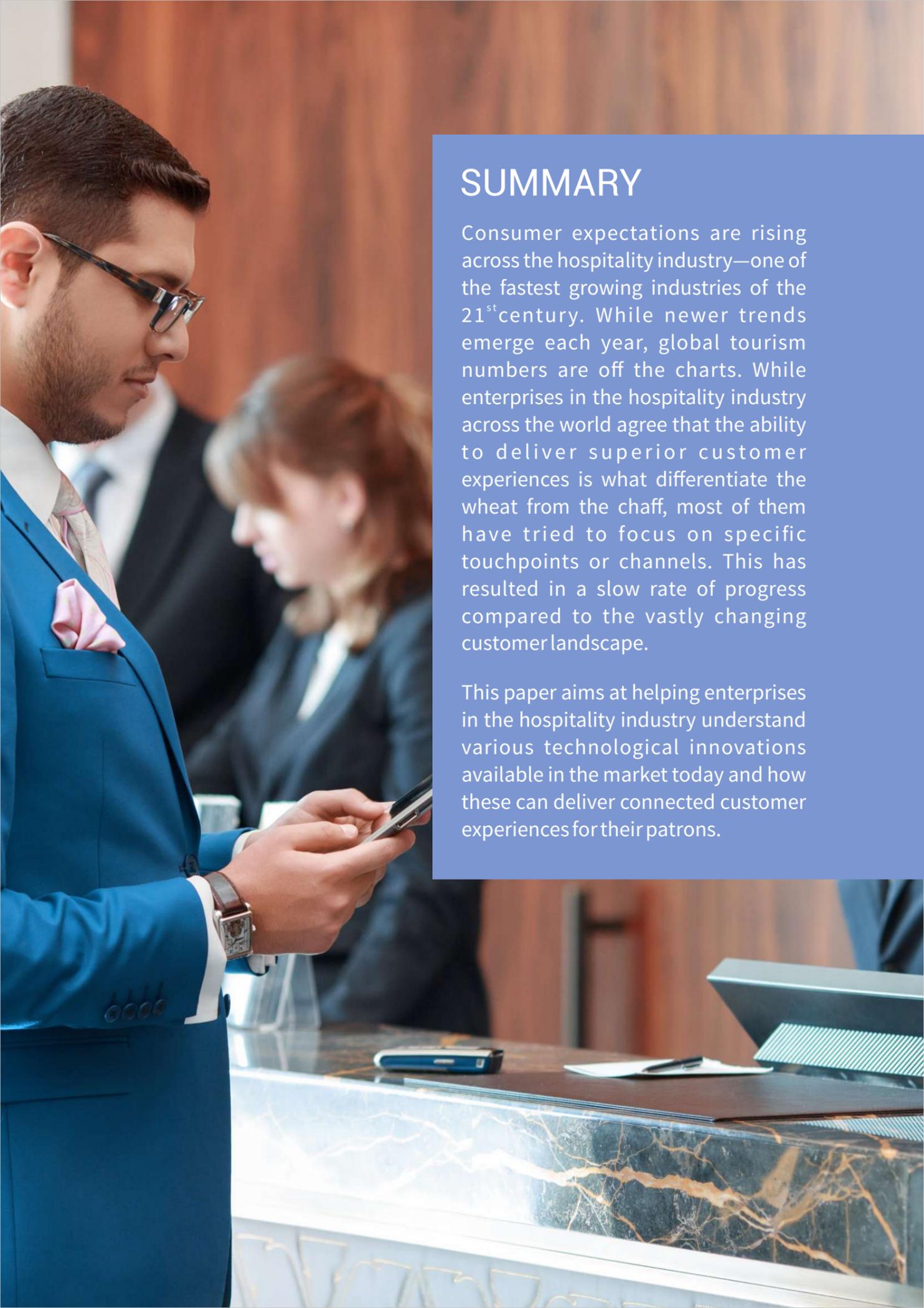




Business-friendly Solutions



**BUILDING  
CONNECTED  
CUSTOMER  
EXPERIENCES FOR  
THE HOSPITALITY  
INDUSTRY**



## SUMMARY

Consumer expectations are rising across the hospitality industry—one of the fastest growing industries of the 21<sup>st</sup> century. While newer trends emerge each year, global tourism numbers are off the charts. While enterprises in the hospitality industry across the world agree that the ability to deliver superior customer experiences is what differentiates the wheat from the chaff, most of them have tried to focus on specific touchpoints or channels. This has resulted in a slow rate of progress compared to the vastly changing customer landscape.

This paper aims at helping enterprises in the hospitality industry understand various technological innovations available in the market today and how these can deliver connected customer experiences for their patrons.

## INTRODUCTION

Today's customers demand personalized contextual experiences that are seamless across all channels and touchpoints. They no longer want to depend on human interactions for trivial tasks. With the proliferation of automation and artificial intelligence in every aspect of our lives, customers want innovative experiences that make for a complete contextual and personalized experience.

While tools like property management systems (PMS) or CRMs have been increasingly deployed across the sector, the data in these systems can be used to deliver superior customer experiences provided they are analyzed in the right manner. The Internet of Things (IoT) has truly helped the hospitality sector simplify management of their assets while improving efficiency.

All these integrated together help deliver a seamless experience for guests thus leading to customer satisfaction and increased revenue. Hence, it is no longer enough to view the customer journey in bits and pieces. The leaders in the hospitality industry are moving the needle on customer satisfaction by enabling a complete transformation of the entire customer experience across all channels with connected devices.



## What does a Connected Customer Experience look like?

The hospitality industry can leverage cutting-edge technology to build meaningful customer experience innovations across. For example, hotels may provide automated, smartphone enabled check-in services. Guests can experience the hospitality even before arriving at the hotel. Based on the proximity, the app can intimate the hotel about the indicative arrival and allow the hotel to be ready with check-in processes. As most of the check-in processes are initiated before arrival, instead of guests going to the reception, the hotel staff can receive the guests and complete the process in a flash. Technologies like RFID, mobile app location triangulation and face recognition help the staff in recognizing the guests and provide personalized services.

Once the guest has checked in, everything within the hotel ranging from the room, the gym or the restaurant can be personalized to suit their individual needs and preferences. Using sensors, the system can learn about the current preferences and learn to adapt over time. For returning guests, the hotel can “recognize” them, and adjust itself according to their preferences and anticipate the customer needs through analysis of the customer’s data. Intuitive customer experiences such as curtains that draw themselves in the morning or rooms that play soothing music for guests who are detected to be going to bed could soon be the norm for hotels worldwide.

Voice assistants are also becoming increasingly popular for hoteliers today. Voice assistants such as Google Home and Amazon Alexa can automate menial tasks from setting alarms, adjusting the ambient lighting and setting the right temperature for shower to closing and opening drapes, controlling room temperature, and turning the lights on or off—the possibilities are seemingly endless.



## Connected Devices can bring efficiency in hospitality processes

With connected devices, in addition to delivering superior customer experiences, hoteliers can manage all their assets and improve efficiency across their processes while reducing operational expenditure.

For example, an IoT enabled HVAC system enabled a hotel to realize \$60,000 annual savings in just a single location. Another hotel in Stamford, USA, enabled daylight harvesting in their hotel rooms with IoT enabled systems so that indoor lighting can be automatically adjusted according to ambient light within the room.

Enabling IoT integrations with property management systems can help gain more authority over the assets within the property. For example, managers can get malfunctioning appliances serviced on time simply by receiving timely alerts from the connected sensor. This ensures that the guests do not have to encounter malfunctioning appliances at any time. The PMS can also replicate the guest’s preferences the next time they visit by selecting the required settings on digital appliances and gadgets such as televisions, thermostats and so on.

IoT can be a game changer for hotels looking for energy management solutions. Since hotels have little control over their rooms once the guest has checked-in, IoT innovations such as motion sensing lights and HVAC devices can control power output more efficiently. Or they can trigger a series of coordinated events for efficient power utilization, based on actions taken by the guests. For example, when a guest leaves their room the elevator can be summoned while the television can be deactivated. This gives them more control over power management leading to huge cost savings, without compromising on the customer experience.



## Connected Solutions: #Digitaligence@work

There are various solutions that help deliver contextual connected customer experiences for the hospitality industry. Some of the possibilities are:

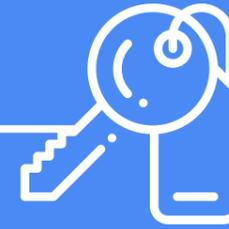
**Guest Room Automation:** The IoT-enabled room automation solution provides unprecedented control for guests over major aspects of their hotel room. Guests can now control their in-room experiences by controlling different aspects of the room at the touch of a button on their smart phone. From customized bedside panels, service panels, to controlling curtains, room temperature, entertainment system can be done with a few touches. The solution also provides centralized monitoring and can be used to avail concierge services, laundry, housekeeping, etc., on demand.

**Mobile Key cards:** Once the guest has checked in, the room can be opened with their smart phones. Technologies such as NFC, Bluetooth, Data over sound or Data over light make this possible without having to make too many infrastructure changes.

**Guest Recognition Solutions:** With these IoT solutions in place, each guest can be identified and welcomed with a personalized greeting message when

they arrive in the lobby. The entire hotel can be transformed in accordance with the guests' choices and preferences, and thereby, service levels can be elevated for priority guests. Hotel staff can also receive notifications on their mobile devices when they are in the proximity of high-value guests, so that they can assist them with whatever needs they might have. This leads to higher levels of customer satisfaction and helps optimize the efficiency levels of hotel personnel significantly.

**Indoor Navigation Assistance Solutions:** When traveling to places where the native tongue is different from a widely spoken language, guest scan face language barriers while navigating through the hotel. Indoor navigation assistance solutions help mitigate these challenges through location aware smart tiles and beacons connected to smartphone applications, which help in effective indoor navigation across the hotel property. The smartphone application recognizes smart tiles printed with predefined pattern, which are placed on the floor to locate the user. The augmented reality enabled solution aids in real time to guide the user according to their needs.



**Augmented Reality Solutions:** With advances in augmented reality, guests can now be presented with immersive experiences throughout the hotel premises. Augmented overlays provide additional information about paintings, artwork, and so on, and help transform dull signboards with augmented animations. Even within restaurants, AR solutions can help provide menu overlays with an additional understanding of the ingredients, preparations methods, by enabling multimedia effects. Smart visiting cards also help display additional information like photo, email and phone icons, 3D view of the hotel on the flipside, as well as an easy import to contacts.

**Virtual Reality Solutions:** VR solutions are the pinnacle of immersive experiences today. By enabling interactive experiences, these solutions help potential guests interact with the things they see through actions such as a gaze to bring up more information or a magnetic click to perform an action. The solution can work well on an existing phone and Google Cardboard design-based headsets to help the guests look at hotel properties, room options, provide 360° views of the hotels and rooms, virtual reality views of different sections: rooms, restaurants and other facilities before they make a choice.

**Virtual Assistants:** Chatbots are increasingly becoming the first line of contact for customer support, queries, bookings, etc. Today's chatbots are smart enough to support a wide variety of interactions consistently and learn from experiences over time. These



chatbots can be seamlessly integrated into the hotels existing web and mobile apps or enabled through popular channels such as Facebook messenger, Skype, WhatsApp, etc. Voice Assistants such as Alexa can be closely integrated within hotel properties to serve as a 24x7 assistant to control various functions across the hotel room.

**Intelligent Advertising Solutions:** Smart digital screen display solutions can drive hyper targeted ads based on the audience profile of the guest looking at the screen. The content can be customized based on various parameters such as gender, age and other physical appearances of the target audience, as well as change the ads in real time based on the guests' preferences and interests.

**Biometric Solutions:** Hotels are increasingly opening their doors to new ways of authentication. Advanced biometric security protocols such as facial recognition and fingerprint identification are being increasingly used to control access to secure zones. The hotel personnel are immediately notified of any unrecognized faces or unauthorized access to help improve security and customer experience. Authorized personnel can also grant or deny access from a remote location through a mobile application.

# Conclusion

Technology has permeated almost every aspect of the hospitality industry. Most hotel chains are beginning to see the difference brought in by connected devices and innovative technologies. From smart automation, facial recognition and biometrics, to voice assistants and data analytics, hoteliers are leaving no stone unturned to gain the edge over their competition and deliver superior customer experiences for their guests. It is imperative that these solutions be implemented efficiently in an integrated manner, keeping the customer journey at the forefront.

## Author Profile

### **Mahesh Prabhu**

VP & Global Head of Innovation at ITC Infotech

A technology enthusiast & evangelist, Mahesh Prabhu has been instrumental in incubation of cutting-edge technologies, research & innovation, & broad-basing the capability enhancement programs. He is passionate about productivity improvements and has instituted processes & frameworks to increase automation in SDLC processes, improve use of reusable components & best practices, provide agility to software projects.

As Head of Innovation, his primary focus is on building innovative solutions using IOT, Chatbots, AI, AR-VR, etc. Prior to this, he incubated the Technology Consulting Group - premier technology services for key customers. He has also led the strategic IT initiatives of the company like Knowledge Management & Collaboration, Strategic Planning, CRM, etc., and has made valuable contributions to other organizational initiatives like defining the metrics & measurement programs, career development plans, job banding among others.

Prabhu holds a Master's degree in Business Administration, a Masters Diploma in Software Engineering & Bachelor's degree in Mathematics, Economics & Statistics.

### **About ITC Infotech**

ITC Infotech is a specialized global full service technology solutions provider, led by Business and Technology Consulting. ITC Infotech's Digitaligence@work infuses technology with domain, data, design, and differentiated delivery to significantly enhance experience and efficiency, enabling its clients differentiate and disrupt the business.

The company caters to enterprises in Supply Chain based industries (CPG, Retail, Manufacturing, Hi-Tech) and Services (Banking, Financial Services and Insurance, Airline, Hospitality) through a combination of traditional and newer business models, as a long-term sustainable partner.

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