

# **Disruptive Technology in the Hospitality Industry**

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## **ABSTRACT**

*Disruptive innovation has been widely embraced by many industrial and service sectors across the world. As a follow-up to the disruptive innovations, this article examines the advantages of disruptive innovation in the hospitality industry, as well as the different technology applications employed in the industry to help it expand. An innovation strategy is a requirement for succeeding in today's competitive environment which makes hospitality stay competitive and profitable. Implications of these Technologies help business stakeholders in hospitality.*

**KEYWORDS:** *Disruptive, Technology, Innovations, hospitality*

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## **I. INTRODUCTION**

The hospitality industry is to provide customers with a pleasant experience. Whether that enjoyment comes from eating a good meal, relaxing in a comfortable spa, or getting a good night's rest away from home, making sure each individual guest is taken care of is supreme.

Innovation increases your chances to react to changes and discover new opportunity. It can also help encourage competitive benefit as it allows you to construct better products and services for your customers. Hospitality is a worldwide business worth in excess of \$500 billion a year.

There are four parts of the hospitality industry: Food and beverages, Travel and Tourism, lodging, and recreation.

Food and Beverages. The food and beverage sector which is efficiently known by its initials as F&B is the largest segment of the hospitality industry

Travel and Tourism Travel deal with the services which is related with moving people from place to place like Buses, cabs, planes, ships, trains .

Lodging means housing for a period or a place to sleep for one or more nights like Fancy hotels, elder hostels, campgrounds, motels and other businesses that provide a place for people to sleep overnight are all in the lodging industry.

Recreation is any activity that people do for rest, relaxation, and enjoyment. The objective of recreation is to revive a person's body and mind. Any business that provides activities for rest, relaxation and enjoyment, to refresh a person's body and mind is in the recreation business.

As technology, internet platforms and markets have evolved rapidly over the past decade in the hotel sector, a wide range of innovative initiatives, Hotel technology has advanced greatly in recent years, with innovations ranging from Smartphone check-in to robotic room service to self-ordering restaurant menus.

Hospitality is a vibrant industry, constantly changing to meet guest expectations. Which results in a premium is placed on innovation. Hotel owners and operators are always on the lookout for new products that can meet and even expect the developing requirements of guests.

Many innovations are takes place in hospitality industry like phone-as-key-cards, mobile self-check-in, mobile booking, self-service check-in kiosks, lobby media panels, electronic luggage tags, bring your own device, bring your own content platforms, Smartphone boarding passes, hotel service optimization systems, guest device connectivity tools, ...

Using phones as key cards is an example of one type of similar innovation. Another type of similar innovation is the use of mobile self-check-in and mobile booking, as well as lobby media panels and electronic luggage tags. Another type of similar innovation is the use of bring-your-own-device and bring-your-own-content platforms.

Several technological applications that businesses should explore this year are critical for providing hospitality experiences.

We view this as a huge potential for the industry to increase income while also improving consumer satisfaction.

An innovation strategy is a required for successive in today's cutthroat changing environment so there is a need of different forms of innovation to stay competitive and profitable, which help l hospitality firms to search for and execute a diversity of new solutions.

Due to increased competition and changing expectations, technology has redefined every stage of the visitor experience. There is a race among industry heavyweights like Marriott, Hilton, and Wynn Las Vegas to create next-generation solutions that differentiate between market positioning and customer desire, with 76% of customers saying that their stay is more enjoyable when hotels use the most up-to-date technology.

Following are the disruptive technologies in the field of Hospitality Industry which improves the performance of the hotels and customer retention power.

**Virtual concierge:** There are new revenue opportunities for the hospitality industry thanks to the popularity of virtual assistant technology, which has spread to the field of virtual concierge services. Any time and from any location, guests can use their smart device to contact the virtual assistant by SMS. Additionally, guests can use the "AloftLive" playlist to listen to music while they stay at the hotel. Approximately two-thirds of Aloft guests are using ChatBotlr, which has a five-second response time. Additionally, a voice-activated voice concierge with translation services is also available.

As AI assistants become more widely used, people are spending less time staring at screens and more time conversing with them. When it comes to making travel arrangements and communicating with the companies that provide those services, customers prefer face-to-face interactions. There are many complexities associated with travel and voice technology developments, but as a result of substantial investment and demand, voice technology in the hospitality industry is gaining traction. To give customers a "Alexa/Google Assistant"-like experience, voice-activated devices are now available that can translate text and voice simultaneously. It's becoming easier to communicate with one another thanks to the removal of obstacles. Artificial intelligence (AI) and Machine learning are set to take customer service experience to a new level in the hospitality industry in the coming years.

Some of the example of AI is transforming hospitality industry:

AI robot adopted by Hilton is known as Connie. Connie is designed to learn and adapt to human beings so the more it interacts with people; the more effective it will be in the future.

AI is helping hugely to help hoteliers in managing their brands through reviews, utilizing customer feedback for benchmarking, organization social channels in real-time, screening negative reviews and more.

Hospitality companies are all eager to commodities these technologies for gathering consumption. Customers are expecting greater personalization in the usage of VR and AR in the hospitality industry.

Imagine being able to step into a hotel room on the other side of the world to see the exact layout, views and facilities. Virtual reality allows guests to tour a hotel, choose a room and book it flawlessly online. They can also experience local attractions and feel confident in their travel choices before they arrive. A number of hotels and resorts, including Radisson and Omni, offer the service and have seen improved customer satisfaction and online booking rates.

## Robots

Robots can engage in recreation a number of roles in hotels, from cleaning rooms to staffing the front desk. Aloft Hotels uses Botlr, a robot butler, to bring items to guests around the clock. If someone calls the front desk needing a toothbrush or extra towels, Botlr will likely be the one bringing the items to their room. Guests at New York's Yotel can have their bags stored with Yobot, a robotic luggage concierge. Robots aren't completely replace humans, however—a lesson learned by the Henn-na Hotel in Japan, which fired half of its all-robot staff to use more humans.

**Biometrics & Stronger Authentication:** Verification and identification data can be used in the future to eliminate the need for check-in and check-out procedures. An IoT-enabled key card will be sent to your guest's mobile device as soon as you detect their presence using beacons or surveillance analytics. To make sure their guests have all they need upon arrival, hotels may plan ahead of time by using the same information (bear in mind 73 percent of visitors want in-room components like temperature to be automatically familiar depending on choice).

If you employ an advanced omnichannel solution (based on an open communications infrastructure since visitors demand real-time alerts), you'll achieve better results quicker while minimising frequent mistakes with real-time notifications for things like room readiness and booking confirmations.

The hospitality industry relies on experience to keep customers coming back. Innovating with the latest ideas and technology allows hotels to offer fresh, personalized experiences that guests crave.

To keep guests and owners informed and engaged, hotels may use this technology to send either automatic or physical alerts. Integration of IoT platforms is required for notifications to visitors, security, and emergency services.

**Integration with UCC:** When staff are unable to communicate effectively with guests, the guest's experience suffers. Even though only half of them are equipped to cope with issues that arise from visits, it's still a cause for worry (i.e. live chat, video, SMS). To increase the value of each client contact, hospitality companies

need an end-to-end engagement solution that combines dynamic communication channels seamlessly. Employees should be able to remain productive from any place on any device by using a single app that integrates phone, video, texting, and conferencing.

Many hotels are rolling out smart rooms, which combine AI and voice recognition technology to integrate virtual assistants into the room. InterContinental Hotels Group is creating AI smart rooms in its hotels in China. The rooms allow guests to use voice control technology and speak naturally to get personalized assistance for both business and personal travel.

Standard hotel rooms may be turned into income generators with the help of cutting-edge in-room application devices. It's more than just a phone; it's a component of your complete communication system. Room service may be purchased and appointments can be scheduled with the touch of a finger while in-room requirements (TV, bookings for restaurants/spa, watching local events) can be managed. Such enhancements to in-room service would have a major effect on the entire visitor experience. From phone activated keys to being able to use your tablet to control the temperature, the future of the hospitality industry looks brighter than ever.

Combine the ideas in self check-in and simpler room keys, a number of hotels are moving to mobile room keys. Guests simply check in using the hotel's app and are notified when their room is ready. In its place of waiting in line at the front desk, guests can go straight to their rooms and use their smart phones or smart watches to unlock the door. Hilton Hotels has introduced mobile check in for rewards guests to seamlessly check in, choose their room and unlock the door through an app.

Out of all the technologies presently in use in the hospitality sector, mobile applications have the biggest effect on the visitor experience. Push alerts for future events and reservations, as well as a live chat feature with the front desk, are some suggestions for a next-generation mobile app experience at the resort. Suppose you could call your "VIP visitors" from anywhere in the building, even if they wanted to use your application's free international calling feature! These services improve the guest's overall stay and encourage long-term brand loyalty.

#### Cloud / SaaS (Software as a Service) in Hospitality

SaaS has helped to decrease administratively and IT issues particularly for small hospitality businesses that cannot afford to invest in in-house technical help.

SaaS has definitely transformed the Hospitality industry. Artificial intelligence is coming as a derivative of this which by many is being considered as innovation as important as the wheel.

The hospitality industry has approached a long way when it comes to automation of services – and with good motive. Today's tech-savvy guests prefer tech over human communication.

Hotels will increasingly feature smart rooms and artificial intelligence.

Many hotels are incorporating artificial intelligence (AI) and smart rooms to provide guests with more customized and memorable stays. Artificial intelligence allows guests to order room service, control curtains, set alarms, and even order extra towels with just their voice. As soon as a guest says, "I need to work," the television is turned off, the lights dim, and the curtain is drawn. Amazon's Alexa for Hospitality, a hotel-specific voice assistant, has just joined the hospitality market. As a result, hoteliers will have easier and more affordable access to cutting-edge technology, such as artificial intelligence (AI) and smart rooms.

The use of 3D/VR/AR technology will make it easier to find the ideal hotel room."

Customers carefully study the room's pictures before making a reservation at a hotel. The use of 3D, VR, and AR to map the inside of hotel rooms, on the other hand, is expected to increase. Customers will be more likely to book a hotel in the future if they may easily explore the property's space and facilities. In the future, we can anticipate guests being able to explore the hotel's immediate surroundings. Overall, these technologies provide consumers with more assurance that they are making the best decision possible.

Guests' use of mobile devices will continue to rise.

"We're witnessing ever-increasing mobile use by our visitors on a worldwide basis." From looking for hotels to making reservations, checking in, and looking for nearby restaurants, we've got you covered. When travelling, consumers rely on their mobile devices. Hoteliers are concentrating on providing smooth Wi-Fi network connections inside hotel rooms to suit this demand, and are starting to create specialised hotel applications. In the future, ensuring a smooth mobile experience will be essential.

Platforms will be future-proofed with smart, adaptable solutions thanks to the cloud.

“The growth of personalisation is a significant trend in the tourism industry as a whole. From the time they start looking for a reservation to the moment they check out of a hotel room, customers want more customised experiences. However, fragmented legacy systems based on a closed architecture provide a barrier for customization in the hotel sector. Because the bulk of data is fragmented, the industry has trouble recognising and personalising guests because these systems lack a comprehensive picture. Because it unifies different technologies into one platform, cloud computing has the potential to help reduce data fragmentation. Hotels can better understand their customers' characteristics and preferences across all touchpoints by using technology.” Ahmed Youssef, Hospitality's Executive Vice President of Corporate Development and Marketing

### **Feedbacksocialmedia**

Hoteliers must prepare for the fact that almost everyone who checks into a hotel, resort, spa, or lodge is carrying a smartphone since technology has permeated almost every aspect of our lives.

A lot of hospitality companies are already making use of social media to their advantage, with guests using location-based social media apps to check in, tweeting about their experiences on Twitter and Instagram, and posting photos of their vacations to Facebook and Instagram. Guests are expected to use social media in greater numbers in the future to provide feedback, complain, or compliment their stay. Client concerns and enquiries should be addressed in real time by hotel employees.

To keep their brand's reputation intact, hotel marketers and management must keep an eye on this trend. To make choices regarding holiday locations, hotels, and leisure activities, customers no longer depend only on information generated by themselves but rather by the community as a whole. Several hotels and leisure companies have developed social media monitoring and communication plans that involve marketing and operational personnel to keep up with what's being said about them online.

To convey how well they're doing with their different environmental initiatives, operators may make use of technology in another way.(for instance, real-time statistics on energy and water usage) (in real time) (in real time).

Digital conference rooms are available.

Hotels must be able to provide conference attendees with access to AV and digital capabilities in addition to high-density Wi-Fi. Even if the AV and digital technology in a normal conference room is modest, staging firms are often engaged for various projects to outfit the location according to the needs.

This kind of technology requires the construction of meeting rooms with hidden tunnels in the ceilings and floors that can enable adequate power and connectivity. The hotel's network design is essential for ensuring mobile phone coverage, Wi-Fi connectivity, VoIP, real-time location services (RTLS), internet protocol television (IPTV), and all AV and digital equipment in conference rooms.

Customer service in the hotel sector must focus on customers' expectations that digital contact will be preferred over face-to-face interaction as visitors become used to and anticipate it. When it comes to customer service, the hotel sector has long placed a premium on well-trained front desk agents.

Technology investments distinguish hospitality properties, improve the guest knowledge and create more pleased customers resulting in increased brand attentiveness, loyalty and reduced price sensitivity.

Modernization in the hotel industry is significant because it has the ability to alter the industry positively. ... Although most service providers and hospitality-related services are doing their best to keep up with these quick changes, new expertise has helped the industry to rise.

Modern Technology has helped in reducing costs, improve operational competency, and improve services and customer experience. ... Technology has helped tourism and hospitality industries replace costly human labor with technological labor. This helps reduce labor costs, but also helps avoid customer service issues.

In the hotel industry the technologies is important because it make the business more easy and efficient. The technology provides the information for the guest about the hotels. It helps the guest to make the decision and provide booking service via the internet.

## II. CONCLUSION

The hotel business is primarily concerned with people. Technology firms and hotel brands are collaborating to overcome the difficulties of delivering cutting-edge technologies to the hospitality industry on a large scale. All of these hurdles must be addressed in order for consumers to have a positive travel experience, since they are used to and demand smart technology in their personal gadgets as well. Smart hotel rooms make use of technology to enable visitors to customize their stay. Smart hotel technology includes a digital interface for controlling lighting and temperature, streaming entertainment choices for any device, and sensors that minimize power use during certain hours or while the visitor is not in the room.

Because it has the potential to transform the industry, hotel sector innovation is essential. Service providers and hospitality-related businesses are struggling to keep up with the industry's rapid evolution, but new technology is enabling the sector to grow even faster now.

Technologies such as artificial intelligence, machine learning, and augmented reality have huge potential to create constructive disruptions in the hospitality industry. Sustainability, global perspective, achieving balance with new accommodation choices, and increasing demand are the most important developments in the hospitality sector. How much money does the hospitality sector generate in the global economy? \$7.6 trillion.

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