FUTURE TECHNOLOGY AND ITS IMPORTANCE IN THE HOSPITALITY INDUSTRY

Abstract

The hospitality industry is one of the key sectors of the global economy, and it has transformed how services are delivered and consumed. a result of the widespread adoption of modern technologies. This research study discusses how modern technology is addressing guest demands and preferences in the hospitality sector. We discuss the spectrum of potential future hospitality services provided by the hospitality industry as technology continues to advance on a daily basis. The newest technological developments in the hotel sector are summarized in this report. Explore some of the cutting-edge technologies being used in the hospitality sector to see how they are enhancing the visitor experience and altering the industry.

It is necessary to talk about the modern, mature trends that are currently dictating the industry. The article finishes with recommendations for dealing with updated technology and how it will help business decide what to do next.

Keywords: information technology, internet, and advances in hospitality and contactless payments.

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I. INTRODUCTION

The term "technology" in the hospitality business refers to a broad spectrum of IT, E-Commerce, and related technology. By utilizing all of this technology, the hospitality industry makes life easier for its staff and enhances the overall guest experience. For instance, there are numerous ways to implement each new technology feature. The use of technology in the hospitality industry speeds up work processes, reduces staff stress, and saves both time and money. The hospitality sector is a cutthroat one, therefore it must always stay up with new technology that lowers costs, boosts the potential for income production, and raises client expectations.

Future Internet of Things (loT) technology will see a surge in the hospitality sector. This technology is used to interconnect things like sensors, mobile devices, and identification tags. It is possible to communicate directly or indirectly with this gadget by using the internet or other devices [3]. This (loT) technology is valuable for smart buildings, which are crucial components of smart cities [4].The (loT) also gives HSP the ability to improve the efficiency of several departments' back ends[5]. (such as front office, sales, and marketing) and it also saves money.

03 costs associated with energy management [6] [7].These Internet of Things (IoT) applications are similar to those for augmented reality experiences and environmental monitoring. This study addresses the future development of technology in the hospitality sector and provides a thorough overview of how it plays a part in modern hospitality services..

II. STATE OF THE ART HOSPITALITY SERVICE

As technology advanced, the platform for digitalized hospitality services emerged. The main means of communication between guests and HSP are guest-facing systems. This system consists of thin-client terminals, handheld devices, and mobile service applications[8][9].Pre-scale point of scale, post-scale phases, and guest cycle phases make up this system's three divisions..

First, the guest-facing system offers various options to satisfy the guest. The guest-facing system enables visitor services like keyless entry, automatic check-in and check-out, management of in-room features, etc.(As seen in the figure) [8] As an illustration, Hilton and Starwood hotels offer all of these amenities through their mobile apps[10].

In addition, this system offers location-based services, which are another crucial amenity for visitor satisfaction [12]. In 2016, 30% of hotels had budgets set out for technology [10]. BOH management, which includes housekeeping maintenance software, revenue and sales management, customer relationship management, and other systems, is what drives guest-facing systems[2]. By gathering information on visitor preferences, behavior, and locations, the guest facing system delivers the guest cycle monitor[8][13].

REVPAR (revenue per available room) is improved by BOH Management System as well[15]. by utilizing the in-room technology to expedite the housekeeping procedure. Housekeeping services can be efficiently scheduled using the BOH management system. With the use of housekeeping management, this approach aids in the efficient use of labor

resources and lowers pay root costs by 10% to 20%.This BOH system aids with the upkeep of smart systems in rooms and around the facility.

III. HERE ARE SOME EXAMPLES OF TECHNOLOGY USED IN THE HOSPITALITY SECTOR.

1. **Robots in Hotels & Restaurants:** Robots in hotels and restaurants are the most significant and impending trend in the hospitality industry. These robots do jobs that were formerly completed by humans, such as greeting guests and giving customers information.

   A select few hotels have begun using robots for cleaning tasks like vacuuming floors. Even for killing germs.

2. **Contactless Payment:** Due to the numerous benefits it offers hotels, restaurants, bars, and cafes, contactless payments have recently taken center stage. Even if customers don't have their wallets on them or their credit cards are lost, they can still make a contactless payment. In this COVID scenario, these sorts of payments lessen the amount of face-to-face interaction, and customers also prefer these payments.

3. **Voice Search & Voice Control:** The hospitality industry is utilizing voice search more and more as a result of how frequently customers use it to locate hotels, restaurants, cafes, and bars, among other locations. Your reservations and websites must be voice search and voice controllable in order for your business to run well. With the use of this technology, restaurants and coffee shops may collect orders automatically so that clients don't have to wait for staff to visit their table. Additionally, it facilitates the usage of smart speakers in hotel rooms and the management of various in-room devices.

4. **Chatbots:** There are numerous characteristics in this chatbot. Without the assistance of humans, a successful chatbot will respond to all typical inquiries. In the most advanced scenarios, chat bots collect the visitor's information and give it to the employees. Additionally, provide them with feedback from the clients. All hospitality and service industries, including pubs, bars, restaurants, hotels, etc., attract inquiries from their customers at various times. Therefore, it is quite challenging to have staff available at all times.

5. **Mobile Check-In:** Mobile check-in is a self-check-in that is possible through a mobile device. There won't be any face-to-face interactions between customers and employees using this technology. This technology is advantageous because it spares the visitor's time and prevents them from waiting in line for check-in. The use of this technology will lessen the number of visitors in the lobby and improve how customers feel about their visits and stays. Some of the more hospitality service are figure below:
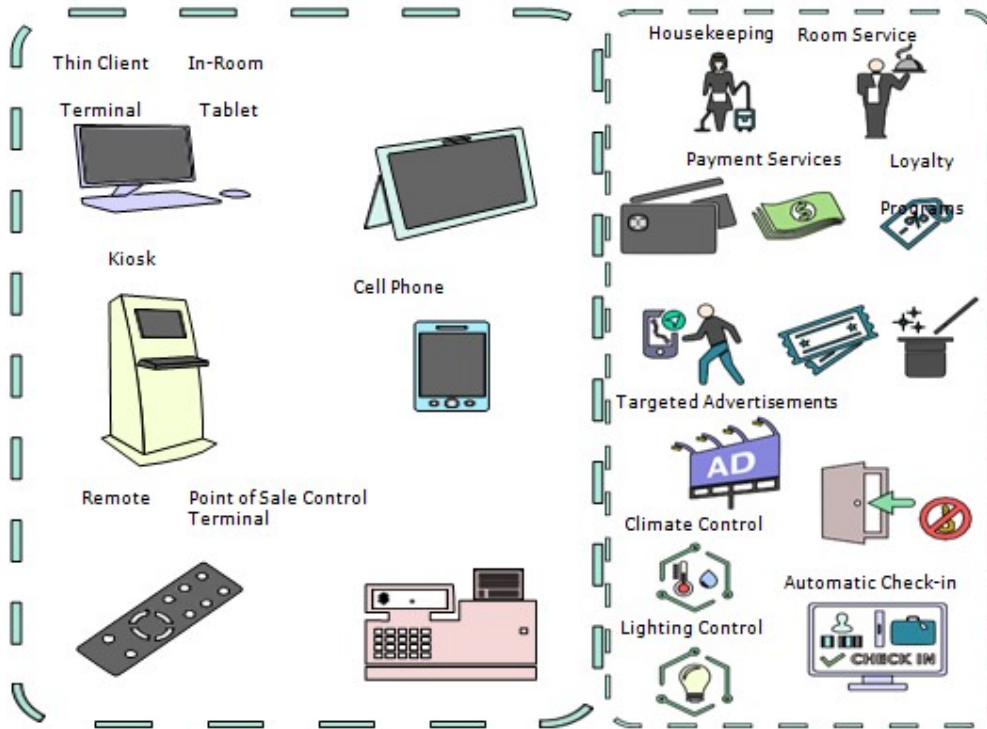
In-Room IoT Sensors
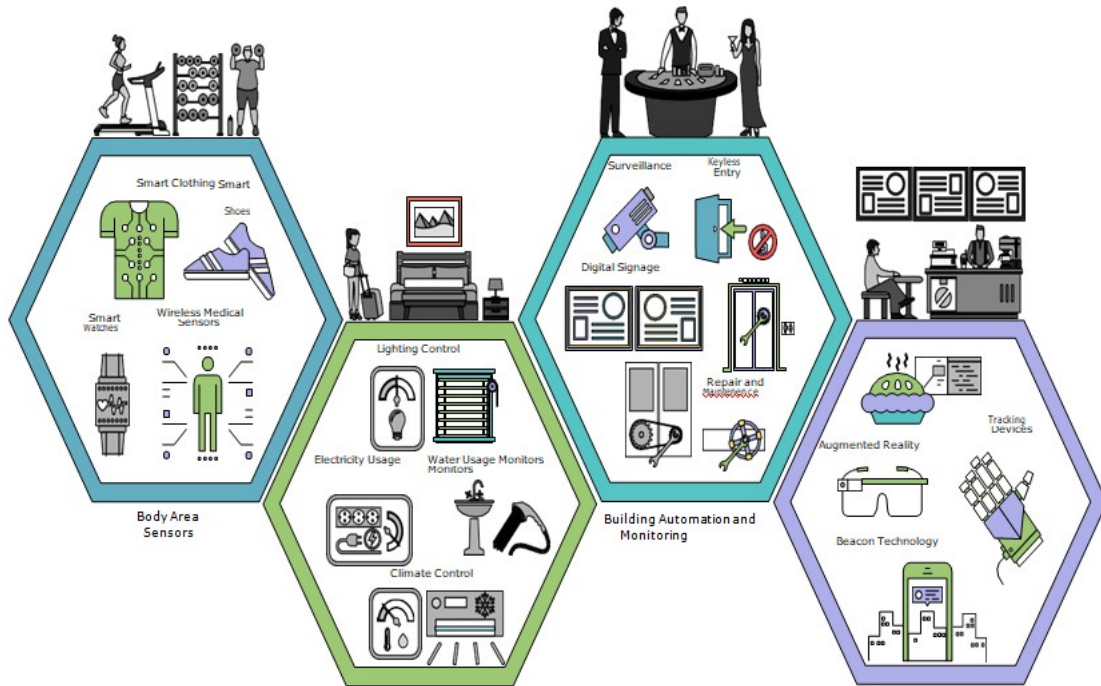
Energy Management in Augmented technology

IV. SCOPE OF FUTURE HOSPITALITY SERVICES

The LoT system has evolved to be used in a variety of ways in daily life.In this essay, I've talked about a few potential services that the LoT ecosystem might offer to the hospitality industry (the graphic above illustrates an example of a LoT sensor).
Body area Sensors:

This is the brand-new technology of the future. Sales of gadgets like smart watches, smart phones, etc. are clever and variable in this. There are also other intelligent devices, including intelligent clothing, intelligent shoes, and intelligent blood pressure monitors. With all of this carefully acquired information, hospitality staff can offer new services to guests, such as automatic temperature control based on body temperature, automatic light control based on sleep cycle, etc. Adapt the meals to the guests' fitness level.

V. ENERGY MANAGEMENT

Utilizing loT technology, this energy management system is used for numerous cost-saving and environmentally friendly processes. Smart lighting, temperature control systems, and the use of low-power gadgets like LED light bulbs are a few ways that hotels save energy.

When the guest is not there, the energy management system also assists in managing the electricity in the guest room. This aids the organization in cutting costs. This gadget can monitor visitors who are conscious of their energy use or determine whether electricity is leaking because of broken devices[6][7].

VI. BUILDING AUTOMATION AND MONITORING

Technology has significantly altered how employees perform their responsibilities. The automated system can be used by employees to accomplish tasks like cleaning, laundry, and cooking. The automatically provided client information aids in receiving the best and most satisfying services. We arrange preventative maintenance work and notify faults and malfunctions before any issues are found through routine physical inspections[18].

VII. AUGMENTED REALITY AND BEACON TECHNOLOGY

This technology is utilized to offer services digitally, such as a digital tour guide and an instant translation service for menu items in in-house restaurants. This technology can be helpful to visitors from many countries so they can convert the textual content into their native or familiar language. Additionally, there are interactive trivia games centered on local attractions on-property[16].This method is compatible with internal loyalty programs[17].

VIII. OBJECTIVE

This study describes the elements that are crucial for the future development of technology in the hospitality sector based on a survey of the literature.

IX. RESEARCH METHODOLOGY

This study's primary goal is to determine the significance of contemporary technological trends in the hospitality sector. This article was able to pinpoint the significance of contemporary technological advancements in the hotel business after conducting a thorough literature analysis. The collecting of secondary data is the basic foundation of this research investigation. Information was gathered from a number of periodicals, published research papers, the internet, etc.

X. CONCLUSION

This research study has provided evidence to support the claim that the hospitality industry is highly reliant on the emerging technologies that are now available on the market. Given that it is a service firm, it need to place a significant focus on maintaining the pleasure of its customers by making certain that all of its employees are current on the most recent developments in technology and in business practices. In addition, hotels should provide their employees with the necessary training on any new technologies that are being used in the industry.

REFERENCES

[1]   G. Langford.   (2016) 2016   travel   and hospitality   industry   outlook.
      [Online].   Available: https://www2.deloitte.com/us/en/pages/consumer-business/ articles/travel-hospitality-industry-outlook-2016.html
[2]   M. L. Kasavana. (2014) Hospitality industry: Connecting the unconnected, the internet of everything. [Online]. Available: http://www.hospitalityupgrade.com/   magazine/   MagazineArticles/Hospitality-Industry-Connecting-the-
[3]   Unconnected-The-Internet-of-Everything.asp
[4]   A. Munir, P. Kansakar, and S. U. Khan, "IFCIoT: Integrated fog cloud IoT: Anovel architectural paradigm for the future internet of things." *IEEE Consumer Electronics Magazine*, vol. 6, no. 3, pp. 74 – 82, July2017.
[5]   S. P. Mohanty, U. Choppali, and E. Kougianos, "Everything you wanted to know about smart cities: The internet of things isthebackbone,"*IEEEConsumerElectronicsMagazine*,vol.5, no. 3, pp. 60 – 70, July2016.
[6]   D. Adelson. (2016) Intelity forecast of hotel technology in 2017. [Online]. Available: http://intelitycorp.com/main/intelity- forecast-hotel-technology-2017/
[7]   W.-H. Lee and C.-C. Cheng, "Less is more: A new insight for measuring service quality of green hotels," *International Journal of Hospitality Management*, vol. 68, pp. 32 – 40, January2018.
[8]   T.-Y. Hsiao, C.-M. Chuang, and L. Huang, "The contents, determinants, and strategic procedure for implementing suitable green activities in star hotels," *International Journal of Hospitality Management*, vol. 69, pp. 1 – 13, January2018.
[9]   Y. Wang, K. K. F. So, and B. A. Sparks, "Technology readiness and customer satisfaction with travel technologies: A cross- country investigation," *Journal of Travel Research*, vol. 56, no. 5, pp. 563 – 577,2017.
[10] D. C. Ukpabi and H. Karjaluoto, "Consumers' acceptance of information and communications technology in tourism: A review," *Telematics and Informatics*, vol. 34, no. 5, pp.618
[11] 644, August 2017.
[12] J. DePinto. (2016) 7 trends for the internet of things in hospitality. [Online]. Available: http://www.hotel-online.com/press releases/release/7-trends- for-the-internet-of-things-in-hospitality#When:14:05:27Z
[13] J. Shallcross. (2016) As marriott and other brands tap the internet of things, enseo grows. [Online]. Available: https://www.tnooz.com/article/as-marriott- and-other-brands-tap-the-internet-of-things-enseo-grows/
[14] D. Tossell. (2015) Developing your digital guest strategy. [Online]. Available: http://hotelexecutive.com/business review/ 4192/developing-your-digital-guest-strategy

[15] G. Piccoli, T.-W. Lui, and B. Grun, "The impact of IT- enabled customer service systems on service personalization, customer service perceptions, and hotel performance," *Tourism Management*, vol. 59, pp. 349 – 362, April2017.

[16] S. A. Lee and M. Jeong, "Enhancing online brand experiences: An application of congruity theory," *International Journal of Hospitality Management*, vol. 40, pp. 49 – 58, July2014.

[17] M. Altin, Z. Schwartz, and M. Uysal, ""Where you do it" matters: The impact of hotels' revenue-management implementation strategies on performance," *International Journal of Hospitality Management*, vol. 67, pp. 46 – 52, October2017.

[18] C. Perey, "Open and Interoperable Augmented Reality and the IEEE," *IEEE Consumer Electronics Magazine*, vol. 4, no. 4,pp. 133 – 135, October2015.

[19] Hospitality Technology. (2015) How hotels are using beacons and augmented reality. [Online]. Available: https://hospitalitytech.com/how-hotels-are-using- beacons-and-augmented-reality

[20] O. Vermesan and P. Friess, *Internet of Things - From Research and Innovation to Market Deployment*. River Publishers Series in Communication,2014.

[21] Special-Nodes. (2013) What will it take for the hospitality sector to embrace the internet of things? [Online]. Available: https://www.tnooz.com/article/internet-of- things-hospitality-M2M

[22] R. C. Wood, *Key Concepts in Hospitality Management*. SAGE Publications Ltd.,2013.

[23] Kumar, P., Murugesh, M. K., Kuma, M. D., Susendiran, S., Sekhar, B. R., & Murthy, D. S. A STUDY ON PARTICIPATION OF CELEBRITY AFFECT TRAVEL...? FOR SOCIAL MEDIA PROMOTION.

[24] Kumar, M. V. P. Emerging New Marketing Trends in the Hospitality & Tourism Industry. *Recent Trends in Tourism and Hospitality*, 240.

[25] Yadav, T. C. S., Shaik, M., Rambabu, M. U., & Kumar, P. AN ASSESSMEN T OF POTENTIAL APPRAISAL ON SOFTWARE INDUSTRIES IN HYDERABAD.

[26] Kumar, V. P., & Bansal, P. Rating the Quality in Higher Education