SEVEN STEPS OPERATORS CAN TAKE TO OPTIMIZE BUILDING PERFORMANCE

Building owners and operators strive to optimize the performance of their buildings and assets to extract maximum value. Achieving this means adhering to several key imperatives, including managing energy use, extending the lifespan of critical assets and maintaining a safer and healthier environment for building occupants. Additionally, there is an increasing demand for building operators to set and achieve sustainability goals.

Operational efficiency offers clear benefits, including increased uptime, enhanced business continuity and minimized disruptions. When buildings function at optimal efficiency, they generate maximum returns. Here are seven steps that owners and operators can take to optimize their building's performance.

1. DO THE MAINTENANCE

Maintaining the proper functioning of critical assets is fundamental to building efficiency, and it starts with the basics. Are filters regularly cleaned and replaced? Every HVAC, cooling tower and air-handling system requires maintenance. Are scheduled maintenance checks being conducted? Is equipment being drained as needed, and are leaks being inspected? While such servicing may seem routine, it can prevent costly repairs down the road.

2. USE A BUILDING MANAGEMENT SYSTEM

Many building assets are now equipped with "smart" capabilities, but their performance can be significantly enhanced by integration into a building management system (BMS). A primary advantage of a BMS is its ability to issue alerts if a critical asset begins to glitch. For instance, a vibration anomaly in an air-handling unit could signal potential fan or bearing failures. Without monitoring or a BMS to provide alerts, the issue can escalate until the unit ultimately fails. A BMS provides real-time insights into the status of all critical assets, enabling proactive management and timely interventions.

3. EMBRACE AI

While alerts can be beneficial, an excessive number of alerts and false alarms may overwhelm and obscure urgent issues. Therefore, it is important to implement strategies for filtering and prioritizing alerts. AI can assist in this process by automatically sorting through numerous alerts and identifying the critical ones, thereby eliminating the need for manual sorting and streamlining processes effectively.

4. USE TECH TOOLS TO IMPROVE EFFICIENCY AND SAFETY

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This problem can be mitigated with technology. For example, employing Bluetooth technology can facilitate the location and identification of faulty VAV controllers, reducing the frequency of ladder climbs. This not only enhances safety but also improves overall efficiency.

5. STEP UP TO THE CLOUD

Internet connectivity offers many benefits, including a broader context for storing and leveraging historical and predictive information. Building owners and operators transitioning to the cloud can access data from various sources, extending beyond the building management system and leveraging it to their advantage.

This data might include occupancy patterns, weather records and calendar history. Cloud-based algorithms can quickly analyze this data to anticipate future trends and allow for more calculated decisions regarding system management and energy consumption.

Within a connected environment, for example, you can integrate external factors such as historical weather data with occupancy details, such as building occupancy rates and frequency. By doing so, you can better predict future energy usage within the building. This approach facilitates better HVAC management, and improves energy management.

6. DON'T FORGET CYBER

Today, a staggering 80% of organizations are unprepared for a cyberattack. Bad actors are aware of these vulnerabilities and in turn target a wide array of buildings, including commercial offices, healthcare facilities and entertainment venues. This is why it's crucial for building operators to implement cybersecurity solutions to defend against threat actors that could disrupt or, worse, shut down a facility.

Unlike traditional cybersecurity that's geared toward information technology networks, Honeywell solutions are purpose-built for the operational technology (OT) environment. They identify threats and anomalous behavior to help building operators manage and minimize cybersecurity risks at their facilities. This enables building operators to run their OT environments more securely, mitigate potential disruptions and reduce threats to safety.

7. MAKE THE MOST OF RENEWABLE ENERGY

To truly optimize building performance, a sustainable and resilient energy supply system is essential. Many operators are turning to renewable energy sources, such as installing solar panels on their roofs or harnessing wind power. However, to effectively use renewables, an automated battery energy storage system (BESS) is necessary to store captured energy for use even when the wind is not blowing or the sun is not shining.

Battery storage is a key enabler of renewable energy use. It allows intermittent sources like wind and solar to contribute to our daily energy needs by efficiently storing generated energy for later use. A BESS enables energy from wind and solar sources to be stored and released as needed. Additionally, such systems can help.

Owners and operators who embrace automation and digitalization can enhance safety, security and comfort for building occupants while also reaping benefits such as improved energy efficiency and prolonged asset lifecycles. Collaborating with the right partner can help get you started on your journey to operational efficiency.

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Building Automation
715 Peachtree St NE
Atlanta, Georgia 30308
Buildings.Honeywell.com

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