WHY MDU PROPERTIES ARE MOVING TO MANAGED WI-FI
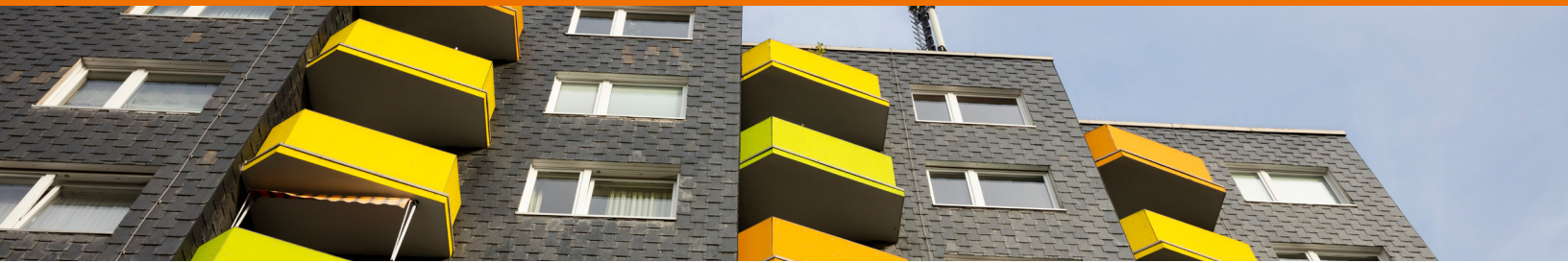
Home will always be where the heart is. But what "home" actually looks like is changing. As a range of macro-economic and population trends converge, we're seeing a historic boom in MDU living. Large numbers of people are moving from rural areas to urban centers, where apartments are the preferred—often only—housing. At the same time, more millennials are choosing to rent rather than buy to save money and preserve flexibility. Meanwhile, as the "Baby Boomer" generation ages, the assisted living industry is seeing massive investment in expanding facilities and constructing new ones. Add it all up, and it's an MDU market that's seeing explosive growth.

WHY NOW FOR MDU MANAGED WI-FI?

That growth opens the door to significant new business opportunities including broadband Internet. After all, all those people moving into MDU housing are bringing more devices they need to connect: smartphones, tablets, PCs, gaming consoles and more. They want and expect reliable, high-performance Internet connectivity. MDU operators could just leave them to pursue the standard "bring your own Internet" (BYOI) path—and let residents wrestle with shoddy customer service, cheap equipment, and spotty performance. Or, they could see these trends for the huge opportunity they are.

Many MDU operators already use onsite managed wireless networks to support internal business applications and services. With a little planning, they could expand those networks to deliver reliable, high-performance wireless Internet connectivity to all their MDU residents. By doing so, they can offer an attractive, highly desired amenity to draw in tenants, grow revenues and make their properties stand out from the crowd.

WHERE IS THE MDU OPPORTUNITY?

The MDU market includes a variety of sub-segments that offer compelling opportunities for MDU operators and their service provider partners. These include:

- **Student housing:** At colleges and universities, tens of thousands of students are MDU residents, both on and off campus. Currently, about 87% of students live off-campus, many in apartments that often include four beds per apartment.

- **Assisted and senior living:** This segment of the MDU industry—including assisted living facilities and senior (+55) independent living communities—is growing at a record pace, projected to double by 2030. And the number of people living in senior and assisted living MDU housing will likely continue growing for the foreseeable future. The +55 population is exploding, and people are living longer than ever before. By 2040, there will be three times as many people age 85+ as today, fueling continued growth in the senior living industry.

- **Apartments (Multi-Family Residential):** This dynamic segment includes families, single professionals, active retirees and others living in apartments and condominiums—most of whom are heavy users of technology and streaming video. This segment is characterized by rapid churn and high turnover. And it's expected to continue to see strong growth—presenting a significant opportunity for MDU service providers, especially among higher-income residents. Currently, ~80% of all apartment construction in the United States is for "high-end" or luxury apartments. These apartments have higher rents and cater to tenants with higher expectations for the services and amenities their housing includes.

WHAT'S WRONG WITH CURRENT CONNECTIVITY MODELS IN MDU HOUSING?

The MDU market encompasses a wide range of residents, but all have one thing in common: they need reliable, high-performance Wi-Fi. In fact, Wi-Fi is increasingly referred to as the "fourth utility"—an essential service that tenants rely on almost as much as water and electricity.

Despite the growing importance of Wi-Fi, however, most MDU residents still get it the old-fashioned way. They contact the local service provider, on their own, and order Internet service. Each tenant gets his or her own Wi-Fi access point (AP), used exclusively for that apartment. If this seems like an inefficient way to handle such an important "utility" in structures housing hundreds of residents, it is. And it creates Wi-Fi problems that tenants definitely feel, including:

- **Poor performance:** More Wi-Fi APs does not equal better Wi-Fi—in fact, just the opposite. When every apartment has its own AP, all deployed independently with no consideration for optimal coverage, that density creates interference that negatively impacts the Wi-Fi service. Tenants end up with inconsistent performance, dropped connections and ongoing frustration.

- **Spotty coverage:** Modern tenants don't go anywhere without a smartphone—and value ubiquitous coverage that they don't have to think about. However, while tenants have coverage in their apartments, the moment they go to the pool, the fitness center, or other common areas of the apartment complex, they lose connectivity.

The end result for MDU tenants using the BYOI model: a limited, inconsistent and often frustrating Wi-Fi experience. Now, MDU property owners and their service provider partners have an opportunity to do something about it. By delivering high-performance, always available Wi-Fi services that all tenants can access, no matter where they are in the complex, MDU operators can make their properties a much more attractive place for prospective tenants to call home.

THE MANAGED WI-FI OPPORTUNITY

What does managed Wi-Fi in an MDU property look like? Typically, MDU operators work with a service provider who manages the deployment and operation of comprehensive Wi-Fi services for the property. MDU property owners roll up the cost of the service into tenants' monthly rent.

With managed Wi-Fi, the service provider pre-plans the property's Wi-Fi network and deploys all access points to ensure optimal coverage everywhere in the apartment complex. This reduces interference and ensures tenants receive Wi-Fi access no matter where they roam on the property. Property owners can use these Wi-Fi advantages—great performance, coverage everywhere in the complex—to attract and retain tenants. Meanwhile, that same reliable Wi-Fi infrastructure can now provide a foundational platform for new "Smart Home" solutions and facility management efficiencies that deliver concrete benefits to the business.

With reliable, high-performance managed Wi-Fi across the property, MDU owners can:

- **Make their properties stand out** in a competitive market for tech-savvy residents who demand fast service everywhere

- **Increase renewals**, since happier tenants tend to renew more often

- **Deliver valuable new wireless Smart Home and business services**, including Internet of Things applications such as keyless door entry, maintenance access, employee GPS, analytics and more

- **Easily expand into wireless service delivery**—the service provider handles everything, with SLAs for secure and guaranteed service and one number to call with any issues

- **Expand technology capabilities without the headaches** through a centrally managed Wi-Fi service delivered by wireless experts who can proactively avoid problems

- **Easily manage wireless services** with multiple management and control options in the cloud or on-premises

- **More easily attract future tenants**, since guests at the property who get awesome Wi-Fi are more likely to consider that property when looking for a new home

At the same time, MDU tenants benefit from:

- **Great Wi-Fi experiences** with unlimited device access, high performance, and always-on reliability
- **Simplified connectivity** with the ability to easily connect to the Wi-Fi network anywhere on the property with a simple login, and even offer secure guest access for visitors
- **Expanded coverage**, so residents stay connected to Wi-Fi at the pool, in the gym, or anywhere else in the complex without having to reconnect
- **Potentially lower costs**, since tenants' Internet connectivity is built into their rent, instead of individually contracted with the local service provider

Managed Wi-Fi is a relatively easy amenity to offer residents. Once the managed Wi-Fi network is in place, MDU operators allow tenants to opt-in to the service during the leasing process or anytime during the lease. The monthly service charge is included in the tenant's monthly lease payment. This provides a good revenue opportunity for MDU operators. In addition, the revenue generated typically more than offsets any cost of acquisition. In addition, the new revenue will typically pay for the managed Wi-Fi network in two to three years.

A couple of examples are included to provide some guidance on the revenue potential.

	SCENARIO #1	SCENARIO #2
# of Apartment Units	300	100
% Occupancy (Average)	90%	80%
# Rented Apartments (Average)	270	80
% Take Rate of Managed Wi-Fi	50%	75%
# Apartments with Managed Wi-Fi	135	60
Additional Rent Charge/Month	$25	$25
Additional Revenue per Month	$3,375	$1,500
Additional Revenue Annually	**$40,500**	**$18,000**

UNLEASH NEW REVENUE-GENERATING SERVICES

Managed Wi-Fi provides a better Internet experience for every tenant. But it also lays the foundation for MDU operators to enable exciting new services that can be hugely valuable to tenants—and generate new incremental revenues above and beyond Wi-Fi. Most of these are based on Internet of Things (IoT) technologies that analysts expect to transform the MDU industry over the next few years. Potential opportunities include:

- **Senior living services:** MDU Wi-Fi can support a wide range of overlaid applications for safety, telemetry, asset and people tracking, and more. For example, many senior living residents currently pay a third party for emergency alert services if they fall. With ubiquitous managed Wi-Fi, MDU owners could offer revenue-generating services like these—and many others—themselves.
- **Residential apartment and student housing services:** MDU owners can offer tenants a variety of new Smart Home services and applications that boost security and improve quality of life. This can include home automation applications like connected thermostats, lighting, and window blinds. And it can include advanced security services, such as the ability to buzz visitors in from a smartphone, remotely lock or open doors to receive packages, or check in on home surveillance cameras while away. MDU owners can offer services like these as add-on subscriptions or build them into the monthly rent. Either way, the property stands out to prospective tenants as a state-of-the-art, technology-enabled apartment complex.

LET RUCKUS HELP YOU CAPITALIZE ON THE MDU OPPORTUNITY

If you're ready to take the next step in MDU managed Wi-Fi, you want to make sure you're using the most reliable, cost-effective, highest-performing Wi-Fi solutions. Here, Ruckus stands head and shoulders above everyone else. Our patented technologies, such as BeamFlex+, allow our Wi-Fi APs to deliver the best performance in the business. And our industry-leading antennae technology ensures great coverage in the most demanding environments—critical for MDUs, where obstacles and interference are a way of life. MDU and service providers that choose Ruckus deliver better Wi-Fi connectivity with fewer APs and less networking equipment— reducing costs and simplifying management.

Ruckus technology leadership includes:

- **Patented BeamFlex+™ adaptive antenna technology** that dynamically reconfigures multi-directional antenna patterns to extend coverage and deliver better connections for every device
- **ChannelFly** predictive channel selection that finds the best Wi-Fi channel for each device based on real-time capacity, boosting performance by up to 50%
- **SmartMesh wireless meshing technology** that eliminates the costly, cumbersome task of pulling Ethernet cables for every access point
- **State-of-the-art security**, from 802.1x to Dynamic Pre-Shared Keys, with all the latest encryption and authentication mechanisms you'd expect—but made simple to manage
- **High-performance dual-band 802.11ac Wave 2 access points** (meshed or wired) that deliver blazing-fast data rates to 802.11ac Wave 2 clients, while drastically improving RF efficiency for legacy 802.11a/b/g/n clients
- **Configuration in minutes and installation in hours**, without cumbersome site surveys or tedious network setup
- **Simple, flexible management** for ten or ten thousand APs with Ruckus appliance-, virtual-, and cloud-managed options

Ruckus' MDU solution portfolio includes a full range of Wi-Fi, switching and value-added products including:

- **Indoor/outdoor access points:** Ruckus indoor APs are available in a variety of form factors (standalone APs, wall-mounted AP and switch) that fit easily and unobtrusively into MDU aesthetics. Ruckus' industry-leading outdoor APs have multiple mounting options and are designed for dense applications that can support large numbers of simultaneous users.
- **Switching:** Ruckus offers a variety of switches to meet any MDU requirements. This includes switches with Power-over-Ethernet to power APs without requiring separate cabling, efficient stackable solutions, and support for applications such as IPTV and VoIP.
- **Location-based services:** Analyze footfall traffic within the apartment community to see where and how people are using the space. Use these insights when planning new construction, sidewalks, additional amenities and more.
- **Simple, flexible management and control:** Ruckus provides multiple ways to manage and control ICX switches and indoor/ outdoor APs. Whatever you need—cloud, on-premises, unleashed—Ruckus has the solution.
- **Smart Cell Insight (SCI) Analytics:** Get the network intelligence you need to deliver better experiences and make more informed business and operational decisions. Ruckus SCI provides a full range of analytics capabilities to help you understand who is on the network and which devices and applications they're using to improve network and business planning.
- **Future-proof technology:** Ruckus leads the industry in supporting new IoT technologies and applications. By snapping in a new module, you can add BLE or Zigbee capabilities that turn your Wi-Fi AP into an IoT gateway—enabling exciting new applications and new revenue-generating services.
- **CBRS/OpenG:** Extend LTE coverage inside apartment complexes and parking structures through new CBRS technology that can plug directly into the Wi-Fi AP. This emerging technology is extremely useful for apartments where LTE coverage is weak or non-existent—and it's currently available only from Ruckus.

MAKE THE MOST OF THE MDU OPPORTUNITY

We know that millions of people will move to MDU housing over the next several years. And we know that all of those people need Wi-Fi. It adds up to a huge opportunity for MDU owners and their service provider partners—and the potential for significant, concrete benefits for every tenant living in an MDU property.

By providing bulk managed Wi-Fi to tenants, MDU owners can deliver Wi-Fi as a legitimate fourth utility with great performance, ubiquitous coverage and simpler connectivity. These advantages create a compelling new amenity and make the property stand out in the growing, fiercely competitive market for MDU tenants. Meanwhile, MDU owners can use the same Wi-Fi infrastructure to support all manner of new wireless services and applications for their business—many of which can generate new revenue streams. And in many cases, MDU owners can do all of this without taking on new operating expenses, by rolling up the costs of MDU Wi-Fi into tenants' monthly rent.

Ready to start capitalizing on managed Wi-Fi in your business? Contact your Ruckus account representative or visit https://www.ruckuswireless.com/solutions/multi-dwelling-units.

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