

Every Community Deserves Amazing Internet

How Advanced Midco[®] Internet Drives Local Economies and Facilitates Growth

Midco is committed to helping communities, their businesses and their residents thrive.

We strongly believe in strengthening communities with advanced fiber and high-speed internet services. Midco invests in extending our network to towns large and small throughout our footprint – and there's proof that investment pays off for communities like yours.

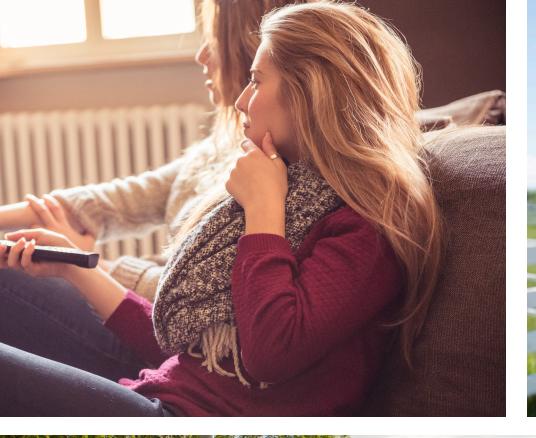
INTERNET AND THE ECONOMY

Reliable internet is important for more than entertainment – it empowers economic growth and helps businesses and families thrive. Without fast internet, numerous industries suffer and risk falling behind economically. According to 2016 data from the Federal Communications Commission (FCC), this disadvantage is a reality to 39% of U.S. rural residents who don't have access to broadband.¹

As of the first half of 2019, Midco's gigabit internet service is available to 90% of the homes and businesses passed by the wired Midco Network. That includes cities as large as Sioux Falls, Fargo, Lawrence and Rapid City, as well as smaller communities like Colton, Casselton and Chisago City. We also reach rural communities through our Midco Edge OutSM strategy, where we "edge out" high-speed internet from the wired Midco Network to rural areas using fixed wireless – a solution that transmits internet signals wirelessly point-to-point or point-to-multipoint. With this technology, Midco supports connectivity for farmers, ranchers, work-from-home teams, community members and small businesses – and the reach of Midco fixed wireless is ramping up to grow in 2020 and beyond.

The world is a connected place – and the networks of today and tomorrow will drive the innovations that make those connections matter and transform our lives.





10**G**

Midco will invest \$500 million to deliver 10G over the next 10 years. It's part of a global partnership of cable providers aimed at helping networks stay ahead of the digital progress underway in our world.

10G is a generational shift that will power the smart communities, businesses and homes of the future – sparking opportunity for innovations we have yet to imagine. Learn more at **Midco.com/10G**.

How Midco's Network Helps Communities Achieve **Economic Growth**

Networks are the great enabler, creating direct and indirect connections that bring the world closer together, shrinking distance and promoting collaboration. Our network enables Wi-Fi networks in homes, business networks, mobile networks and rural networks – and we interconnect with more than a hundred other networks.

Collaborative connections fuel innovative and creative solutions. All across the country and the world, innovators are coming up with new ways to leverage this new world of connectivity to provide better healthcare, education and precision farming – as well as to invent, to work together and to monetize.



Healthcare

Midco's internet connectivity is a key component in telemedicine. Rural residents with geographical barriers need access to healthcare anytime and anywhere. MRIs, ultrasounds, X-rays and other medical images can be shared

online with distant specialists. Online consultations also reduce the number of costly patient transfers to other facilities. This saves money and lives.

Work from Home

Midco's reliable internet connectivity is critical for homebased businesses or work-from-home employees. With high-speed internet, your community can attract and retain

residents who prefer to live and raise their families in Midwest communities, but work for a company elsewhere.

With Midco's internet infrastructure, your community is empowered to have work from home arrangements and telecommuters are not only more productive, but they also have higher salaries that increase spending power and keep dollars in your local economy. According to the 2017 State of Telecommuting Study:

- The average telecommuter earns \$4,000 more a year than a non-telecommuter.
- The typical U.S. telecommuter is 45 years old or older, and earns an average salary of \$58,000 while working for a company with more than 100 employees.²

Connectivity also gives workers flexibility to work from home when they are on-call, have a service call scheduled at their home or have sick children – improving worker morale and saving time and money.



Community

When local residents have the opportunity to telecommute and stay in your community – they're driving less – reducing their carbon footprint, traffic congestion, and road wear and tear. According to the 2017 State of Telecommuting

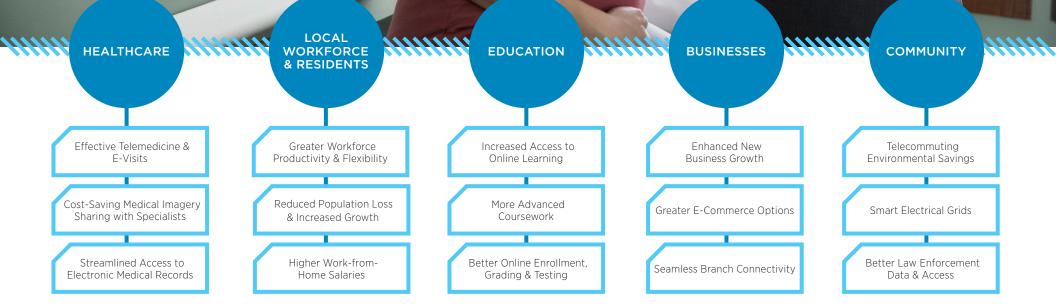
Study, the current number of U.S. telecommuters saves \$1.5 billion in energy costs annually – and produces greenhouse gas savings equivalent to taking 600,000 cars off the road for a year.²

Reliable internet gives law enforcement instant information on warrants and other records, no matter where they're working. Police can also use live video to monitor high-risk situations to protect citizens and officers.

How important is high-speed broadband?

On a scale of one to 10, I'd put it at an 8 or 9. It's very important to our teachers trying to access content. There's a lot of online testing and along with that, you can get to the Smithsonian and look at primary artifacts – things that we just couldn't do before."

> Jeff Ward Sturgis, SD • Meade School District MIDCO CUSTOMER



When school got out at 3 pm, our internet speeds dropped drastically. Doing credit card transactions was nearly impossible. Now, we can transact business much faster, and it's very reliable.

Marty Ferguson Annandale, MN • Business Owner MIDCO CUSTOMER



Business

Business owners looking to relocate need access to internet to stay connected with clients and maintain business functions. Fast broadband connections also help businesses connect

branch locations – and open new ones. If your community doesn't have the highspeed infrastructure, it could be driving away successful businesses.

Keeping your current local businesses – and keeping them open, efficient and productive – is just as important as attracting new business. Great connectivity is a reason for businesses to stay in your community. A study from the International Technological University found that for every 1% increase in broadband penetration in studied countries, productivity grows by 0.13%.³

With high-speed internet in your Midwest community, you can empower local businesses to take advantage of online consumer markets and e-commerce. According to the McKinsey Global Institute, these businesses "can reach customers, find suppliers, and tap talent on the other side the world and also use the internet to provide significant marketing and brand muscle. As a result, small firms can compete like big ones."⁴



Education

Students have access to limitless learning resources that schools cannot always provide on their own. In small communities, students have

expanded access to learn world languages, take advanced placement courses, and choose from a variety of electives through online learning.

Students can complete online college courses before high school graduation – giving them an advantage. This means they can take lighter course loads and achieve their degree more quickly.

Schools can operate more efficiently with online portals used for enrollment, class registration, grades, testing, events and more. According to the United States Department of Education, 48 states and Washington, D.C., support online learning programs.⁵ Students in your community could be taking advantage of these with a fast, reliable connection



If we didn't have fixed wireless, we'd just be limited as to what we could do. It would be like trying to farm without having GPS or not having a tool in your toolbox.

Carl Olson Fargo, ND • Olson Hereford Ranch MIDCO CUSTOMER

Farming and Ranching

Farmers and ranchers rely on an internet connection to follow commodity markets, communicate with customers and ensure regulatory compliance. However, the challenge of homes and businesses being too far outside of town remains. Rural connectivity is often too slow or non-existent, with 29% of U.S. farms having no access to internet according to a 2017 USDA report.⁶ Farm equipment and sensors can collect a ton of information, but if it can't be uploaded, stored and analyzed, its usefulness is lessened.

We all know that broadband connectivity has become a necessity for modern life. Living 10 miles outside of town should be a benefit, not a limitation. That's why we're making strides to provide rural farmers and ranchers in our footprint with Midco Fixed Wireless Internet, so their operations can succeed – just like any other business.

MIDCO COVERAGE

9,500 Midco Network Fiber Miles

385,000+

Customers

400 Communities States: Kansas, Minnesota, North Dakota, South Dakota and Wisconsin

Midco is Committed to Connecting Businesses, Residents and Communities in the Midwest

Lifeline Program

Regardless of income, internet connectivity is vital for finding and retaining jobs, achieving educational success and keeping up with finances. With Midco Lifeline program, qualifying low-income households can take advantage of a federal program providing vital connections to the world via affordable internet and phone service. This service could impact unemployment rates, education and poverty levels in your community.

Midco Gig

Available by cable modem, Midco Gig internet is a cost-effective way for communities, homes and businesses of all sizes to enjoy the benefits of faster speeds and enhanced internet capacity. As of the first half of 2019, Midco's gigabit internet service via modem is available to 90% of wired Midco communities.

Midco Fixed Wireless

In 2018, Midco acquired InvisiMax, a North Dakota fixed wireless company. With the acquisition came an experimental license for CBRS, a cutting-edge technology using wireless spectrum due to become available in late 2019. When we used new technology called carrier aggregation to test this frequency, we proved out download speeds of up to 200 megabits per second. Our reliable and

- 1. "2016 Broadband Progress Report," Federal Communications Commission, 2016.
- 2. "Latest Telecommuting Statistics," GlobalWorkplaceAnalytics.com, 2017.
- 3. "3 Ways Fast Broadband Contributes to Economic Growth," Tech.Co, 2016.

next generation fixed wireless network allows us to serve customers about 30 miles away from our fiber.

Midco will use this next generation technology to further expand our reach in rural America using a large, provisional award of federal funding. We've also acquired an experimental "C-band" license, with testing starting in spring 2019. While the highly touted 5G will do little for rural connections,

> it's our hope that associated advances in radio technology and signal processing will trickle down to help fuel further innovation for our LTE fixed wireless service.

Network Improvements

Reliable, fiber connectivity is important for network speeds – that's why we build our network with a philosophy to go as deep as possible into the network with fiber. We also actively upgrade and build redundancy and rerouting capabilities into our existing network routes. As a result, Midco has remained among the fastest ISPs in the United States since 2013.

For business connectivity and IT needs, Midco is investing in regional data centers serving key areas and expanding into underserved markets. Our data centers enable businesses to cost effectively house equipment and data – and keep it secure and always accessible on our highly redundant fiber network.

- "The great transformer: The impact of the Internet on economic growth and prosperity," James Manyika, Charles Roxburgh – McKinsey Global Institute, 2011.
- 5. "Use of Technology in Teaching and Learning," U.S. Department of Education.
- 6. "Farm Computer Usage and Ownership," USDA, 2017.

In a rural community with

fewer people, it's nice having

extra resources to lean on, the

internet provides access to that.

Hannah Anderson

Bemidji, MN • Business Owner

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