

Module: Contemporary Themes in the Hotel and Hospitality Sector.

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Abstract

This report will study and identify the influence of mobile applications and personalization, tools that are used in the hotel industry as a result. It analyzes the impact on technology adoption raising the need for reconsideration due to the changing behavior of the customer, digitalization etc. and the desire for innovation in the customer experience. A PESTEL analysis is a tool used to understand and evaluate the various aspects of the subject matter across the six domains that comprise political, economic, social, technological, environmental, and legal implications. The assessment focuses on the main industry outcomes, including identifying the strong points, pointing out the weaknesses, and recommending the best practices. Lastly, the paper furnishes ideas that should be considered for purchase and control strategies that can be used in tandem with apps to realize their full potential of harnessing their potential and addressing the concerning issues. In a nutshell, this report will open up strategic perspectives and practical concerns for using these technologies for such purposes.

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Introduction

The hotel and hospitality business is rapidly using technology to improve visitor experiences, streamline operations, and stand out from the competition (Ford and Sturman, 2020). Online facilities for easy check-ins and check-outs, keyless entry systems, and guest control over lighting, temperature, and entertainment are transforming how hotels serve guests (Saratchandran, 2018). Technology integrations in future hotel design are crucial because they affect the guest experience, productivity, and profitability. The hospitality industry has traditionally been labour-intensive, but technology has changed that (Car and Střfanřch, 2020). Digital booking, personalisation, and next-level ease are essential, and hotels that do not comply fall short of modern consumer expectations. Due to competition, technology can help hotels reduce expenses, resource use, and sustainability or advance up a level (Ali et al., 2020). This creates a new tech-focused traveller category, which will increase hospitality technology use in the future. The importance of media will increase to improve guest experience and operational efficiency. Hotels that use technology to do this will lead the market.

Review of Relevant Literature

The topic line will be driven by the fact that the research scope will cover mobile apps and personalization platforms after considering this as an area that is related to the technological side of the hotel and hospitality industry. The occurrence of hand-held devices and shoppers' taste for customized and easy ways also gives greater exposure and, thus, importance to this technological area (Buhalis et al., 2019). It is now upgraded in many papers towards the app hotel, with personalization technology being the most important tool. Andreessen et al. (2024) survey showed the negative impact of 88% of tourists who use mobile apps during pre-trip searches and get travel options and amenities before they make a reservation. Moreover, about half of the guests (49%) do mobile check-in and 36% have had mobile check-out. This turns out to be evidence showing that guests will try to arrange the machines with the technology to enhance their simple unpleasant feelings. As Chen (2023) put it, personalization technology implies that consumers might have TV, room temperature, and entertainment aspects of their stay customized depending on their tastes and preferences. Besides, food and beverage choices for guests may be personalized too. Their result illustrates the concept that the growth of this variable raises the count by 59% and caps at 10% of the maximum amount (Aleamar, 2023). Through marketing, hotels can achieve loyalty by using mobile apps to launch retention and engagement campaigns. As cited from Grotte's (2018) study, the guests' interactiveness, which is a key parameter, tends to be significantly higher for the hotels with mobile apps, recorded at an average of 27. In one year, the mobile app generated up to \$2 million and resulted in 34% booking growth, according to 2% Dominique Rambaran, CIO of Atlantis Resorts (Atlantis, 2024). The innovator of digital solutions has a mobile check-in/out system and a room-ready alert that allows the user to access their room with a digital room key. Personalization forms the main objective of a wide number of the users who would want their room settings to be manipulated with the accommodation app for their pleasure. CRM integration with AI and machine learning to analyze guest data by hotel houses provides the means to forecast customers' individual needs and recommend customized solutions (Çeltek and İlhan, 2020). The app of Hilton's Connected Room provides the possibility for customers to control the entire room using a phone, ranging from heating to lighting (O'Brien, 2017). On the other hand, challenges include data confidentiality, system integration facilities, and the blending of multi-channel experiences (Bilgihan et al., 2016). However, the common feeling is that mobile apps and customer personalization are just one chance for hotels to be on a different level of service, which can be distinguishable if used wisely. Hence, it can be hypothesized, as stated by Bason

and Miah (2021), that the hotel sector continues to grow and needs to keep pace with ever-changing guest expectations powered by technologies.

Application to the Hotel and Hospitality Industry

PESTEL Analysis

A PESTEL analysis provides a comprehensive lens to evaluate how the contemporary theme of mobile apps and personalization technology is impacting the hotel and hospitality industry across various factors.

Political Factors: Global governments have accelerated technological development and digitization, embracing the hotel industry (Ford and Sturman, 2020). Policymakers in several countries are providing incentives and subsidies to encourage the adoption of new tech and personalisation solutions. The Singapore Tourism Board's Hotel Innovation Challenge and Hotel Technology Adoption Programme enable hotels to adopt new technologies (Boo and Chua, 2022). GDPR (General Data Protection Regulation) and other EU and regional data rules restrict businesses' collection, storage, and use of customer data, but they protect customers' privacy (Gal and Aviv, 2020). Privacy rules like GDPR may prevent companies from fully exploiting data to provide personalised guest experiences (Kumar et al., 2024).

Economic Factors: Economic conditions determine whether hotels invest in new technologies like phone apps or platform customisation (Breda et al., 2019). In an optimistic business climate, when travel is high, hotels have the capital and means to install cutting-edge hotel technologies, upgrade network infrastructure for easy digital experiences, and adopt AI and machine learning-based systems for better service personalisation (Cooper and Hall, 2019). In economic recessions, when hotel occupancy rates drop and finances are tighter, these organisations may delay or limit technology-related institutional developments.

Social Factors: Changing guest demographics and preferences is the main trigger for hotels to put their reliance on a mobile app and personalization technologies (Stilic et al. 2023). Considering the major proportion of double-digit tourists like millennials and Gen Z, these need to be met by hotel keepers to have the upper hand or international competitiveness. Seeking for fewer clicks, and attractive randomized, and sharable, online interactions, coupled with the pressure for hotels to use mobile apps and personalization as the response to these steadily evolving customer needs.

Technological Factors: More mobile devices and applications that provide hotel service upgrades are boosted by proliferating artificial intelligence in computers, cloud computing, IoT, and data analysis, (Shin et al. 2023). However, fast turnover demonstrated among the companies also urges them to constantly innovate and invest in current technology to stand out among competitors, who are mostly graduate guests with modern lifestyles. Tech-savvy hotels must be alert and on the go to update the current IT system of mobile applications, personalization platforms and systems as the high technology revolution continues and embraces to provide a higher level of experience to the customers (Cooper and Hall, 2019).

Environmental Factors: Consumers and businesses can apply personal technology to boost hotel efficiency, energy use, and environmental impact. ARGAs - The room control system integrates with mobile apps, allowing visitors to customise lighting, heating, and amenities based on their location and preferences. Energy consumption may decrease (Beck, 2021). The fourth issue is that personalisation and data processing consume more electricity than other sources, which may hurt sustainability.

Legal Factors: There are some legal risks resorting from the recently implemented data laws such as GDPR, plus the emerging technologies like facial recognition for individualized check-in, safety issues associated with the digital key and liability for using AI and algorithms in operations and decision-making (Padden and Öjehag-Pettersson, 2021). Addressing these issues requires robust policies, compliance measures, and legal safeguards for the hotels' operations to adhere to the law and standards of ethics and humanity.

Industry Responses and Impact Analysis

While this problem matters to the majority of the hotels with the facility to approach consumers; hence, responding to the demands of the consumers is one of the issues that is expensive thus the hotel groups spend money to compete with the edge. Examples of industry responses include:

Hilton Honors App and Connected Room: This single, coordinated control makes possible the steps to check-in digitally, and open the door just by using the device for that purpose, and with that room, one can operate the lights, heat and air conditioning and the entertainment systems (Hilton, 2023). However, it is noteworthy that harnessing the Connected Room

Concept will award Hilton a competitive edge. On the other hand, a setback has been experienced in the process of harmonizing the different properties.

Marriott Mobile App and AI Room Assistants: From Marriott Hotel, the App comes with features such as service requests, and mobile check-in/out, and will soon offer personalized recommendations informed by the AI algorithm, which will analyze the guest behaviour patterns and preferences (Buhalis and Moldavska, 2021). Similarly, the site has elevated its customer services to the level of AI-operated voice assistants based in part of their hotels to provide customized in-room services. The project had some thorny initial stages; however, the hospitality factor of the visitors could be regarded as outweighing part of their complaints.

Accor's Mobile Apps and Digital Keys: Since then the app for mobile devices has been up for all of the brands a hotel runs as a part of Accor's initiative (Damnjanović, Lončarić and Dlačić, 2020). The apps include a range of functions, like checking in and out of rooms with mobile devices, keys, and customizing services. The production rates that range from their competitors also use the technology is also an added advantage compared to these other expensive applications.

While the adoption of mobile apps and personalization technologies has the potential to enhance guest convenience, personalization, and overall satisfaction, it is important to recognize both the strengths and limitations of these solutions:

Strengths:

- Seamless digital user experiences tailored to modern consumer demands.
- Personalization capabilities enhance guest satisfaction, loyalty, and revenue opportunities (Cooper and Hall, 2019).
- Mobile capabilities like check-in, checkout, and digital room keys increase operational efficiency.
- Guest data provides rich insights for predictive modelling and targeted, personalized services (Buhalis and Moldavska, 2021).
- Intelligent room controls offer sustainability benefits via optimized energy usage.

Limitations:

- Significant investment costs for development, hardware integration, and ongoing maintenance.
- Data privacy and security risks require robust policies, security measures, and compliance efforts (Cooper and Hall, 2019).
- Technical issues and inconsistencies can degrade the user experience and undermine adoption (Buhalis and Moldavska, 2021).
- Limited capabilities and adoption of some solutions may fail to meet guest expectations.
- Need for continuous innovation and investment to keep pace with rapidly evolving demands.

Overall, the hotel industry is actively embracing mobile apps and personalization technology to drive enhanced guest experiences, operational optimization, and competitive differentiation. However, successful implementation requires carefully navigating costs, infrastructure requirements, evolving consumer preferences, and regulatory landscapes to maximize the strengths and mitigate the limitations of these technologies.

Evaluate Future Policy and Management Options

Mobile apps and personalisation technology present opportunities and risks for hotels and hospitality (Cooper and Hall, 2019). To move the sector forward, all stakeholders—decision-makers and other industry players—must implement these policies and management practices. The prior insights and evaluations yield numerous crucial recommendations. The previous pros and downsides and ratings address several important points:

Data Privacy and Security Policies: As customers' data like cards is used for personalisation and data breaches increase, hotels are developing strong data security and privacy rules. A GDPR-compliant solution would not only comply with the requirements but also set the standard for data protection best practices in the sector (Wainstein, 2020). It will build a trustworthy brand by acquiring verified consent from participants, establishing clear business standards, and implementing strong security measures.

Omnichannel Integration and Seamless Experiences: Future consumers will want an integrated purchase process (Cooper and Hall, 2019). Using a mobile app, a store, or another

platform for the transaction does not matter. Hotels must use multichannel strategies because consumer voice equals brand consistency. Funding facilities that connect mobile apps, a website, on-property technologies, and clients with real-time data and good treatment an example.

Continuous Innovation and Agile Development: The development of the technology change will make the hoteliers need to find out the suited development methodology such as agile or innovation culture building to stimulate the ability of creativity (Conrady and Buck, 2012). This could be done by setting up innovative cities that could bring people together or work in conjunction with technology companies to ensure the highest level of knowledge in the latest technology, and tastes of guests and always quickly adapt to the changes in digitalization, mobile apps and personalization.

Strategic Partnerships and Ecosystem Development: The most sensible approach is to offload the whole burden of technology development which is a complex process and to focus instead on cooperation with technology providers, emerging start-ups and market players, thus making it possible to enjoy the advantages of knowledge and experience of the above-mentioned entities (Kumar, Kapoor and Shah, 2024). These could be any of the three – business fuels innovations by cooperating in innovation networks, chasing the bright future created by technologies, and developing end-to-end solutions that are designed in a tailored approach for each client's specificities (Bichler et al., 2022).

Talent Acquisition and Upskilling: The workforce needs to be skilled and well-educated enough for a successful changeover to phone apps (Cooper and Hall, 2019). The hotel industry should highly rate the competency-based recruitment process as a way of making sure there is expert skill in mobile app development, data analytics, as well as machine learning and personalization among others. Furthermore, the employees may be retrained or upskilled so that they match with the technology, this will motivate the working force to accept the change.

Guest Education and Change Management: Mobile devices and personalisation technology can overcome some of these obstacles, but they also have their issues, such as how to protect guests' privacy, overcome technological barriers, and prevent guests from becoming dependent on devices and continuing the old way of providing services (Conrady and Buck, 2012). Thus, process describes the process. Hospitals should understand in educational programmes and

strategy transition that technologies will reduce client fear. Employers will benefit since technologies are convenient and time-saving.

Sustainability and Environmental Responsibility: Hotel room controls using personalisation technology reduce waste and environmental impact. The plans should include transparent sustainability goals, criteria for monitoring execution, and reporting procedures (Osei et al., 2020). Instead of destroying the environment, this company must be ethically developing and contribute to the clean fame of sustainable tourism, which consumers want.

As far as the above is concerned, it is possible that the hotel and hospitality industry, besides applying such measures, will conquer new grounds, and enhance customer service experience by understanding and dealing with relevant issues and opportunities which the application mobile apps and the personalization technologies present so that it can position itself favourably in a rapidly changing and personalized world that is tech-driven.

Conclusion

Integration of mobile apps and personalisation technologies transforms hospitality processes. These revolutionary technologies have the ability to improve guest experiences, cut administrative work, and grow a business. The key obstacle is presenting the benefits without analysing the problem from a spectrum-wide perspective that balances the domains. Hotels must choose rigorous data privacy and security policies to build confidence and reduce liability. Omnichannel connectivity without gaps and constant innovation of ground-breaking services to meet changing client needs are essential. Hotels may prevent technology disruptions and leverage innovations for efficiency by strengthening partnerships, talent acquisition, and staff training. To maximise product business value and enable extensive technology use, customer awareness and change management are essential. However, hotels should determine their goal and use technology to customise energy management and environmentally conscious operations to meet consumer demand for sustainable tourism. Mobile apps and personalised technologies can be completely utilised by timely addressing these top priorities, good policy formulation, and successful administration. This can lead to a great client experience, efficient operations, and long-term competitiveness.

Reference List

Aleamar, S. (2023) *How To Increase Food and Beverage Revenue in a Hotel*. Available at: <https://www.canarytechnologies.com/post/how-to-increase-food-beverage-revenue-in-a-hotel> (Accessed: 17 May 2024).

Ali, A., Rasoolimanesh, S.M. and Cobanoglu, C. (2020) Technology in tourism and hospitality to achieve sustainable development goals (SDGs). *Journal of Hospitality and Tourism Technology*, 11(2), pp.177-181.

Andreessen, M., Horowitz, A. and Evans, B. (2024) *Mobile Is the New First Screen 'Software is eating the world.'* 'Mobile is eating the world.' *THE MOBILE LANDSCAPE*. Available at: <https://www.oracle.com/a/ocom/docs/mobile-infographic-2595872.pdf> (Accessed: 17 May 2024).

Atlantis (2024) *ATLANTIS - LEADER OF SUSTAINABLE TOURISM IN THE BAHAMAS*. [online] www.atlantisbahamas.com. Available at: <https://www.atlantisbahamas.com/sustainable-tourism> [Accessed 18 May 2024].

Bason, T. and Miah, S. (2021) Technology and the future of the hospitality industry: An empirical investigation into the use of mobile apps. *Journal of Hospitality and Tourism Technology*, 12(1), 74-92.

Beck, G. (2021) *Dictionary of 21st Century Energy Technologies, Financing and Sustainability*. River Publishers.

Bichler, B.F., Kallmuenzer, A., Peters, M., Petry, T. and Clauss, T. (2022) Regional entrepreneurial ecosystems: how family firm embeddedness triggers ecosystem development. *Review of Managerial Science*, 16(1), pp.15-44.

Bilgihan, A., Smith, S., Ricci, P. and Bujisic, M. (2016) Hotel guest preferences of in-room technology amenities. *Journal of Hospitality and Tourism Technology*, 7(2), pp.118-134.

Boo, H.C. and Chua, B.L. (2022) An integrative model of facial recognition check-in technology adoption intention: the perspective of hotel guests in Singapore. *International Journal of Contemporary Hospitality Management*, 34(11), pp.4052-4079.

Breda, Z., Pacheco, C. and Dinis, G. (2019) FUTURE TRENDS IN THE HOSPITALITY INDUSTRY: AN ANALYSIS FROM THE CONSUMERS'POINT OF VIEW. *Tourism in Southern and Eastern Europe...*, 5, pp.139-162.

Buhalis, D. and Moldavska, I. (2021) In-room voice-based AI digital assistants transforming on-site hotel services and guests' experiences. In *Information and Communication Technologies in Tourism 2021: Proceedings of the ENTER 2021 eTourism Conference, January 19–22, 2021* (pp. 30-44). Springer International Publishing.

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S. and Hofacker, C. (2019) Technological disruptions in services: lessons from tourism and hospitality. *Journal of Service Management*, 30(4), pp.484-506.

Car, T. and Stifanich, L.P. (2020) Mobile technology: a tool to increase hotel sales and revenue. *Economics Business and Organization Research*, pp.454-465.

Çeltek, E. and İlhan, I. (2020) Big data, artificial intelligence, and their implications in the tourism industry. In *Handbook of research on smart technology applications in the tourism industry* (pp. 115-130). IGI Global.

Chen, M. (2023) *Personalization in hotels: Stay relevant with customized services*. Available at: <https://hospitalityinsights.ehl.edu/personalization-in-hotels> (Accessed: 17 May 2024).

Conrady, R., and Buck, M. (2012) *Trends and Issues in Global Tourism*. Springer

Cooper, C. and Hall, M. (2019) *Contemporary Tourism: An International Approach*. 4th Edn. Goodfellows, Oxford.

Damnjanović, V., Lončarić, D. and Dlačić, J. (2020) TEACHING CASE STUDY: Digital marketing strategy of Accor Hotels: shaping the future of hospitality. *Tourism and hospitality management*, 26(1), pp.233-244.

Ford., R.C. and Sturman., M.C (2020) *Managing Hospitality Organizations*. 2nd Edn. Sage, London.

Gal, M.S. and Aviv, O. (2020) The competitive effects of the GDPR. *Journal of Competition Law and Economics*, 16(3), pp.349-391.

Grotte, J. (2018) Future Challenges of the Hospitality Industry. In *7th International Conference on Tourism and Hospitality Management* (pp. 11-25).

Hilton (2023) *Hilton Honors App with Contactless Check-In*. [online] Hilton. Available at: <https://www.hilton.com/en/p/hilton-honors-mobile-app/> [Accessed 18 May 2024].

Kumar, S., Kapoor, B. and Shah, M. A. (2024) Contemporary Issues and Challenges Facing the Hospitality Industry. In *The Framework for Resilient Industry: A Holistic Approach for Developing Economies* (pp. 55-64). Emerald Publishing Limited.

O'Brien, J. (2017) *Hilton More In-Room Technology As Part Of Connected Room Initiative*. Available at: <https://essentialinstall.com/commercial/hilton-connected-room/> (Accessed: 17 May 2024).

Osei, B. A., Ragavan, N. A. and Mensah, H. K. (2020) Prospects of the fourth industrial revolution for the hospitality industry: a literature review. *Journal of Hospitality and Tourism Technology*, 11(3), 479-494.

Padden, M. and Öjehag-Pettersson, A. (2021) Protected how? Problem representations of risk in the General Data Protection Regulation (GDPR). *Critical Policy Studies*, 15(4), pp.486-503.

Saratchandran, V. (2018) *How Hotels are Using Technology for Competitive Advantage | Fingent Blog*. Available at: <https://www.fingent.com/blog/how-hotels-are-using-technology-for-competitive-advantage/> (Accessed: 18 May 2024).

Shin, H. H., Shin, S. and Gim, J. (2023) Looking back three decades of hospitality and tourism technology research: a bibliometric approach. *International Journal of Contemporary Hospitality Management*, 35(2), 563-588.

Wainstein, L. (2020) *Data Security in Hospitality: Risks and Best Practices*. Available at: <https://hospitalityinsights.ehl.edu/data-security-in-hospitality-best-practices> (Accessed: 18 May 2024).