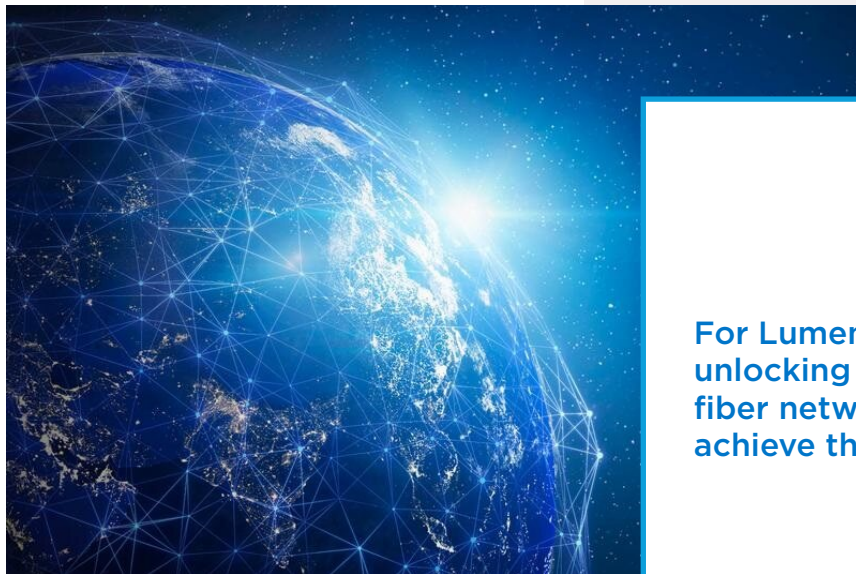


Lumen Digital Inclusion Marketing Brief



For Lumen, digital inclusion means unlocking the power of our expansive fiber network to help communities achieve their connectivity goals.

Introduction

Advancements in technology have revolutionized every aspect of Americans' lives, from work and school to essential services like healthcare. With more of our work, school, and personal worlds moving online, internet access is critical to our ability to connect with others, conduct business, access information, work, learn and build healthy, stable lives. Despite the perception that everyone has moved online, the FCC estimates that more than eight million Americans lack access to broadband internet. Most of those who don't have internet access live in areas without the proper infrastructure needed to provide this critical connectivity.

Digital inclusion refers to the efforts of federal, state, and local governments, along with their industry partners, to deliver connectivity to unserved and underserved areas as efficiently and economically as possible. For Lumen, that means unlocking the power of our expansive fiber network to help communities achieve their connectivity goals.

Middle-Mile Infrastructure Supports Last-Mile Connectivity

Bringing broadband internet to unserved and underserved areas requires coordination between last-mile providers and the networks that support them. Middle-mile infrastructure is essential for successful last-mile activities, which connect homes and businesses to the information superhighway. Lumen has an extensive fiber footprint in North America—with approximately 400,000 route miles across the country—that includes both dark and lit fiber and conduits.

Through public-private partnerships with federal, state and local governments, Lumen is using our middle-mile infrastructure to bring broadband to unserved and underserved communities. This is accomplished by either providing access to excess capacity on existing networks or activating “dark fibers” to take advantage of unused fiber. This can deliver connectivity to anchor institutions and other key locations as part of a hub-and-spoke model.

Community Benefits

There are many reasons why government agencies are prioritizing the expansion of broadband connectivity. Providing internet access empowers citizens to become more active participants in the economy, creating a more financially stable population that depends less on public benefits and can make better use of public services. Expanding internet access also enables governments to put more services online, reducing the cost of service delivery and allowing them to use taxpayer dollars more efficiently and effectively.

Public-private partnerships can help states and localities realize these benefits sooner. By partnering with Lumen, state governments and last-mile providers no longer need to take on the expensive and resource-intensive work of building out middle-mile infrastructure alone. Lumen’s expertise and expansive network can help states develop and deploy their middle-mile infrastructure capacity faster and more efficiently, meaning communities will see the connectivity benefits sooner. By using Lumen’s existing network infrastructure, the money that states would have to put toward middle-mile development can go toward activities like building out last-mile infrastructure in more areas and attending to network maintenance.

Community Outcomes

The ongoing digitization of society has transformed internet access from a luxury nice-to-have into a necessity for participation in today’s economic and social communities. Expanding access to more areas and more Americans will improve many aspects of Americans’ daily lives and make America more competitive on the world stage.

- **Healthcare:** The increased use of telehealth and virtual visits has made internet access an essential part of patient care. However, another important benefit broadband delivers is enhanced communication between rural clinics and better

staffed and resourced healthcare facilities. Expanding internet access for both patients and providers enables earlier diagnosis and more personalized care, delivering better health outcomes.

- **Education:** To be successful today and in the future, students—whether in kindergarten or graduate school—need the ability to do their schoolwork online. Equitable access to online resources and learning can prevent students in certain areas from falling behind due to a lack of access to information, limited course offerings, or exclusion from class activities. Moreover, for research universities, fast fiber connectivity enables students and faculty members to conduct groundbreaking research, collaborate with peers around the world, and further improve our understanding of our world.
- **Rural development:** The COVID-19 pandemic accelerated the trend of workers moving from large cities to suburban, exurban and rural areas while continuing to work remotely for their employers. However, the additional stress on older internet infrastructure created some challenges for employees and their new communities. Supporting these workers as they move to more affordable communities and enabling companies to expand their access to talent regardless of geographic location with modern, reliable broadband is essential to our shared economic future.
- **Stronger economy:** In addition to working remotely, broadband internet access enables small business owners to operate out of their homes and localities more efficiently. Connectivity supports economic progress and growth in communities that have lacked access to jobs and economic opportunities, such as farm workers.

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- **Digital literacy:** More access to online services and information helps increase Americans' digital literacy, which improves the social and political foundations of communities across the country.
- **Reducing digital crime:** When people spend more time online, they are more adept at identifying phishing and other fraudulent digital activities. More frequent exposure to both legitimate and suspicious online activities can help reduce the potential economic damage to organizations and individuals resulting from digital crime.

“The urgency to partner on last-mile and middle-mile fiber expansions has never been greater. Connecting unserved and underserved communities with high-speed broadband will ensure a greater and more diverse participation in education and the economy.”

-Kate Johnson, CEO, Lumen

Conclusion

As a leading middle-mile infrastructure provider, Lumen has both the opportunity and the responsibility to help close the digital divide. By working with both state and local governments and last-mile internet providers, Lumen is extending the power of our existing network to reach more communities in need.

Technology will continue to develop at a rapid pace, and the emergence of new products, such as generative AI, will result in an ever-larger digital divide and the growth of economic, educational, and social disparities.

Now is the time to prioritize all aspects of digital inclusion, from access to literacy and public-private partnerships, to ensure that the United States maintains its position of global leadership as an economic and innovation powerhouse.