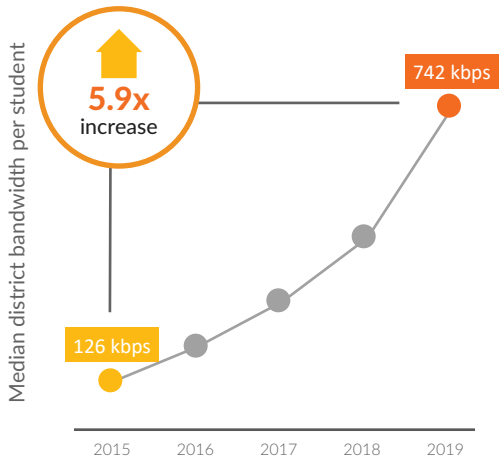
Texas | 2019 Connectivity Snapshot

21st century learning is increasing the demand for broadband. Schools need to continue to grow their bandwidth to make technology a part of learning in every classroom, every day.

BANDWIDTH



MEETING FCC BANDWIDTH GOALS:

98% of your students are meeting 100 kbps per student, and

32%

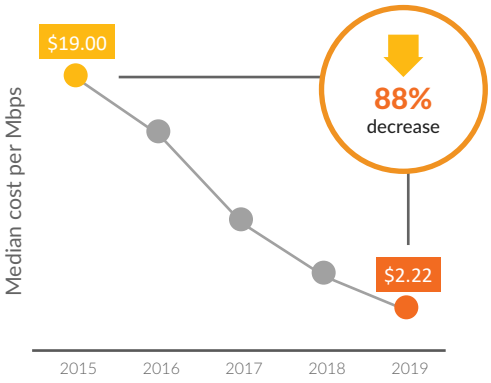
of your students are meeting 1 Mbps per student, in comparison to 24% nationally

"Providing high-speed Internet is no longer a luxury but a necessity for schools in Texas. Teachers and students should not be limited in their success because of a lack of resources, which includes access to high-speed broadband in every classroom, every day. I am proud to support the work of the Classroom Connectivity Initiative to increase connectivity, provide Texas students with a quality education, and bring our schools into the 21st century."

- Governor Greg Abbott

AFFORDABILITY

Taking advantage of improved affordability is the key to meeting the 1 Mbps per student goal.



307

districts have expiring internet contracts and are not meeting 1 Mbps per student. Their median cost:

$8.19

per Mbps

260

of these districts can meet 1 Mbps per student if their broadband costs decline to the median cost of districts already at 1 Mbps per student:

$0.70

per Mbps

FIBER

Since 2016, Texas has upgraded 92% of its unscalable school campuses to fiber.

6,684 school campuses now have scalable infrastructure, and only

27

school campuses still need to be upgraded to scalable infrastructure

WI-FI

E-rate funds have enabled Texas school campuses to upgrade Wi-Fi networks and bring broadband to every classroom.

$422 M

in federal Wi-Fi funding has been utilized in Texas since 2015

Source: USAC Form 471 2019 E-rate applications, n=1,015 of 1,023 school districts, n=6,676 of 6,711 schools, n=5,031,323 of 5,058,774 students

1 Mbps = 1,000 kbps

Education SUPERHIGHWAY

About the Metrics

BANDWIDTH

Median Bandwidth per Student

We determine a school district's bandwidth by dividing the district's total monthly internet access bandwidth by the number of students. We determine the median district bandwidth per student by calculating the median of all districts in the state. The increase factor is generated by dividing the median bandwidth per student in 2019 by the median bandwidth per student in the first year represented on the chart.

Students meeting FCC Bandwidth Goals

We assess if a district is meeting the short-term (100 kbps/student) and long-term (1 Mbps/student) FCC Bandwidth Goals by dividing the district's total monthly internet access bandwidth by the number of students. We then sum the total number of students in every district meeting the goals.

To account for oversubscription, we discount the amount of bandwidth needed based on the size of the district:

Size	Meeting long-term BW Goal
1-5 schools	1 Mbps per student
6-15 schools	850 kbps per student
16-50 schools	700 kbps per student
51-99 schools	400 kbps per student
100+ schools	170 kbps per student

AFFORDABILITY

Median Cost per Mbps

We determine the cost per Mbps at a district level by dividing the district's total monthly internet cost by the total monthly internet bandwidth. We then take the median cost per Mbps across all districts within the state.

Districts and Students with Expiring Internet Contracts and Better Deals

Of the total number of districts in the state not meeting 1 Mbps per student with expiring internet contracts, these districts (either directly or via their consortia) can meet 1 Mbps per student within their current budget if they get similar pricing to districts already at 1 Mbps.

FIBER

Fiber Upgrades Since 2016

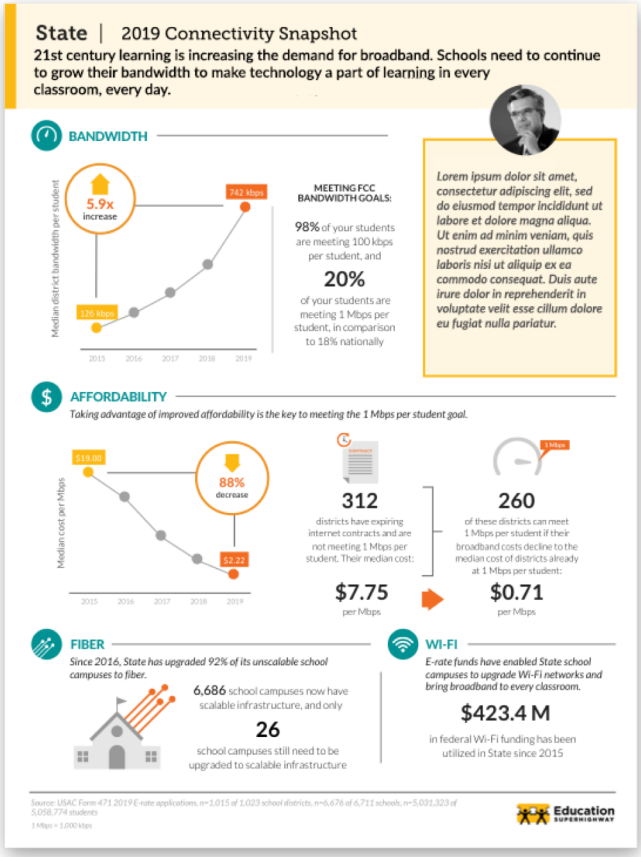
This metric shows the percentage of public K-12 schools that have been upgraded from a non-scalable connection to fiber since 2016.

% of Schools on Fiber

This metric shows the percentage of public K-12 schools in the state that are currently connected on a scalable fiber connection. Fixed wireless connections with capabilities of 1 Gbps are a sufficient option for some school districts.

Schools with or without scalable infrastructure

This metric reports on the availability of scalable infrastructure based on the FCC-recommended goal that every school's broadband infrastructure be scalable to 10 Gbps (which currently requires fiber). There are some cases in which a 10 Gbps connection is not required because of school population. In these cases, we made an assumption that these schools already have sufficient infrastructure. For schools where the connection type was unknown, we applied a set of rules to determine the connection type based upon extensive research.



Wi-Fi

"Wi-Fi funds" are E-rate Category 2 funds for schools to upgrade their internal connections. For funding years 2015 - 2019, the FCC provided every school with a Category 2 budget (adjusted yearly for inflation) of $150 per student or a minimum of $9,200 per school. We calculated the total Category 2 funding utilized by summing the funds requested by districts (excluding the requests denied by USAC) for Funding Years 2015 - 2019.