Upgrading Broadband in Montana's K-12 Schools

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Our mission

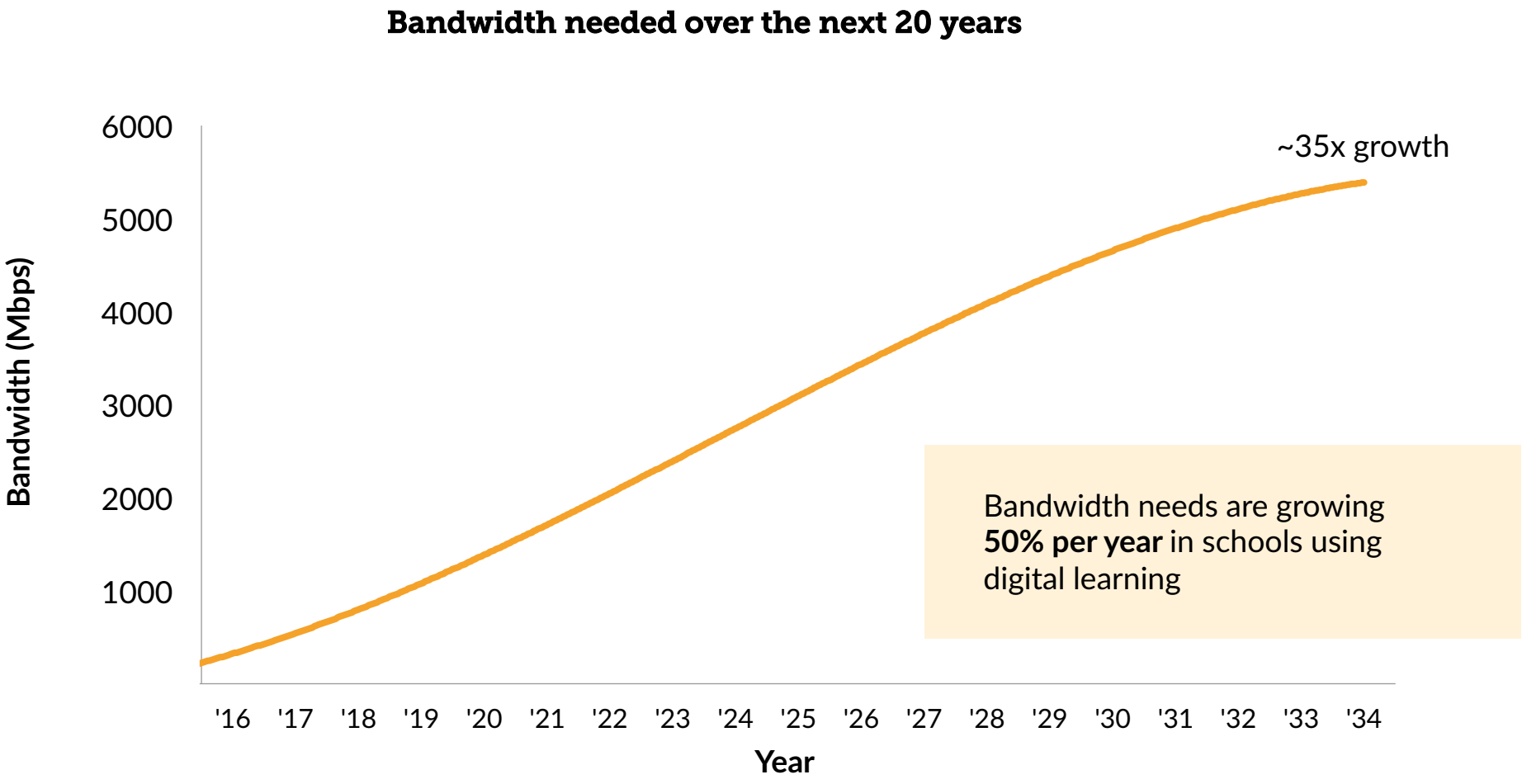
Upgrade the Internet access in every public school classroom in America so that all students can take advantage of the promise of digital learning.

We offer our services at no cost thanks to the support of our philanthropy funders

Education SUPERHIGHWAY

Bandwidth needs are growing

K-12 schools are increasing digital learning and number of connected devices

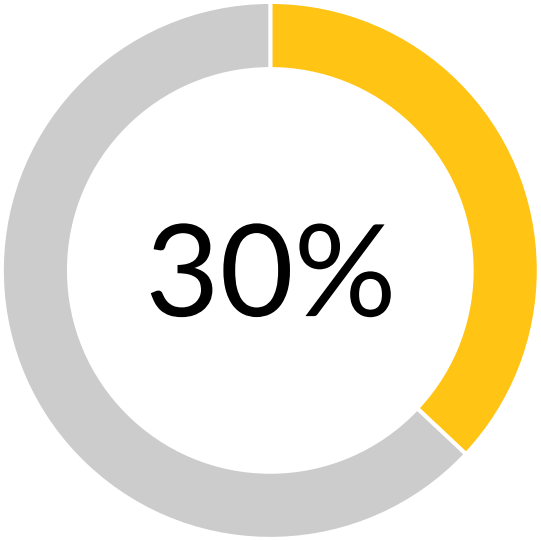


Education SUPERHIGHWAY

National progress upgrading districts & students

Connectivity

In 2013



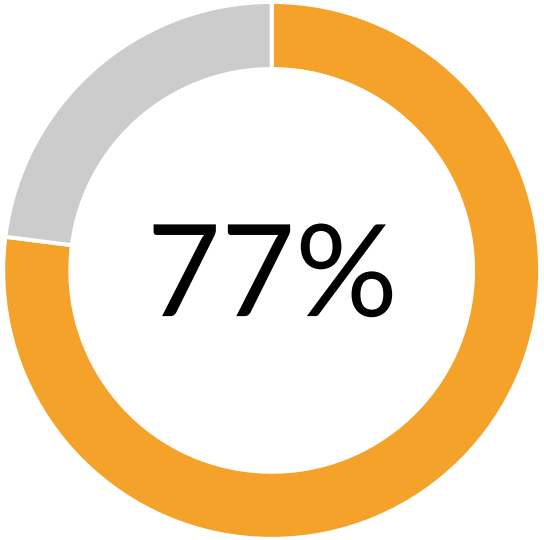
of school districts were meeting 100 kbps goal

4 Million students

300,000 teachers

11,200 schools

In 2015



of school districts were meeting 100 kbps goal

24.5 Million students

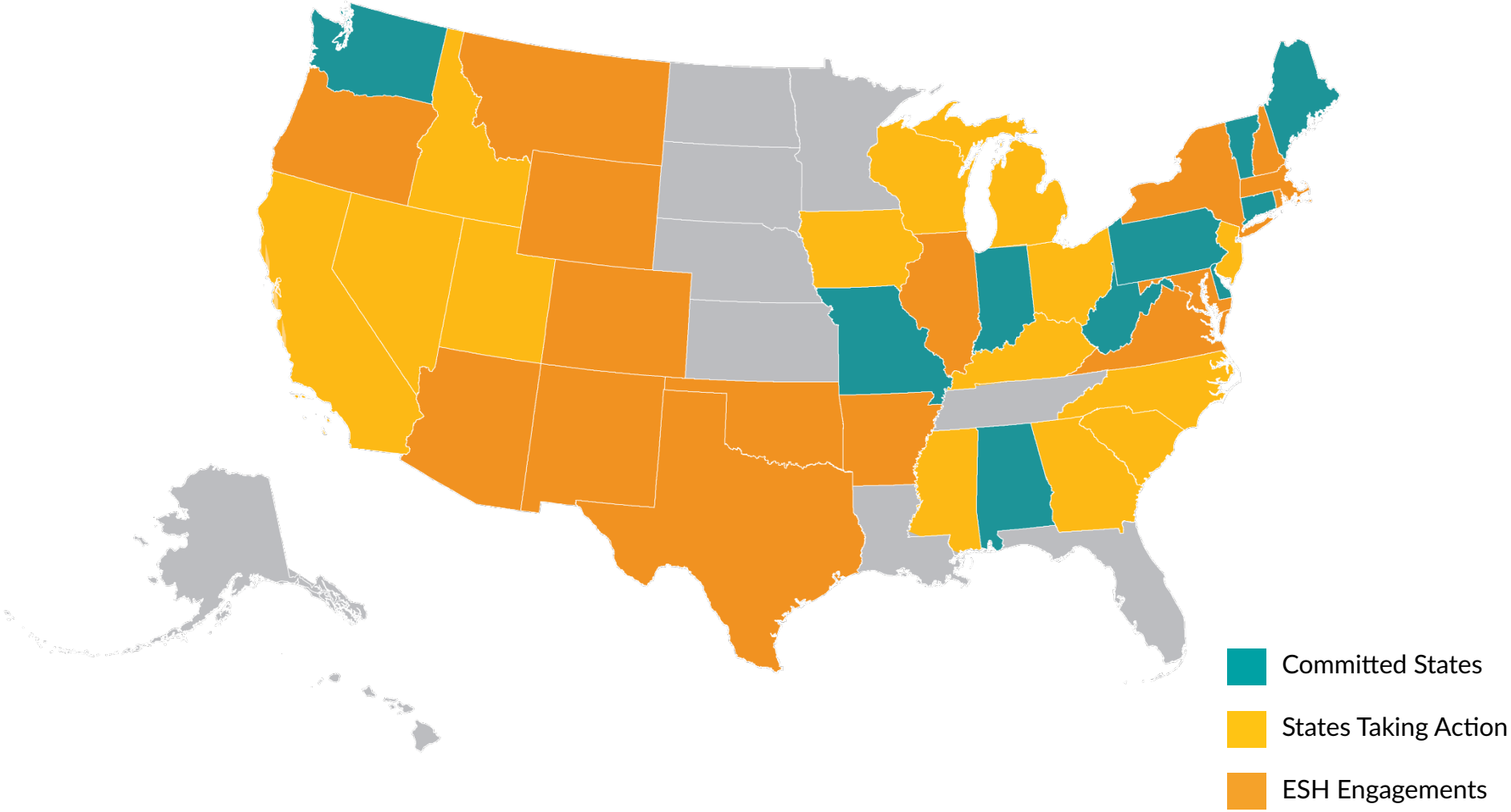
1.7 Million teachers

53,100 schools

Education SUPERHIGHWAY

We work with state leaders to catalyze action and scale

State engagements



Education SUPERHIGHWAY

What we do: help districts procure broadband upgrades

Our consulting program are designed to help districts work with providers to upgrade

Understand and provide education for districts to get their buy-in towards upgrades

Research technology and provider options by engaging with the provider community

Champion districts towards upgrades based on research findings

Help districts release and manage high quality 470/ RFPs and understand rules

Provide technical and implementation support as needed towards success

Great progress in Montana in 2015

EducationSuperHighway supported 28 districts seeking procurements in the 2015-2016 cycle

EducationSuperHighway directly supported:

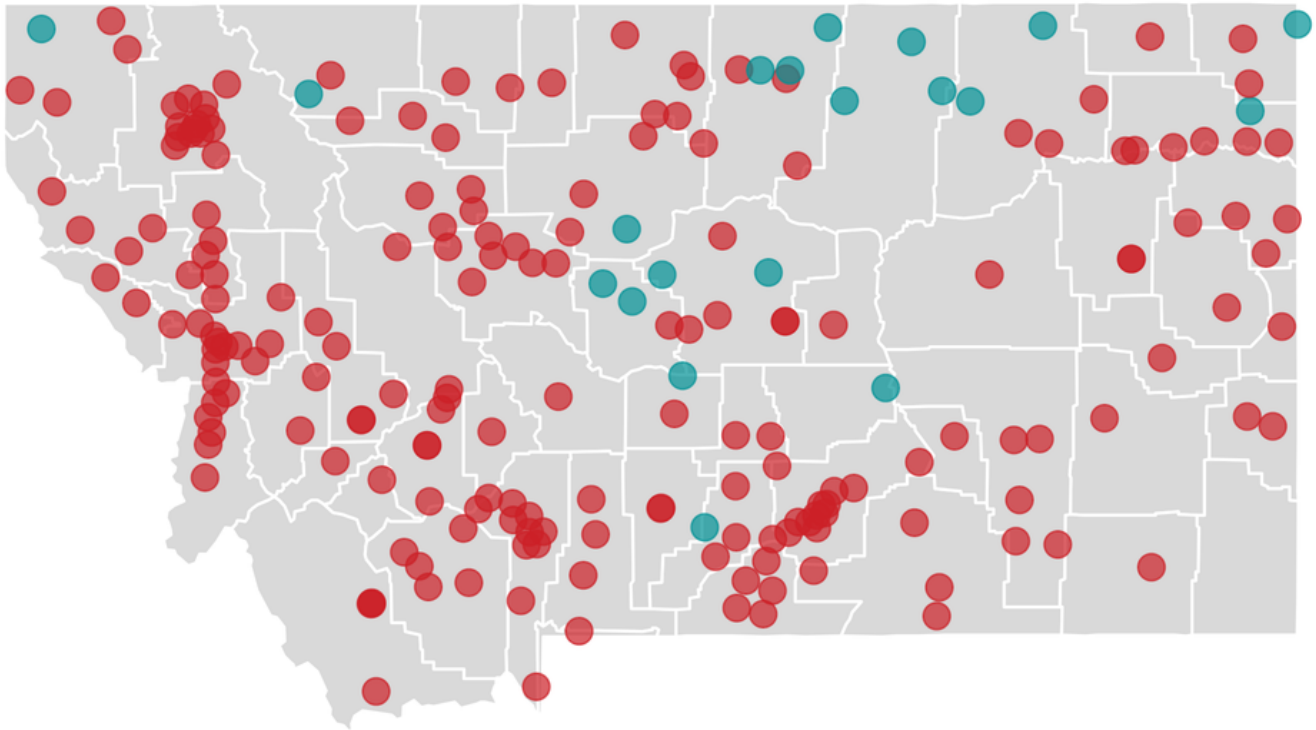
- 28 districts (and 104 schools) sought upgrade opportunities
- 47 service provider bids received
- 18 districts (and 88 schools) upgraded this year
- Districts increased bandwidth by 15x on average
- Cost per Mbps decreased by 41% on average

12,000+ more students now have access to fiber

25,000+ more students now meeting 100 Kbps/student minimum access goal

Education SUPERHIGHWAY

Districts meeting 1 Mbps/student bandwidth goals

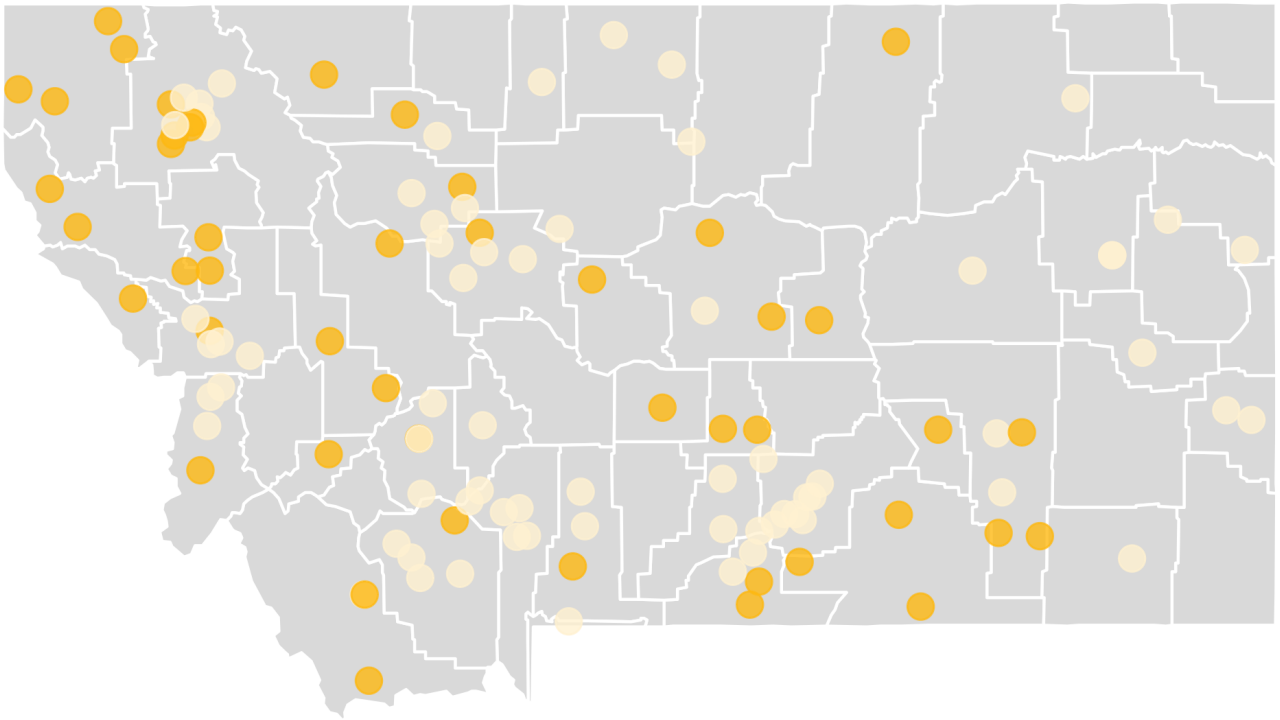


Meets 1Mbps/Student Goal
Does Not Meet 1Mbps/Student Goal

Nearly all districts need to upgrade in order to meet the 2018 standard of 1 Mbps/student

Education SUPERHIGHWAY

Districts across Montana lack fiber optic connections



Upgrade at partial cost to district
Upgrade at no cost to district

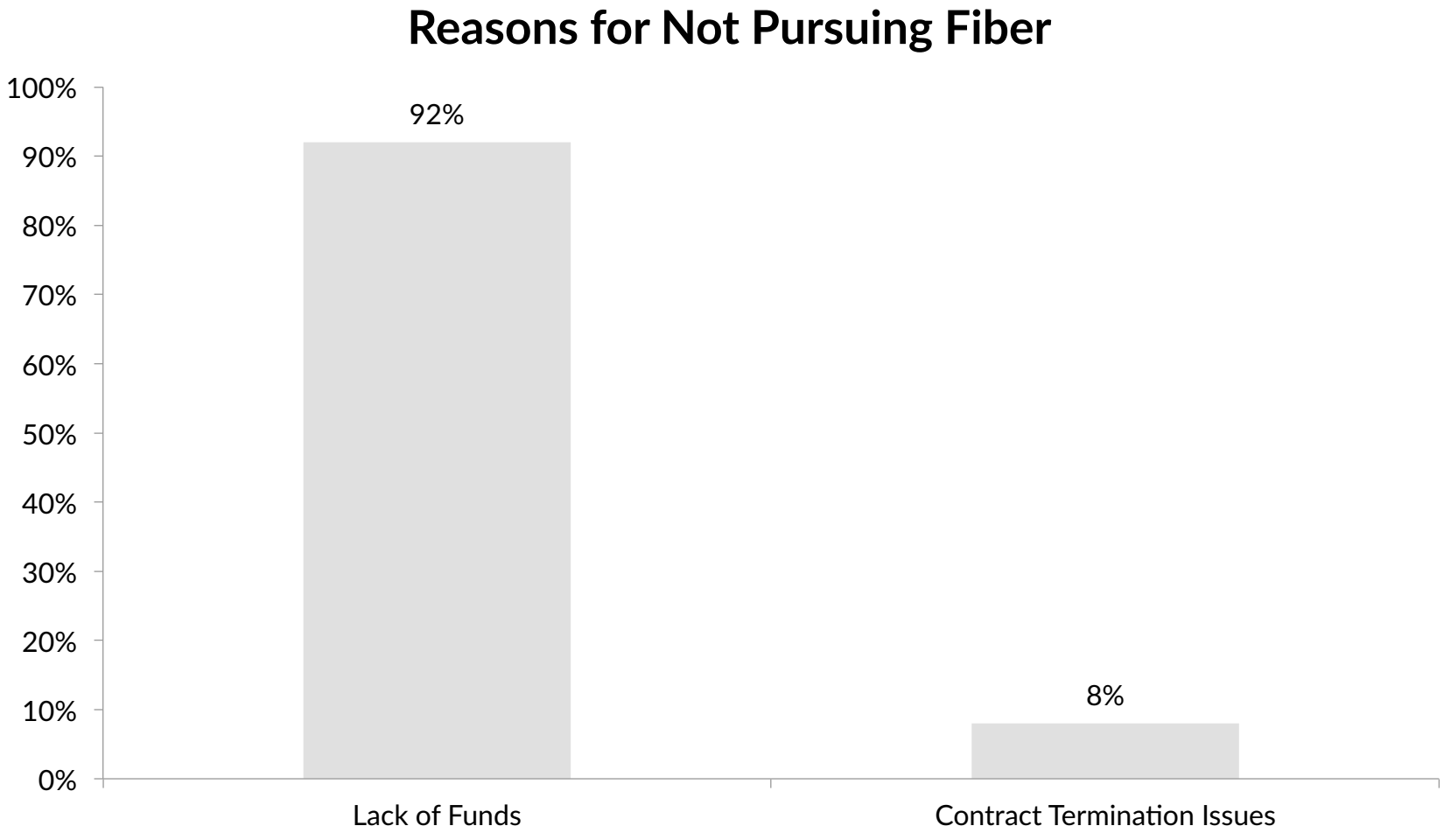
133 districts, 163 schools and 25,000 students lack fiber access to the Internet

A state matching fund enables many to upgrade at no cost to the district

Education SUPERHIGHWAY

Districts not pursuing fiber upgrades in 2015-2016

92% of districts we worked that with did not move forward with fiber, stated that it was because they lacked funds.



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One-time fiber funding opportunity expires in 2018

- **Additional 10% E-rate funding if state provides matching funds**
- Funds are for one-time capital improvements and matched by E-rate 1:1
- More flexibility to pay non-discounted portion of fiber construction costs

Governor Bullock proposed a $2M state matching fund to help districts close the gap in the next biennium

This will support over 60 schools and 20,000 students to upgrade to fiber at no cost to the district

States are leveraging E-rate to connect more schools

In New Mexico, state match funding allowed 51 schools to upgrade at no cost.

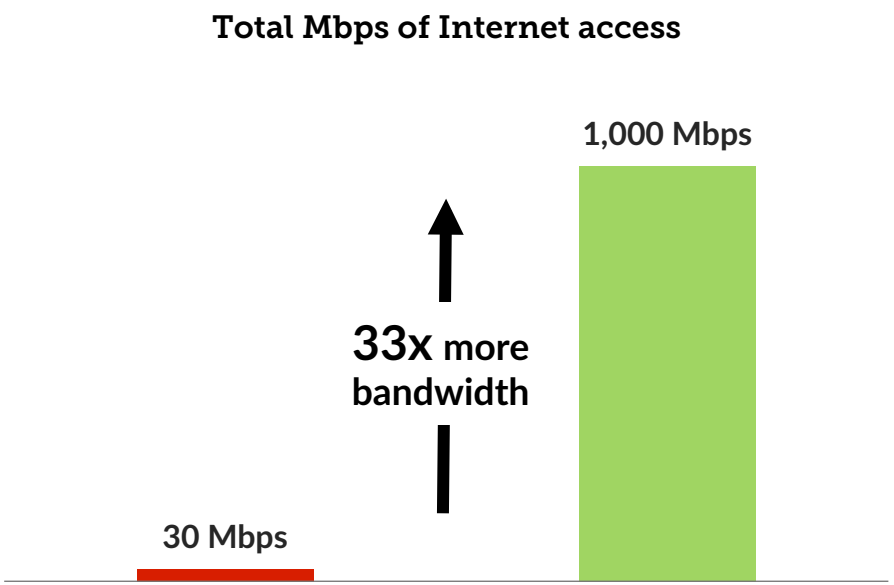
District	# of schools	Special Construction	E-Rate %	State Match	District Match
Bernalillo Public Schools	9	$2,500,000	90%	$125,000	$0
Bloomfield Schools	1	n/a	80%	n/a	$0
Central Consolidated Schools	11	$3,100,000	90%	$155,000	$0
Cobre Consolidated Schools	1	$675,000	90%	$33,750	$0
Deming Public Schools	1	$1,325,000	90%	$66,250	$0
Espanola Public Schools	6	n/a	90%	n/a	$0
Farmington Municipal Schools	8	$700,000	80%	$70,000	$0
Gadsden Independent Schools	1	$450,000	90%	$22,500	$0
Gallup-McKinley County Schools	4	$5,975,000	90%	$298,750	$0
Hondo Valley Public Schools	2	$115,350	90%	$5,768	$0
Jal Public Schools	3	n/a	80%	n/a	$0
Socorro Consolidated Schools	2	n/a	90%	n/a	$0
West Las Vegas Public Schools	2	n/a	90%	n/a	$0
TOTAL	**51**	**$14,840,350**		**$777,018**	$0

Case Study: Darby School District, Montana

Fiber Special Construction

Helped school district leverage new E-rate funding options to build fiber to a community

- 320-student district in the remote Bitterroot Valley
- Recently closed a successful procurement for a new 18 mile fiber run –
  - 5 bidders
  - Lit service options
- Winning provider will build out fiber, **with the majority of construction costs reimbursed by E-rate program.**

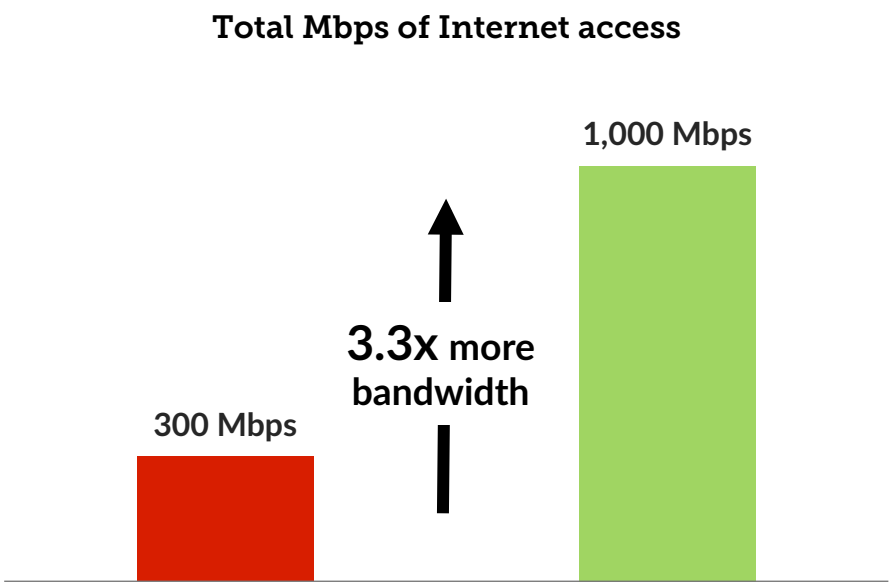


Case Study: Great Falls Public Schools, Montana

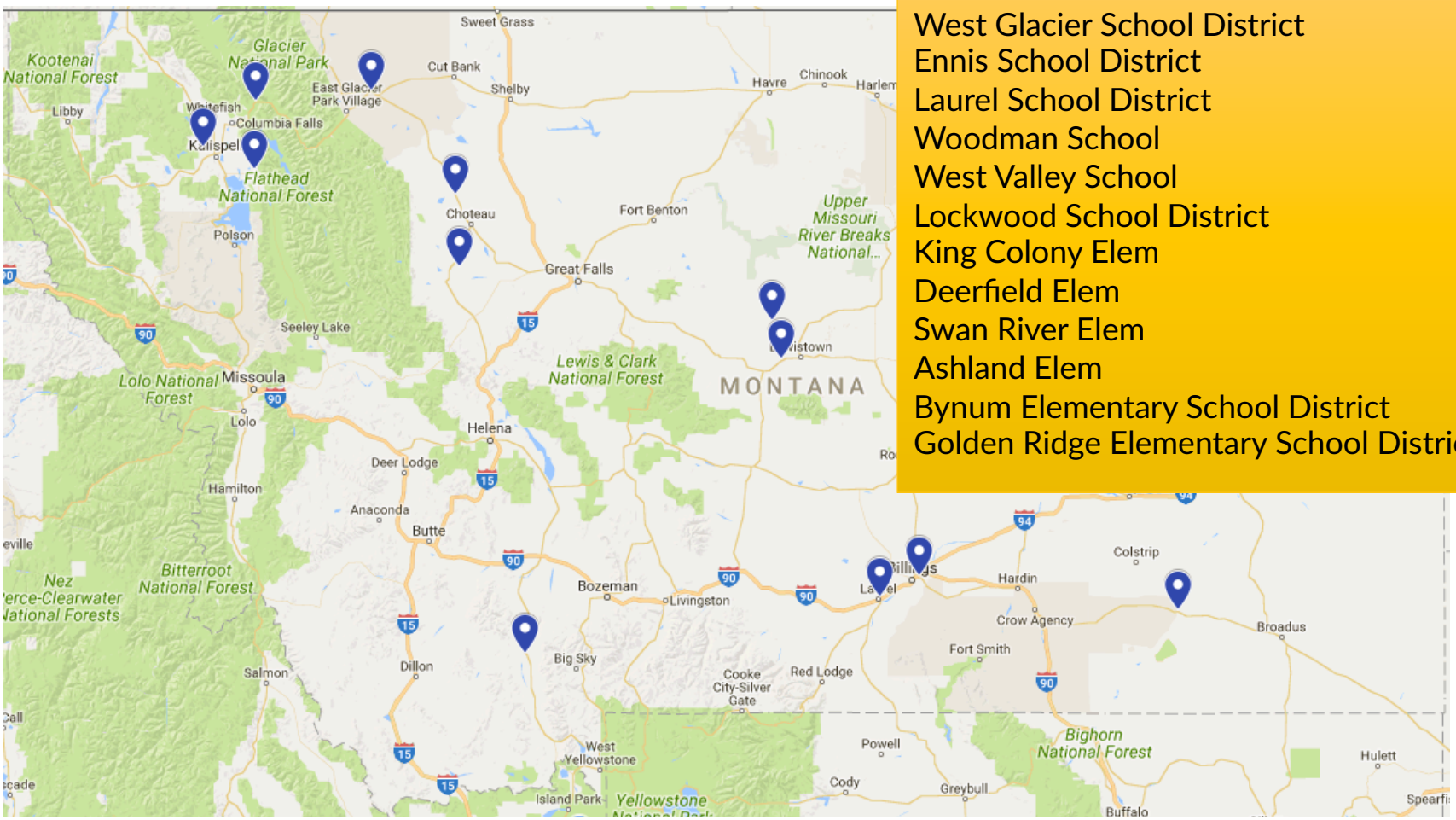
Bandwidth Upgrade

Helped district upgrade with existing provider to meet bandwidth goals

- 10,067 students (2nd largest district in the state)
- Was on a 300 Mbps lit fiber connection at $12 per Mbps, resulting in just 30 kbps/ student
- Upgraded mid-contract to 1 Gbps connection with existing provider; will receive 100 kbps/ per student after upgrade



We’ve launched projects in another 12 districts to date



West Glacier School District
Ennis School District
Laurel School District
Woodman School
West Valley School
Lockwood School District
King Colony Elem
Deerfield Elem
Swan River Elem
Ashland Elem
Bynum Elementary School District
Golden Ridge Elementary School District

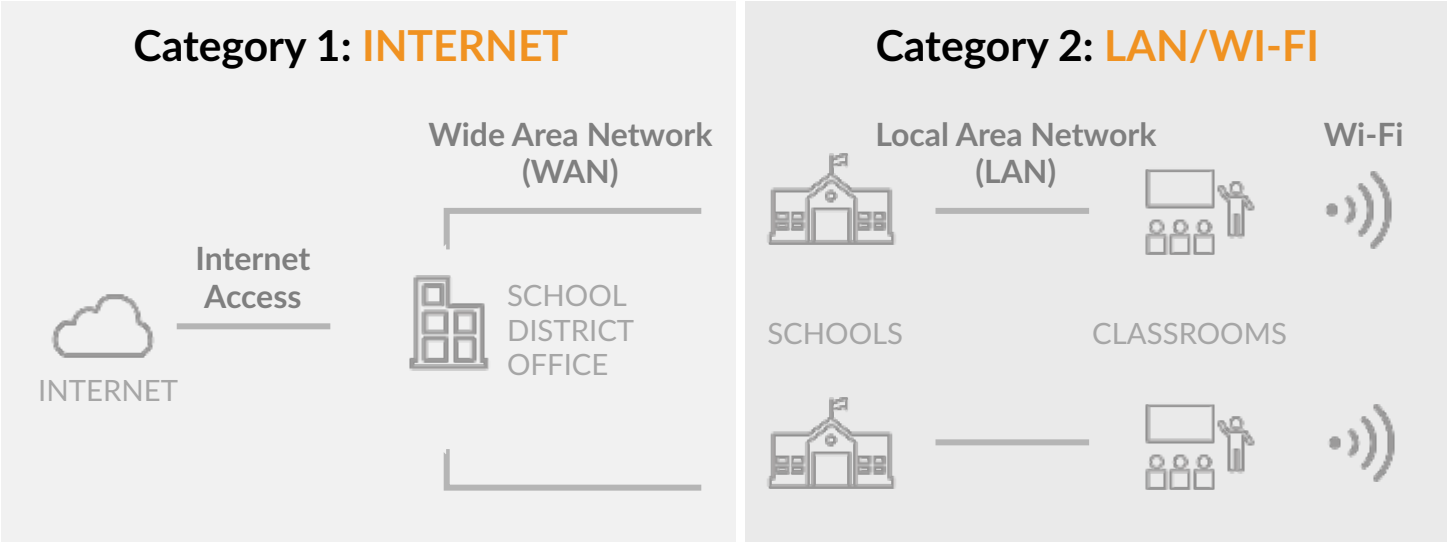
Education SUPERHIGHWAY

E-rate funds K-12 broadband connectivity

$3.9 BILLION ANNUALLY

Up to 90% discount on connectivity services

Operated by the Universal Service Administrative Company (USAC) under the FCC



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E-rate timeline

E-rate eligible services

Category 1 services

- Fiber (lit and dark)
- Wireless (e.g., microwave)
- Cable modem
- DSL
- Satellite service
- Broadband over power lines
- T-1, T-3
- Dial-up
- Voice services

Category 2 services

- Access points
- Antennas and cabling
- Caching
- Network switches
- Firewall services and components
- Switches
- Routers
- Racks
- UPS/battery back up
- Supporting software
- Managed services (e.g., Wi-Fi)
- Basic maintenance, repair, and installation