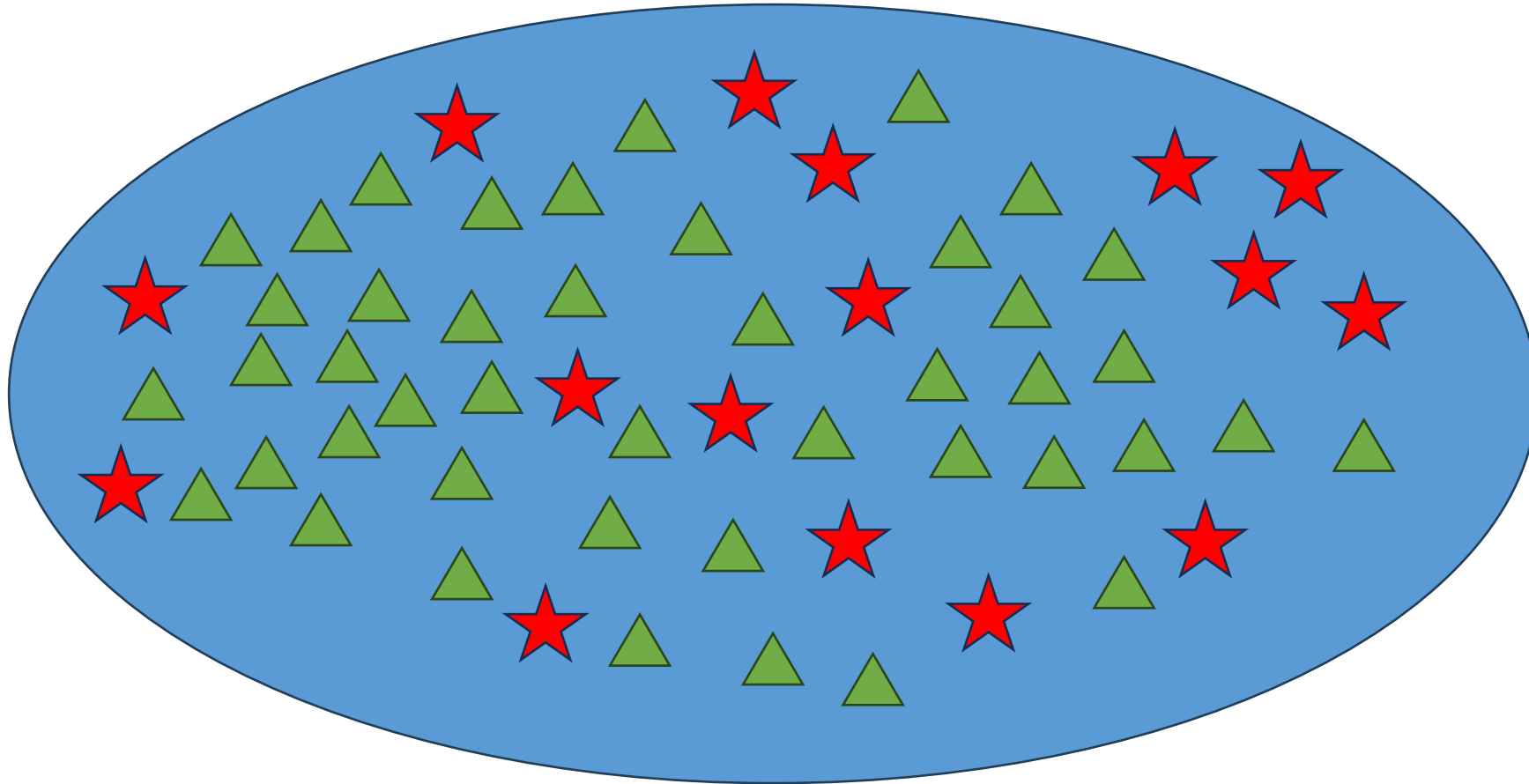
And the Rules Matter . . . A Lot
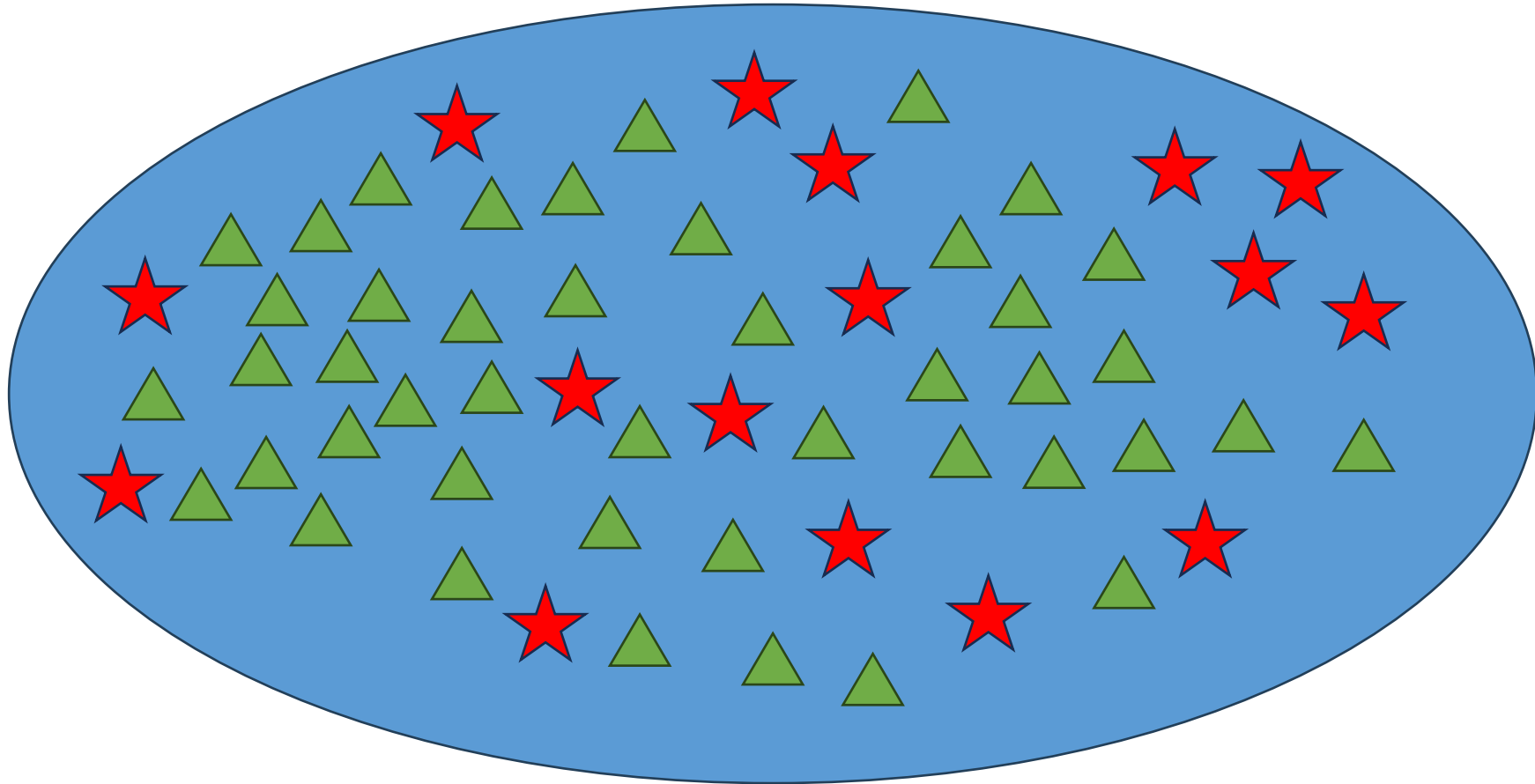
BEAD – Biggest Issues
for Smallest Providers Nationwide

- **Affordability challenges**

- **Matching fund impacts/scoring**

- **Mapping Challenges**

- **Policy & Sustainability Issues**

BEAD – Tricky Issues Tackled

- **Letters of Credit**

- **Part 200/Uniform Guidance**

- **Build America/Buy America**

ND on Key Issues – and Comparisons

- **Project Area Size**
  - Provider-defined
  - Comps: Counties (GA); School districts (KS); Zip codes (VA)

- **Low-Cost Option/Affordability**
  - Still under development
  - Comps: $15 (NY); $30 (WA); range of $30-$75 (VA)

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Lessons Learned

- **Data-Driven Decision-Making is Key**
  - Bad locations, lack of technical standards, clunky challenges, and lack of consequences could cement bad decisions for years/decades to come

- **Properly Tailored Vetting and Accountability is Key**
  - Critical to ND's success to date
  - Balance of RDOF vs BEAD?
  - Strings vs policy prescriptions

- **Don't Sleep on Sustainability . . .**

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Back to Universal Service

- **It's not just about *getting* broadband out there – it's about *keeping* it out there**
    - Ongoing affordability and sustainability challenges must be addressed
    - Grants and USF are two very different things with different purposes

- **Uncertainty in the FCC's USF could undermine BEAD – or drive participation?**
    - Judicial challenges
    - Need to participate to retain support?

- **ND is perhaps the best example of what can be done right!**

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Keeping Rural America Connected

- **Universal Service is an essential piece of the puzzle, but there's even more to getting *and keeping* rural America connected**

- **Digital Equity initiatives & Non-Deployment uses of BEAD**

- **Affordability initiatives**

- **Education & awareness**

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Broadband Built to Last

www.ntca.org/universalservice

SMART RURAL COMMUNITY®

activating broadband
IN RURAL COMMUNITIES

www.smartruralcommunity.org

economic development

smart ag

education

telehealth

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North Dakota "Showcase" Studies

- **Consolidated Telcom (2014)**
  - Enabling telemedicine pharmaceutical consults across multiple branches

- **Dakota Central (2017)**
  - Supporting on-line therapy and use of adaptive technologies

- **DRN (2013)**
  - Facilitating early adoption of remote connected learning

- **Polar (2015)**
  - Creating "laptop university" via connectivity and device and software grants

- **Red River (2017)**
  - Implementing telemedicine link for prescriptions to help with aging in place

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From the Biggest Picture to the Big Picture

Presentation

Guidehouse will give a big-picture summary of federal funding programs for broadband, the type of projects they support, and how progress in North Dakota compares to other states.

Harrison Phelan
Director,
Guidehouse

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Building on the keynote address, we will dive deeper into federal broadband programs and observations from other states

Keynote Address

North Dakota's broadband success and the challenges it may face to connect remaining locations

North Dakota's success

Potential connection challenges

Federal funding complexity

From the Biggest Picture to the Big Picture

Overview of federal funding programs to increase broadband connectivity and North Dakota's progress relative to other states

State broadband comparisons

What we're seeing

Federal broadband programs

North Dakotans will need to work together to take advantage of federal broadband funds and achieve 100% broadband service

What is Broadband?

Broadband is "high-speed Internet access that is always on and faster than traditional dial-up access." 99% of North Dakotans have access to broadband service at served speeds.[1]

What is Digital Equity?

Digital equity is when all individuals have the information technology capacity needed for full participation in their society.[2] Many North Dakotans face accessibility, affordability, and skills barriers, precluding their participation in today's digital economy.

Why are we here today?

The summit will provide a roadmap for stakeholders to navigate the federal broadband funding landscape and facilitate the necessary partnerships to enable greater participation in our digital economy.

Why is Broadband Important?

Economic Development	Government Services	Education

Health Care	Public Safety	Social connectivity
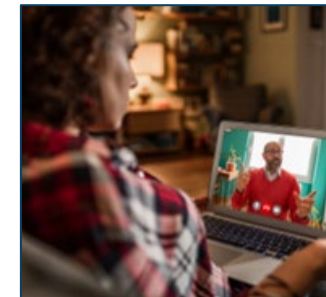
1. Broadband is defined by the Federal Communications Commission (FCC) as a connection with at least 100 Mbps download speed and 20 Mbps upload speed.
2. Definitions - National Digital Inclusion Alliance

The federal government has allocated funds to respond to broadband and digital equity challenges

Source

National Telecommunications and Information Administration

Treasury

Programs

Broadband Equity, Access, & Deployment

Funds broadband deployment to unserved and underserved areas

Digital Equity Act

Establishes three grant programs that promote digital equity and inclusion

Capital Projects Fund

Funds critical capital projects, including broadband infrastructure

Allocation

$130.2M

$4.5M+

$37.3M

Estimated Implementation Timeline

2024 - 2030

2024 - 2029

2023 - 2026

Each program provides funding for ongoing and planned deployment and non-deployment activities in North Dakota

Broadband Equity, Access, & Deployment

- Deploying broadband infrastructure
- Broadband planning and data collection
- Advancing digital adoption

Digital Equity Act

- Promoting digital inclusion
- Enhancing digital literacy and skills
- Facilitating affordable and equitable access

Capital Projects Fund

- Broadband infrastructure projects
- Digital connectivity technology projects
- Multi-purpose community facility projects

Within each program, common themes and challenges have emerged

Program	Common Themes	
Broadband Equity, Access, and Deployment *Allocation | $130.2M*	States may deal with locations that receive no bids by offering waivers (e.g. low cost, BABA)	Proposed low-cost options are generally $30 - $75, with 20 states providing ranges
Digital Equity Act *Allocation | $4.5M*	Capacity Grant allocation amounts have tended to be insufficient to fully implement State Digital Equity Plans	While often overlooked, cybersecurity is a key element of state digital equity plans
Capital Projects Fund *Allocation | $37.3M*	Treasury has directed states to create their own subaward closeout processes, in line with 2 CFR 200	Treasury shall determine protocol for awarded BSLs where owners have refused service / location access

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North Dakota ranks 5th nationally for percent of locations served, with ~99% receiving service at 100/20 Mbps or greater

Top 10 Ranked States by % Served[1]

National Ranking	State	% Served
1	Connecticut	99.3%
2	Rhode Island	99.3%
3	New Jersey	99.3%
4	Massachusetts	99.3%
5	**North Dakota**	**98.8%**
6	Delaware	97.7%
7	New York	97.5%
8	Maryland	97.3%
9	Nevada	97.1%
10	Hawaii	96.3%

Locations Receiving 100/20 Mbps Speeds Or Greater*

State	%
North Dakota	98.99%
Massachusetts	98.68%
New Jersey	98.18%
Delaware	98.10%
Maryland	97.83%
Rhode Island	97.59%
Connecticut	97.19%
New York	96.53%
Nevada	93.43%
Hawaii	90.44%
Nationwide	90.10%

0% 25% 50% 75% 100%
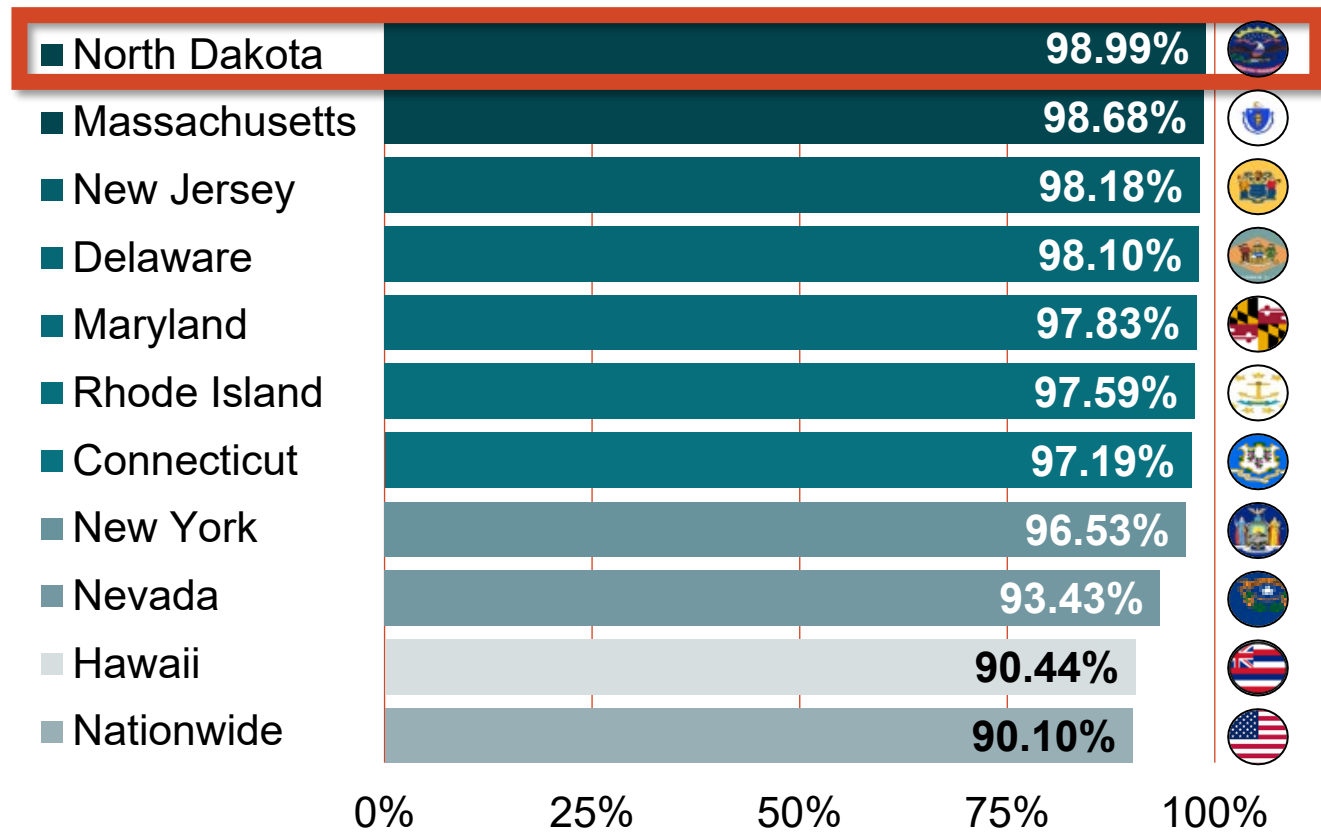
*residential service delivered using any technology

1. FCC National Broadband Map. The % served statistic may differ from other presentations today that use pre-challenge data.

North Dakota will need to navigate various hurdles before it can reach its goal of 100% served
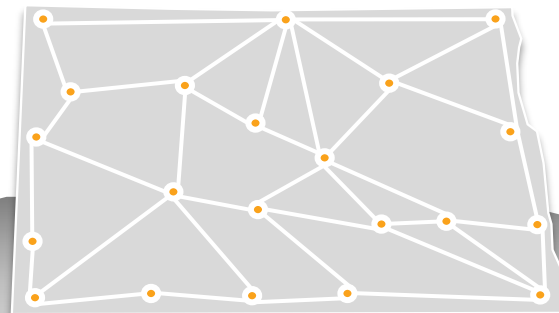
What are some of the key hurdles that will prevent the state from reaching 100%?

1. Permitting	2. Regulations	3. Labor	4. Financing	5. Materials
Coordination among agencies may delay required permits	Federal regulations and requirements may be unappealing to providers	National timeline for BEAD deployment may create competition for labor	Securing additional financing to meet grant match requirements may prove challenging	Buy-America requirements and supply chain stability could delay implementation

During today's panels, we will explore tradeoffs and decision points that the state will consider as it works to reach 100% coverage

Policy

How do legislators view the broadband landscape in North Dakota?

What is the state's long-term vision for broadband success?

What policies will support sustainability of broadband initiatives?

Technology

What are tradeoffs between various broadband technologies?

What would prevent ISPs from applying for broadband funding?

After deployment, what projects might have the greatest impact?

Non-Deployment Activities

What does "the Digital Divide" look like in North Dakota?

What digital equity objectives should the state prioritize?

How can different entities work together on digital inclusion?

Legislation And Policy

Panel

Topics

- Broadband objectives from State House of Representatives, State Senate, and North Dakota's Governor's Office

- The vision for broadband in North Dakota

- Deployment and non-deployment tradeoffs

Hon. Glenn Bosch
State Representative, North Dakota Legislature

Hon. Kyle Davison
State Senator, North Dakota Legislature

Robyn Madison
Regional Director, (NTIA)

Mason Sisk
Senior Policy Advisor to Governor Doug Burgum

Carissa Swenson
Executive Director, Broadband Association of North Dakota (BAND)

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ILEC Service Areas
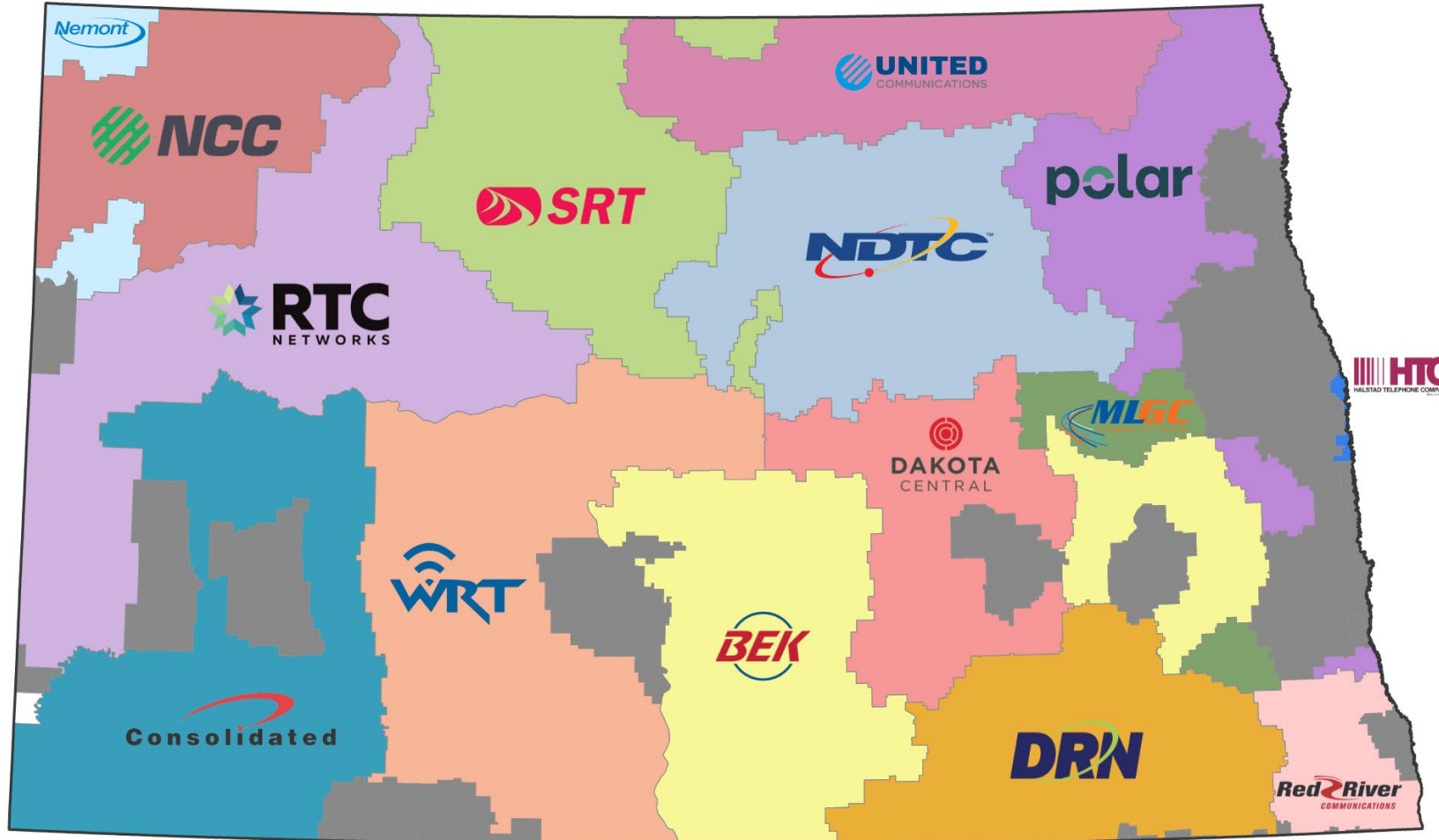
2023 North Dakota USF Distributions

High-Cost
$187,500,000

E-Rate
$3,500,000

Rural
Healthcare
$700,000

Lifeline
$1,260,000
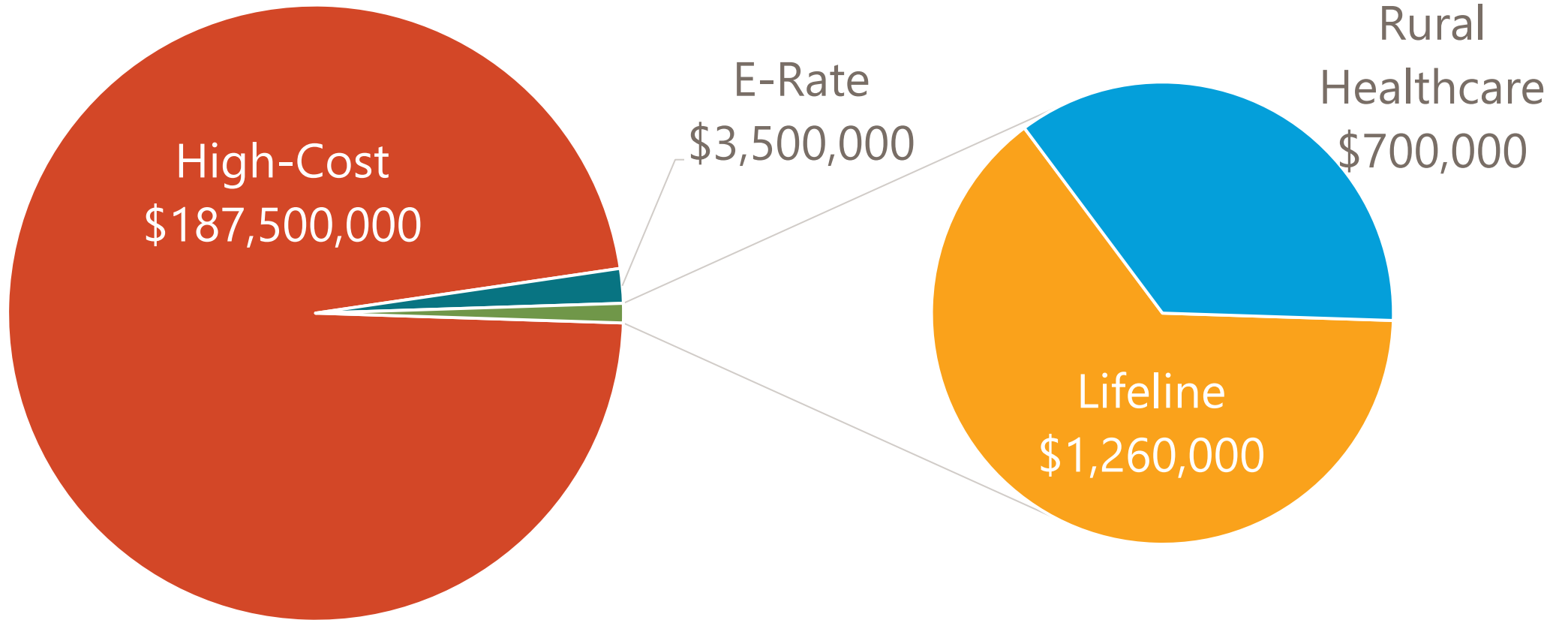
Nearly $193 Million Per Year!

Broadband Service Areas
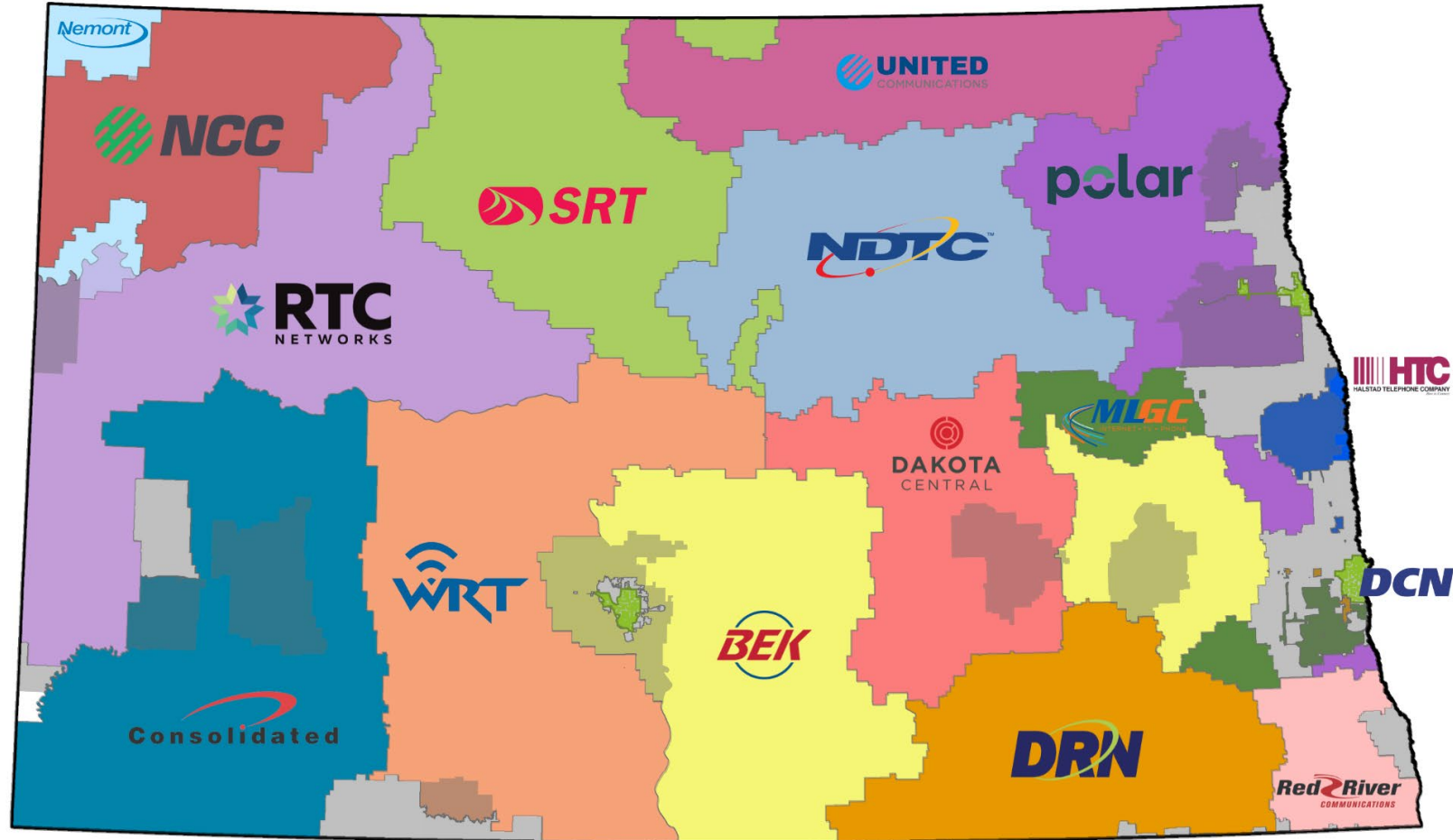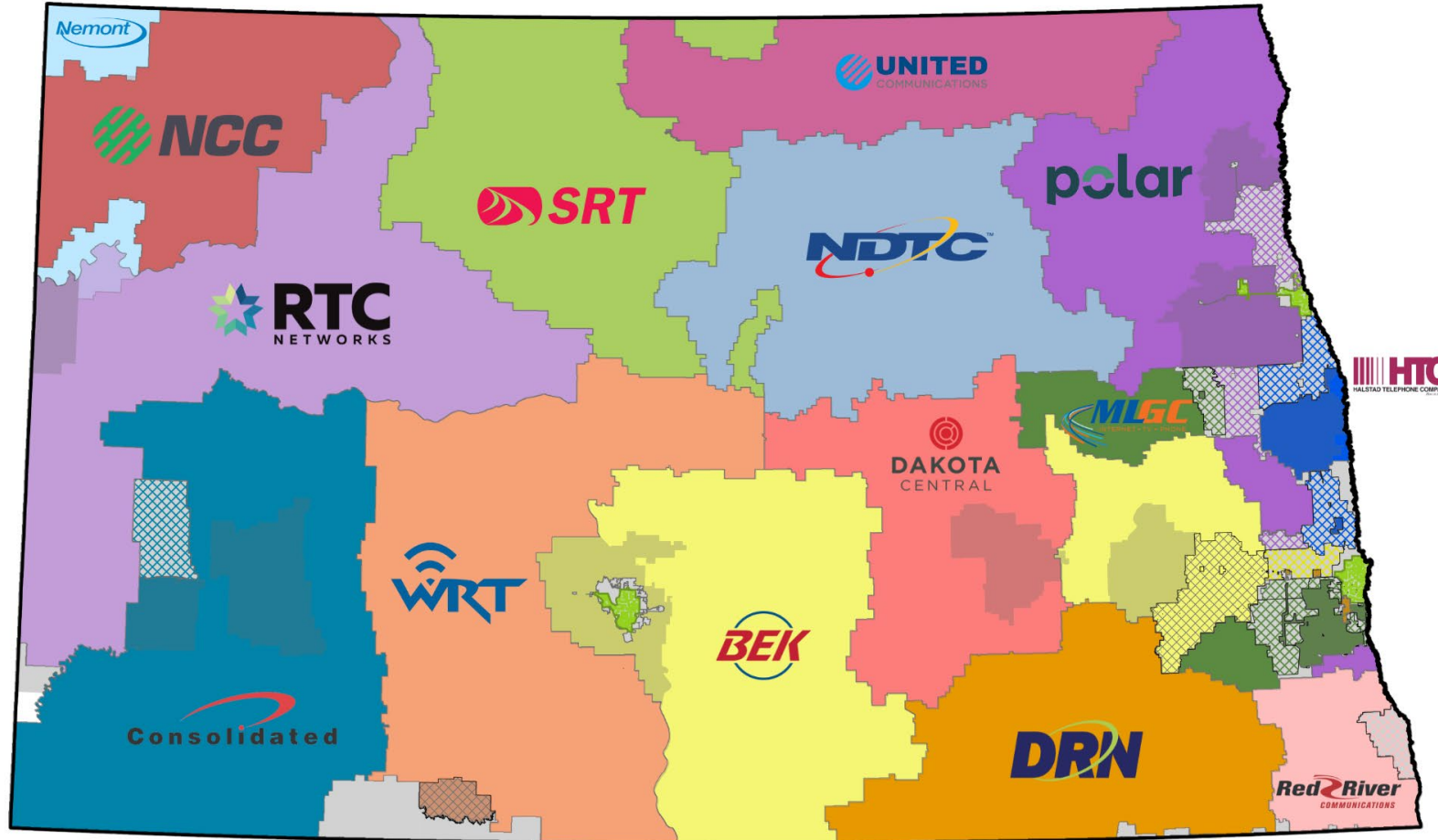
North Dakota Broadband Deep Dive

Presentation

Guidehouse will present on the accomplishments of the North Dakota Broadband Program, what to expect next year, key funding milestones, and next steps for stakeholders.

Mary Najarian
Manager,
Guidehouse

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Through our continued collaboration, North Dakota is poised to allocate $172M+ over the next five years to support "BroadbaND for All"

	2023	2024	2025	2026	Onwards

BEAD $130M
- Submit Initial Proposal
- Submit Final Proposal
- Complete challenge process
- Conduct subgrantee selection
- Execute and monitor deployment projects

CPF $37.3M
- Complete project and expenditure and performance reports
- Complete deployment projects

DE $4.5M
- Release of Capacity Grant NOFO (3 rounds)
- Submit Competitive Grant Application[1]
- Prioritize Capacity Grant activities
- Conduct subgrantee selection, as needed

◆ Milestone

1. The Administering Entity for previous DE Grants (NDIT) is ineligible to apply.

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BEAD Estimated Cost Projections

Percent of total funding expended

2023: 0.3%
2024: 1.1%
2025: 4.5%
2026: 15.8%
2027: 35.3%
2028: 63.4%
2029: 93.0%
2030: 100.0%
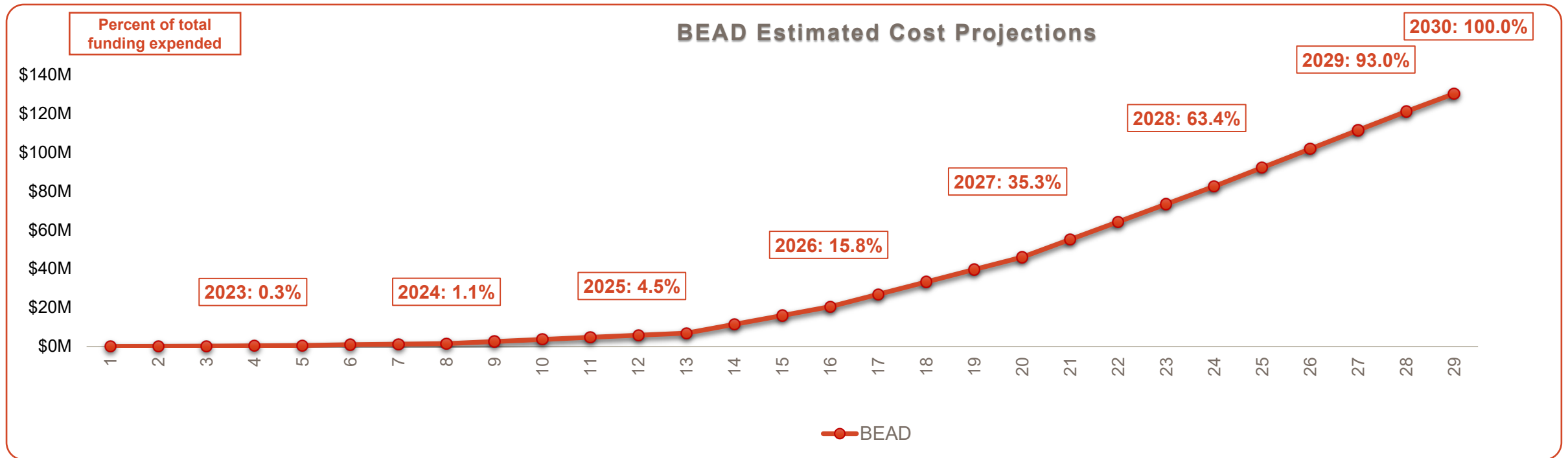
BEAD

The State Broadband Program Office has completed the BEAD challenge process, in preparation for subgrantee selection

Initial Proposal → **Challenge Process** → **Subgrantee Selection** → **Final Proposal / Implementation**

3. Submit Initial Proposal to NTIA:
Winter 2023

4. Conduct Challenge Process:
Spring 2024 - Summer 2024

5. Competitive Subgrantee Selection Process:
Fall 2024 – Winter 2024

8. Submit Final Proposal:
Spring 2025

7. Conduct Public Comment Period:
Spring 2025

1. Finalize Initial Proposal:
Fall 2023

2. Conduct Public Comment Period:
Fall 2023

We are here

6. Develop Final Proposal:
Winter 2024 / 2025

9. Ongoing Monitoring, Reporting, and Performance Management:
Summer 2025 – Onwards

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The subgrantee selection process for BEAD deployment projects will kick off in Fall 2024 with the release of eligible locations

Pre Application › **Initial Application Round** › **Subsequent Application Round(s)**

Pre-Application | Fall 2024

Identify locations that potential subgrantees intend to apply for

- Release BEAD eligible locations
- Issue location of interest questionnaire

Initial Application Round | Winter 2024

Accept and review applications for all unserved and underserved locations and eligible CAIs

- Deconflict project areas
- Identify preliminary Extremely High Cost Threshold (EHCT)
- Determine highest scoring applications

Subsequent Application Round | Winter – Spring 2024

Perform additional application rounds if unclaimed locations exist

- Conduct targeted outreach to potential subgrantees
- Determine highest scoring applications
- Update Extremely High-Cost Threshold (EHCT)
- Select and award subgrantees

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Prior to the challenge process, thanks to you, North Dakota was a leader in broadband, with 98% of locations having reliable internet access

Pre-Challenge Map, Service Speeds by BSL

~348K — Broadband Serviceable Locations (BSLs)

50+ — Internet Service Providers (ISPs)

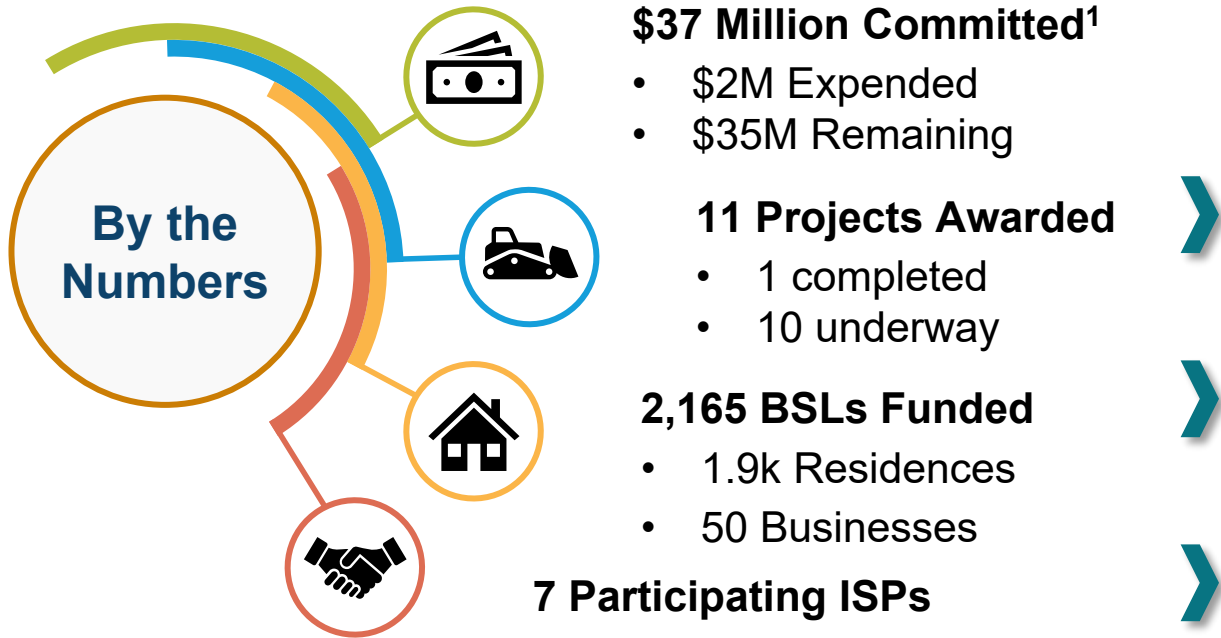**~342K** — BSLs with 100 / 20 Mbps (98% of all BSLs)

~6.4K — BSLs lacking broadband service pre-challenge

North Dakota's goal is to achieve 100% broadband connectivity; the BEAD program will help connect remaining locations.
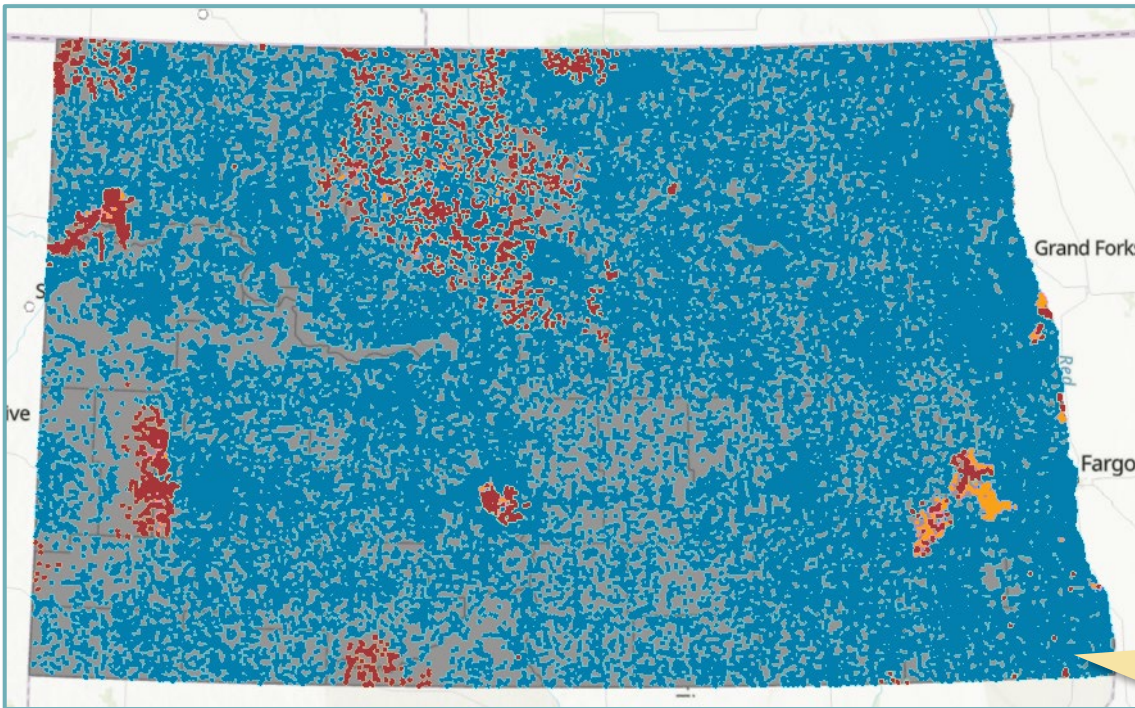
Key

- ● ≥ 100/20 Mbps
- ● < 25/3 Mbps
- ● Populated with no plans
- ● ≥ 25/3 and < 100/20 Mbps
- ● Unpopulated with no plans

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Projects funded by CPF are working to address infrastructure needs, with $37.3M to be deployed by 2026

The Capital Projects Fund (CPF) is a program established under the American Rescue Plan Act (ARPA) to fund critical capital projects, including broadband infrastructure, that enable work, education, and health monitoring in response to COVID-19.

By the Numbers

$37 Million Committed[1]
- $2M Expended
- $35M Remaining

11 Projects Awarded
- 1 completed
- 10 underway

2,165 BSLs Funded
- 1.9k Residences
- 50 Businesses

7 Participating ISPs

Red River COMMUNICATIONS   Nemont   NCC

MLGC INTERNET • TV • PHONE   HTC HALSTAD TELEPHONE COMPANY   WRT   polar

Findings and Implications for Other Programs

- **Monitoring & Compliance |** The newly created CPF monitoring & compliance processes will be adapted for similar requirements under BEAD

- **Close Out Requirements |** NDIT developed a close out process and documentation for CPF, which can serve as the foundation for BEAD closeout

- **Deployment Lessons Learned |** Some providers faced implementation challenges around permitting and easements, supply chain, and weather, which will inform BEAD deployment planning

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1. The total CPF allocation is $38.7M. $37.3M represents the project costs.

Total funding available for Digital Equity activities is yet to be determined and subject to constraints

The Digital Equity (DE) Act creates 3 grant programs to help all communities and people reap the benefits of a digital economy. The state's efforts will focus on supporting existing DE activities administered by relevant stakeholders, including state agencies.

Vision: Empower every North Dakotan, from our urban centers to the most remote regions of our state, with equitable digital access to be engaged with the opportunities of tomorrow.

Planning Grant: Develop digital equity plans.

Capacity Grant: Implement state digital equity projects.

Competitive Grant[1]: Address barriers to digital equity.

Broadband Availability & Affordability

Online Accessibility & Inclusivity

Digital Skills

Online Privacy & Cybersecurity

Device Access

North Dakota's planned DE activities include[2]:

1. Conduct accessibility audit of North Dakota state websites
2. Encourage cyber security offerings
3. Support long-term digital inclusion programming

1. The 2024 Competitive Grant Application is due September 23rd, 2024. The Administering Entity for previous DE Grants (NDIT) is ineligible to apply.
2. Proposed DE activities are subject to NTIA approval

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Key next steps and how you can support

Next Steps for State

BEAD
1. Finalize materials and initiate subgrantee selection
2. Develop Final Proposal

CPF
1. Prepare for submission of Q3 Project & Expenditure Report
2. Complete all deployment projects by 2026

DE
1. Prioritize activities to be funded by Capacity Grant
2. Conduct subgrantee selection for prioritized DE activities

What you can do

BEAD
1. Participate in the subgrantee selection process
2. Share ideas about potential deployment and non-deployment projects

CPF
1. Identify and flag potential deployment challenges

DE
1. Review eligibility requirements for competitive grant
2. Identify partnership opportunities for capacity grant

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Technology and Strategy

Panel

Topics

- Non-fiber technologies and broadband technology trends

- Funding trade-offs between upgrades and deployment

- Easements and permitting challenges

Seth Arndorfer
*CEO,
Dakota Carrier
Network*

Andrew Curley
*Senior Director of
Government
Relations, Midco*

Dirk Gates
*SVP of Customer
Experience,
Tarana Wireless*

Tom Steinolfson
*CEO,
Red River Communications*

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Digital Opportunity Community of Practice

Panel

Topics

- North Dakota Digital Equity Plan objectives

- Digital Equity needs and opportunities

- Opportunities for collaboration across state agencies

Ken Edwards
Community Partnerships Manager, Lead For America

Mary Najarian
Managing Consultant, Guidehouse

Al Peterson
Outreach Specialist, ND State Libraries

Tabitha Teel
Program Director, NDIT-EduTech

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Digital Equity Activities must have measurable objectives for documenting and promoting goals for Covered Populations

Who are the Covered Populations?

Individuals who primarily reside in a **rural area**

Aging individuals aged 60 and older

Individuals who live in **covered households** (defined as households with **income of not more than 150% of the poverty level**)

Individuals who are members of a **racial or ethnic minority group**
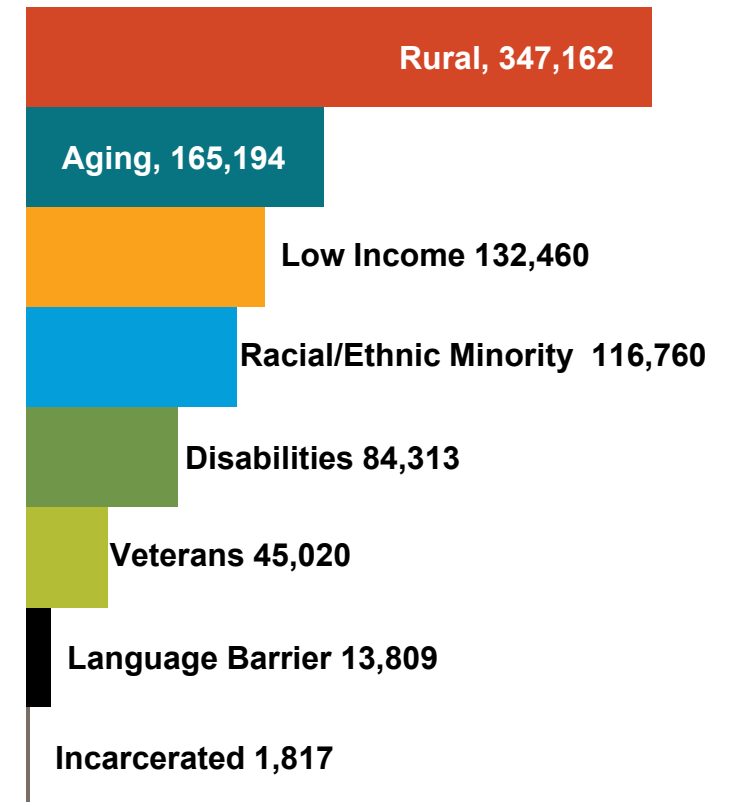
Individuals with **disabilities**

Veterans

Individuals with a **language barrier**, including individuals who are English learners and have low levels of literacy

Incarcerated individuals (as defined by the State of Territory), other than individuals who are incarcerated in a Federal correctional facility

Estimated Population in North Dakota[1]

Rural, 347,162
Aging, 165,194
Low Income 132,460
Racial/Ethnic Minority 116,760
Disabilities 84,313
Veterans 45,020
Language Barrier 13,809
Incarcerated 1,817

1. *Covered Population Baseline Summary* available on page 37 of the *North Dakota Digital Equity Plan*

The North Dakota Digital Equity Plan emphasizes the importance of cost, access, and digital skills

Vision

Empower every North Dakotan, from our urban centers to the most remote regions of our state, with equitable digital access to **be engaged** *with the opportunities of tomorrow.*

Goals

Broadband Availability and Affordability	Online Accessibility and Inclusivity	Digital Skills	Online Privacy and Cybersecurity	Device Access

Objectives

|								
Expand access to high-speed and reliable broadband infrastructure	Encourage broadband adoption among all North Dakotans	Promote affordability by improving statewide participation in low-cost programs and services	Encourage online availability of state government resources	Ensure that state government resources are accessible to all North Dakotans	Encourage increased provision of and participation in digital skills trainings	Increase promotion of cybersecurity education offerings	Encourage internet service providers (ISPs) to increase their cybersecurity measures	Expand access to and awareness of public devices in North Dakota

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Digital Equity activities are being funded through three different Digital Equity Act programs

Digital Equity *Planning* Grant Program

Formula grant program for states, territories and tribal governments to develop **digital equity plans.**

$0.5M
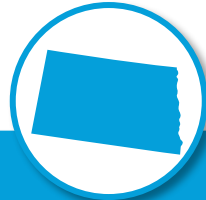
Digital Equity *Capacity* Grant Program

Formula grant program for states, territories, and tribal governments to **begin implementing** digital equity projects.

$4.5M[1]

Digital Equity *Competitive* Grant Program

Funds **annual grant programs** for five years to implement digital equity projects.

$1.25B[2]

1. amount from 2024 NOFO. Two further rounds of funding will be announced.

2. This value represents the total amount available nationally. The Administering Entity for previous DE Grants (**NDIT) is ineligible to apply.**

BroadbaND 2024!

Both BEAD and DE funding prioritizes specific eligible activities

Broadband Equity, Access, & Deployment (BEAD) Non-Deployment Funding Priorities

- Advancing digital adoption

- Training and workforce development

- Broadband planning and data collection

Digital Equity Funding Priorities

- Advancing digital adoption

- Training and workforce development

- Promoting digital inclusion

- Enhancing digital literacy and skills

- Facilitating affordable and equitable access

- Online accessibility improvements

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