

Technology Checks in for an Extended Stay

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ABSTRACT

Technology integration has accelerated across the hospitality and tourism industry over the last several years as businesses focus on balancing cost efficiency while still providing a service experience that builds customer brand loyalty. COVID-19 has accelerated the rapid integration of technology in hotels as consumers have demanded safety through contactless transactions including hotel check-in. In addition, significant staffing shortages have left hotel operators with no other option but to use technology resources to survive. However, what is unclear is the readiness of hotel consumers to adopt technology and associate that experience similarly to experiences of the past that build brand loyalty. This industry commentary article investigates the pros and cons associated with use of technology in hotels from the perspective of the consumer and the business to gain a better understanding of what we are likely to expect in the future.

Keywords

Hotel, technology, kiosk, self check-in, labor shortage, hotelier

INTRODUCTION

For decades, customer service has been perceived as an interaction between two individuals wherein representatives assist consumers in creating a memorable experience. The high value associated with a memorable experience has helped businesses to grow loyalty within an increasingly competitive market. Accordingly, hospitality and tourism organizations rely heavily on employees to provide exceptional service that not only reflects the organizational brand but connects the consumer to the brand through its compelling entrepreneurial narrative or story. However, as the industry continues to experience a variety of disruptions such as extreme labor shortages, natural disasters, and pandemics, industry operators must pivot to meet new external demands and determine efficient international practices. This requires operators to determine appropriate technology needed to survive.

In the current state, the developing reliance on technology has been associated with advantages and disadvantages for hotel businesses. Guests can skip the check-in process via the company's mobile app, research photos and reviews prior to arrival, and pay for their stay online. Though these new features are convenient for guests, businesses may be abandoning their most valuable resource: employees. Technology can process transactions, but in the current state, technology and, more specifically, robots are unable to be hospitable and understand human emotions (Zhong, Coca-Stefaniak, Morrison, Yang, & Deng, 2022). In ancient Greece, hospitality was a cordial offering from host to guest in which genuine interaction is exchanged (Ritzer, 2006). It is safe to assume that the Greeks did not include computers in their blueprint for effective hospitality since technology lacks empathy. By simply completing a

transaction or offering online registration, personal interaction is eliminated, thus creating potential communication barriers (Softinn, 2022).

Every exchange between consumer and company is an integral part in determining whether the guest selects the brand in the future. In addition, technology may become an insufficient investment over time due to the limited flexibility of its programming. Hoteliers must decide how much technology is considered excessive before this asset becomes a liability. Agile strategies are required by upper management to ensure that IT-driven opportunities and challenges are turned to the advantage of tourism organizations, toward leveraging their innovation and staying competitive in their market (Buhalis & Law, 2008). Managers must also consider the readiness of their organization to adapt to the inevitable acquisition of technology from the perspective of employee skills and abilities. Research concerning this topic is highly valuable yet limited in quantity; “Given the sweeping effects IT signifies for the hospitality industry and the absence of research, a comprehensive study examining the extensiveness of and strategic priorities that form technology in the lodging industry appears highly warranted” (Siguaw, Enz, & Namasivayam, 2000, p.4). This industry commentary offers insights into the pros and cons associated with technology in hotels from the perspective of the consumer and the business to gain a better understanding of what we are likely to expect in the future. Data was gathered from each perspective to further understand the impact of the rapid digital transformation of the hospitality experience.

INDUSTRY CONTEXT

Technology Usage in Hotels

Technology is altering the way businesses complete transactions (Fikru, 2015). The most dramatic change for businesses has been the adaptation of information technology and how they interact with their consumers (Van Veldhoven & Vanthienen, 2022). An application referred to as self-service technology (SSTs) is growing in popularity as consumers can access a service or complete a transaction independently from the direct assistance of a company affiliate (Meuter, Ostrom, Roundtree, & Bitner, 2000). With relation to hotels, the use of SSTs has grown immensely for guest safety as well as convenience purposes; self check-in, room checkout, and food service kiosks are increasingly common (Kasavana, 2005). Moreover, hotel managers rely on SSTs for improved internal and external practices such as operational efficiency and enhanced guest services (Doyle, 2007). The growing popularity of automation, specifically SSTs, actively engages guests in the service delivery process (Schrier, Erdem, & Brewer, 2010). However, the use of SSTs has also been associated with negative business impacts and is not a substitute for human employees (Gupta & Sharma, 2021).

The unfamiliarity of technology may appear intimidating to guests who are not comfortable navigating these systems, a feeling of apprehension referred to as technological anxiety (Meuter M. L., Ostrom, Bitner, & Roundtree, 2003). Meuter, et al. (2003) suggest consumers are hesitant to embrace technology but feel obligated to accept technological advances. They reported 62% of participants had never used automated hotel checkout (Meuter M. L., Ostrom, Bitner, & Roundtree, 2003), and recent studies have shown over the last 18+ years, kiosk use in hotels only rose to account for 23% of hotel transactions (Softinn, 2022). In a recent survey conducted by Rapyd, 60% of consumers reported they plan to use contactless methods such as kiosks rather than relying on front desk staff to handle cash (Hotel Tech Report, 2022). Yet, Gupta and Sharma (2021) report, “customers expect a hotel staff member to assist and navigate them when using technology” (p. 245). This rapid acceleration of contactless transactions due to COVID-19 still faces the same barriers as before with many consumers who are hesitant to embrace digitalization, either because of confusion in using the technology or skepticism due to machine malfunction or errors (Softinn, 2022). Zhang, et al. (2022) reported customers perceived the usefulness of technology as more important than the ease of use. According to Hotel Tech Report (2022), 59% of 18- to

34-year-olds reported using self-checkouts regularly, while 39% of 55- to 65-year-olds reported using them regularly.

Hotel Guests' Perspectives on Technology

Hoteliers are experts in hospitality; therefore, their guests' best interests are widely considered when making decisions (Zohreh, Rastegar, & Zheng, 2022). After conducting a survey including a broad range of demographics in 2005, Ham, Kim, and Jeong (2005) concluded that restaurant and banquet management systems benefit significantly from the use of technology, but that guest-related interface applications were not improving the performance of hotels. In 2019 and 2021, multiple studies found in quick service restaurants, a low percentage of customers preferred ordering from a kiosk, approximately 30%, as it was attributed to reducing wait times and a more expedient checkout process (Hotel Tech Report, 2022; Gupta & Sharma, 2021). Additionally, Softinn (2022) reported that despite the increased use of technology in hotels, there is still a downside — kiosks are incapable of providing personal interaction. As such, technology has limitations, from its ability to analyze guests' preferences and demographics to easy integration with property management systems (PMS) (Gupta & Sharma, 2021). This research substantiates that technology is not a substitute for human employees. Yet after COVID-19, customers reported less of an importance in the ability of robots to be like humans and understand emotions if they could provide good service, in this case, reducing the spread of disease and expedient transactions (Zhang, et al., 2022). Shin, Perdue and Kang (2019) suggested that front-desk technology not only reduced transaction times, it created more customized service experiences. Accordingly, there is a correlation between wait times and guests accepting information technology post COVID-19.

Automation as a Necessity or Disposable Resource

Human capital refers to the highly valuable network of employees within an organization. This resource is key in maintaining a competitive advantage in an active market (Elsharnouby & Elbanna, 2021). A report by Baum (2007) suggested essential skills for hotel front offices include oral communication, customer care, teamwork, the enforcement of ethical policies, and interpersonal skills. This reinforces the argument that a company's personnel are essential in building a relationship between brand and consumer. Though technology may be capable of providing service, it cannot provide the intangible experiences that human employees can have through social exchanges. On the contrary, a study by O'Connor and Murphy (2004) recognized that closer relationships led to increased satisfaction and were built from a collection of customer information – which would be challenging without automated systems. Human capital and technology are essential resources for hotels to leverage competitive advantage. Yet, existing research suggests that technology and human capital are interdependent, but the most successful hotels incorporate both in their business model. However, hoteliers have had to rely more heavily on technology integration due to critical workforce shortages, accelerating the use of technologies as they have slowly replaced jobs. In May 2022, the American Hotel & Lodging Association surveyed over 500 hoteliers and found nearly 97% experienced staffing shortages with almost half, 49%, experiencing severe staffing shortages. Accordingly, the impact of labor shortages on wait times has encouraged quicker adaptation of technology by consumers.

Strategies to Mitigate Technological Failures

Existing research has demonstrated technology alone is not an adequate substitute for a skilled workforce. There are several considerations organizations must evaluate to mitigate potential technology failures to meet the needs of customers. The integration of new technology requires hoteliers to conduct a needs assessment to determine the most appropriate technology based on their goals in using the technology (i.e., decrease wait times, offer more personalized service, etc.) and the unique demographic the organization serves. In addition, hoteliers must assess the current skills of employees and address their skill gaps. In a study conducted by Liu and Yang (2021), they identified that hotel employees lacked knowledge of technology and were incompetent in their ability to support its successful integration.

Therefore, introducing any new technological innovation requires training for all users (employees and customers). This is reinforced by Gupta and Sharma (2021), who also suggest training should cover how employees can positively position the benefits of technology with customers. For example, during the pandemic, technology helped reduce contact and improved the safety of people (Liu & Yang). Furthermore, Park, Kwun, Park, & Bufquin (2022) highlighted the most successful organizations selected technology that has proven efficiency and is straightforward to navigate for employees and customers. As such, it is critical for organizations to understand the limitations of technology, those services that only human employees can provide, and realize that some technology that may have added value during the pandemic may not in the future (Park, et al).

DISCUSSION

There is no doubt that technology is here to stay across the hospitality and tourism industry, and it is no different for hotels. The industry context discussed above has offered several perspectives on technology adoption and use as well as how technology has evolved, and failures can be mitigated. To better understand what we are likely to expect in the future from technology in hotels, critical data was captured from a variety of peer-reviewed, academic research articles and industry reports, listed in Table 1 as pros and cons from the perspective of the consumer as well as the business.

Table 1: Hotel Technology Pros and Cons

Perspective	Pros	Cons
Customer Perspective	<p>Reduces wait-time; quicker experience, perceived to be quicker transaction time (Gupta & Sharma, 2021; Hotel Tech Report, 2022; Shin, Perdue & King, 2019).</p> <p>Meets experienced preference based on generational needs (Hotel Tech Report, 2022).</p> <p>Perceived to be safer (Hotel Tech Report, 2022).</p> <p>Lack of human connection (Ham, Kim, & Jeong, 2005).</p> <p>Higher accuracy (Hotel Tech Report, 2022).</p> <p>Robots are perceived to be useful and valuable (Zhong, et al., 2022).</p> <p>Greater use of robots has increased positive attitude toward their use (Zhong, et al., 2022).</p>	<p>Intimidating and unfamiliar (Meuter M. L., Ostrom, Bitner, & Roundtree, 2003).</p> <p>Complicated and confusing (Park, Kwun, Park, & Bufquin, 2022; Softinn, 2022).</p> <p>Lack of personalization and interaction (Softinn, 2022).</p> <p>Eliminates jobs (Hotel Tech Report, 2022).</p> <p>Encountered various problems with robot operation (Zhong, et al., 2022).</p>
Business Perspective	<p>Collects guest information, therefore improving guest interactions (O'Connor & Murphy, 2004).</p> <p>Linked to increased sales of products/services (Hotel Tech Report, 2022).</p> <p>Reduces transaction time (Gupta & Sharma, 2021; Shin, Perdue, & Kang, 2019).</p> <p>Creates more options for customized experiences (Shin, Perdue, & Kang, 2019).</p>	<p>Abandons human capital; potentially the company's most valuable resource (Elsharnouby & Elbanna, 2021).</p> <p>Consumers expect a self-service method to resolve questions and complaints; limitation of most technology (Hotel Tech Report, 2022).</p> <p>Technology malfunctions (Softinn, 2022).</p>

	<p>Growing acceptance and high use of digital payments around the world (Hotel Tech Report, 2022).</p> <p>Contactless options will continue to be important after pandemic (Hotel Tech Report; Liu and Yang; 2021).</p> <p>One self-service ordering kiosk can handle the same volume as 1.5 cashiers (Hotel Tech Report).</p> <p>Higher accuracy, reduction in service recover spend (Hotel Tech Report, 2022).</p> <p>Automation can position staff to focus on more meaningful guest interactions (Gupta & Sharma, 2021; Hotel Tech Report, 2022).</p> <p>Importance of whether robots were like humans and whether they could understand human emotions is less important post COVID-19 (Zhong, et al., 2022).</p>	<p>User errors and dissatisfaction with the experience (Softinn, 2022).</p> <p>System lags (Softinn, 2022).</p>
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These key findings require further analysis and interpretation as we move away from the COVID-19 pandemic. Findings demonstrate that technology may lead to feelings of apprehension due to the lack of human interaction and suggest it should not be the only option available to guests. By offering only technology to assist guests with check-in, bell services, or food service selections, hotels are not leveraging human capital to create personalized experiences and rely on the consumer and technology to create the positive service experience. Hotel services provide lodging brands with the opportunity to enhance guests' experience using their own values, vision, and story through personalized interactions. Existing research highlights technology cannot provide hospitality or act as a substitute for human employees. Human capital not only assists in diversifying experiences with each unique interaction, but helps the company maintain a competitive advantage by capitalizing on their roster of talented personnel who can understand customer emotion instead of their automated systems. Furthermore, reducing the duration of transactions satisfies hotel companies and their guests by serving them efficiently. Consumers who appreciate this seamless interaction will likely revisit the brand, thus creating a foundation of trust and reliability between the hotel and its guests. In addition, it is critical that hotel organizations understand the needs of their guests and how to exceed them beyond the market's standards. Automated systems accumulate guests' selections and preferences, therefore allowing hotels to create a more personalized visit every time guests return to one of their properties. Moreover, guests likely appreciate the predictable experience they will receive when the hotel recalls their preferences. Guest satisfaction is partially contingent on the quality of service they receive from the brand throughout their stay.

CONCLUSION

After investigating the data and extracting key findings, several conclusions can be made concerning the limits of technology in the lodging industry. Though automation presents opportunities, it also poses significant costs for hotels and their guests. The most efficient strategy for hotels is to incorporate technology into areas of the hotel that can serve guests with simple transactions, accompanied by a company affiliate who gives guests the opportunity to select their preference. With the proper training, employees can assist guests who are finding the self-service technology difficult to navigate, or fully

process the transactions themselves for an entirely personal experience. Older generations value the option of traditional person-to-person service delivery while international travelers take advantage of SSTs with a translator feature. Accordingly, SSTs should be designed consistent with the brand's identity to reflect its narrative and be user-friendly to promote use by guests within all demographics the hotel serves. In addition, automation should be used for front-office duties that require recording guest information, yield management, and market analyses. Both technology and human capital are prerequisites for success in the lodging industry and require strategic external and internal management.

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