

# Oklahoma Connect and Learn Initiative: Phase One

Cross-Boundary Collaboration and Partnerships



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*Office of Management and Enterprise Services*  
**State of Oklahoma**



Project Initiation: September 2016  
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# Executive Summary

The State of Oklahoma has more than 500 K-12 school districts serving Oklahoma communities and their 692,000 students. As Oklahoma school districts move into the next phase of the technology revolution, it is imperative that they are given the proper tools they need to succeed in 21st-century education while preparing students for their future college and career endeavors.

Through the Oklahoma Connect and Learn Initiative, the State of Oklahoma has an opportunity to partner with interested school districts and telecommunication service providers to increase the number of school districts with fiber optic connections, improve the capacity and affordability of those connections, and ensure Oklahoma classrooms have WiFi access to better facilitate digital learning.

Announced in September 2016, Oklahoma Governor Mary Fallin and state leaders established the Oklahoma Connect and Learn Initiative to maximize state and Federal Communications Commission E-rate funds available to upgrade school internet connectivity. The initiative was established by the governor's office, the Oklahoma State Department of Education, the Oklahoma Corporation Commission, the Office of Management and Enterprise Services, and a local school district superintendent in conjunction with the national organization, the EducationSuperHighway.

"Broadband access in the classroom is an important resource for students and teachers. It opens the door to innovative, technology-based learning and helps to ensure our students are exposed to the computer and internet skills they will need in our 21st century workforce. I'm proud of the steps Oklahoma has taken to improve broadband access in our schools, and I will continue to work at bringing broadband to an even greater number of classrooms in the future," Governor Fallin said.

The initiative aims to transform education in Oklahoma by providing a network capable of supporting personalized learning plans for every student and increased access to upper level courses and concurrent enrollment.

The goal is to build out the broadband connections and WiFi networks so that schools are paying less than \$3 per megabit per second for their broadband connections as well as have 100 percent of schools meet the State Educational Technology Directors Association recommendations for bandwidth standard of at least 1.5 megabits per second per student.

# Concept

## Problem

With the Oklahoma State Department of Education implementing academic standards that drive toward digital learning, there is a greater need to build a network to support these curriculums. Access to high speed broadband in education can no longer be an afterthought. It is fundamental for implementing educational opportunities for students, regardless of their zip code.

According to the EducationSuperHighway, only 85 percent of Oklahoma school districts are ready to support digital learning today. To meet the State Educational Technology Directors Association recommendations of at least 1.5 megabits per second per student, the average Oklahoma district will need to triple its bandwidth.

Oklahoma school district officials are faced with few choices for connecting their school districts to affordable broadband.

To help with costs to improve network connectivity, the Federal Communications Commission is providing all states an historic opportunity to fund fiber builds for school districts. The FCC can pay up to 90 percent for broadband and \$150 per student for Wi-Fi network buildouts. The deadline to receive the funding is Dec. 31, 2018.

With the expansion of one to one and bring your own device (BYOD) programs, school districts are beginning to see a need to develop wireless networks to meet the demand for internet access. In order to ensure effective and efficient use of bandwidth delivery to the classroom and student level, school districts will need to be able to increase capacity while decreasing costs.

## Solution

The Oklahoma Connect and Learn team will work with school districts and local telecommunication service providers to focus on achieving the initiative objectives of:

- Providing every school district with fiber-based connections.
- Empowering all school districts to meet the 2018 broadband objective of 1.5 Mbps per student.
- Establishing WiFi in every classroom.
- Enhancing the affordability with a cost of less than \$3 per Mbps per student.

We are on track to complete these goals by 2020.

Working with the EducationSuperHighway, the Office of Management and Enterprise Services and the Oklahoma State Department of Education contacted school districts for network assessment, initiated projects for fiber builds, communicated about resources and held local training sessions about the opportunity for E-rate funding throughout the state.

School district leaders now have access to resources and technical assistance that support scalable, cost-effective network upgrades to meet the growing demands of technology in the classroom. All tools and resources are provided at no cost to the school district.

- Discuss a plan to upgrade broadband network based on a district's current infrastructure and future needs.
- Help school districts research technology and provider options.
- Help school districts create a Form 470/RFP strategy to meet both E-rate and Oklahoma Universal Service Fund (OUSF) rules.
- Help school districts take advantage of the OUSF monies by communicating important deadlines and requirements.
- Support implementation of school districts' new networks.

Resource information can be found on the [Oklahoma Connect and Learn resources webpage](#).

The Connect and Learn team has worked on a standardized best practice with service providers to install underlying circuits that can support at least 25 percent more capacity. A statewide contract to offer WiFi services to classrooms has been put in place as well.

### **Next Steps**

Future goals for the Oklahoma Connect and Learn Initiative include creating a transparency portal as well as building out the broadband connections and WiFi networks.

In order to track the progress of improved services to school districts, better availability of products and reduction of expenses, OMES will provide a transparency portal. The portal will be sortable by school district and will provide information to parents, school district officials, service providers and state leaders for progress of each goal of the Oklahoma Connect and Learn Initiative. It will provide greater visibility into school district pricing and technology choices. The portal will also help identify best practices for purchasing and reducing waste at both the state and school district levels. Additionally, the portal will allow for news, updates and success stories to be prominently featured.

While having a statewide contract vehicle for purchasing WiFi is a start, the end goal is to build out the broadband connections and WiFi networks so that schools are paying less than \$3 per megabit per second for their broadband connections. This will begin to close the fiber connectivity gap and increase affordability of high-speed broadband connections.

## **Significance**

In July 2014, the FCC adopted the E-rate Modernization Order. The order outlines the following three goals for the E-rate program:

1. Ensuring affordable access to high-speed broadband sufficient to support digital learning in school districts and robust connectivity for all libraries.
2. Maximizing the cost-effectiveness of spending for E-rate supported purchases.
3. Making the E-rate application process fast, simple and efficient.

However, school districts find it difficult to navigate the E-rate and OUSF processes, leaving millions of dollars of funding unused. In 2015, only 204 of the 394 school districts that took the 2016 State Department of Education Tech Survey received Category II E-rate funding and 46 school districts received no E-rate funding at all.

In 2015, the OUSF administrator reduced the requested reimbursement of the 275 Oklahoma school funding applications received. Many times the reductions were given because the documentation that supported their request was inaccurate or incomplete.

In 2017, Oklahoma leveraged \$44.1 million in federal E-rate funds but \$27.1 million is still available to the 442 school districts.

Only a small percentage of school districts have E-rate experts on staff and the state currently provides limited support in this area. This has led to school districts contracting with E-rate consultants to process their E-rate applications when seeking funding to purchase broadband and WiFi services. From the recent SDE technology survey, approximately 72 percent of reporting school districts use a consultant to file for E-rate and OUSF. Approximately 290 school districts spent an average of \$4000.00 per school district, over \$1.2 million, on consulting fees during the 2015 to 2016 school year.

The Connect and Learn Initiative provides E-rate resource information and communications that have helped increase participation in the E-rate program since it began in 2016. School districts get the necessary funding needed to achieve the connectivity goals set by the FCC, the EducationSuperHighway and the Oklahoma State Educational Technology Directors Association.

Oklahoma school district officials are faced with having few choices for connecting their school districts to affordable broadband and procuring the service in a way that meets E-rate standards.

From a cost perspective, low-cost megabit per second circuits are difficult to achieve, as many school districts are too small to require wide area network circuits. The WAN circuits are what allow for the one gigabit per second or greater capacity that is typical for more efficient and cost effective broadband services.

Leveraging state resources, such as the procurement vehicles through statewide contracts, increases the affordability of high-speed broadband connections.

From a planning perspective, many school districts in rural areas do not have the technical expertise to create a network plan that can be expanded upon over the course of time in order to close the connectivity gap and provide the bandwidth needed for digital learning. Providing standards and best practices has helped with putting the correct network circuits in place to allow for needed bandwidth expansion in the future.

Leveraging state resources such as the technology staff and guidance provided by the Connect and Learn Initiative can help with establishing best practices and viable technology plans.

## Benefits

We are closing the K-12 connectivity gap. When the initiative started, Oklahoma had only 77 percent of school districts connected to fiber. Oklahoma now has approximately 90 percent of our school districts with fiber connections.

We have also had an additional 115,868 students in 72 school districts upgraded to the 2016-2017 SETDA minimum recommended bandwidth of 100 kilobits per second per student as noted by the EducationSuperHighway.

By expanding the current statewide contract options to include managed WiFi, OMES has the potential to save school districts thousands of dollars while providing a revenue generating opportunity for the State of Oklahoma.

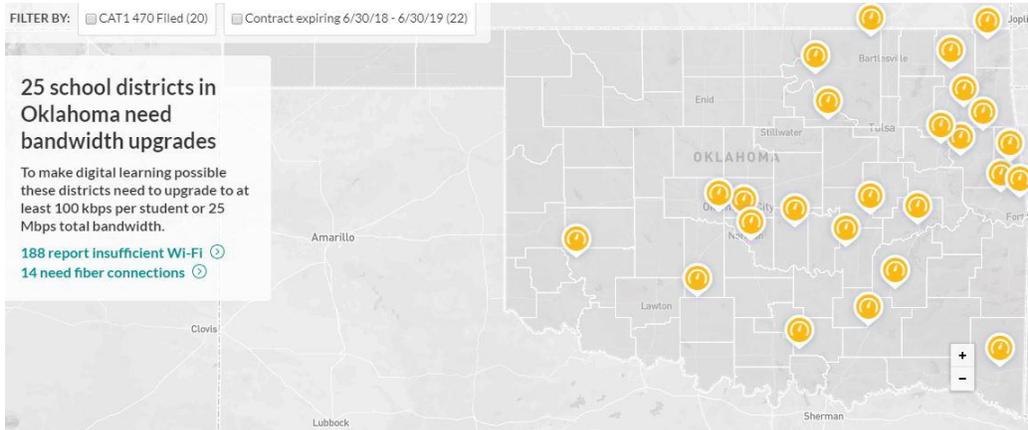
OMES technical expertise will be leveraged for technology assessment and deployment, reducing the burden on school district IT resources.

“State technology unification has allowed us to create a statewide contract to allow for more purchasing power for our school districts,” said Oklahoma CIO Bo Reese. “Where it would have been smaller scale in the past, now we have more purchasing power.”

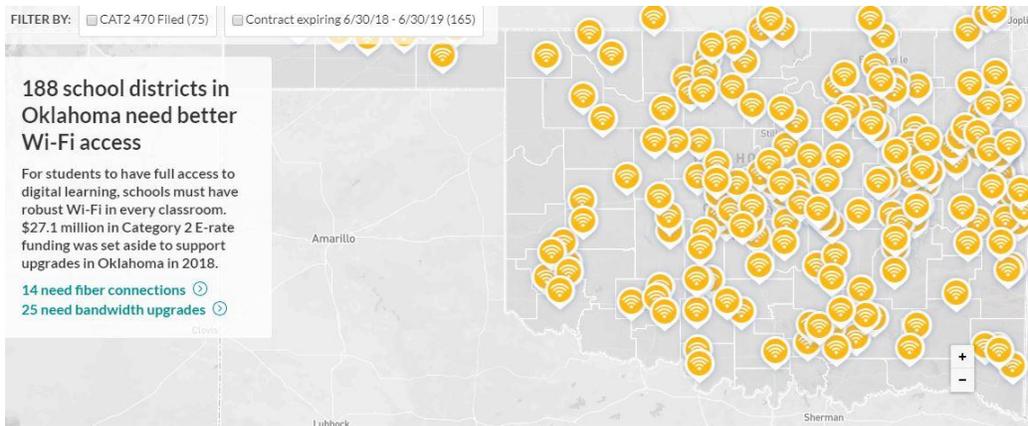
That ability to provide more bandwidth at a cheaper rate is important when trying to establish fiber optic cable connections in Oklahoma schools. It’s also important when trying to meet the standard of 1.5 megabits per second bandwidth per student.

The Oklahoma Connect and Learn Initiative will continue with its efforts to provide training, network planning, procurement vehicles and communications to close the K-12 connectivity gap in Oklahoma.

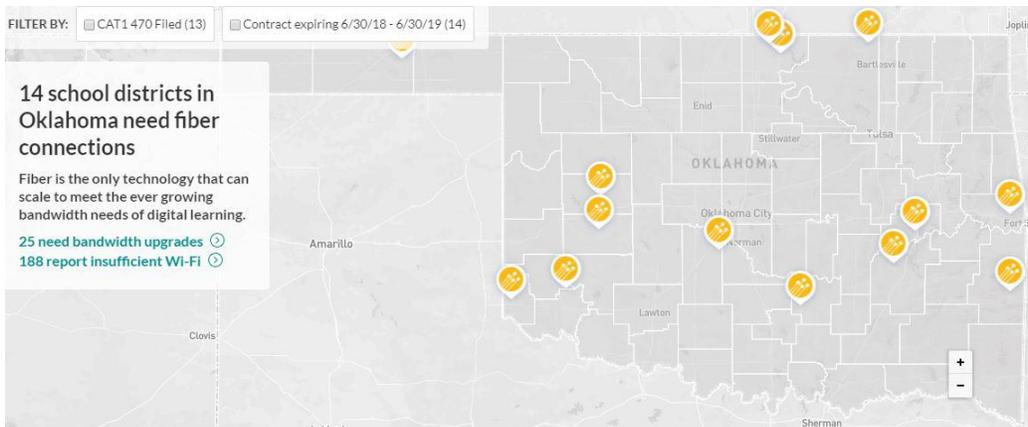
See our state’s progress and more information on the [EducationSuperHighway website](#).



25 school districts in Oklahoma need bandwidth upgrades.



188 school districts need better WiFi access.



14 school districts in Oklahoma need fiber connections.