Comnexiom
USE CASE

# *Maintain Efficient Building Operations No Matter the Occupancy Level*

**As a facility manager, it can take a lot of effort to keep up with the maintenance of your fully occupied commercial building. But when you don't have tenants telling you how well your building is running during the day or you're not based onsite, you need your building's things and systems to speak for themselves.**

**Fully or partially occupied or empty, you can achieve operational excellence with help from the Internet of Things (IoT). A smart building strategy and a reliable remote IoT monitoring solution can help ensure facilities function as designed. You can know at a moment's notice what's happening in your buildings. Read how we can help you remotely monitor facility operations 24/7.**

***Spoiler alert: The ROI is significant by avoiding water leak damage and optimizing facility management. It's all easily managed using an online dashboard on a smartphone or computer. Plus, alerts via email, text, or call from a wide variety of fast-install IoT sensors and meters.***

## *Challenges*

A large property management company needed to reduce operating and capital costs associated with several office buildings due to varying occupancy levels. The property and facility managers had to solve some immediate maintenance issues and identify system and equipment upgrade opportunities.

They wanted to ensure that any updates to their facilities would result in a high return on investment (ROI) by reducing operation costs, improving building performance, and positioning buildings to compete with market trends.

The company had some office complexes that had several empty suites. Recently, in one of the buildings, an empty suite's water heater failed. This mishap resulted in water damage in that suite and two adjacent occupied suites. The complex's facility managers only found out about the water damage because one of the nearby tenants complained about it. Unfortunately, it was too late to avoid costly damage.

The property managers identified Remote Monitoring Solutions as an ideal way to put preventive measures in place and fix issues long before they might turn into more significant problems.

## *Solution*

The facility managers self-installed:

- Wireless Water Detection Sensors—Water Rope, Water Detect Plus, and Water Detection Puck—throughout the buildings to monitor water heaters, water pumps, boilers, and restrooms for leaks
- Temperature Sensors throughout the building to monitor offices, conference rooms, hallways, and restrooms
- Accelerometers, Differential Air Pressure Sensors, Vibration Meters, Temperature Sensors, and AC Current Meters on air circulation fans and central HVAC system units in every building
- Open-Closed Sensors on doors and windows of vacant office space and Infrared Motion and Occupancy Detection Sensors in restricted areas
- The Wireless Sensor Management and Remote Monitoring Software on facility staff smartphones and computers
- Gateways in each building to protect and communicate data sent from every Wireless Sensor and Meter

Sensors sent data wirelessly to gateways in the maintenance closet of each building. The gateway then sent aggregated sensor data to the software. Using the software, facility managers uploaded a graphic showing the building layout of the monitored areas.

This allowed the managers to drag and drop sensor tags onto the design or map with live data. Then, they could see the performance of their building plumbing, doors, and HVAC systems from an aerial view. Managers set up notifications to alert them if readings signified any potential issues, allowing them to respond immediately.

## *Results*

Before implementing Wireless Sensors, the company had to repair the three office suites' water damage. This remodeling included replacing the water heater, carpet, floorboards, drywall, repainting walls, and restoring furniture. The project cost thousands of dollars—much more than the cost of deploying Remote Monitoring Solutions.

After installing the solutions, Temperature Sensors detected an incident where one of the building's boilers malfunctioned during a frigid wintry weekend. Temperatures started to drop inside the building, and the solution instantly notified the property manager on her smartphone. Had the Temperature Sensors not informed her, there was a high probability that the plumbing would have frozen over the weekend, causing potential damage. The company was able to repair the system and have temperatures back to normal for business on Monday.

Using our comprehensive monitoring solution, the property management company can:

- Prevent costly damage due to plumbing and water heater leaks.
- Ensure their tenants have efficient heating and cooling for their offices.

**ROI:** After only a month of using the Wireless Solution, the company optimized its building monitoring with preventive measures and reduced energy, operational, and capital costs.

# Remote Monitoring Helps Your Facilities Stay in Tip-Top Shape


1

**Water Detection Sensors**

A Wireless Water Detection Puck Sensor is ideal around toilets, sinks, boilers, and water heaters.
A Wireless Water Rope Sensor along walkways, walls, and pipes can detect water and help prevent damage from leaks.

2

**Temperature Sensors**

Chart your HVAC systems' fluctuating environmental conditions. The Temperature Sensor measures various HVAC split and packaged, hybrid heat pump, and ductless mini-split heat pump systems with a waterproof lead up to 100 feet.

3

**Duct Temperature Sensors**

Monitor your HVAC system right in its ducts. Duct Temperature Sensors with 8-foot leads can be inserted between vents, near fans, and under small spaces while maintaining a sealed environment. Get reports and alerts wherever you work.

4

**AC Current Meters**

Analyze HVAC system power consumption and predict problems before they occur with our AC Current Meters. Knowing current use by root mean square (RMS) average and amp hours helps you manage performance. Measure boiler pump power draw too.

5

**Open / Closed Sensors**

Maintain security across your properties by monitoring the status of doors and windows. Wireless Open-Closed Sensors use a switch and trigger magnet to detect status. Be alerted right away when the status changes from your preset parameters in the software.

04/2021