Impact of Technology Evolution on Customer Satisfaction in Hotel Industry Affected by Covid-19

Nicole Mathias and Ronja Mäkiluoma

Haaga-Helia University of Applied Sciences

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Abstract

Authors
Nicole Mathias, Ronja Mäkiluoma

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Covid-19 pandemic tremendously changed and affected all areas of people's everyday life, forcing people to avoid crowds, follow the curfews and avoid travelling. Hotel services were forced to change their performance. Technologies implemented at the hotel not only enabled businesses to continue their operations, but they helped increase customer satisfaction.

This study aims to identify how technological evolution impacted customer satisfaction in hotel industry during Covid-19 pandemic. The main research questions that authors aimed to answer were regarding the evolutions of technology such as how Covid-19 has affected the technological development in hotel services and how technological evolution has increased customer satisfaction with services during the Pandemic.

This research has been conducted with quantitative method. Google Forms has been chosen by the authors for best convenience for research distribution. The target group for this research were people who travelled during Covid-19 Pandemic and stayed at the hotels during their trips.

The relevance of this research is reflected in context of latest situation happening in the world. Within this period, businesses have struggled to adapt to the "new normal" and were forced to quickly find solutions to maintain profitability. This thesis represents how travelers have reacted to the change in rather unusual situation in the world.

This analysis can be used by the hotels as a base for the further research in customer satisfaction with technologies in hotel services. Taking this research as a basis, hotels can start implementing technologies in their services step by step to earn trust among customers, improve customer satisfaction and customer journey within the hotel industry.

Keywords
Covid-19, Hotel services, Customer travel behavior, Technological evolution, Customer satisfaction

Contents

1   Introduction

The beginning of 2020 has brought severe changes in the world due to Covid-19 Pandemic. The virus has spread all over the world forcing countries to implement various measures to secure safety and health of population. Situation in the world tremendously changed and affected all areas of people's everyday life, forcing people to avoid crowds, follow the curfews and avoid travelling. Naturally, people were caused by fear of the unknown and fear for their safety and health, hence the customer behaviour and values have excessively changed from the usual within very short period of time.

Restriction of mobility has significantly affected one of the largest economic sectors – tourism and hospitality industry. Hospitality industry was struggling with dramatic loss of customers and hence loss of revenue, so that many businesses were even forced to cease their operations since they couldn't adapt to the "new normal". Due to fast-changing situation, businesses needed to find the solution that would correspond the new regulations and safety measures, while still offering services to their customers. While some businesses shifted to remote work, reduced hours of operation, implemented social distancing measures, none of those methods could ensure providing quality services at the hotels. So, a lot of hotel businesses turned to one of the most progressing directions being the evolution of technological development. Hotels started implementing technologies in different areas of their services to attract customers and ensure their safety while stay. Technologies implemented at the hotel not only enabled businesses to continue their operations but were supposed to help increase customer satisfaction.

During the Pandemic, people were under constant stress and pressure from the restrictions. As might be expected, customers who have been used to high quality assistance and wide range of services offered by the hotels, would be disappointed having major limitations and poor options of activities that are offered during adaptation period. To help people adapt to changed situation, hotels implemented technological solutions on different steps of customer journey, so that people get satisfied and feel themselves comfortable and safe. In this research the authors wanted to find out how the technological evolution has affected customer satisfaction in hotel industry. As everything has changed after Covid-19, it was interesting for the authors to find out how the pandemic has affected the customer satisfaction standards regarding technology as part of a customer's journey.

As the authors study Tourism and Event Management they are originally interested in tourism and occurrences affecting the industry. Technology is a big part in tourism and events, and it is

changing every day. As tourism and events is a big concept authors wanted to narrow it down to a specific field, hence evolution of technology in hospitality industry. This was both interesting to the authors as well as relevant for the scientific research. Having studied field during bachelor's degree, and applying the knowledge onto the research, it would be beneficial for further development in the hospitality field.

The research consists of literature review, where authors introduce the main concepts used in the thesis; research methodology, where authors discuss the quantitative method used to conduct the research for the thesis and argue for its reliability and validity; results and analysis, where authors discuss the actual results of their research; and lastly, the discussion part, where authors analyse the results and discuss its creditability for the science community. Altogether, this research is structured in a way to help the reader get familiar with the topic to help understand the research scope and analysis and make use of the research for further development in the hotel industry filed.

The topic has been acutely relevant at the time of writing the thesis, so the authors have analysed the existing data related to the phenomenon and found the gap in literature sources. Authors claim that research conducted in this thesis would be relevant and insightful for businesses to analyse their performance and think of the improvements in their services. The aim of this research is to analyse impact of technology evolution on customer satisfaction in hotel business affected by Covid-19 pandemic.

This research is going to answer questions regarding the evolutions of technology such as how has Covid-19 affected the technological development in hotel services and how technological evolution has increased customer satisfaction with services during the Pandemic. So that at the end of the research, the reader can see how the technologies have improved customer satisfaction and can apply the knowledge for further development.

2 Literature review

Literature review aims to provide the reader with background information of the research scope. This section will let reader get acquainted with the definition of hotel industry and its services, customer travel behavior, technological evolution in services and customer satisfaction before and during the Covid-19 Pandemic. It aims to support the reader with getting an idea of key concepts that would be helpful in understanding the research results and its analysis.

2.1 What is hospitality?

For quality research, it is essential to define the key concepts of a research topic to introduce the reader into the topic and provide the fundament to analyze the research. This is what the background information part is dedicated to. To begin with, it is important to differentiate two concepts that are closely correlated with each other and therefore, are often mistaken for each other - Hospitality business and Hotel business. Even though the concepts have similar characteristics, those industries are not exactly the same. This chapter will introduce both concepts, display their differences and define the scope of this particular research.

Hotel business is one segment of the broader industry - Hospitality. While hotels are a critical part of the hospitality industry, they are not the only businesses that make up this sector. The hospitality industry encompasses a broad range of businesses and services that are involved in providing accommodations, food, and other services to customers. This can include hotels, motels, resorts, bed and breakfasts, hostels, and other types of lodging establishments. However, in addition to lodging, the hospitality industry also includes businesses that provide food and beverage services, such as restaurants, cafes, bars, and catering services. Other types of businesses that fall under the umbrella of the hospitality industry include travel and tourism services, event planning and management, and recreational activities such as theme parks, museums, and casinos. (Pandey 2008,8)

While the hotel business is a significant component of the hospitality industry, it is only one part of a much broader and diverse sector that encompasses a wide range of businesses and services. The hospitality industry as a whole is focused on providing high-quality customer service and creating positive experiences for customers, regardless of the specific type of business or service provided. (Wood 2015,3)

It is well known that Hospitality business is considered as one of the major players of the service economy. Annually, this sector makes a huge turnover in the world economy and up until recently has been the largest employer in the world next only to the armed forces. (Ottenbacher & al., 2009,

269) This large and significant sector has just as large a number of services, therefore, when it comes to the definition, it is difficult to put it in a sentence. So, in this chapter we found it important to define the concept of hospitality in order to frame up the further research.

There are many definitions of the hospitality industry, each complementing one another. Cambridge dictionary would define hospitality as "the act of being friendly and welcoming to guests and visitors; food, drink, entertainment, etc. that an organization provides for guests or business partners.". Merriam-Webster Dictionary defines the concept as "hospitable treatment, reception, or disposition; the activity or business of providing services to guests in hotels, restaurants, bars, etc.". Germann Molz and Gibson propose a definition stating that "Hospitality has been one of the most pervasive metaphors within tourism studies, referring on one sense to the commercial project of the tourist industry such as hotels, catering, and tour operation, and in another sense, to the social interactions between local people and tourists, that is, hosts and guests.". Noticeably, those definitions all have repeating characteristics that provide an overview of what business areas this industry includes and what attitude is expected towards the consumers. Most of the people refer to hospitality as a friendly and welcoming behavior towards the guests, whilst sharing food, drinks, accommodation altogether, or separately. (Kunwar 2017, 56)

The contemporary hospitality industry is enormous and has a large number of services to offer, therefore, it is very competitive. Nowadays, the market of hospitality service is very democratized, in a sense that people can reach whatever service they want and whenever they want it. Getting used to the basic services, people are seeking for more advanced ones that would fascinate them and they expect a very high quality of the services they are using. In this regard, to provide quality services, it is crucial to realize that hospitality involves complex relationships between service providers and consumers. Overall success can depend on interpretation, articulation, and negotiation of identities. Summarizing, Hepple, Kipps and Thompson have argued that hospitality consists of four basic characteristics. Firstly, hospitality is behavior confessed by a host or a guest who is away from home. Secondly, it is interactive in nature and involves personal contact between the provider and receiver. Thirdly, hospitality comprises a blend of tangible and intangible factors. Finally, the host must ensure guest's security, as well as psychological and physiological comfort. (Kunwar 2017, 56)

2.1.1 What is hotel industry?

While both hospitality and hotel industry are concerned with providing customer service and creating positive experiences for customers, there are some key differences between the two. The

first being the range of services. The hospitality industry includes a much wider range of businesses and services than just hotels. For example, restaurants, cafes, bars, catering services, travel and tourism services, event planning and management, and recreational activities such as theme parks and casinos all fall under the hospitality industry umbrella. Even though some of the service can be hosted under one food of the hotel, hospitality services are individual business areas with own structures and practices. Secondly, customer satisfaction: while both hospitality and hotel industry involve customer service, the degree and type of customer interaction can differ. In a hotel industry, customer interaction is typically focused on providing accommodations and related services, while in other hospitality industry businesses like restaurants, bars, and theme parks, customer interaction is more focused on providing food, beverage, and entertainment services. Thirdly, staffing: the staffing needs for a hotel industry can be quite different from other types of hospitality industry. Hotels require front desk staff, housekeeping, maintenance, and other roles specific to lodging accommodations. Other hospitality industry businesses like restaurants and bars may require chefs, servers, bartenders, and other staff with specialized skills (Revfine 2020).

In this research authors are focusing on the hospitality service offered under the roof of Hotel industry. While the hospitality industry is a broad category that encompasses a wide range of businesses and services that are involved in providing accommodations, food, and other services to customers, the hotel industry is a specific segment of the hospitality industry that involves providing accommodation, food, and other services to guests under one roof. Hotel industry is solely concerned with the provision of guest accommodation and related services. Just as hospitality, hotel industry must provide friendly and welcoming behavior towards the guests as well as focus on providing excellent customer service, maintaining the operational and financial aspects of the business.

2.2   Services of Hotel business

The ever booming Global tourism has been a major contributor to the proliferation of the Global hospitality industry by leaps and bounds. Even before the COVID-19 pandemic struck the world, there was corroborative evidence as to a steep shift in the operations of the industry. Things were changing and the industry experienced a major lift because of increased disposable income, a considerable change in lifestyle, ever-evolving travel trends, increased acceptance of the internet, e-commerce, e-banking and an overall increase in the online presence of hotels, tourism institutions and travelers (Newaskar, T. 2022).

The whole area has been rapidly growing and developing with increasing demand of consumers. Dedicated to serve people, the hotel business belongs to service activity. As a common knowledge, hotel is a place where people will stay by paying the prescribed charges for the provided services. Consumers or how they are more commonly referred to in the hotel business "guests", get personal comforts like comfortable logging for any number of days, while often availing other services like dining and enjoying calm and independent stay. Apart from basic accommodation services, guests can often get entertainment, sport facilities, even sightseeing upon the possibilities of the chosen hotel. The unspoken goal that the hotel are trying to reach is to provide the guests the experience of "Home away from Home". (Appannaiah, Raghavan, Reddy, Gopala Krishna 2010, 238-240)

Even before the Covid-19 pandemic, there has been a wide range of services that hotels provided to the guests. As suggested by the authors of Service Management book, those services can be divided into two major categories: Core facilities and Peripheral facilities. The core facilities are the ones that would satisfy the basic needs of guests, while ensuring the comfortable and pleasant stay. Below is listed services that the hotel is offering for their guests:

1) Accommodation is the primary service of the hotel business. The main focus is to provide comfortable and safe accommodation to the guests. Hotels offered various types of rooms, such as standard rooms, deluxe rooms, suites, etc., to meet the different needs and budgets of their guests.

2) Many hotels had in-house restaurants, cafes, and bars that served breakfast, lunch, and dinner. This is something to make the guests stay easier. They don't have to leave the building to get food.

3) Hotels provided daily housekeeping services to ensure that the guest rooms are clean, tidy, and well-maintained. This included changing the bed linens, replenishing the towels and toiletries, and tidying up the room. In addition to the housekeeping and only tidying the room, usually hotels offer laundry services. This provides guests with clean clothes for example for people who are travelling for long periods of time.

4) Front desk being the heart of the hotel, where guests will have their first interaction with the hotel. The hotel's front desk provides various services, such as check-in and check-out, concierge services, arranging transportation, and providing information about local attractions and activities.

5) Most hotels provide the opportunity for guests to park the vehicles in front of or near the hotel to ensure that vehicles are monitored by the hotel staff. This saves the guests from hussle of finding the parking spot in an unknown area, provides guests with a level of safety regarding their property, provides peace of mind and allows them to enjoy the stay without worrying about the vehicle.

Peripheral hotel services refer to the amenities and facilities that a hotel offers to enhance the guest's stay beyond their accommodation.

1) Hotels offer room service and delivery of services directly to the guests rooms upon requests so that guests could order food at any time of the day without leaving their rooms.

2) Some of the hotels offer transporting for the guests to and from the airport or other locations in the area.

3) Many hotels offered fitness centers, wellness facilities, swimming pools, and spa services to help guests relax and stay healthy during their stay.

4) Hotels often had business centers, conference rooms, and meeting spaces for guests who needed to conduct business during their stay or for bigger events.

5) Some hotels provided entertainment options such as live music, cultural shows, or movie screenings to entertain guests during their stay.

These peripheral hotel services are designed to make the guest's stay more comfortable, convenient, and enjoyable, and are often a major factor in choosing a particular hotel. Guests can choose the services among offered by the hotel upon the necessity. (Appannaiah, Raghavan, Reddy, Gopala Krishna 2010, 242-251)

2.3   Customer travelling behavior before versus during Covid-19

Over the years, the hospitality industry, including the hotel industry, has suffered from many crises, including natural disasters, wars, emergencies threatening destination securities, pandemics, and epidemics. Compared to other human-induced and natural disasters, the COVID-19 pandemic is different due to its worldwide ravaging and omnipresent impact on economies and people. The novel coronavirus has severely affected the travel and tourism industry as it has spread to every corner of the globe. The pandemic has significantly affected travel and tourism, with airlines, hotels, restaurants, casinos, cruises, destinations, and internal markets experiencing economic

and environmental consequences. Understanding the impact of COVID-19 on these groups is essential for the recovery of the industries. (Chen, Duan, Ali, Duan, Ryu 2021, 5)

Hotel industry has been an integral part of Tourism industry, providing an accommodation to the guests who are travelling domestically or internationally. Hence, to conduct creditable research for the impact of technology evolution on customer satisfaction in hotel industry affected by Covid-19, it is essential to argue how Covid-19 has affected the overall customer travel behavior around the world. This chapter is dedicated to the research of customer travel behavior before and during Covid-19. This will indicate the patterns that have changed in customer perception of travelling and decision-making process. This knowledge will help to understand the psychology of the customer, form relevant research questions, and conduct a fundamental analysis afterwards.

Being beyond anything experienced previously at such a global scale, Covid-19 has aversively affected domestic and international tourism. In 2020, international tourist arrivals declined by 74%, leading to huge losses in export revenues. In response to changing situation in the world, governments worldwide have implemented measures such as lockdowns, wearing face masks, and travel restrictions to contain the spread of the virus, including severe restrictions and border controls on domestic and international travel. The closure of the tourism and hospitality industry has tremendously affected the customer travel behavior around the world and has resulted in negative social and cultural differences. (Chen, Duan, Ali, Duan, Ryu 2021, 1)

2.3.1 Customer travelling behavior before Covid-19

Before the COVID-19 pandemic, there was a growing demand for travel. There was no limitation in travelling. Travelers were free in destination choices, had no fear nor restriction. Before Covid-19, customer travelling behavior was generally characterized by a high level of mobility and a preference for international travel. Many customers were willing to travel long distances for leisure or business purposes without care in the world. Customers were willing to take longer trips, with many people opting for international travel and multi-city vacations. Before the COVID-19 pandemic, travel decisions were primarily driven by factors such as personal interests, budget, time constraints, and availability of travel options. Many customers were willing to spend significant amounts of money on travel, particularly for international trips or high-end accommodations.

Personal interests played a significant role in travel decisions, with customers often selecting destinations based on their desire to experience a specific culture, cuisine, or natural environment. For example, customers interested in history might choose to visit iconic sites such as the Colosseum in Rome or the Great Wall of China, while those interested in adventure might opt for

activities such as trekking or bungee jumping. Travelers were increasingly seeking out unique and immersive experiences, such as cultural activities, adventure sports, and eco-tourism.

In addition, the rise of technology and social media had a significant impact on customer travelling behavior, as customers increasingly turned to online resources to research and plan their trips. This led to a rise in online booking platforms and personalized travel recommendations based on customer preferences and behaviors. (Abdullah, Dias, Muley, Shahin 2020)

2.3.2 Pre Covid-19 customer preferences in hotels

Before the COVID-19 pandemic, customer travel behavior regarding hotels was diverse and constantly evolving. It varied widely depending on factors such as the purpose of travel, the budget, the length of stay, and the destination.

Several trends were online booking platforms. With the rise of technology, many customers were turning to online booking platforms like Expedia, Booking.com, and TripAdvisor to search for and book hotels. This was due to the convenience of being able to compare prices, read reviews, and make bookings from the comfort of their homes or offices. Focus on luxury and unique experiences was popular as well. Many customers were willing to spend more money on high-end hotels that offered unique experiences such as spa treatments, gourmet dining, and breathtaking views. They were also interested in boutique hotels that provided a more personalized and intimate experience. Customers were looking for hotels that offered a range of amenities and services such as free Wi-Fi, room service, fitness centers, and concierge services. Many customers were loyal to specific hotel chains and would choose them over others when traveling. This was often due to the loyalty rewards programs offered by the hotels, which allowed customers to earn points and redeem them for free nights, upgrades, and other perks. Some customers were spontaneous and would make last-minute bookings, either to take advantage of special deals or simply because they hadn't planned their trip in advance (Dixit 2017).

Overall, customer preferences in hotels before COVID-19 were focused on comfort, cleanliness, location, and value for money. Customers valued hotels that were clean and well-maintained. This included clean and fresh linens, spotless bathrooms, and a clean environment in general. Guests showed their preferences towards hotels with comfortable beds, pillows, and other furnishings just as appreciated additional amenities such as a mini-fridge, microwave, and coffee maker in their rooms. Good customer service was always very much appreciated. Customers appreciated hotels with friendly and helpful staff who were available to answer their questions and provide assistance whenever needed. Location also played important role in decision-making. Customers preferred
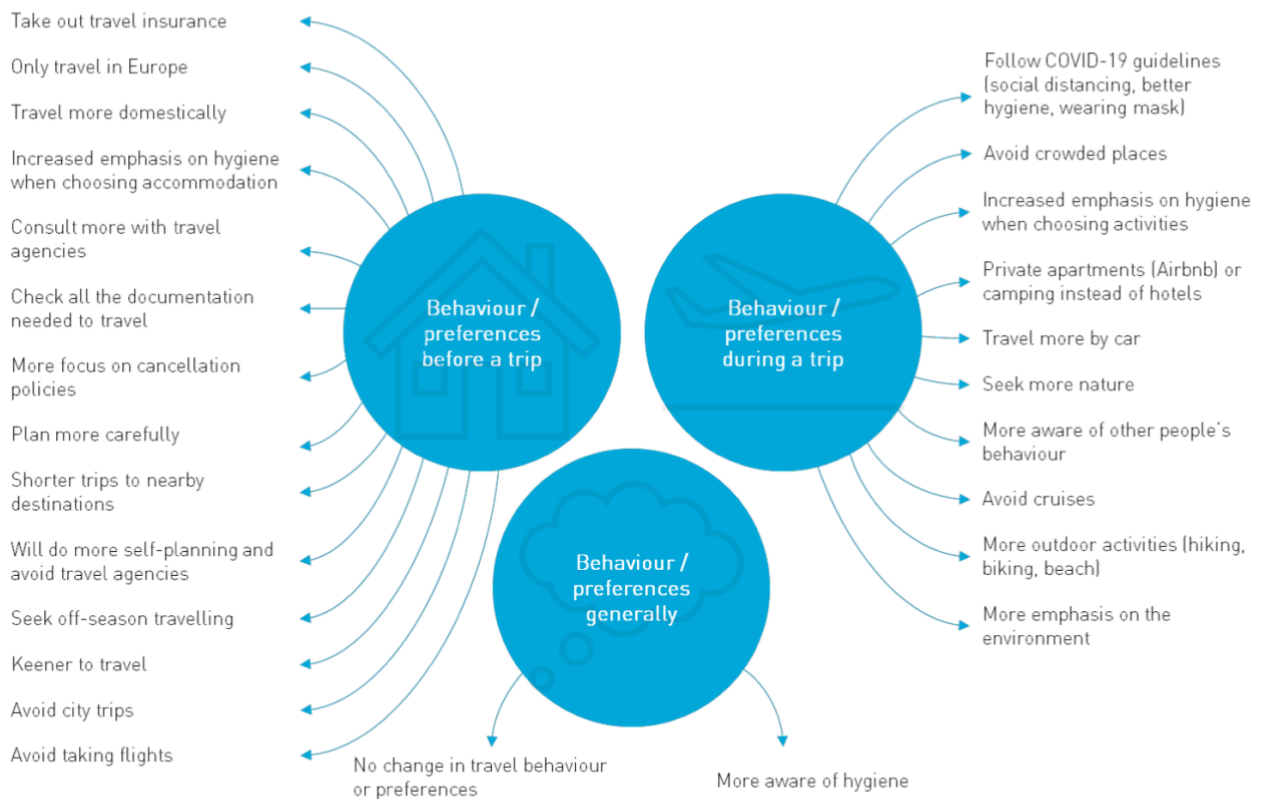
hotels that were conveniently located near tourist attractions, business districts, or public transportation. With constantly evolving services, guests preferred hotels that offered good value for their money. This meant that they were willing to pay a higher price for hotels that provided better amenities and services. (Canina & McQuiddy-Davis 2020)

2.3.3   Customer travelling behavior during Covid-19

The COVID-19 pandemic has resulted in changes to the lifestyles of consumers. It had a significant impact on the way people perceive travel and their behavior as tourists. Many people have canceled or postponed their travel plans due to the pandemic, while others have adopted new travel behaviors to minimize their risk of exposure to the virus. When making travel decisions, tourists have become more careful and have been conducting thorough risk assessments of potential destinations. Risk perception in tourism is defined in various ways by tourism studies, often describing it as anxiety, fear, nervousness, or worry experienced by tourists. The level of risk perception associated with international tourism differs depending on the tourist's role and their preference for familiarity or novelty in the destination. Some tourists may even view the risk as an exciting aspect of tourism, which motivates them to seek out new experiences. (Chen, Duan, Ali, Duan, Ryu 2021, 3)

Nevertheless, the COVID-19 pandemic has significantly affected people's travel choices due to the turbulence it caused. The restrictions that were rapidly changing have challenged the passion for travel, causing more people to opt for nearby destinations and appreciate the excitement of discovering local areas. Despite the challenges caused by the pandemic, when travel restrictions were lifted, not everyone was deterred from venturing out of their countries to enjoy a vacation abroad. There are very different experiences among people who travelled during Covid-19. Some people met more obstacles, such as curfews, restrictions, closed attractions, as well as cancellation policies that were not as adopted to the situation, etc. Meanwhile, other tourists have reported positive feedback. Travelers highlighted that navigation and advice from travel agencies were very useful and also noted that when travelling across the Europe, regulations and sanitary measures were similar to their home countries, which also made it easier to adopt. The Graph 1 below displays the impact of Covid-19 pandemic on travel behavior and considerations according to the research conducted by European Travel Commission:

Graph 6: The COVID-19 impact on travel behaviour/preferences and considerations

Take out travel insurance

Only travel in Europe

Travel more domestically

Increased emphasis on hygiene when choosing accommodation

Consult more with travel agencies

Check all the documentation needed to travel

More focus on cancellation policies

Plan more carefully

Shorter trips to nearby destinations

Will do more self-planning and avoid travel agencies

Seek off-season travelling

Keener to travel

Avoid city trips

Avoid taking flights

Behaviour / preferences before a trip

Behaviour / preferences during a trip

Behaviour / preferences generally

Follow COVID-19 guidelines (social distancing, better hygiene, wearing mask)

Avoid crowded places

Increased emphasis on hygiene when choosing activities

Private apartments (Airbnb) or camping instead of hotels

Travel more by car

Seek more nature

More aware of other people's behaviour

Avoid cruises

More outdoor activities (hiking, biking, beach)

More emphasis on the environment

No change in travel behaviour or preferences

More aware of hygiene

Q: What kind of impact has the pandemic had on your travel behaviour and preferences? Before, during and after a trip? What aspects of your travel do you consider now that you did not consider before the pandemic?

Figure 1. Impact of Covid-19 on travel behavior/preferences and considerations. (European Travel Commission 2022, 24)

Reflecting on the two years of restrictions and analyzing travel experiences during the pandemic, travelers have developed new values and standards toward destinations and travel choices. Not only has this period changed their travel behavior and preferences, but also impacted on what they will consider now in relation to going on a holiday compared to before.

When considering the qualities of tourism offerings that were implemented during the pandemic and which tourists desire to persist in the future, the most frequently cited feature is adaptable cancellation policies, followed by enhanced hygiene standards. Adaptable cancellation policies have been regarded as particularly favorable, primarily because obtaining reimbursement for plane tickets is typically more complicated. Hence, many travel companies have implemented flexible booking policies, allowing customers to change or cancel their travel plans without penalty. This has provided travelers with more peace of mind and has encouraged them to book travel despite the uncertainty caused by the pandemic.

The improved hygiene measures such as the availability of hand sanitizer in public spaces, increased cleaning in hotels, and public transportation are all appreciated measures. Travelers are now more concerned about their health and safety when travelling. The third-largest aspect affected by the pandemic is the need to take out travel insurance. Some travelers have become risk-averse regarding the impact of unforeseen or sudden changes prior to and during their holiday and would like to mitigate a potential financial loss with travel insurance. Due to the pandemic, many travelers are now opting for more secluded destinations and outdoor activities, such as camping, hiking, and road trips. They are also more interested in nature-based experiences, such as wildlife watching and ecotourism. With the pandemic, there has been an increased use of technology for travel-related activities, such as booking, checking in, and accessing travel information. Many customers are also using technology to research and plan their trips, and to stay connected with friends and family while travelling. Overall, the COVID-19 pandemic has had a significant impact on customer travel behavior, with travelers now prioritizing health and safety, and being more cautious about travelling. (European Travel Commission 2022, 23-31)

2.3.4   Customer preferences during Covid-19

The COVID-19 pandemic had a significant impact on the global hotel industry, with hotel occupancy rates dropping to historic lows. According to data from STR, a global hospitality data and analytics firm, the international hotel occupancy rate in 2020 decreased by 63.9% compared to 2019 (STR, 2020).

To survive the crisis, hotels had to quickly adjust to the circumstances and guests' needs to attract guests for using the services. In this changing situation in the world, travelers were fearful. As a result, customer preferences in hotels have also changed due to the pandemic. Here are some of the ways in which customer preferences in hotels have shifted during COVID-19 (Ongsakul, Kajla, Raj, Khoa, Ahmed 2022):

1) Customers now prioritize cleanliness and safety over other factors. They expect hotels to maintain high hygiene standards and implement safety protocols, such as regular cleaning of high-touch surfaces and providing hand sanitizer stations.

2) Customers prefer contactless options for check-in, room service, and payments. Hotels have responded to this by implementing mobile check-ins, keyless entry, and mobile payments.

3) Due to the uncertainty caused by the pandemic, customers prefer hotels with flexible cancellation policies that allow them to change or cancel their reservations without penalty.

4) Customers prefer hotels with outdoor spaces, such as patios, balconies, or rooftop terraces, where they can enjoy fresh air and social distance from other guests.

5) With more guests spending time in their rooms, in-room amenities have become more important. Customers expect hotels to provide high-speed internet, streaming services, and comfortable workspaces.

6) Customers now prefer to stay in hotels that offer local experiences, such as outdoor activities, tours, and food and beverage options that showcase the local culture.

2.4   Technology in hospitality industry

The first modern hotel was built in England in the 1800s. As colonization and global trade increased, people were able to travel longer distances. Despite this, there was only one type of technology available at the most glamorous hotels up until 1894: the telephone at the front desk. Even this required an operator to be able to work. In 1927, radios were introduced to hotel rooms. In the 1900s, leisure travel was a luxury that was available only to the rich. The hotel industry was slowly embracing technology. A real technology revolution was witnessed by hotels in the 1980s and 1990s when the personal computer was introduced followed by the internet (Popat, P. 2021).

With front office operations becoming more important, these systems kept on upgrading themselves by adding modules such as guest profiling, housekeeping, the global Distribution System (GDS) which is a primary reservation tool for travel agents, sales and profits, and revenue management. Hoteliers had to purchase new expensive systems to match the software, and technicians had to upgrade the software. Property management systems (PMS) were offline and not cloud-based until the year 2010. When PMS systems were brought to cloud after 2010, it has since removed the need for on-the-spot installations and assembling. After bringing the PMS systems into the cloud it has enabled operations like accounting, concierge, housekeeping, payment management, etc. to be effortless in the system(Popat, P. 2021)..

Steve Job launched his first iPhone in 2007. This was revolutionary in the evolution of technology. Google was quick to follow as they launched Android OS for phones. After this came apps. To book hotels, airline tickets, etc. before guests were able to book themselves, agents logged in via intranet on their behalf. First time guests were able to book their hotels in the heat of the moment from their own phones. For hotels to be bookable, they had to be on top of their game in terms of the content, offerings, and services (Popat, P. 2021)..

Hotel bookings are no longer the only use of technology in the industry. Innovating and offering travelers a seamless tech experience is what companies are more and more investing in. Contactless check-ins, mobile app-based room service, face recognition-based room door unlocking, and much more have become commonplace since COVID-19. Payment reminders and important information to know before arrival are now preconfigured in the PMS, saving guests time and effort. Many guest questions and concerns are answered by chatbots after office hours, which increases guest satisfaction (Popat, P. 2021).

2.5 Customer satisfaction

The level of guest satisfaction is measured by the level of fulfilment of requests, expectations, and needs, as well as the pleasure derived from the experience. This can and will differ from guest to guest. This can be hard as hotels face rapidly changing guest behaviors, preferences, and expectations. Other similar hotels competing or hotels in the area will also be compared by the service offered in a hotel. Collecting feedback can help measure and optimize hotels performance in a precise way. Sometimes the feedback can be negative, but this is the best way to learn and grow. The reputation of the hotel can be tarnished if unsatisfied guests file complaints and leave bad reviews. It can have a negative impact on the hotels business, and fewer guests can believe that the hotel cannot provide the kind of service that would ensure their satisfaction. However, happy guests are likely to make repeat bookings and recommend the hotel to others, which will lead to growth in the future. By providing unique amenities, personalized touches, and excellent customer service, hotels will attract repeat travelers, word-of-mouth referrals, and positive social media reviews. Hotel reviews are in the hands of the guests as the guests are the ones with expectations (Amadeus Hospitality).

There are a lot of big factors as well as small factors affecting customer satisfaction. Guests start their holiday as soon as they step into a hotel. They greet the staff and wait in the check-in line. Already at this point guests can have a negative feeling of the hotel. If the que is long and the staff does not greet them or a basic lack of staff friendliness. Dirty rooms and housekeeping's slow response are all examples of negative experiences that ultimately affect the guest experience in a hotel. Guests' experiences have been improved and efficiency has increased when self-service check-in is available online, at lobby kiosks or through mobile apps. Streamlining operations through technology will continue to be a long-term objective. The pandemic also prompted hotels to adjust housekeeping protocols, such as eliminating daily housecleaning and turndown services. The reason for this was mainly to minimize guest contact, but it also resulted from scaled-back teams, labor shortages, and longer room service times. As a result, hotels are helping the environment in a small way (Amadeus Hospitality).

3 Research methodology

This chapter is dedicated to research methodology. In particular, it is aiming to describe the scope of this research and data collection method and argue for its relevance for this research. This chapter would introduce how the research was planned and conducted.

3.1 Research scope

This thesis research is dedicated to understanding how hotel industry managed to maintain customers satisfaction with services during Covid-19 pandemic, particularly focusing research on impact of technological evolution on customer experience.

In hotel industry, technologies were implemented on different steps of customer journey. Starting from contactless check-in and check-out, digital menus and room service, air purification systems, enhanced cleaning and disinfection technologies and ending with virtual concierge services or smart technologies within the hotel room that are regulated by guests' smartphones that reduced the need for guests to touch switches and remote controls, minimizing the risk of transmission. Altogether, technologies have played a crucial role in helping hotels to adapt to new normal.

Covid-19 undoubtedly has caused huge number of limitations which forced businesses to reduce the number of provided services and change the approaches. To comply with safety protocols, hotels may have reduced or eliminated certain amenities that guests had come to expect, such as daily housekeeping, room service, fitness centres, and swimming pools. This can lead to dissatisfaction among guests who were looking forward to these services. Many hotels have had to adjust their dining options to comply with local health guidelines, such as reducing capacity in restaurants or only offering grab-and-go options. Hotels may have had to reduce staffing levels or change their service procedures to comply with safety protocols, leading to longer wait times or slower service. Travel restrictions and quarantine requirements have reduced the number of guests visiting hotels, which can lead to reduced staffing levels and limited services. All above listed reasons have contributed to less enjoyable experience and lower guests' satisfaction.

This research is dedicated to analysing customer experience while staying at the hotel during the pandemic and how technologies implemented in the proposed services have improved guests' experience and increased satisfaction.

3.2   Research methodology

It is the purpose of research to advance knowledge by developing scientific theories, concepts, and ideas. In order to accomplish a research purpose, hypotheses are formed, data is collected, analysis is conducted, conclusions are formed and practical applications are developed (DiscoverPhDs, 2020).

To collect data for this research, authors have chosen to conduct Quantitative research. Quantitative research is a process of collecting and analysing numerical data to test the hypotheses and answer research questions. It can be used to find patterns and averages, make predictions, test casual relationships, and generalize to wider population. (Bhandari, What is Quantitative Research? Definition, Uses and methods, 2021) This method is beneficial due to several reasons, such as researchers can get the data from specific target groups, which makes the research more relevant and makes the method more practical, Quantitative research allows researchers to draw general conclusions about a population, based on a representative sample, which increases the external validity of the results and lastly it can involve large sample sizes, which increases the statistical power of the study and allows for more accurate estimates.

The purpose of quantitative research is to attain greater knowledge and understanding of social world. Researchers use quantitative research methods to observe situations or events that affect people. Method produces objective data that can be clearly communicated through statistics and numbers. Quantitative research follows the scientific method in a structured manner. The researchers begin by observing the subject of study and then create a hypothesis. They use deductive reasoning to make predictions about what the data will reveal if the hypothesis is correct. Once data is collected, the researcher analyzes it to either confirm or disprove the hypothesis. (Williams, T. 2021).

3.2.2   Why quantitative is more relevant for this research?

The main objective of this research is to analyse what impact have technologies had on customer satisfaction with hotel services and its development during Covid-19 Pandemic. The study aims to examine behaviour patterns and determine the average customer experiences, providing insights for future improvements and enhancements in customer-focused areas based on the findings. Hence, the data discovered in research must be objective, easily convertible for statistical analysis and of large scale. To achieve desired outcome, it was decided by the authors that quantitative method is the most suitable and relevant research method.

Quantitative method used for ths research allows the authors to collect data on customers travel behaviour petterns during Covid-19 Pandemic and customers' adoptation to increased use of technologies in different areas of the hotel. Larger amount of participants allows to examine the phenomena, draw objective conclusions and find the patterns in the behaviour for better understanding of customer psychology. Since data gained in this research is easily convertible to the statistical this research could be used as a valid base for further research in this area.

3.3   Planning process

Quantitative research has specific structured around the scientific method that must be respected for quality research. The process starts with the observation of situation that falls under scope of investigation. Then, based on observation, researchers form a hypothesis and by using deductive reasoning predict how the data should look like if the hypothesis is true. After collecting and analyzing the data, researchers confirm of reject the theory. This is the overall procedure that authors have been following while planning the research process.

First, authors have made observation about the phenomena. Hotel industry has been suffering from Covid-19 Pandemic. As travel restrictions and lockdowns were put in place to contain the spread of the virus, hotel occupancy rates dropped dramatically. This was unprecedented cause of events because of how faat and how much it has changed the world. Authors then noticed that as part of the solutions for businesses to maintain profitability, they started implementing technologies in their services. Authors gathered data comparing the situation and change in hotel services before and during Covid-19 as well as the impact of technological evolution on customer satisfaction.

Once authors have collected the data, they have formed a hypothesis, that technological evolution has improved the level of customer satisfaction with hotel services during Covid-19 pandemic. Based on the hypothesis, authors have predicted outcomes formulated a plan to test their predictions. Authors formed an opinion that more and more businesses around the world start implementing technologies in their services to improve customer experience. It was stated that technologies affect of business efficiency, competitive advantage, customer experience, and data analysis. Hence, authors suggested that technological evolution in hotel services would improve customer satisfaction, while Covid-19 acting as a catalyst for such development.

3.4 Data collection process

For this research, authors have used survey as a data collection method. Authors used a Google Forms survey to collect data. The survey was done from scratch by the authors. After all of the needed answers were collected the data was analysed later with the help of the theoretical research made before conducting the survey. Google Forms have been chosen by the authors due to its time-proved benefits. Google Forms is a user-friendly platform for both sides: it allows research to easily create surveys and on the other end, it is easy for the recipients to fill in. Altogether, Google Forms has been chosen by the authors for best convenience in data collection and further analysis (Kayode-Sanni, A. 2022).

After choosing the data collecting method it was time to select the target group. The target group for this research were people who travelled during Covid-19 Pandemic and stayed at the hotels during their trip. Authors have equally collected data from both male and female or different ages, as the focus of this research was on overall customer satisfaction with technological evolution during Covid-19, despite the age or gender.

Questions for the survey were divided between three main sections such as general questions about participants and their travelling behavior during Covid-19, questions regarding technological evolution in the hotel services and series of questions regarding customer satisfaction with the services.

Once the survey was created, it was posted on authors social media platforms as well as in a Facebook group called "Thesis / Survey Questionnaire Filling Group". The authors got total of 61 answers for the survey. The survey was up for two weeks, from 9th of March to 24th of March.

3.5 Reliability and validity

Reliability and validity indicate how well the method, the way that the research was made or measures something. Reliability translates to how good is the consistency or the research. Validity translates to how accurately the measures are made (Middleton F. 2019). There are multiple kind of errors that can be made when conducting a research. When reliability and validity are neglected, it can affect the research result. The goal of the authors was to minimize these errors and to conduct as reliable and valid research as possible.

Before conducting the survey, the authors took their time to research the topic. This way the survey results could be analyzed well and profoundly. When it comes to the sources, authors took multiple sources from books as well as from the internet. Thus, the authors would have reliable references from different points of views.

The way that the authors minimized the errors more when conducting a survey were to think about the questions and think about how many questions would be perfect amount for the research. Authors shared the survey before publishing it with different people who were not going to be part of the survey and asked them to check it for them. Authors read it multiple times by themselves and together to ensure that everything was correct. All of the participants were asked to join the survey, no one was forced to answer authors questions or against their own will. No one was harmed during this research either.

4 Research results and analysis

This chapter contains the results and analysis of the research, which was conducted in March through a survey. The survey was launched in authors' social media platforms as well as in a Facebook group.

Findings will be presented in figures with a detailed description. The results will showcase how Covid-19 Pandemic has been a catalyst for technology in the hospitality business and how has it impacted customer satisfaction with services. The number of people who took part in this questionnaire was 61. It is important to note that questions have been divided into sections. Meaning that some questions were opening up depending on recipients' answers, hence some questions have less replies than others.
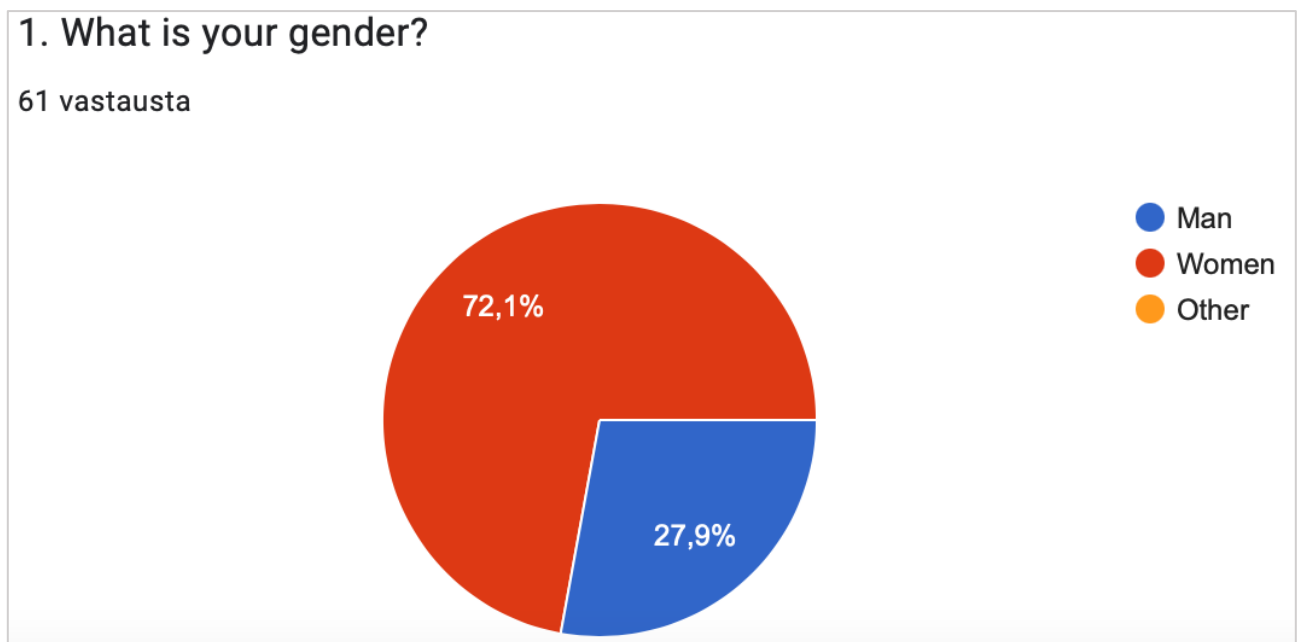
Figure 2. Pie chart displaying gender of participants.

The survey was not focused on gender deviation. Authors have been equally collecting data from both women and men. Altogether, authors have collected 61 responses to the survey. Among them 44 women and 17 men as displayed in Figure 2.
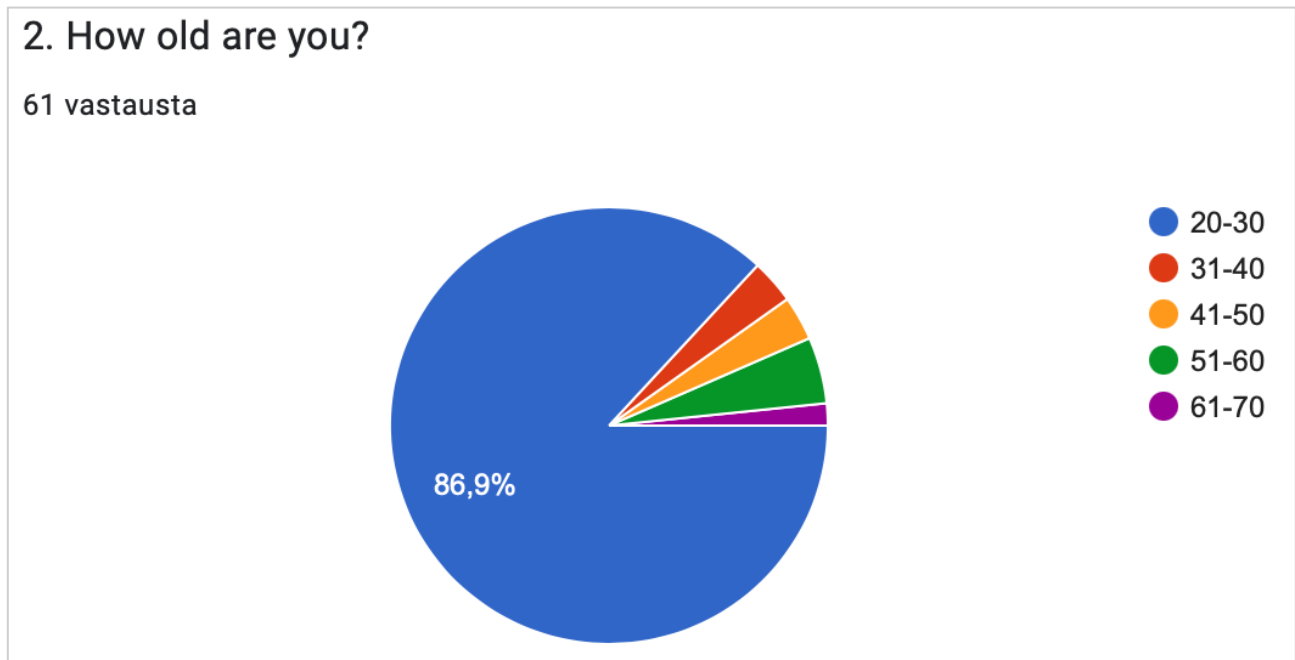
Figure 3. Pie chart displaying age of participants.

As shown in Figure 3, most of the recipients (53/61) were in age range from 20 to 30 years old. Authors have expected the majority of recipients being of Millennian generation and Gen Z due to the choice of research distribution method. Typically, it is those two generations who user social media more proactively. Moreover, it is those two generations who have travelled the most during Covid-19 Pandemic. Hence, the most relevant group for this research.
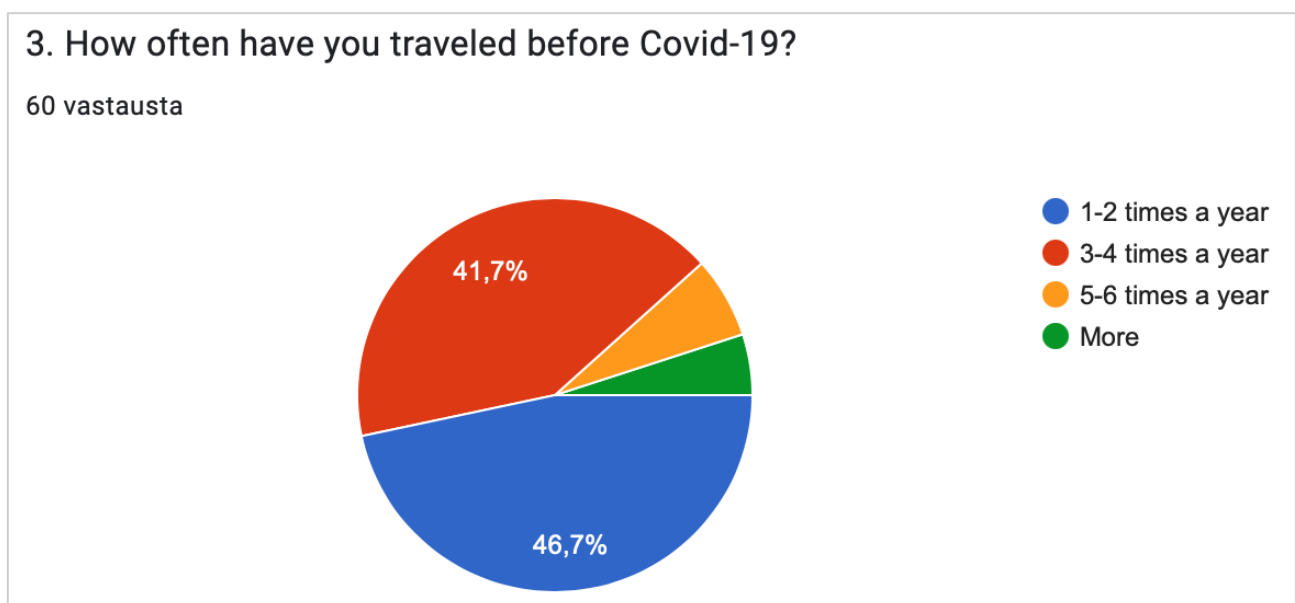

Figure 4. Pie chart displaying travel frequency before Covid-19.

Results in Figure 4 show that the majority of the participants have travelled from 1-4 times a year before Covid-19 Pandemic. 11,7% have travelled 5-6 times a year or more. Before Covid-19 tourists were free in travel choices and had no mobility limitations nor restrictions as much as during the pandemic.
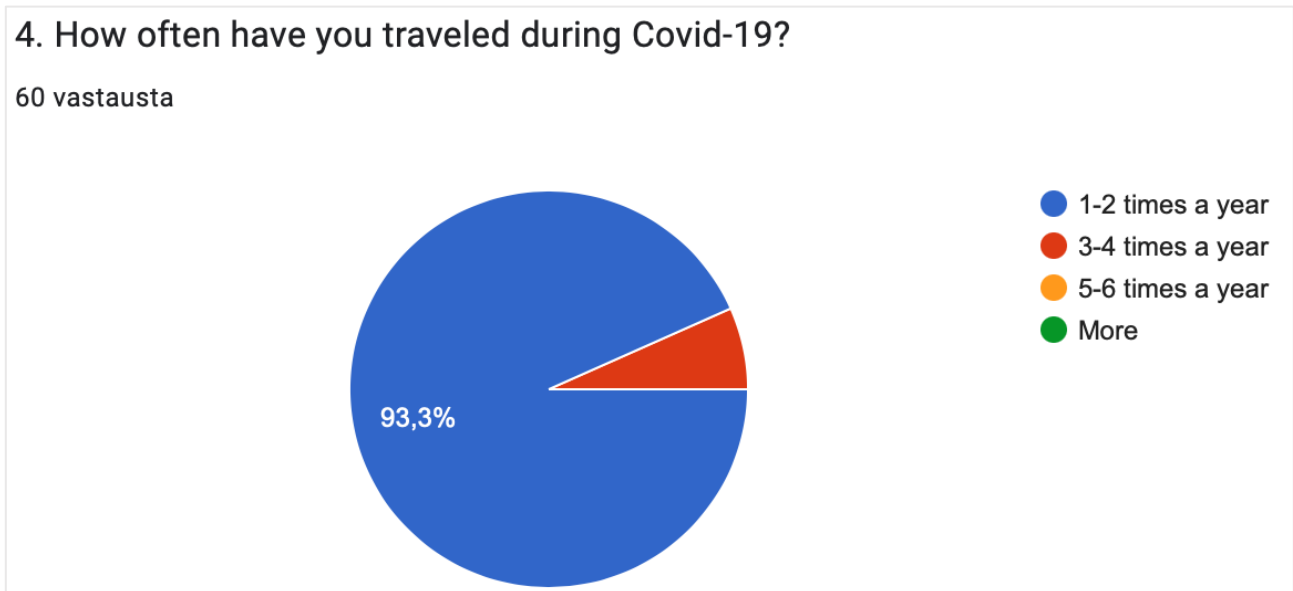
Figure 5. Pie chart displaying travel preferences during Covid-19.

During Covid-19 Pandemic, the situation dramatically changed due to implemented regulations and new safety protocols. In Figure 5 shown that most of the respondents have travelled 1-2 times a year during the pandemic and only four people have travelled 3-4 times. No respondents have travelled more that that. The option of 0 travels was intentionally excluded from this question for validity reasons, as this research is aiming to analyze customer experience during Covid-19 pandemic and reflection towards technology implementation during that time.
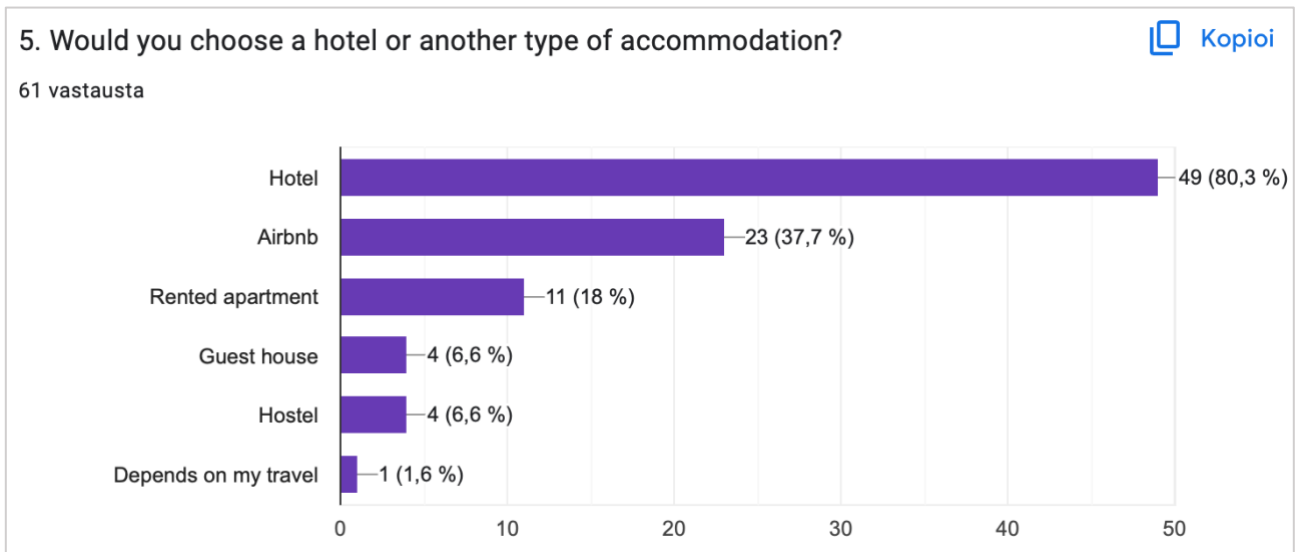
Figure 6. Chart displaying accommodation preferences.

In Figure 6 illustrated that 49 respondents have shown their preferences towards hotels during their trips. Twenty-three respondents have answered they prefer staying in Airbnb, eleven prefer rented apartments, four have chosen guests houses and another four would stay at hostels. Even though, this research is focusing on technologies implemented in hotel services, other types of accommodation also have made improvements to conform to new normal during the pandemic. Hence, authors considered those options relevant for the research.
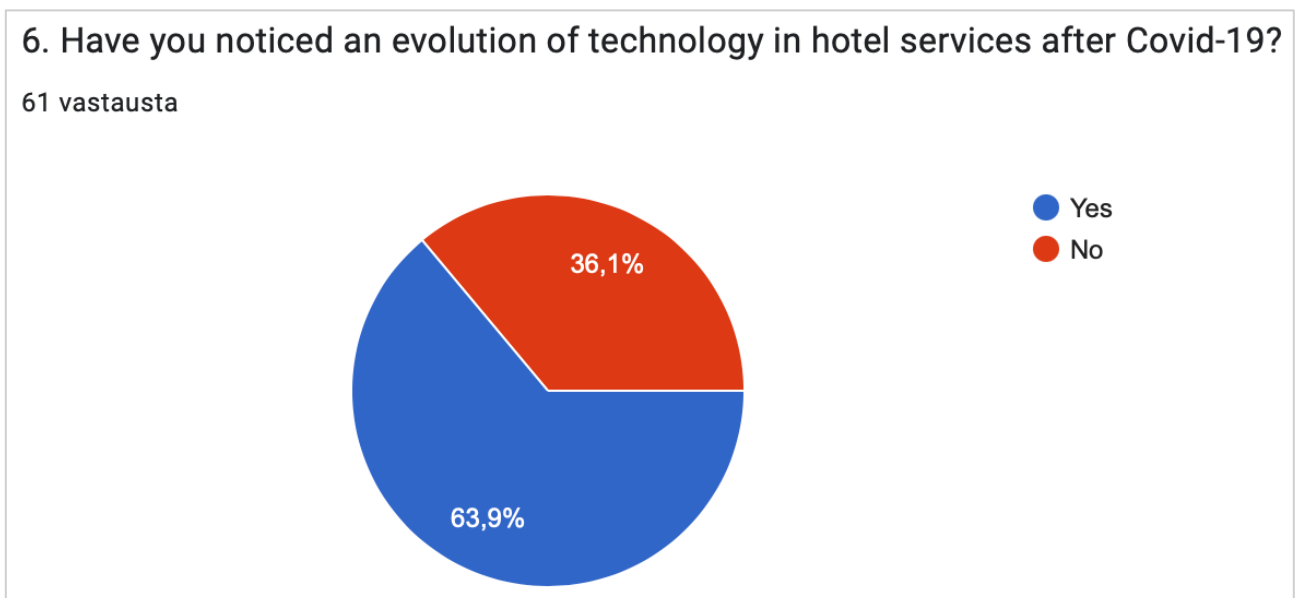
Figure 7. Pie chart displaying opinion towards technological evolution.

This question intended to help authors identify if people have noticed the evolution of technology in hotel services after Covid-19. As displayed in Figure 7, 63,9% or thirty-nine respondents have noticed such evolution. 36,1% or twenty-two respondents have not made such observation.
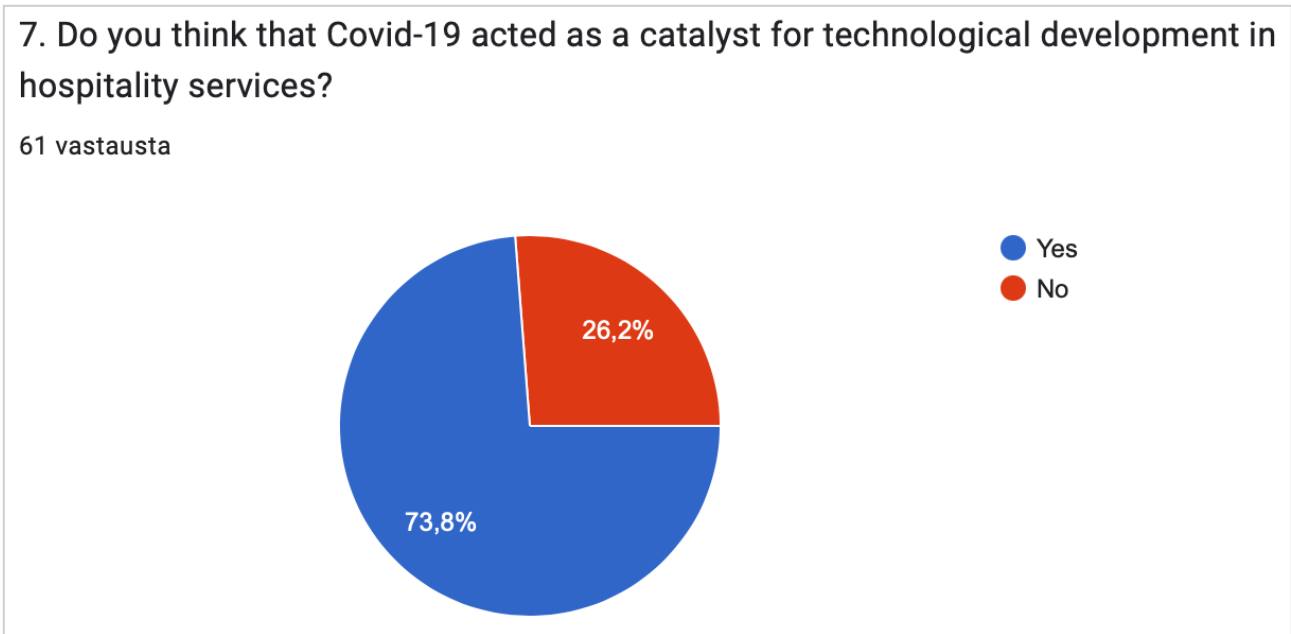

Figure 8. Pie chart displaying opinion toward impact of Covid-19 on technological development.

Nevertheless, figure 8 shows that the majority of respondents think that Covid-19 acted as catalyst for technological development in hospitality services. 73,8% or forty-five respondents agree to that statement and 26,2% or sixteen respondents think that the statement is false.
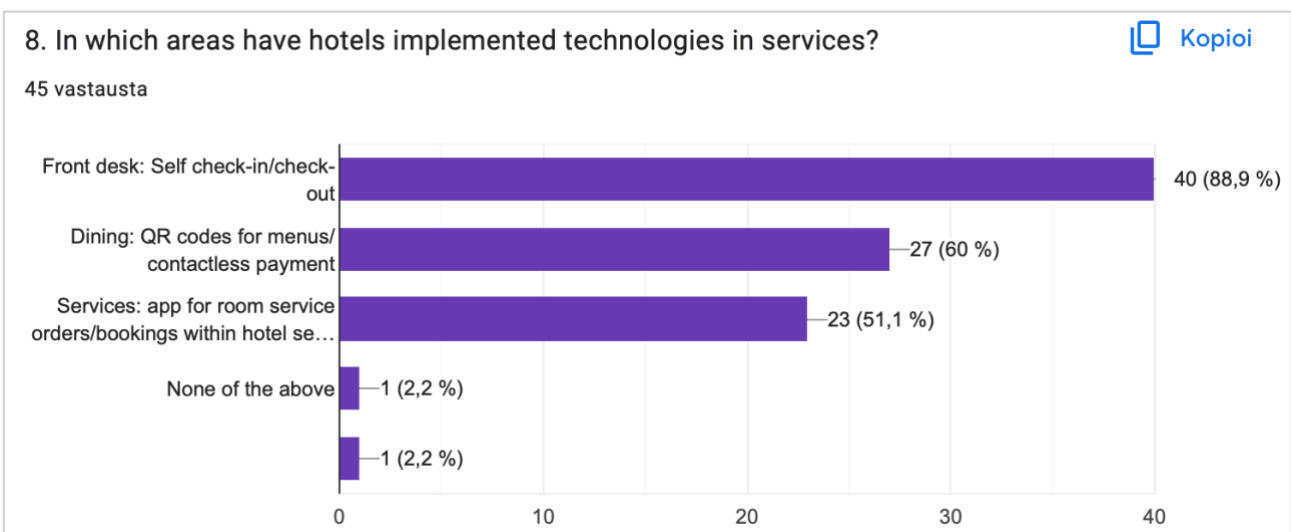
Figure 9. Chart displaying how technologies have been implemented.

Question eight appeared for those respondents who answered "yes" to question seven, hence the number of respondents is lower. Question aimed to analyze how hotels managed to implement technologies in their services within short period of time. Figure 9 shows that among forty-five respondents, 88,9% or forty respondents have used technologies at the Front desk while checking in or checking out. 60% or twenty-seven respondents have used QR coded in dining area., 51,1% or twenty-three respondents have used technologies for hotel services, such as room service orders, bookings within hotel services, wake up calls, taxi orders. One person has not used any of the mentioned services and has not specified any other areas where technologies were implemented.
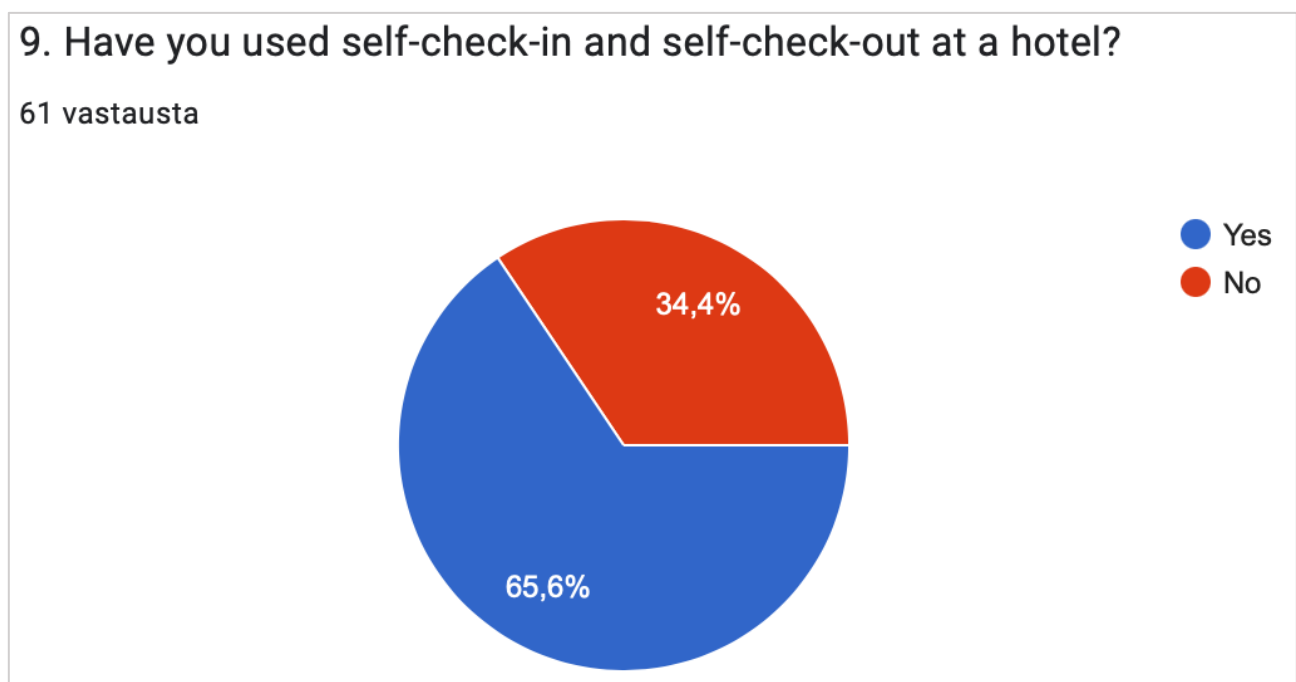

Figure 10. Pie chart displaying how people used self-services in hotel.

Question nine has been distributed to all the respondents to analyze whether hotels implemented one of the most common services during Covid-19 – Self-Check-In and Self-Check-Out. 65,6% (forty respondents) have answered positively to that question, 34,4% (twenty-one respondent) have not used self-services at the front desk.

10. Would you prefer self-check-in/check-out at the hotel over human interaction?

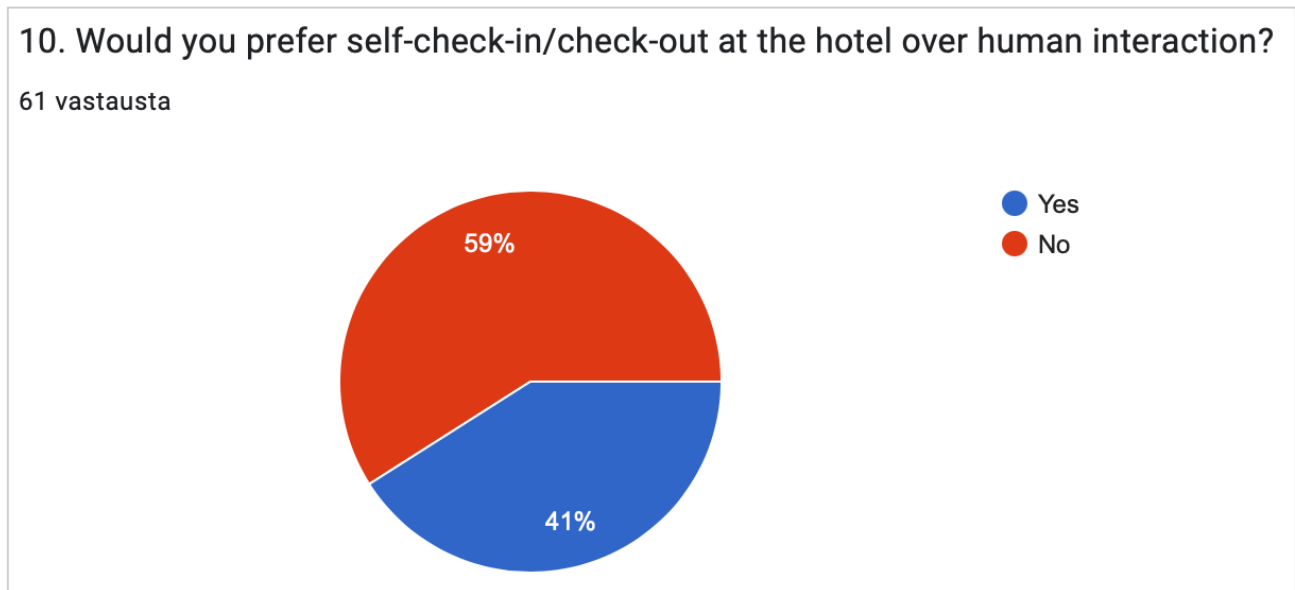61 vastausta

● Yes
● No

59%

41%

Figure 11. Pie chart showing how many participants would prefer self-check-in/self-check-out over a human interaction.

Question ten aimed to help authors understand how people are prepared for changes in hotel services, how much they are willing to accept technologies over human interaction. People opinions have spitted in this question almost half by half. Figure 11 displays that 41% (twenty-five respondents) would prefer self-services over human interaction. Yet, 59% (thirty-six respondents) would still prefer human interaction over self-services.

Question 11 was an open question asking, "Why have you answered yes or no in the previous question?". Authors wanted to know the reasoning behind the answers. Authors got 42 answers and here are some of them listed below:

- sometimes you don't want to talk to people/have anxiety/ want to take your time
- It is nicer to talk to a person and you can ask questions
- When I travel to a new destination I want to learn tips on what i could do during my stay. Front desk is usually the place where I could ask.
- When theres human interaction I feel genuin respect and care from the hotel. Especially if it's and expensive one. Self checks make the hotel seem lazy.
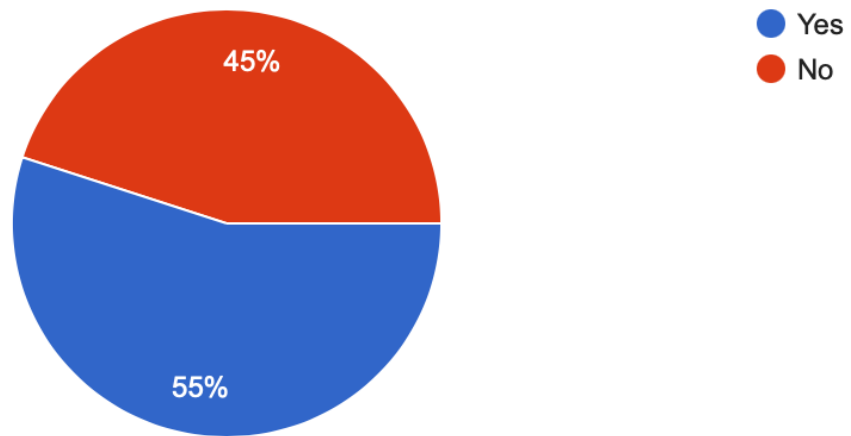- Easy and quick. No waiting in queue

Figure 12. Pie chart showcasing if the hotel offered an opportunity to use an app for the hotel services.

As shown in the figure 12 above, of the sixty participants who answered, thirty-three (55%) answered that they were offered an app to use for the hotel services. The remaining twenty-seven (45%) answered that they were not offered an app for the hotel services. In this question, if the participant answered "yes" they would continue to the next question (Figure 13) but if they answered "no" they would continue the survey from question sixteen (Figure 16).
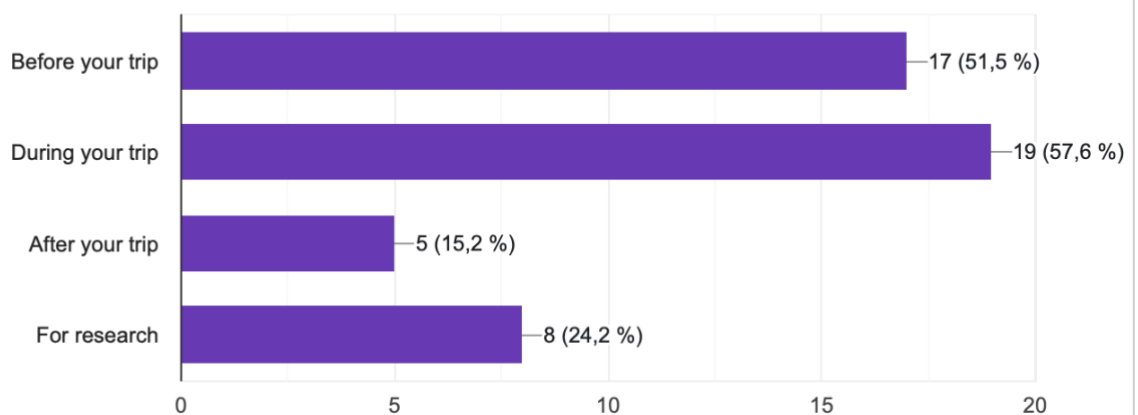

Figure 13. Bar chart showing in what context have the participants used a hotel app.

From questions thirteen until question fifteen participants who had an opportunity to use an app during their stay have answered these questions, hence the low respondence rate. In the figure 13 above is presented when the participants have used the hotel app witch was provided to them. 19 out of 33 answered that they have used the app during the trip. The second most common time to use the app was before the trip.
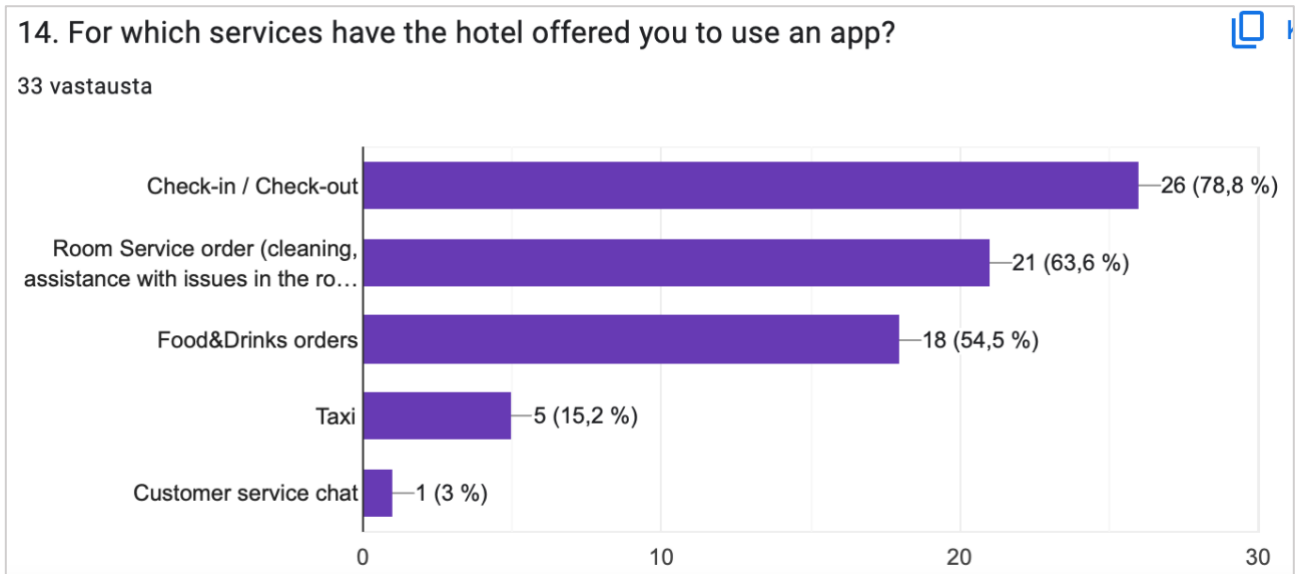

Figure 14. Bar chart showing what services the hotel offered for the participants in the app.

Figure 14 shows that among 33 respondents, 26 participants have used an app to check in and check out. 21 participants have used an app to order room service, 18 participants have used the app for food and drink orders, five have used the app for ordering a taxi and only 1 has used the app for customer service chat.
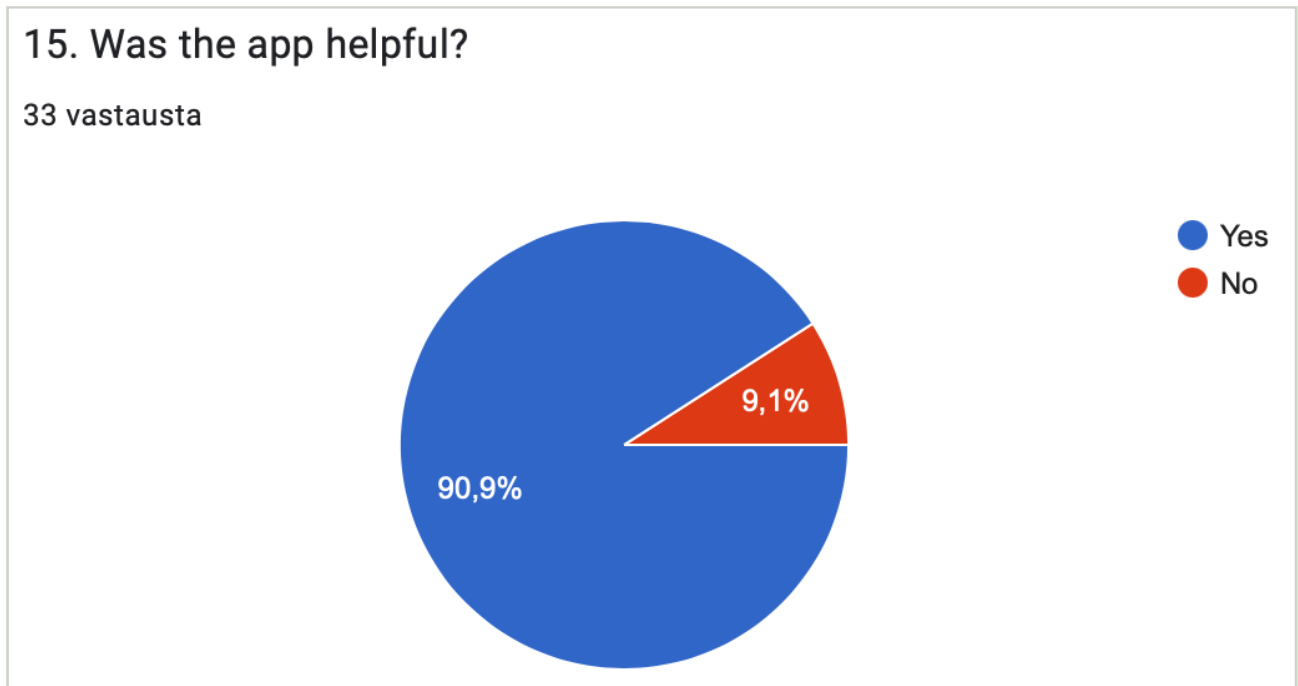
15. Was the app helpful?

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Figure 15. Pie chart showing if the participants thought the app they used was helpful.

Results on the figure 15 shows that over 90% thought that the app that they used for their hotel services during their hotel visit was helpful. Only around 9% did not think that the app was helpful. This shows that the technology has an positive effect on the hotel business.

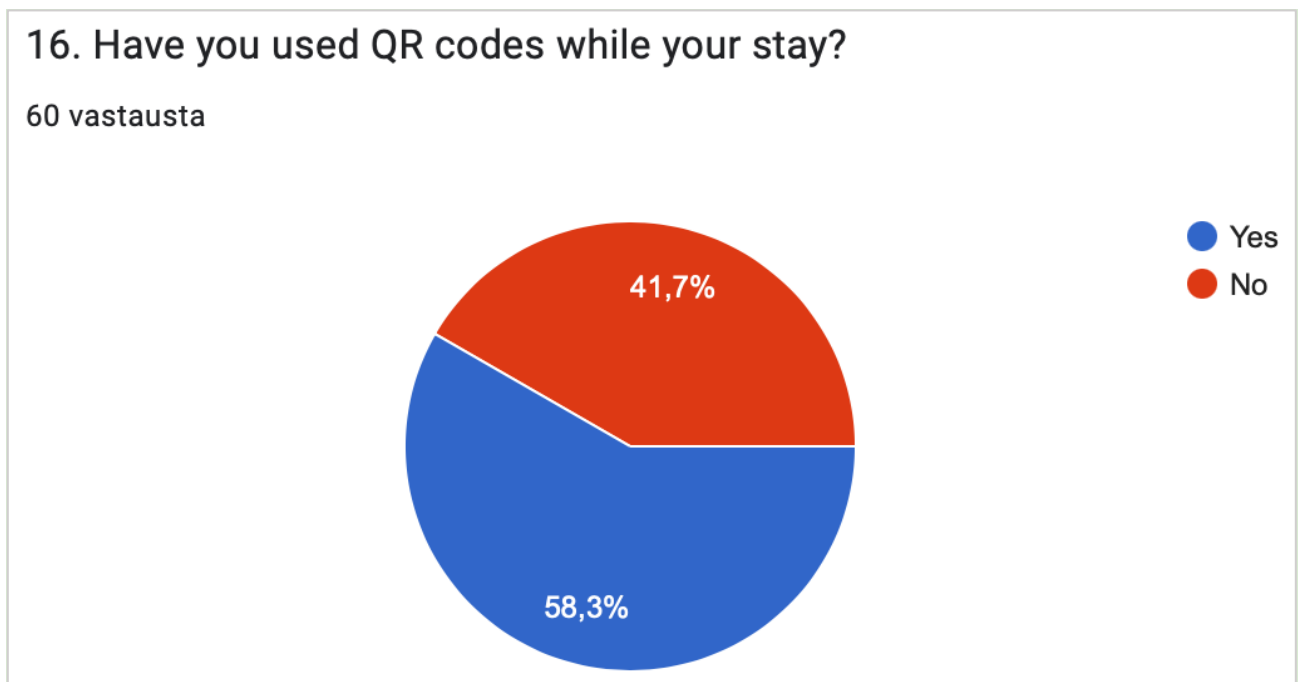## 16. Have you used QR codes while your stay?

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Figure 16. Pie chart illustrating if the participants used QR codes while their stay.

In figure 16 the question was intended to help authors to identify if the participants have used QR codes before. From the 60 participants 35 (58,3%) answered that they have used QR codes while their stay. 25 out of 60 stated that they have not used QR codes during their stay.
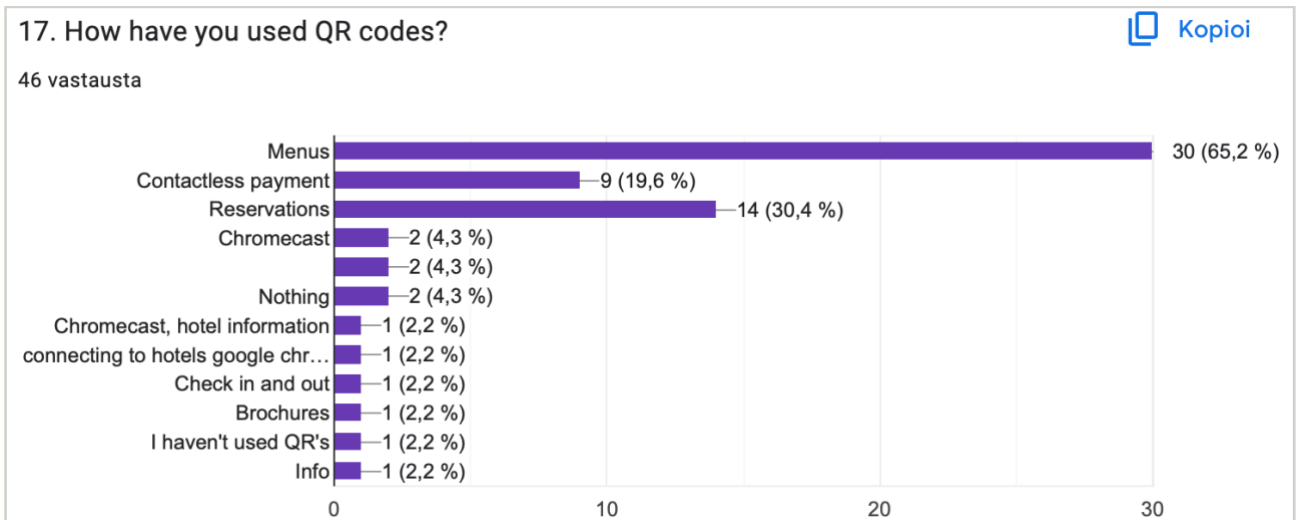

Figure 17. Bar chart showing how the participants have used the QR codes.

As the figure 17 above shows when the participants have used QR codes they have used them the most with menus (65,2%), making reservations (30,4%) and contactless payment (19,6%). Other answers were Chromecast, hotel information and brochures. This question was asked as the authors wanted to know the specific ways that the participants have used QR codes.
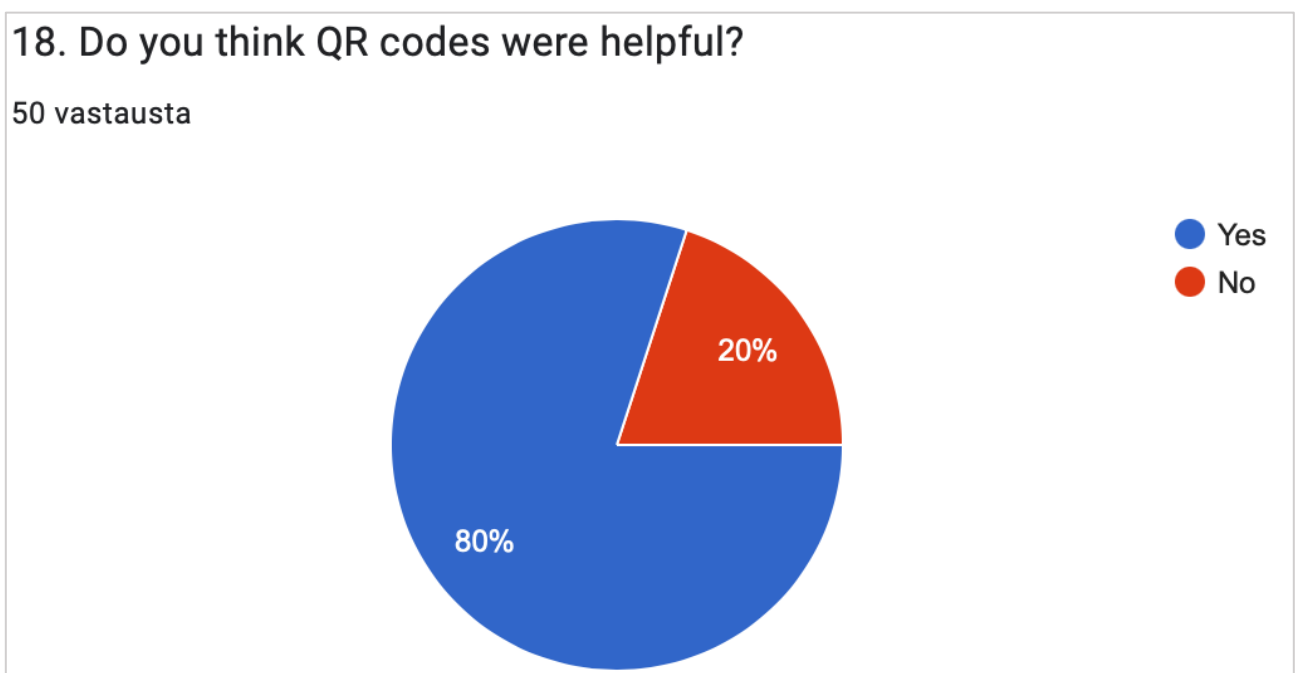

Figure 18. Pie chart showing if the participants thought QR codes were helpful.

When asked if the participants thought that the QR codes were helpful 80% said yes. Only ten out of fifty thought they were not helpful. Seven out of ten participants were women and three out of then were men (Figure 18). This question was asked as the authors wanted to know if the participants thought that the QR codes were helpful.
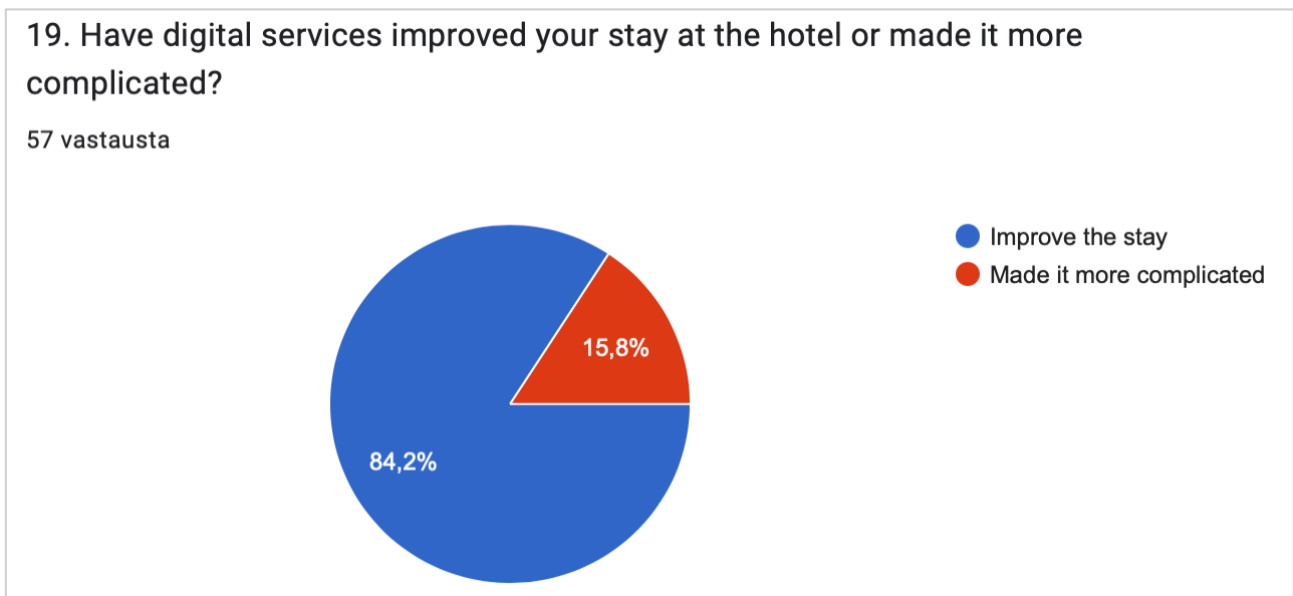

Figure 19. Pie chart showing how many participants thought digital services improved their stay.

As it shows in the figure 19 above, the percentage of the survey participants (84,2%) who think that the digital services improved their stay was much higher than those who think it made it more complicated (15,8%). Nine out of fifty-seven answered that the QR codes did not improve their stay. Five out of nine were women and four out of nine were men.

The two last questions of the survey were open questions. The first one was "How has the technology implemented in hotel services increased your satisfaction?". This question got 25 answers. Below is listed some of them:
- "This has simplified the stay at the hotel. You have easy access to everything you need."
- "Easy and a relief for introverts."
- "Easier and faster to check out."
- "It may be quicker, especially for an airport hotel where you just want to get your and sleep without hassle."

The second and the last question was "Anything else you want to add regarding the topic?". This question was answered by 12 participants. Here are listed some of the answers:

- "Qr codes should be placed all around the hotel if you want people to use it but if you only have a few in selected areas no one is going to use them"
- "It's good to have both option, technology and human contact, for different guest groups. The youth handles technology better and the older generations like human interactions."
- "I see the value in having real workers available at lobbies for example. More options is always help but technology shouldn't be used to replace human connection but to improve on it."

5 Discussion

The discussion part is dedicated to evaluation research results and delving it into meaning, importance, and relevance. The part is divided into five main sections: summary of key findings, authors' interpretations of results, discussion of implications, acknowledgement of limitations, recommendations. (McCombes 2022)

The research question stated in this research was Impact of Technology Evolution on Customer Satisfaction in Hotel Industry Affected by Covid-19. Based on the research question, authors have formed a hypothesis that that technological evolution has improved the level of customer satisfaction with hotel industry during Covid-19 pandemic.

The research has shown that tourist travel behavior has shifted from frequent travelling to trips mainly one to two times a year. Yet, people have traveled, and the majority stated hotel as preferred type of accommodation. Among those who have travelled during the pandemic, more than half of the participants have noticed the evolution of the implementation and evolution in technologies used in services provided by the hotel. Seventy-three percent of the participants claim that Covid-19 acted as a catalyst for such change. Mostly, people were pleased with the technologies implemented in hotel services, the majority's claimed that digital services have improved their stay. It has made the customer journey easier and faster. Yet, the survey has shown that people are not prepared to completely substitute human interaction with the technologies. According to the responses, the main reasons why people would prefer human interactions was that people feel more respected and welcomed at the hotel when they are welcomed by hotel workers and that they find it easier to solve the problem or navigate within destination when communicating with human employees. People are willing to use apps, QR codes and technology in general as they make travelling and hospitality services easier. Although people are using apps and QR codes they prefer human interaction in these situations as well.

Summarizing the key findings of the research, authors have developed an opinion, that overall, technological solutions have helped hotels to survive the Pandemic crisis. People were willing to stay at the hotel and found it easy to navigate within services using digital solutions. Mostly, customers were satisfied with their stay. The struggles that were identified during this research, such as lack of human interaction in case of queries, could be used for further development in areas of technologies. Covid-19 acted as catalyst for the development and with proper analysis of

customer experience and issues, it can be developed more into the place where people could satisfy all their needs and get the service that they desire.

Acknowledging the limitations of the research, authors have identified two things. First, being the distribution of the research, since it was published in authors' social media and one Facebook group. The issue that authors have faced was that the administrators of travel related groups have not allowed to post the survey in their channels. With better distributions, authors could have gathered more insights related to the topic. This way the results and the findings could have been more precise. Second, being language of the survey. Most of the participants were Finnish speaking, English not being their strength. Even though, the survey was conducted in universal language (English), authors admit the possibility that some participants may have struggled to express their opinions in a foreign language.

The relevance of this research is reflected in context of latest situation happening in the world. By the time of writing the thesis, the world just started to recover from the two yearlong Covid-19 Pandemic. Within this period, businesses have struggled to adapt to the "new normal" and were forced to quickly find solutions to maintain profitability. One of the largest areas that was affected by the Covid-19 Pandemic was Tourism and hospitality industry. In a sense of latest event, authors thought that it would be relevant to conduct research to investigate how people reacted to the changes, how they adapted and how this situation has acted as a catalyst for services development towards more technologically advances services. So that the experience would be relevant for businesses to develop their services towards flexibility and better customer satisfaction with the help of technology.

This thesis represents how travelers have reacted to the change in rather unusual situation in the world. This analysis can be used by the hotels as a base for the further research in customer satisfaction with technologies in hotel services. Analyzing peoples' responses, hotels can understand customer expectations, and readiness toward changes and research how to improve customer satisfaction with new possibilities offered by technological evolution. Overall time during the Pandemic has started to mentally prepare customers for the digitalization, so people's expectations would start growing accordingly, hence, this research would be good to review for the hotels who are willing to keep up with the time and develop services to increase customer satisfaction and meet customers' expectations.

6 Conclusion

This research aimed to identify how technological evolution impacted customer satisfaction in hotel industry during Covid-19 pandemic. The main research questions that authors aimed to answer were regarding the evolutions of technology such as how Covid-19 has affected the technological development in hotel services and how technological evolution has increased customer satisfaction with services during the Pandemic. Research topic was inspired by past world situation and correlated with authors' field of studying.

Based on conducted quantitative research, authors found out the answers to stated research questions. Regardless of the participants age and gender, authors got a good coverage of answers. Over 85% of the participants were mainly in their 20s, rest of them being older people in their 30-60s. Authors thought that the age was not as important factor as the focus was more on travel habits of the participants. Within research, authors confirmed that despite the high risks and uncertain situation, people were still willing to travel, although not as often as before Covid-19. The key findings of the research confirmed the hypothesis. Authors found out that most commonly people would prefer hotel over other types of accommodation; over 60% have noticed the evolution of technology in services, mostly in front desk and dining; 59% would prefer human interaction over technologies, even though hotels have offered opportunity to use the apps and QR coded; 90% thought that the app was helpful as well as 80% thought that QR were helpful. Summarizing the key findings, it was discovered that technological evolution has improved the stay at the hotel.

Even though the research showed positive feedback towards technology evolution, some participants stated that they are drawn to the human interaction, although the opportunity to use technologies was offered. Authors came to the conclusion that technology can be part of the customer journey in hospitality services, but not completely replace human interaction. As the change happened so fast, people have had doubts and have little trust towards service opportunities that technologies were to offer. People are not ready for an immediate digitalization of the services; they would need a longer adaptation period to get used to self-service. Taking this research as a basis, hotels can start implementing technologies in their services step by step to earn trust among customers, improve customer satisfaction and customer journey within the hotel industry.

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Appendices

Appendix 1. Research survey questions

Technology as part of customer satisfaction

By answering our questions, you will help us gather information for our thesis. This thesis research is dedicated to researching how technologies affected customer satisfaction during the stay at a hotel after Covid-19. Your participation will help to evaluate how Covid-19 influenced the evolution of technologies in hospitality services.

The survey is going to take a maximum of 5 minutes.

Thank you for answering our questions :)

Kind regards,
Ronja and Nicole

1. What is your gender?

○ Man

○ Women

○ Other

2. How old are you?

○ 20-30

○ 31-40

○ 41-50

○ 51-60

○ 61-70

3. How often have you traveled before Covid-19?

○ 1-2 times a year

○ 3-4 times a year

○ 5-6 times a year

○ More

3. How often have you traveled before Covid-19?

○ 1-2 times a year

○ 3-4 times a year

○ 5-6 times a year

○ More

4. How often have you traveled during Covid-19?

○ 1-2 times a year

○ 3-4 times a year

○ 5-6 times a year

○ More

5. Would you choose a hotel or another type of accommodation?

☐ Hotel

☐ Airbnb

☐ Rented apartment

☐ Guest house

☐ Другое…

6. Have you noticed an evolution of technology in hotel services after Covid-19?

○ Yes

○ No

7. Do you think that Covid-19 acted as a catalyst for technological development in hospitality services?

◯ Yes

◯ No

осле раздела 1   Перейти к следующему разделу   ▾

Раздел 2 из 5

Section 2 out of 5   ⌄
                                                                     ⌃

If you have answered yes to question 7:

---

8. In which areas have hotels implemented technologies in services?

☐ Front desk: Self check-in/check-out

☐ Dining: QR codes for menus/contactless payment

☐ Services: app for room service orders/bookings within hotel services/wake up call/taxi orders

☐ None of the above

☐ Другое… «Other…»

Раздел 3 из 5

Section 3 out of 5

If you have answered No to question 7:

⋮⋮⋮

9. Have you used self-check-in and self-check-out at a hotel?

◯ Yes

◯ No

10. Would you prefer self-check-in/check-out at the hotel over human interaction?

◯ Yes

◯ No

11. Why have you answered yes or no in the previous question?

Развернутый ответ

12. Did a hotel offer you an opportunity to use an app for hotel services?

◯ Yes

◯ No

Раздел 4 из 5

Section 4 out of 5

If you have answered Yes to question 12:

B *I* U 🔗 ≔ ≡ ̶T̶

13. In what context have you used a hotel app...

☐ Before your trip

☐ During your trip

☐ After your trip

☐ For research

...

14. For which services have the hotel offered you to use an app?

☐ Check-in / Check-out

☐ Room Service order (cleaning, assistance with issues in the room or hotel, was up call, etc)

☐ Food&Drinks orders

☐ Taxi

☐ Другое…

15. Was the app helpful?

◯ Yes

◯ No

Раздел 5 из 5

Section 5 out of 5

If you answered No to question 12:

16. Have you used QR codes while your stay?

○ Yes

○ No

17. How have you used QR codes?

☐ Menus

☐ Contactless payment

☐ Reservations

☐ Другое…

18. Do you think QR codes were helpful?

○ Yes

○ No

19. Have digital services improved your stay at the hotel or made it more complicated?

○ Improve the stay

○ Made it more complicated

20. How has the technology implemented in hotel services increased your satisfaction?

Развернутый ответ   «Open anwer»

⋮⋮⋮

Anything else you want to add regarding the topic?

Развернутый ответ   «Open anwer»

Appendix 2. Answers to open questions

11. Why have you answered yes or no in the previous question?

42 ответа «42 answers»

I like people :)

Koska se on usein nopeampaa ja näppärämpää.

Hyvää asiakaspalvelua ei voi saada koneesta.

I like having human interractions over digital

When I travel to a new destination I want to learn tips on what i could do during my stay. Front desk is usually the place where I could ask.

I prefer to talk with staff

I prefer more self-check-in/check-out cause I don't like conversations with strangers

If theres many people checking in it is much esier to do it by self-check in

On pirun ok puhuu ihmisen kans ja sille voi esittää kaikkia toiveita huoneesta, kysyy vinkkejä. Ideoita ohjeita tms. Se on myös osa hotellikokonaisuutta

haluan asioida ihmisten kanssa en tietokoneiden

Because human interaction is super necessary during one's stay at a hotel

When theres human interaction I feel genuin respect and care from the hotel. Especially if it's and expensive one. Self checks make the hotel seem lazy.

Self check in is quicker

Things are easier to handle

Because it is a lot faster and more convenient

Human interaction is the best.

Because I find it smoother that way

So much faster self check in and check out

Things are easier handle

Self check-in on useimmiten nopeampaa. Tosin koen, että saan täydemmän palvelukokemuksen kun menen vastaanoton tiskille kirjautumaan. Joten vastaukseni riippuu siitä että onko kiire/ruuhkaa vai ei

With human will be comfortable

sometimes you don't want to talk to people/have anxiety/ want to take your time

Easier to do on the go, instead of waste time in the lobby.

I don't really like talking to people

It is nicer to talk to a person and you can ask questions

No queues, service is faster, easier

Maybe yes, maybe no. If there is some problems it's easier to interact and get help from real person right away.

I prefer a human communication

Easy and quick. No waiting in queue

I prefer a real conversation and customer encounter with an employee in hospitality business

It's quick and easy

It makes it easier to plan schedules around your other plans since you're not expected at specific times

I feel more comfortable to speak with people or I have an option to ask something from administrator

Prefer human communication

I'm don't always like social contact and the option to still do things like this without forced contact, is great for my introverted self.

No one need to wait for me.

I have a social anxiety

I like to have human interaction

I dont like the machines

Because I don't like to talk to strangers, it makes me nervous.

The front desk is the guest first impression of the hotel, therefore I believe a human interaction is way more important

I want to have human contact

20. How has the technology implemented in hotel services increased your satisfaction?

Easier and faster to check out.

Esim kaikki tärkeä info löytyy tv,ei tarvitse papereita selata

Faster

I prefer to do things myself and I like that technology has developed and makes certain things much easier, like self check-in and menus

This has simplifyed the stay at the hotel. You have easy access to everything you need.

Asiat oli helpompi hoitaa vaa nappia painamalla ilman että tarvii itte liikkua tms. Mihinkää

really haven't used technology otherwise in hotel services.

Easier to have anything on hand (but some qr codes are rubbisssshhhh)

It may be quicker, especially for an airport hotel where you just want to get your and sleep without hassle

Much faster- dont have to queue, i can choose my own language for more convenience and better understanding.

-

Very much

Olen saanut vastauksia nopeammin, apua ja asiat tuntuvat turvallisemmilta kun ne voi hoitaa itse sovelluksella

?

It's really easy to use and reduce human interaction

It made the process more smooth, easier and muuch faster, no need to queue, everything is digital, so can be done on the go, saves a lot of time

helps to easily find information about services and better navigate in hotel

.

It made it faster and easier to handle everything

Yes, cause it was faster to find any options

Easy and a relief for introverts.

I had opportunity to speak with less annoying ppl :)

If it was, I would be more satisfied

Its more quicker

I think it's more convenient and good for me since it makes me nervous when talking to a stranger.

Anything else you want to add regarding the topic?

12 ответов «12 answers»

No

-

Question 13th i would have chosen all three first ones. Why option was to choose only one

Qr codes should be placed all around the hotel if you want people to use it but if you only have a few in selected areas no one is going to use them

No :)

.

I see the value in having real workers available at lobbies for example. More options is always help but technology shouldn't be used to replace human connection but to improve on it

It's good to have both option, technology and human contact, for different guest groups. The youth handles technology better and the older generations like human interactions.

nothing

Nope