

Artificial Intelligence in Hotel Management: Opportunities, Risks, and Managerial Perspectives

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Abstract

Artificial intelligence (AI) is increasingly shaping hotel management, yet its value extends beyond technological capability. This article examines how hotel managers perceive the current and potential role of AI in hotel operations, focusing on applications, benefits, risks, and organisational conditions of adoption. The study draws on seven semi-structured interviews with hotel managers and department heads and interprets the findings through a framework linking AI-driven digital transformation, guest experience, competitiveness, and organisational readiness. The results show that managers view AI primarily as a support tool for reservations, pricing, routine communication, personalisation, reporting, and decision-making, rather than as a replacement for human hospitality. Perceived benefits include efficiency, responsiveness, and better use of data, while key concerns relate to cost, fragmented systems, employee readiness, privacy, and service identity. The article offers a managerial perspective on the adoption of human-centred AI in hotels.

Keywords: artificial intelligence (AI), tourism, hotels, hotel management, digital transformation, personalisation, service innovation

INTRODUCTION

Statement of the Research Problem

Artificial intelligence (AI) has moved from a primarily technological topic in tourism research to a practical managerial issue in hospitality organisations. Hotels increasingly operate in conditions marked by rising guest expectations, labour shortages, data-intensive operations, complex distribution systems, and pressure to make faster and more accurate decisions (Doborjeh et al., 2022; Law et al., 2024; Shin et al., 2025). In this context, AI is relevant not only as a digital tool but as a managerial and organisational phenomenon that affects how hotels coordinate operations, personalise service, support

employees, and preserve the human character of hospitality (Huang & Rust, 2018; Bulchand-Gidumal et al., 2024; Kim et al., 2025).

Recent research shows that AI in tourism and hospitality has developed rapidly across areas such as chatbots, recommendation systems, service robots, sentiment analysis, predictive analytics, revenue management, and decision-support systems (Doborjeh et al., 2022; Knani et al., 2022; Law et al., 2024). Much of this literature has focused on technological applications, customer acceptance, and service interfaces, particularly in relation to automation, personalisation, and guest experience (Grundner & Neuhofer, 2021; Mariani & Borghi, 2021; Bulchand-Gidumal et al., 2024). These studies provide an important basis for understanding what AI can do in hospitality, but they do not fully explain how hotel managers interpret AI within everyday organisational practice, strategic decision-making, and service design (Kim et al., 2025; Shin et al., 2025).

This managerial perspective is important because the value of AI in hotels does not depend only on technological capability. It also depends on managerial judgement, organisational readiness, data quality, employee acceptance, leadership, and alignment with the hotel's service identity (Li et al., 2019; Bulchand-Gidumal et al., 2024; Shin et al., 2025). Hotels are especially relevant for examining these issues because they combine data-rich operational systems with a strongly relational service logic. AI can support reservations, pricing, forecasting, guest communication, reputation monitoring, and internal coordination, but it may also weaken the guest experience if automation reduces empathy, discretion, trust, or situational judgement (Huang & Rust, 2018; Grundner & Neuhofer, 2021; Belanche et al., 2021; Law et al., 2024).

The central problem addressed in this article is therefore not whether AI is useful in hotels in general, but under what organisational and managerial conditions it becomes meaningful, beneficial, or problematic. The article approaches AI adoption as a process of aligning technological possibilities with service quality, leadership capacity, staff readiness, guest expectations, and the human-centred foundations of hospitality.

Aim, Contribution and Research Questions

This article aims to analyse how hotel managers perceive the current and potential roles of AI in hotel operations, with particular attention to its applications, benefits, risks, and organisational conditions for adoption. The article focuses on managers because they influence investment decisions, implementation priorities, employee communication, service design, and the balance between automation and human interaction (Li et al., 2019; Kim et al., 2025; Shin et al., 2025).

The article is theoretically positioned at the intersection of three related areas of literature: AI-driven digital transformation in tourism, AI-supported hospitality service experience, and organisational readiness for technology adoption in service-intensive environments (Doborjeh et al., 2022; Knani et al., 2022; Law et al., 2024). This framing makes it possible to examine AI not only as a tool for efficiency or personalisation, but also as a question of managerial interpretation and organisational-service alignment.

The article's original contribution lies in showing how hotel managers evaluate AI through a service-sensitive logic. The study argues that managers do not understand AI simply as a replacement for human work or as a universal solution for hotel operations. Rather, they assess its value according to function,

context, expected return, data reliability, employee readiness, and the need to preserve the interpersonal foundations of hospitality (Huang & Rust, 2018; Grundner & Neuhofer, 2021; Law et al., 2024).

Empirically, the article draws on seven semi-structured interviews with hotel managers and department heads. These interviews provide insight into how AI is understood across different managerial functions, including general management, operations, sales and marketing, revenue-related decision-making, guest relations, and human resources. The study therefore offers a qualitative account of AI adoption from the perspective of those responsible for translating technological possibilities into organisational practice (Braun & Clarke, 2006; Kim et al., 2025; Shin et al., 2025).

Two research questions guide the article:

- RQ1: How do hotel managers evaluate the current and potential applications of artificial intelligence in hotel operations?
- RQ2: What benefits, risks, and organisational challenges do hotel managers perceive in adopting artificial intelligence in hotels?

Together, these questions allow the analysis to move beyond a descriptive overview of AI applications and towards an interpretation of AI as a managerial and organisational issue. They support the article's broader argument that successful AI adoption in hotels depends not only on technological sophistication, but also on leadership, data governance, employee engagement, organisational readiness, and the careful preservation of human-centred hospitality.

THEORETICAL FRAMEWORK: ARTIFICIAL INTELLIGENCE IN TOURISM AND HOTEL MANAGEMENT

AI-driven digital transformation and hotel operations

AI has become an important part of digital transformation in tourism and hospitality. Rather than referring to a single technology, AI includes data-driven capabilities that support prediction, classification, recommendation, automation, language processing and decision support. In tourism and hotel organisations, these capabilities are usually embedded in reservation systems, customer relationship management platforms, revenue management tools, marketing systems, virtual assistants, review analytics and operational dashboards (Doborjeh et al., 2022; Law et al., 2024).

Earlier phases of tourism digitalisation were mainly associated with online booking, mobile communication, digital distribution and online reviews. AI extends this transformation by enabling organisations to move from a digital presence to adaptive, predictive decision-making. Hotels can use AI to analyse behavioural patterns, anticipate demand, automate routine communication, personalise offers and support decisions with more structured information (Knani et al., 2022; Kim et al., 2025). This is particularly relevant in hotel operations, where demand volatility, labour constraints, seasonal variation and changing guest expectations require faster and more informed managerial responses.

In operational terms, AI is particularly relevant to reservations, sales, pricing, guest communication, review monitoring, and managerial reporting. These areas are suitable for AI because they are data-intensive, repetitive and connected to measurable outcomes. AI-powered chatbots can support standard booking enquiries, recommendation systems can guide customers towards relevant offers, and predictive tools can assist revenue and demand forecasting (Pillai & Sivathanu, 2020; Doborjeh et al., 2022;

Bulchand-Gidumal et al., 2024). However, the value of these applications depends on managerial interpretation. AI can support hotel operations by improving speed, consistency, and analytical insight, but it does not remove the need for human judgement in commercial, operational, and service-related decisions (Huang & Rust, 2018; Shin et al., 2025).

For this reason, AI-driven transformation in hotels should not be understood as purely technical. It also requires organisational alignment, data quality, staff capability and clear managerial priorities. Hotels need to decide which processes can be automated, which decisions should be supported by AI, how data should be governed and where human judgement must remain central. In service-intensive industries such as hospitality, digital transformation creates value only when technological efficiency is balanced with service quality and human-centred value creation (Huang & Rust, 2018; Law et al., 2024; Shin et al., 2025).

AI, guest experience and service personalisation

AI also affects the tourist and hotel guest experience. Before travel, recommendation systems, AI-supported search tools, personalised marketing and conversational agents can help tourists compare options, reduce information overload and receive more relevant offers. During the hotel stay, AI can support multilingual communication, provide automated responses to routine questions, assist with simple service requests, and improve response times. After the visit, AI can help hotels analyse reviews, identify satisfaction patterns and personalise follow-up communication (Grundner & Neuhofer, 2021; Scarpi, 2024).

The influence of AI on guest experience is both functional and relational. Functionally, AI can reduce waiting time, increase convenience, improve responsiveness and provide more accurate information. Relationally, it affects how guests perceive attention, care, trust and authenticity. This distinction is especially important in hospitality, because guests do not evaluate service only through efficiency. They also assess whether the service feels appropriate, considerate and contextually sensitive (Huang & Rust, 2018; Belanche et al., 2021).

Research on AI-enabled service encounters shows that customer acceptance depends on perceived usefulness, ease of interaction, trust, anthropomorphism and the fit between technology and the service setting (Lin et al., 2020; Jia et al., 2021; Park, 2020). This means that AI is not automatically experienced as an improvement. A chatbot, service robot or personalised recommendation may improve the guest experience when it solves a concrete problem quickly and appropriately. The same technology may weaken the experience if it appears intrusive, mechanical, poorly designed or unable to recognise emotionally sensitive situations (Mariani & Borghi, 2021; Xie & Kim, 2022).

This is particularly relevant for hotels, where hospitality depends on the balance between operational efficiency and human attention. AI can support guest relations by handling repetitive, information-based, or low-complexity interactions, thereby allowing employees to focus on more complex or relational service moments. However, it may damage the guest experience when it replaces interactions that require empathy, discretion, cultural sensitivity or situational judgement. Therefore, AI in guest-facing hotel functions should follow a complementary rather than substitutive logic (Huang & Rust, 2018; Belanche et al., 2021; Law et al., 2024).

From a managerial perspective, this implies that AI should be evaluated through the principle of service appropriateness. The central question is not only whether AI can perform a task, but whether it should perform that task in a specific hotel context. Managers must therefore define which guest interactions can be automated, when escalation to human staff is necessary and how AI-supported service can remain consistent with the hotel's service identity (Grundner & Neuhofer, 2021; Bulchand-Gidumal et al., 2024; Shin et al., 2025).

AI, competitiveness and organisational readiness

AI is closely connected to competitiveness in tourism and hotel management. Hotels operate in increasingly data-rich and competitive environments, where they must respond quickly to market changes, interpret guest behaviour, optimise pricing, manage resources efficiently and maintain service quality across multiple channels. AI can support these objectives by improving demand forecasting, customer segmentation, revenue management, targeted communication, review analysis and operational coordination (Doborjeh et al., 2022; Law et al., 2024; Kim et al., 2025).

The competitive value of AI lies in its ability to transform dispersed data into actionable managerial insight. In hotels, this may be useful for reservations, pricing, reputation management, staffing, guest communication, event-related planning and cross-departmental coordination. AI can therefore contribute to competitiveness not only by reducing costs but also by improving the organisation's ability to make faster, more informed, and more adaptive decisions (Bulchand-Gidumal et al., 2024; Shin et al., 2025).

At the same time, competitiveness in hospitality cannot be reduced to efficiency alone. Hotels compete through trust, atmosphere, reliability, personal attention and memorable experiences. AI strengthens competitiveness only when operational advantages are translated into visible value for guests, employees and managers. Faster communication, better pricing and more accurate forecasting are strategically meaningful only if they support better service quality, stronger guest relationships and more coherent organisational performance (Grundner & Neuhofer, 2021; Mariani & Borghi, 2021; Law et al., 2024).

This also means that AI adoption depends on organisational readiness. Hotels need reliable data, integrated systems, skilled employees, clear leadership and transparent data governance. If hotel data are fragmented across reservation systems, channel managers, customer relationship management tools, review platforms and revenue systems, AI outputs may be incomplete or misleading. In such cases, AI can increase organisational complexity rather than reduce it (Doborjeh et al., 2022; Bulchand-Gidumal et al., 2024; Shin et al., 2025).

Employee acceptance is another important condition. In hospitality, employees are central to service quality, and their perception of AI strongly influences implementation outcomes. If AI is presented as a replacement for human labour, staff may associate it with job insecurity, deskilling, surveillance or reduced professional autonomy. Research shows that awareness of AI and robotics can influence hotel employees' turnover intentions, particularly when organisational support is weak (Li et al., 2019). AI adoption should therefore be accompanied by communication, training and a clear explanation of how technology supports rather than diminishes human work.

Leadership plays a decisive role in this process. Hotel leaders must define why AI is introduced, which problems it should address, how its success will be evaluated and where human oversight is required. They also need to establish principles for data quality, privacy, accountability, employee involvement and service-sensitive implementation. In this sense, AI-based competitiveness should be understood as an organisational capability rather than as a direct result of technology adoption. AI becomes strategically valuable when managers connect technological tools to service design, employee capabilities, data governance, and business objectives (Kim et al., 2025; Law et al., 2024; Shin et al., 2025).

METHODOLOGY

Research design, sampling and interview guide

The empirical part of the study was designed as a qualitative investigation based on semi-structured interviews with hotel managers and department heads. A qualitative approach was appropriate because the aim was not to measure the frequency of predefined attitudes, but to examine how managers interpret the role, usefulness, limitations and organisational implications of AI in hotel operations. Qualitative research is particularly suitable for exploring perceptions, meanings and decision-making processes in contexts where practices are still developing and where the phenomenon under study is not yet fully standardised (Patton, 2015).

Semi-structured interviews were selected because they provide a balance between comparability and openness. All interviewees were asked about the same core themes, while follow-up questions allowed them to elaborate on role-specific examples, practical concerns and contextual differences. This format was appropriate because AI adoption may be understood differently by general managers, operational managers, commercial managers, guest-facing staff and HR-related decision-makers (Kallio et al., 2016).

The study used purposive sampling. Interviewees were selected because they held managerial or departmental roles, had direct knowledge of hotel operations and were able to comment on digitalisation, AI-related practices or organisational readiness for technological change. The sample was not intended to be statistically representative. Its purpose was to provide information-rich insights into how AI is perceived across different hotel functions and decision-making positions, consistent with qualitative sampling logic (Patton, 2015).

The interview guide was developed in line with the theoretical framework and the two research questions. It covered three thematic areas: managers' general understanding of AI and its strategic relevance; current and potential applications of AI in hotel operations, including reservations, guest communication, revenue management, service personalisation, reporting and decision-making; and perceived benefits, risks, implementation barriers, employee-related concerns and leadership responsibilities. This structure connected the empirical questions with the article's theoretical focus on AI-driven digital transformation, guest experience, competitiveness and organisational readiness (Doborjeh et al., 2022; Knani et al., 2022; Law et al., 2024).

Interview sample

The final sample consisted of seven interviewees, coded as I1 to I7 to protect anonymity. The participants represented different managerial perspectives within the hotel sector. I1 and I6 reflected general management viewpoints; I2 represented operational management; I3 was associated with sales and marketing; I4 provided a revenue or commercial analytics perspective; I5 represented guest relations or front-office coordination; and I7 contributed an HR or people-management perspective. Due to anonymisation requirements, the study reports the sample primarily through managerial function and analytical relevance rather than through identifiable hotel or destination characteristics.

Table 1: Interview Sample and Analytical Relevance

Interviewee	Managerial function	Main empirical emphasis	Analytical relevance for the study
I1	General management	Strategic relevance of AI, managerial visibility, decision-making, and cost justification	Provides insight into how AI is evaluated at the level of overall hotel management, including strategic usefulness, implementation priorities and expected organisational value.
I2	Operations management	Routine communication, service coordination, operational efficiency, and human intervention in complex situations	Shows how AI is perceived in daily hotel operations, especially in relation to workflow support, response speed and the limits of automation in service delivery.
I3	Sales and marketing	Reservations, sales communication, segmentation, personalised offers, MICE-related communication	Contributes a commercial perspective on AI, particularly its role in customer targeting, conversion, sales responsiveness and event-related communication.
I4	Revenue / commercial analytics	Pricing support, forecasting, revenue optimisation, booking patterns, and fragmented data systems	Provides insight into the analytical and revenue-related value of AI, as well as the importance of data quality and system integration.
I5	Guest relations / front office coordination	Guest communication, personalisation, appropriateness of tone, and human contact in sensitive situations	Represents the guest-facing perspective, especially the balance between automated communication and the human character of hospitality.
I6	General management	Integrated dashboards, operational coordination, MICE-related service flows, and leadership responsibility	Adds a second senior management perspective, with emphasis on cross-departmental coordination, complex service environments and managerial use of AI.
I7	HR/people management	Employee readiness, training, internal communication, and staff concerns about AI	Provides the people-management perspective, especially regarding employee acceptance, training needs and organisational adaptation.

Note: Interviewees were coded as I1 to I7 to protect anonymity. The sample was designed to include different managerial and departmental perspectives rather than to achieve statistical representativeness. Its purpose was to capture variation across strategic, operational, commercial, guest-facing and HR-related interpretations of AI adoption in hotel management.

As shown in Table 1, the sample included general management, operations, sales and marketing, revenue-related decision-making, guest relations and HR-related perspectives. This functional variation was important because AI adoption does not affect all areas of hotel management equally. Commercially oriented respondents mainly discussed pricing, segmentation, sales communication and forecasting. In contrast, operational and guest-facing respondents focused on workflow coordination, service speed, personalisation and the boundary between automated and human interaction. The HR-related perspective added insight into employee readiness, training and concerns about changing work roles. Although the sample was small, it was appropriate for the exploratory qualitative design, where the aim was to identify recurring patterns and managerial interpretations rather than to achieve statistical generalisation (Patton, 2015).

Data collection and analysis

The interviews were conducted individually, either face-to-face or via video call, depending on participants' availability. Each interview lasted between 35 and 60 minutes, with an average duration of approximately 46 minutes. Before the interviews, participants were informed about the purpose of the study, the voluntary nature of participation and the anonymisation of their responses. With prior consent, the interviews were recorded, transcribed and anonymised. Identifying details about persons and organisations were removed from the empirical presentation.

The material was analysed using thematic analysis, which is appropriate for identifying, organising and interpreting patterns of meaning within qualitative data (Braun & Clarke, 2006). The analysis combined deductive and inductive coding. Deductive coding was guided by the research questions and theoretical framework, particularly the categories of AI applications, perceived benefits, risks, organisational challenges and managerial implications. Inductive coding was used to identify themes that emerged from the interviews.

The analysis proceeded in three stages. First, the transcripts were read repeatedly to gain familiarity with the material and identify recurring ideas. Second, relevant text segments were coded according to their substantive meaning. Initial codes included strategic relevance of AI, routine automation, service personalisation, pricing and forecasting, data quality, system integration, cost justification, employee uncertainty, leadership responsibility and preservation of human hospitality. Third, related codes were compared across interviewees and grouped into broader interpretative themes.

This process led to four higher-order themes: the perceived significance of AI among hotel managers, areas of actual and potential AI use, perceived benefits of adoption and perceived challenges in implementation. The themes were interpreted within the theoretical framework. For example, statements about pricing, reservations and forecasting were linked to AI-driven competitiveness; statements about chatbots, guest communication and personalisation were linked to guest experience; and statements about data integration, staff readiness and leadership were linked to organisational readiness and managerial adoption.

To strengthen analytical transparency, conclusions were derived by comparing coded interview segments across respondents and connecting them to both research questions. For instance, when several interviewees associated AI with faster routine communication but also emphasised the need for human intervention in sensitive guest situations, this was interpreted as evidence of a complementary view of AI in hospitality. Similarly, when managers discussed the usefulness of forecasting but warned about

fragmented data systems, this was interpreted as evidence that AI value depends on organisational readiness rather than technological capability alone.

RESULTS

The thematic analysis identified four higher-order themes that explain how hotel managers interpret AI in hotel operations: the perceived significance of AI, areas of actual and potential use, perceived benefits and perceived challenges. Across the interviews, AI was not evaluated only as a technological tool, but as a managerial resource whose value depends on operational usefulness, service appropriateness, commercial relevance and organisational readiness. This interpretation is consistent with recent hospitality research, which emphasises that AI adoption depends not only on technological capability, but also on leadership, data quality, employee acceptance and service alignment (Bulchand-Gidumal et al., 2024; Kim et al., 2025; Shin et al., 2025).

Perceived significance of AI among hotel managers

The interviewees generally understood AI as a support mechanism rather than as a replacement for hotel employees or managers. AI was associated with faster access to information, improved handling of repetitive tasks, stronger analytical support and better coordination of daily hotel operations. Senior management respondents, particularly I1 and I6, interpreted AI primarily as a tool to improve managerial visibility and decision-making. For them, AI becomes significant when it helps managers understand complex operational situations more quickly and respond with greater confidence.

Several interviewees also distinguished between digitisation, automation and AI. This distinction was especially visible among respondents involved in sales, marketing, and revenue-related activities, particularly I3 and I4. They did not describe AI simply as another digital tool, but as a more advanced form of data-based support that can assist with prediction, segmentation, pricing and customer communication. This finding reflects the broader shift in tourism and hospitality from basic digitalisation towards adaptive and predictive organisational capabilities (Doborjeh et al., 2022; Knani et al., 2022; Law et al., 2024).

At the same time, managers did not describe AI as universally applicable. I1, I2, I5 and I6 repeatedly emphasised that hospitality depends on judgement, empathy, attentiveness and the ability to respond to situations that cannot be fully standardised. This indicates that managers evaluate AI through a service-sensitive logic. They accept AI when it improves efficiency, responsiveness, or insight, but they remain cautious about automation that risks weakening the interpersonal quality of hospitality. This supports the view that AI in service contexts is most valuable when it complements rather than replaces human service work (Huang & Rust, 2018; Law et al., 2024).

Areas of actual and potential use in hotels

The interviews identified several areas where AI was already used or perceived as particularly promising. The most frequently mentioned areas were reservation support, automated guest communication, pricing support, online reputation analysis, customer relationship management and managerial reporting. These areas were perceived as suitable for AI because they are data-intensive, involve repeated tasks and generate outcomes that managers can observe or measure.

I3 and I4, in particular, emphasised reservations and sales. These respondents associated AI with faster responses to enquiries, more targeted communication, better use of guest data and support for pricing or revenue-related decisions. From their perspective, AI is useful when it improves commercial responsiveness and helps hotels interpret booking behaviour more effectively. This corresponds with studies that identify chatbots, recommendation systems, predictive analytics and revenue management as important areas of AI application in hospitality (Pillai & Sivathanu, 2020; Doborjeh et al., 2022; Kim et al., 2025).

Guest communication was another important area. I2 and I5 highlighted the value of AI for answering routine questions, supporting pre-arrival communication, providing quick information and reducing pressure on staff during busy periods. However, both respondents stressed that complex, emotional or unusual guest interactions should remain human-led. This distinction shows that managers assess AI not only by task efficiency, but also by the emotional and relational quality of the service encounter. Previous research similarly shows that guests evaluate AI-enabled hospitality services according to usefulness, trust, appropriateness and fit with the service context (Lin et al., 2020; Belanche et al., 2021; Mariani & Borghi, 2021).

A further area of potential use was managerial and operational decision-making. I1 and I6 expressed interest in AI-supported dashboards, predictive staffing, internal reporting and tools that could help managers identify operational bottlenecks. I4 connected AI with forecasting and revenue optimisation, while I7 saw potential in training support and internal knowledge systems. These responses indicate that managers see AI not only as a front-office or sales tool, but also as a resource for internal coordination and organisational learning (Law et al., 2024; Bulchand-Gidumal et al., 2024; Shin et al., 2025).

In hotels connected to business travel, conferences and event-related services, AI was also associated with MICE-related activities. I3, I4 and I6 referred to event demand forecasting, participant communication, conference-space allocation, and coordination among accommodation, catering, and meeting facilities. This suggests that AI may be especially valuable in hotel environments, where several service flows must be coordinated simultaneously. In such contexts, the relevance of AI is linked not only to efficiency but also to the ability to manage operational complexity and time-sensitive communication (Jang & Choi, 2022; Magdy & Abouelazm, 2024).

Perceived benefits of AI adoption

The most frequently mentioned benefit of AI was time efficiency. Interviewees described AI as useful for reducing repetitive work, accelerating responses and helping staff and managers focus on tasks that require greater attention. I2 and I5 emphasised this benefit in relation to daily operations and guest communication, while I3 and I4 connected it to faster sales processes, more structured customer data and improved commercial responsiveness.

Another important benefit was improved data use in decision-making. I1, I4, and I6 noted that hotels already generate large amounts of data, but managers often lack the time or the system integration needed to interpret it effectively. AI was therefore seen as a tool that could transform fragmented information into clearer patterns, summaries or recommendations, particularly in pricing, forecasting, reputation monitoring and operational planning. This supports literature that presents AI as a decision-support resource capable of improving responsiveness, prediction and managerial insight in hospitality organisations (Doborjeh et al., 2022; Law et al., 2024; Kim et al., 2025).

Service personalisation was also recognised as a benefit. I3, I5 and I6 argued that AI could help hotels provide more relevant offers, tailor communication and better understand guest preferences. However, respondents did not view personalisation as automatically positive. I5 stressed that personalised communication must remain appropriate in tone and context. This finding shows that hotel managers understand personalisation not only as a data-driven commercial practice, but also as part of the guest's emotional and relational experience. This is consistent with research suggesting that AI-supported personalisation must be balanced with trust, transparency and perceived service appropriateness (Grundner & Neuhofer, 2021; Mariani & Borghi, 2021; Xie & Kim, 2022).

Several respondents also associated AI with improved managerial attention. AI was seen as useful for identifying priorities, detecting recurring problems and reducing the burden of manual reporting. This benefit is analytically important because it shifts the discussion from AI as automation to AI as support for managerial judgement. In this sense, AI can strengthen hotel management by allowing leaders to focus more on service recovery, staff development, strategic planning, and complex decision-making (Huang & Rust, 2018; Shin et al., 2025).

Perceived challenges in AI adoption

Although respondents recognised the potential of AI, they also identified several barriers to wider adoption. A prominent challenge was uncertainty regarding costs and returns. I1 and I6 emphasised that managers are unlikely to support AI adoption unless its purpose, expected value and performance effects are clear. This indicates that hotel managers approach AI pragmatically: they do not reject innovation, but expect it to be justified by operational improvements, commercial value, or better service outcomes.

Data quality and system integration represented another recurring challenge. I3 and I4 noted that hotels often use several systems that are only partially integrated. In such contexts, AI-generated outputs may be unreliable if the underlying data are incomplete, inconsistent or fragmented. This finding shows that the limitation of AI adoption may not lie primarily in managerial resistance, but in organisational and infrastructural readiness. It is also consistent with literature emphasising that AI value depends on data quality, system integration and governance capacity (Bulchand-Gidumal et al., 2024; Law et al., 2024; Shin et al., 2025).

Workforce adaptation was also repeatedly mentioned. I2, I5 and I7 observed that employees may respond to AI with uncertainty if they associate it with replacement, deskilling, monitoring or the loss of human service values. I7 particularly emphasised the importance of training and internal communication, while I2 and I5 focused on the risk that employees might perceive automation as incompatible with the personal nature of hospitality. This confirms that AI adoption depends not only on technological performance, but also on employee trust and organisational support. Research similarly shows that awareness of AI and robotics can influence hotel employees' attitudes and turnover intentions, especially when organisational support is limited (Li et al., 2019).

A further challenge concerned the preservation of service identity. Even respondents who evaluated AI positively insisted that it should not replace moments of hospitality that require empathy, discretion or situational judgement. This was especially evident in relation to guest-facing functions. Managers were open to AI for standardised communication, information provision and routine requests, but cautious about its use in complaint handling, emotionally sensitive situations or highly personalised service encounters. This finding supports the literature that stresses the importance of human-AI

complementarity in service contexts (Huang & Rust, 2018; Belanche et al., 2021; Mariani & Borghi, 2021).

Taken together, the results show that AI adoption in hotels is shaped by four conditions: economic justification, data readiness, employee acceptance and service fit. These conditions explain why managers perceive AI as promising but not automatically desirable. AI is considered most appropriate when data are structured, tasks are repetitive, and outcomes are visible. At the same time, its use is more contested in service moments that require discretion, emotional intelligence and individual judgement.

DISCUSSION AND MANAGERIAL IMPLICATIONS

AI as selective and service-sensitive adoption

The findings show that hotel managers do not perceive AI as a uniform technological solution that can be applied equally across all hotel functions. Instead, they evaluate AI according to task characteristics, operational relevance and the required level of human judgement. AI is perceived as most useful in areas where processes are structured, data are available, and outcomes are measurable, such as reservations, sales communication, pricing support, review analytics, routine guest communication and managerial reporting. This supports the view that AI adoption in hospitality should be understood as a selective and context-dependent process rather than as a general technological transition (Doborjeh et al., 2022; Law et al., 2024; Shin et al., 2025).

At the same time, the findings confirm that technical feasibility alone is not sufficient. Managers distinguish between tasks that can be automated and service moments that should remain human-led. They are open to AI when it reduces repetitive work, improves responsiveness or supports better decisions. Still, they are more cautious when automation may affect complaints, emotional situations, or complex guest requests or interactions that require empathy and discretion. This reflects the principle of service appropriateness: the key managerial question is not only whether AI can perform a task, but whether its use is suitable in a specific hospitality context (Huang & Rust, 2018; Belanche et al., 2021; Mariani & Borghi, 2021).

This interpretation strengthens the article's central argument that AI in hotels should follow a complementary rather than substitutive logic. AI creates value when it supports staff, improves the quality of information and reduces operational friction. At the same time, human employees remain responsible for relational, emotionally sensitive and context-dependent aspects of hospitality. Such complementarity is especially important in hotels, where service quality depends not only on speed and consistency, but also on trust, attentiveness and perceived authenticity (Grundner & Neuhofer, 2021; Law et al., 2024).

Organisational conditions of AI value

The findings also show that the value of AI depends on organisational conditions. Managers associated AI with several benefits, including time efficiency, better use of data, faster communication, improved forecasting, more relevant personalisation and stronger managerial visibility. However, these benefits were repeatedly described as conditional. AI was not seen as inherently valuable, but as useful only when it is connected to clear organisational needs, reliable data, employee readiness and service strategy.

This finding is important because it moves the discussion beyond technological optimism. Hotels may invest in AI tools, but their practical value remains limited if systems are fragmented, data are unreliable, or managers do not understand how recommendations are generated. The interviews therefore support recent literature arguing that AI adoption requires data governance, system integration and organisational capacity to interpret algorithmic outputs (Bulchand-Gidumal et al., 2024; Law et al., 2024; Shin et al., 2025).

Employee acceptance is another key condition. The findings show that staff may associate AI with job insecurity, deskilling, monitoring or the loss of human service values if implementation is not properly explained. This is particularly relevant in hospitality, where employees directly shape the guest experience. The results are consistent with Li et al. (2019), who show that awareness of AI and robotics can influence hotel employees' attitudes and turnover intentions, particularly when organisational support is weak. In this study, the emphasis on communication, training and gradual implementation confirms that AI adoption should be treated as an organisational change process rather than a purely technical deployment.

The findings further suggest that AI value depends on leadership. Managers must define why AI is introduced, which problems it should solve, how success will be measured and where human oversight is required. Without this leadership role, AI may increase complexity rather than reduce it. With clear governance, however, AI can support more evidence-informed, coordinated and service-sensitive hotel management (Kim et al., 2025; Shin et al., 2025).

Managerial implications

The findings have several practical implications for hotel managers. AI adoption should begin with clearly defined operational or managerial problems rather than with the technology itself. Hotels should identify where AI can create visible value, such as reducing response times, improving forecasting, supporting pricing decisions, analysing guest feedback or reducing repetitive administrative work. This approach is consistent with research showing that AI creates value when it is aligned with organisational strategy, service processes and managerial capability (Bulchand-Gidumal et al., 2024; Kim et al., 2025; Shin et al., 2025).

AI is especially suitable for areas where tasks are repetitive, data-intensive and relatively low in emotional complexity. Reservations, sales support, routine guest communication, review analytics, operational reporting and revenue-related decision support are appropriate starting points because their outcomes can be monitored through indicators such as response time, conversion, forecasting accuracy, service consistency and reduced administrative burden (Pillai & Sivathanu, 2020; Doborjeh et al., 2022; Law et al., 2024).

A further implication concerns the boundaries between automated and human-led service. AI should support routine information exchange and data processing, while employees should remain responsible for situations requiring empathy, negotiation, discretion and contextual judgement. This requires clear escalation points so that guests can move from automated support to human assistance when needed. Such boundaries are important for maintaining trust and protecting the human character of hospitality (Huang & Rust, 2018; Belanche et al., 2021; Mariani & Borghi, 2021).

AI implementation also requires employee communication and training. Managers need to explain how AI will change work routines, which responsibilities will remain human and how technology can support rather than diminish service work. This is essential because staff acceptance influences whether AI becomes part of everyday practice or remains a source of resistance (Li et al., 2019; Shin et al., 2025).

Hotels should also strengthen data governance before expanding their use of AI. Managers need to know what data is collected, how it is integrated, how recommendations are produced, and who remains accountable for AI-supported decisions. This is especially important in hotels where information is fragmented across reservation systems, channel managers, revenue tools, CRM platforms and review systems. Without reliable data and clear accountability, AI outputs may be difficult to trust or interpret. With appropriate governance, AI can become a strategic resource for improving coordination, responsiveness and service quality (Law et al., 2024; Bulchand-Gidumal et al., 2024; Shin et al., 2025).

CONCLUSION

Summary of the Key Findings

This article examined how hotel managers perceive the role of artificial intelligence in hotel operations, with particular attention to its applications, benefits, risks and organisational conditions of adoption. The study was based on the premise that AI in hotels should not be understood only as a technological innovation, but as a managerial and service-related phenomenon embedded in organisational decision-making, employee readiness, data governance and the human character of hospitality (Huang & Rust, 2018; Law et al., 2024; Shin et al., 2025).

The findings show that hotel managers generally view AI as a support tool rather than as a replacement for human hospitality. AI was associated with faster communication, reduced repetitive work, better use of data, improved forecasting, more relevant personalisation and stronger managerial visibility. Managers were especially open to AI in reservations, sales support, pricing, routine guest communication, review analytics, reporting and operational coordination. They were more cautious in service situations requiring empathy, discretion, negotiation or situational judgement.

The study also showed that organisational conditions shape AI adoption in hotels. Managers identified several barriers, including unclear return on investment, fragmented data systems, limited integration between hotel platforms, employee uncertainty, training needs, privacy concerns and the possible weakening of the human element in hospitality. These findings confirm that AI value does not arise automatically from technological capability. It depends on hotel leaders' ability to align AI with operational needs, reliable data, employee engagement, and service identity (Li et al., 2019; Bulchand-Gidumal et al., 2024; Kim et al., 2025; Shin et al., 2025).

Overall, the article concludes that AI can create value in hotel management when it complements human work, improves managerial insight and strengthens service coordination. Its role is most productive when it supports routine, data-intensive and time-sensitive tasks while preserving human responsibility for relational, emotionally sensitive and context-dependent aspects of hospitality.

Contribution of the article

The main contribution of this article lies in shifting the discussion of AI in hospitality from a primarily technology-centred or customer-centred perspective towards a managerial perspective. Previous

research has provided important insight into AI applications, customer acceptance, service robots, chatbots, recommendation systems and AI-supported personalisation in tourism and hospitality (Pillai & Sivathanu, 2020; Belanche et al., 2021; Mariani & Borghi, 2021; Law et al., 2024). This article complements that literature by examining how hotel managers interpret AI within organisational practice.

The article contributes theoretically by framing AI adoption in hotels as an organisational-service alignment process. This means that AI becomes meaningful only when technological possibilities align with hotel operations, managerial judgement, employee readiness, guest expectations, and the relational logic of hospitality. This perspective helps explain why managers do not evaluate AI only by efficiency or automation potential, but also by service appropriateness, trust, data reliability, and the preservation of human interaction.

The empirical contribution lies in showing how managers from different hotel functions evaluate AI differently. Commercially oriented respondents emphasised pricing, sales, segmentation and forecasting, while operational and guest-facing respondents focused more on communication, responsiveness, service quality and the boundary between automation and human contact. The HR-related perspective highlighted training, employee acceptance and the organisational consequences of AI adoption. This functional variation shows that AI adoption in hotels is not a uniform process, but a differentiated managerial issue shaped by role, context and service priorities.

Limitations and future research

The study has several limitations. Its qualitative and exploratory design is based on seven semi-structured interviews with hotel managers and department heads. The sample provides useful analytical insight into managerial perceptions, but it does not allow statistical generalisation to the whole hotel sector. The findings should therefore be interpreted as an in-depth qualitative account of selected managerial perspectives rather than as representative evidence of all hotels.

AI adoption may also vary by hotel size, ownership structure, category, market segment, geographical location, digital maturity, and guest profile. Chain hotels, independent hotels, luxury properties, urban hotels, resort hotels and conference-oriented hotels may face different opportunities and constraints when adopting AI. Future studies could therefore compare AI adoption across different hotel types and destinations to identify how organisational context shapes managerial interpretation and implementation.

Another limitation is that the study focuses on managers and department heads, while employees and guests are not included. Since AI adoption affects service quality, trust, workload, privacy and the perceived authenticity of hospitality, future research should include front-line employees and guests to examine whether their views correspond with or differ from managerial expectations. Such a comparison would be valuable because successful AI adoption depends on both internal acceptance and external service experience (Li et al., 2019; Grundner & Neuhofer, 2021; Mariani & Borghi, 2021).

Finally, AI technologies are developing rapidly. Managerial perceptions may change as AI tools become more accessible, integrated, affordable and familiar in everyday hotel operations. Future research could therefore examine AI adoption longitudinally or combine interviews with surveys, operational performance data, guest satisfaction indicators or case studies of specific implementation projects.

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