

Is It Time for MDUs to Embrace Bulk-Managed Broadband Access?

The growing adoption of bulk, high-speed internet is driving a paradigm shift in how market-rate and luxury MDU communities serve their residents.

By Henry Pye / *RealPage*

Historically, market-rate and luxury multifamily communities executed communications service agreements with traditional phone and cable television service providers to deliver and market video and high-speed internet access (HSIA) directly to residents of multiple dwelling units (MDUs).

The service providers then executed subscriber agreements directly with residents. Under such arrangements, an MDU's principal obligations were to supply space for service providers' equipment, install a portion of the low-voltage infrastructure, and assist service providers in marketing endeavors. For the most part, with the exception of a few outlier owners, the multifamily industry spent the past 20 years *not* providing HSIA on a bulk basis.

Over the past two years, however, adoption of bulk HSIA has grown dramatically. But why now? Several factors contribute to that growth.

Reason No. 1: Bulk HSIA can address multiple concerns and evolve. For the past decade, every technology solution seemed to require its own community-spanning wired or wireless network. However, implementing a separate network for each technology provider and solution proved cost-prohibitive and limited an MDU's ability to afford multiple technology platforms over time.

But technology has evolved to the point that a single network can support various technology

providers and solutions today and tomorrow, presenting a markedly better investment. A managed HSIA solution with managed Wi-Fi can support almost every on-site technology solution available today, except for life-safety systems. In addition, there is a clear path forward to cost-effectively support additional wireless networks and tomorrow's providers and solutions.

Reason No. 2: Cellular assist via a managed HSIA solution can be viable and less costly for 4G/5G mobile support. No

one knows precisely how the migration to 5G will affect MDUs. However, there are many reasons to believe it will be unpleasant. 5G promises revolutionary mobile communications approaching Wi-Fi speeds. It achieves these service levels and speeds via higher-frequency transmissions. Unfortunately, the amplitude of a radio transmission is inversely proportional to how far the signal can reliably travel and how well the signal penetrates objects. Thus, at a time when energy codes (low-E windows and radiant barriers) and building types (e.g., light-gauge steel) are increasing impediments to any outside radio frequency, mobile communications providers are moving toward a new mobile communications standard that presents even greater challenges for penetrating MDU buildings.

The first solution many MDU communities consider for cellular augmentation is a

distributed antenna system (DAS). No 5G DAS system exists today, however, and the promise of Citizens Broadband Radio Service (CBRS) is still a couple of years away. Moreover, a DAS is increasingly expensive to operate because it ties to incoming broadband connections instead of rooftop antennas. Wi-Fi cellular assist is often a less costly solution than a 4G system that will quickly require extensive upgrades.

Reason No. 3: A managed HSIA network provides a superior, less-risky smart-community experience. The internet of things (IoT) and accompanying multifamily middleware partners are fragmented and barely out of infancy. Therefore, communities should protect their investments by avoiding proprietary equipment and pursuing solutions with multiple exit strategies. A managed HSIA solution combined with Wi-Fi-enabled edge devices, such as thermostats, sensors and lighting systems, reduces the potential impact of proprietary equipment while offering increased options to adjust or change.

If an owner needs to replace a middleware partner, a new partner can be added with little cost beyond commissioning. Moreover, during any disruption, residents can still use Apple Homekit, Google Home or Amazon Alexa with any of the in-unit Wi-Fi devices. As managed networks evolve to support new wireless networks cost-effectively, they can also support tomorrow's IoT solutions, such as LoRa utility meters or indoor positioning beacons.

Reason No. 4: Managed HSIA solutions can provide a Wi-Fi solution far superior to anything residents can obtain on their own. It's no secret that resident-provided Wi-Fi in MDU buildings operates very poorly. Though a managed HSIA solution utilizes superior equipment, the primary challenge for wireless HSIA is not the quality of a resident's Wi-Fi equipment. Rather, the main challenge is the lack of a system

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that manages the wireless access point within a unit relative to the units that surround the unit in three dimensions. A resident's wireless access point continuously interferes with neighboring wireless access points and vice versa.

Though the reasons to utilize wireless equipment from a quality vendor are many, the most important is the ability of a managed solution to mitigate the adverse effects of placing dozens of wireless access points in proximity. As a result, a managed HSIA solution inevitably leads to a better experience for all residents.

Moreover, managed HSIA enables multiple wireless networks and secure virtual local area networks. Managed HSIA can provide a personal area network for individual unit residents, roaming access for network users, a guest network for visitors, access for on-site leasing managers and maintenance and the backbone for a core smart-community solution.

A comprehensive and ubiquitous managed HSIA solution provides far more than internet access for residents in their units. It enables a communitywide connected lifestyle that enriches the resident experience while giving the community management team opportunities to reduce expenses and add revenue streams.

Reason No. 5: Providing a managed HSIA solution has become far less costly than the best available retail options. A large percentage of managed HSIA solutions deployed to market-rate or luxury MDU communities proved unsuccessful. In most cases, failures were attributable to the high costs for backbone bandwidth, which caused communities to settle for speed/price

combinations less competitive than the best offers from traditional phone and cable television service providers.

However, in the past 24 to 36 months, the diminishing cost of bringing significant backbone bandwidth to individual MDU communities has greatly improved the managed HSIA financial model. In major metropolitan areas, most MDU communities with 200 or more units that pay for network equipment upfront can offer a gigabit HSIA solution to each unit for a cost of \$25 per unit per month or less.

By comparison, the retail options from traditional phone and cable television service providers routinely command \$70 to \$100 per month for "up to" gigabit HSIA. In a relatively short period of time, the economics have flipped, allowing MDUs to offer HSIA services that meet or exceed the combination of speed and pricing available in the consumer marketplace.

Based in part on the reasons mentioned above, bulk-managed HSIA now represents a viable option for many MDU communities. At a minimum, any community should consider a managed HSIA (bulk or non-bulk) before moving forward with any DAS system or IoT deployment. ❖

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