Tackling Energy Wastage while Enhancing Guest Experience

Source: Pixabay (2020)

Background

With air-conditioning close to being a necessity in any hotel, the question of how to minimize carbon footprint without compromising guest comfort presents a significant challenge for hotel managers. Traditionally, hotels have relied on conventional Heating, Ventilation, and Air Conditioning (HVAC) systems that operate on fixed schedules, often leading to energy wastage for heating and cooling empty rooms if guests forget to turn them off before leaving (Hotel Technology News, 2024).

Located in the island country of Cyprus, Prestige Bookings is a luxury resort offering high-end villas for holiday guests (Prestige Bookings, n.d.). Due to the hot and dry climate of the Middle East, the air conditioners at the resort are always running, especially during the busy summer months (Sensibo, n.d.). It was also difficult for management to monitor and control all the HVAC units, as they are spread out across the island. In an effort to meet their sustainability goals, the resort incorporated a smart HVAC management solution named Sensibo Airbend, which helped the resort save over 40% on their energy bills (Hotel Management Magazine, 2023).

Sensibo Airbend is a smart technology that manages all HVAC units for hotels. Through a centralized dashboard, staff can monitor key metrics like temperature and power usage, as well as remotely control individual HVAC units or make mass adjustments (Sensibo, n.d.). The system also allows smart rules and parameters to be set to optimize air-conditioning. For example, the hotel can program the air conditioner to auto-adjust when reaching a set temperature (Hotel Management Magazine, 2023). This keeps rooms at optimal temperature and enhances energy efficiency while ensuring guest comfort. Additionally, the system supports smart scheduling, allowing hotel managers to schedule HVAC settings for upcoming days or weeks based on weather and occupancy forecasts (Sensibo, n.d.).

Another key selling point for Sensibo Airbend is its air quality monitoring function. Besides temperature, the device also monitors humidity, carbon dioxide levels, and total volatile organic compound levels, and alerts hotel staff for quick action if air quality is poor (Sensibo,

n.d.). It also includes a mold prevention feature that automatically switches the HVAC unit to fan mode to prevent moisture buildup after air-conditioning use (Sensibo, n.d.). These functions ensure healthy and clean air quality and an optimal indoor environment for guests.

The setup process for Sensibo Airbend is simple. All that is required is to download the Sensibo app, register each device under the hotel's account by scanning the QR code on the back, connect the device to the local Wi-Fi network, place it near the HVAC unit, and pair the remote control of the HVAC unit with the device (Sensibo, n.d.). By doing so, the hotel will have remote control of all HVAC units through the Sensibo app. When used together with add-on gadgets such as motion detectors and window sensors, the system can even automatically switch off the air-conditioner with a delay when guests leave their rooms or open a window, further reducing energy waste (Sensibo, n.d.).

Challenges

Despite being a simple yet useful invention, affordable for hotels of all sizes, Sensibo Airbend is not particularly impressive, as there are many similar products on the market. Furthermore, the ability to set temperature thresholds for rooms may take away guests' freedom to adjust the air-conditioning as they please, which goes against the prerequisite of not compromising guest experience. Moreover, the Sensibo Airbend system relies solely on a local Wi-Fi connection to operate, making it vulnerable to malfunction in the event of any signal interference.

Discussion Questions

1. What are the environmental impacts of traditional HVAC systems in hotels?
2. How does Sensibo Airbend enhance energy efficiency in hotel HVAC systems, and how might this impact the hotel's operational costs?
3. What are the potential challenges or drawbacks of using a smart HVAC management system like Sensibo Airbend in terms of guest satisfaction and experience?
4. How does the air quality monitoring feature of Sensibo Airbend contribute to guest health and comfort, and what additional measures could hotels take to ensure optimal indoor air quality?
5. How might future technological advancements further improve the capabilities of smart HVAC systems in the hospitality industry?

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Keywords

- Hotel
- Sustainability
- Energy consumption
- Carbon footprint
- Air-conditioning
- Technology

在提升宾客体验的同时应对能源浪费问题

Source: Pixabay (2020)

背景

空调几乎是任何酒店的必需品，如何在不影响宾客舒适度的前提下减少碳足迹，对酒店管理者构成了重大挑战。传统上，酒店依赖基于固定时间表运行的传统暖通空调系统，如果宾客在离开房间时忘记关闭空调，经常会导致空置房间的供暖和制冷能源浪费(Hotel Technology News,2024）。

Prestige Bookings 位于岛国塞浦路斯，是一家为度假客人提供高端别墅的豪华度假村(Prestige Bookings, n.d.)。由于中东地区炎热干燥的气候，度假村的空调常年运行，尤其是在夏季繁忙的月份(Sensibo, n.d.)。由于各个别墅的 HVAC 设备分布在整个岛屿上，管理层也难以监控和控制所有设备。为了达成其可持续性目标，该度假村引入了一种名为 Sensibo Airbend 的智能 HVAC 管理解决方案，这帮助度假村节省了超过 40%的能源费用(Hotel Management Magazine,2023）。

Sensibo Airbend 是一种为酒店管理所有 HVAC 设备的智能技术。通过一个集中化的仪表板，员工可以监控温度和用电量等关键指标，并远程控制单个 HVAC 设备或进行批量调整(Sensibo, n.d.)。该系统还允许设置智能规则和参数以优化空调运行。例如，酒店可以设定空调在达到特定温度时自动调节(Hotel Management Magazine, 2023）。这既能将房间保持在最佳温度，提高能效，又能确保宾客的舒适度。此外，该系统支持智能排程，允许酒店经理根据天气和入住率预测，为未来几天或几周安排 HVAC 设置(Sensibo, n.d.)。

Sensibo Airbend 的另一个关键卖点是其空气质量监控功能。除了温度，该设备还能监控湿度、二氧化碳水平和总挥发性有机化合物水平，并在空气质量不佳时提醒酒店员工以便快速采取行动(Sensibo, n.d.)。它还包括一个防霉功能，在使用空调后自

动将 HVAC 设备切换到风扇模式，以防止湿气积聚(Sensibo, n.d.)。这些功能确保了健康清洁的空气质量和为宾客提供最佳的室内环境。

Sensibo Airbend 的设置过程很简单。只需要下载 Sensibo 应用程序，通过扫描设备背面的二维码在酒店账户下注册每个设备，将设备连接到本地 Wi-Fi 网络，将其放置在 HVAC 设备附近，并将 HVAC 设备的遥控器与该设备配对即可(Sensibo, n.d.)。通过这样做，酒店就可以通过 Sensibo 应用程序远程控制所有 HVAC 设备。当与运动探测器和窗户传感器等附加配件一起使用时，系统甚至可以在客人离开房间或打开窗户后延迟一段时间自动关闭空调，进一步减少能源浪费(Sensibo, n.d.)。

挑战

尽管 Sensibo Airbend 是一项简单而有用的发明，且适合各种规模的酒店承担其费用，但它并不特别出众，因为市场上存在许多类似产品。此外，为房间设置温度阈值的能力可能会剥夺客人随意调节空调的自由，这与“不损害宾客体验”的前提相悖。再者，Sensibo Airbend 系统完全依赖本地 Wi-Fi 连接运行，在遇到任何信号干扰时容易发生故障。

讨论问题

1. 酒店传统 HVAC 系统对环境有何影响？
2. Sensibo Airbend 如何提升酒店 HVAC 系统的能效？这可能对酒店的运营成本产生何种影响？
3. 使用像 Sensibo Airbend 这样的智能 HVAC 管理系统，在宾客满意度和体验方面可能存在哪些挑战或缺点？
4. Sensibo Airbend 的空气质量监控功能如何有助于宾客的健康和舒适度？酒店还可采取哪些额外措施以确保最佳的室内空气质量？
5. 未来的技术进步可能会如何进一步提高智能 HVAC 系统在酒店业的能力？

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关键词

- 酒店
- 可持续性
- 能源消耗
- 碳足迹
- 空调
- 技术

在提升賓客體驗的同時應對能源浪費問題

Source: Pixabay (2020)

背景

空調幾乎是任何酒店的必需品，如何在不影響賓客舒適度的前提下減少碳足跡，對酒店管理者構成了重大挑戰。傳統上，酒店依賴基於固定時間表運行的傳統暖通空調系統，如果賓客在離開房間時忘記關閉空調，經常會導致空置房間的供暖和製冷能源浪費 (Hotel Technology News, 2024)。

Prestige Bookings 位於島國塞浦路斯，是一家為度假客人提供高端別墅的豪華度假村 (Prestige Bookings, n.d.)。由於中東地區炎熱乾燥的氣候，度假村的空調常年運行，尤其是在夏季繁忙的月份 (Sensibo, n.d.)。由於各個別墅的 HVAC 設備分佈在整個島嶼上，管理層也難以監控和控制所有設備。為了達成其可持續性目標，該度假村引入了一種名為 Sensibo Airbend 的智能 HVAC 管理解決方案，這幫助度假村節省了超過 40%的能源費用 (Hotel Management Magazine, 2023)。

Sensibo Airbend 是一種為酒店管理所有 HVAC 設備的智能技術。通過一個集中化的儀表板，員工可以監控溫度和用電量等關鍵指標，並遠程控制單個 HVAC 設備或進行批量調整 (Sensibo, n.d.)。該系統還允許設定智能規則和參數以優化空調運行。例如，酒店可以設定空調在達到特定溫度時自動調節 (Hotel Management Magazine, 2023)。這既能將房間保持在最佳溫度，提高能效，又能確保賓客的舒適度。此外，該系統支援智慧排程，允許酒店經理根據天氣和入住率預測，為未來幾天或幾週安排 HVAC 設定 (Sensibo, n.d.)。

Sensibo Airbend 的另一個關鍵賣點是其空氣品質監控功能。除了溫度，該設備還能監控濕度、二氧化碳水平和總揮發性有機化合物水平，並在空氣品質不佳時提醒酒店員工以便快速採取行動 (Sensibo, n.d.)。它還包括一個防霉功能，在使用空調後自

動將 HVAC 設備切換到風扇模式，以防止濕氣積聚 (Sensibo, n.d.)。這些功能確保了健康清潔的空氣品質和為賓客提供最佳的室內環境。

Sensibo Airbend 的設定過程很簡單。只需要下載 Sensibo 應用程式，透過掃描設備背面的二維碼在酒店帳戶下註冊每個設備，將設備連接到本地 Wi-Fi 網路，將其放置在 HVAC 設備附近，並將 HVAC 設備的遙控器與該設備配對即可 (Sensibo, n.d.)。透過這樣做，酒店就可以透過 Sensibo 應用程式遠程控制所有 HVAC 設備。當與運動探測器和窗戶感測器等附加配件一起使用時，系統甚至可以在客人離開房間或打開窗戶後延遲一段時間自動關閉空調，進一步減少能源浪費 (Sensibo, n.d.)。

挑戰

儘管 Sensibo Airbend 是一項簡單而有用的發明，且適合各種規模的酒店承擔其費用，但它並不特別出眾，因為市場上存在許多類似產品。此外，為房間設定溫度閾值的能力可能會剝奪客人隨意調節空調的自由，這與「不損害賓客體驗」的前提相悖。再者，Sensibo Airbend 系統完全依賴本地 Wi-Fi 連接運行，在遇到任何訊號干擾時容易發生故障。

討論問題

1. 酒店傳統 HVAC 系統對環境有何影響？
2. Sensibo Airbend 如何提升酒店 HVAC 系統的能效？這可能對酒店的營運成本產生何種影響？
3. 使用像 Sensibo Airbend 這樣的智能 HVAC 管理系統，在賓客滿意度和體驗方面可能存在哪些挑戰或缺點？
4. Sensibo Airbend 的空氣品質監控功能如何有助於賓客的健康和舒適度？酒店還可採取哪些額外措施以確保最佳的室內空氣品質？
5. 未來的技術進步可能會如何進一步提高智能 HVAC 系統在酒店業的能力？

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關鍵詞

- 酒店
- 可持續性
- 能源消耗
- 碳足跡
- 空調
- 技術