

OPERATIONAL AUTOMATION FOR HOTELS IN THE AGE OF SUSTAINABILITY

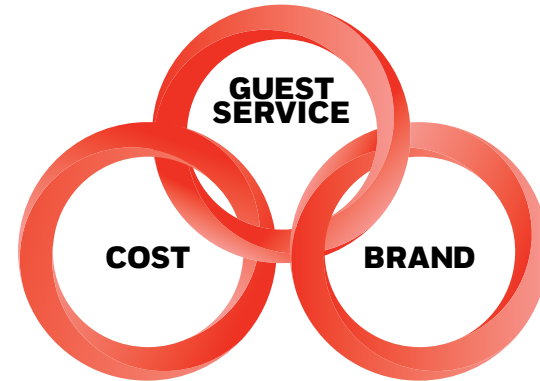
A guide to cultivating guest loyalty, energy savings, and environmental integrity for hotels who live by their brand.



Honeywell



At its core, a hotel's success is a blend of guest service quality, cost management, and brand. Each of these three impacts the others, and each is dependent on the others.



BACKGROUND

The way a hotel, or portfolio of hotels, manages building operations, from the guestroom to the common areas, from the workforce to the power grid, is the subject of this article. We'll explore the unique challenges of balancing energy efficiency with guest comfort, and maximizing occupancy with meeting sustainability goals.

THE CHALLENGES OF BUILDING AUTOMATION FOR HOTELS

Whether a global brand or franchise, or an individual property, hotels face common challenges in meeting business goals while also fulfilling sustainability commitments. One critical key is automation of building environmental controls. From guestrooms to banquet rooms and other common spaces, opportunity awaits the hotelier willing to make a reasonable investment in HVAC automation, whether cloud-connected or on-premises.

Differences in building structures and ages, type of infrastructure, local codes, and guest demographics all need to be considered. Integrating smart automation starts with an understanding of each property's unique characteristics. Challenges may include integrating legacy systems, addressing varying technical experience among staff, and ensuring consistent guest experiences. Overcoming these challenges demands a comprehensive strategy that addresses unique circumstances while ensuring unity in automation standards.

Smart automation can be the foundation on which hotels can build a sustainable future, as well as the competitive edge that allows operational savings without compromising the experience guests expect, and that keeps them coming back. By staying focused on environmental, social, and governance (ESG) commitments, hotels bolster their brand, attract today's environmentally conscious guests, and contribute meaningfully to the communities they serve. Through smart automation, hotels can embrace a future where responsible practices and exceptional guest experiences go hand in hand, setting new standards for sustainability in the hospitality industry.

Portfolio-wide implementation of smart automation

Managing the competing challenges of operational efficiency, sustainability and guest experience across a diverse portfolio of hotels requires a strategic and cohesive approach to ensure seamless operations, standardized guest experiences, and efficient resource management. Hotel chains and management companies aiming to leverage the full potential of smart automation across their diverse properties do well to start with the guest experience.

THE GUEST EXPERIENCE AND THE ROLE OF BUILDING AUTOMATION

While building automation systems all offer the option to schedule climate conditions room by room and throughout common spaces using programmable controls, the real key to capturing savings from energy waste is through automating the monitoring of room occupancy. Fortunately the technology exists today to ensure room comfort levels meet guest expectations as well as reduce the demand on HVAC systems using autonomous occupancy sensing.

Occupancy logic built in to the BMS means that sensors within a room can use a combination of changes in the door state with motion detection to decide when the room is unoccupied. It then widens the temperature tolerance from the set point to reduce HVAC cycling until the guests return, when the parameters will again direct the system to maintain a tighter compliance to the setpoint. When the system registers that the room is checked out of, it can deploy an even broader tolerance for temperature variance, saving even more. This can result in up to 25% savings in heating and cooling expense per room, without requiring any staff monitoring or actions.

These systems can be wireless and easy to install and maintain, with no configuration, using the hotel's existing property management system in most cases.

For luxury hotel installations, the same data logic can be deployed to also control curtains and lighting scenes, based on occupant preferences.



THE OPPORTUNITIES FOR HOTELS

Centralized control and monitoring

Centralization is the linchpin of successful portfolio-wide automation. Implementing a centralized building control and monitoring system allows hotel management to oversee all properties and all rooms from a single interface. This centralized hub aggregates data from various properties, providing real-time insights into energy usage, occupancy rates, guest preferences, and operational efficiency. Centralized control empowers management teams to remotely adjust settings, troubleshoot issues, and implement standardized protocols across all properties, ensuring consistency and adherence to corporate standards.



Rapid continuous data analysis for informed decision-making

Data analysis is the bedrock of effective decision-making in building automation. Smart automation systems generate vast amounts of data, providing insights into guest behavior and energy usage patterns, and revealing opportunities for operational efficiency. By harnessing advanced analytics tools, hotel management can make strategic decisions with more confidence, optimizing resource allocation, implementing predictive maintenance, and enabling personalized guest experiences. Gathering and analyzing edge data empowers hotel chains to respond swiftly to changing market demands, which can be a competitive advantage across their properties.

Interoperability and scalability of building automation systems

The ability of different systems and devices to work seamlessly together is essential for portfolio-wide automation. Building automation systems must be interoperable to integrate with existing infrastructure, third-party applications, and emerging technologies. Additionally, scalability is crucial, allowing hotels to expand their automation capabilities as their portfolio grows. Hotels can invest in systems that can scale efficiently without compromising performance or security. And they can do it using software-as-a-service, which minimizes capital expense by using an OpEx model.

By choosing interoperable and scalable solutions, with a cloud-based control and analytics platform, hotels can ensure their investments will carry them well into the future, ensuring compatibility with evolving technologies and industry standards with minimal upgrade and CapEx, and lower maintenance costs.



Summary

Energy efficiency – Smart automation optimizes energy consumption by regulating lighting, heating, and cooling based on occupancy and natural light levels. This energy-conscious approach not only reduces utility bills but also aligns with sustainability goals, making hotels environmentally responsible.

Operational streamlining – By automating routine tasks, such as housekeeping schedules and room service requests, hotels can streamline their operations. This automation minimizes human errors, ensures consistency, and allows staff to focus on delivering exceptional guest experiences.

Enhanced guest experiences – Smart automation creates a personalized and convenient environment for guests. From adjusting room settings to match individual preferences to enabling seamless check-ins and check-outs, these systems elevate the overall guest experience. Guests appreciate the convenience and sophistication offered by smart technology, leading to higher satisfaction rates and positive reviews.

Cost savings – Efficient energy usage, reduced staff workload, and predictive maintenance contribute to substantial cost savings for hotels. By optimizing resource allocation and minimizing wastage, hotels can allocate their budget effectively, investing in guest amenities and staff training programs.

Data-driven decision making – Smart automation systems generate vast amounts of data related to guest behavior, preferences, and operational patterns. Through data analytics, hotels can gain valuable insights into guest trends, enabling targeted marketing efforts and personalized service offerings. Data-driven decision-making enhances strategic planning and ensures hotels stay ahead of market demands.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) GOALS FOR HOTEL BRANDS

As prominent players in the broader hospitality industry, hotels are increasingly recognizing the importance of aligning their operations with ESG goals, fostering a culture of sustainability and responsibility.

Overview

Environmental responsibility – ESG commitments underscore the significance of environmental stewardship. By reducing their carbon footprint, conserving energy, and minimizing waste, hotels contribute significantly to environmental preservation. Smart building automation systems play a pivotal role in achieving these objectives by optimizing energy usage, regulating lighting and climate control, and implementing eco-friendly practices such as water conservation. Hotels can adopt sustainable building materials and renewable energy sources, further solidifying their commitment to environmental preservation.

Social impact – ESG commitments emphasize social responsibility, encompassing community engagement, employee welfare, and guest satisfaction. Smart building automation can help empower hotel staff to provide personalized guest experiences by automating routine tasks and focusing more on personalization. Hotels can invest in training programs to enhance staff skills, fostering a positive work environment and promoting employee well-being.

Governance and ethical practices – Governance standards guide hotels in upholding ethical standards and transparency in their operations. Implementing smart automation can standardize and improve data privacy and security, safeguarding guest information and fostering trust. Hotels can also adopt ethical sourcing practices, supporting local businesses and artisans, promoting local, small-scale economic growth. By integrating these, hotels reinforce their commitment to responsible governance and gain regard within their communities.



CYBERSECURITY AND DATA PRIVACY IN HOTEL AUTOMATION

With technological advancement in building automation comes the need for robust security measures. By implementing comprehensive security protocols and adhering to data privacy regulations, hotels can safeguard sensitive information, ensuring a secure environment for both guests and operations.



Cybersecurity measures for smart building automation systems

The proliferation of smart devices introduces new vulnerabilities that malicious actors may exploit. Be sure that the hotel operating technology has the same level of cybersecurity as your IT systems would demand. These measures are essential to protect building automation systems from unauthorized access, data breaches, and other cyber attacks.

Robust firewalls, encryption protocols, and intrusion detection systems serve as the first line of defense. Regular security audits, penetration testing, and software updates are vital to identifying vulnerabilities and addressing them promptly. By implementing multi-factor authentication and access controls, hotels can restrict system access to authorized personnel only, mitigating the risk of unauthorized intrusion.



Data privacy regulations and compliance

Data privacy regulations, such as the General Data Protection Regulation (GDPR) in Europe and the California Consumer Privacy Act (CCPA) in the United States, impose stringent requirements on how organizations handle personal data. Smart automation systems collect a wealth of guest information, necessitating meticulous compliance with these regulations. Hotels must obtain explicit consent from guests before collecting and processing their data.

Transparent privacy policies, clearly outlining the type of data collected and its purpose, build trust and empower guests to make informed decisions about their information. Regular audits and compliance checks ensure that hotels adhere to regulatory frameworks, avoiding legal complications and reputational damage.



Best practices for ensuring security and privacy in hotel automation

Implementing security and data privacy best practices is essential for maintaining the integrity of smart automation systems.

Regular training and awareness - Hotel staff should receive comprehensive training on security protocols and data privacy practices. Educated employees are the first line of defense against social engineering attacks and inadvertent security breaches. Regular awareness programs reinforce the importance of vigilance and adherence to security policies.

Vendor due diligence - Hotels must conduct thorough screening when selecting automation partners. Vendors should demonstrate a commitment to security, privacy, and regulatory compliance. Contracts should clearly outline data protection responsibilities, ensuring that vendors uphold the same stringent standards that hotels adhere to internally.

Incident response plans - Hotels should develop robust incident response plans to address potential security breaches. Rapid response and containment strategies minimize the impact of breaches and demonstrate proactive measures to guests and regulatory authorities. Transparency in communication during and after security incidents fosters trust and confidence among stakeholders.

Continuous monitoring and auditing - Continuous monitoring of network traffic, system logs, and user activities allows hotels to detect anomalies and potential security threats in real-time. Regular security audits and vulnerability assessments identify vulnerabilities before they are exploited, enabling proactive remediation.



Understanding the complex components of smart building automation as well as the benefits is pivotal for hotels aiming to remain competitive in the changing hospitality landscape.

By embracing these technologies, hotels can unlock new avenues for guest loyalty, growth and environmental sustainability. Advanced connected building automation is not a trend, but a strategic imperative that defines the future of hospitality.

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