19 Exploring the Role of Artificial Intelligence for Luxury Hotel Brands

A Case Study in Europe

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1. Introduction

Luxury hotel brands are experiencing a similar growth trend as the luxury travel market, which contributes to nearly 7% of all international travel (Shin and Jeong, 2022). Luxury consumption refers to the consumption of products and services that are relatively scarce in society and go beyond basic needs, often serving as a form of exhibition (Wu and Yang, 2018; Shin and Jeong, 2022). The visitors to luxury hotels anticipate various benefits from luxury consumption, leading to emotions and a strong affinity for a particular hotel brand (Wu and Yang, 2018). There is a rich history of luxury hotel brands, and many Western consumers consider the experience gained in a luxury hotel to be an integral part of their lifestyle (Wu and Yang, 2018).

According to Kucukusta et al. (2014), luxury hotel brands are often classified as five-star city hotels and are referred to as "high tariff" hotels in certain parts of Europe. These luxury hotel brands are renowned for providing exceptional and personalized services tailored to the requirements of the consumers (Shin and Jeong, 2022). Compared to budget and independent hotels, luxury hotel brands provide superior service due to their technological advantages, strong brand recognition, and skilled management teams (Yang and Mao, 2017). The adoption of technology in luxury hotel brands has become a tradition that satisfies the target audience and enhances customer experiences by providing reliable, guest-centric, and innovative services through the use of machines and AI (Shin and Jeong, 2022). In sectors such as hotels and airlines, the hospitality and tourism industry has been at the forefront of VR advertising experiments (Shin and Jeong, 2022).

Key Takeaways

- Luxury industries have recognized that consumption patterns are changing and that consumers have an increased disposable income.
- Luxury goods have evolved from the traditional orientation of possessing them to the orientation of experiencing them.
- There has been a long and storied history of luxury hotel brands, making them an integral part of the lifestyle industry.

DOI: 10.4324/9781003488248-19

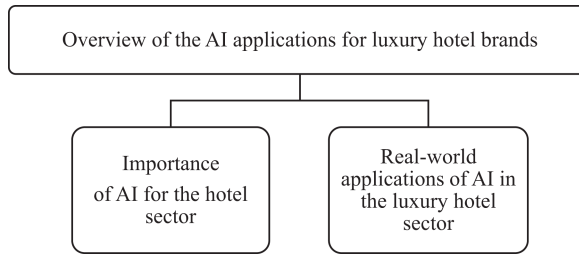

Figure 19.1 Overview of the AI applications for luxury hotel brands
Source: Developed by authors

Figure 19.1 further illustrates the overview of the next three sections as follows.

1.1 Importance of AI for the hotel sector

The application of technology and innovation in the hotel sector attracts customers (Citak et al., 2021), and the hotel industry must recognize the potential benefits of AI and its application in an industrial setting (Zeng et al., 2020). The use of AI was initially prevalent in manufacturing industries, where human-like AI was adopted to replace repetitive human work. This trend spread to other sectors, including transportation, medical, education, and supply chain management (Mustafa, 2022; Citak et al., 2021). The first recorded introduction of AI in the hotel sector was at Henn-na Hotel, inaugurated in Japan in 2015, followed by Wynn Las Vegas in the United States in December 2016 (Yang et al., 2020). Hotel operations have been transformed fundamentally and significantly by AI and robotics technologies. Self-service kiosks are now used at customer service desks to allow guests to check in and check out on their own, thereby reducing waiting times and ensuring prompt service (Kim and Qu, 2014).

As AI is increasingly used in the hotel sector, it helps to meet customer expectations and analyze bookings and transactions (Kim and Qu, 2014). Using artificial intelligence, hotels can generate new customer experiences by learning from customer-related data (Ivanov et al., 2017). The application of AI in the hotel sector is becoming more common, from chatbots to smart gatekeepers, leading to an enhanced in-house guest experience (Kim and Qu, 2014). Currently, numerous AI tools have been established and implemented in various sectors, most notably in the tourism and hospitality industry with language translation facilities, voice recognition facilities, booking cancellation, and network processing facilities (Mustafa, 2022). AI has changed the pattern of communication, capturing the needs of visitors, improving customer service, and increasing customer preference (Jayawardena et al., 2022). Additionally, AI benefits hotel employees because it reduces monotonous tasks such as taking orders, checking in, and checking out, as well as answering the same questions repeatedly (Zeng et al., 2020). Therefore, it is important to explore the role of AI in the luxury hotel sector because providing

top-notch, personalized service is the goal of luxury hotels (Jayawardena et al., 2023a; Jayawardena et al., 2023b). Data collected by AI can be analyzed to create a customized experience for guests, ranging from room customization to personalized amenities. Luxury hotels place a great deal of emphasis on personalization (Mustafa, 2022; Citak et al., 2021).

Key Takeaways

- As one of the most competitive markets, the hotel industry should assess the potential benefits of AI.
- AI is widely used in various fields, including manufacturing, transportation, medicine, and education.
- AI can function like a human, recognizing the current needs of the customer, providing a solution, and making timely decisions.
- There is a need to explore AI's role in the luxury hotel sector, because luxury hotels strive to provide top-notch, personalized service.

1.2 Real-World Applications of AI in the Luxury Hotel Sector

Hospitality is one of the industries in which AI is gaining more attention. The Hilton Group, for example, employs an AI robot named Connie, which provides visitor information to customers and, importantly, learns from human voice interactions, improving its performance with each new conversation (Konstantinova, 2019). Many luxury hotels are applying AI tools for hotel operations. For instance, Caesar's Palace was the first hotel to introduce data-driven analytics, which had a customer database that had been stored for approximately two decades from its total rewards loyalty programme (Boulton, 2016). Another example is Starwood Hotels, which utilizes AI analytics to personalize services based on customer needs, especially to optimize energy and water consumption (Boulton, 2016).

It is very common to use AI-powered chatbot services in Europe. The Edwardian Hotel, owned by Radisson, utilizes AI-powered chatbot services. These AI-powered tools help customers find their required restaurants, bars, or information simply by listening to their voice (Prentice et al., 2020a). Radisson Blu Edward's chatbot provides service in London and Manchester and seamlessly connects customers to a human operator if it cannot fulfill their needs. Similarly, Aloft Hotels uses delivery robots to deliver food, amenities, and luggage to hotel rooms, and Flyzoo Hotel, owned by Alibaba, employs a face recognition system for guest check-ins and check-outs (Jayawardena et al., 2022).

In 2023, Zurich's The Dolder Grand introduced an AI-based robotic housekeeper (Frank et al., 2020). This robotic housekeeper uses a positioning system and operates autonomously, without requiring commands from an authorized person. It performs four essential functions namely excellent floor surface cleaning, autonomous navigation in all directions, automatic water refilling, and returning to its charging station when needed. This development signifies a significant leap toward a digital future (Mishra et al., 2023; Frank et al., 2020).

Key Takeaways

- Many luxury hotels have incorporated AI into their operations, revenue management, and marketing.
- Caesar's Palace is the first hotel to introduce data-driven analytics, which had a customer database that had been stored for approximately two decades from its total rewards loyalty program.
- It is very common to use AI-powered chatbot services in Europe such as The Edwardian Hotel, owned by Radisson and Radisson Blu Edward Hotels.
- When considering the face recognition systems, the Flyzoo Hotel, owned by Alibaba, employs a face recognition system for guest check-ins and check-outs.

2. Summary of Recent Research Studies

When considering the recent research, it was identified that social media engagement and conversion rate optimization are positively influenced by AI within the hotel and tourism sector (Nazir et al., 2023). Furthermore, Li and Khan (2023) found that in Chinese hotels, perceived value of AI has a positive and significant influence on turnover intention among employees. For organizational activities, AI directly affects determining the return on investment, improving sustainability, and controlling legal and ethical issues related to the use of data (Bulchand-Gidumal et al., 2023). The advantages of hybrid intelligence in marketing include enhancing customer service and personalization, analyzing customer data, preferences, and behaviour, and using human judgement to create engaging content, offers, and interactions (Petrescu and Krishen, 2023).

It is possible to improve hotels' resilience and sustainability by addressing guests' growing concerns and turning adversity into an opportunity (Gaur et al., 2021; Robinson et al., 2020). Another important contribution is that employees and customers must be trained to work with and around their robotic support staff, to use their AI, and to continuously enhance guest experience through the advancement of AI and robotic devices (Cain et al., 2019; Gursoy and Chi, 2020; Loureiro et al., 2021). In terms of AI replacement, it would be better suited for food and beverage services than wellness (Rauf et al., 2022) for millennial guests (Rauf et al., 2022). A summary of ten recent research studies on AI applications in the hotel sector is presented in this section. Table 19.1 shows the summary of the studies as follows;

Key Takeaways

- Recent research identified that social media engagement and conversion rate optimization are positively influenced by AI within the hotel and tourism sector.
- For organizational activities, AI directly affects operations by determining the return on investment, improving sustainability, and controlling legal and ethical issues related to the use of data.
- Hybrid intelligence provides many marketing benefits, including improving customer experience and personalization; analyzing customer data, preferences,

Table 19.1 Summary of the Recent Research Studies on AI Applications for the Hotel Sector

Source	*Key Constructs*	*Methodology*	*Key Findings*
Nazir et al. (2023)	AI and repurchase intention	Surveys	Social media engagement and conversion rate optimization are positively influenced by AI. Engagement on social media and conversion rate positively influence consumer satisfaction, increasing repurchase intentions.
Li and Khan (2023)	Organizational support and turnover intention based on employee perceptions of AI's value	Surveys	The perceived value of AI has a positive and significant influence on turnover intention among employees.
Bulchand-Gidumal et al. (2023)	Impact of AI on organizational functions and stakeholder relationships within the hospitality sector	Focus groups/ interviews/surveys	A key component of the implementation of AI is determining the return on investment, improving sustainability, and controlling legal and ethical issues related to the use of data.
Petrescu and Krishen (2023)	The current state of knowledge regarding hybrid intelligence in marketing	Bibliometric analysis	Hybrid intelligence can bring numerous benefits including enhancing customer experience and personalization; analyzing customer data, preferences, and behaviour to provide insights; as well as utilizing human judgement to create relevant and engaging content, offers, and interactions.
Gaur et al. (2021)	The role of AI and robotics in facilitating touchless travel during pandemics	Literature review	Hotels' resilience and sustainability can be improved by addressing guests' growing concerns and turning adversity into opportunity. Compelling strategies are needed to boost guests' confidence and help hospitality businesses recover quickly from a crisis.

Robinson et al. (2020)	Developed a framework for delineating encounter types in which human or artificial actors can take part (customers or frontline encounters)	Literature review	Traditionally, interhuman service encounters may not share much with interspecific, and interAI service encounters as AI replaces the role of the customer or the frontline encounters and premise.
Cain et al. (2019)	Literature review on the state of robotics and AI in the service industry	Literature review	People must be trained to work with and around their robotic support staff, to use their AI, and to continuously enhance guest experience through the advancement of AI and robotic devices.
Gursoy and Chi (2020)	An analysis of the effects of the COVID-19 pandemic on the hospitality industry	Literature review	Among the most important safety precautions customers expect are hand sanitizers at the entry, masks for staff, social distancing, limiting the number of customers served, and health and safety training for employees.
Loureiro et al. (2021)	Research on AI in the business context and future research agenda	Literature review	Based on the findings, 18 topics were classified into four main clusters: societal impact of AI, organizational impact of AI, AI systems, and AI methodologies.
Rauf et al. (2022)	Assessed the reactions of millennial guests toward AI-based hotel applications	Surveys	In total, four service encounter categories were studied: (i) check-in, (ii) reception services (excluding check-in), (iii) wellness, and (iv) food and beverage services. In terms of AI replacement, it would be better suited for food and beverage services than wellness.

Source: Developed by authors

and behaviour to provide insights; and utilizing human judgement to create relevant and engaging offers, content, and interactions.
- For millennial guests, four service encounter categories were studied: (i) check-in, (ii) reception services (excluding check-in), (iii) wellness, and (iv) food and beverage services. in terms of ai replacement, it would be better suited for food and beverage services than wellness.

3. Methodology

The primary data was collected using semi-structured interviews conducted through telephone conversations with five members of the senior management team at two highly reputed luxury hotels in Europe, representing the United Kingdom and Germany. Additionally, secondary data was utilized to validate the thematic findings, including annual reports, recent research studies, and website data (Jayawardena et al., 2022). This study employed the non-probability sampling method of snowball sampling. One significant reason for selecting participants through snowball sampling is that participants were recruited through a social network, specifically through friends of friends (Jayawardena et al., 2022).

Thematic analysis was carried out by the researchers using note cards and manual coding (Jayawardena et al., 2022). Researchers manually coded the data by reading through it, assigning codes and themes, and reviewing the results (Basit, 2003; Bogdan and Bilken, 2003). This method is considered suitable for small sample sizes, and a few authors who have described manual coding methods and techniques, such as cut-and-paste and note cards, include Basit (2003) and Bogdan and Bilken (2003). The interview questions covered five areas, including AI applications and their impact on employee performance in the hotel sector. How AI can tools provide 24-hour service and improve convenience for customers? How AI can tools provide 24-hour service and enhance the operational efficiency of the hotel? Perceptions of consumers regarding human intelligence versus AI as machine intelligence? Adoption techniques of AI and robotics in the hotel industry?

4. Qualitative Thematic Analysis

The main themes indicated four categories: (1) emotional intelligence (EI) training for employees; (2) service encounters; (3) hotel cancellation, and (4) reliability and safety factors.

4.1 EI training for Employees

Training employees in EI can improve guest satisfaction, employee well-being, and overall efficiency in European hotels (Prentice et al., 2020a). Housekeeping staff with a strong understanding of EI comprehend the importance of respecting guest privacy and comfort (Budhwar et al., 2022). As part of their efforts to make guests feel welcome and appreciated, they may leave personal notes in the rooms

to demonstrate their concern for the guests' well-being beyond just cleaning the room (Jayawardena et al., 2022). It is common for hotel managers and staff to encounter conflicts, either among their employees or between their employees and guests (Jayawardena et al., 2022). EI can be employed to mediate and resolve these conflicts more effectively than before. For example, a manager might utilize active listening skills and empathy to understand the root cause of a dispute and find a mutually beneficial resolution (Budhwar et al., 2022; Jayawardena et al., 2022; Kim et al., 2021). This can be further justified based on the following interview quotes, such as:

> "I always know my friends' emotions from their behavior. I treat my staff as friends and highly encourage direct communication. I always prefer and allow them to speak directly to me if they encounter any problem with the guests."
>
> (Participant 1)

AND

> "Hotels often have high-stress situations, especially during peak seasons. Emotional intelligence helps employees deal with stress, remain calm under pressure, and provide great service even when there are a lot of guests. So, I would prefer to leave feedback or complaints with the help of the voice assistant."
>
> (Participant 5)

Hotel staff members with high EI are trained to recognize repeat guests by name when they return to the hotel (Prentice et al., 2020b). This personal touch not only makes guests feel valued and appreciated but also encourages them to return to the hotel in the future (Budhwar et al., 2022; Prentice et al., 2020b).

4.2 Service Encounters

Although AI adoption is still in its infancy (Romero and Lado, 2021; Ivanov et al., 2017), hotel managers anticipate that AI and machines will assume various responsibilities, including critical service interactions (Budhwar et al., 2022). However, due to the potential drawbacks of AI, no studies have determined which service interactions are best suited for AI and robotics (Jayawardena et al., 2022). Consequently, it is challenging to determine when AI and robots should replace employees in service encounters (Kim et al., 2021; Jayawardena et al., 2022). For example, customer service inquiries in a call center, where most conversations are relatively straightforward and repetitive, may be better suited for AI and robots than more complex customer service inquiries requiring problem-solving or EI (Jayawardena et al., 2022).

In general, there are two interpretations of what a "service encounter" entails. A service encounter is defined as any time a consumer interacts with a service,

regardless of whether a human is present (Rauf et al., 2022; Buhalis and Moldavska, 2022). Tussyadiah and Park (2018) found that hotel service robot adoption is influenced by human–robot interaction: anthropomorphism, perceived intelligence, and perceived safety. Robots will manage the front desk and deliver items to guestrooms, replacing human staff and interacting socially with guests (i.e., direct interaction during check-in and indirect interaction during room delivery). Consequently, robots are attributed human characteristics and behaviour (Li et al., 2022; Li et al., 2021). Hotel guests showed a more positive attitude toward robotic staff during COVID-19 (Rauf et al., 2022; Kim et al., 2021). This can be further justified based on the following interview quotes, such as:

> "It's important to understand what service encounters mean since they include check-in and check-out, information provision, wellness, and various restaurant-related service encounters. For example, sometimes 'restaurant encounters' are 'greeting' and 'order taking.'"
>
> (Participant 4)

4.3 Hotel Cancellation

Due to the fact that cancellations directly affect income, they are considered crucial in hotel and lodging revenue management (Rauf et al., 2022). Cancellations made close to the service time are particularly damaging to hotels due to the lack of time for management to react. Hotel and lodging companies need to be aware of potential cancellations to minimize their idle capacity (Sánchez et al., 2020). Booking data assists hoteliers in predicting cancellations and improving their booking schedules by aiding in the forecasting of cancellations (Kim et al., 2021; Sánchez et al., 2020). With the help of AI, hotel cancellation issues are likely to be addressed efficiently and effectively (Sánchez et al., 2020).

To predict which reservations are more likely to be canceled, AI algorithms can analyze historical booking data and external factors (e.g., weather events or local events) from historical booking data (Tussyadiah and Park, 2018; Li et al., 2022). In such cases, hotels can take proactive measures such as overbooking, offering special promotions, or contacting guests to confirm their bookings to avoid cancellations (Rauf et al., 2022). This can be further justified based on the following interview quotes, such as:

> "As a person who has been working in the hotel industry for 15 years, I think using artificial intelligence-powered chatbots or automated messaging systems will help send personalized reminders to guests before their scheduled check-in dates. It is also possible to include cancellation policies and penalties in these reminders to encourage guests to make timely decisions regarding their reservations."
>
> (Participant 2)

AND

> "Normally the facilities include the swimming pool, sports complex, food services, spa, business centers, and a lot of complementary services. So, the cancellation is a loss when considering all these aspects as we need to think about it as an overall expense."
>
> (Participant 4)

4.4 Reliability and Safety Factors

Although there are many benefits to using AI in hotels, it also poses several difficult questions regarding its reliability and safety (Hussein et al., 2022). For instance, questions arise around data security, particularly considering the sensitivity of customer information that is gathered and stored by AI systems (Kim et al., 2023). There is a great deal of sensitive data held by hotels about their guests, including payment details as well as personal information (Thaichon and Quach, 2023). AI systems must be designed with robust security measures to keep this data safe from breaches or being accessed by unauthorized individuals (Kim et al., 2023).

> "AI systems should be designed to include features such as encryption, multi-factor authentication, and secure storage to protect the data from potential cyber-attacks. Additionally, access to the data should be restricted to only those with the required authorization."
>
> (Participant 3)

Hotel operations are continuous, and any downtime in AI systems, such as reservation systems or self-check-in kiosks, can impact the guest experience (Kim et al., 2023). To minimize service interruptions, it is essential to ensure high availability and redundancy.

> "Any downtime in AI systems, like reservation systems or self-check-in kiosks, can affect hotel operations. To minimize service interruptions, you need high availability and redundancy. Suppose a hotel has multiple data centers for its reservation system, so if one goes down, the other takes over and keeps things running."
>
> (Participant 5)

Key Takeaways

- Two highly reputed luxury hotels in Europe representing the United Kingdom and Germany were interviewed using semi-structured interviews with five members of their senior management teams.
- Additionally, secondary data sources such as annual reports, research studies, and website data were used to validate the thematic findings. The non-probability sampling method of snowball sampling was used.
- The main themes indicated four categories: (1) EI training for employees; (2) service encounters; (3) hotel cancellation; and (4) reliability and safety factors.

5. Discussion of the Findings

This study proposes several new insights into the current AI applications in the hotel sector. One of the most challenging issues hotel managers face is balancing capacity with demand (Sánchez et al., 2020). A hotelier has to manage demand and the limited number of rooms within a specified timeframe without losing revenue per unused room because the product cannot be stored in the hospitality industry (Hussein et al., 2022; Sánchez et al., 2020). In order to maximize revenue, hotels try to maximize occupancy, which involves dealing with future demand (Sánchez et al., 2020). Pricing strategies are used by hoteliers based on predicted demand. By adjusting the price of rooms, hoteliers can attract more customers when demand is low and reduce costs when demand is high (Jayawardena et al., 2022).

In the hospitality industry, where guest satisfaction and interpersonal relationships are paramount, EI plays a significant role (Rauf et al., 2022; Kim et al., 2021). Conflicts can be effectively mediated and resolved with EI. To resolve a dispute, a manager might use active listening skills and empathy (Kim et al., 2023; Sánchez et al., 2020). Hotels with high EI train their staff to recognize repeat guests by name as a new strategy. When guests feel valued and appreciated, they are more likely to return to the hotel in the future (Rauf et al., 2022). Hotels in Europe often host guests from a variety of countries, so cultural sensitivity is essential (Jayawardena et al., 2022). Staff trained in EI are more likely to understand and respect the cultural differences of guests, avoiding misunderstandings and ensuring a welcoming atmosphere for everyone (Thaichon and Quach, 2023).

The most common definition of a service encounter is that it occurs whenever a customer interacts with the service, regardless of whether a human is present (Rauf et al., 2022; Buhalis and Moldavska, 2022). As a result of the potential negative consequences of AI, limited research focused on the suitability of service encounters in replacing employees with AI and robots (Jayawardena et al., 2022). Thus, it is difficult to determine when AI and robots should replace employees in service encounters (Jayawardena et al., 2022). A customer service inquiry in a call center, where most conversations are straightforward and repetitive, may be better suited to AI and robots than more complex inquiries, such as those requiring problem-solving or EI (Jayawardena et al., 2022).

In the hospitality industry, research has been conducted on the effects of AI contactless service encounters on psychological safety needs during the COVID-19 pandemic (Kim et al., 2021; Li et al., 2022; Romero and Lado, 2021). With the help of AI, hotel cancellation issues are likely to be addressed more efficiently and effectively in the future (Rauf et al., 2022; Sánchez et al., 2020). AI systems can learn from past customer data and develop algorithms to anticipate customer needs, allowing hotels to anticipate and respond to customer needs quickly and accurately (Thaichon and Quach, 2023). Customers are significantly less likely to be dissatisfied due to cancellation issues (Sánchez et al., 2020). AI algorithms can predict which reservations are more likely to be canceled by analyzing historical booking data and external factors (e.g., weather events) (Sánchez et al., 2020).

In such cases, hotels can take proactive measures such as overbooking, offering special promotions, or contacting guests to confirm their reservations (Thaichon

and Quach, 2023). There is no doubt that the use of AI in hotels will bring many benefits, but it will also pose several challenging questions regarding the dependability and safety of this technology (Jayawardena et al., 2022). Considering the sensitivity of consumer information gathered and stored by AI systems, there are concerns regarding data security as hotels hold a great deal of sensitive information about their visitors, including payment information and personal details (Jayawardena et al., 2022). AI systems must be built with robust security measures to prevent data breaches and unauthorized access (Jayawardena et al., 2022). Any downtime in hotel AI systems, such as reservation systems or self-check-in kiosks, can negatively impact the visitor experience (Rauf et al., 2022; Buhalis and Moldavska, 2022). It is imperative to ensure high availability and redundancy to minimize service interruptions (Kim et al., 2021; Li et al., 2022).

Key Takeaways

- By adjusting accommodation rates, hoteliers can attract more customers during periods of low demand and reduce expenses during periods of high demand.
- Conflicts can be effectively mediated and resolved with EI.
- It is difficult to determine when AI and robots should be used to replace employees in service encounters.
- Research has been conducted on the effects of AI contactless service encounters on customer psychological safety needs in the hospitality industry during the COVID-19 pandemic.

6. Managerial Implications

Researchers, policymakers, and administrative bodies can benefit from the authors' identification of two broad practical implications. Firstly, it is necessary to conduct specific research studies that have identified which service encounters are more conducive to replacing employees with AI and robots, given the potential negative consequences of AI (Kim and Qu, 2014; Ivanov et al., 2017). It is often the case that service encounters that are more conducive to replacing employees with AI and robots involve repetitive tasks and routines and do not require a high level of human empathy, creativity, or adaptability (Ivanov et al., 2017; Mustafa, 2022). For example, call center employees and restaurant waiters are more likely to be replaced by AI and robots than personal trainers, artists, or therapists (Cain et al., 2019).

Secondly, the implementation of AI in hotels has several managerial implications that can affect a variety of hotel operations, guest experiences, and employee responsibilities (Cain et al., 2019). Managers must devise a strategic plan for integrating AI into their hotels' operations (Gursoy and Chi, 2020; Loureiro et al., 2021). This involves evaluating the prospective benefits, costs, and risks of adopting AI (Gursoy and Chi, 2020; Loureiro et al., 2021). For AI implementation, decision-makers must allocate funds for technology, staff training, and ongoing maintenance (Thaichon and Quach, 2023). Hotel administrators must invest in training programmes to prepare employees to work alongside AI

systems (Yang and Mao, 2017; Shin and Jeong, 2022). Training should focus on assisting employees in comprehending AI technologies, operating AI systems, and interacting with AI-enabled devices (Kim and Qu, 2014). AI can improve customer service, inventory control, resource allocation, and revenue management in hospitality, as well as other operational aspects (Cain et al., 2019). Businesses can maximize profitability by using AI-powered analytics to make data-driven decisions (Li et al., 2022), optimize pricing strategies, and allocate resources efficiently (Thaichon and Quach, 2023).

Key Takeaways

- Given the potential negative consequences of AI, specific research studies are required to determine which service encounters lend themselves to replacing employees with robots and AI.
- To implement AI, decision-makers must allocate funds for technology, staff training, and maintenance.

7. Recommendations for Business Practices: The Key to Success

Brand managers are facing a variety of challenges because of the increasing demand for luxury brands, which is adding complexity to the luxury market (Hennigs et al., 2013). In order to succeed in brand management, it is important to understand what consumers expect from brands and to be able to respond accordingly in order to increase profitability (Pelet et al., 2019; Nam et al., 2021). Luxury hotel management is gaining increasing interest from scholars and practitioners in both the field of brand management and the field of tourism management literature as a whole (Loureiro, 2022; Nozawa et al., 2022; Giglio et al., 2020).

The hospitality industry has rapidly embraced AI, and luxury hotel brands are no exception. Luxury hotels can benefit from the use of artificial intelligence by enhancing guest experiences, streamlining operations, and gaining a competitive edge (Loureiro, 2022; Nozawa et al., 2022; Giglio et al., 2020). Developing a strategic plan should include an evaluation of current technology, the scope of AI implementation, and the resources required for its implementation. It is also important to consider the legal and ethical implications of implementing AI in the hotel's operations (Nozawa et al., 2022).

The application of artificial intelligence in the restaurant industry is showing promise (Berezina et al., 2019). It has been shown that artificial intelligence can be helpful in reducing errors and in portion control and cost control in the restaurant industry (Berezina et al., 2019). There is no doubt that the role of artificial intelligence and robots will expand in the restaurant industry over the coming years, including kitchen preparation, quality checking in the kitchen, training staff, serving guests, seating guests, etc. (Garcia-Haro et al., 2020). Currently, robot chefs are an emerging reality in the restaurant industry (Berezina et al., 2019).

Another AI tool is to demonstrate the way around the hotel. Delegates can use interactive touchscreens mounted on the walls of the reception or the outside of conference rooms, which are used to direct them in the right direction, provide

them with flight or rail information, or advertise special spa treatment rates (Loureiro, 2022; Pelet et al., 2019; Nam et al., 2021). There is a possibility that such touchscreens (visual and tactile senses) may also include sound effects (auditory sense) and even emit the scent of the hotel's signature scent (olfactory sense), which can be purchased at the hotel's reception desk (Nozawa et al., 2022; Giglio et al., 2020). If the touchscreen invites the viewer to a local wine tasting, it indirectly stimulates the viewer's gustatory sense in an indirect manner (Nozawa et al., 2022; Giglio et al., 2020).

Key Takeaways

- Increasing demand for luxury brands is adding complexity to the luxury market, giving brand managers a variety of challenges.
- Developing a strategic plan should include an evaluation of current technology and the scope of AI implementation.
- It has been shown that artificial intelligence can be helpful in reducing errors and in portion control and cost control in the restaurant industry.
- Employee resistance and job replacement are serious challenges to overcome.
- It is also possible to use interactive touchscreens that are mounted on the walls of the reception and outside of the conference rooms in order to show the way around the hotel. These touchscreens can be used to direct visitors in the right direction, provide flight or rail information to travellers, or advertise special spa treatment rates.

8. Conclusion

The objective of this study is to present the results of a qualitative case study conducted in Europe that investigates the factors influencing AI in luxury hotel brands. The first section of this chapter provided an overview of luxury hotel brands and the significance of AI for these brands. The second section provided a concise literature review of how luxury brands are utilizing AI and the real-world implementations of technology in the luxury hotel sector in several European countries. Since this is a qualitative analysis based on case studies of two European luxury hotels, Section 3 discusses the research methodology. In addition, Sections 4 and 5 presented thematic findings and managerial implications, respectively. The findings of this study provide marketers and policymakers with important insights into various AI-based business strategies for promoting luxury hotels.

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