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## Value of a REN as Broadband Infrastructure Partners

The national community of non-profit Research and Education Networks (RENs) play a vital role in state broadband landscapes. RENs work at the community, state, and national levels to contribute technical expertise in network design, engineering, operations, and consulting on optical networks and technologies. The men and women who operate these networks have extensive knowledge of existing broadband infrastructure. This knowledge combined with their unique portfolio of partnerships and mission-driven collaborative spirit, make RENs tremendous assets to state broadband planners.

As a trusted community of broadband leaders, these networking organizations work strategically with their local and state communities to convene a wide range of infrastructure partners, community stakeholders, and anchor institution representatives to deploy broadband infrastructure to unserved and underserved areas. The mission is to support the unique networking needs and tools required by the thousands of Community Anchor Institutions (CAIs) spanning this country.

Every statewide and regional REN across our country is an active testimony of a successful deployment and operation of middle-mile infrastructure with the purpose of serving public-service missions that support the unique networking needs and tools required by CAIs. RENs have successfully constructed open access, middle-mile infrastructure funded by past federal grant programs which continue to be instrumental in delivering affordable and reliable Internet access to unserved and underserved areas.

RENs also actively participate in established federal programs that provide funding to improve technology infrastructure to advance innovation and scientific discovery, further the country's academic enterprise, and facilitate Internet access for CAIs.

Generally speaking as a national community, RENs are uniquely positioned with their public-missions and expertise to partner with state broadband leaders. Each REN is unique and reflects the broadband landscape that it operates in providing different innovations and technologies within their local communities based on individual CAI needs. Our country's RENs work in a collaborative manner with their peer organizations through The Quilt and through these relationships are able to quickly identify and implement scalable solutions.



# RENS as Partners to State Broadband Leaders

→ **Identify Unserved and Underserved Communities**

- Thorough knowledge of Federal map data availability and shortcomings
- Experience with other local/state map resources
- GIS mapping expertise
- Experts in existing local and state infrastructure

→ **Bridge Gaps in Digital Equity & Inclusion**

- With their intellectual capital, programs and resources, higher education institutions are key stakeholders in every state's digital equity plans and workforce development efforts.
- State digital equity and inclusion plans must prioritize funding to connect every community college, every MSI, and every college and university to a global fabric of world-class and secure research and education networking infrastructure.
- While significant progress has been made, many community colleges, HBCUs, TCUs, MSIs, colleges and universities still lack the type of high-performance connectivity that would allow them to actively participate at the forefront of STEM education and research opportunities as well as the career opportunities and high-paying, high-demand jobs that exist in those fields.
- RENS and university leads are willing and capable partners to support efforts that help the "little guys" move forward and create access to high-performance computing that is often a barrier for grant funding and other opportunities.

→ **Design / Construct / Operate / Measure Broadband Infrastructure**

- Technologists who can solve broadband access issues in a cost-effective, scalable manner
- Experts in fiber-optics construction, consulting, and engineering
- Public/private partnerships with proven success with a wide range of telecommunications partners for last-mile solutions
- Extensive network peering expertise and relationships including content and cloud providers
- Decades of experience operating scalable, robust, resilient, and secure middle-mile infrastructure
- Extensive experience conducting large-scale competitive procurements for broadband and telecommunications equipment and services
- Technical experts on establishing network performance metrics and measurement

→ **Perform Community Outreach and Stakeholder Engagement**

- RENS know the players and have the right relationships
- As a trusted convener, RENS serve as a communication hub for community outreach and coordination efforts for broadband infrastructure solutions
- Strong local/community stakeholder relationships
- Extensive community anchors relationships
- Higher education partnerships serve as anchors and workforce development resources

RENS are the engine for innovation in every state. Research and education infrastructure is a critical component to every state's broadband plan and complements our nation's continuous efforts to provide a high-speed technology foundation for inclusion, innovation, discovery, and global competitiveness.

To find the REN in your state or region, follow this link to a list of our [Quilt Members](#).

