

Chapter 17

Revolutionizing Hospitality: Leveraging Mobile Apps and Cutting-Edge Room Technologies in the Hotel Industry

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ABSTRACT

Mobile apps and room technology are transforming the hotel sector, improving productivity and visitor experiences. Smartphone apps make booking rooms, checking in and out, using hotel amenities, and unlocking rooms easy. These apps improve visitor experiences with personalized recommendations and smooth hotel staff contact. Smart thermostats, automatic lighting, voice-activated assistants, and integrated entertainment systems make hotel rooms individual havens. These innovations improve convenience, energy efficiency, and sustainability in hotel rooms, revealing the future of hospitality. These technologies' advanced data analytics help hotels understand visitor preferences, improve offerings, and increase service efficiency. Mobile apps and smart room technologies are not a fad in hospitality; they elevate the bar and increase client satisfaction and loyalty towards the products and services of hotel operations. As these technologies improve, hotels that integrate and use them will stay relevant and gain a competitive edge by giving guests a better experience.

INTRODUCTION

The hotel industry is changing dramatically due to the introduction of mobile applications and cutting-edge room technologies (Verma et al., 2021). In response to evolving guest expectations, hotels gradually integrate digital solutions to enhance visitor pleasure and optimize operations (Erdem & Barakazi, 2023). Since they can handle reservations, check-in and out, and use several hotel services directly from their smartphones, travelers now view mobile applications as indispensable. The trend toward seamless service and personalization in the hotel business, which is more substantial, aligns well with this shift toward digital convenience (Ivanova, 2023). Mobile apps offer a plethora of features that improve visitor satisfaction and engagement. From booking and payment processes to room service requests and local area guides, these applications provide a uniform platform that allows guests to tailor their stay according to their interests (Sayfutdinov & Egamberdiyev, 2024). For instance, many hotels now enable guests to use

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smartphone apps and keyless admission straight from the front desk (Uhodnikova et al., 2022). Moreover, mobile applications provide immediate communication between guests and hotel staff, ensuring prompt settlement of any questions or issues (Shelemetieva & Hres-Yevreinova, 2021).

Cutting-edge room technologies improve the in-room experience and work with these mobile solutions. Integrated entertainment systems, voice-activated assistants like Amazon's Alexa, automatic lighting, and smart thermostats make it simple for visitors to personalize their stay, according to Papanos and Michopoulou (2023). By maximizing energy use, these solutions enhance environmental initiatives while offering convenience. To cut down on energy waste, smart thermostats, for instance, can modify the temperature of a room according to occupancy. By eliminating the need for physical touchpoints and improving hygiene, voice-activated assistants can operate various room functions (Tao et al., 2018).

Additionally, the information gathered by these technologies offers insightful knowledge about the tastes and actions of visitors, allowing hotels to give more individualized services. Singh (2024), in their study, states that hotels can improve overall service quality, anticipate visitor wants, and customize marketing methods. Stronger customer relationships and loyalty are essential in a competitive market, and this data-driven approach helps businesses achieve both (Bilgihan & Ricci, 2024).

Review of the Literature:

The hotel industry has significantly improved operational effectiveness and the visitor experience using cutting-edge in-room technology and mobile applications. According to Rogerson (2013), visitors also feel powerful. Mobile apps are now indispensable for enhancing guest satisfaction and streamlining hotel operations (Tjandra et al., 1924). According to Povorozniu (2023), these programs make it easy for guests to check in and out, manage their reservations, and access a variety of amenities, adding convenience and personalization to their stay.

Numerous research studies have been done on hotel mobile apps' unique benefits and features (Talukder, 2024). Features like smartphone check-in, keyless room entry, and real-time communication with hotel staff enhance the overall guest experience by decreasing wait times and improving operational efficiency. Talukder (2021) says offers and recommendations can be customized using mobile apps, tailoring the visiting experience to each visitor's tastes. Cutting-edge room technologies, which have received much attention in the literature, are essential for advancing sustainability and energy efficiency and improving visitor comfort (Mukhopadhyay et al., 2023). For example, smart thermostats can lower energy use by adjusting room temperature based on occupancy (Davronov, 2021). Elvia Ratna Sari et al. (2023) said automated lighting systems promote environmentally responsible behavior by ensuring that lights are only utilized when necessary. Voice-activated assistants, such as Amazon's Alexa, are now placed in hotel rooms to allow guests to use the amenities without using their hands (Partovi & Fang, 2022). In addition to increasing client happiness, these aides provide a more convenient and engaging in-room experience (Komppula & Lvov, 2023). Voice commands can be used to manage room settings, request services, and retrieve information, eliminating the need for physical touchpoints and improving convenience and hygiene (Gilbert & Ricci, 2024). Hotels can gain essential insights into visitor behavior and preferences through data analytics, a potent tool from these technologies (Talukder et al., 2024). Using this data, hotels may improve marketing techniques, anticipate guest demands, and customize services. This data-driven approach enhances visitor satisfaction while boosting customer loyalty and operational effectiveness (Das et al., 2024).

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