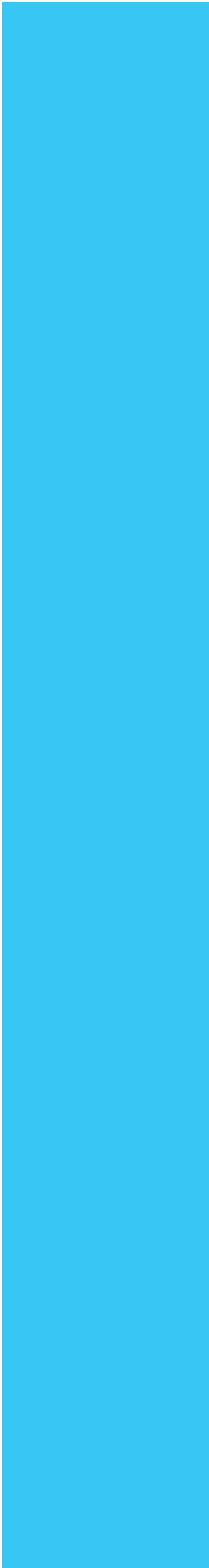


BRIEF

# Public-Private Partnership Brings Reliable Broadband to Oregonians

Lumen helps Link Oregon  
extend high-speed connectivity  
into remote students' homes



As the global pandemic made clear, having high-speed internet connectivity at home is critical for student success. However, too many students still lack home broadband service, especially in remote and rural areas of the country where middle-mile access may still be unavailable.

Recent federal investments could help change that. For instance, the [Infrastructure Investment and Jobs Act](#) (IIJA) of 2021 provides \$1 billion to expand middle-mile connectivity into underserved communities, and the [American Rescue Plan Act](#) (ARPA) supports this goal as well.

As state and local officials consider how to spend this money, a public-private partnership in the state of Oregon could serve as a model for bringing connectivity to more families nationwide. [Link Oregon](#), a nonprofit network consortium involving Oregon's four largest research universities and the state government, is working with [Lumen](#) to expand middle-mile access within rural communities across the state.

The funding from federal programs such as IIJA and ARPA provides a “key opportunity” to extend the reach of this partnership, according to Steve Corbató, executive director of Link Oregon — ensuring that students throughout the state can learn and work from home as effectively as they can while they're at school.



## Overcoming significant hurdles

Oregon is a fairly large state geographically, with a moderate population of about 4.2 million people. Much of the state consists of wide-open space, rugged mountains, and volcanic rock.

“If you go out to southeastern Oregon, there are homes that are separated by five to ten miles,” Corbató said. “The area south of Burns, Oregon and north of I-80 in Nevada is one of the most unpopulated regions of the lower 48 states.”

Without financial incentives, it can be cost-prohibitive for companies to run fiber cabling into such sparsely populated areas. And even in rural communities that do have high-speed internet access, the service often is not resilient.

“We have a number of communities in Oregon that only have a single fiber path in,”

Without financial incentives, it can be cost-prohibitive for companies to run fiber cabling into sparsely populated areas.

Corbató noted. “In many cases, that fiber is aerial rather than buried underground. If a car hits a pole or a wildfire burns through the area, those communities lose their connection. That’s not a hypothetical situation; it happens.”

Case in point: A 2021 fire in Klamath and Lake Counties threatened a non-redundant, mostly aerial fiber deployment spanning more than 150 miles, which would have cut off connectivity for seven Oregon communities.



---

## Rising to the challenge

In 2021, Oregon convened a Broadband Middle-Mile Infrastructure Planning Group. Co-chaired by Corbató, its purpose was to assess the status of middle-mile network infrastructure in Oregon and make recommendations to the state's Broadband Office. Tre Hendricks, director of government affairs for Lumen, served on the committee as well.

The planning group identified 37 remote and Tribal Oregon communities lacking resilient middle-mile connectivity. It [recommended a dozen action items](#), such as establishing a "future-proof" residential bandwidth standard of 100 megabits per second (Mbps) both upstream and downstream and fully extending middle-mile networks where needed throughout the state.

IIJA funding will be instrumental in these efforts. IIJA's \$1 billion [Enabling Middle Mile Broadband Infrastructure Program](#) aims to reduce the costs associated with bringing high-speed internet access to unserved and underserved communities.

IIJA's \$1 billion Enabling Middle Mile Broadband Infrastructure Program aims to reduce the costs associated with bringing high-speed internet access to communities.

"Tackling this challenge requires a blend of approaches," Corbató said. For communities where fiber isn't feasible, technologies such as fixed wireless and low Earth orbit (LEO) satellites can help fill broadband access gaps.

"We have to think of this as a system," he asserted. "It can't all be fiber, but at least for people effectively on the electrical power grid, there should be a greater effort made to get fiber to their homes, especially with the new levels of federal investment."



## How Lumen is helping

Bringing reliable broadband services to remote areas of the state involves collaboration between Link Oregon and private companies such as Lumen.

Corbató's relationship with Lumen goes back several years, to when he was involved in bringing ultra-high-speed internet service to universities through the [Internet2](#) research and education network.

"Link Oregon works by acquiring the long-term rights to fiber lines," he said. "We do that almost entirely through private and public partners, and Lumen has been a great partner and a strong supporter of our network development."

In one example, Link Oregon worked with Lumen to enable a third-party dark fiber connection from an agricultural research center that [Oregon State University](#) and the USDA Agricultural Research Service jointly operate in a remote region of the state.

Broadband service to remote areas involves collaboration between Link Oregon and private companies such as Lumen.

"It's an area where research is critical," Corbató said. "Their range management research is vital. That site had been operating on legacy technology at several megabits per second. That's far less than what I have for connectivity at home in Portland. They couldn't conduct the science they needed to do. They needed to download remote sensing information to be able to track cattle using wireless transmitters on each of the animals, and they just couldn't do that."

He added: "Our partnership with Lumen, because they have capabilities in many parts of the state, enables us to meet these research and education needs."



---

## Leveraging a unique opportunity

Making reliable broadband services available to every Oregon community will go a long way toward helping students learn effectively from home and ensuring digital equity. Corbató recognizes the huge opportunity that programs like IIJA and ARPA provide, and he urges state and local leaders to ensure that the funding gets to the communities that need it most.

Reliable broadband services for every Oregon community will help students learn effectively from home.

“The amount of money the federal government is spending on broadband now will not be a recurring expense,” he observed. “We really need to look at this the way states looked at the electrification of rural areas 90 years ago — that is, we have essentially a one-time opportunity to modernize our infrastructure.”

He advised: “Use that money as well as you can, and make sure you’ve got a sustainable model in place to keep the new systems operating.”

\* This content is provided for informational purposes only and may require additional research and substantiation by the end user. In addition, the information is provided “as is” without any warranty or condition of any kind, either express or implied. Use of this information is at the end user’s own risk. Lumen does not warrant that the information will meet the end user’s requirements or that the implementation or usage of this information will result in the desired outcome of the end user. All third-party company and product or service names referenced in this article are for identification purposes only and do not imply endorsement or affiliation with Lumen. This document represents Lumen products and offerings as of the date of issue.