

Internet of Things and Automation in Hotel Industry

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Introduction

Tourism is one of the largest and labour intensive industry. Smart Technology, Internet, artificial intelligence and social media has impacted the tourism industry at a very fast pace. The product of tourism industry are not untouched from this aspect. UNWTO (2019), Tourism Product is "a combination of tangible and intangible elements, such as natural, cultural and man-made resources, attractions, facilities, services and activities around a specific center of interest which represents the core of the destination marketing mix and creates an overall visitor experience including emotional aspects for the potential customers. Hotel industry is a major component of global tourism.

Leisure in hospitality is the major force for taking it to global level. Incidentally, the Internet of Things (IoT) has altered the operationalisation in hospitality sector. The IoT is the interconnection of everyday physical devices like sensors, actuators, identification tags, mobile devices, etc., such that they can communicate directly or indirectly with each other via local communication networks or over the Internet(A. Munir, P. Kansakar, and S. U. Khan, 2017). Across the globe, the hospitality industry and businesses has revolutionized and render hyper-personalization along with real-time solutions for the tourists queries, redefining the meaning of IoT in the tourism industry altogether. . Earlier, unlike other sectors, the hospitality industry was slow to adopt emerging IT trends like IoT systems within their value chain of activities (Pizam, 2017). Also, IoT has redefined humans-technology interface across the globe by saving them time and energy and providing them with comfort in their everyday lives. The individuals of the modern society are experiencing user friendly living through new IoT innovations . M. L. Kasavana. (2014)observed the IoT technology is already spreading through the hospitality industry with public terminals, in room technologies and mobile applications Connecting comfort with budget friendly solutions has crafted significantly well within a short time frame by IoT to tourism industry.

Benefits & Application of IoT in Hotels

Connecting the global village with technologies has changed everything a more significant and exponential way by just adding connectivity to the existing products and services. The products have become services and services have become more intelligent in the current scenario of technology driven world. IoT also shows its footprint in almost every aspect of life either vertical or horizontal linkages, hospitality do not left behind in it. Many hotels are already using IoT to control the thermostats within the rooms. By using connected thermostats, hotels can adjust room temperatures at check-in and check-out which eliminates the cost of cooling or heating has revolutionized the service delivery and has improved the customer experience while reducing the costs. Execution and implementation of IoT in hospitality have already been impacting the sector in the following way.

1.Automation in Room Bookings

To stand out from the competition, providing the best guest room accommodation is one of the ways to do in the Hospitality industry. Guest-facing systems empower guests with services such as automatic check-in and check-out services, keyless entry services, control of in-room functions etc(Y. Wang, K. K. F. So, and B. A. Sparks 2017) . Guest-room Automation has made the stay of guests more comfortable, accommodated and is being on the cutting edge of modernity. For example, many top-rated Hotels and Resorts use a technology known as “daylight harvesting”. They harvest the daylight by using IoT devices, which automatically adjust the LED lights based on the detected natural light in the rooms.

2. Maintenance of Services

IoT sensors takes the preventive measures and maintenance into existence which recognizes the hazardous situations and sends alerts for proper maintenance before the issue escalates. As the manual checking of the each equipment in the hotel without IoT becomes a difficult and tedious task, predictive maintenance played a important role. It empowers the hotel staff to make ascertain about when and where repair is needed and focuses on human attention only when and where it is required.

3. Use of Smart Cell Phone

Today, there are almost every individual uses cell phones 7 billion as people on and about 85% of the global population is receiving the cellular coverage. One can use various apps on phone as the key to their room or for submitting any request to the hotel reception. The work requests or work orders sent can be accessed by the engineers and can meet guest satisfaction.

4. Personalization and Customised Services

This includes tourist needs assessment, meeting quality standards for services, and evaluation customer satisfaction. Since customers and employees play a significant in co-creating value in hotels (Choi, 2001; Pizam, 2017; Sun et al., 2018), understanding how soft resources like customer relationship, the culture of human resources, and leadership add value within the supply chain activities is critical. As comfort is a major factor in guest satisfaction during stay in hotel, using their personal data and information may provide value -addition to the tourists and make their stay a memorable experience. For instance, an IoT platform can remember a guest's specific likings & preferences and can automatically use for their next visit to hotel stay with favourite room freshener, magazines, temperature, and lighting .

Future Perspectives of Smart Technology in Hospitality Sector

Tourists will be able to access devices in a connected smart home, and as they come near the hotel, their smart car which is connected to the internet will share information about the guest to the guest services. Then the guest services will make use of the data to offer customised services, share room information and access to the guests, and allow them to access the room seamlessly using their personal wearable device and customize their experience with IoT devices. Simultaneously, depending on the guest's personal settings and calendar updates, the alarm clock can be automatically set to the right time. The IoT trend will create a new market made up of mainstream customers, who are willing to choose convenience over concerns about privacy.). Pizam (2017) said the benefits from using IoT system strategies in hotels, theme parks, and cruise liners could significantly improve decision-making in terms of cost-efficiency, supply chain management (SCM), and customer relationship management (CRM). Therefore, by exploring strategies hoteliers used to develop and implement IoT systems to increase profit,

future scholars and practitioners may benefit from understanding how emerging IT trends like the IoT might impact hotel strategies in the fourth industrial revolution. This is just a glance how IoT in hospitality has and will impact the industry. Coming onto reality, the capacities of the IoT technology has been impressive in a way that many of the 5-star hotels like Clark group has already implemented IoT in their hospitality.

Conclusion

The Hotel businesses create value by offering out-of-the-box solutions to the customers through IoT, Wi-Fi and Internet. Their valuable customer will get enhanced customer experiences, not just for personal use but for reinventing the operations and transforming business processes also. The tourists will get personalize and customize services and products according to their need in future.

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