WHY **MULTI-HOUSING BUILDINGS** SHOULD HAVE **FIBER OPTIC INTERNET**

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The benefits of fiber for apartments, townhomes and condominiums

Location, location, location. This well-known mantra has been a part of housing-market vernacular for generations. So often used, it's become a cliche among developers, real estate agents and other property gurus to measure the desirability of a dwelling. Even so, these words hold a longstanding truth that is worth a moment of consideration.

Location serves as a key influencer in tenant demand, a contributor to housing satisfaction and a leading factor in commercial and residential valuation. But in the digital age, there's more to the question of what makes property valuable and viable to buyers and renters. It's time for building owners and property managers to think deeper.

No doubt, location will always matter, but times are changing, consumer demands are shifting and a new opportunity is knocking. The age of broadband and constant connectivity has ushered in a new big player in the asset and value equation for property—fiber optic internet.

There are many reasons that stakeholders across the multiple-dwelling unit (MDU) industry should consider installing fiber in their buildings. Known in industry circles as an "invisible" asset, fiber internet presents value not only for the business interests of landlords, owners, operators and managers, but there are major payoffs for potential renters and buyers as well.

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THE FIBER FACTOR

As the fastest form of broadband internet delivery, fiber optics, in all metrics, outperform traditional cable networks. Fiber transmits more data faster, without losing significant signal quality over long distances. In comparison, most coaxial cable networks are currently limited to about 1Gbps. Cable networks, moreover, are designed to be asymmetrical, offering higher download speeds than upload speeds Alternatively, fiber optics can offer up to 100Gbps in bandwidth and speed, with symmetrical upload and download speeds.

These figures translate into improved data communication in terms of transmission speed, reliability, quality and long-term cost. Fiber is a future-proof solution for MDUs of all kinds.

Fiber is a proven commodity that not only will increase the value of the property, but reduce occupant churn and ensure the building meets the wired and wireless connectivity needs of residents for the long term.

BANDWIDTH DEMAND IS BOOMING

For apartments, townhomes, condominiums and other multi-dwelling housing, fiber internet service presents a prime value-added opportunity that is becoming too significant to overlook. To understand why, it's crucial to observe the trends that are developing in the age of the connected living space.

The demand for internet bandwidth continues to rise, and it's not slowing down. The average internet user's internet speed grows by 50 percent per year, according to Nielsen's Law of Internet Bandwidth. Additionally Moore's Law says computing power grows by 60 percent per year. Dependence on the internet is growing, and even the average connected user is needing more bandwidth than ever before.

From work-at-home careers to streaming entertainment to the rise of ultra-connected smart homes, people are relying more than ever on a robust and dependable broadband connection.

CONSIDER WHAT'S DRIVING THE BANDWIDTH BOOM:

The number of internet-connected devices in homes is exploding

The average American has access to more than 10 connected devices in their household, including more than two computers and two mobile phones, research from Statista finds. By 2030, that number is projected to grow to 15 devices. In terms of bandwidth share, just one connected 4K Ultra High Definition (UHD) TV often consumes as much as 20 to 30 Mbps of data. From smartphones to TVs to wearable fitness trackers, and from smart appliances to digital assistants, connectivity is not a niche market, it's a booming industry.

Working-at-home is becoming the norm

The COVID-19 pandemic brought about a sharp rise in remote work, but historically, technology itself—propelled by the internet—has been driving the work-from-home trend for years. Telework is being implemented at businesses of all sizes, and the reasons are numerous. The benefits of remote work strategies include reducing the need for costly office space, gaining efficiencies, reducing costs of an on-site workforce, recruiting and retaining talent, and resolving work-life balance issues.

The internet and technology are becoming integrated into how companies do business and employees do their jobs. Businesses—and their home-based employees alike—now have access to ever-faster high-speed internet, intuitive project management software, powerful wireless devices and efficient cloud-based solutions.

At-home virtual learning for adults is on pace to grow

The e-learning industry has been growing for the past decade. During the pandemic, it rose sharply. Even before COVID-19 sent students everywhere online for school, Research and Markets forecasted the online education market to reach $350 billion by 2025. People want the opportunity to gain new skills on their own time. Not only is the cost structure more convenient for some students, working professionals have the opportunity to gain training, certifications, and valuable career-enhancing skills on a schedule that suits them.

Streaming and on-demand entertainment is as popular as ever

When it comes to home entertainment, on-demand video streaming is king. According to a digital media trends survey from the Center for Technology, Media & Telecommunications, in the eight years from 2009 to 2017, the number of U.S. households subscribing to paid, internet-dependent streaming video services increased by 450%. Growth is not slowing down. A report from Grand View Research finds that the global video streaming market is expected to grow at a compound annual growth rate of 20.4% from 2020 to 2027 to reach $184.2 billion by 2027.

5G is here, and it's on the rise

5G—the next generation of connectivity for mobile networks—is set to replace 4G LTE as the fastest and most reliable method of mobile communication and data streaming. 5G is being rolled out at a time when more bandwidth will be needed to serve nearly 27 billion mobile devices, security systems, home appliances, vehicles and other parts of the Internet of Things. The new generation of wireless networks seeks to surpass the data rates of 4G LTE by a large margin. With 5G, users can expect minimum download speeds of 50Mbps. In other words, the poorest 5G networks will offer better speed and latency than the best 4G LTE networks. Mobile networks are undergoing rapid development as users seek faster speeds, a more intuitive user experience and deeper integration into their work and personal lives.

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WHY FIBER **STANDS APART**

When it comes to internet service options, fiber stands out as the most viable, cost-effective and capable—especially in multi-dwelling communities with many residents to serve.
The average internet user's bandwidth needs are growing. Everyday users regularly stream content, download data, uploads and shares files. Fiber transfers data through tiny, flexible glass strands as pulses of light, rather than electricity, at a rate of about two-thirds the speed of light.

+ **Fiber is faster**
  Fiber optic internet is the fastest internet service platform currently available, and that's no surprise. Some fiber networks are capable of supplying speeds of up to 100Gbps. At those speeds, residents can stream content, play online games, use IoT devices and do general computing faster. Lag time on webpages, uploading, downloading and gaming is frustrating. With fiber, bandwidth is broad enough to serve all residents.
+ **Fiber is scalable**
  A wide range of bandwidth options—including up to 100Gbps at the ready—ensures top-tier internet performance to everyone in the community. Not every building or unit needs 100Gbps, but whatever is required, internet service over fiber can be easily adjusted to accommodate growth needs without additional hardware. Other technologies have limitations and often require extra equipment to attain more speed. VDSL, (Very high-speed Digital Subscriber Line) for example, cannot effectively scale to more than approximately 100Mbps.
+ **Fiber is more secure and more available**
  A fiber line is dedicated, which means the service is much more secure, with less opportunity for interference. With a shared connection like cable modems and 5G services, the availability of service depends on the bandwidth usage of others.
+ **Fiber brings symmetrical speed (because upload speed matters)**
  Internet speed is important to work efficiency and and a better online experience, but there are two crucial parts to the speed equation, both of which need to be considered. These days, upload speeds are becoming just as important as download speeds. Why? Because internet users are sending just about as much information as they are receiving, or requesting. Any time you send an email, stream or share video content, host a video conference or use a Voice-over IP (VoIP) application such as a home office phone, you're uploading information, or sending data to another computer or server. Here's where symmetrical speed becomes an asset. Fiber allows the simultaneous use of upload and download bandwidth, and users can utilize the same high speeds for both applications.
+ **Fiber is cost-effective**
  The increased speed of fiber over cable ensures increased user satisfaction. Fiber also comes with far fewer maintenance requirements than other broadband platforms. Upgrades and updates are practically automatic because there's no need to switch out hardware or add additional equipment once fiber is installed.
+ **Fiber has low latency**
  It's hard to describe latency without bringing up speed. Latency affects internet speed and network performance overall. While bandwidth is the amount of data that can be transmitted over the network at a given time, speed is affected by the interaction of bandwidth and latency. Latency is the delay in the transfer of data—the time it takes for data to be sent from sender to receiver. Low latency—which fiber can provide—means web pages load faster, online payments process more quickly, documents can download faster and voice and video quality is better. Think of speed as cargo being transported. Satellite internet is like a ship moving cargo, whereas fiber is like a 747 jet carrying cargo—both effectively carry the load, but fiber does it much faster.
+ **Fiber increases property values**
  The presence of a fiber connection in a building can increase its value. A study commissioned by the Fiber to the Home Council Americas, citing research from the University of Colorado at Boulder and Carnegie Mellon University, found that fiber can increase a home's value by an average of 3.1%. In an MDU community, the impact is greater. The study found that fiber network availability increases rental values by 8% and the purchase price of condos by 2.8%.
+ **Fiber is a property differentiator**
  Properties with a fiber connection are more attractive to potential residents. A survey from RVA LLC, a market research and consulting firm, found that buyers are willing to pay a 2% premium for a fiber-connected house or apartment. Renters will pay a 15% premium for fiber. For tenant satisfaction and a lower resident churn rate, fiber presents a clear advantage. There's more: Not only will a fiber-equipped building better compete with new construction, a fiber network allows the fastest available internet speeds to be available to renters and owners.

There are many advantages a robust platform such as fiber can bring to small and large multi-dwelling communities. Fiber internet is much more than an industry buzzword. Its positive impact on the bottom line demonstrates just how valuable it is to the future.

ROBUST BROADBAND IS IN DEMAND

The preferences of buyers and renters are evolving. Whether you call them amenities, assets or luxuries, landlords are beginning to take notice of changing trends as a strategy to stand out in the highly competitive housing market. In-unit laundry, covered parking, swimming pools and patios remain highly desirable, but a survey of multifamily residents shows that technology is coming out on top.

A study from XFINITY Communities, Networking with Residents: Technology Drives the Multifamily Industry, surveyed 205 qualified building managers and owners across the United States

"Residents expect a high-level of technology services, and respondents believe that both Wi-Fi access and high-speed internet are now more important than even in-room laundry, the study summarizes. "This trend, combined with rapid property development and an increasingly competitive rental market, has forced managers and developers alike to become more focused on providing new services and upgrading existing ones."

Eighty-seven percent of respondents said technology played an extremely or very important role in keeping residents satisfied. Eighty-three percent agree or strongly agree that their company could do more to provide the highest level of technology implementation for current and prospective tenants.

The advantages of fiber optic cable over copper wire are well documented. Minnesota-based Arvig and its MultiWav fiber internet service is making headway in the state's metro regions. In Minneapolis-St. Paul, the company has fiber in more than 10,000 units in the metro area.

Fiber can transfer more data faster and over longer distances than copper. A fiber signal does not degrade like copper, requires little maintenance and loses only a fraction of its signal strength over long distances.

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FUTURE-PROOFING

The majority of property managers and developers responding in the XFINITY study said they have already invested in or are planning to invest in fiber, with others considering technologies that will also get their residents to gigabit speeds.

"This statistic matches up with the expectations of residents who increasingly see technology as a deciding factor in their housing decisions. It also shows that property managers are seeing new technology drive property values and resident renewal rates," the study says.

GETTING FIBER TO THE STRUCTURE

Fiber network construction has advanced rapidly, with equipment now being deployed that allows the fiber connection point to extend directly to the end-user premises. This network design concept is known as Fiber to the Home (FTTH). FTTH technology is designed and optimized for use in residential applications, including MDUs of all sizes.

CONCLUSION

It's crucial that building owners, property managers, condominium association boards and all other stakeholders thoroughly research internet service providers that can meet the specific needs of the building and its tenants. An ideal provider will work with both the building owner and the tenant community in each stage of developing a fiber deployment plan for the building.

Fiber is a fast, future-proof and cost-effective internet solution that is ideal for multi-dwelling communities.

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