The Role of Commercial IoT in Transforming the Multi-Dwelling Unit Industry

Reza Raji, Senior Vice President IoT, VANTIVA

Internet of Things (IoT) technologies are emerging as a dominant trend for a growing number of players in the multi-dwelling unit (MDU) sector as pressure mounts to do more with less at scale when it comes to complying with industry regulations and delivering enhanced services to tenants.

According to analysts at Parks Associates, over one-third of U.S. MDU property managers report offering IoT and smart home devices to residents in at least one property they manage.

As the trend gathers steam, the property management industry is uniquely positioned to take the integration of consumers' physical and digital lives to the next level. Apartments, condos and other MDUs that offer IoT-based services are creating new value propositions that will transform the entire sector.

To learn more about the evolving role of commercial IoT and how it is transforming the multi-dwelling unit industry, we sat down with Reza Raji, senior vice president of IoT at VANTIVA, formerly known as Technicolor. Here is what he had to say:
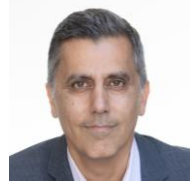
Q: Thank you for taking the time to chat, Reza. Let's start by having you explain the role of Internet of Things applications in the multi-dwelling unit market.

Reza Raji: While IoT has been getting a lot of press attention in recent years, the underlying technologies have been around for decades. Specific elements of IoT are used by leaders in the multi-dwelling unit sector to manage a wide array of operations that improve compliance, streamline processes and -- in an increasing number of cases -- generate new revenue streams.

That said, there are a lot of misconceptions about IoT. Many believe that IoT is simply about putting a bunch of sensors and devices that can be connected via wireless protocols. Others think it's a gateway…or maybe an app.

In reality, it's all of those things. IoT solutions integrate intelligent devices, sensors, gateways and multiple software layers to access cloud resources and gain insights from -- and control of -- connected devices throughout MDUs. IoT enables the collection and aggregation of data that can then be processed to generate real-time and predictive analytics through artificial intelligence and machine learning (AI/ML).

IoT can be utilized to collect, aggregate, and use data to automate simple functions -- such as setting thermostat levels and controlling exterior lights -

- in a manner that optimizes efficiency to create savings. The possibilities are almost endless.

Let me offer a simple example of IoT in action. Say a tenant locks themselves out of their apartment. Instead of hunting down a manager -- or calling a locksmith during off-work hours -- doors can be unlocked automatically through a mobile app after ensuring identification and authorization. It saves all involved time, money and aggravation.

Q: One of the pain points in the multi-dwelling unit environment is the issue of compliance. MDUs tend to be highly regulated spaces, especially in highly urbanized areas. To what extent does commercial IoT play a role in addressing that issue?

Raji: Safety compliance is a massively important topic for property owners and managers.

In multi-dwelling units, for instance, water damage is a top-priority safety and compliance issue that IoT can address. If you can prevent water leakage from happening in the first place -- or detect it as quickly as possible -- enormous sums of money can be saved while preventing safety and health issues from worsening, like slippery floors and black mold.

IoT can even be applied for rodent detection by integrating sensors and traps that wirelessly communicate their status. Monitoring and controlling common pests across the board can have a massive impact because it is both a health and safety issue. It is a preventative measure that IoT solutions can streamline and optimize.

Security is essential as well. Ensuring the safety of tenants through centralized and automated security systems can significantly reduce liability issues. While security is not new, integrating it with other operational silos while automating and managing critical functions from a central place can address critical areas of concern in a highly responsive and cost-effective manner.

Q. Is this a facility-by-facility arrangement, or do you see the possibility of managing whole portfolios of facilities?

Raji: The whole point of IoT is to manage complex systems on a large scale. IoT solutions enable MDU operators to manage a single apartment building as easily as operators with 10, 50 or 100 properties on a national footprint. The scalability allows companies with national footprints to fully benefit from IoT solutions.

Indeed, large property portfolio managers have an even higher need to monitor and manage their properties remotely in an automated fashion.

Q: So, what can executives in the MDU space do to begin operationalizing IoT? What skillsets, competencies or relationships will be needed to usher in the IoT revolution?

Raji: That's a great question. The MDU sector has already experienced the technology in the form of a handful of software tools for tenant management. These tools typically handle billing, customer support, document management and accounting. These are information technology (IT) solutions.

With IoT, managers can integrate IT with operational technologies (OT), including sensors and cameras. It allows them to extend digital transformation initiatives beyond IT systems to MDU portfolios' physical footprint and physical assets.

The OT/ IT integration enabled by IoT solutions fundamentally changes the sector. Property owners, managers and executives adopting IoT -- along with emerging technologies like AI/ML and big data analytics -- will significantly mitigate their risks and create better, safer, and more convenient living experiences for their tenants.

Q: Sounds like a win-win application of technology. How accessible -- and implementable -- are these technologies for MDU owners and managers?

Raji: While many companies can gain significant value from its effective IoT implementation, most lack the expertise and knowledge to integrate these moving parts and achieve important business objectives seamlessly.

The reason is that IoT can be extraordinarily complex. The industry itself is highly fragmented. Critical value chain links still need help with how best to come together to create cohesive business solutions.

Imagine buying a car online, and having a bunch of discrete boxes delivered that contain the engine, axel, tires and electrical system for the consumer to assemble. That is the situation for most MDU executives. They shouldn't be required to understand the complex technology layers involved in IoT to benefit from the value it can create.

Q: In this context, how important is it for leaders in this sector to develop the right partnerships to create an IoT ecosystem?

Raji: The right partnerships are critical because the technologies needed to bring all this together already exist. What is vital is integrating the right tools, technologies, protocols and standards to bring together holistic solutions.

Nobody should expect property managers and owners to become technology experts. Just as they rely on service providers to deliver Wi-Fi or

cable TV services, they should look for experts who can deliver IoT integration services.

Q: What are organizations like VANTIVA doing to address challenges in the IoT space when creating integrated solutions for the MDU environment?

Raji: VANTIVA -- formerly known as Technicolor -- comes at the challenge from a position of strength because we're experts in delivering internet, Wi-Fi connectivity and integration services.

We have been enabling connected homes around the world for decades. Our connectivity and wireless solutions are used by more than 250 operators globally.

We also set the industry standard in fiber home gateways that provide robust home network controls, advanced Wi-Fi technologies and mobile apps that enable end users to optimize today's truly connected home.

VANTIVA also leads the industry in end-to-end security and privacy solutions with our ISO 27001 certification -- the global standard for information security management.

These pillars of competencies uniquely position VANTIVA to deliver integrated IoT solutions to ensure safe, reliable, stable, high-performance IoT services to the MDU market.

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