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Business Model Reinvention: Impacts of Covid-19 in the Hospitality Business

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ABSTRACT

At the moment, the hospitality business is facing serious challenges due to the COVID-19 pandemic, which is forcing hotels to quickly adapt to a new operational reality. Such adaptation requires the redefinition of the current business models since they are not adequate for the current global scenario. The main goal of this dissertation is to analyse the main impacts of COVID-19 in the hospitality business and to ultimately propose a general reinvented business model, aiming to contribute to the hospitality industry's reinvention in the global scenario. To fulfil these objectives, a literature review was developed, and an in-depth interview was conducted with 14 professionals, who work at different hotels. The interview aimed to assess nine building blocks, all related to the business model implemented by hotels: key partners, activities, resources, value proposition, customer relationship, channels, customer segments, cost structure, and revenue streams. Overall, the obtained results demonstrated that the reinvention of the hotels' business model must include a significant investment in technology and digital communication, since these two dimensions are vital for the industry's growth and evolution, since they provide customers with a sense of trust and confidence towards hotels.

Keywords: hospitality business, business models, digital transformation, COVID-19, pandemic.

JEL: M19, L83

RESUMO

Atualmente, a indústria hoteleira enfrenta sérios desafios devido à pandemia do COVID-19, o que obriga os hotéis a se adaptarem rapidamente a uma nova realidade operacional. Tal adaptação requer uma redefinição dos modelos de negócio atuais, dado que estes não são os mais adequados ao cenário global atual. O principal objetivo desta dissertação é analisar os principais impactos do COVID-19 no negócio da indústria hoteleira e, em última instância, propor um modelo de negócio geral reinventado, com o intuito de contribuir para a reinvenção da indústria hoteleira a nível global. Para cumprir este objetivo foi desenvolvida uma revisão da literatura e realizada uma entrevista com 14 profissionais, os quais trabalham em hotéis distintos. A entrevista objetivou avaliar nove blocos de construção específicos, todos relacionados com os modelos de negócio implementados pelos hotéis em questão, designadamente: principais parcerias, atividades, recursos, proposta de valor, relacionamento com o cliente, canais, segmentos de clientes, estrutura de custos e fluxos de receita. De uma forma geral, os resultados obtidos demonstraram que a reinvenção do modelo de negócio dos hotéis deve incluir um forte investimento em tecnologia e na comunicação digital, visto que estas duas dimensões são vitais para o crescimento e evolução da indústria hoteleira, pois proporcionam um sentimento de confiança e segurança aos clientes dos hotéis.

Palavras-chave: indústria hoteleira, modelos de negócio, transformação digital, COVID-19, pandemia.

JEL: M19, L83

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List of Acronyms:

BMI	Business Model Innovations
C19	COVID-19
CVP	Customer Value Proposition
HB	Hospitality Business
HI	Hotel Industry
OTA	Online Travel Agency
UNWTO	World Tourism Organization

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I - INTRODUCTION

According to the World Tourism Organization (UNWTO, 2020), over the past decades, the tourism industry has been experiencing an exponential growth and a deepening diversification, which justifies why this specific industry has become one of the fastest-growing economic sectors in the world. The most modern tourism industry is linked to development, also encompassing a growing number of destinations. Thus, the tourism industry has become a key driver for socio-economic progress, surpassing several other economic sectors.

The basis for this exponential growth of the tourism industry is related to the implementation of business models, which consist in a specific tool that organizations use in order to reach and offer value to their customers, including channels, partnerships, and internal activities or resources. Amongst the multiple frameworks of business models, the most popular one is the Business Model Canvas, proposed by Osterwalder (2004), which comprises nine building blocks that refer to the following aspects of a specific company: 1) key partners; 2) key activities; 3) key resources; 4) value proposition; 5) customer relationships; 6) channels; 7) customer segments; 8) cost structure; and 9) revenue streams (Osterwalder & Pigneur, 2010). Overall, these have been the key areas that have been adequately assessed by companies in the tourism sector to achieve such exponential growth.

Nevertheless, in the current digital age, the definition of business models highly depends on technological innovations, especially to adapt to the customers' experience. The concept of digital innovation is fundamental in the tourism and hospitality industries, considering that the current scenario does oblige these industries to use digital technology to keep their competitive advantage. In other words, at the moment is vital for tourism and hospitality companies to use digital technologies to improve their services, their traditional models, and their products and processes, with the main goal of satisfying the customers' more exquisite needs and demands. In sum, the digital era introduces the need to upgrade and adapt the existing business models, especially by implementing digital technologies to attract even more customers and to maintain the exponential growth of the pertaining industry (Ivan, 2020).

At the moment, the hospitality business is facing some serious challenges due to the COVID-19 pandemic, which is affecting the entire world. According to an article published in The New York Times (Firshein, 2020, par. 4), "the coronavirus outbreak has cost hotels in the United States more than \$23 billion in room revenue since mid-February". As a matter of fact, this new pandemic crisis has been forcing hotels to quickly adapt to a new operational reality,

which comprehends a reshape and redefinition of their processes and communication strategies in order to innovate in terms of the customers' experience. Therefore, these adaptations truly require the redefinition and a new design in terms of the adopted business models, considering that the previously implemented ones are not up to date. The COVID-19 pandemic has significantly impacted the hospitality business, and the tourism industry in a broader sense, which emphasizes the need and urgency to implement redesigned and innovative business models, with the goal of resuming the previous exponential growth of the tourism industry.

The present dissertation focuses on the analysis of the main impacts of COVID-19 in the hospitality business, namely in terms of the necessary business model reinvention. Another main objective of the present study is to analyse the influence that COVID-19 has had in the hospitality business, especially in hotels. Moreover, the research also intends to identify the main changes that hotels had to implement to adapt their business in the current pandemic context, basically referring to a reinvention of their business models. The goal is to present a general business model, more precisely a post-COVID-19 business model, with the main aim of contributing to the hospitality industry's reinvention in the global scenario. Hence, the research question that is going to be explored throughout the present dissertation is *How was the business model of hotels reinvented after COVID-19?*

The qualitative technique that will be used to collect the primary data refers to in-depth interviews, which assume a conversational mode with the aim of reconstructing the participants' experiences and reality. The sample of the study is composed of 14 interviewees who work at different hotels, providing different insights according to their own reality. Most of them were selected to the present study due to the fact that they were mentioned in the researcher's network contacts, hence being considered as valid participants to the study.

Regarding the structure of this dissertations, and after this introductory chapter, a literature review is presented, being based on the analysis of the concepts of the hotel industry, business models, digital transformation, impacts of COVID-19, and digital transformation impacts on business model redefinition. Then, in the methodology chapter, the research objectives and questions are revealed in more detail, as well as the research approach, the data collection procedures, and the qualitative data analysis approach. Afterwards, in the chapter dedicated to the data analysis the obtained results are presented and adequately analysed, being confronted with the existing literature. The final chapters refer to the main conclusions of the study, to the list of references, and to the appendices that were elaborated by the author of the dissertation.

II - LITERATURE REVIEW

2.1 Hotel industry

2.1.1. Hotel industry definition

The hotel industry involves all of the tourism entities that provide accommodation for customers and other services for tourist consumption, being organized in a wide variety of forms and companies with the main goal of satisfying both the wishes and needs of customers, while simultaneously achieving a specific set of economic goals. The hotel industry is an extremely important driver for economic growth and development, being linked to several other economic activities, such as transport, tourism agencies, and trade. However, this industry is classified according to the hotel's facility, location, organization structure, business, and business policy, namely according to the following categories:

- 1) Accommodation services, which are provided by the hotel accommodation units (apartments and/or rooms);
- 2) Food and beverage services, depending on the type and category of the hotel, being provided in the hotel's dining rooms, lounges, breakfast rooms, cocktail bars, and through room service;
- 3) Sports and recreation services, namely by providing the access to pools, golf courts, tennis courts, gyms, jogging paths, and by hosting several events;
- 4) Cultural and entertainment services, such as concerts, exhibitions, and conferences;
- 5) Merchant services, associated with the opportunity of customers buying souvenirs and personal necessities;
- 6) Trades and services, often related to nail salons, hairdressers, beauticians, and photographers;
- 7) Health and other services, mainly related to rehabilitation, treatment, and diagnosis (Batinić, 2016).

Lastly, it is important to mention that the hotel industry is complemented by other services and operation providers, directly related to travel agencies, tourism organizations, marketing organizations, transportation services, convention centres, information services, catering organizations, among others. Therefore, the hotel industry is influenced by multiple services and companies, which all contribute to the industry's success and exponential growth (Batinić, 2016).

2.1.2. Overview of the hotel business in Portugal

Over the last 20 years, Portugal has been significantly improving its tourism sector to get to the desired economic and growth results. Since 2011, the Portuguese tourism sector has grown more than 10%, mainly due to its tourism strategy based on government stability and media coverage. In 2017, the Portuguese Tourism Minister announced the construction of 40 new hotels, as well as the restoration of 30 historic buildings (convents and palaces) with the main goal of converting them into hotels. Between the years of 2010 and 2016, the number of international tourists increased up to 67% and the level of tourism increase up to 40%. In 2019, Portugal received more than 21 million tourists, generating employment for more than 1,15 million people (Horwath HTL, 2019).

Between 2015 and 2018, 256 new hotels were granted licenses, which represents a significant increase in terms of new hotel properties in Portugal, with its hotel inventory growing up to about 24%. In turn, in 2018 Portugal opened 81 new hotels, mainly located in Porto and Lisbon, which consists in the focus of investors and operators' investments. Table 1 presents key statistics in terms of Portugal's tourism offer, referring to data registered in 2018.

Table 1 – Key statistics of the tourism offer in Portugal in 2018 (Horwath HTL, 2019, p. 7)

Tourism offer	Key statistics (2018)
Total chain hotels	336
Total chain rooms	43,069
Average size per chain hotel in rooms	128
Country hotels stock (<i>overall supply</i>)	1,309
Country rooms stock (<i>overall supply</i>)	98,960
Average size per hotel in rooms	76
Chain penetration % by hotels	26%
Chain penetration % by keys	44%
Total number of brands	45
Domestic brands	19
International brands	26
International chain hotels	86
Domestic chain hotels	250
International chain rooms	10,779
Domestic chain rooms	32,290

Finally, it is pertinent to add that 87 new hotels are expected to open soon in Portugal, representing a total of 9.012 new rooms. According to Horwath HTL (2019), Lisbon will receive about 32.3% of these rooms, which will turn the city as one of the major assets in Portugal in terms of the hotel industry. Hotel rooms are expected to increase by 9.9% and hotels by 6.7% in a near future.

2.2. Business models

The concept of business model is fairly recent and has been developing and evolving for the past decade. By analysing the existing literature, it is possible to establish that this concept has a very diversified and wide range, referring to different aspects according to each author. Hence, there is not a general definition of the concept of business model at the moment. For instance, Osterwalder and Pigneur (2010) define business model as the “rationale of how an organization creates, delivers, and captures value” (p. 14). In turn, some other authors claim that a business model consists in the “content, structure, and governance of transactions designed to create value through the exploitation of business opportunities” (Zott & Amit, 2010, p. 214).

According to Chesbrough and Rosenbloom (2002), who present a more detailed definition of the concept, the function of a business model comprehends different aspects, namely:

- 1) To demonstrate the value proposition;
- 2) To identify the market segmentation and the revenue generation;
- 3) To define the structure of the value chain;
- 4) To specify the revenue mechanism;
- 5) To assess the cost structure;
- 6) To clarify the position of the company in the value network;
- 7) And to formulate the competitive strategy.

In addition to these definitions, there are many other proposed by different authors, some of which are summarized in the following table (Table 2). Still, many of the existing definitions of the concept assume that both the value and the customer are particularly important aspects of a business model, establishing some sort of consensus amongst the existing literature. Overall, and based on all of these definitions, the concept of business model refers to a specific tool that an organization must use in order to reach and offer value to their own customers, including partnerships, channels, and internal resources or activities.

Table 2 – Definitions of the concept of business model

Authors	Definition of business model
Hedman and Kalling (2003, p. 49, 52-53)	Business model is a term used to describe the key components of a specific business. That is customers, competitors, offering, activities and organization, resources, supply, and production inputs. It also includes the longitudinal process components to cover the dynamics of the business model over time.
Morris, Schindehutte and Allen (2005, p. 727)	Business model is a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in

	defined markets.
Shafer, Smith and Linder (2005, p. 202)	Business model is a representation of a firm's underlying logic and strategic choices for creating and capturing value within a value network.
Andersson et al. (2006, p. 1)	Business models are created to make clear who the business actors are in a business case and how to make their relation explicit. Relations in a business model are formulated in terms of values that are exchanged between the actors.
Teece (2010, p. 173)	Business model defines how the enterprise creates and delivers value to customers, and then converts payments received to profits.

2.2.1. Frameworks of business models

Considering the different types or frameworks of business models, the most popular one is definitely the Business Model Canvas, proposed by Osterwalder (2004) and based on nine building blocks. However, and in addition to this specific business model, there are a lot of other relevant frameworks that are worth to be mentioned and studied, which will be discussed in the present section of the investigation. The main goal is to highlight the most important aspects of these different frameworks to fully understand their specificities and practical implications to the businesses in general.

Throughout the last two decades, several business models frameworks have been designed and developed, all of them covering distinct aspects and components, despite sharing some base assumptions and propositions. Amongst some of their similarities, it is noteworthy to mention the fact that they all demonstrate how companies create and capture value (Fielt, 2014). According to the same author, all business model frameworks intend to address the essential aspects that constitute a business model, such as components, questions, building blocks or functions, as well as the existing relationships between each of them.

2.2.1.1. Framework of Hamel (2000)

Hamel (2000) proposed a general business model framework that comprehends four main components, more precisely: the core strategy, the strategic resources, the value network, and the customer interface. In more detail, the core strategy is what defines the general business mission, despite also demonstrating the markets, the segments and the products of the business, which elucidates about the existing competition and explains what truly differentiates a company when compared to its competitors. The strategic resources refer to the set of skills, capabilities, and knowledge of the company, as well as to its strategic assets and core process.

The customer interface is related to the explanation of how the company reaches its customers, provides all the customers' insights, and allows the interaction between the company and its customers. The value network, which is the last main component of the business model proposed by Hamel (2000), shows the network of the company, composed by partners, suppliers and coalitions, who are related to each other through three specific connections, as it is shown in Figure 1.

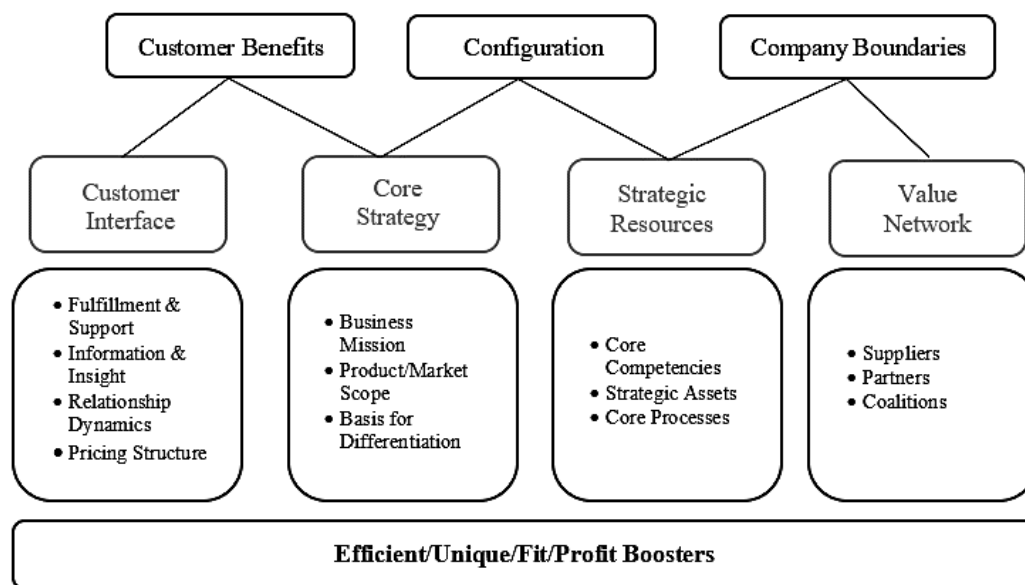


Figure 1 – Business model framework proposed by Hamel (2000)

As it is demonstrated in Figure 1, the four main components of the business model framework proposed by Hamel (2000) are all connected to each other through three specific connections: 1) customer benefits; 2) configuration; and 3) company boundaries. The customer interface is connected to the core strategy through the customer benefits, which shows the actual benefits that are provided to customers by the company. In turn, the core strategy is connected to the strategic resources through the configuration, which demonstrates how the strategy of the company is supported by a unique combination of assets, competencies, and processes of the company. Lastly, the strategic resources are connected to the value network through the company boundaries, which shows how the company's strategic decisions are converted into the value network.

2.2.1.2. Framework of Morris et al. (2005)

Morris et al. (2005) have proposed a strategic framework to conceptualize a value-based venture. Overall, this framework can be used by any company and it allows its users to design, categorize, describe, and analyse a business model. More specifically, the framework proposed

by Morris et al. (2005) is composed by three levels of decision-making, namely: the foundation, the proprietary and the rules levels. In the first level, it is necessary to make some general decisions regarding the definition of the business (what it is and what it is not); in the second level, users can develop several variables, which result from the marketplace advantage and from the value that is eventually created; in the last level, the rules are created in order to guide users in the previous levels of the business model. Nevertheless, these three levels are further divided into six key decision areas, which refer to specific key questions that are summarized in Table 3.

Table 3 – Summary of the key questions and components of the three levels of the business model proposed by Morris et al. (2005)

Levels	Key questions	Components
Foundation	How will the company create value?	Factors related to offering
	For whom will the company create value?	Market factors
	What is the company's internal source of advantage?	Internal capability factors
	How will the company position itself in the market?	Competitive strategy factors
	How will the company make money?	Economic factors
	What is the entrepreneur's time, scope, and size ambitions?	Personal/investor factors
Proprietary	The unique combination of all these components allows the creation of the value and the achievement of the competitive advantage by the company.	
Rules	Creation of guidelines and operating rules to ensure that the foundation and the proprietary elements are adequately converted into strategic actions.	

2.2.1.3. Framework of Johnson, Christensen and Kagermann (2008)

The business model framework proposed by Johnson et al. (2008) is based on four specific elements, which can actually be combined in order to create and deliver value. The first element, and the most important one, is the Customer Value Proposition (CVP), which connects the concepts of customer and of job, as it is pointed out by the authors in the following statement: “The more important the job is to the customer, the lower the level of customer satisfaction with current options for getting the job done, and the better your solution is than existing alternatives at getting the job done (and, of course, the lower the price), the greater the CVP” (Johnson et al., 2008, p. 52). The second element is the profit formula, since it demonstrates how a company can create value for itself and as a direct result of the creation of value to the customer. Essentially, the profit formula combines the revenue model (price*volume), the cost structure (different costs and scale economies), the margin model (the contribution that is

needed to obtain the desired profits), and the resource velocity (the best way to use resources while simultaneously supporting the expected volume). The third element, on the other hand, refers to the key resources, consisting of different kinds of assets that are needed to deliver the proposition to the customers. Finally, the fourth and last element is related to the key processes, namely those that allow the company to deliver value repeatedly and increasingly in terms of scale. Some of these key processes are associated to the training, manufacturing, development, planning, budgeting, sales, planning and service.

In sum, this business model framework is based on the essential elements of any company, which are all interconnected and depend on one another in order for the company to create value, either for itself or for the customers, and to be successful and profitable. Nonetheless, it is noteworthy to mention that any changes that might occur in one specific element also affect the other elements, which emphasizes the interconnection that there is among all of these four elements (Johnson et al., 2008).

2.2.1.4. Framework of Osterwalder and Pigneur (2010)

The business model framework initially proposed by Osterwalder (2004) is probably the most famous framework. Basically, the author tried to present and explain the business model of a company by dividing it into four different areas and nine building blocks (Table 4).

Table 4 – Business model framework proposed by Osterwalder (2004)

Area	Building block	Description
Product	Value proposition	A value proposition is an overall view of a company's bundle of products/services that are of value to the customer.
Customer interface	Target customer	The target customer is a segment of customers a company wants to offer value to.
	Distribution channel	A distribution channel is a means of getting in touch with the customer.
	Relationship	The relationship describes the kind of link a company establishes with the customer.
Infrastructure management	Value configuration	The value configuration describes the arrangement of activities and resources that are necessary to create value for the customer.
	Capability	A capability is the ability to execute a repeatable pattern of actions that is necessary to create value for the customer.
	Partnership	A partnership is a voluntarily initiated cooperative agreement between two or more companies to create value for the customer.
Financial aspects	Cost structure	The cost structure is the representation in money of all the means employed in the business model.
	Revenue model	The revenue model describes the way a company makes money through a variety of revenue flows.

However, this initial framework was later developed by Osterwalder and Pigneur (2010), who suggested a more practical business model framework – the Business Model Canvas (Figure 2) – that allows companies to develop and change business models, and therefore to create, deliver and capture value for their customers.

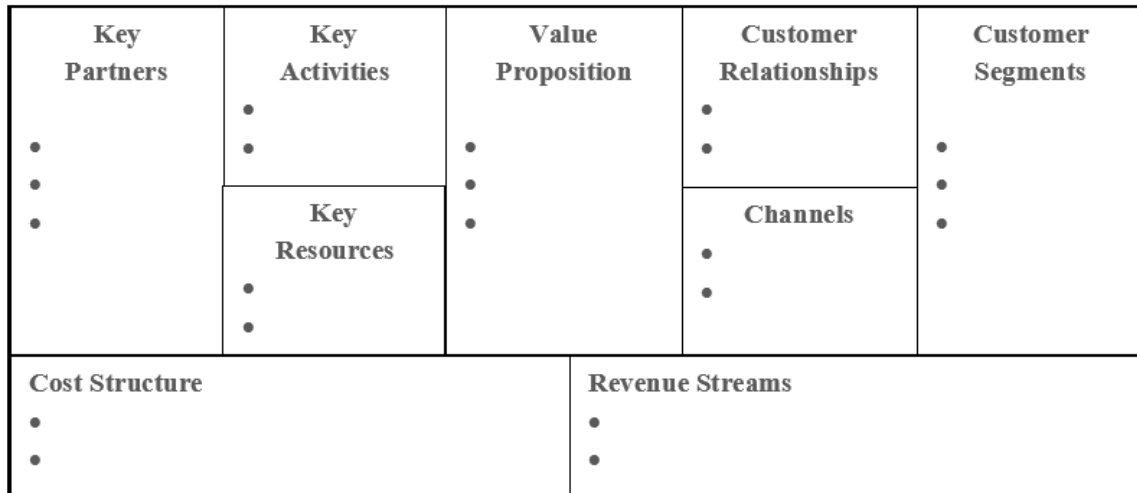


Figure 2 – The Business Model Canvas proposed by Osterwalder and Pigneur (2010)

Based on the previous version of the framework, the Business Model Canvas has nine different building blocks, which refer to the following aspects of the company:

- 1) Key partners: the network of suppliers and partners that make the business model work;
- 2) Key activities: the most important things a company must do in order to make its business model work;
- 3) Key resources: the most important assets that are required to make a business model work;
- 4) Value proposition: the bundle of products/services that create value for a specific customer segment;
- 5) Customer relationships: the types of relationships a company establishes with specific customer segments;
- 6) Channels: how a company communicates with and how it reaches its customer segments in order to deliver a value proposition;
- 7) Customer segments: the different groups of people or organizations that a company aims to reach and serve;
- 8) Cost structure: all costs that are incurred in order to operate a business model;

- 9) Revenue streams: the cash that a company generates from each customer segment (Osterwalder & Pigneur, 2010).

Finally, the Value Proposition Canvas (Figure 3), also proposed by Osterwalder and Pigneur (2010), is related to the Business Model Canvas, even though it explains how a company can create value for its customers. However, this last framework highlights two specific building blocks, the value proposition and the customer segment, helping any company to tackle a core challenge and to create compelling products and services to customers, influencing their intention to acquire such products/services. The customer segment is related to the job that customers want to get done by acquiring the product/service of the company, which can refer either to the needs that they want to satisfy or to the problems that they want to solve. During this process, customers can experience gains and pains. The company, on the other hand, observes all the aspects related to the customers to adequately solve them. Regarding the value proposition, companies can create products and services, aiming to solve the pains and stimulate the gains of the customers.

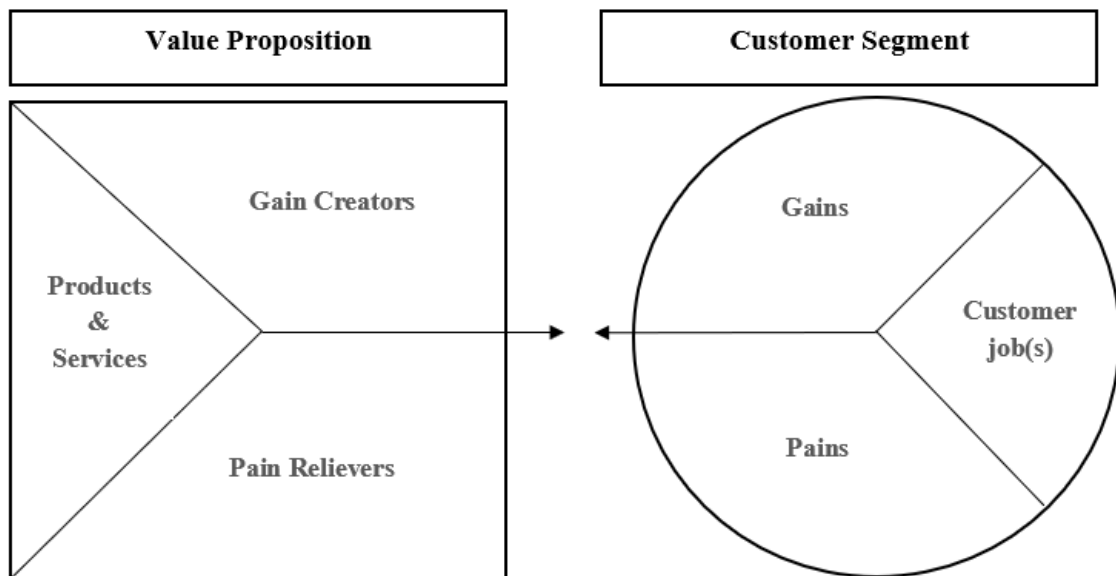


Figure 3 – Value Proposition Canvas proposed by Osterwalder and Pigneur (2010)

2.2.1.5. Framework of Maurya (2010)

Another business model framework that is especially relevant to the Business Model Canvas is the Lean Canvas, the latter being an extension of the former. According to Maurya (2010), the Business Model Canvas deeply missed some important aspects related to higher risks, with no building blocks considering such factor. Therefore, in the Lean Canvas, four building blocks were introduced, substituting four previously established building blocks (Figure 4). Overall,

the Lean Canvas was proposed with the goal of helping companies to better understand arising problems, with the aim of avoiding wastes regarding time, money and efforts when building the products/services. Hence, other aspects that were introduced in this specific framework are related to the solution, how to solve specific problems, the key metrics, the actions that the company needs to develop in order to maintain its advantage, and the unique competitive advantage of the company. Essentially, these elements were all introduced with the aim of substituting the building blocks related to the key partners, the key activities, the customer relationships, and the key resources (Maurya, 2010).

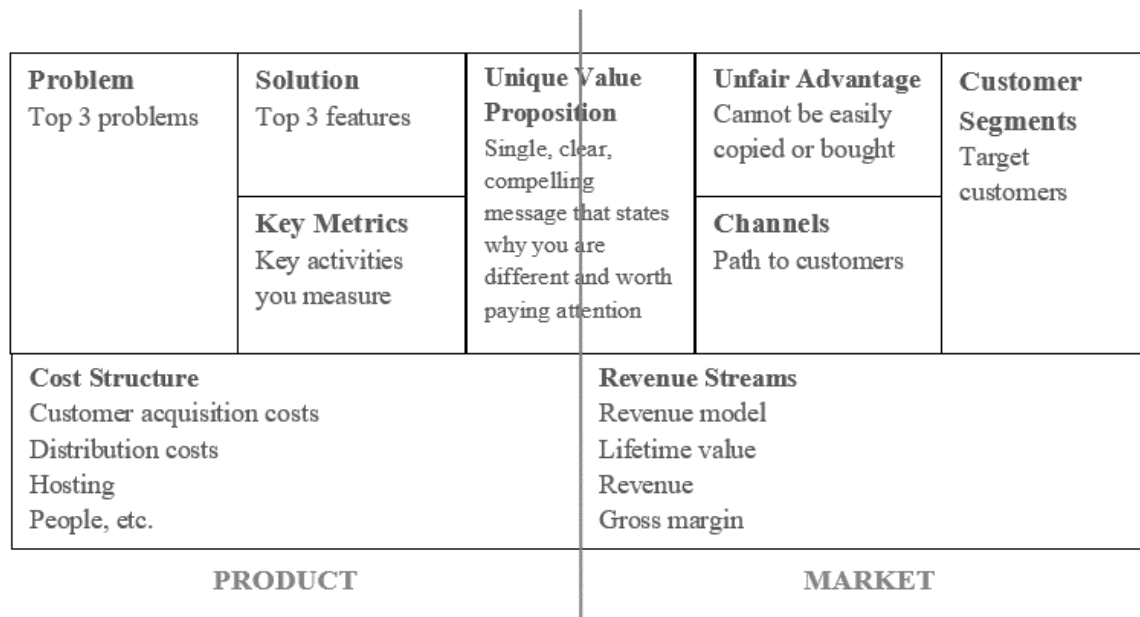


Figure 4 – The Lean Canvas framework proposed by Maurya (2010)

2.2.1.6. Framework of Gassmann, Frankenberger and Csik (2014)

The business model framework proposed by Gassmann et al. (2014) is based on the analysis of four central dimensions, which are considered by the authors as being vital in a business model. More precisely, this business model framework assesses the dimensions related to Who, What, How and the Value. Overall, the dimension related to the Who refers to the people that truly cover the customer; the dimension related to the What refers to the product/service that is offered to the customer (value proposition); the dimension related to the How refers to the building and distribution of the value proposition; and the dimension related to the Value refers to the financial aspect of the business model itself. Hence, this last business model framework proposed by Gassmann et al. (2014) is associated to a magic triangle, which combines all these dimensions as important aspects of a business model (Figure 5).

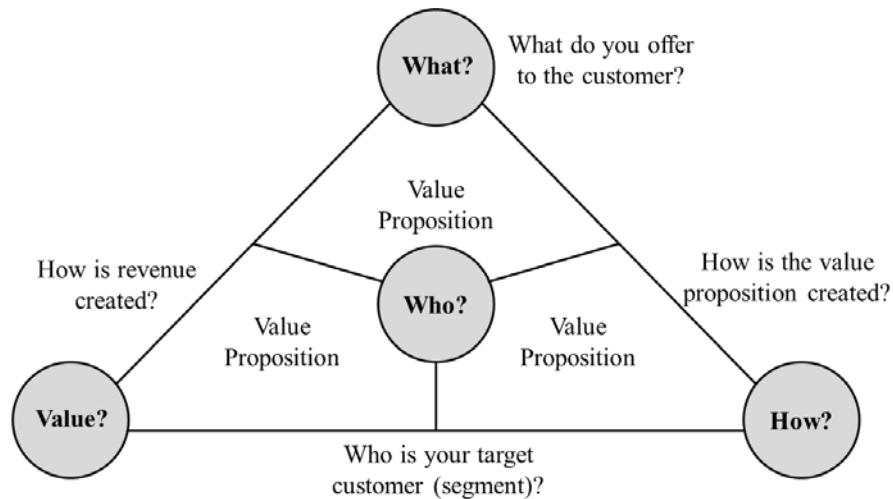


Figure 5 – The Magic Triangle proposed by Gassmann et al. (2014)

In sum, Gassmann et al. (2014) claim that when all four dimensions are put together in the form of the magic triangle, the business model of a company becomes tangible and it can achieve a common ground for rethinking their business. The main strength of this specific framework is related to the fact that this business model combines internal and external factors, hence demonstrating how a company is deeply embedded and interacting with its own environment.

2.2.1.7. Framework of Upward (2016)

The business model proposed by Upward (2016), the Flourishing Business Canvas (Figure 6), is based on the Business Model for Strong Sustainability Ontology and consists in the most radical extension of the Business Model Canvas. Basically, the Flourishing Business Canvas is composed by 16 question blocks, including the nine blocks that integrate the Business Model Canvas, and aims to help companies to become strongly sustainable. The 16 questions' blocks refer to the following aspects:

- 1) Goals;
- 2) Benefits;
- 3) Costs;
- 4) Ecosystem actors;
- 5) Needs;
- 6) Stakeholders;
- 7) Relationships;
- 8) Channels;

- 9) Value co-creations;
- 10) Value co-destruction;
- 11) Governance;
- 12) Partnerships;
- 13) Resources;
- 14) Biophysical stocks;
- 15) Activities;
- 16) Ecosystem services (Upward, 2016).

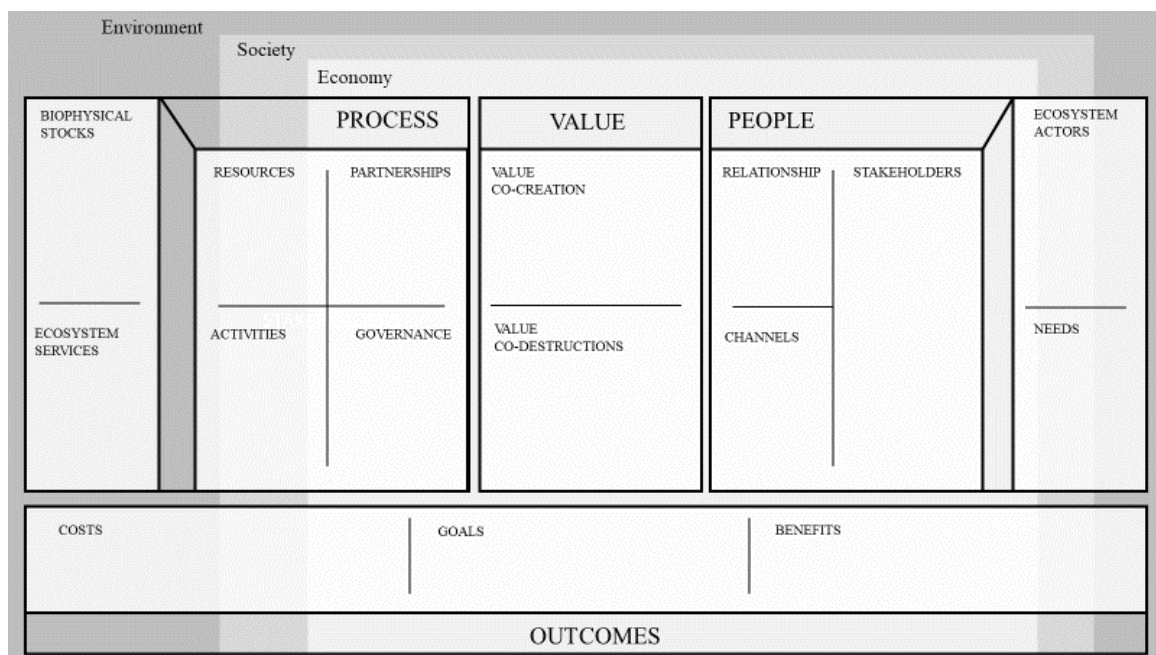


Figure 6 – The Flourishing Business Canvas proposed by Upward (2016)

The benefits of the Flourishing Business Canvas are related to the fact that it presents a list of all of the necessary questions that all stakeholders should answer when developing all their tasks, it requires short answers, and it allows the identification of eventual risks, opportunities and gaps in terms of the business of the company (Upward, 2016).

2.2.2. Business model innovations vs. reinventing business model

According to Mitchell and Coles (2003), the concept of Business Model Innovations (BMIs) refers to “the replacements within the business models that companies make in order to provide product or service offerings to customers and end-users that were not previously available” (p. 17). Regarding this specific concept, Osterwalder and Pigneur (2010) established that in the past several industries were characterized by a dominant business model, even though such a

notion is currently changing in a radical manner. Indeed, at the present different business models compete within the same markets, while the boundaries between the existing industries are blurring. Hence, these authors consider that BMIs are not about benchmarking or copying competitors, but about creating new mechanisms that aim to create value and derive revenues. In other words, BMIs are “about challenging orthodoxies to design original models that meet unsatisfied, new or hidden customer needs” (Osterwalder & Pigneur, 2010, p. 136).

Johnson (2010) claims that BMIs can strongly reshape entire industries and redistribute billions of dollars of values, pointing out the business models that were introduced by Walmart, Amazon and Target, which accounted for 76% of the market capitalization in retail industries by the year of 2007 and resulted in earnings of about \$300 billion of value. Moreover, similar results are shown in other industries, such as in the airline, rental and digital communications industries, which emphasizes the importance of BMIs in the current business environment. However, it is noteworthy to mention that BMIs are especially important in times of instability, given their ability to deliver superior returns, either by defending and protecting a dying core business or by proactively exploring new avenues for growth in any type of industry. As a matter of fact, nowadays technological innovations alone do not ensure high profits for companies, being also necessary to implement an innovative business model for companies to reap advantages from such technological innovations (Lindgardt et al., 2009).

Overall, BMIs are extremely important for researchers, entrepreneurs, and managers due to three main reasons, namely:

- 1) BMIs are frequently an underused source of future value;
- 2) Competitors find more difficult to replicate or copy an entire novel system than a single innovative product/process;
- 3) BMIs are a potentially powerful competitive tool, which is why the competitor's efforts in this specific area must not be undermined (Amit & Zott, 2012).

Regarding the relation between BMIs and competitive advantage, Mitchell and Coles (2003) emphasize that continuing with BMIs actually provides a way to outperform the competition within the market/industry, given the fact that improving the business model will make it difficult for competitors to follow the company's actions, and to copy or replicate its actions, hence creating a competitive advantage for the innovative company. The main goal is to combine the company's activities in a unique/innovative way, aiming to create and deliver more value to customers and to simultaneously capture more value for them, which will

ultimately ensure the company's competitive advantage.

Nonetheless, for BMIs to become a source of competitive advantage the company's business model must be more than just a good logical way of doing business and developing activities. Hence, there are some conditions that business models must fulfil to provide companies with a sustainable competitive advantage, more precisely:

- 1) The business model must meet specific customer needs;
- 2) It must be a non-imitable model in some aspects;
- 3) The company needs to be quite flexible to respond to eventual changes in the business model (Teece, 2010).

Lastly, BMIs' greatest value is related to the fact that they can be implemented to achieve competitive advantages, especially during crisis periods. Indeed, the pertaining literature concludes that many major companies were established during crisis periods, which is the case for Apple, since despite some negative quarters in terms of growth it continues to grow and remains profitable due to the implementation of BMIs in the company's business model (Lindgardt et al., 2009).

On the other hand, the reinvention of business models is solely related to the creation of a new business model, which poses a challenge regarding the best manner to operationalize all important dimensions in order to create such novel business model. Essentially, business model reinvention is based on four distinct dimensions, more precisely:

- 1) Customer sensing, which refers to the ease of acceptance of a new value proposition;
- 2) Technology sensing, which indicates the strength, impact and direction of technology on the new customer value and on the business network;
- 3) Economic/profitability sensing, which indicates the economic feasibility and profitability of the new business model;
- 4) Business infrastructure sensing, which refers to the responsiveness of the traditional business network to reconfigure the new business model (Voelpel, Leibold & Tekie, 2004).

Overall, these four dimensions are quite interactive with each other, flowing like a wheel. Indeed, companies generally seek ways to create customer value propositions with services/products that are innovative and that satisfy the customers' needs. Adequate

technology must be in place within the company, aiming to leverage efficiency and the new customer value. In turn, the business system infrastructure must be adequately configured to enhance the created customer value. At last, all the endeavours that were undertaken must be economically feasible to truly benefit those involved in the entire reinvention process (Voelpel et al., 2004).

2.2.3. Business model for the hotel industry definition

Considering that hotels operate in unique internal and external contexts, it is especially important to understand and follow the strategic management practices. As a matter of fact, hotels share several values with other companies from different industries, even though some of their main characteristics, intrinsic to their own industry, require a different approach in terms of a strategic perspective. The unique characteristics of hotels are essentially related to the following aspects: 1) inseparability of customer participation in the service process; 2) perishability; 3) simultaneity; 4) intangibility; 5) cost structure; 6) heterogeneity; and 7) labour intensity. In other words, and due to the fact that customers are always present and participate in the service delivery of hotels, these companies must pay close attention when designing their operations and marketing strategies, aiming to efficiently communicate with their customers (Okumus et al., 2019).

Regarding the hotels' cost structure, it influences the companies managerial and resource allocation, directly affecting the strategy formulation process, which frequently involves sustainable-oriented strategies and pricing strategies to maintain their profit. Also, hotels are very labour intensive, hence requiring a significant number of employees. Therefore, hotels can only take care of their customers if they firstly take care of their employees, since the latter will strongly participate in the delivery of a unique experience for customers (Okumus et al., 2019).

A business model provides the hotel's method for making money in the current business environment. Hence, it is particularly important to identify an applicable business model when designing and creating a strategy for the hotel. A business model tends to evolve until it adequately matches the hotel's mission and vision, simultaneously demonstrating the hotel's competitive strengths, eliminating its vulnerabilities, and honing its key processes and resources (Johnson, 2018). Moreover, the business model truly provides a deeper insight into the hotel's alignment in terms of its strategies and underlying actions, while supporting its own strategic competitiveness. Table 5 presents a general business model canvas for the hotel industry, being

based on the nine blocks proposed by Osterwalder and Pigneur (2010).

Table 5 – General business model canvas for the hotel industry

Key Partners - Franchises - Owners - 3 rd party booking sites - Travel agencies - Corporate partners	Key Activities - Hospitality - Hotel management	Value Proposition - A uniform travel experience customers can trust	Customer Relationships - Direct relationship with customers - Indirect relationship with customers (through 3 rd party internet sites)	Customer Segments - Leisure travellers - Business travellers - Corporate customers - One-off events
	Key Resources - Hotels - Customer relationships - Hospitality industry expertise - Timeshares		Channels - Online 3 rd party booking sites - Online booking channels - Travel agents	
Cost Structure - Fixed assets costs - Depreciation - Management costs - Renovation costs - 3 rd party partner fees			Revenue Streams - Management fees - Customer sales - Business contracts	

Source: https://miro.medium.com/max/1154/1*R04WPudk3YuTjosTszjdYw.png

2.3. Evolution of the digital transformation in pre-COVID-19 scenario

Currently, the hotel industry needs to properly invest in technology and to fully understand how to exploit it adequately, aiming to meet the emerging challenging trends, to maintain its competitive advantage and to satisfy the customers' needs in the digital world. The greatest challenge that the hotel industry faces is related to the determination of both the type and the level of technology that it must integrate into their facilities, also based on its objectives and target customers. The emerging technologies that have been evolving and gradually implemented in the hotel industry are the following ones:

- 1) Self-service technology;
- 2) Mobile devices;
- 3) Artificial intelligence;
- 4) Smart mirrors;
- 5) Smart-home assistants;
- 6) Robots (Mairinger, 2018).

Regarding the self-service technologies, they basically allow customers to be served without establishing a direct contact with the hotel's employees, consisting of a more productive approach. The most common type self-service technology refers to kiosks systems in hotels, which basically allow customers to check-in and to check-out on their own (Wei, Torres & Hua, 2017). Mobile devices, on the other hand, have been constantly used in hotels as room-keys and credit cards, with their cameras reporting who is entering and leaving with the assistance of a recording software. These uses of mobile devices help to increase security and to provide a more personalized service to customers, which justifies their significant benefit when implemented in the hotel industry (Tomašević, 2018).

Artificial intelligence is frequently used to mine data from customers, namely from external sources, to create a more advanced customer profile and ultimately a more personalized service. Regarding smart mirrors, they can be introduced in the hotel rooms with the main goal of providing several types of information to customers, namely related to the weather, their emails, the stock market, and to even interact with the customers' smartphones. Similarly, smart-home assistants can provide a real-time connectivity and convenience to customers, who can request any assistance or service in a much easier and faster manner (Hospitality Technology, 2018).

Lastly, robots are still an upcoming technology, even though some hotels already have implemented them in several roles, such as receptionists, housekeeping, bartenders, and concierges. Robots can move at the exact same speed as people and are based on a technology platform for cognitive computers, combining several application interfaces. However, the implementation of robots in hotels must be carefully assessed, given the fact that the human interaction is considered to be a very important aspect of the entire hotel experience to customers (Mairinger, 2018).

2.4. COVID-19 crisis in the hotel business

2.4.1. Impacts of COVID-19

The COVID-19 was declared as a pandemic in March of 2020 and has been significantly impacting the global economic, socio-cultural, and political systems. Several health communication measures and strategies, such as community lockdowns, social distancing, self- or mandatory-quarantine, and stay at home campaigns, have ceased global tourism, travels and leisure. Although the tourism industry is used to bounce back from distinct types of crises/outbreaks, the COVID-19 is considered to be a different type of crisis, given the fact that

it can have long-term and profound structural and transformational changes within the tourism sector, leading to a worldwide depression and recession (Novelli et al., 2018).

The COVID-19 impacts on tourism are estimated to be very harmful worldwide, since the international tourist arrivals are estimated to drop about 78%, referring to a loss of US\$ 1.2 trillion in export revenues from tourism and to 120 million tourism job cuts. Hence, the current discussions and research regarding the tourism industry aim to use the COVID-19 pandemic as a transformative opportunity, considering that this specific industry must not only recover from this pandemic, but also to reform the future normal and economic order (Sneader & Singhal, 2020). Essentially, researchers suggest the adoption of inter-disciplinary, multi-disciplinary or even anti-disciplinary research in order to enable creative and flexible thinking, with the main goal of challenging the current pandemic and its negative impacts and transforming them into positive changes to shape the world's future, both in terms of the tourism industry and of the general economic, political, and socio-cultural systems (Hall, Scott & Gössling, 2020; Sigala, 2018; Wen et al., 2020).

Nonetheless, it is important to keep in mind that tourism both results and is responsible for the interconnected and global world, pollution, climate change, global, national and regional economic development and growth, superiority of capitalism values, and politics and policy formulations. Therefore, and given the fact that climate change increases the frequency of pandemics, pandemics are expected to become more and more common in the future, which highlights the importance of developing research regarding its roots and symptoms in order to challenge the existing growth-paradigms and assumptions, namely by reimagining and resetting the tourism industry (Hall et al., 2020; World Economic Forum, 2019).

One of the main consequences of COVID-19 is related to both the necessity and the acceleration of the use of technologies in order to help tourists (e.g., information regarding travel restrictions, hygiene measures, online crisis communication, and online COVID-19 alerts) and businesses (e.g., festivals/events, online food delivery, destinations, and virtual visits of museums). Still, not everyone has access to technology, which undermines the assumption that everyone has the capability and the knowledge to effectively use technology tools and the conveyed information. Therefore, the digital division found between consumers and businesses has actually converted COVID-19 into an infodemic (related to the lack or misinformation) and a tool that deepens the economic division and the competitive gap between tourism operators of different sizes. Overall, and as it is pointed out by Sigala (2020, p. 315),

Likewise, the digital inequalities in all sorts of tourism businesses potentiate COVID-19 vulnerability, while COVID-19 vulnerability increases both economic and digital inequalities in the tourism sector. According to Sigala (2020), COVID-19 has several impacts and implications on the three main stakeholders in the tourism industry (the tourism demand, the tourism operators, and the destinations and policymakers), namely in three different stages, which refer to the respond, the recovery, and the restart stage from the current pandemic (Table 6).

Table 6 – Main impacts of COVID-19 in the three main stakeholders in different stages (Sigala, 2020)

Stakeholder	Respond stage	Recovery stage	Restart stage
Tourism demand	<ul style="list-style-type: none"> • Trip cancellations • Loss of money paid for travel-tourism • Quarantine and social distancing • Travel restrictions and bans • Panic buying and stockpiling 	<ul style="list-style-type: none"> • Social distancing • Lockdown and stay at home • Use of technology for contactless services (shopping, working, and studying) • Virtual events and communication 	<ul style="list-style-type: none"> • New tourism service and experience based on digital technologies • New priorities determining the tourists' selection, evaluation, and consumption behaviour
Tourism operators/businesses	<ul style="list-style-type: none"> • Managing the safety and health of tourists and employees • Handling customer communication (changing travel bookings and itineraries, cancellation of bookings, and compensations and refunds) 	<ul style="list-style-type: none"> • Ensure business continuity and building resilience (repurpose of resources, innovation from necessity, acceleration of digital adoption, customer and employee engagement, and mitigate crisis impacts) 	<ul style="list-style-type: none"> • Resetting the new business normal (re-opening, new cleaning and hygiene protocols, crowd management, social distancing practices, and re-design and re-imagine the customer journey to make it contactless)
Destinations and policymakers	<ul style="list-style-type: none"> • Ensuring the health and safety of tourists • Crisis communication • Managing repatriation of citizens • Interventions to support vulnerable employees/tourism businesses 	<ul style="list-style-type: none"> • Keeping tourists informed and interested • Virtual visits of destinations • Engaging with destination partners and stakeholders • Crisis communication • Interventions to support the tourism industry and jobs 	<ul style="list-style-type: none"> • Reimagine new types of sustainable and responsible tourism • Setting safety and health regulations • Develop strategies for staged re-opening • Promotion and motivation to tourists • Health passports and identities

However, the current pandemic of COVID-19 also has several impacts on business models, including those referring to the tourism industry. Past research about the impacts of crises on business models often refers to specific scenarios, such as the dot-com crash in 2000, the financial crisis of 2008, and the natural disasters (tsunami in the Indian Ocean in 2004 and the Hurricane Katrina in 2005). In their study, Ritter and Pedersen (2020) concluded that there are six types of crisis impacts, which essentially describe the different ways a crisis can profoundly

influence a business model. These six impact types refer to the following business models:

- 1) Antifragile business models;
- 2) Robust business models;
- 3) Adaptive business models;
- 4) Suspended business models;
- 5) Aided business models;
- 6) Retired business models.

Overall, antifragile business models present a better performance during a crisis, given the fact that they tend to improve under stress and to better realize their own potential during that scenario. For instance, in some cases, certain capabilities that were previously considered to be costly, unproductive, and complex became quite important once the crisis emerged. In these types of business models, the main managerial issues refer to the detection of the favourable environment (the crisis) and the acceleration of the business model itself (Ritter & Pedersen, 2020).

Robust business models, on the other hand, are known for the fact that they remain in the desired operational state, even during a crisis, only suffering some changes in terms of the volume of the business model, but not in the business model in itself. Therefore, the main managerial issues in this type of business models are related to the insurance of the business continuation and to the management of the changes regarding the volume. Adaptive business models refer to models that need to change when a crisis hits, for instance regarding urgent needs in healthcare (e.g., use of masks). Moreover, these changes might include a shift from on-site services to remote services to continue operating and selling their products/services. Hence, the main managerial issues within this type of business models include the identification of the opportunities to develop the model and the rapid implementation of those identified initiatives (Ritter & Pedersen, 2020).

Suspended business models are related to a temporary closure of a business model, with the intention of reopening once the crisis is over. The major key assumptions for these specific business models are the following: 1) the business model will be running profitably once the crisis is over; and 2) it is preferable to invest during the suspension period rather than to dissolve the business and start a new venture after the crisis is over. Thus, the managerial issues that arise with suspended business models are associated to the insurance of enough capital in order to finance the business during its closure period and to the insurance of the access to resources,

namely human resources, after the business restarts (Ritter & Pedersen, 2020).

In turn, aided business models are related to businesses that are unable to support themselves during a crisis, therefore depending on external support. This external support might be provided by governments, investors, or management teams, with the main goal of supporting businesses that are quite vulnerable during a crisis. The main assumption regarding these business models is related to the fact that once the crisis is over businesses will be successful once again, being preferable to rely on external aids rather than closing their ventures and/or firing everyone due to lack of profit. The main managerial issues in these models include the presentation of the business model as being worthy of receiving external aid, the identification and further application of the aid, and the preservation of the business model for a later revival, especially after the crisis is over (Ritter & Pedersen, 2020).

Finally, retired business models are those that cease to exist during a crisis, since the cost of maintaining the business model operating throughout the crisis exceeds the expected profits after the end of the crisis. In this case, it is preferable to end and close the business and to start a new one after the crisis is finally over. The managerial issue of retired business models refers to the organization of an orderly shutdown and exit of the business (Ritter & Pedersen, 2020).

2.4.2. Digital transformation impacts on business model redefinition

At the moment, tourists' concerns regarding health risks and security are increasing, mainly due to the current COVID-19 pandemic, which is affecting individuals' travel behaviours. Hence, hotels must address all these changes related to consumer demand and restore travellers' confidence and sense of security. Taking into consideration the effects of a large-scale public health crisis, as well as the current trends in the hotel industry, there are three key dimensions that both practitioners and investigators must consider in terms of management: 1) artificial intelligence; 2) hygiene and cleanliness; and 3) health and healthcare (Jiang & Wen, 2020).

Firstly, hotels are starting to pay more attention to the potential benefits of artificial intelligence and its applications in hotel management practices. This might be immensely helpful to hotels at the present, given the role of social distancing as an effective prevention strategy against COVID-19. Indeed, by adopting artificial intelligence hotels can help to protect their customers and their own employees, increasing the general sense of security and trust. Secondly, hygiene and cleanliness are quite essential in the current scenario, given the fact that they have been a recurring issue in pandemic outbreaks, being considered as a culprit of disease.

Thus, these two dimensions are extremely important to hotels, especially when considering the severe effects of COVID-19 and the safety measures, since they increase customers' sense of security and safety, allowing them to fully appreciate their travelling experience. Lastly, health and healthcare are also especially important dimensions, not only due to the safety and security of customers and employees, but also to reassure customers and to increase their trust towards the hotel (Jiang & Wen, 2020).

However, Mastrogiacomo (2020) proposes 10 specific digital strategies that the hotel industry must consider, especially if hotels want to surpass the current crisis and to thrive once again. According to the author, hotel managers should ponder on these 10 considerations when preparing their digital strategy:

- 1) Consistently align the marketing and revenue management strategy, especially on rate strategy, parity across channels, new offers and packages, a more flexible cancellation policy, and direct booking perks;
- 2) Consistent fresh content on the hotel's website, since customers will expect up to date content that truly reflects the state of the current pandemic and hotels must provide truthful information to reassure their customers;
- 3) Maintain a flexible cancellation policy, which will guarantee the maintenance of the hotel brand and of a strong brand loyalty;
- 4) Delicately balance the direct and OTA (Online Travel Agency) strategy;
- 5) Develop a month-to-month marketing plan, which must progressively build with the rise in travel demand in order to maximize the hotel's revenue;
- 6) Maximize website conversions, ensuring that the hotel's website is optimized for conversions on the long term;
- 7) Stay connected to guests who have cancelled reservations, with the main goal of recapturing bookings and to progressively increase the hotel's revenue;
- 8) Revisit the automated marketing campaign strategy, especially through email;
- 9) Maximize revenue by focusing on upselling ancillary services, namely by creating experiential packages with several services included, since it will give customers a sense of uniqueness;
- 10) Get creative with the hotel inventory, such as providing co-working spaces and meeting rooms, following the emerging trends in the current pandemic scenario.

III - METHODOLOGY

This chapter presents the methodology of the dissertation, which basically comprehends the set of methods and techniques that were used throughout the scientific research process. In more detail, this chapter is divided into 4 different subchapters, starting with the presentation of the research objectives and questions. The other subchapters refer to the presentation of the research approach, of the data collection procedures, and of the qualitative data analysis approach.

3.1. Research objectives and questions

In the process of developing a specific research, the definition of the main objectives is the first step, immediately followed by the determination of the research questions that will support the entire investigation. Overall, the research objectives are based on a wide literature review about a specific theme/subject, as well as on the existing gaps within that same literature, aiming to further contribute to the pertaining scientific field.

After conducting the literature review, some lack of knowledge was identified within the scientific field under investigation, which justifies why the present study focuses on the analysis of the main impacts of COVID-19 in the hospitality business, more precisely in terms of the necessary business model reinvention. Even though the vast majority of the authors mentioned some of the major impacts of COVID-19 in the tourism and economic sectors, one of the research objectives refers to the analysis of the influence that COVID-19 has had in the hospitality business, especially in hotels. Moreover, another objective is related to the identification of the main changes that hotels had to implement in order to adapt their businesses to the current context of COVID-19, which basically refers to a reinvention of their business model. Lastly, the final research objective is to present a general business model, more precisely a post-COVID-19 business model, with the main aim of contributing to the hospitality industry's reinvention in the current global scenario.

In sum, the main research objectives of the present investigation are the following ones:

- i. To analyse the influence that COVID-19 has had in the hospitality business, especially in hotels;
- ii. To identify the main changes that hotels had to implement in order to adapt their businesses to the current context of COVID-19;
- iii. To present a general business model canvas (a post-COVID-19 business model) that

can benefit the hospitality industry in the current global scenario.

Based on these research objectives, the key research question that is going to be explored throughout the present study is the following: *How was the business model of hotels reinvented after COVID-19?*

To answer to this central research question, several sub research questions were developed with the main goal of supporting the present study. Overall, these sub research questions were based on the research objectives, as well as on the literature review about the pertaining subject. Table 7 summarizes the connection between these 3 elements, namely between the research objectives, the sub research questions, and the literature review.

Table 7 – Sub research questions of the study and intrinsic research objectives and literature review (Source: Elaborated by the author)

Research objectives	Sub research questions	Literature review
i. To analyse the influence that COVID-19 has in the hospitality business, especially in hotels	Did reservations decrease? Was the staff fired or put in lay-off? Did the services suffer any changes or were cut back?	Sigala (2020)
ii. To identify the main changes that hotels must implement to adapt their businesses to the current context of COVID-19	Were there any changes in terms of the hotel's management and operations? Did all the operations and services suffer severe changes?	Sigala (2020) Jiang & Wen (2020)
iii. To reinvent/present a general business model that can benefit the hospitality industry in the current global scenario	What changes must be implemented in the business model of hotels? What new dimensions must be considered in the business model?	Mastrogiacommo (2020) Mairinger (2018) Jiang & Wen (2020)

3.2. Research approach

Considering both the research objectives and questions, it is ultimately necessary to understand the opinions, behaviours, and interactions of people that are, or were, involved with hotels. Therefore, the most efficient approach in order to collect such data refers to a qualitative research, which is basically characterized as representing the views and perspectives about real-life events of the participants in the study (Yin, 2011). Moreover, the qualitative research also allows the study of the participants' context, to focus on a single phenomenon, and to create an agenda for a change (Creswell, 2007).

Although the qualitative research tends to collect data in the field, where participants actually experience the problem under investigation, the present study does not comprehend an in-field observation and collection of data, mainly due to the restrictions that are currently

imposed by the COVID-19 pandemic, especially the social-distancing restriction. Hence, the methods chosen in the present investigation do not include any physical interaction with the participants, aiming to thoroughly follow all the government's rules, which justifies why the digital platforms will be crucial in order to gather information for the research.

Despite the previously mentioned constraints, the researcher still represents a vital instrument in terms of gathering and reviewing multiple formats of data, selecting the central participants and reviewing several official documents pertaining to the problem under investigation, while also determining whether additional data need to be collected in order to confirm previous statements (Yin, 2011). Furthermore, the researcher's role also includes studying the contextual conditions of both the organizations and participants that cooperate in the research, exploring the activities and processes that are actually influenced by the theme under study, and generating valid and significant conclusions based on the collected data (Creswell, 2007).

Overall, the qualitative technique that will be used in order to collect the primary data refers to in-depth interviews, which assume a conversational mode with the main goal of reconstructing the participants' experiences and reality through their own expressions. Therefore, the researcher will create a healthy conversation with all participants, especially by demonstrating a clear interest in the other person's responses, avoiding "yes/no" questions and answers, and ensuring that all participants follow the intended sequence and provide their own perspective about the subject under discussion (Yin, 2011).

3.3. Data collection procedures

Considering the research goals, it was important to create an adapted interview script, since there are people that prefer a more informal approach, while others may prefer a more formal approach (Beaud & Weber, 2007). The interview protocol that was created in order to guide the conversation with the participants of the study actually promoted a more efficient data collection process, given the fact that it has established some pre-defined questions with the main goal of avoiding any type of divergence during the conversation, hence maintaining the main theme under debate and allowing an easier reconstruction of the entire context of the interview.

In more detail, the interview's guide contains several questions with open answers with the main goal of exploring both the knowledge and the life experience of each interviewee

regarding the hotel where he/she works. Thus, the interview's guide was adequately adapted according to the interviewees' functions and experience within their workplace, in this specific case in the hotel. In Appendix I the different interview scripts are presented, referring to different people and questions and in accordance with their own profile, either related to their preferred approach or to their functions in the workplace.

The sample of the study is composed of 14 interviewees, which is deemed to be an acceptable number, even though the results of the research should be carefully considered. Overall, the interviewees were selected according to the researcher's personal network contacts, who had been working in the pertaining hotel both before and after the COVID-19, and taking into consideration their experience and expertise regarding the changes that occurred in the hotel due to COVID-19. In terms of geography, the hotels where the interviewees work are mostly located in Portugal (9), while the remaining hotels (5) are located abroad and in different countries. This disparity in terms of the location of the hotels is quite beneficial to the dissertation, since it contributes to the understanding of how foreign hotels are actually dealing with COVID-19 and with its own impacts in terms of the management of their businesses. All interviewees work daily at the pertaining hotel, and none of the hotels comprehended in the research is still closed. Moreover, most of the interviewees were mentioned by the researcher's network contacts, who either worked or studied with them, while the remaining ones were pointed out during some of the interviews. Nonetheless, in all cases the interviewee was interviewed by the researcher, which refers to a first-person contact, being first asked about their interest in participating in the present study after a brief contextualization of the research itself.

Concerning the specific methods, all interviews were conducted by phone call, with the main topics being pointed out by the researcher throughout the conversation, which ended up being freely conducted by the interviewees. It is important to mention that the researcher did not ask for permission or authorization to the hotels where the interviewees work, being completely up to them to freely answer to the proposed questions. The interviews' average duration was of about 30 minutes and occurred during the month of September of 2020, corresponding to a period of 6 months of changes after the spread of COVID-19.

3.3.1. Characterization of the sample

The interviewees are basically characterized by the hotel where they work and by the functions

that they develop as employees of that same hotel. Overall, the participants of this research are receptionists (4), food and beverage (F&B) supervisors (3), guest relations (2), chefs (1), event coordinators (1), front desk agents (1), front office managers (1), and sales coordinators (1), as it is demonstrated and summarized in Table 8 and in Graph 1. The name of the hotels and of the interviewees will not be shared on the present dissertation, aiming to maintain them anonymous for obvious reasons (identity protection). In turn, a description of the hotels and of the interviewees' functions will be presented.

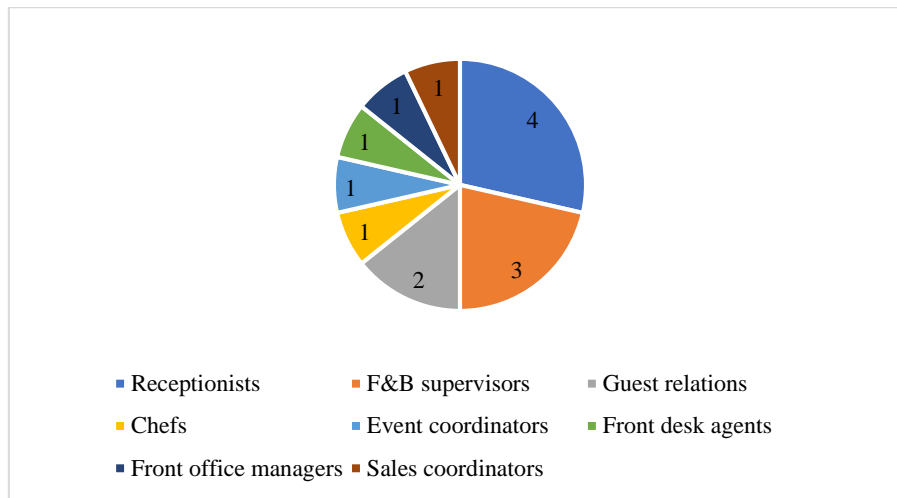
Table 8 – Characterization of the sample of the study (Source: Elaborated by the author)

Interviewees	Hotel description	Function
1	Hotel 1 – 76 rooms, 140€night, 5 star-hotel, Paço de Arcos (Oeiras)	Receptionist
2	Hotel 2 – 26 rooms, 120€night, guest house, Lisbon	Chef
3	Hotel 3 – 194 rooms, 170€night, 5 star-hotel, Lisbon	Food and Beverage Supervisor
4	Hotel 4 – 186 rooms, 200€night, 5 star-hotel, Lisbon	Food and Beverage Supervisor
5	Hotel 5 – 9 rooms, 80€night, guest house, Peniche	Receptionist
6	Hotel 6 – 177 rooms, 170€night, 5 star-hotel, Vale de Janelas (Amoreira)	Front Office Manager
7	Hotel 7 – 30 rooms, 200€night, 5 star-hotel, Sintra	Events Coordinator
8	Hotel 8 – 200 rooms, 300€night, 5 star-hotel, Budapest	Front Desk Agent
9	Hotel 9 – 194 rooms, 300€night, 5 star-hotel, Dubai	Guest Relations
10	Hotel 10 – 192 rooms, 120€night, 5 star-hotel, Cascais	Guest Relations
11	Hotel 11 – 283 rooms, 130€night, 5 star-hotel, Abu Dhabi	Sales Coordinator
12	Hotel 12 – 500 rooms, 120€night, 4 star-hotel, London	Receptionist
13	Hotel 13 – 40 rooms, 50€night, 4 star-hotel, Óbidos	Receptionist
14	Hotel 14 – 140 rooms, 130€night, 4 star-hotel, United Kingdom	Food and Beverage Supervisor, Bar, Restaurant, Conference and Events

According to Table 8, 14 people were interviewed in the present research, all referring to different hotels with different characteristics (rooms, prices, and rankings) and to different functions. Basically, the conducted interviews aimed to collect specific data regarding the hotels' changes after the emergence of COVID-19, namely through a direct source that validates the obtained data and information. In other words, all interviewees provided information according to their knowledge and experience as workers at the pertaining hotel, which

essentially represents some of the biggest changes that were implemented in the current context, either nationally or internationally.

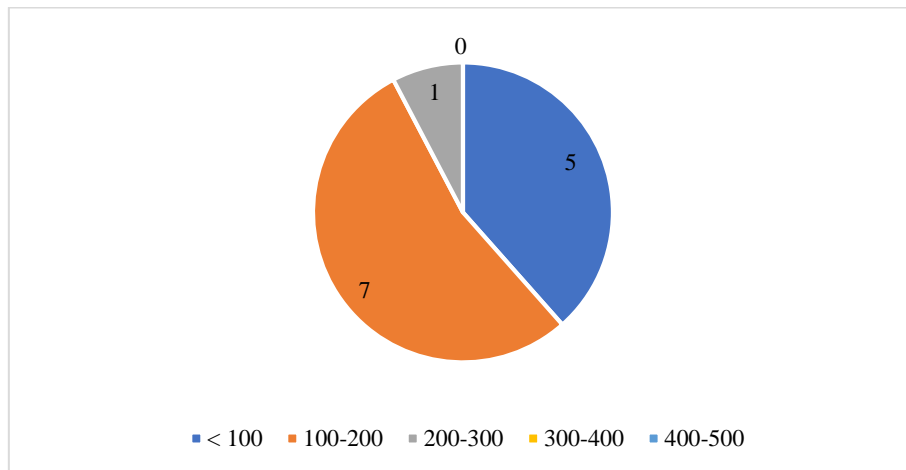
Graph 1 – Job/functions of the interviewees as employees of the hotels (Source: Elaborated by the author)



As it was previously stated, the hotels involved in the research are all different and from distinct locations, which contributes to the diversity of the collected information. It is quite beneficial to analyse all 14 hotels, since they add up more relevance to the present dissertation, especially by comprising different scenarios and contexts, as well as distinct changes and measures in order to overcome the barriers and difficulties imposed by COVID-19. In more detail, the conducted interviews provide an in-depth perspective about the hotel's management, relationship suppliers, and other stakeholders. It is noteworthy to mention that all the hotels present a different approach to the current pandemic, implementing distinct measures and changes according to their own resources and amenities, which positively contributes to the pertaining scientific field, especially by providing multiple strategies and measures that can be adequately adapted to every single hotel.

In terms of the hotels' occupation, the number of rooms that each one provides diverges significantly, ranging from 9 up to 500 rooms. This information is rather important, since it characterizes the hotels' dimension, both in terms of occupation and of the business. Graph 2 shows the hotels' occupation according to 5 different groups, emphasizing the significant difference between the hotels that were included in this dissertation.

Graph 2 – Hotel's occupation (number of rooms) (Source: Elaborated by the author)

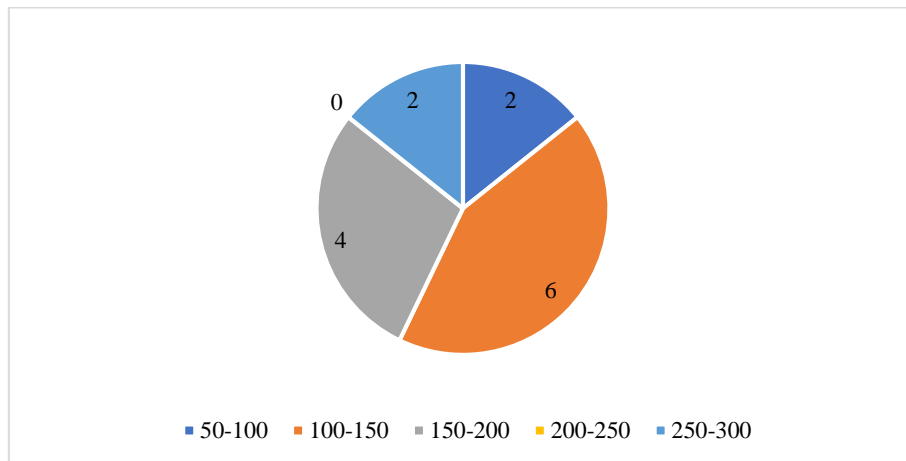


According to Graph 2, most of the hotels has between 100 and 200 rooms (7 hotels), while the remaining have either less than 100 rooms (5), about 200-300 rooms (1) or over 400-500 rooms (1). From the 14 analysed hotels, none of them has an occupation ranging from 300-400 rooms. Another important aspect that must be analysed to characterize the comprised hotels refers to the average price per night that each hotel offers to the public. Graph 3.3 demonstrates the average price range per night of the analysed hotels, comprehending different groups that relate to distinct price ranges.

Overall, it is possible to conclude that the hotels' price range per night varies significantly (Graph 3), with the vast majority of the hotels charging 100-150€per night (6), which basically consists in a mid-range price, since the most expensive rooms cost up to 250-300€ The remaining ones charge 150-200€(4), 50-100€(2), and 250-300€(2). Among all the hotels, none of them charges 200-250€per night.

In sum, it is possible to conclude that the majority of all interviewees work as receptionists (4) in the pertaining hotel, most of them located in Portugal (9), having an occupation of about 100-200 rooms (7) and charging between 100-150€(6) per night. It is noteworthy to add that all hotels present a remarkably similar ranking, only varying between 5 and 4 stars, which makes them very prestigious and luxurious hotels.

Graph 3 – Hotels’ price range (per night and in €) (Source: Elaborated by the author)



3.4. Qualitative data analysis approach

As it was previously stated, in the present dissertation the qualitative technique that will be used to collect the primary data refers to in-depth interviews, hence assuming a conversational mode with the main goal of reconstructing the interviewees’ experiences and reality through their own words and expressions. Therefore, the researcher created a healthy conversation with all of the 14 interviewees, especially by demonstrating a very clear interest on their own responses, avoiding the “yes/no” questions and answers, and ultimately ensuring that all of the interviewees followed the intended sequence and provided their own perspectives about the topics under discussion (Yin, 2011).

The qualitative data analysis approach that will be used in the present study is the thematic analysis, which consists in a qualitative research method that is widely used across a range of research questions and epistemologies. Essentially, the thematic analysis is a method that is used to identify, organize, describe, and report themes that are found within a specific data set, as it is pointed out by Braun and Clarke (2006). According to the same source, thematic analysis truly provides a highly flexible approach, since it can be modified to satisfy the needs of several studies, providing a rich and detailed account of data. Furthermore, this type of qualitative analysis also offers a more accessible form of analysis, consists in an extremely useful method to examine the perspectives of different participants, highlights both the similarities and differences, and generates unanticipated insights about a specific subject. Lastly, King (2004) claims that thematic analysis is very useful to summarize key features of a large data set, given the fact that it forces the researcher to take a well-structured approach in order to handle data, ultimately producing a much clearer and organized final report.

Clarke and Braun (2013) suggest that the goal of the thematic analysis is to identify themes (i.e. patterns) in the obtained data, especially those that are considered to be important or interesting to a particular discussion. Those themes are then used to address the research and/or to contribute to the pertaining scientific area, providing both an analysis and interpretation of the data. A common pitfall is to use the interview's questions as the themes, which will be the case in the present dissertation. As a matter of fact, the interview's questions of this research were designed to gather information according to the main themes, which will be later analysed in the next chapter.

It is also relevant to mention that there are two levels of themes within the thematic analysis, more precisely: the semantic and the latent levels. Basically, semantic themes refer to themes “within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written” (Braun & Clarke, 2006, p. 84), while the latent level goes way beyond to what has been said, starting “to identify or examine the underlying ideas, assumptions, and conceptualizations – and ideologies – that are theorized as shaping or informing the semantic content of the data” (Braun & Clarke, 2006, p. 84).

The thematic analysis comprehends a six-phase framework, corresponding to six specific steps, such as:

- 1) Become familiar with the data, namely by reading and re-reading the transcripts of the interviews, as well as by making several notes with some early impressions;
- 2) Generate initial codes, by organizing the data in a meaningful and systematic way;
- 3) Search for themes, namely by examining the codes and fitting them into a theme;
- 4) Review themes, and ultimately modifying and developing preliminary themes that were previously identified;
- 5) Define themes, with the main goal of identifying the essence of each one;
- 6) Write-up, which is basically the endpoint of the analysis and when the researcher writes down the thematic analysis according to the defined themes and pertaining data (Braun & Clarke, 2006).

IV – DATA ANALYSIS

The present chapter aims to present and analyse the results of the information that was gathered through the in-depth interviews, conducted by the researcher with the 14 participants of the study. All of them work at different hotels and provide their personal insights and perspectives about their experience as employees at hotels, both before and after the COVID-19 pandemic. The main objective is to gather relevant and important information regarding the current scenario in the hotel industry and to present a thorough and precise business model, illustrating the hotel's strategy both before and after such pandemic crisis.

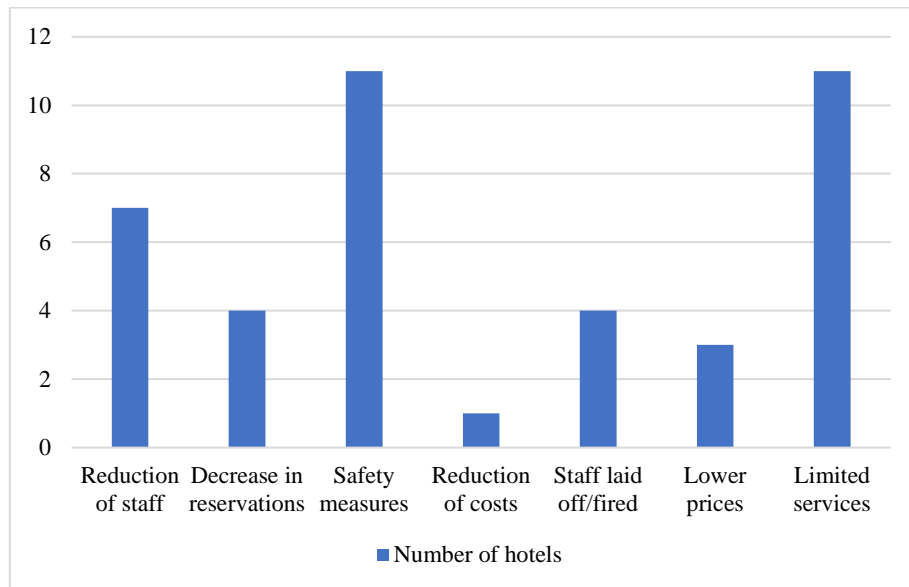
The analysis of the obtained results is divided into different subchapters, all of them referring to one of the nine blocks of the Business Model Canvas proposed by Osterwalder and Pigneur (2010). However, in the following paragraphs, the introductory questions of the interview will be analysed, referring to open questions that were asked to every single interviewee. These initial questions helped to establish a conversation with all interviewees and marked the beginning of the interview, consisting in a specific and easy-going starting point. Furthermore, the obtained results will be confronted with the literature review about the subject under discussion, aiming to understand if the obtained data are congruent or not with the existing research about the issue. Eventually, the obtained data also intends to fulfil any existing gaps among the literature, hence contributing to the pertaining scientific area.

The first introductory question was the following: *After the opening of hotels post-COVID, what are the **main changes** that you observed? What has changed in hotels?* According to Graph 4, the main changes that occurred in hotels after COVID-19 are related to new safety measures (11), directly associated to the safety and hygiene norms disseminated by the government and by health institutions, and to limited services (11), in the sense of reducing the both the staff and customers on the same space to avoid the risk of infection by COVID-19. Some other interviewees claimed that some of the changes that occurred in their hotel are associated to the reduction of the staff (7), to the decrease of reservations by customers (4), to the staff being on lay-off or even fired (4), to lower prices (3), and to the reduction of costs (1).

In sum, the main changes are all interconnected, except for the implementation of new safety measures, considering that the decrease in reservations by customers reduces the hotel's profit, negatively impacting its staff (in lay-off or fired). To contradict this negative impact, hotels are trying to lower their prices, aiming to gradually return to their profit margin. Essentially, these results are congruent with the arguments presented by Sigala (2020) and Jiang

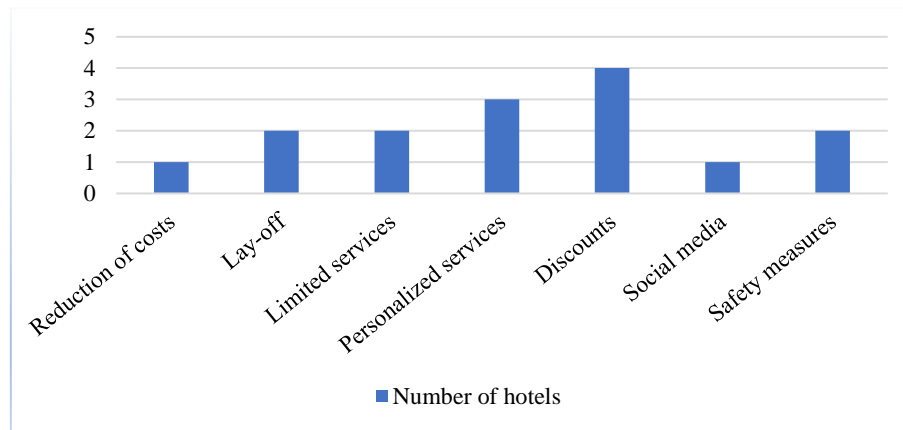
and Wen (2020), since they corroborate the severe impacts that COVID-19 has been having on hotels and the increasing focus of hotels in the health and healthcare domain, as well as in cleanliness requirements.

Graph 4 – Main changes in hotels after COVID-19 (Source: Elaborated by the author)



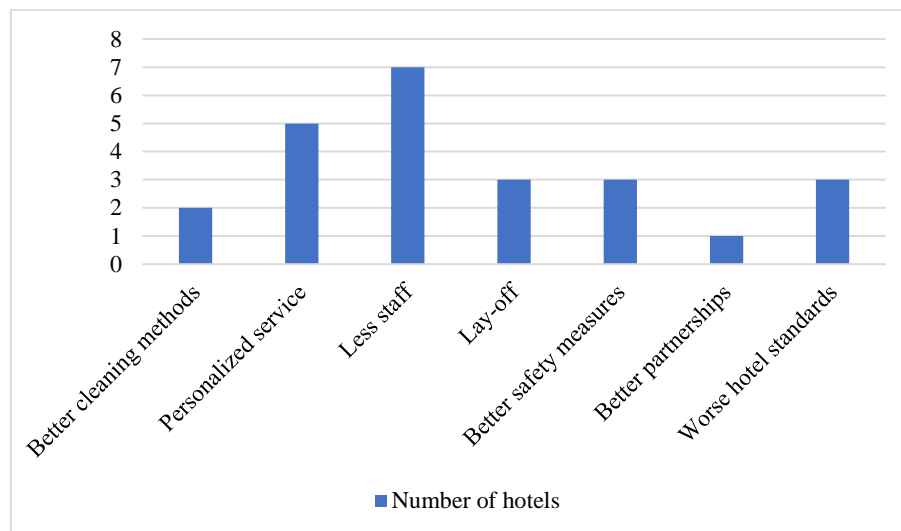
The second introductory question was the following one: *What do you think will still change in hotels? OR Are you planning to change anything at your hotel?* As it is demonstrated in Graph 5, the interviewees demonstrate their belief in future changes, which include some discounts in order to attract more customers (4), investing in more personalized services (3), implementing safety measures to guarantee the customers' safety and well-being (2), sending more staff to lay-off due to the low income and to the constraints implemented by the government and health institutions regarding social distancing (2), reducing the hotel's costs whenever possible and necessary (1), and investing in social media in order to keep close contact with customers and to promote the hotel (1). All of these answers actually corroborate the study conducted by Jiang and Wen (2020), namely in terms of the new reality regarding the constant cares in the cleaning department, and the arguments presented by Mastrogiacomo (2020), given the clear bet on social media with the main goal of maintaining a closer contact with customers and to keep all marketing efforts to attract more clients to the hotel.

Graph 5 – Future changes in hotels after COVID-19 (Source: Elaborated by the author)



The third and last introductory question was the following: *What do you think that actually got better? And what got even worse?* Based on Graph 6, the positive impacts that the current pandemic had on hotels are related to the offering of personalized services to customers (5), to better safety measures (3), better cleaning methods (2), and to better partnerships (1). On the other hand, the negative impacts are mainly related to the fact that hotels now have less staff (7), several staff members are in lay-off (3), and there are worse hotel standards (3), mainly related to the fact that it is more difficult to provide unique packages and experiences to customers to ultimately distinguish the hotel as a higher ranking one (with 4 or 5 stars).

Graph 6 – Positive and negative impacts of COVID-19 in hotels (Source: Elaborated by the author)



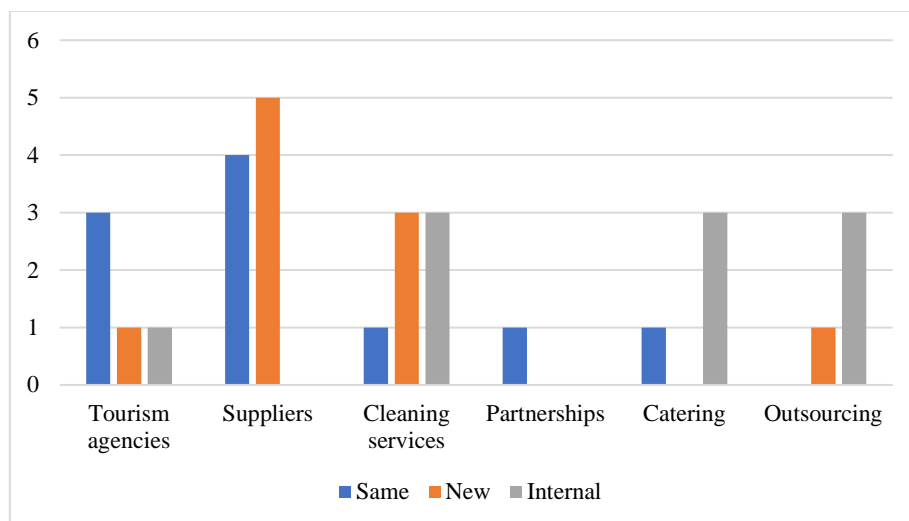
4.1. Key partners

Regarding the hotels' key partners, all interviewees were asked whether they changed their partners and/or suppliers or if they remained the same. In this sense, key partners refer to

tourism agencies, cleaning services, catering chains, investors, technology providers, and partnerships. Most hotels changed their suppliers (5) in order to decrease the hotels' costs while maintaining their service quality. However, some of them preferred to maintain their older suppliers (4), which emphasizes that their new business strategy does not include any changes regarding these key partners. In terms of tourism agencies, hotels have maintained the same partners (3), aiming to strengthen such partnership as a strategy to increase their reservations and profit. On the other hand, cleaning services seem to be a quite controversial partnership, given the fact that some hotels established new partnerships (3), while others opted for internal operations (3). This was also the case in terms of the catering services and of outsourcing, considering that most hotels (3) opted to develop such operations internally. These statistics are all presented in Graph 7, which helps to better understand the status of the hotels' key partners.

The obtained data clearly supports the investigations conducted by Sigala (2020) and Jiang and Wen (2020), given the fact that they illustrate some of the main impacts of COVID-19 in hotels, namely related to the decrease of profit, which directly affects the contracts established with some of the hotels' key partners. On the other hand, data also emphasizes the clear investment of hotels in their cleaning services, which are now provided by new partnerships or done internally with the main goal of fulfilling all the imposed requirements.

Graph 7 – Key partners of hotels (Source: Elaborated by the author)



4.2. Key activities

With regards to the hotels' key activities, interviewees were asked two different questions. The first question was the following one: *Has anything changed in the key activities that were sold*

by the hotel? (Ex.: the restaurant was closed, rooms, group services, gym, and swimming pool). As it is demonstrated in Table 9, interviewees' answers actually pointed out some changes in 8 different activities, namely in terms of the services related to swimming pools, group services, safety measures, restaurants, spas, gyms, gardens, and bares. Some of the key activities that changed the most across all 14 hotels were: 1) swimming pool, which now has a limited number of clients; 2) group services, since they were practically all cancelled, except for a few weddings; and 3) restaurants, which now work with a very limited number of clients. Nevertheless, there were also a few changes related to the access to some services, with swimming pools being open to the general public, with the new health and safety standards, since staff members and customers must wear masks and disinfectants, and some services were actually closed (ex.: restaurants), restricted to their exterior areas, or had to change their usual operations (ex.: work as take-away). Overall, all of these changes in terms of the hotels' key activities are related to the negative impacts mentioned by Sigala (2020), which highlight that several services had to cease their activities and that several sectors of the industry had to either close or to introduce major changes to operate according to the new safety and hygiene recommendations.

Table 9 – Changes in the key activities of hotels (Source: Elaborated by the author)

Activities	Changes	Interviewees
Swimming pool	Open to the general public and not exclusively to guests	1, 2
	Limited number of clients	3, 4, 7, 12, 14
Group services	All cancelled, except for a few weddings	1, 6, 8, 9, 13
	Conference meetings were reduced	6, 8, 9
Safety measures	Staff must fulfil all the safety standards (masks and disinfectants)	1, 2
Restaurant	Closed	2, 12
	Exterior space was open	2
	Limited number of clients	3, 4, 7, 8, 10, 13
	Take-away	9, 12
	Opening a new restaurant	11
Spa	Limited number of clients	3, 7
	Closed	9, 12
Gym	Limited number of clients	4, 9
Gardens	Open to the general public	7
Bar	Changed its functions	8
	Open	12

The second question regarding the hotels' key activities was the following one: *Has anything changed in terms of the hotel's management and operations? (Ex.: restructuring, personnel training, check-in processes, more thorough cleaning)*. Based on the interviewees'

answers, which are summarized in Table 10, the main management and operations key activities that changed the most are related to the cleaning and safety services, to training, to restructuring/firing, and to meetings. Essentially, hotels implemented some new specific changes in terms of all these activities, more precisely:

- 1) Put a person in charge for checking the cleaning and safety services, as well as their congruence with the established standards (7);
- 2) Invested on training their staff regarding the best practices to deal with COVID-19 (6);
- 3) Avoiding sharing objects with staff and customers (5);
- 4) Fired some staff members (3);
- 5) Conducted their meetings via the internet and by email (1).

In sum, the obtained data in this specific question are all congruent with the main investigations analysed, more precisely with those conducted by Mairinger (2018), Jiang and Wen (2020), Mastrogiacomio (2020), and Sigala (2020), since all answers gather some recommendations and insights provided by all of these authors.

Table 10 – Changes in the key activities of hotels (management and operations) (Source: Elaborated by the author)

Activities	Changes	Interviewees
Cleaning and safety services	Person responsible for checking the cleaning and safety services and the fulfilment of standards	1, 2, 3, 5, 7, 10, 11
	Avoiding sharing objects with staff and clients	3, 7, 9, 10, 11
Training	Training regarding the best practices to deal with COVID-19	3, 4, 8, 12, 13, 14
Restructuring/firing	Some staff was fired	4, 6, 14
Meetings	Meetings were conducted via the internet and by emails	6

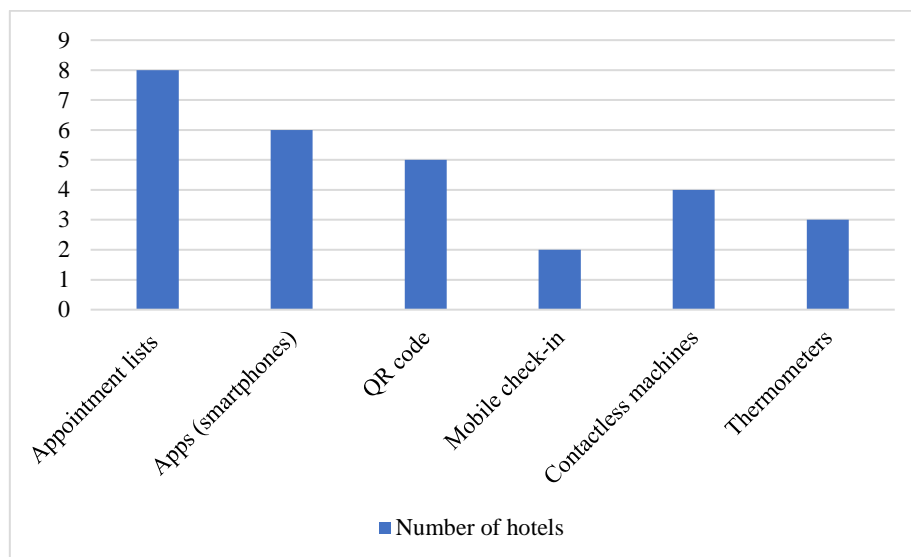
4.3. Key resources

According to the interviewees' answers, which are all summarized in Graph 8, the new resources that hotels had to purchase after the emergence of COVID-19, and obviously in addition to masks and disinfectants, are related to technology. In more detail, hotels had to purchase appointment lists (7), with the main objective of respecting the social distancing implemented by health institutions, smartphones apps (6), aiming to provide better and faster services to customers, which also contributes to a more personalized experience, implement QR codes (5), with the goal of avoiding any material resources that can transmit COVID-19, implement contactless machines (4), with the same goal of avoiding close contact between the

staff and customers, implement mobile check-in (2), also making the process way easier and safe, and purchase of thermometers (3) in order to check customers and staff's temperature, which consists in one of the main measures that other industries are implementing in order to avoid further contamination.

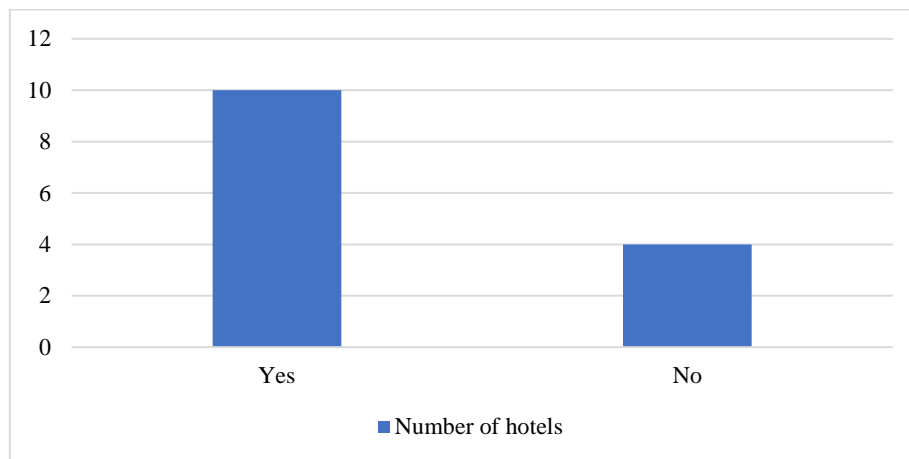
These answers are very similar to the arguments presented by Mairinger (2018), since the author clearly points out some of the main technologies that are being implemented in the hotel industry, emphasizing that the future is definitely towards the constant innovation in this specific dimension. The only difference is that now technology is being implemented not only to improve customers' experiences, but also to guarantee their well-being and safety.

Graph 8 – Purchase of new resources in accordance with the COVID standards (Source: Elaborated by the author)



Regarding the hotels' accreditation by the Clean and Safe seal (Graph 9), which is considered to be an essential resource nowadays, mainly due to the trust and confidence that it creates on customers in the current pandemic, the vast majority got accredited by the Clean and Safe seal answered that their hotels were indeed accredited by this specific seal (10). The remaining (4) or are working towards that accreditation for future profit or have its own cleaning seal.

Graph 9 – Accreditation by the Clean and Safe seal (Source: Elaborated by the author)



Lastly, some of the interviewees suggested that the hotels' loyalty program has remained the same (5), while others claimed that it did change after COVID-19 (5). The main changes refer to the decrease in the hotels' prices and to lower stays, as well as to the accumulation of points, which can be used in future reservations (Table 11). The four remaining interviewees did not answer the question, making it impossible for the researcher to know exactly how the loyalty programs remained in the pertaining hotels.

Table 11 – Loyal program with the hotel (Source: Elaborated by the author)

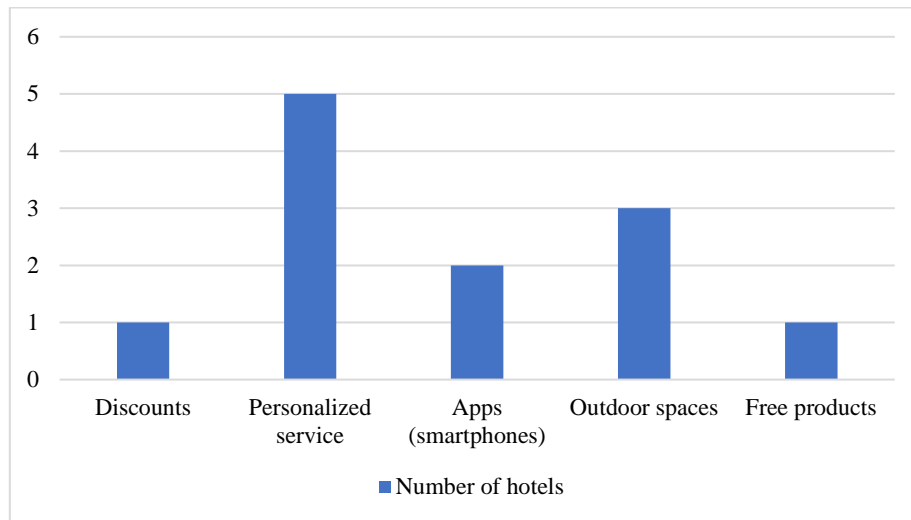
Loyal program changed?	Changes	Interviewees
Yes	Prices decreased and stays were shortened	3, 7, 11, 13
	Accumulation of points	8
No	-	1, 5, 6, 9, 10

4.4. Value proposition

In terms of the value proposition, interviewees were asked the following question: *Were there any changes that added more value to the customers or to the hotel? (Ex.: Offer of masks and disinfectants or products for individual use)*. The most popular answer among interviewees, and based on Graph 10, refers to the offering of a more personalized service (5), which is directly linked to previous answers, since it includes the implementation of technology to improve the customers' experience and to increase the hotels' profit. However, interviewees also mentioned the use of outdoor spaces (3) to provide some of their own services, the use of smartphone apps (2), the offering of free products to customers (1), and some discounts (1) when making their reservations. Essentially, all these changes aim to attract customers and to simultaneously maintain the hotels' profit and expansion. Once again, these findings are

congruent with the arguments presented by Mairinger (2018), since it is quite notorious the investment in new technologies to attract more customers and to maintain some of the older ones.

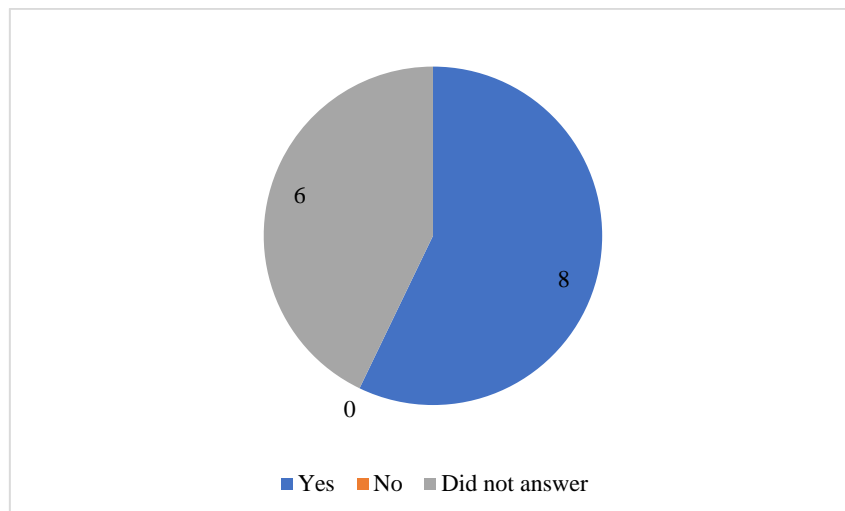
Graph 10 – Changes that added more value to customers or to the hotel (Source: Elaborated by the author)



4.5. Customer relationship

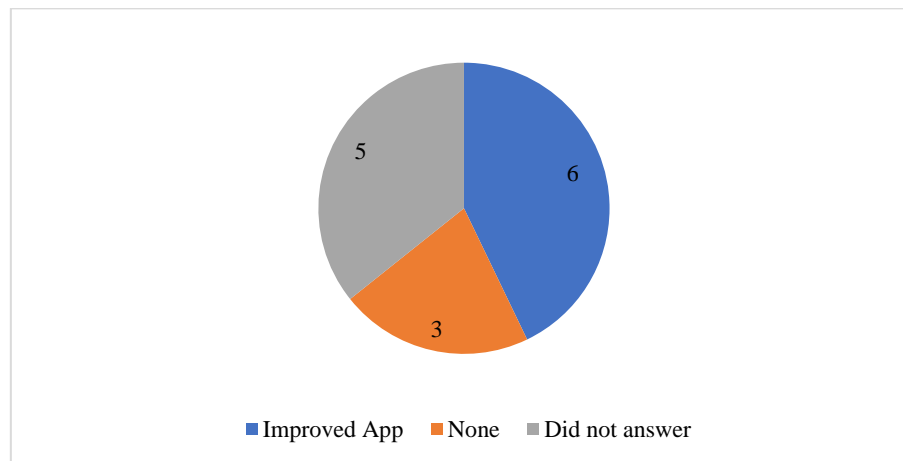
One of the questions regarding the customer relationship was the following one: *Did you try to show your clients that the hotel is safe in terms of sanitation? (Ex.: sticker on the bedroom door when it was cleaned, inform that all devices were disinfected)*. As it is demonstrated in Graph 11, the most part of the interviewees answered to this question positively (8), which means that hotels are actually trying to demonstrate that their facilities do follow rigorous cleaning and hygiene measures, with the aim of guaranteeing customers' safety and well-being.

Graph 11 – Hotel safety in terms of sanitation and cleaning (Source: Elaborated by the author)



Another question about the customer relationship had to do with the hotels' activities that became more digital after COVID-19. The only activities that truly became more digital are related to the hotels' apps, which were significantly improved to fully provide a unique experience to customers, as well as the main services that the hotel provides (Graph 12). This trend is highly emphasized by Mastrogiacomio (2020), who firmly claims that the hotels' growth and expansion will be based on the investment on technology, with several applications and benefits to both the hotels and their customers.

Graph 12 – Digital activities (Source: Elaborated by the author)



An important aspect of the customer relationship relates to the cancellation policy of hotels. Therefore, interviewees were asked if there were any changes in terms of such specific policy in their hotels. Based on Table 12, the cancellation policy changed in almost every hotel, except in one (Interviewee 4). Overall, hotels introduced the following changes:

- 1) Hotels allowed customers to cancel their reservations up to 24h/48h/72h before, without further costs (5);
- 2) Reservations became refundable and/or the money could be used for future reservations (4);
- 3) Hotels offered vouchers (2);
- 4) Hotels avoided any cancellations, proposing a reschedule instead (1).

Once again, the obtained data confirms the arguments provided by Mastrogiacomio (2020), who also establishes that hotels must be more flexible in terms of cancellations, especially at the current scenario. The main goal is to promote further reservations and to attract customers to the pertaining hotel, offering them some flexible options in terms of travelling.

Table 12 – Cancellation policy (Source: Elaborated by the author)

Cancellation policy changed?	Changes	Interviewees
Yes	Reservations are refundable and/or the money can be used for future reservations	1, 8, 9, 12
	Avoiding cancellations and proposing new dates for the reservations	3
	Vouchers	5, 6
	Cancellations up to 24h, 48h, or 72h before without further costs	7, 10, 11, 13, 14
No	-	4

The last question about the customer relationship related to any offerings that hotels are currently providing to their customers, such as a free night when they stay for X days or last-minute deals. Basically, only three of the 14 hotels provide these types of offerings to their customers, as it is demonstrated in Table 13. In more detail, interviewees said that their hotels are offering a free week for companies that work at their home offices, team building for small groups, one free night when customers book two nights, and cheaper reservations for customers who have memberships (Interviewee 3, 5 and 6).

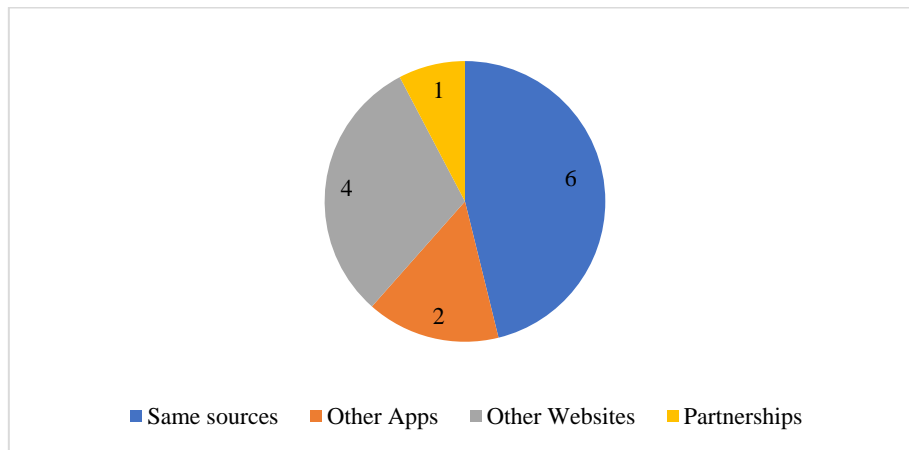
Table 13 – Offers in the current context of COVID-19 (Source: Elaborated by the author)

Any offers?	Type of offers	Interviewees
Yes	Free week for companies that are working from their home offices	3
	Team building for small groups	3
	Reservations for two nights offer one free night	5
	Cheaper reservations for clients that are members of the hotel	6
No	-	1, 2, 4, 7, 8, 9, 10, 11, 12, 13, 14

4.6. Channels

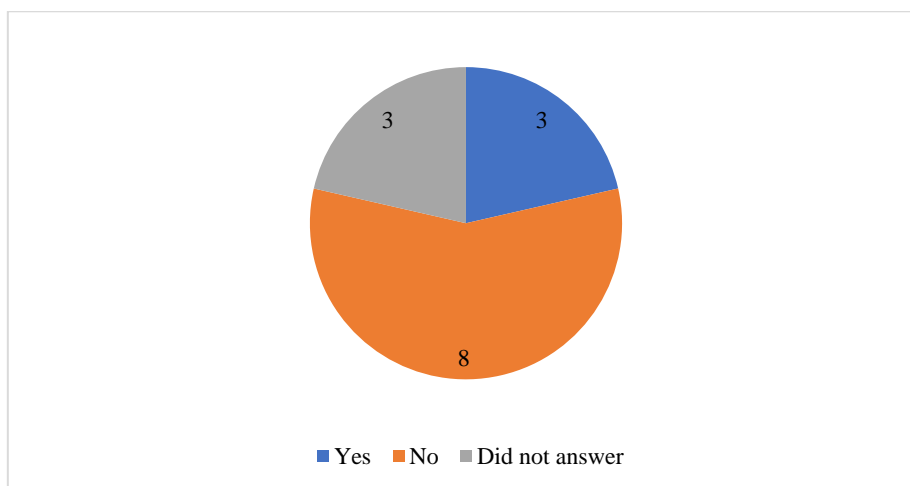
Regarding the hotels' channels, interviewees were asked to answer to two different questions: 1) *Did the hotel bet on other sources (such as the official website)?* And 2) *Have you (the hotel) reduced the travel agents?* In terms of the sources of customers' reservations, hotels have strongly maintained their traditional sources (6). Nevertheless, some hotels trusted on other websites (4), other apps (2), and other partnerships (1) (Graph 13). These different sources might have been selected by hotels to reach more target audiences and to increase their own scope. Basically, this joint action with other websites, apps or partnerships will result in an increased profit for both parties, while presenting more choices to eventual customers.

Graph 13 – Sources of reservations (Source: Elaborated by the author)



Specifically focusing on the hotels' travel agents, the vast majority did not reduce any of the existing partnerships, as it has been said by 8 interviewees (Graph 14). Still, three hotels reduced their partnerships with travel agents, which might be related to their strategy to decrease the hotels' costs. These answers are supported by Mastrogiacomio (2020), who clearly suggest the use of new channels to attract more customers and to increase the hotels' scope within the digital world.

Graph 14 – Travel agents (Source: Elaborated by the author)



4.7. Customer segments

The customer segments are related to the main clients that hotels typically have, referring to a particular profile. About this aspect, 10 interviewees claimed that the hotels' customer segments did change after COVID-19, referring to completely different customer segments. As a matter of fact, and according to Table 14, the major change among the hotels refers to more Portuguese

customers and to longer stays (5), as well as to longer stays during summer (2). These results are due to the current pandemic, since most frontiers had severe constraints when it comes to travelling. Hence, it is quite normal that hotels now have more Portuguese customers and longer stays, since there are not many options in terms of tourism and/or travelling. These findings are congruent with the study conducted by Sigala (2020), who describes the main impacts of COVID-19, clearly related to the decrease of reservations and travels by consumers.

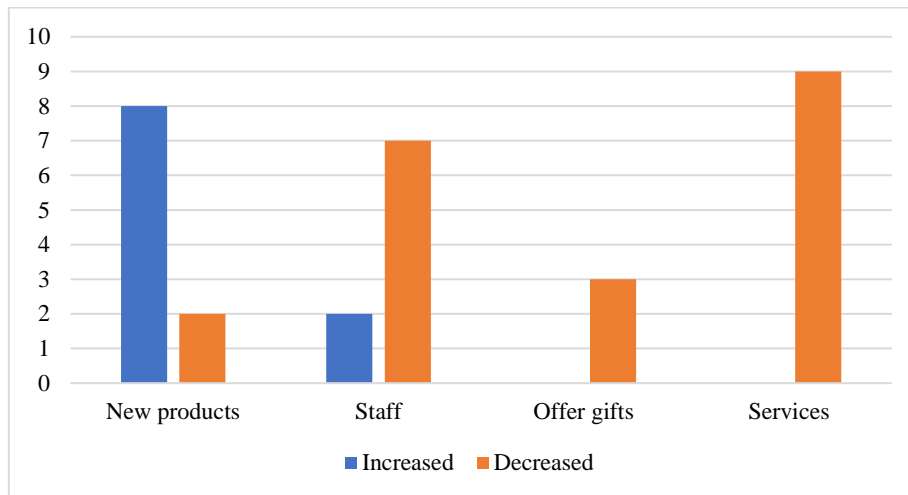
Table 14 – Main clients of the hotel before and after COVID-19 (Source: Elaborated by the author)

Type of clients changed?	Type of clients after COVID-19	Interviewees
Yes	More Portuguese clients during the summer; younger clients and families	2
	More British clients; Americans, Canadians and Brazilian decreased; more exquisite clients; business clients	3
	Foreign companies, business trips, Portuguese clients, couples	4
	Portuguese clients during the summer	6, 7
	Portuguese clients, longer stays	9, 11, 12, 13, 14
No	-	1, 5, 8, 10

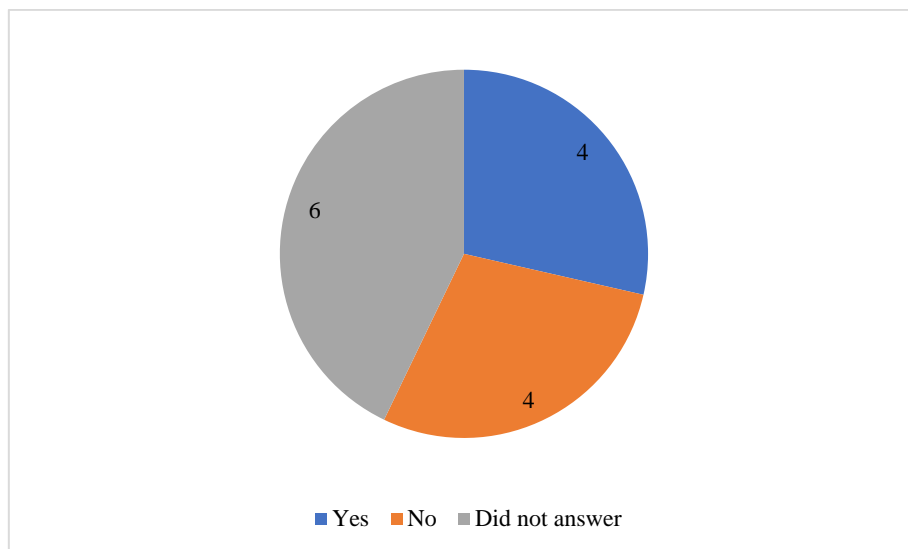
4.8. Cost structure

The first question that interviewees were asked to answer was the following one: *Was there any increase or reduction in the hotel costs during this period? Have you tried to reduce costs in some way?* As it is pointed out in Graph 15, the major decrease in the hotels' costs relate to their services (9), since they had to limit, or even close, the provided services due to the social distancing measures. Still, some other aspects were considered to reduce hotels' costs, mainly their staff, and their offer gifts (newspapers, magazines, and flowers). However, eight hotels actually increased their costs with new products, such as cleaning and disinfection products, masks, aprons and disposable gloves for housekeeping, acrylics, dispensers, distance signalling, in order to improve the sanitizing conditions and hotel's appeal to eventual clients. Two of the hotels introduced a new product, an adapted restaurant menu to reduce costs and waste. It is important to mention that the investment in new products does not have anything to do with marketing and/or computer systems, considering that four hotels invested on these assets (Graph 16). Essentially, these results are not congruent with the arguments provided by Mastrogiacomio (2020) since they do not demonstrate a clear investment in technology and in digital solutions to overcome this current crisis.

Graph 15 – Cost structure of the hotel (Source: Elaborated by the author)



Graph 16 – Investments in marketing and/or on computer systems (Source: Elaborated by the author)



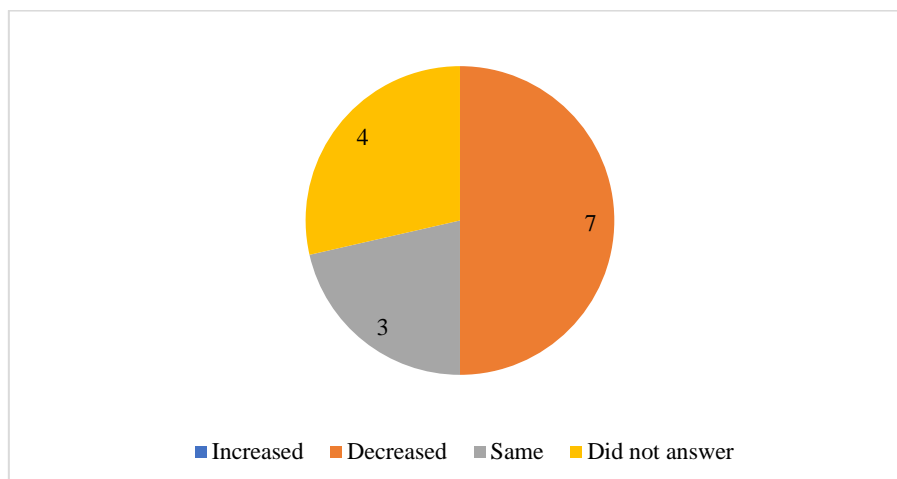
4.9. Revenue streams

Lastly, in terms of the revenue streams of hotels interviewees were asked to answer to two different questions. The first question was related to the prices of the hotels, namely to their decrease or increase after COVID-19. According to Graph 17, most hotels decreased their prices (7), aiming to attract some customers to their facilities. This is linked to the ambition of increasing the hotels' profits and to overcome such crisis. Also, this is possibly because the number of customers truly decreased (Graph 18), being extremely important to surpass such negative impact. The main goal of hotels was basically to provide cheaper prices to customers

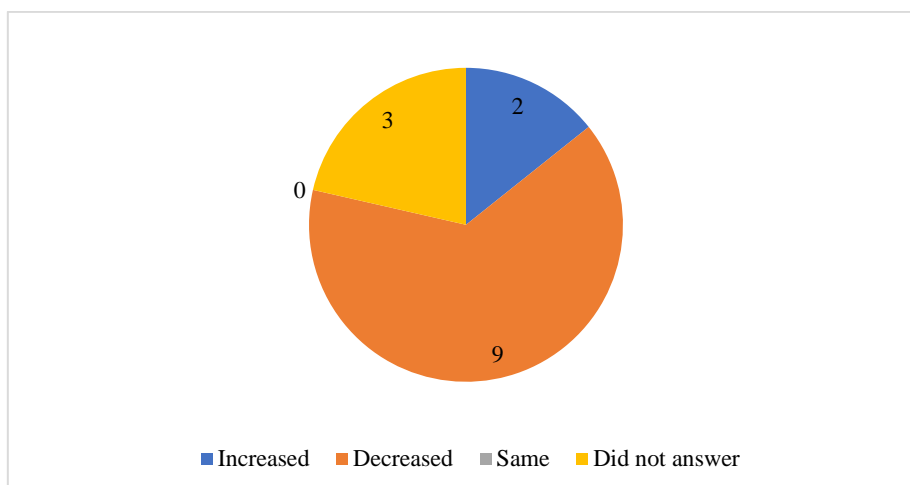
to increase their numbers.

The obtained data confirms the arguments presented by Sigala (2020), namely regarding the negative impacts of COVID-19 in the hotel industry. The author has also stated that the hotel industry has suffered a severe decrease in terms of reservations, which in turn affected their profits and growth. The main strategy of most hotels was based on decreasing their prices, aiming to attract more customers and to eventually start making some profit to overcome the current situation. However, in addition to the decrease of their prices, hotels also tried to provide newer services to their customers, as it was previously stated and demonstrated by the interviewees' answers, especially focused on the implementation of new technology in their facilities, not only facilitating the provision of the services but also the communication between the hotel's staff and the customers.

Graph 17 – Prices of the hotel (Source: Elaborated by the author)



Graph 18 – Number of clients of the hotel (Source: Elaborated by the author)



As it was previously mentioned, namely in Table 7, the study's sub research questions are the following ones:

- 1) Did reservations decrease?
- 2) Was the staff fired or put on lay-off?
- 3) Did the services suffer any changes or were cut back?
- 4) Were there any changes in terms of the hotel's management and operations?
- 5) Did all the operations and services suffer severe changes?
- 6) What changes must be implemented in the business model of hotels?
- 7) What new dimensions must be considered in the business model?

Overall, and based on the interviewees' answers and on the literature review, it is possible to conclude that the hotels' reservations significantly decreased after the emergence of COVID-19, hence resulting in several staff members being fired or put on lay-off. Moreover, the hotels' services suffered a few changes, either by significantly limiting the number of customers or by being completely closed. Considering the hotels' management and operations, they started to focus even more on cleaning and safety services, as well as on training their staff members with regards to the best practices to deal with COVID-19, with several severe changes to balance the hotels' costs and profit (staff being fired or put on lay-off). The main changes that must be implemented in the business model of hotels refer to measures related to the current norms in terms of health and safety, with new cleaning and health services, to new and cheaper partnerships/suppliers, to invest on technology and digital communication strategies, and to the implementation of technology to benefit both the hotel and its customers, while simultaneously attracting new customers to increase its profit.

Table 15 presents a proposal of a reinvented business model for hotels, based on the conducted investigation and with the main goal of consisting in a significant contribution to the hotel industry, even though it is only based on a small sample of hotels. The new measures that are suggested by the obtained data are presented in green, while the older measures are presented in black. This colour scheme is used to make it easier to understand the measures adopted before the emergence of COVID-19 and the new measures that are suggested in this study for future implementation and after COVID-19. Therefore, it is expected that this reinvented business model can help hotels in a near future, even though it might not fully result in their growth and evolution.

Table 15 – Proposal of a reinvented business model for hotels (Source: Elaborated by the author)

Key Partners <ul style="list-style-type: none">- Franchises- Owners- 3rd party booking sites- Travel agencies- Corporate partners- Cleaning services- Technology companies	Key Activities <ul style="list-style-type: none">- Hospitality- Hotel management- Healthcare- Restaurants and bars (take-away)- Training (staff)	Value Proposition <ul style="list-style-type: none">- A uniform travel experience customers can trust- Cleanliness and safe facilities- Personalized services based on digital communication and apps	Customer Relationships <ul style="list-style-type: none">- Direct relationship with customers- Indirect relationship with customers (through 3rd party internet sites and apps)	Customer Segments <ul style="list-style-type: none">- Leisure travellers- Business travellers- Corporate customers- One-off events
Key Resources <ul style="list-style-type: none">- Hotels- Customer relationships- Hospitality industry expertise- Technology			Channels <ul style="list-style-type: none">- Online 3rd party booking sites- Online booking channels- Travel agents- Apps	
Cost Structure <ul style="list-style-type: none">- Fixed and cheaper assets- Depreciation- Management costs- Renovation costs- 3rd party partner fees- Investment in technology- Cleaning services			Revenue Streams <ul style="list-style-type: none">- Management fees- Customer sales- Business contracts- Discounts- Vouchers- Stay packages (for X nights one extra night is offered)	

V – CONCLUSIONS

The main goal of the present dissertation was to analyse the main impacts of COVID-19 in the hospitality business, more precisely in terms of the necessary business model reinvention. Furthermore, the study also intended to identify the main changes that hotels had to implement to adapt their business in the current pandemic context, basically referring to a reinvention of their business models, and to ultimately present a general business model, a post-COVID-19 business model, aiming to contribute to the hospitality industry's reinvention in the global scenario.

To fulfil the dissertation's objectives, the study was based on a literature review about the pertaining issue and on in-depth interviews that were conducted with 14 interviewees, who still work at hotels at the present moment. Based on the Business Model Canvas, a business model framework proposed by Osterwalder and Pigneur (2010), the interview consisted in several questions that aimed to assess the 9 building blocks that comprise such framework, namely the hotels' key partners, activities, resources, value proposition, customer relationship, channels, customer segments, cost structure, and revenue streams.

The obtained data either supported or contradicted the perspectives presented by Mairinger (2018), Jiang and Wen (2020), Mastrogiamco (2020), and Sigala (2020), which is why these investigations are the main focus of the present work, especially in the data analysis chapter, where all findings were compared to these sources.

Overall, these authors emphasize the negative impacts that COVID-19 has been having on the hotel industry since its emergence, resulting in the loss of profits, decrease of reservations, and in several staff members being put on lay-off or fired (Sigala, 2020). Jiang and Wen (2020) have suggested that the main three trends at the moment, and in the hotel industry, refer to artificial intelligence, cleanliness and health and healthcare, essentially summarizing the aspects that hotels must consider when reinventing their business model. Mairinger (2018) and Mastrogiamco (2020), on the other hand, focus on the technological strategies that hotels must implement on their facilities to overcome such crisis and to increase their profits and competitive advantage.

Considering all the interviewees' answers, it is possible to conclude that the majority of hotels maintained their partnerships with the same tourism agencies, changed their suppliers and cleaning services, and started to develop some activities internally, aiming to ultimately decrease some of the hotels costs by increasing their demand. Their activities are mainly limited

to a small number of clients and some of them are developed on exterior spaces, and whenever possible, due to the imposed social distancing measures. Moreover, hotels had to invest in some other activities, especially those related to the hotel's management and operations, directly associated to new cleaning and safety services, to the training of its staff members regarding the best practices to deal with COVID-19, and to the restructuring of its personnel (some staff members were fired or put on lay-off). The investments made by hotels are significantly related to technology innovations, which demonstrates a clear bet on this dimension to overcome such difficult times, where safety and well-being are the focus.

In addition to these investments in technology, which also aim to attract more customers, hotels also offered personalized services and discounts to customers, with the objective of increasing their profit. The cancellation policy also became more flexible, with customers being able to cancel reservations up to 24h-72h without further costs or even to reschedule their reservations. Regarding the channels to make such reservations, hotels started to rely on other websites, apps and partnerships, which clearly suggests that they are now open to new channels in order to deepen their scope and to attract different customer segments. As a matter of fact, their customer segments have significantly changed, since they are mainly Portuguese, younger people that wish to stay for several more days than usual. These new strategies were applied to balance their revenue, counterbalancing their costs with their profit.

In sum, this dissertation demonstrates that the future of hotels, and specifically after the emergence of COVID-19, truly relies on digital solutions to thrive once again. As a matter of fact, it has become quite clear that the business model reinvention must be based on technology and on digital communication, since these are the main domains highlighted by the interviewees. However, it is noteworthy to mention that the study has some limitations, namely related to the sample size, both in terms of the participants and hotels (14), which might not allow for a wide generalization of the findings, and as well the difficulty of finding filled a hotel business model. Therefore, further investigations should try to focus on a wider and bigger sample, aiming to better illustrate the current circumstances in more hotels and to fully discuss the COVID-19's impacts on a broader level within the hospitality industry and the necessary reinvention in terms of the hotels' business model.

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VII - APPENDICES

Appendix I

INTERVIEW SCRIPT

Current job/position:

Hotel:

Research question:

- What is the main reinvention in the Business Model of hotels after COVID-19?

Introductory questions:

- After the opening of hotels post-COVID, what are the main changes that you observed? What has changed in hotels?
- What do you think will still change in hotels? OR Are you planning to change anything at your hotel?
- What do you think that actually got better? And what got even worse?

Business Model Canvas questions:

Key Partners:

- Has anything changed regarding the hotel's partners/suppliers? Or are they the same? Have you stopped having any? Ex.: Tourism agencies, suppliers, cleaning services, catering chains, investors, technology providers, companies (partnerships).

Key Activities:

- Has anything changed in the key activities that were sold by the hotel? Ex.: Restaurant was closed, rooms, group services (such as weddings and meetings), gym, swimming pool.
- Has anything changed in terms of the hotel's management and operations? Ex.: Restructuring, personnel training, check-in processes, more thorough cleaning.

Key Resources:

- Have you purchased new resources in accordance with the COVID standards and in addition

to masks and disinfectants? Ex.: Contactless payment machine, appointment lists for breakfast, menu with QR code in the restaurant.

- Were any hotels bought or did you join a hotel chain?
- Was the hotel accredited by the Clean and Safe seal?
- Has the loyal program with the hotel chain changed in any way?

Value Proposition:

- Were there any changes that added more value to the customers or to the hotel? Ex.: Offer of masks and disinfectants, products for individual use.
- Any new personalized services?
- Do you offer breakfast in the clients' room or in a larger outdoor space instead of a more closed buffet and space?
- Do you offer discounts on activities like golf and tennis, which were previously practiced by foreign clients?

Customer Relationship:

- Did you try to show your clients that the hotel is safe in terms of sanitation? Ex.: Sticker on the bedroom door when it was cleaned, inform that all devices were disinfected. Visible disinfection during the check-in?
- Has any activity become more digital? Ex.: Tasks and orders via smartphone.
- Any changes in terms of the cancellation policy?
- Any offers in the current context of COVID-19? Ex.: Free night for longer stays or X stays, last minute deals.

Channels:

- Regarding reservations, did you bet on other sources (such as the official website)?
- Have you reduced the travel agents?

Customer Segments:

- Who were the main clients of the hotel? Did they remain the same after COVID-19? Ex.: Before they were older groups, foreigners, companies/business trips, shorter stays and now they are young adults/nationals with longer stays.

Cost Structure:

- Was there any increase or reduction in the hotel costs during this period? Have you tried to reduce costs in some way? Ex.: Increased with cleaning/sanitization, purchase of masks and disinfectant gel kits, increase/decrease in staff.
- Were there any investments on marketing or on a computer system?

Revenue Streams:

- Did you increase or decrease the prices?
- Has the number of clients increased or decreased?