

## Chapter 2

# Sensor-Based Technology in the Hospitality Industry

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### ABSTRACT

*In today's scenario, there has been a dramatic transformation in the way services are being provided and taken by the consumers. With the changing preferences of consumers, and businesses, vendors across the regions are emphasizing towards the introduction of touchless solutions, which are likely to change the way people interact and use the services. Incorporation of smart technologies enables the operators to create a positive and seamless experience for the users. Convergence of technologies with the current market trends is expected to bring the concept of "internet of things" nearer to reality. Embracing IoT solutions transform the overall hospitality business scenario and pose several opportunities for the smart hotel solutions. In this chapter, various IoT solutions used in the hospitality and leisure sector have been discussed. This chapter further emphasizes how efficiently the touchless technology products with minimal contact enhance the operations in hospitality sector and how the hotel industry is focusing towards nurturing the dreams of travellers.*

### INTRODUCTION

In today's scenario, the hospitality industry is majorly being shaped by the current surge in the Internet of Things technology. The concept of "IoT" outspreads internet connectivity outside conventional devices such as laptop & desktop computers,

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tablets, and smartphones to varied range of devices, which significantly exploits embedded technology for enhanced interaction and communication via internet (Aluri, 2016). Implementation of proper sensor-activated technological solutions poses to be an essential aspect in any hospitality or hotel businesses. IoT is paving the way, various products and services in hotel businesses deliver value and redefine user experiences in the forthcoming future by solving real-time queries and interpreting hyper-personalized recommendations for the guests (Team Trilyo, 2019). The businesses are on the leading edge of IoT technology in order, to maintain a competitive edge in the market. The key vendors are developing unique versatility in terms of functionality, design, and quality standard of products and solutions. This includes the interconnection of physical devices such as identification tags, actuators, sensors, as well as mobile devices, which enables them to communicate directly or indirectly with each other.

One of the key strategies adopted by leisure businesses against the influx of new players includes technological developments, product innovations, brand development, and brand acquisition. Technology is significantly the major factor expected to propel the shifting preferences of consumers, whether it is, in terms of seeking entertainment, dining out, leisure activities, stay at hotels, and other activities. User-experience plays a vital role among all the hoteliers and hospitality providers, thus enabling the businesses to acquire services, and strategies which are competitive and significant in the changing market place.

With the increasing need of minimal contact nowadays, touchless technology poses to be one of the solutions gaining surge in popularity. These include the well-assimilated technologies such as sensor-based and voice-activated technologies which offers safer environment, and seamless experience to the users. For instance, incorporation of touchless technology helps in preventing the risks of contamination among the users in hotel kitchens, pubs, restaurants, rooms, and others, hence, making it safe for them. In addition to the hotels, in case of high-traffic areas, such as airport lounges, cruises, and a few others, there is high risk of transmission of the germs. Introduction of smart sensor-based technologies, thereby, poses to be advantageous to the customers in terms of their health and well-being as well. With the changing market scenario, it is hence, necessary for the businesses, to emphasize on the overall safety, and excellence in terms of guest experience. The innovative and advanced techniques introduced by various vendors are expected to enable the end-users to cope up with the changing time and consumer preferences, and cater to the concerns of health and safety as well.

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