

IMPACT REPORT

CONNECTING OKLAHOMA TO THE GLOBE

OneNet[®]
Advancing Technology Across Oklahoma



ONENET BY THE NUMBERS

2,051 miles
of high speed fiber
backbone

200+ million
gigabytes of data
transported annually

300+ gigabits
per second to the rest
of the world

1,300+ connections
spanning all corners
of the state



Traversing the Globe

When OneNet began serving Oklahomans in 1996, few organizations such as schools, libraries and health clinics were connected to the internet. In rural areas, entire communities were not connected. In the last 20 years, OneNet has worked to deliver internet access to all four corners of the state. Today, Oklahomans are connected not only across the state but also around the globe. High-speed internet access has brought the world to Oklahoma. Our state's citizens can travel the globe through a connection at school, a public library or other community organization. Whether it's digital educational resources, telemedicine visits or world-class research initiatives, OneNet's mission to advance technology across Oklahoma is making it possible for Oklahomans to connect in ways once unimaginable.

Advancing Technology in an Evolving World

As technology changes at a rapid pace, OneNet's network and organization must evolve to meet the growing needs of communities for high-speed connectivity. OneNet has made a number of enhancements – both technical and operational – to better serve our customers.

Enterprise Enhancements

OneNet has refreshed several applications to improve customer communications and service delivery. We introduced an updated website with a design that is more user-friendly and more accessible for customers. We deployed a new billing system, which improves our billing process and provides new billing options for customers. We also implemented a customer relationship management (CRM) application to enhance our circuit provisioning process, provide better access to information for our staff and boost ongoing communications with our customers.

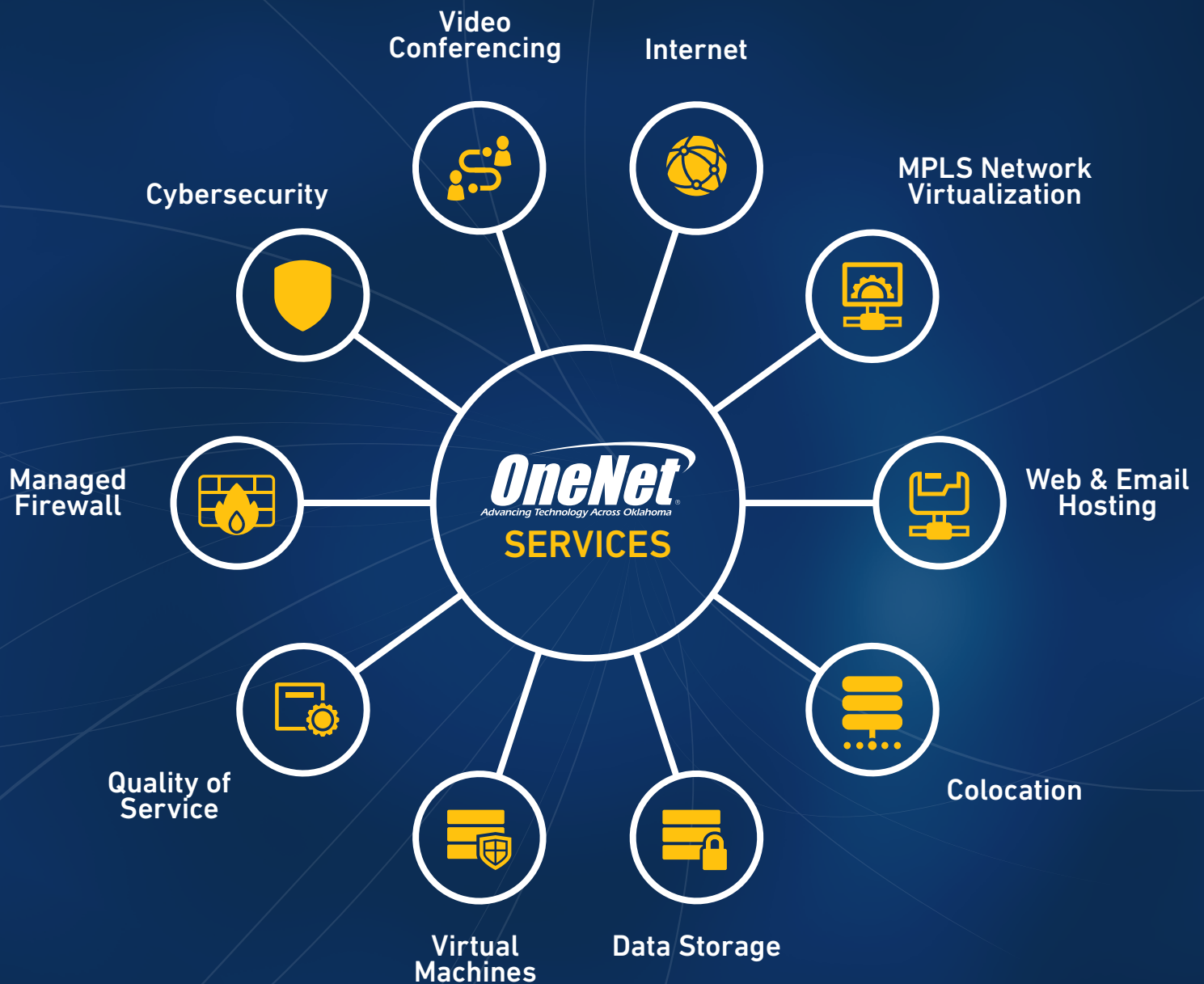
Data Center Upgrades

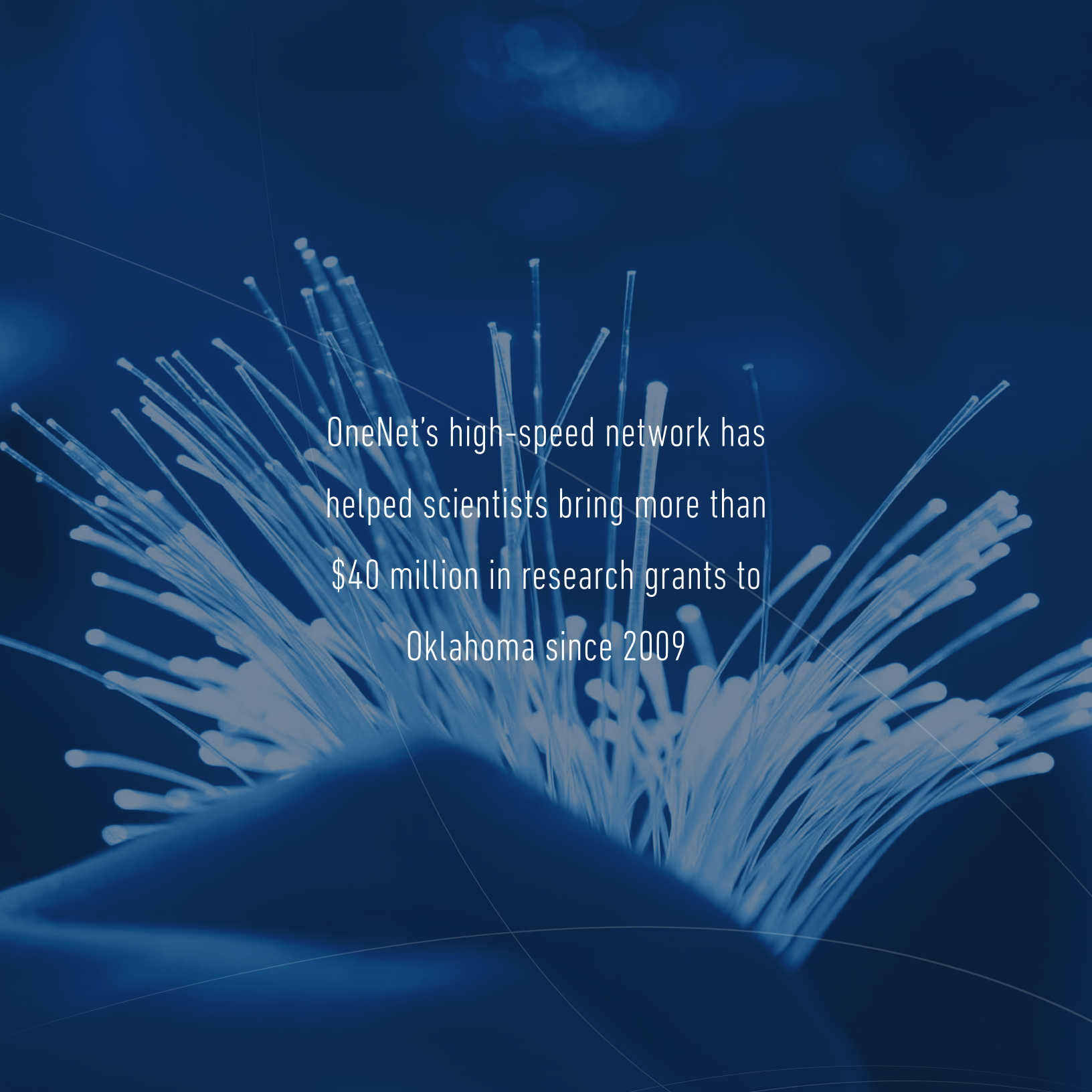
OneNet's data center received two upgrades. A new, fully redundant, chilled water system ensures the data center always maintains the cooling needed to protect OneNet and customer equipment. We also deployed a new hot aisle containment system. This system expands available rack space for customers needing colocation services and provides more efficient cooling for the equipment housed in the system.

Security Initiatives

Cybersecurity is a growing concern for OneNet customers and a top priority for OneNet's leadership. To help our customers manage cybersecurity issues, OneNet's engineering team has developed tactics for DDoS mitigation and other types of cyberattacks. Through customer events, we are educating our users on these techniques and how to prevent and manage attacks.







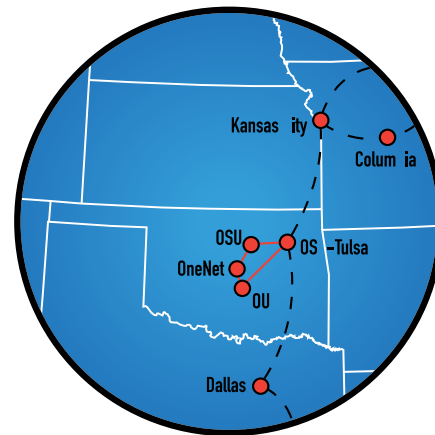
OneNet's high-speed network has
helped scientists bring more than
\$40 million in research grants to
Oklahoma since 2009

Advancing Oklahoma Research, Powering Big Data Movement Around the Globe

OneNet has a long history of advancing research in Oklahoma. OneNet's high-speed network has helped scientists bring more than \$40 million in research grants to Oklahoma since 2009. Today, OneNet's 100Gbps research ring and connection to Internet2 are expanding possibilities for Oklahoma researchers by increasing the capacity for big data movement. As researchers drive demand for big data movement, OneNet has strategically positioned the state to participate in world-class, global research, including:

- Oklahoma Center for High Energy Physics – Collaborates with 34 countries on the ATLAS project
- University of Oklahoma's Center for Analysis and Prediction of Storms – Conducts storm-scale ensemble forecast with NOAA
- Oklahoma State University's High Performance Computing Center – Requires moving high-volume data across the country for bioinformatics research
- University of Oklahoma's Advanced Radar Research Center – Generates more than 20Tb of data per day for storm prediction research

100Gbps Connectivity



OneNet's 100Gbps research ring enables big data movement across the state and around the globe.



OneNet provides exclusive access to Internet2's nationwide 100Gbps research and education network.

Oklahoma's Partner in Education

Since 1996, OneNet has operated interdependently with higher education. OneNet's network is built upon the higher education system across the state, with OneNet's network gear housed at 38 higher education campuses. OneNet provides connectivity for the higher education institutions and in return, receives space in the institutions' data centers and support for our equipment. This partnership generates millions in savings each year and enables Oklahoma's students to become globally engaged citizens through reliable connectivity. OneNet internet connectivity saves higher education approximately \$6.4 million annually.

OneNet's partnership with education goes beyond universities and colleges. OneNet serves nearly half of the K-12 school districts across the state, reaching more than half of Oklahoma's students. OneNet also serves most of the state's career technology centers and nearly half of the public libraries. As

a provider for the E-Rate federal funding program since its inception, OneNet's goal has been to expand high-speed broadband services to Oklahoma's rural communities and drive down costs for these services. OneNet remains committed to ensuring that all of Oklahoma's students can participate in today's digital learning initiatives, so they are prepared for work and educational opportunities in our digital world.

Connecting 1.8 Million Viewers to Educational Television

OneNet's commitment to education extends to educational television and the 1.8 million viewers who tune in to the Oklahoma Educational Television Authority (OETA) weekly. OneNet connects OETA's towers to a fiber network, improving both reliability and quality of service for OETA's viewers. The fiber connections also create significant annual cost savings for the agency.



Enabling Oklahoma's
students to become globally
engaged citizens through
reliable connectivity



CONNECTS



773 Government Agency Sites



64 College & University Campuses



249 K 12 School Districts



96 Libraries



38 Career Technology Center Campuses



52 Hospitals & Clinics



17 Tribal Agency Sites



34 Research, Nonprofit, Other Agencies

Taxpayer Savings

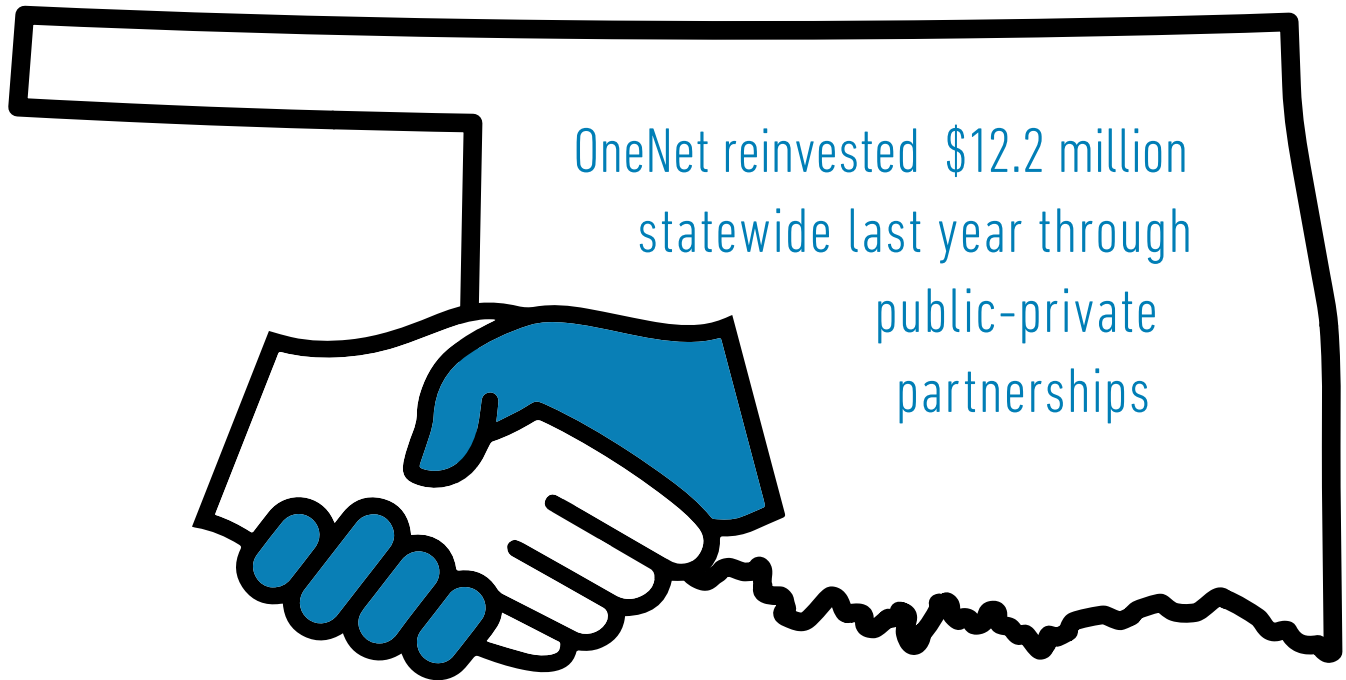
Over the last few years, OneNet has successfully optimized the networks of several state agencies and created significant cost savings for taxpayers.



OneNet provides approximately 780 connections at 731 state agency sites. Network optimization for these agencies has created a projected total annual savings of \$5.2 million for the state.

Public-Private Partnerships

Since its inception, OneNet has partnered with local telecommunications and cable providers to deliver broadband services to customers across the state. This partnership assists those we serve in finding affordable broadband options, while returning most of the customer fees to the local community. OneNet is a middle-mile internet service provider. This means we operate a network that connects communities across the state. We depend on local telecommunications and cable companies to provide the connection from our network to the customer's site, which is called the last-mile connection. OneNet greatly values the local companies who partner with us to provide last-mile services. Last year, OneNet paid last-mile providers \$12.2 million to connect customers to our network. These customer fees are returned to the community to support local broadband services.





Ensuring Oklahomans have access
to the resources needed to succeed
in their communities and beyond

Connecting Rural Oklahoma



Completed in 2013, the Oklahoma Community Anchor Network (OCAN) connects rural communities in 35 Oklahoma counties to high-speed broadband services. Through management and operation of this 10Gbps network, OneNet provides new options for connectivity for education, health care and public safety institutions in previously underserved communities, so all Oklahomans have access to the resources needed to succeed in their communities and beyond. In addition, through OneNet's partnerships with local telecommunications providers, OCAN services extend to the private sector, creating opportunities for small businesses and advancing economic growth.

1,005 MILES OF HIGH-SPEED FIBER

76 COMMUNITY ANCHOR INSTITUTIONS

35 OKLAHOMA COUNTIES

Expanded Global Connections

With support from the National Science Foundation's International Research Network Connections program, OneNet is now directly connected to the Pacific Wave International Exchange and its peering and high-performance, scientific networks. This new connectivity to the Western U.S. and Asia-Pacific region will enhance scientific collaborations for Oklahoma's research institutions. Research and education projects within the state of Oklahoma, including the National Oceanic and Atmospheric Administration, the National Weather Center, and the National Severe Storms Laboratory will benefit from OneNet's ever-expansive global connections. Researchers at the University of Oklahoma and Oklahoma State University will be connected to the Pacific Wave through OneNet's 100Gbps high-speed optical network.



AL PEERING EXCHANGE

PACIFIC WAVE IS A PROJECT OF CENIC & PACIFIC NORTHWEST GIGAPOP



EASTERN REGIONAL NETWORK

served by WRN members:

BQG: New Mexico GigaPoP

CENIC: California

COG: Colorado and Wyoming

PNWGP: Washington, Montana,

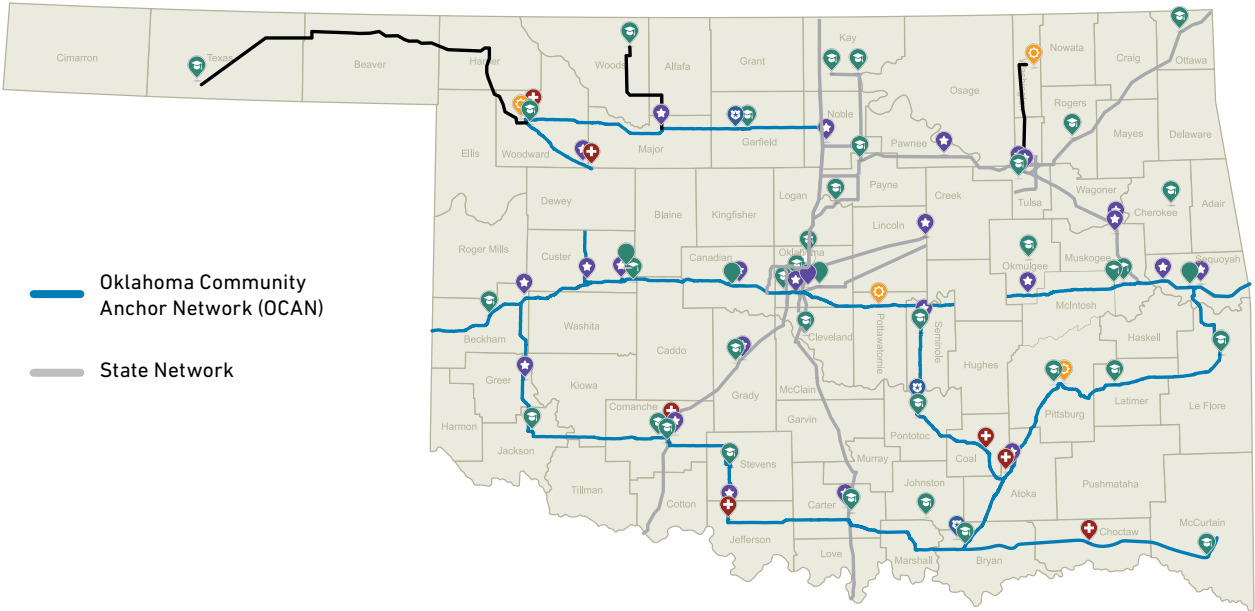
Idaho, Oregon & Idaho

UH: Hawaii

WITH SUPPORT FROM THE NATIONAL SCIENCE FOUNDATION



OneNet Network



OneNet Points of Presence



Higher Education
Campuses



Career Technology
Centers



Hospitals



Public Safety
Agencies



Other



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