

## Facilities-Based IoT Could Reduce Maintenance Costs, Resident Frustrations

Facilities-based IoT can boost a multifamily building owner's net operating income and give building management and maintenance staff insight into how HVAC, security and alarms run across a property via a cloud-based connection.

By Opie Williams / *Pace International, Multifamily Broadband Council*

**I**n the multifamily industry, facilities-based internet of things (IoT) solutions are emerging as effective tools to help properties manage energy consumption, reduce costs, and increase overall net operating income (NOI). But what exactly is a facilities-based IoT solution, and what are the benefits?

Simply put, IoT is an ecosystem of connected physical objects accessible through the internet. It's like a giant network of connected "things," or devices. Facilities, when associated with the property management industry, tend to refer to the operations within a multifamily housing community for which management teams are responsible. Facilities management often includes overseeing devices within a building, ensuring a fully functioning living environment for residents. Think HVAC units, water heaters, leak detection, alarms and security systems.

When we introduce the wonderful world of IoT to building facilities, the term facilities-based IoT is born. When applied to multifamily housing, this cloud-based revolution includes connecting smart devices in multiple residences across an entire building and leveraging the internet to transmit valuable information from those devices to management staff – without the need for staff to check the device in person. This helps provide staff with visibility into the efficiency of HVAC units, streamline maintenance operations, and improve the overall living experience for residents – all without staff having to leave the office.

### **REDUCING UTILITY, MAINTENANCE EXPENSES**

In the multifamily housing industry, utility and maintenance expenses present a constant challenge and can have a detrimental impact on NOI. Property managers usually need to wait for residents to report any maintenance issues, meaning that many malfunctions can go undetected for weeks or even months at a time. This often results in reactive maintenance, which requires more resources, and options are usually limited and less than favorable.

A facilities-based IoT solution can enable property staff to address equipment failures immediately.

Aside from equipment issues, properties also face the risk of residents intentionally adjusting device settings, creating conditions that can be destructive to facilities. Two common occurrences include residents turning off equipment altogether in the winter or summer months to reduce utility bills, and using equipment excessively during peak times. These actions, if unmonitored, can lead to costly property destruction resulting from mold or water damage.

Implementation of a facilities-based IoT solution provides property staff with access to a centralized platform that offers a birds-eye view of high-level device data from across the entire property. Visibility into valuable metrics such as unit run-time, system status, mode, ambient temperatures and humidity levels provides crucial insights that enable staff to address equipment malfunctions immediately, which reduces costs and increases NOI.

From the centralized platform, property staff can set minimum and maximum temperature ranges and define thresholds that alert them when risky conditions are present within residences, such as when an internal temperature drops below or hits above the setpoint or extreme humidity is detected. Mold is reported as one of the costliest problems for properties, so the ability to measure humidity, and therefore detect the presence of mold, is invaluable to maintenance teams.

Based on user-defined thresholds, real-time alerts are triggered to empower staff to proactively dispatch the maintenance team immediately. This is especially useful during periods of vacancy, when a resident may not necessarily be there to report an issue. It also helps keep service calls within normal business hours, avoiding late-night emergency maintenance calls from disgruntled residents, thereby reducing staff overtime.

This constant, real-time equipment monitoring enables staff to rapidly address some of the most common causes of maintenance problems. These include HVAC units that appear to be running for abnormal amounts of time, windows accidentally left open in conjunction with running HVAC units, undetected leaks in hidden areas, and drastic adjustments to the thermostat contractors may make while temporarily completing work in vacant units. Across the IoT industry, smart HVAC management generally provides a reduction in utility costs (15 to 20 percent), as well as extended equipment life (25 percent).

## MOBILE CONTROL

In addition to improving processes for people who manage the properties, a facilities-based IoT solution serves to increase resident satisfaction by providing residents with mobile control of their thermostats – an appealing value-added service that many smart living communities are implementing.

Managing a building with hundreds of units requires a great amount of responsibility on behalf of property staff. Overall, an effective facilities-based IoT solution should be a robust reporting software, flexible enough to allow for the introduction of new smart devices, but sturdy enough

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to equip property teams with the tools needed to improve facility management operations. Brewing maintenance problems in vacant units no longer go undetected, unnecessary maintenance costs are avoided, and historical data reporting can be analyzed to help create more efficient properties going forward. ❖

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