

## Trends on Technological Transformation in World Hospitality & Service Sector

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### ABSTRACT

Tourism has been one of the hardest hit industries by COVID-19. Digital innovation Hubs are providing solutions to the challenges of the sector. Creating better customer experience, increasing revenue due to COVID-19 tourism industries took an action to plan digital strategies.

Tourism industry still is in a fight for survival during Corona Pandemic.

Here we will find out how this pandemic is forcing progress for hotels, restaurants, and travel providers to coexist COVID-19. Businesses must take strategic steps to change during pandemic by investing in technology and digital transformation. Tourism industry is shifting and using new service and operating new methods of technology to make life safer and easier for their customers. As Travel and hospitality has different consumer's expectations we need to see how we can growth and increase the profit.

**KEYWORDS:** Covid19, Digital Transformation, Technological advancement

### INTRODUCTION

The Covid-19 has had impacted on every organization in the world. Tourism industries started to change and adopted new design throughout digital technology.

In 2020 and upcoming years, Tourism industries started to create a new platform of contactless programs. This is the only way to stop the spread of the virus and ensure guest safety and health (Brooks & Kasavana, 2007).

Digital Transformation is a development of using technologies in business industries to improve company and customer experience and meet customers demand in different ways (Lei, 2011).

Companies have started to approach their clients digitally. This development is due to the advancement in technology and the rise of the internet. This has in turn reduced the geographic challenges (Cowen, 2012).

Successful Hotels and restaurants started to Implement Digital Transformation strategies for a

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better way to communication and services to their customers (Kontogeorgopoulos, 2008).

Digital Transformation will create \$305 billion of value between 2016 and 2025 and will generate benefits for both the customer and society, according to (World Economic Forum, 2021).

The effect of Covid-19 on Businesses should not be underestimated; yet it also demonstrates that SMEs must alter their business strategies through digital transformation in order to avoid becoming redundant (Loohuis, 2021). The digital revolution of business strategies and delivery of services has drastically transformed industries such as healthcare, e-commerce, eateries, Fintech, information technology, auto rental, and so on. Due to the pandemic, corporate businesses have recognised the necessity for digitalization of services to make them available to people on digital platforms. Delivering assistance through digital ecosystem systems, Data protection, a secure remote access tool had become apparent as data protection became such a key issue, database

management, data protection, user-friendly apps, blockchain, Robotics based Technologies and Smart Process Automation systems, the push for 5G and WiFi 6.0 has gathered prominence, and 24X7 accessibility are digital ways pushed by Covid-19 (SOURAV, 2021). Consequently, improved promotional methods have been developed to address different customer dangers. As a result, because technology and digital platforms influence customer behaviour, businesses must include digital changes into their processes (Cárdenas, Zabelina, Lanas, Fierro, & Galarza, 2021).

### Literature Review

Practitioners and academics alike have identified supply and consumption factors, as well as technologies, as the sector's most important concerns in the near and long term. The proportional significance of safe and hygienic is predicted to drop with time, while sustainability reporting is anticipated to receive prominence in the times to come (Aksoy et al., 2022) and this is why the need for deliveries, concept of dark kitchens, as well as the acceptance of technology solutions, such as contactless payment, are projected to stay in the after the pandemic situation (Souza et al., 2022).

Also, in context with technology solutions, virtual reality, plays an important role, as a cutting-edge technology with the potential to boost destination reach and the attractiveness of lesser-known places. Many sites do not fully understand or realize the potential and use of virtual reality. Virtual reality is becoming increasingly popular, and that it is the technology of the future. This transformative tech has given rise to the phenomena of digital tourism, which provides visitors with a preview and comprehension of what they would encounter if they visit a location in person. Virtual reality is quickly becoming an excellent technique to exhibit information and elicit meaningful responses from travelers in order to improve services and the overall tourist satisfaction in a tourism site (Jasrotia, 2022).

Technological advances pose a significant challenge for all industries throughout the world, as well as a significant potential for the luxury hotel business. According to the study, openness to change and status consumption are two possibly alternative elements that managers might employ to boost hotel guests' apparent usability and the usage of vocal assistant devices. This suggests that premium hotels customers' willingness to adapt is a required but not adequate requirement for these gadgets to be adopted. Rather, luxury hotel management should address their visitors' status consumption tendency (Amatulli et al., 2022).

The findings indicate that travelers' prior experiences and educational levels have an interaction impact on the perceived utility of hotel technology in terms of interpreting and answering inquiries, delivering correct information, and communicating in several languages. Regardless of academic level, the view of technology usage tends to indicate a similarity among naive travelers. However, this view varies among experienced travellers with higher educational levels, notably among graduates. Furthermore, the perceived utility of hotel technology has a greater impact on behavioural intention in experienced hotel consumers than in rookie hotel customers (Tavitiyaman et al., 2020).

According to the findings of the survey, hotel and travel executives must actively participate in their firms' digital reform objectives. They will need commensurate digital transformations and digital business-oriented capabilities to achieve so. They have defined the precise digital transition and digital business-related capabilities they need (Busulwa et al., 2022).

### Common Practices in Digital Services in Hospitality Industry

#### Restaurants Digital transformation

Customers at restaurants will met by new rules and regulations. As we know they all taking precautions as social distancing like 6 feet apart and providing mask and sanitizer to the customer. But we want to see how they evolve technology into their restaurant?

Well as one of the main reasons to involve the Corona virus is touching the stuff, restaurants are creating Digital menus to meet customers' expectations and reduce the risk of touching stuff (Varol and Tarcan, 2009).

#### QR Code in Restaurant

Digital menu is a new innovated menu with QR code as you can find in your table. Instead of having the human touch to get a normal menu you can scan the code with your phone camera and find the menu on your smartphone which it provides convenient and efficient way of ordering, and also can help to your customer to decide what to eat without having to take any help from managers. A menu concept is informative and engaging and promote hygiene and sanitation.

#### Reasons to use QR Code:

##### ➤ Convenience

Customers don't need to wait to receive the menu at their table with physical menu.

##### ➤ Hygiene

Earlier waiters had to deliver the physical menus leading to hygiene issues due to constant human

touch. With the rise in QR code scanned menus, this obstacle is also removed from the path.

#### ➤ **Saving**

Another benefit of QR code is the time. Again, your customer can immediately check the menu and place their order quickly by having all the details and information even the pictures of the food. Also, it helps to save money for restaurants about updating their menu in a paper and printing out and with only one click you can add new items and special offers to the menu.

#### ➤ **Increase Earning**

The images that you see digitally are much more pleasing, especially when they are of some mouth-watering food along with some great description. This helps increase the average bill value.

#### ➤ **Promote Offers**

Update new offers easily with Digital menus. Doing that digitally is very convenient and can be done well in advance to avoid delays and other similar issues.

#### ➤ **Better Experience**

With provision of a wholesome experience of unique images of food and apt description, the guest experience betters' manifold and helps them dine better.

### **Smart Gates in Dubai Airport**

After Corona Pandemic Emirates decide to reduce contact points between traveler and staff at the airport.

Emirates collaborated with the International Air Transport Association (IATA) to develop a

New system to make traveler life easier (*Emirates Experience, 2021*). Nowadays Dubai is offering Smart Gates in arrival and departing at DXB which providing a new system that achieving self-service, No additional fees, faster processing time and contactless process.

These Smart gates will help you to check-in by yourself. It looks like a small machine with a space to drop your baggage and a touchscreen which providing fully touchless process. The passenger can check-in, choose their seats and receive boarding pass. The machine will have printed the boarding pass and bag tags which you can attached to the bags before drop them to the machine. Of course, passenger still have manual check in options yet and all depend to them which way they are willing to use.

Emirates by using this new technology achieved an excellent work which making you safe and saving lot of time while standing in line before and eliminate that much more contact.

### **Self-check-in Machine**

To deliver an out-of-the-world guest experience and save their check-in time, investment in such digital service is worth every penny.

Whatever business objective or strategy they select, whether it's concentrating on the user engagement or optimizing internal operations, it's apparent that technological procedures and technologies play an essential part in the process, which will only grow in the future (Law, Leung & Buhalis, 2009).

### **Hotels use Digital Keys**

Covid-19 changed the guest's experience in hotel. Due to Corona so many hotels decided to change their facilities for example Hilton now using digital keys instead of key card.

### **What is Digital/Mobile keys?**

As you can see the name you can find that it is not a regular key and it's kind of keys that it works along WIFI and smartphones.

Hotel companies started to explore mobile keys which is increasing loyalty, direct bookings, contactless plus efficiency. There are many advantages behind mobile key technology such as saving the time for business travelers who have a very specific times and they can do their own check-in instead of waiting in the line.

Hilton now providing digital keys to their guest but in order you need to have Either iPhone, iPad or android latest version.

Once you download an application you'll have features like check-in & check-out, room service, housekeeping, and mobile room keys.

### **How Do Mobile keys work?**

After a reservation is booked, the guest will get an email confirmation with a link to download the mobile key app before to arrival. When a visitor checks in, the PMS (Property Management System) instantly notifies the mobile key platform, and the mobile key platform replies by providing a secure digital key to the guest's mobile phone. The guest may then open the door with a press of a button on the phone screen or simply by holding the phone close to the door using the mobile key app. Other hotel amenities, such as the gym, elevator, and parking garage, may also be accessed with the mobile key. The PMS notifies the mobile key platform of the check-out, and the digital key is deactivated.

Mobile keys may be used without having to replace current lock systems, making this new technology accessible to small businesses. Existing locks may be updated by adding a

Bluetooth device, which allows for mobile key compatibility while keeping keycard functionality.

### Advantages of Mobile Keys

Guests desire mobile apps that improve their experience by allowing them to self-serve and personalize it. The hotel owners as well as the guests have benefited from the mobile key technology during the pandemic period. They found it quite convenient, efficient, sustainable, and secure.

### Use of Robots in Housekeeping deliveries and Room Services

Several sectors are adopting "contactless" methods as a result of the epidemic. Robots are projected to be used in shopping malls, large and small, to create social separation and minimize the number of employees who must physically come to work. In Guangzhou hotels, robots are also being utilized to

fill jobs that hotel personnel are unable to fill during the epidemic. Robots are employed on the frontline to protecting hotel guests and staff by preparing food and beverage in room dining services, serving as waiters in hotel restaurants, delivering cleaning items, and distributing facemasks and hand sanitizers. The robots not only preserve the health of guests and prevent the spread of viruses, but they also improve service quality and customer happiness.

### Research Methodology

A survey was carried out to hotel managers in Delhi/NCR in order to investigate the research questions raised in the paper above. For most cases, the chosen hotel managers are serving in branded hotel chains. Managers are asked to provide feedback to four multiple-choice questions in the survey (see Table 1)

**Table 1 - Survey questions**

ID	Question	Type of answer	Choices
1	Do you believe that COVID-19 facilitated the digitalization of certain systems in your establishment (for example, pre-check-in, self-check-in/out, electronic menus, online service bookings, and so on)?	Single answer	No Yes
2	What percentage of internal meetings with employees and external meetings with customers, suppliers, and other partners do you believe will continue to be held online post-Covid?	Single answer	0% 25% 50% 75% 100%
3	What percentage of internal staff meetings and external meetings with customers, suppliers, and other partners do you believe will continue to be held online post-Covid?	Multiple answers	
4	Guest reaction to technological implementation at various point of contact.	Single answer	1. Highly Satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Highly Dissatisfied

### Results and Discussion

The questionnaire was completed by 31 hotel managers. Table 2 summarizes the respondents' responses to each of the four questions, both in terms of frequency and percentage. These findings are examined in detail below, question by question.

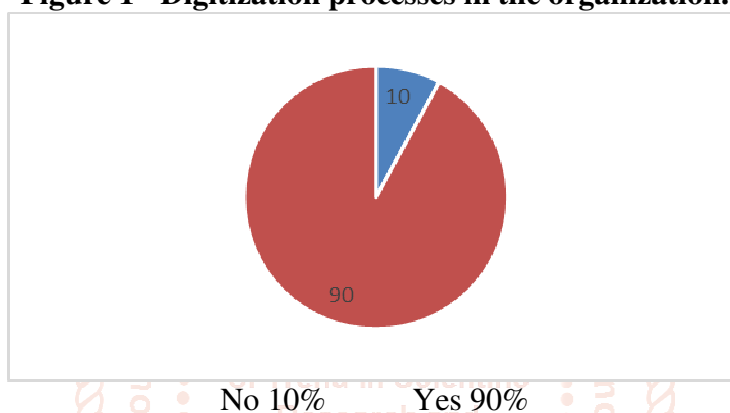
**Table 2 - Survey statistics summary**

ID	Answer	Frequency	Percentage
1	No	3	10%
	Yes	28	90%
2	0%	1	3%
	25%	4	13%
	50%	22	71%
	75%	3	10%
	100%	1	6%

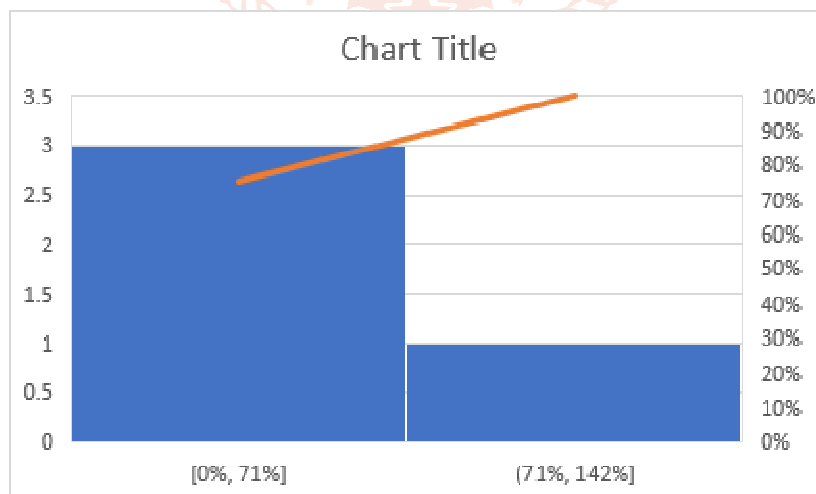
3	File sharing in the "cloud"	14	45%
	Team management	25	81%
	Project / task management	6	19%
	Data analysis and visualization	7	23%
4	Highly Satisfied	21	68%
	Satisfied	4	13%
	Neutral	3	7%
	Dissatisfied	2	6%
	Highly Dissatisfied	1	3%

As shown in Figure 1, 90 percent of hotel managers agreed that COVID-19 aided some of their organization's digitalization efforts. The findings are consistent with studies from other industries that found that the constraints and limitations imposed by the global epidemic caused most organizations, regardless of industry, to accelerate their transformational change.

**Figure 1 - Digitization processes in the organization.**

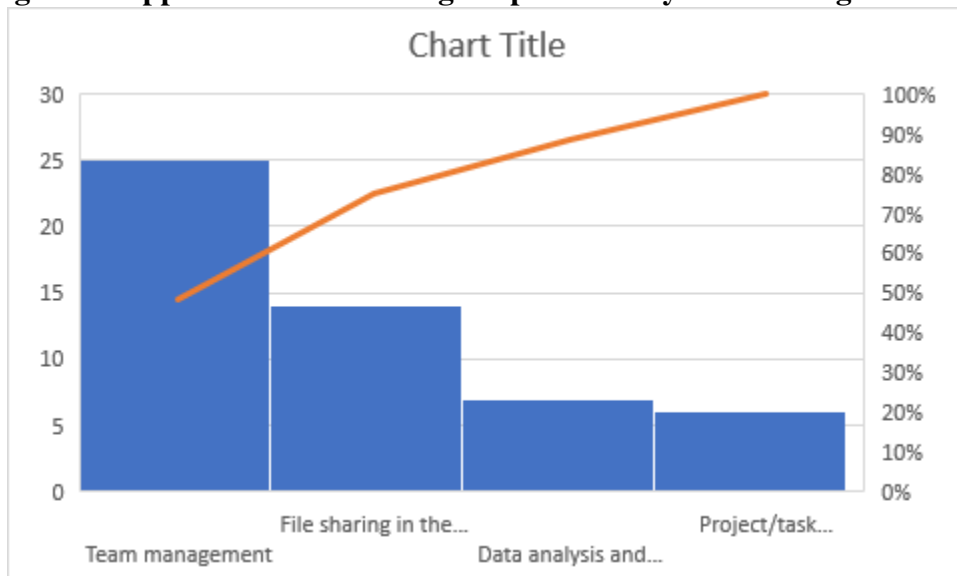


According to Figure 2, more than 71% of respondents believe at least half of their internal and external meetings will continue to hold online. One interesting finding is that only two of the three respondents who answered negative way to question one, indicating that COVID-19 did not gain momentum their organization's digital transformation, said that all meetings would be presential in the future. The remaining three respondents stated that three-fourths of their meetings are held online.



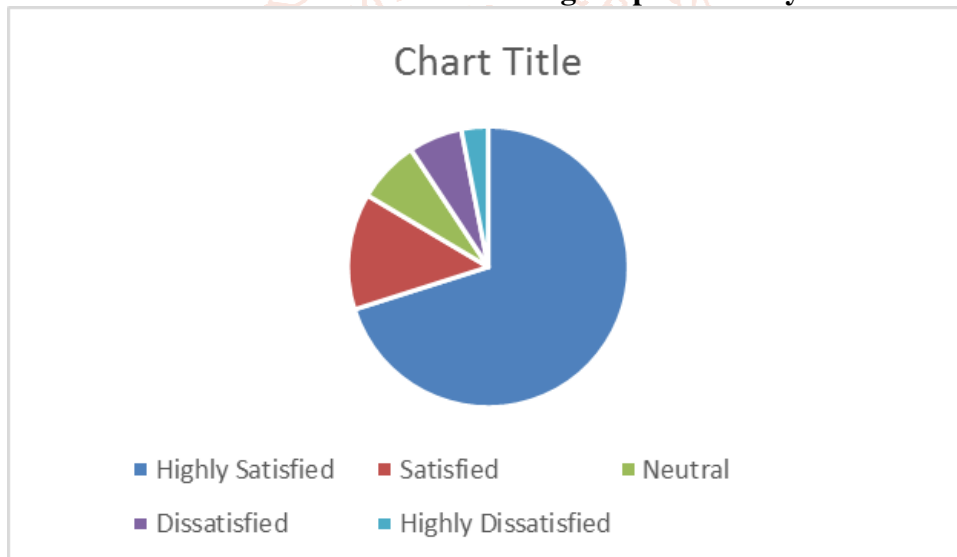
In response to the third question, which technological tools did organizations use more frequently as a result of the pandemic's consequences, as shown in Table 2 and Figure 3, team management tools were more frequently used (25 respondents, representing 81 percent of the hotel managers). The second most popular tool was file sharing via cloud platforms, with 45 percent of respondents indicating that use of this type of tool has increased in their organizations. The increased use of these tools could be attributed to the need for teams to work remotely, which necessitates the ability to access files from everywhere and have tools to manage teamwork (scheduling, online meetings, online chat, and other team management functionalities).

**Figure 3: Application of technological productivity tools during Covid 19.**



Regarding the fourth question on which Guest reaction to technological implementation at various point of contact it was found that 68% of the respondent experienced that the guests are very happy and highly satisfied, and 13% of the guests are satisfied which indicates that in general the hotel and restaurant customers are comfortable with the digitalization and technologies.

**Figure 4 – Guests reaction towards use of technological productivity tools during Covid 19**



Recent changes in reserving patterns brought about by the global epidemic, only 25% of respondents said they had increased their usage data analysis and visualization tools. In addition, only 19% of respondents said their organizations increased their usage project/task management tools. A dialogue with hotel managers indicated that many used "Team management" tools to manage projects/tasks in this case.

Two of the four respondents said that online meetings would be reduced to 25% or less after the pandemic, three said they would increase the use team management tools, but also two respondents said they would increase their use of cloud file-sharing. This situation could imply that hotel managers believe that online meetings seem to be ineffective. Nonetheless, they acknowledge that organizations should not cease

operations due to the global epidemic and should digitalize their own processes in order to continue operations in the face of adversity.

**Conclusion and implications**

This brief but insightful study demonstrates that COVID was unquestionably a catalyst for digital change in the hotel industry. According to the information gathered from the hotel managers, digitalization appears to be continuing, with old habits dying away rather than returning.

This shift has the potential to have far-reaching consequences in the industry. Many hotel corporations, for example, conduct regular face-to-face meetings with their regional managers. In other circumstances, a hotel manager may be accountable for a group of hotels in a company, requiring him or

her to shift between hotels for meetings. Converting many of these meetings to online meetings could decrease the cost of travel and commuting to meetings while also saving travel time. This will create a positive impact on the environment also the staff who are not involved in public dealings directly can be assigned to work remotely and may allow hotels to cut office space to enhance their guest outlets or public area. Working from home, in turn, can become a major component in retaining employees by giving staff to pick their work speed and better balance their work and home life. A more contented staff will be economic and productive. Higher staff retention, when combined with document digitization and cloud storage, can also support improved knowledge management and operations efficiency, which can benefit from simple adjustments such as switching presential meetings to online meetings. Attendance technologies like as self-check-in, self-check-out, and self-in-room ordering, among others, have the potential to increase efficiency.

Many luxury brands have traditionally valued one-on-one engagement with customers at all stages of their stay. Following COVID-19, all of these ideas and procedures may need to change. Hotel consumers have significantly higher hygienic demands, are much more appreciative of contactless solutions, and place a high value on digital marketing. During this era of uncertainty, hoteliers have a rare investment opportunity in technological improvements to gain a long-term cost advantage. The survey shows that customers are highly satisfied with the digitalization of the various processes and has helped to increase the number of reservations also these changes has helped the hotels to check on the number of staffs required for the previous traditional methods of reservations, registration, check-in, billing and check-out process. Also, digitalization has helped to keep the detailed history of the guests.

Following this timely exploratory study and considering the topic's importance in improving management and streamlining procedures, more research should be conducted on the subject. Nonetheless, despite the projected benefits of digital transformation in the hospitality business, there is no strong empirical evidence of such. As a result, future studies could investigate this gap while also contributing to social theory.

There are certain limitations to this research. Given the circumstances, the empirical study was based on the short questionnaire that did not go into greater information about how hotels were performing and where they were headed. With more time on their

hands, future research could examine greater sample sizes, expanding beyond a single country, and obtaining a sample of respondents from different sources (this study is just one, despite being a relevant association of hospitality managers).

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