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***BUSINESS MODEL INNOVATION IN RESPONSE TO TIMES
OF CRISIS***

***EMPIRICAL EVIDENCE AND FUTURE RESEARCH
IMPLICATIONS***

TESI DI DOTTORATO
DI

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Introduction

The tourism industry is defined as an hypercompetitive sector characterized by radical and disruptive changes due to two main factors: the role of innovation in high and low technology and the globalization process that has changed demand patterns and increased the number of competitors in the sector (Della Corte, 2012).

The adoption of recent technological innovations has fundamentally changed the tourism industry. In particular, the recent wave of technological change, known as digitalization, has led to a shift in the entire tourism ecosystem (Solvoll, Alsos, & Bulanova, 2015). Both hospitality and tourism are the industries now most affected by digital disruption (Perelygina et al., 2022). In this new context, business model innovation (BMI) is strategically important and even crucial for companies that need to constantly innovate to avoid falling behind. In times of change, especially during crises and disasters, business model innovation (BMI) provides a tool for business leaders and entrepreneurs to create and adapt value to respond to change, find solutions, and meet emerging needs (Amit & Zott, 2010). Examining the role of innovation (Nunes and Cook, 2021; Dilletta and Sandra Sun-Ah Ponting ,2020; Kasima, Gursoy and Okumus, 2014; Di Pietro, Guglielmetti, Mugion and Renzi, 2014; Bourdeau, 2019) and (BMI) as a driver of development in the tourism sector (Szromek, Herman and Naramski, 2021; Soluk et al, 2021; Arcese et al, 2020; Souto 2015) in response to the crisis (Breier, et al., 2021) and considering previous literature on BMI (Amitt and Zott, 2012; Osterwalder and Pigneur, 2010; Casadesus-Masanell and Ricart, 2010), the authors show how business models in the tourism sector can be innovated through changes in the value proposition, value creation, and value delivery. The value proposition describes the portfolio of solutions that companies offer to their customers (Johnson et al., 2008; Morris et al., 2005). Value creation describes how companies create value for customers through the combination of resources and capabilities and its value network (Achtenhagen et al., 2013). Finally, value capture describes how companies generate revenue from their value propositions (Clauss, 2017). Given the complexity of the tourism product (simultaneity, intangibility, storability, and variability) and its expression as an experience-based innovation, many innovation changes are due to a combination of external and internal knowledge (absorptive capacities) that have favored the use of new knowledge invested in the development of new BM. Given the experience-based nature of the tourism product, internal knowledge is often based on non-technological elements resulting from close relationships between employees and customers. In this case, the ability to acquire technology-

based knowledge from outside and combine it with internal knowledge represents a source of competitive advantage.

According to these premises, this work investigates on how (BMI) can overcome turbulent events and the internal and external effects that influence the innovation process during the current health emergency due to the Covid-19 spread. From the literature emerges the role of knowledge management in crisis management framework and their contribute on (BMI), despite that the literature does not investigate much on Absorptive Capacity (ACAP) in the tourism sector, in this context this work offers a contribute on literature investigating on the role of ACAP on BMI in tourism sector. Finally, the role of technology is investigated as innovation driver in tourism sector.

Considering the following premises, the thesis is divided into the following chapters:

The first chapter consists of a general overview of the subject, highlighting the main theoretical considerations in order to define the starting point on which the explanation of the research problem is based. In order to identify the main research streams and literature gaps, it is important to examine the evolution of the concept of business model innovation (BMI) in the tourism sector and its role in times of crisis, disaster and change. Once the gaps in the literature are identified and the research questions are formulated, the research design is described. The research design consists of two parts, a theoretical part and an empirical part. The theoretical part aims to investigate the role of the business model in the tourism sector in times of crisis. The main focus is on crisis management and the role of BMI. The empirical part consists in collecting and analyzing data from a specific sample of tourism companies in order to answer the research questions and achieve the research objective.

The second chapter contains the main theoretical frameworks on crisis management in the tourism sector and the role of innovation in crises. Different theories and theoretical frameworks on this topic are considered in order to understand the contribution of innovation in the tourism sector under turbulent circumstances and how innovation has supported the resilience of the sector. In order to conduct an accurate analysis, the research includes both a literature review and a bibliometric analysis. In the bibliometric analysis, a digression on annual scientific production is made and a thematic approach and network analysis are used. Relevant theories on the role of innovation in the tourism crisis and factors influencing the innovation process are highlighted.

The third chapter examines the role of (BMI) in the tourism sector. The ability to innovate is critical to long-term business performance. The literature review was conducted to understand the relationship between business model innovation and the tourism sector and the factors influencing changes in (BM). Most of the works on the studied topic consist of empirical analyzes focusing on innovation practices. The results highlight the nature of the tourism sector as an open system, the relationship between external knowledge and internal innovation, and their impact on business model innovation.

The fourth chapter consists of an empirical analysis based on a multiple case study according to the research questions and research framework, aiming to verify the role of the business model as a driver to manage change and crisis. This chapter presents the findings and results of this study, highlights its limitations, and provides some directions for future research.

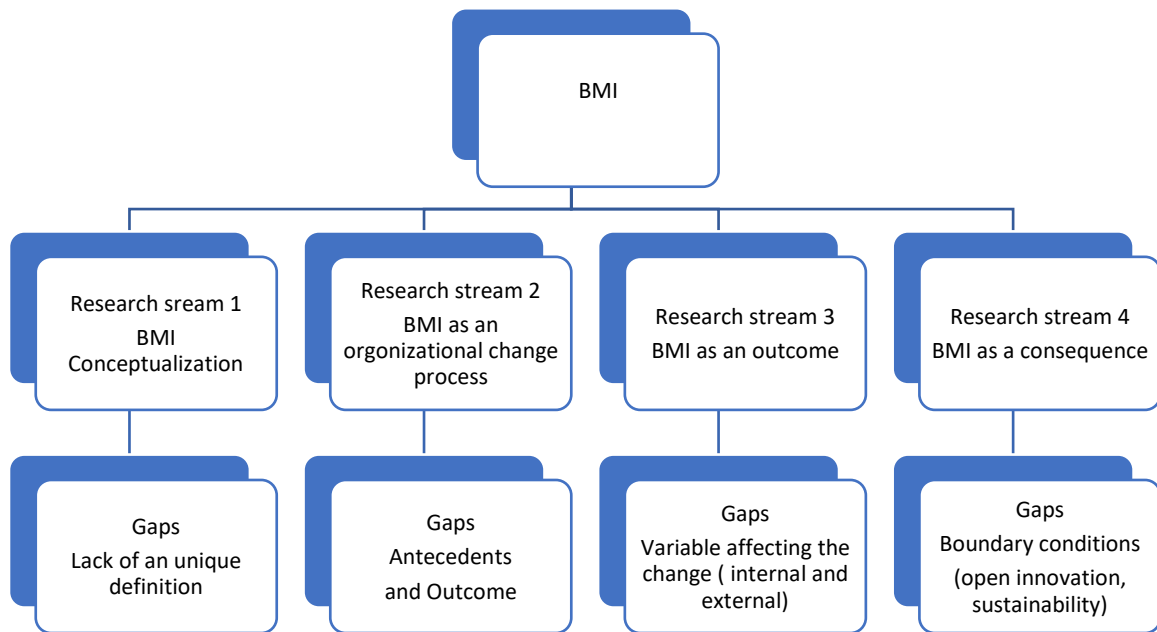
Chapter 1: Introduction to Research Topic

1.1 Statement of Research Problem

Given the fragmented nature of the tourism sector and its strong dependence on external factors (Paraskevas and Quek, 2019), the tourism industry has been affected by several crises (financial, economic, environmental, political, health, scarcity of natural resources). A crisis is defined as a negative event that differs from normality by a high degree of ambiguity and unpredictability (Racherla and Hu, 2009) and negatively affects destinations and organizations (Pedersen, Ritter, and Benedetto, 2020; Pforr and Hosie, 2008; Coombs, 2007), but it can also be considered as an opportunity resource (Kovoor-Misra, 2009; Ozawa and Zellner, 2012; Williams et., 2017; Sust et al., 2020). A crisis can awaken new customer needs and stimulate business models to innovate and introduce new capabilities, new value propositions, and new value demonstrations (Ritter and Pedersen, 2020). The current health crisis had a dramatic impact on the tourism industry. The nature of the tourism product (intangibility, simultaneity, transportation and storage, variability) has resulted in huge losses in the industry, i.e., what is not sold today represents lost revenue that cannot be recovered. Forced closure due to the last health emergency has forced companies to rethink their business model (BM). Temporary changes in BM are considered strategic tools to overcome times of crisis (Kraus et al, 2020). Business model innovation (BMI) often occurs in response to external drivers such as globalization (Ibarra, Ganzarain, and Igartua, 2018; Lee, Shin, and Park, 2012; Bock, Opsahl, George, and Gann, 2012), competitiveness (Berezhnoy, 2019; Bashir and Verma, 2017), and technological opportunities. (Paiola and Gebauer, 2020; Zott and Amit, 2017). Although the concept of (BMI) is fairly new, there are several contributions in the literature (Mitchell and Coles, 2004; Osterwalder and Pigneur, 2011; Chesbrough & Rosenbloom, 2002; Giesen, Berman, Bell, and Blitz, 2007; Lindgardt, Z., Reeves, Stalk, and Deimler, 2012; Geissdoerfer, Savaget, and Evans, 2017). The large number of authors makes it difficult to find a clear definition. Originally, the term (BM) was associated with a set of information technology modeling activities (Bellman, Clark, Malcolm, Craft, and Ricciardi, 1957). It is only in the 1990s that BM is described as a way of doing business (Timmers, 1998); it is defined as an architecture of products, services, and information flows, including a description of the various business actors and their roles. BM is considered an architecture of organizational units and activities that are interdependent (Zott and Amitt, 2010; Casadesus-Masanell, and Ricart, 2010;

Osterwalder, Pigneur, and Tucci, 2005). Most of these definitions align with that of Teece (2010), who defines BM as the "design or architecture of a company's value creation, delivery, and capture mechanisms." According to Teece (2010), in order to benefit from innovation, companies must not only innovate products, but also innovate their business model according to customer needs through technological behavior. In addition, the literature converges in the components of a BM "the company's value proposition and market segments, the structure of the value chain required to realize the value proposition, the mechanisms of value creation that the company employs, and the way these elements are connected in an architecture." The ability to innovate a business model is seen as a tool that supports a company's resilience in turbulent times (Mitchell and Coles, 2003). BMI also describes a process of transformation from one business model to another, or the transformation of a company after mergers and acquisitions, or the creation of an entirely new business model (Geissdoerfer, Bocken, and Hultink, 2016).

Fig. 1.1 Literature research streams



Source: own elaboration from Foss and Saebi, 2017

Most of the literature focuses on offering a definition of BMI and its dimensions. A first gap in the literature is the lack of a clear definition of BMI and its dimensions such as novelty (new to business, new to industry) and scope (a single change or an architectural change). Some authors (Geissdoerfer et al., 2016) define BMI as a process of transformation from one business model to another within established companies or after mergers and acquisitions, or the creation of

entirely new business models in start-ups. Looking at the organizational level of a BM, the literature highlights the different stages of the organizational change process (Geissdoerfer, Savaget, & Evans, 2017; Frankenberger, Weiblen, Csik, & Gassmann, 2013) and the key variables that support change in a company, such as organizational capabilities and leadership, dynamic consistency (Demil and Lecqoc, 2010), radical and incremental experimentation (Batocchio, Ferraz Minatogawa, & Anholon, 2017; Baldassarre, Calabretta, Bocken, & Jaskiewicz, 2017; Miroshnychenko, Strobl, Matzler, & De Massis, 2021), and organizational factors (Bock et al., 2012; Schneider & Spieth, 2014). BMs are said to adopt an open innovation approach (Albats, Podmetina, & Vanhaverbeke, 2021) that fosters business capabilities (collaboration and communication, knowledge management), human resource management (training, knowledge acquisition, networking), and customer engagement (brand awareness, loyalty, sales growth). BMI is often identified as a response to turbulent events such as internal crises or external events such as changing stakeholder demands (Ferreira, Proença, Spencer, and Cova, 2013), changes in the competitive environment (de Reuver et al., 2009), and opportunities created by new information and communication technologies (Pateli & Giaglis, 2005; Wirtz et al., 2010), but there is no work that provides a definition of BMI antecedents. Some authors (Bhatti et al., 2021; Miroshnychenko et al., 2021; Clauss e al., 2019; Bock et al., 2012;) identify strategic flexibility as a precursor to BMI. Strategic flexibility is considered as the ability to recognize and assimilate new knowledge (potential absorptive capacity) in order to transform and use new knowledge (realized absorptive capacity).

In the tourism industry, companies do not innovate in isolation, but in the context of inter-company collaborations that foster innovation opportunities. As we mentioned earlier, internal innovation can come from the combination of internal and external sources of innovation generated by other companies. In the tourism sector, BMI has considered an innovation steer that allows companies to change their business models affected by the hypercompetitiveness of the sector. In this particular context, innovation was considered as the creation of a novel value proposition and the implementation of a unique business model. Although Chesbrough and Rosenbloom (2002) and Teece (2010) define business model innovation as a way in which entrepreneurs create and deliver value to customers through the use of technology, Souto (2015) highlights that internal innovation in the tourism sector is often not based on scientific and technological knowledge due to the complexity of the sector and the experiential dimension of the tourism product (Hjalager, 2010). In the tourism sector, technological innovation is mainly dominated by suppliers (Evangelista & Savona, 2003; Pavitt, 1984), while internal innovation

in the tourism and hotel industry is mainly non-technological. Non-technological innovations, such as business models and business concepts, are strategic development tools for tourism companies (Souto, 2015). Most innovations that emerge in tourism companies are not based on technological and scientific knowledge, but on internal organizational processes. Due to the experience dimensions, innovation processes must focus on relationships with customers and employee engagement. Service innovation requires the integration of intangible aspects such as customer engagement, employee-customer relationships, and tangible aspects such as the booking of operating systems and other hardware. In this case, business model innovation (BMI) leverages the potential of new technologies, technological knowledge, and non-technological knowledge. Absorption and flexibility strategy are the main factors that help tourism companies to cope with changes and crises, to introduce new technologies, to innovate operations and to introduce new customer services. Tourism companies that excel at collaboration are more likely to develop new business models. Resilient businesses tend to adapt and respond to crises by developing new revenue streams and investing in innovation activities rather than cost cutting (Williams et al., 2017; Manfield and Newey, 2018). In adapting to crises, firms also adopt a bricolage approach (Baker and Nelson, 2005; Senyard et al., 2014; Tsilika et al., 2020), combining tangible and intangible sources, technological and non-technological sources, specific and non-specific knowledge derived from knowledge accumulated in ordinary operations.

1.2 Objective of Work and Research Questions

Based on the analysis of the research problem and the identification of the various literature gaps, this paper aims to help fill some of the literature gaps identified above.

Resilient firms tend to adapt to crises by creating new revenue streams and investing in human capital, in the innovation process, rather than in cost-cutting policies (Williams et al., 2017; Manfield and Newey, 2018). Temporary changes at BM are seen as useful tools to recover from a crisis (Kraus et al., 2020). Upon these literature theorems, it is possible to formulate this first research question:

Q1) How Can Business Model Innovation (BMI) be a useful tool to response to a crisis in Tourism Sector?

Considering BM as a useful tool to overcome crises, it is necessary to find out under which conditions changes are possible on BM. Previous scholars have highlighted the main variables

that support change in an organization, such as organizational capabilities and leadership, dynamic consistency (Demil and Lecqoc, 2010). Crisis management research streams have highlighted that turbulent events favor BMI implementation (Bivona and Cruz, 2021; Cheah, Ho, and Li, 2018). According to these theses, the second research question is as follows:

Q2) Which are the main drivers that encourage BM in tourism sector in times of health emergency crisis?

BMI is often considered a response to turbulent change, but there are no clear definitions on BMI antecedents. Indeed, BMI is often defined as a response to strategic discontinuities and disruptions (Doz & Kosonen, 2010) and to unpredictable change (Voelpel et al., 2004). Resilient companies are characterized by a strong ability to adapt to external changes and develop a flexible strategy. Given the complex nature of tourism businesses, characterized by the combination of tangible and intangible factors such as knowledge (Tsai, 2018; Burns et al., 2011), the lack of specific knowledge forces businesses to implement interactive BMs that leverage internal resources by activating collaboration and knowledge sharing with business partners to activate the innovation process during a time of crisis. The involvement of business partners and the capacity of firms to translate and absorb knowledge from them favor the implementation of innovation in BM (Bivona and Cruz, 2021). Absorptive capacities promote business innovation (Bhatti et al., 2020) and the way to capture and create value (Ferraris, Santoro, and Bresciani, 2017). Acquiring external knowledge favors the introduction of new products and services (Vrontis et al., 2017). The combination of internal and external knowledge improves the different components of a BM. Acquiring new knowledge and combining it with internal existing knowledge favors the development of new business model ideas, the change of BM and the way to create and capture value (Bhati et al., 2021). Based on the literature proposition, the third research question can be formulated:

Q3) How Can Absorptive capacities favour BMI in tourism sector?

Tourism product is determined by tangible and intangible factors. This is the reason why internal knowledge is often based on non-technological innovations, while technological innovations in the tourism sector are mainly dominated by suppliers (Souto, 2015; Evangelista, 2003). Moreover, external knowledge originating from the external environment is easier to imitate, while non-technological innovations such as business models and business concepts influence innovation performance. Given the characteristics of the tourism product, the

innovation process requires a close relationship between the customer and the company, and service innovation requires collaboration between these two main actors. In the tourism sector, innovation processes do not aim at innovation per se, but new knowledge is provided to meet the needs of customers. This important relationship is not based on the mere development of technologies, but on the interaction of three components: the absorption of external knowledge, scientific knowledge. The development of internal knowledge, which is usually non- scientific and non-technological. The combination and application of internal and external knowledge. Based on these findings, the final research question is formulated:

Q4) Can non-technological innovations be driver for business model innovation in tourism sector?

The goal of this research is to find answers to questions through the application of scientific procedures. Namely, by defining the research goal, it is possible to find out the truth that is hidden and that has not been discovered yet (Kothari, 2004).

According to research question the following framework is proposed:

1.3 Research Design

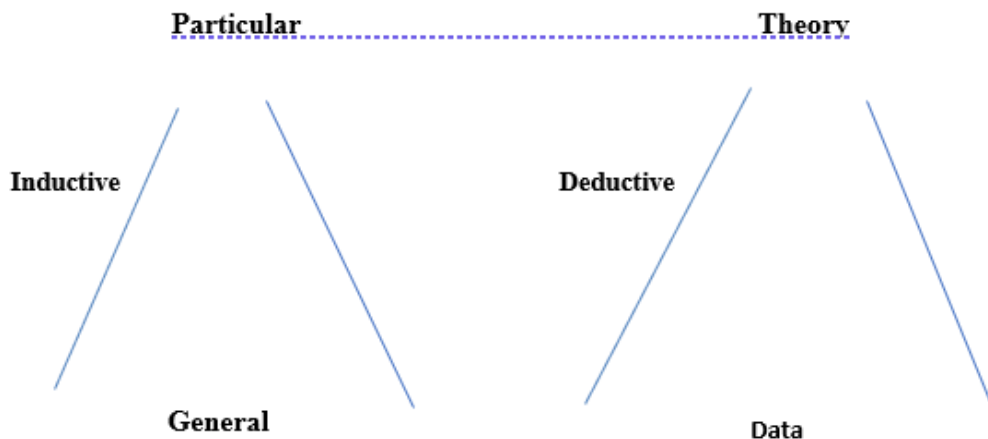
In order to proceed with scientific research, it is necessary to define a research design. It consists of an overall strategy that the authors choose to achieve their research goal. First, it is necessary to identify the problem, conduct an investigation of the topic to identify what should be studied, what are the main research directions and what are the gaps in the literature to be filled.

Once the literature review is completed, the author can proceed to identify the research questions supported by the literature review and explore the identified literature gap in depth. The literature review provides the key theoretical frameworks upon which the research is based. It also allows for the identification of the key variables to be analyzed according to the research objective. After the literature review is completed, an experimental approach is conducted to confirm or not the research hypothesis. In this particular case, an analysis of several case studies is conducted to understand whether BMI can be a useful tool to overcome crises in the hospitality industry, especially during Covid-19. The role of BMI innovation as a strategic tool to overcome crises, especially during the crisis in the tourism sector, is still little researched and can be considered as a new research direction, while there is already general research on the role of BMI in the crisis. In this paper, a qualitative analysis is conducted using a deductive and

inductive approach (Bingham and Witkowsky, 2021). A deductive analysis consists of a "top-down" approach in which theories are applied to the data to test the theory. In a qualitative analysis, the data are codified. Codes may be created from concepts found in the literature, theory, or propositions developed by the researcher.

An inductive analysis, on the other hand, consists of a bottom-up approach in which the analysis starts from the interpretation of the data to arrive at the elaboration of theoretical assumptions. The inductive method is a cognitive process from the particular to the general. In the inductive model, the researcher starts from the observation of a particular and concrete phenomenon to arrive at general and universal laws that can explain other similar phenomena.

Fig. 1.2 Inductive and deductive approach



source: own elaboration

Actually, both single (Velu, 2016; Franceschelli et., 2018) and multiple case study research designs (Ghezzi and Cavallo, 2020; Yang et al., 2017; Bolton and Hannon, 2016) are well-established in the BMI field (Ranta, Aarikka-Stenroos and Väisänen, 2021; Bolton & Hannon, 2016). In the following table, different case studies applied to business model innovation are presented.

Tab. 1.1 Case study Typology

Case study type	Definition	Published study example
Explanatory	this kind of case study is required to answer to questions that ought to explain the presumed causal links in real-life interventions that are too complex for the survey or experimental strategies (Yin, 2009)	Latilla, V. M., Frattini, F., Franzo, S., & Chiesa, V. (2020). Organisational change and business model innovation: An exploratory study of an energy utility. <i>International Journal of Innovation Management</i> , 24(04), 2050036.
Descriptive	this kind of case study is used to describe an intervention and phenomenon and the context in which happens.	Lee, J., Suh, T., Roy, D., & Baucus, M. (2019). Emerging technology and business model innovation: the case of artificial intelligence. <i>Journal of Open Innovation: Technology, Market, and Complexity</i> , 5(3), 44.
Exploratory	this kind of case study is used to explore those situations in which the intervention being evaluated has no clear, single set of outcomes.	Heikkilä, M., Bouwman, H., & Heikkilä, J. (2017). From strategic goals to business model innovation paths: an exploratory study. <i>Journal of small business and enterprise development</i> .
Multiple-case studies	this kind of case study allows the researcher to explore differences in different study cases and to compare the results (Stake, 2015).	Guldmann, E., & Huulgaard, R. D. (2020). Barriers to circular business model innovation: A multiple-case study. <i>Journal of Cleaner Production</i> , 243, 118160.
Intrinsic	this kind of case study is not analysed to build theories, but it is analyzed in all its particularity. In other words, the researcher is interested to the specific case (Stake, 1995).	Miller, K., McAdam, M., & McAdam, R. (2014). The changing university business model: a stakeholder perspective. <i>R&D Management</i> , 44(3), 265-287.

Instrumental	this kind of case is used to support the building of a new theory, to discover an issues. The case is considered only a discovery tool (Stake, 1995).	Pohle, G., & Chapman, M. (2006). IBM's global CEO report 2006: business model innovation matters. <i>Strategy & Leadership</i> .
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source: own elaboration from Hafiz (2008)

1.4 Multiple-case studies

In this work, a multiple case study methodology is used to analyze a specific topic, in this particular case the role of BMI in the tourism sector in times of crisis. Case study is a commonly used method to analyze BMI (Latilla et al., 2020; Lee et al., 2019; Guldmann, 2020; Miller, 2014) and in this case, a multiple case study analysis was chosen to ensure a high degree of robustness in the results. With this method, a few cases are selected and analyzed to understand the similarities and differences between them. This methodology allows to predict similar results (a literal replication) and to predict divergent results but for predictable reasons (a theoretical replication). Each case study is developed based on some elements that can be found in the following: Propositions, application of a conceptual framework, development of research questions, linking data to propositions, establishing criteria for describing results.

Propositions come from literature, personal/professional experiences, and theories. They are not always present, but they help the researcher narrow the scope of the research and increase the feasibility of the project. Propositions can be equated with the research hypothesis.

There can be several propositions and each of them must have a specific focus and purpose. Each proposition favors data collection and discussion. Each proposition guides data collection, determines the direction and scope of the study, and provides the basis for a conceptual structure/framework.

The conceptual framework provides the starting point for the case study analysis. It is used to identify which initial factors will be included in the study and describes the relationships between constructs based on theories and empirical evidence. The initial framework and the various construct relationships will be completed as the data analysis progresses. The final conceptual framework includes all findings that emerge from the data analysis.

Data sources include documentation, interviews, reports, direct observation, participant observation. Data can be collected using a variety of methods: Pattern matching, linking data to propositions, generating explanations, time series analysis, logic models, and cross-case synthesis (Yin, 2009), as well as categorical aggregation and direct interpretation (Stake, 2015).

Chapter 2: Theoretical Framework on Tourism Innovation

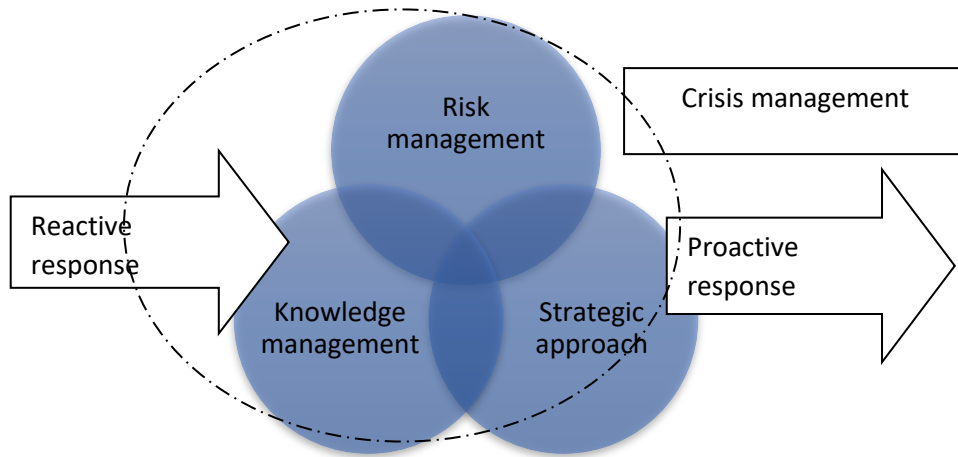
2.1 Management in Times of Crisis

The tourism sector has been affected by several crises and disasters over time and for different reasons in different regions of the world, and innovation has played a central role in overcoming crises in such circumstances (Cheah et al., 2018; Clauss et al., 2019; Aliperti et al., 2019). In times of crisis, innovation has underlined the recovery and resilience of the hospitality industry (Bourdeau, 2009, Luthe and Wyss, 2015; Kawharu et al., 2017). Recent literature has demonstrated the role of innovation in addressing crises in the hospitality industry (Presenza and Petruzzelli, 2019). Investment in innovation and in R&D favors profits during an economic crisis (Lilien and Srinivasan, 2010) and improves firm productivity (Barros et al., 2009). The recent crisis (Covid-19) has caused a shift from tourism based on excessive consumption to tourism based on social well-being (Everingham and Chassagne, 2020). Tourists are looking for creative innovation that enhances their experience and satisfaction (Hermawati, Nurwati, Suhana, Machmuddah, & Ali, 2020). Companies are called upon to innovate their organizational management to respond to emerging needs and overcome times of crisis (Breier et. al, 2021)

In this chapter, a digression about tourism crisis is given. There are numerous definitions (Huang, et al, 2020; Sharahbani, et al.2019; O' Brien, 2012; Glaesser, 2006; Pforr, 2006;) and typologies of crises (Hall. 2010; Racheral and Hu; 2009) in the literature. Scholars propose various crisis management frameworks, some of which consist of general frameworks for the tourism sector (Faulkner, 2008; Ritchie, 2004), while others consist of specific frameworks for particular crises (Li, Zhong, Zhang, and Hua, 2021; Paraskevas and Quek 2019; Luo and Zhai, 2017; Okumus, Altinay and Hueseyin 2005). Be that as it may, all these theories can be traced back to the definition of Pearson (1998; 2019), who describes crisis management as a systematic attempt by an organization and its stakeholders to manage or prevent crises. Over the years, in addition to defining the phases of a crisis and elaborating a strategic approach to be applied, authors (Paraskevas and Quek 2019; Mikulik et al., 2018) have emphasized the concept of risk management (risk identification, risk assessment, risk management decision, evaluation), which has favored a shift from a *reactive response* to a *proactive response* to crises. Successful risk management must be supported by a knowledge management process (Paraskevas, Altinay,

McLean, and Cooper, 2013; Jia, Shi, Jia, and Li, 2012) through which organizations acquire and store data to assimilate and transform into innovations to deal with crises. The process of knowledge management allows companies to respond to the crisis, but also to avoid adopting policies or strategic plans that have been previously adopted, or adopting policies that have already been adopted by other companies.

Fig. 2.1 Crisis Management Framework



source: own elaboration

The second part of the chapter examines the role of innovation in tourism crisis management. This analysis corresponds to both the conceptual analysis and the bibliometric analysis. A bibliometric analysis is carried out, making a digression on the annual scientific production and using a thematic approach and a network analysis. The analysis highlights the key role of innovation in times of crisis, showing the main innovative practices in the tourism industry and the relationship between knowledge management and business model innovation. Although external sources of knowledge and absorptive capacity are considered the main drivers of firms' innovation efforts, the thematic map shows that there is still little research on this topic.

2.2 Crisis Typologies in Tourism Sector

The tourism sector is affected by crises and disasters. The most common definition (Glaesser, 2006), which better explains the concept, defines a tourism crisis as "an event which causes disruption in normal functioning of tourism businesses, damages the reputation of a destination in terms of safety, attractiveness and comfort and affects the perceptions of visitors negatively. As a result, the crisis negatively affects the tourism economy and causes reduced tourist arrival, spending, and delay in business". This definition is both the result of previous

definitions and a starting point for future contributions that take into account political (Pforr, 2006; O'Brien, 2012), organizational (Lagadec, 1993; Pauchant and Douville, 1994; Roberts, 2013; Shrivastava, 1993) or environmental (Pearson and Mitroff, 1993) aspects. It is necessary to define the difference between the terms crisis and disaster. A crisis refers to organizational problems (Self, 1978; Ray, 1999; Faulkner, 2001; Tew et al., 2008; Huang, et al., 2020), while a disaster refers to external environmental problems (Stafford et al., 2002; Biggs, Hall, and Stoeckl, 2012). Crisis refers to a situation in which the main cause of the event is self-inflicted, due to poor management and inability to adapt to changes in the organization. Disaster refers to a situation in which an organization is faced with an unpredictable event over which it has no control. Parsons (1996) defines a disaster as a situation in which an organization must deal with something unpredictable (Mikulić, Sprčić, Holiček, and Prebežac, 2018) and random (Faulkner & Vikulov, 2003). A disaster is a natural or man-made event that has a gradual or immediate impact on the destination and the local community, which must implement recovery strategies (Estevão, C., & Costa, 2020).

Tab.2.1 Typology of crisis and disaster

Typology	Definition	Authors
Terrorism issues	crises such as disasters or catastrophes involving a clearly unpredictable event that can normally only be managed after that is realized.	Aziz, 1995; Pizam & Smith, 2000; Goodrich, 2002; Hall, 2002; Henderson, 2002; Mckercker and Hui, 2004
Political crisis	situations where the economic or political system faces challenges which political institutions and organizations can not manage.	Leiper & Hing, 1998; Pine, Chan, & Leung, 1998; Prideaux & Witt, 2000; Sharahbani, et al. 2019
Natural disasters	the term disaster is referred to situations in which the destination faces unpredictable catastrophic events on which it has a small control.	Page, Yeoman, Munro, Connell, & Faulkner, 2001; Chien, 2003; Walker, 2006; Wilder-Smith, 2006; Kuo, Chen, Tseng, Ju, & Huang, 2007; McAleer, Huang, Kuo, Chen, & Chang, 2009
Internal Crisis	a crisis can be defined as an event due to organizational errors.	Selbst, 1978; Ray, 1999; Faulkner, 2001; Huang, et al., 2020
Economic and financial crisis	crises can be understood as one speculative pressure on changes in the foreign exchange rate, on interest and on foreign reserves.	Eichengreen, Rose and Wyplosz, 1995 Girton e Roper, 1997
Health emergency crisis	It represents an unexpected threat to physical health or wellbeing which requires an urgent assessment. a health crisis occurs when consequences have the potential to overwhelm community routine.	Nelson, Lurie, Wasserman, & Zakowski, 2007; Morgans and Burges, 2011

Source: own elaboration

Tourism crises are classified (Duan, Xie, & Morrison, 2021) by stage of occurrence (before and after), duration (short- and long-term), geographic extent (regional, national, global), theme (political, environmental, economic, natural disaster, health emergency, security). Hall (2010) identifies different types of crises (Tab.2.2) affecting the tourism industry since 1974, such as the oil crisis due to the oil Airab embargo, which affected Western Europe and North America.

Table. 2.2 Typologies of crisis

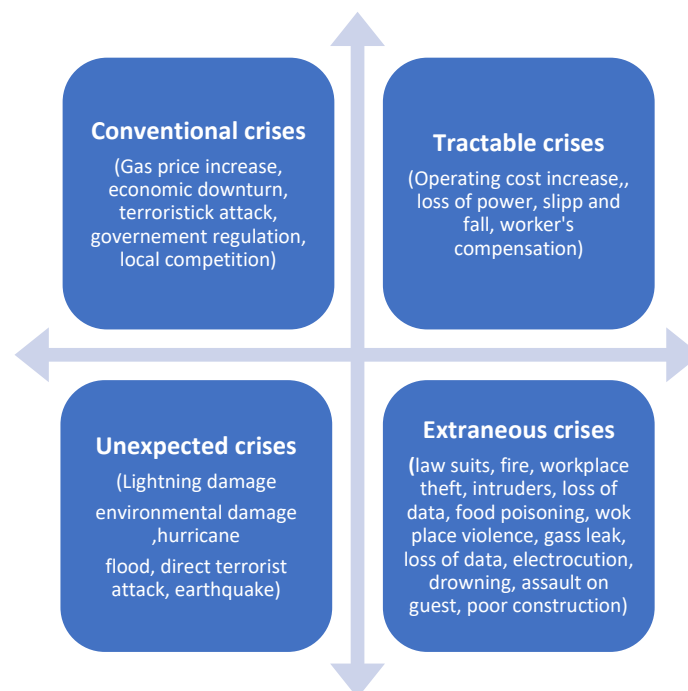
Year	Typology of crisis	Specific event	Geographic dimension
1974	Oil Crisis	Arab Oil Embargo	W. Europa N. America
1979	Energy Crisis	Revolution in Iran; USSR invades afghanistan; Iraq-Iran War	USA; W.Europe
1989	Political Issue	First Intifada	
1990	Oil Shock	First Gulf War	Global
1992	Natural Disaster	Hurrican Andrew	Global
1998	Natural Disaster	Asian haze	Asia
2000	Political Issue	Second Intifada	
2001	Terroristic Issue	11/9 attacks	Global
2001	Health issues	Uk foot and mouth	Global
2001	Health Issues	Sars	
2004	Political issues	Bali Bombings	
2004	Natural disasters	Hurricane Katrina	
2006	Political Issue	Insraele invades Lebanon	
	Natural disaster	US Heat Wave , Asia	
2008	Financial Crisis		Global
2009	Health issues	Swine flu pandemic	Global

2010	Oil/ energy Issue	Oil price increase	Global
2020	Health Emergency	Covid-19	Global

source: own elaboration from Hall, 2010

Racheral and Hu (2009) conducted an analysis aimed at categorizing crises from a firm perspective considering two main dimensions, the level of control and occurrence probability.

Fig. 2.2 Crisis Typology as Perceived by Operators



Source: own elaboration from Racheral and Hu (2009)

Four main categories of crisis are identified:

- 1) Unexpected crises characterized by a low probability of occurrence and a low degree of control. These crises are found in environmental damage and terrorist attacks. The typology of knowledge required to manage these types of crises is derived from years of experience in areas frequently affected by these types of events.
- 2) Conventional crises are predictable but characterized by a low level of control. These crises can be seen in economic downturns. Despite the low level of control, the high probability of occurrence encourages management and employees to obtain information and take existing actions.

- 3) Traceable crises are characterized by a high level of predictability and control. These crises can be identified by rampant inflation and employee demands, and require expert management and staff, as well as high investment in technology.
- 4) External crises are characterized by low probability and a high degree of control. These crises are characterized by lawsuits, workplace theft, intruders, data breaches, and food poisoning. Although the probability of their occurrence is quite low, they are easily managed. To prevent this type of crisis, a process of risk prevention is required.

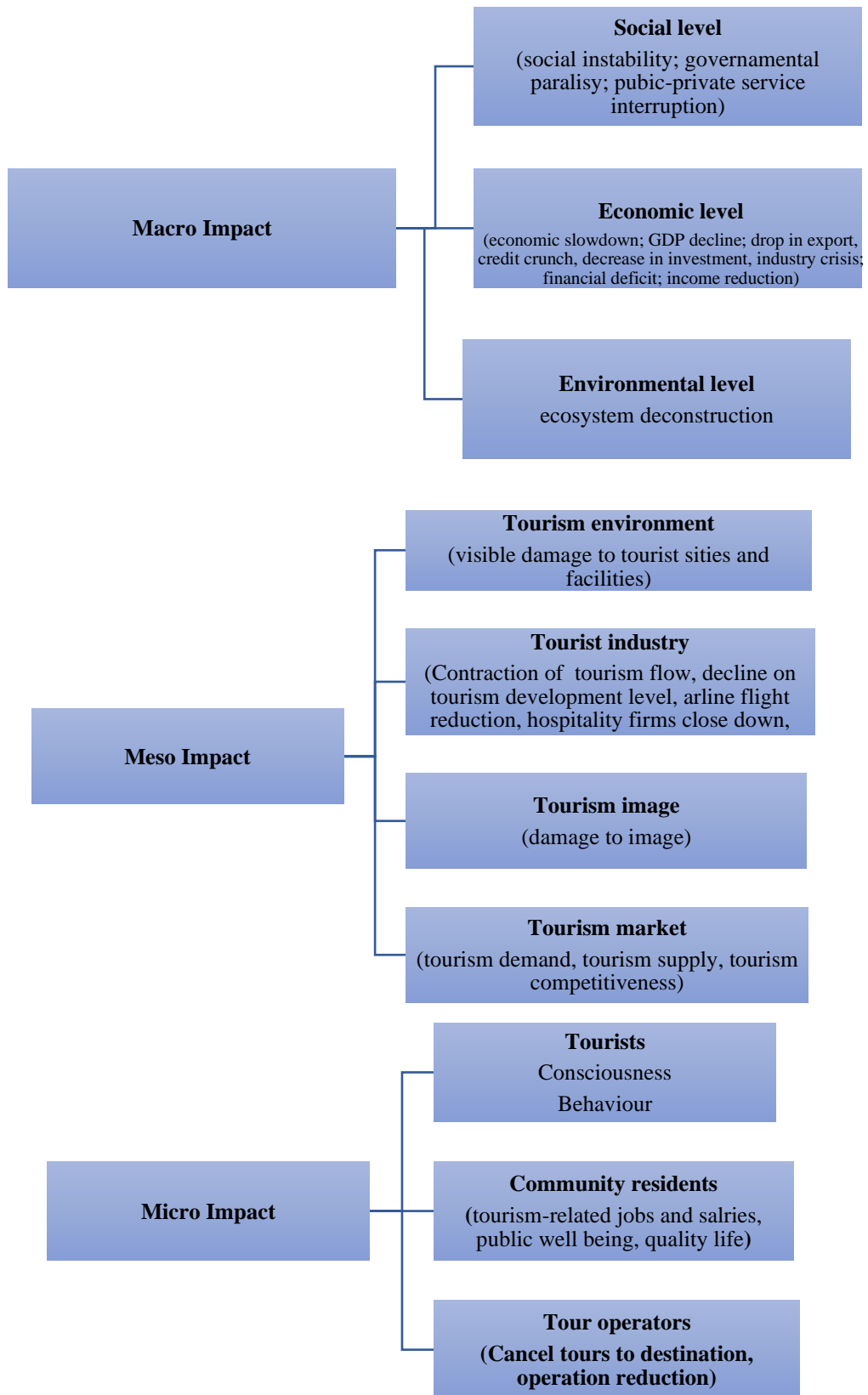
Crises can affect the tourism industry on three levels: *Macro Impact*, *Meso Impact* and *Micro Impact*.

Macro Impact refers to the effects of a tourism crisis at the macro level of a destination, including economic, social, and environmental dimensions. The impacts of tourism crises are manifested in the destruction of ecosystems and the release of pollutants. The impact on the economic environment can be seen in: economic recession, decrease in income, increase in unemployment rate, decrease in GDP, decrease in exports, business crisis. The impact on the social environment is due to health, safety and security problems that can lead to social and governmental instability.

Meso Impact refers to the tourism sector and its activities, including tourism environment, tourism industry, tourism image, tourism market and tourism losses. Natural disasters and security crises such as terrorist attacks and wars cause visible damage to tourism sites and facilities. This type of crisis negatively affects the image of a destination at the international level, leading to a decrease in arrivals and the closure of tourism businesses. Tourism crises also affect the destination market in terms of tourism investment, competitiveness, demand, and supply.

Micro Impact refers to the effects of tourism crises at the individual level, i.e. on tourists, locals and tour operators. Crises raise tourists' awareness of safety and security. Impacts on communities are manifested in lower levels of prosperity due to a possible decline in employment rates and salaries, and disruption of public services.

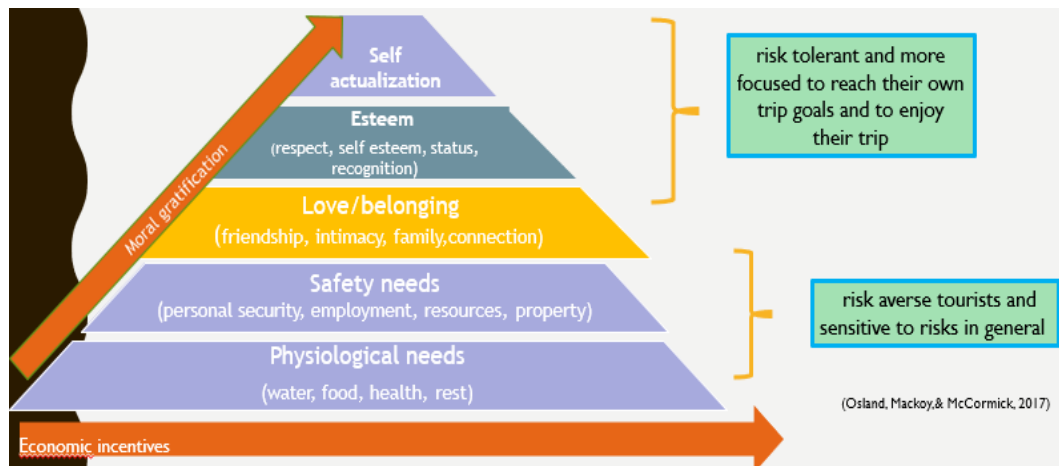
Fig.2.3 Tourism crises impacts



source: own elaboration from Xuan, Dien and Morrison, 2021

Tourism demand is particularly sensitive to safety and health. In terms of risk perception, tourists can be divided into two main categories (Osland, Mackoy & McCormick, 2017): 1) risk-averse tourists and sensitive to risks in general, with a particular focus on health and safety risks, and 2) risk-tolerant tourists and more concerned with reaching their own destinations and enjoying their trip. Considering Maslow's Hierarchy of needs, risk-tolerant tourists have warnings related to higher levels of the hierarchy, while the risk-averse tourists are more focused on the lower level of Maslow's hierarchy.

Fig.2.4 Risk perception



own elaboration from: Osland, Mackoy, & McCormick, 2017

The negative impact on tourism demand can be measured by the decline in tourist numbers, hotel occupancy, airline flights, passenger numbers, etc. On the supply side, companies are forced to implement competitive strategies (diversification, improvement of product quality) and to adopt pricing policies oriented to the heterogeneity of customers.

The impact of a tourism crisis can also be influenced by small changes in the environment, namely *synergy factors*, which are divided into *positive synergy*, *negative synergy*, and *interactive synergy* (Haken, 1985; Zhao et al., 2018).

Positive synergy factors have a positive impact on the crisis. Such factors include destination familiarity, previous travel experiences, and information seeking. Familiarity with the destination has a positive effect on risk and safety perceptions and influences tourists' behavior and opinions about the destination's image. Previous travel experiences have a positive effect, appearing to be associated with low-risk perceptions and favoring future travel decisions.

Negative synergy factors have a negative impact on the crisis. Such factors are seen in official travel warnings, dependence on tourism, crisis experiences, globalization, and internationalization. Government travel warnings can have a negative impact on the image of the destination by affecting the psychology of tourists and increasing their fears about the safety of the destination. Dependence on tourism revenues has a negative impact on a destination's economy. A tourism crisis can destroy a destination's economy if its economic well-being depends primarily on tourism revenues. Previous experiences with tourism crises can have a negative impact on tourists' decision to travel again, they can cause tourists to be afraid and worried about traveling. Finally, the globalization process has favored the spread of phenomena such as economic and financial recessions, political instability, or natural disasters that cause tourism crises.

Interactive synergies can have both positive and negative effects. They can be found in media coverage, tourists' personal characteristics, and tour operators. Media coverage can attract visitors, but it can also increase their perception of risk. A tourist's personal characteristics can have both positive and negative effects on tourism crises, depending on their risk perception and tolerance. Destination security measures can encourage, but also discourage, visitors from visiting a destination. Security measures can have a dual effect: They can increase the perception of safety, but they can also increase the perception of risk. Tour operators also have a strong influence on the tourism crisis because of the degree of customer loyalty. Namely, if a tour operator is perceived as safe, tourists are willing to visit destinations offered by that tour operator.

2.3 Crisis Management

A crisis is considered an unpredictable event that can occur at any time, anywhere, for reasons that may be unknown until the event occurs. A crisis interrupts the previously existing state and the ongoing situation returns to normal only through a crisis management plan, and people and organizations can return to their activities. Moreover, after a crisis, new business relationships and a new way of working are established. In fact, the term crisis is derived from the Greek word "krisis", which means turning point (Santana, 2003).

Chaos theory (Faulkner and Russell, 1997) states that systems that appear to be in equilibrium are always on the verge of chaos and that small changes can disrupt this equilibrium. Given this assumption, crises are inevitable, and companies are always waiting for them, and if they are

not in a crisis, they are in a pre-crisis or prodromal phase (Fink, 1986). Faulkner (2001) provides a framework for crisis management in tourism and distinguishes six phases a pre-event phase, a prodromal phase, an emergency response phase, a short-term recovery phase, a long-term recovery phase, and a resolution phase to reach a new stable state (Figure 6).

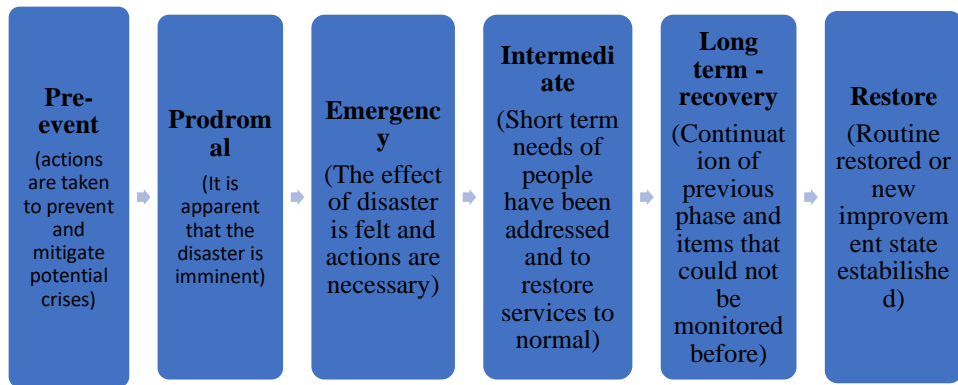
Each of these phases includes some prerequisites such as the establishment of a coordinated management team based on a consultation approach, from which a protocol of strategies, measures and actions is derived.

A tourism disaster management plan must include:

- *Risk assessment*: an evaluation of potential emerging risks and prioritization of actions and tasks in response to identified risks.
- *Community capability review*: an assessment of the community's ability to deal with specific disasters.
- *Media, monitoring activities, and warning system*: the media plays an important role in crisis management. During the emergency and recovery phases, the media provide tourists with information on the status of the crisis and the security measures taken.

Taking into account past events and the strategies and measures applied in response to the associated risks, it is possible to develop strategies for dealing with similar events in the future. In this framework, crises and disasters are considered separately. A crisis is an internal, self-inflicted event resulting from a lack of planning and management. A disaster is an external event over which people and organizations have no control. Nowadays, the distinction between disaster and crisis is very subtle and for this reason they are presented as the opposites of a continuum. Although disasters are considered unpredictable events, their impact can be monitored and actions taken in response to risks can be reapplied to future events.

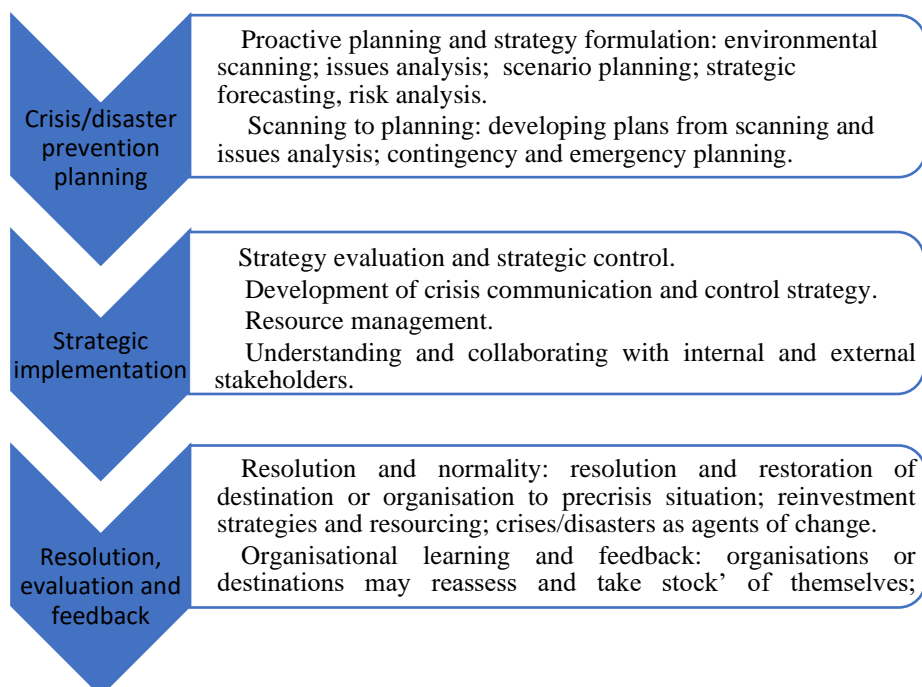
Fig. 2.5 Tourism disaster management framework



source: Faulkner, 2001

One of the key competencies of a manager is managing change. Organizations must move from a reactive approach to a proactive approach to deal with chaos and change (Smallman, 1996). Although crises and events cannot be easily predicted, managers are able to reduce risks and prevent or mitigate crises. The development of strategies favors organizations' management of changes resulting from crises and disasters. Ritchie (2003) applies a holistic strategic approach to Faulkner's framework, a model consisting of three main phases: 1) *prevention and planning*, 2) *implementation*, 3) *evaluation and feedback*. Each phase includes a set of management tasks.

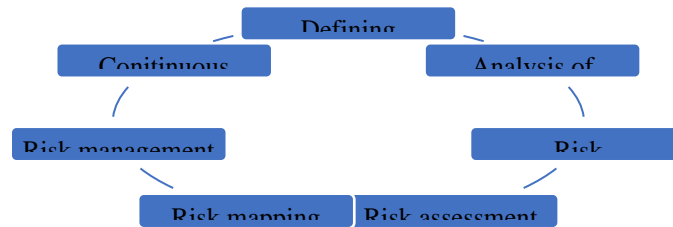
Fig. 2.6 Strategic Management Framework



Source: own elaboration from Ritchie (2004)

Risk assessment seems to be one of the most important measures for successful crisis management. Indeed, after the risks have been identified, it is possible to evaluate a strategy and a strategic control. Mikulik et al. (2018) propose an integrated risk management process.

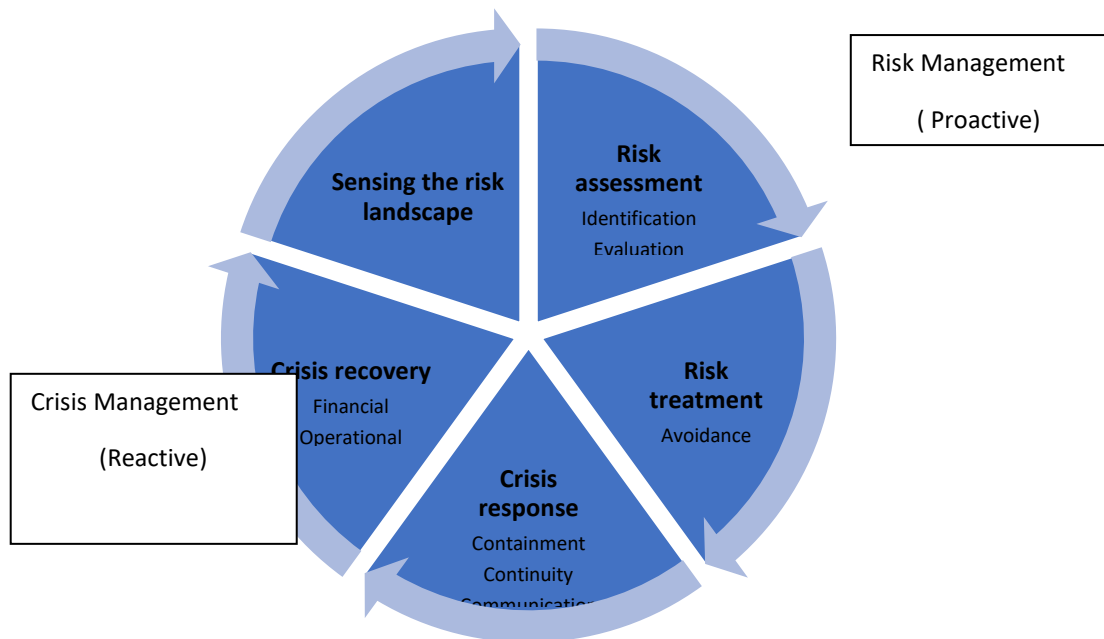
Fig. 2.7 Risk Assessment Management Process



Source: from Mikulik et al., (2018)

This integrated risk management allows us to identify all possible risks, the priorities and the appropriate actions. This assessment provides a useful risk map that helps policymakers and managers develop strategies and action plans to use when similar crises occur. The distinction between the proactive and reactive approaches is outlined by Paraskevas and Quek (2019). In this framework, two main components are identified: risk management (proactive approach), which addresses all potential threats that are still risks, and crisis management (reactive approach), when threats have become crises. This process is divided into 5 phases that are fed by risk intelligence, the ability of an organization to produce and manage knowledge during the process and use it to deal with threats.

Fig. 2.8 The resilience management framework



Source: from Paraskevas and Queck, (2019)

Both frameworks are based on the concept of risk assessment to proceed with a proactive action that implements measures to deal with potential and real threats. Both models emphasize the concept of knowledge management and knowledge sharing among the different stakeholders of the tourism sector.

2.4 Knowledge Management Framework

Hospitality and tourism organizations improve their crisis management plan by acquiring and disseminating knowledge.

According to resource-based theory (RBT), knowledge is considered one of the most important unique resources and capabilities that an organization must acquire, control, and deploy to manage crises and increase resilience.

In contrast, the knowledge-based view considers knowledge to be an organization's most important strategic resource. The knowledge-based view views the organization as a set of capabilities, competencies, processes, and tools through which knowledge is acquired, created, disseminated, and used. Knowledge applied in an organization is defined as *Intellectual Capital* (IC), which consists of a set of intangible assets such as resources, skills, and competencies from which organizational performance and value creation are derived (Roos, & Roos, 1997;

Subramaniam, & Venkatraman, 2001). (IC) consists of three main dimensions: *human capital, organizational capital, and cultural capital*.

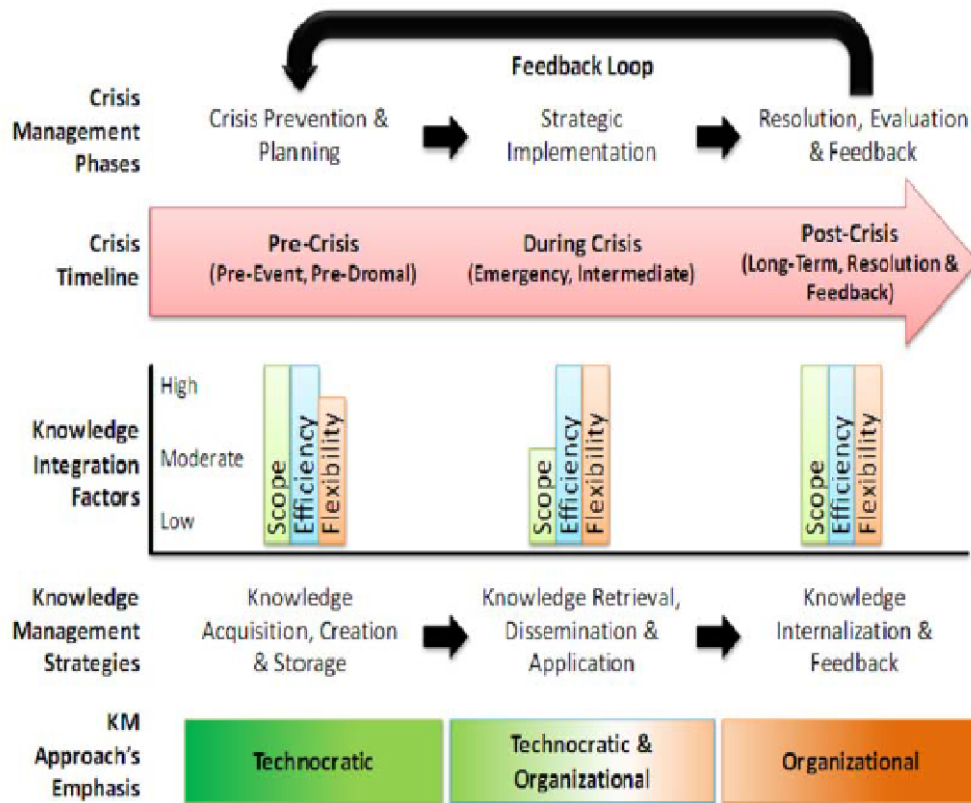
Human capital consists of the knowledge that employees create through their competence, attitude, and intellectual agility (Cricelli et al., 2014). Employees are creative, smart, skilled, and experts in their roles and functions, which are an important source for developing new ideas and creating new knowledge.

Organizational capital is defined as "institutionalized knowledge and codified experience" that exists in an organization and is collected and shared through databases, patents, manuals, structures, systems, and processes. Organizational capital includes tangible aspects such as infrastructure, information systems, and routine procedures. Knowledge is the result of internal processes and external sources. Interaction among employees is facilitated by physical spaces such as meeting rooms and computer networks. Organizational knowledge is understood as knowledge that is woven into the organizational structure.

Social capital is defined as the knowledge generated and available in a network. In this particular context, it consists of the knowledge generated among team members. There are two main forms of knowledge: *tacit knowledge and explicit knowledge*. Explicit knowledge consists of codified data or data physically stored in databases and is distinguished in objects (business plans, databases, reports) and in rule-based knowledge stores (rules and procedures). Tacit knowledge consists of knowledge derived from internal procedures, routine processes, internal and mental models of individuals (Paraskevas et al., 2013). It can be divided into cognitive knowledge (perceptions, beliefs, and values) and technical knowledge (expertise, knowledge, and skills).

The knowledge management process consists of three main phases: 1)the acquisition and storage phase, 2)the retrieval, dissemination, and use phase, and 3) the evaluation and feedback phase. In the first phase, knowledge is acquired, transformed into explicit knowledge, and stored in a database. In the second phase, knowledge is disseminated to employees and distributed among departments. In the third phase, knowledge is evaluated by employees and their feedback guides the organization in acquiring new knowledge.

Fig. 2.9 Crisis Knowledge management framework



source: from Racherla and Hu, (2009)

These three phases presuppose the need to integrate the different types of knowledge from different sources. Integration is based on three main factors: scope, flexibility, and efficiency. The scope determines the degree of complexity and integration of the existing knowledge. Efficiency determines the degree of congruence between the knowledge of the acting persons. Flexibility consists of the organization's willingness to reconfigure existing knowledge and combine it with new potential knowledge.

The combination between the forms of knowledge (tacit or explicit) and the sources of knowledge determines which approach is used to manage the knowledge: a technocratic approach based on the application of technological tools or an organizational approach based on network interactions and communities. Looking at the phases of crisis management and the process of knowledge management, the actions of the first phase of knowledge management (acquisition, creation and storage) are applied in the phase before a crisis occurs. In this phase, the organization identifies all risks and determines the actions to be taken (Wang and Belardo 2005).

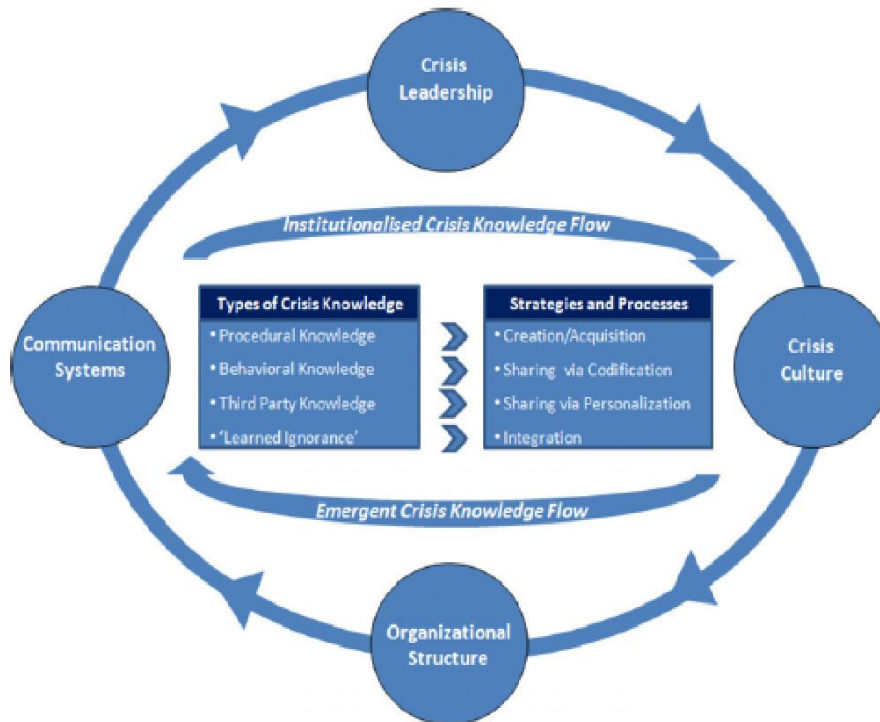
In this phase, the most important information consists of government regulations, scenario analysis, and emergency information. The most appropriate approach is the technocratic approach. The sources are codified into databases that can be accessed by the experts. In addition to the data, the experts' experiences are also collected. This emphasizes the different aspects of knowledge, because knowledge comes not only from data, but also from experience. Considering the chaos theory, "companies are constantly at the chaos threshold, waiting for changes," and actions such as collection, storage, and creation should be performed constantly to avoid crisis moments and be prepared for any changes.

The dissemination and retrieval phase is carried out when the crisis occurs, and both a technocratic and an organizational approach are adopted. The knowledge management area focuses on applying the best measures to manage the crisis. The dissemination of knowledge is a crucial point in a tourism destination, a knowledge distribution system is required to face situations of uncertainty and change. In the tourism and hospitality sector, stakeholders need to acquire and share information and knowledge to be aware. Thus, a technocratic approach is needed to promote the dissemination of knowledge through technological tools, but the experience of experts is also necessary. Experts who have already mastered these situations of uncertainty cannot be replaced by technology.

Actions such as learning, evaluation and feedback are carried out in the post-crisis phase, the recovery phase. In this phase, companies show maximum flexibility by adapting their strategies according to their assessments and feedback. In this phase, the organizational approach is more emphasized. Members of the organization acquire and assimilate knowledge and review feedback.

According to the organizational approach, a crisis also becomes an opportunity for organizations and stakeholders to acquire new knowledge to disseminate at the intraorganizational or interorganizational level. Community and networks become useful tools through which knowledge can be disseminated and shared. In this way, individuals can interact, exchange, and learn from each other's experiences. Considering the technocratic and organizational approach and the different forms of knowledge (tacit and explicit), Paraskevas et al. (2013) identify four knowledge typologies and two main information flows influenced by four internal organizational factors.

Fig. 2.10 Framework for Crisis Knowledge Governance



source: Paraskevas et al., 2019

This crisis knowledge management framework is based on two main theories: Normal Accident Theories (NAT) and High Reliability Theory (HRT).

NAT considers organization as a complex system of technology and human capital and assumes that although crises and disasters are unpredictable and unintentional, they can also depend on errors in organizational procedures that lead to situations of uncertainty that become uncontrollable.

In contrast, (HRT) assumes that organizations can proactively control and reduce the risks of technical operations and avoid failures even in a turbulent environment.

According to these two theories, four organizational factors influence the crisis knowledge management process.

- 1) *Crisis leadership* is not just about the role of managers urging their employees to behave reactively in a crisis, but about getting them to behave proactively. In fact, crisis leadership refers to a leader's ability to spread a crisis culture throughout their organization (Mitroff, 2001). A crisis leadership consists of a set of concepts, visions, and actions that shape the strategic crisis management plan. Crisis leadership requires a

certain degree of flexibility due to the degree of uncertainty and includes activities such as continuous training and review of crisis processes and continuous strategic adaptation opportunities.

- 2) *Crisis culture* refers to the way employees behave, communicate, and perceive crises, and it is influenced by individual characters (values, attitudes, beliefs) and also by organizational leadership. Crisis culture is described not only as a set of intangible aspects such as values and beliefs, but also as a set of policies, rules, and norms that shape organizational behavior. In this context, the motivation process is important to promote the adoption of the crisis management process.
- 3) *Organizational structure* represents the work flow structure and authority relationships. The fragmented nature of the tourism sector requires the development of inter-organizational relationships and a hierarchical structure rather than an apartment structure.
- 4) *Communication systems* are represented by the way information is transmitted. Communication among all stakeholders facilitates the flow of knowledge into decision making and generates a new flow of knowledge and ideas (McGregor, 2001).

Paraskevas et al., (2019) identify four typologies of knowledge:

- 1) *Procedural knowledge* is referred to as both explicit rule-based knowledge (crisis management routines, rules, and procedures) and explicit object-based knowledge (report, business plan, reading, documents). Explicit procedural knowledge appears to be inflexible and may lead to inappropriate actions being taken in response to crises.
- 2) *Behavioral knowledge*: This knowledge is based on management standards, procedures, and mechanisms, as well as informal connections, such as social interactions among colleagues, customers, suppliers, and partners, and is a complex form of knowledge that results from social interactions, as well as individual characters such as psychological and personal factors, risk attitudes, beliefs, and values.
- 3) *Learned ignorance*: it consists in the awareness of an organization and its employees that they do not have the specific knowledge required to cope with the current situation.

This kind of knowledge leads to two main approaches: "*known unknown*" and "*unknown unknown*". The first approach is to understand what is already known and to identify the possible gap to be filled. The second approach refers to speculative actions and experiments due to the lack of understanding of the crisis.

Third-party knowledge consists of knowledge that comes from external experts in the organization and can be used for internalization or simply for crisis management.

The way the external knowledge is acquired, assimilated, transformed into internal knowledge and used is described in two main knowledge flows: the first is the flow of institutionalized crisis knowledge and the second is the flow of emergent crisis knowledge.

In the institutionalized flow, knowledge comes from previous experiences of the organization in dealing with previous crises and from the experiences of external actors of the organization. This type of knowledge can be either explicit, i.e., embodied in the database, or implicit, i.e., derived from social relationships. For example, by bringing together people with different skills from different regions and forming a team to deal with a particular crisis.

Emerging crisis knowledge includes knowledge that emerges under conditions of genuine uncertainty. This emerging knowledge results from the organization's efforts to manage the crisis using the "known unknowns" and "unknown unknowns" approach.

These two streams are closely linked in a circular process. The knowledge that emerges in the flow of emergent crisis knowledge feeds into the institutionalized flow, is codified, and replaces the knowledge that already exists. This theoretical framework, based on this flow loop, highlights the dual nature of knowledge that comes from both a codified body of data and experience.

2.5 Innovation in tourism crisis management

Innovation is considered a response to major environmental changes such as economic crises (Bordeau, 2009), civil wars (Broshi-Chen and Mansfeld, 2021), climate change (Dick-Forde, Oftedal, and Bertella, 2020). These unrests can seemingly be an obstacle to the growth of the tourism sector, but they also represent an important opportunity for it. According to Kanter (1984), innovation is identified as a way to transform a problem to be solved into a new idea. Innovation is synonymous with the development, acceptance and implementation of new ideas, products, processes and services. The terms acceptance and implementation emphasize the ability to adapt to change. Different degrees of innovation are discussed in the literature, from radical innovation to incremental innovation (Shestakov and Poliarush, 2019). In the tourism sector, innovation is considered to be "everything that differs from business as usual or which represents a discontinuance of previous practice" in the firm"(Hjalager, 2010). Incremental

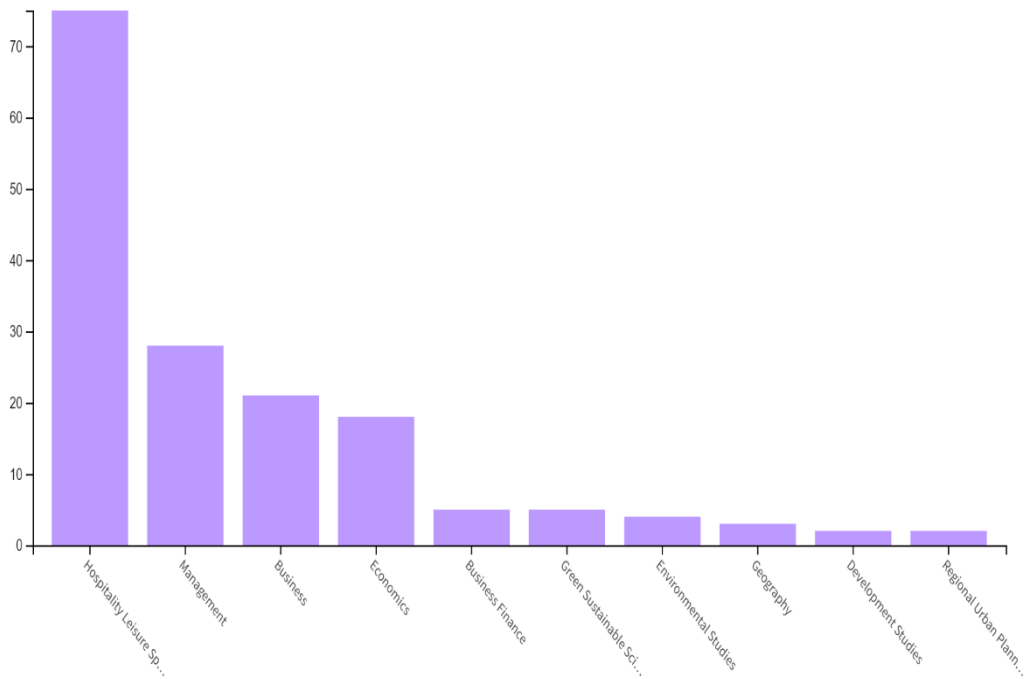
innovation, identified as something new or improved based on an existing business model and capabilities, is associated with small and medium enterprises due to their limited financial resources. Radical changes supported by collaborative networks are applied by large corporations and at the destination level.

To investigate the role of innovation in the tourism sector in a time of crisis, we selected a database of 123 papers, including papers and proceedings, from the Web of Science (Wos) database. WoS is a database that collects scientific resources with a high impact factor. It allows thematic search by authors, journal, year of production, citation of the author, citation of a specific scientific paper, it includes Science Citation Index, which allows searching abstracts of publications from scientific journals, Social Sciences Citation Index, which indexes journals in social sciences, Arts and Humanities Citation Index, which refers to publications in the field of humanities (Mongeon, and Paul-Hus, A.2016). This database has the particularity of performing bibliographic searches in the past and in the future of a publication by retrieving previously cited articles. In this way, we can track the evolution of published research and the influence it has had over time (Leydesdorff, Carley, and Rafols, 2013).

The following collection of documents is a result of a query driven by the following keywords: “innovation”, “tourism”, “crisis” “crisis management”. The search strings “*innovation*” in “Topic” AND “*tourism*” in “Title” AND “*cris**” in “Topic” AND “*cris*management*” in “Topic”. Respectively ‘Article title, Abstract, Keywords’ were used to search for reviews or articles in English.

From an initial database of 169 papers we selected only documents belonging to the following categories: *Hospitality Sport Leisure Tourism* (71 documents), *Management* (28), *Business* (21), *Economics* (18), *Business Finance* (5)

Fig.2.11 Web of science categories



source: elaboration from web of science

Tab.2.3 Most Frequent Words

Keywords Plus	Occurrences	Authors' Keywords	Occurrences	Titles	Occurrences	Abstract	Occurrences
innovation	39	tourism	26	Tourism	56	tourism	370
Tourism	24	covid-19	21	Crisis	25	crisis	150
Performance	13	crisis	12	Covid	20	innovation	117
Crisis	9	hospitality	9	innovation	17	study	110
Management	9	innovation	8	Development	13	development	105
Model	9	resilience	6	Economic	13	economic	103
Impact	8	entrepreneurship	5	Industry	13	industry	98
Impacts	8	coronavirus	4	Hospitality	11	research	84
knowledge	8	crisis management	4	Pandemic	10	paper	62

economic-crisis	7	dynamic capabilities	4	Business	9	hotel	59
Growth	7	greece	4	Hotel	9	covid	58
Industry	7	portugal	4	Social	9	based	56
Business	6	evolutionary economic geography	3	sustainable	8	analysis	55
hospitality	6	financial crisis	3	Analysis	7	results	50
networks	6	hospitality industry	3	Management	7	sector	50
resilience	6	management	3	Regional	7	business	47
Sustainability	6	pandemic	3	perspective	6	management	47
crisis management	5	social innovation	3	Research	6	social	46
framework	5	spain	3	Resilience	6	findings	45
Behavior	4	sustainability	3	Spanish	6	model	44

source: Own elaboration by bibliometrix

Under this investigation nine categories of innovation were identified:

- 1) **Product innovation:** is defined as an innovation strategy that gives companies a sustainable competitive advantage by improving existing products and services in the marketplace and is perceived by consumers as new and unprecedented. (Nysveen, Oklevik, and Pedersen, 2018). This dimension of innovation is important to differentiate the use of a product that can be adapted to different markets.
- 2) **Process innovation:** refers to the development of new ideas in response to existing production problems and includes all activities to improve efficiency, productivity (Ottenbacher and Gnoth, 2005) and flow, and to improve the quality of the product (Liu and Cheng, 2018; Avermaete, et al., 2003; İpçioğlu and Goenuellueoğlu, 2008). Process innovation involves the entire production line to effectively bring the goods or services to the market and improve the quality of the product offered (Avermaete, 2003; İpçioğlu and Goenuellueoğlu, 2008; Coşkun et al., 2013).
- 3) **Organizational innovation:** includes all changes in the structure of the company (OECD, 2005) to improve product quality and external relations.

- 4) **Marketing innovation:** includes activities and practices to target potential and existing customers (Patluang, 2017). Others define marketing innovation as the activity of entering new markets and increasing market share (Johne and Davies, 2000).
- 5) **Service innovation:** is defined as a new service or the renewal of an existing service that enables companies to gain a competitive advantage. This competitive advantage results from the added value for customers (Van der Have, Toivonen and Tuominen, 2008). It consists of a new way of rethinking the business by seeking to reform relatively operational procedures and processes to better meet market needs (Kuo, Kuo, and Ho, 2014).
- 6) **Management innovation:** it consists of management change to achieve business objectives. It includes processes, work structures and strategies in accordance with changes in management systems to an innovative activity. (Carlsen, Andersson, Ali-Knight, Jaeger and Taylor, 2010; Nieves and Segarra-Ciprés, 2015; Brikinshaw et al, 2008).
- 7) **Social innovation:** consists of a new way of thinking and approaching social problems to ensure social well-being and not just prosperity, which entails institutional changes (Alegre, Berbegal-Mirabent, 2016).
- 8) **Business Model Innovation:** can be considered as a new dimension of innovation that includes previous dimensions and is a source of competitive advantage. Even in a mature market, companies can compete through their business model. BMI can be a source of disruption and change the logic of an entire industry sector (Massa and Tucci, 2013).
- 9) **Institutional innovation:** consists in a new cooperation/organizational structure or a new legal framework that reorients the tourism business, such as the alliances between American Express credit card and tourism stakeholders Hjalager (2010).

At the level of the goal, it is defined as a new organizational structure that emphasizes the principle of collaboration based on a new organizational structure. These innovations include the creation of business networks and the formation of new alliances, as well as the establishment of standards for business certification that allow for the awarding of seals of approval, control, and advertising (Maráková & Medved'ová, 2016).

Tab. 2.4 Innovation practices to manage crisis found in the literature

<i>Authors and publication year</i>	<i>Innovation Dimension</i>	<i>Variables</i>	<i>Context</i>
Hidalgo, Martín-Barroso,		innova-tion and differentiation	Coronavirus

Nuñez-Serrano., Turrión, & Velázquez., (2022)	Marketing innovation	strategies, market reorientation strategies, and information from official sources, price policies, sanitary dispositions and information from official sources.	Pandemic
Broshi-Chen, Mansfeld (2021)	Product/service innovation; Process innovation; Management innovation; Institutional innovation; Marketing innovation	Quadratic Creativity & Innovation Model based on two dimensions: thinking style (from rigid to flexible) and actions (from conventional to unconventional).	2 nd Intifada security-induced tourism crisis (2000-2008)
Nunes and Cooke; 2021	Social and Institutional innovation	The singularity territorial is based on ‘ <i>territorial innovation</i> ’ that allows innovation and tourism to be coherently integrated in territorial <i>framework</i> . Territorial innovation mechanism dimension: <u>Institutional:</u> Institutional proximity to governance; regulatory context, standards, social conventions. <u>Relational and functional:</u> Informal knowledge exchange; Networks and collaborations, Labour mobility, Local business networks. <u>Geographic:</u> Co-location of specialized firms; Co-location and technological proximity.	Post coronavirus path towards new sustainability dimensions
Santiago, Roxas, Rivera., Gutierrez, (2021) Kim, E. J., & Pomirleanu, N. (2021)	Managerial innovation	Family business (FB) and Non Family Business (NFB) strategies to deal with crisis FBs: keeping their core personnel and minimizing outsourcing to cut costs. Meanwhile, NFBs reducing their regular and contractual personnel and replacing them with seasonal employees. Compliance redesign: Partnership redesign: Extensive redesign:	Health crisis
Li, Zhong, Zhang and Hua (2021)	Marketing innovation Product innovation Managerial innovation	Food and beverage innovation practices: Emergency response: <u>Epidemic prevention and control:</u> forced closure; crisis management procedures, disinfection procedures. <u>Governement and community support:</u> reduction in rent and in loan. <u>Corporation and social responsibility:</u> free meals for medical workers, charity show, donation. <u>Marketing responses:</u> take out or	Coronavirus Crisis

		<p>order deliveries, contactless deliveries, share food safety photos of videos with customers</p> <p>Management response: Product Line adjust, Re-factor a service process, Cost saving, Labor sharing</p> <p>Recovery response:</p> <p>Covid 19- prevention: providing a “health-status checking procedures,</p> <p>Customer service innovation: robots, automated kitchen kiosk; innovative customer loyalty programme</p> <p>Product innovation: Retail catering, smaller dishes campaign, changing raw materials, research and development.</p> <p>Innovative marketing strategy: community based sale, cutting prices of fine restaurants create a new sub-brand with lower prices, multi-digital sale channels</p> <p>Collaboration with third parties: (banks, e-commerce giants, logistic company, food delivery service platform, retailers, suppliers)</p>	
<i>Dillette & Sandra Sun-Ah Ponting 2020</i>	<p>Marketing innovation</p> <p>Product innovation</p> <p>Process innovation</p>	<p>Innovation: content design, safety protocol, professional growth</p> <p>Social systems: professional associations, government agencies businesses</p> <p>Communication: Virtual platforms, collaboration, empowerment</p> <p>Time: Implementation Acceptance, Innovators & early adopters</p>	Pandemic Emergency Frist and second wave
Stojčić, N., Vojvodić, K., & Butigan, N. (2019).	Service innovation	<p>Introduction of new business practices (business reengineering, knowledge management or quality management);</p> <p>new methods of work organization;</p> <p>new methods of organization of external relations;</p> <p>changes in design of their services or goods; new forms of promotion, new methods of pricing;</p>	After economic-financial crises
Alegre, 2016	Social innovation	<p>Social dimension as driver of innovation</p> <p>Social objectives;</p> <p>Type of Business from B2B to B2C:</p> <p>Partners;</p>	Social crises (social inclusion)

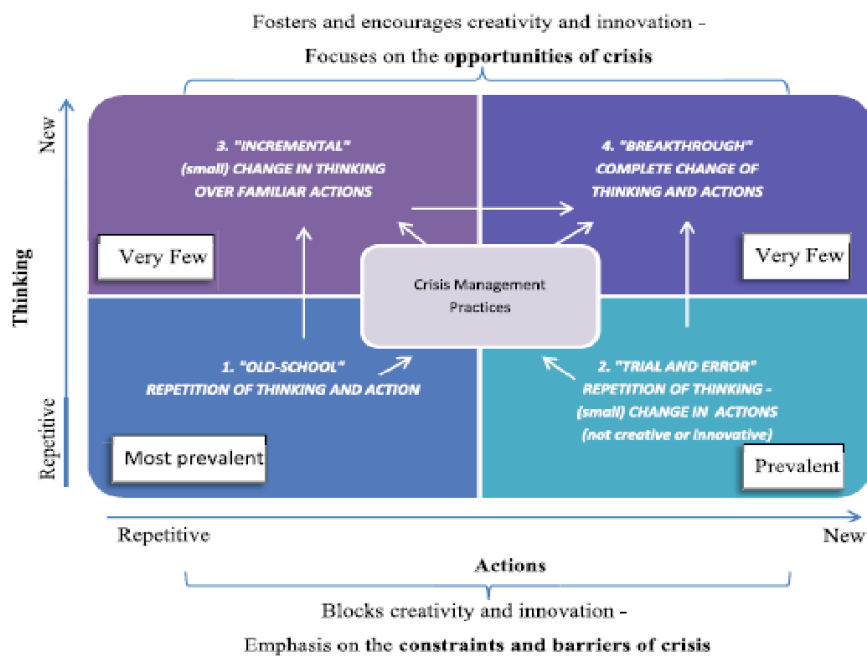
		Value proposition; Clients;	
Kasim, Gursoy, Okumus 2014	Social Innovation	<p>3R Approach in environmental management, with the addition of another R (Reaching)</p> <p>Innovative reducing (low level of technology and knowledge) adopted by small hotels: implementation and monitoring operational daily activities to reduce water consumption.</p> <p>Innovative resusing (low level of knowledge but high technological capability) adopted by hotels concentrates on water reuse as water management strategy.</p> <p>Innovative Reaching (High level of knowledge and low level of technology) Reaching means collaborating with appropriate and important stakeholders</p> <p>Innovative recycling (high level of technology and high level of knowledge) applied by large hotel groups.</p>	Environmental Crisis: Water scarcity
Di Pietro, Guglielmetti, Mugion and Renzi, 2014	Institutional innovation	<p>Cultural, technology district (CTD). a network of organization located in a specific geographical area with the purpose to reach a sustained value creation through two drivers: culture and technology.</p> <p>Actors (local bodies, cultural organizations, local and national companies, investors and several stakeholders);</p> <p>Non-human entities (needs, satisfaction levels, information flows, funds, policies, social support, resources, research and studies);</p> <p>Interaction among all these elements.</p>	Economic crisis
Bourdeau, 2009	Institutional innovation	Re -think places by leveraging on historical and natural artistic cultural resources	Economic Crisis

source: own elaboration

Apart from the current pandemic, the main crises that affected tourism were the terrorist attacks in 2001, the SARS epidemic in 2003, and the global financial crisis of 2008 (Brouder, 2020). In both cases, the tourism industry proved resilient (Sekulovic, 2015; Knowles, 2019; Bangwayo-Skeete, and Skeete, 2020; Romão 2020; Melián-Alzola, Fernández-Monroy, Hidalgo-Peñate, 2020). Crises have affected demand patterns and forced companies to adopt

new initiatives. Terrorist events have revolutionized the travel industry by introducing security measures in airports and airlines, and tourism destinations have adopted security measures and sought to improve their brand image. Creativity and innovation play an important role in addressing a security-related crisis. Broshi-Chen and Mansfeld (2021) provide evidence of all the measures applied by destination stakeholders by combining the level of thinking and the novelty of the measures during the second Intifada.

Fig. 2.12 Creativity and innovation oriented-crisis management



source: from Broshi Chen and Masfeld (2021)

The economic and financial crisis of 2008 has affected the spending capacity of travellers and forced companies to rethink their products.

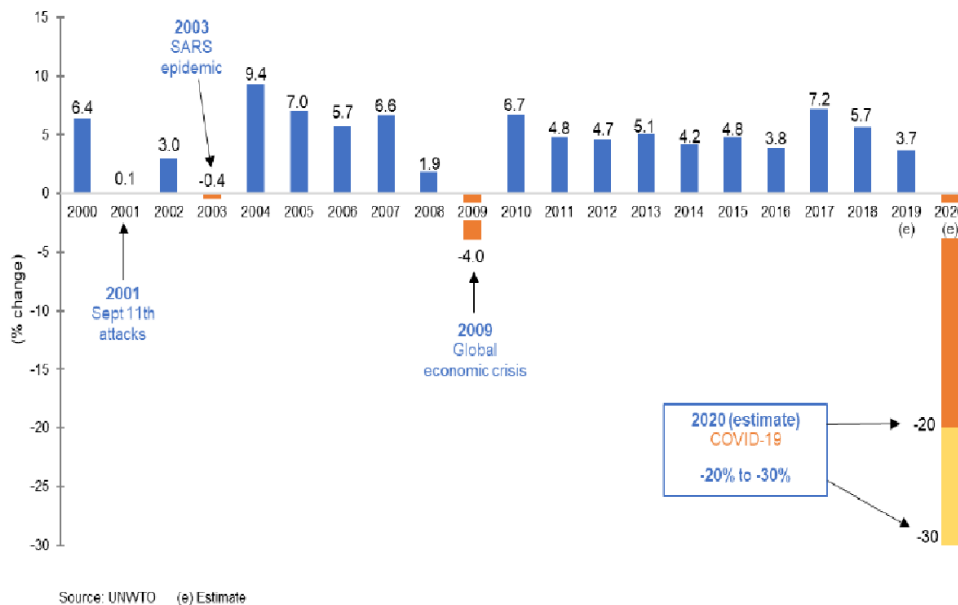
The financial crisis has had a major impact on the housing market, with house prices and rents falling in many European cities. At the same time, the increasing use of platforms such as airbnb has led to an increase in the price of temporary rentals for tourist purposes, affecting tourist flows.

In fact, companies do not introduce innovation processes only to satisfy their own needs, but they are called to respond to changes that time demands through innovation processes (Artic, 2013). Stojcic, Vojvodic, & Butigan (2019) show the recovery activities that Croatian companies carry out in terms of service innovation. They indicate that service innovations are

primarily generated through the transfer of knowledge and skills through intra-firm channels. These results support the proposition that external sources of knowledge and absorptive capacities are the main drivers of firms' innovation efforts.

Fig. 2.13 International tourist arrivals trends

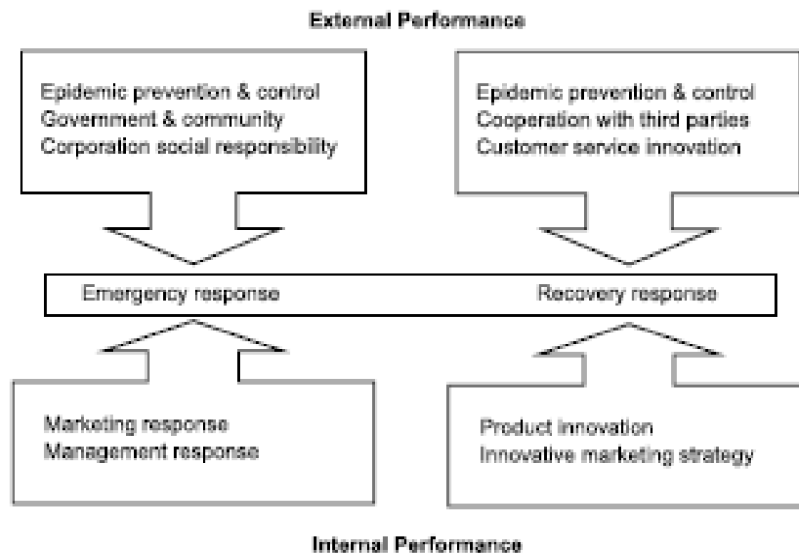
2020 forecast - international tourist arrivals, world (% change)



source: from WTO, 2020

Several authors (Li et al. 2021; Marx and Klotz, 2021) have shown the link between resilience and innovation in the tourism sector. Resilience is defined as the ability of a company to survive, adapt and innovate in a turbulent environment (Dahles, & Susilowati, 2015). Resilience can be viewed under three main approaches: According to the recovery approach, it is the ability to restore a company to its pre-crisis state. According to an innovation approach, resilience consists in the ability to make incremental changes to the product, to the business model, to the process (Dias et al., 2022). The third approach is the ability to sustain this change after the crisis and apply it to a subsequent crisis (Lew and Cheer, 2017). During the current pandemic, Li et al. (2021) define a framework that considers the innovation actions taken by restaurant operations during the *emergency response phase* and the *recovery response phase*.

Fig. 2.14 The innovative crisis management model for restaurant enterprises



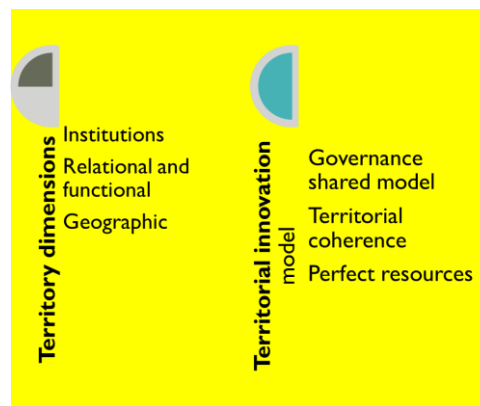
source: from Li, Zong, Zhang and Hua (2021)

Mark and Klotz (2021) identify the key innovation actions taken by small tour operators to attract domestic visitors, organize long- and short-haul travel, and redesign marketing strategies to be applied in the long term, even after the crisis. Three main approaches are taken in redesigning strategies (Kim and Pomirleanu, 2021): 1) redesigning strategies based on externally imposed compliance conditions, 2) redesigning strategies based on internal capabilities and brand vision, and 3) redesigning strategies with an external partner. Most of the redesigned strategies are based on external regulations imposed by the government and customers. Safety is the main factor affecting the value proposition of the tourism business model, and companies are also changing their value chain and relationships with their partners to ensure the new value proposition imposed by the external environment.

At the destination level, crises have influenced innovation processes that affect the inventiveness of regional territories that have discovered their tourism vocation by exploiting territorial resources (Bourdeau, 2009). Recent literature shows the relationship between the territory and its innovation (Nunes and Cook, 2021; Romão 2020, Giacosa, Ferraris and Monge, 2017; Reverte, Padilla, Morales, Navarro and Lopez, 2016). Technology is a key element for the requalification and enhancement of the cultural heritage and its neighborhood. A Technological Cultural District (CTD) is an interdependent system of institutions in a limited geographical area with the objective of creating sustainable value through two factors: culture and technology. The CTD's mission is to promote innovation at the local level through the

enhancement and protection of cultural heritage and to strengthen the economic chain associated with cultural goods and activities as a specific option for revitalizing the economy. The competitive advantage of a CTD derives mainly from the development and use of new technologies to create regional cultural excellence (Sepe & Di Trapani, 2010). Technological innovation includes elements of social integration as well as incentive factors for knowledge diffusion and sharing. The point of contact between the cultural and technological aspects stems from the need to create a network capable of linking the different organizations (cultural and non-cultural) of a given area in order to implement technological-organizational innovations and create local centers of excellence. Considering the financial and economic crisis that affected various industrial regions, Bourdeau (2009) explains the concept of territorial inventiveness, that is, the ability of an industrial region to reinvent business models, taking advantage of its natural and cultural resources. Nunes and Cook (2021) define the interdependence between territorial uniqueness and territorial innovation. The latter is the result of three dimensions: collective learning, relational and institutional proximity, informal networks and relationships supported by shared governance models.

Fig. 2.15 Territorial innovation model



source: own elaboration from Nunes and Cooke (2021)

In fact, companies use innovation processes not only to satisfy their own needs, but they are called upon to respond to changes that time demands (Artic, 2013) through innovation processes. Environmental issues such as climate change, which affects the use of renewable energy and the management of natural resources such as water management, represent a relevant external pressure. The principle of *strong sustainability* emphasizes the role of carrying capacity, biodiversity and biotic resilience. In this context, there are more and more innovative collaborations (Kasim, Gursoy, Okumus, and Wong , 2017) to address the scarcity of natural

resources, which is a critical problem in the hospital industry, as the increasing number of lodging establishments and mass mobility have strong impacts on the availability of water management and the quality of water. Kasim et. al, 2017 propose a water management approach for hotels based on the framework commonly known as the 3 Rs (Reducing, Reusing, Recycling) to which a fourth R (Innovative Reaching) is added. The framework uses the concept of innovation using existing knowledge and technological capabilities and their intensity, taking into account hotel size, financial, technical, knowledge and management capacities.

2.6 Bibliometric Analysis

A bibliometric analysis is used to study the evolution of the role of innovation in tourism crisis management in the literature by sorting data such as references, citations, co-citations, keywords, and keyword-plus (Diodato and Gellatly, 2013). This analysis is defined as a quantitative study of published works such as scientific papers, book chapters, abstracts, conferences, and reviews. A bibliometric analysis allows analyzing the development of a discipline considering the intellectual, social, and conceptual structure on which it is based (Zupic and Čater, 2015). The relevance of bibliometric analysis in the field of tourism is underlined by Koseoglu et al. (2016) in *Annals of Tourism Research*, who highlight different typologies of bibliometric analysis.

This work can be considered as a thematically focused review study. Specifically, the work analyzes the role of innovation in different crisis contexts in the tourism sector, considering two main dimensions related to tourism: Innovation and Crisis.

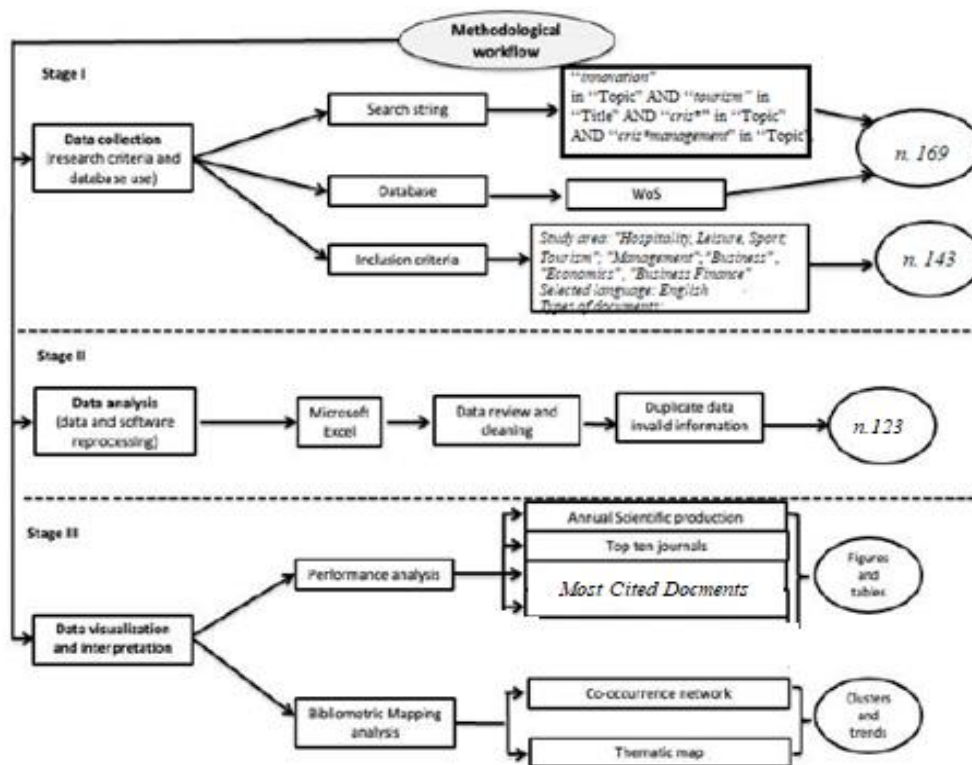
The bibliometric analysis was carried out using the Bibliometrix R package (Aria and Cuccurullo, 2017). This software allows quantitative analysis in bibliometrics and scientometrics. The R package is an open source ecosystem and already supports other different bibliometrics packages that allow performing some specific analyzes, but none of them allows performing the full workflow.

This paper presents the full workflow:

- The research design: consisting to provide the knowledge base of a topic or research field and its intellectual structure, investigating the conceptual structure and producing a social network structure focused on a specific focus.

- Data collection: a database of bibliometric data is selected, the set of documents is defined using specific keywords and other filters such as research areas, languages, kind of documents. Finally, the dataset is extracted.
- Data analysis: consisting in descriptive analysis and network extraction.
- Data visualization: consisting in the extraction of data and their representation through intuitive visualizations or maps.
- Interpretation: describing and commenting findings.

Fig.2.16 Bibliometric flow



source: own elaboration

The multidisciplinary database Web of Science (WoS) was used for data collection. WoS is a database that collects scientific resources with a high impact factor. It allows thematic search by authors, journal, year of production, citation of the author, citation of a specific scientific paper, it includes Science Citation Index, which allows searching for abstracts of publications from scientific journals, Social Sciences Citation Index, which indexes journals in the social sciences, Arts and Humanities Citation Index, which refers to publications in the field of humanities (Mongeon and Paul-Hus, A.2016). This database has the particularity of performing bibliographic searches in the past and future of a publication by retrieving previously cited

articles. This allows us to follow the evolution of published research and the influence it has had over time (Leydesdorff, Carley, and Rafols,2013). The following collection of documents is a result of a query driven by the following keywords: “innovation”, “tourism” and “crisis”. following keywords: “innovation”, “tourism”, “crisis” “crisis management”. The search strings “*innovation*” in “Topic” AND “*tourism*” in “Title” AND “*cris**” in “Topic” AND “*cris*management*” in “Topic”. Respectively ‘Article title, Abstract, Keywords’ were used to search for reviews or articles in English.

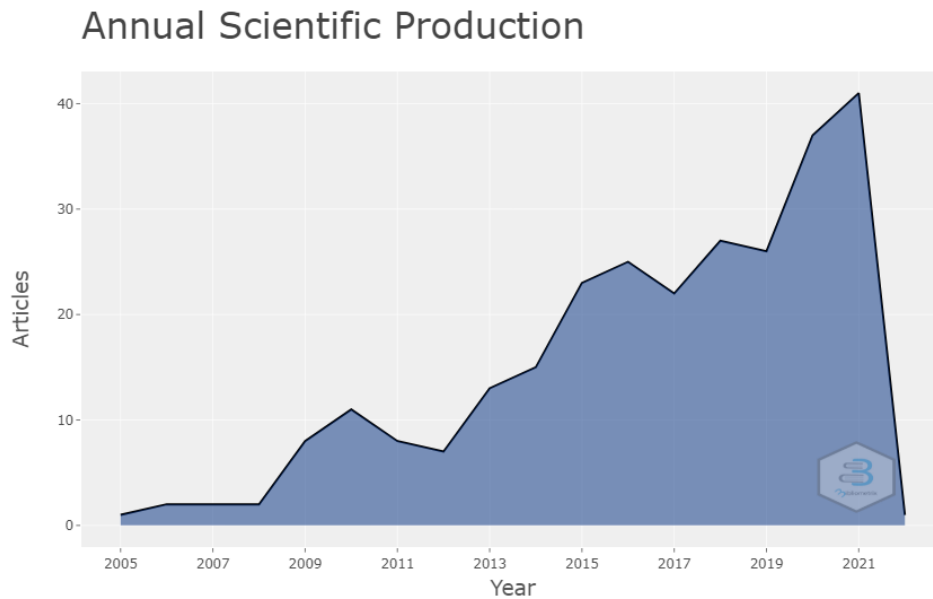
To collect our data, we selected 123 documents excluding the following indexes: Arts & Humanities Citation Index (A&HCI), and including articles, proceeding papers, early access and reviews from the following research categories: Hospitality Leisure Sport Tourism (53), Management (26), Business (21), Economics (21), Business Finance (3). Main sources are represented by management journals and journals concerning sustainability issues (Fig.1).

Fig. 2.17: Most Relevant Sources

Sources	Articles
TOURISM MANAGEMENT	16
JOURNAL OF SUSTAINABLE TOURISM	15
TOURISM ECONOMICS	14
CURRENT ISSUES IN TOURISM	9
ANNALS OF TOURISM RESEARCH	6
INTERNATIONAL JOURNAL OF HOSPITALITY MANAGEMENT	6
INTERNATIONAL JOURNAL OF TOURISM RESEARCH	6
TOURISM AND CULTURE IN THE AGE OF INNOVATION	6
TOURISM MANAGEMENT PERSPECTIVES	6
EDUCATION EXCELLENCE AND INNOVATION MANAGEMENT: A 2024	5
INTERNATIONAL JOURNAL OF CONTEMPORARY HOSPITALITY MANA	5
JOURNAL OF HOSPITALITY AND TOURISM MANAGEMENT	5
STRATEGIC MANAGEMENT ENGINEERING: ENTERPRISE ENVIRONMI	5
TRANSFORMATIONS IN BUSINESS & ECONOMICS	5
VISION 2020: SUSTAINABLE ECONOMIC DEVELOPMENT AND APPLIC	5
WORLDWIDE HOSPITALITY AND TOURISM THEMES	5
ANATOLIA-INTERNATIONAL JOURNAL OF TOURISM AND HOSPITALI	4
Tot	123

source: our elaboration

Fig.2.18 Scientific Production



source: ouwn elaboration

Trends in the literature are presented using a graph that analyzes the frequency of articles published over a given period (2005-2022). The starting point of publication is in 2005 and three publication periods are identified according to the turning points.

The first period (2005-2009) includes only a few papers (5) dealing with workforce training and how to reform workers in terms of risk and crisis management for sustainable tourism (Kumar, Antony, and Douglas, 2009; Tarlow, 2005). The financial crisis has affected industrial areas, which in some cases have been forced to rethink their economies, exploit their historical, natural, artistic, and cultural resources, and discover their tourism vocation through territorial inventiveness in response to the crisis (Bourdeau, 2009). The financial crisis has affected the real estate market, especially the economies of some European countries (PIGS countries). In the main cities of these countries, prices and rental values have dropped sharply. Meanwhile, the use of sharing economy platforms such as Airbnb has increased, fostering the growth of demand in the real estate market in cities and encouraging tourism in urban areas (Sood, and Tellis 2009).

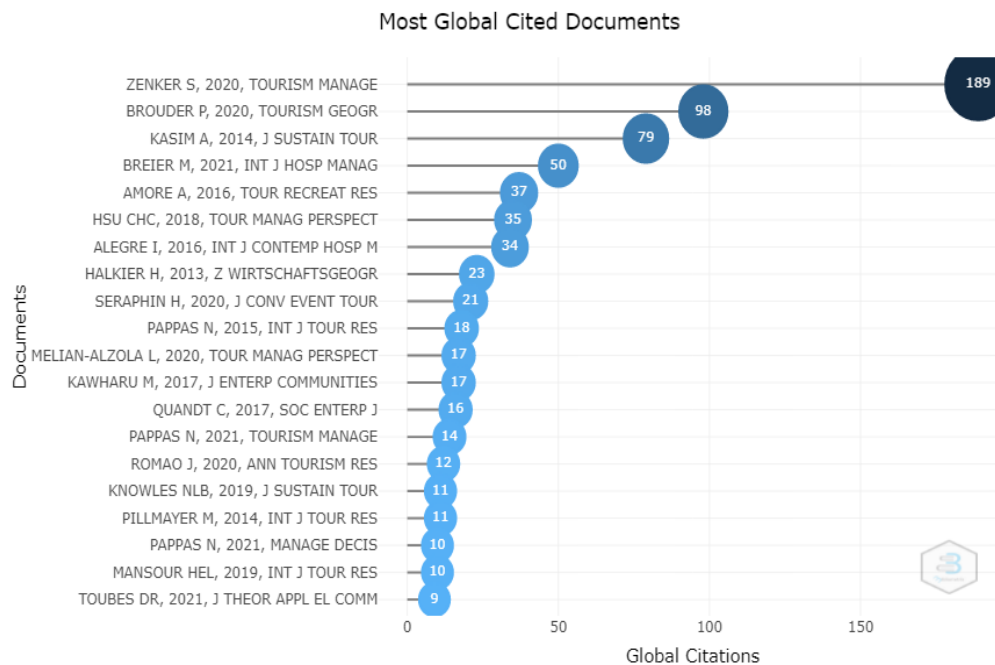
The second period (2010-2019) includes 48 papers dealing with economic and financial crises and innovation practices applied. Some studies (Pappas, 20015; Sekulovic, 2015) focus on the enterprise level and the use of e-tools such as social media, blogs, online travel agencies, and

general social networks. Innovative tools are applied to business models to address economic crises as a cultural technology district based on the two main drivers of culture and technology, with the main objective of achieving sustainable value creation through the collaboration of multiple actors (Di Pietro, Mugion, Renzi, 2014).

The third period (2020-2022) includes the largest production of papers focused on the current health emergency due to the spread of covid- 19.

The majority of the papers consist of research papers with empirical evidence that analyze different areas of the tourism industry, such as the cultural sector and the role of digitization in the museum (Zollo, Rialti, Marrucci e Ciappei), the innovation practices and strategies used in the restaurant sector (Li, Zhong, Zhang, and Hua, 2021), and the hotel sector (Kim and Pomirleanu, 2021; Hidalgo, et al, 2022), and only two articles address the events industry (Seraphin, 2021; Dillette, and Ponting, 2020).

Fig. 2. 19 Most Global Cited documents



It can be seen from the figure that the most cited article in the world is by Zenker (2020) and belongs to the *Tourism Management* journal. This paper is so frequently cited because it provides an analysis of the tourism industry considering demand, suppliers, and the systematic

perspective of the sector in 2020 during the unexpected spread of Covid-19. Zenker and Cock (2020) focus their attention on changes in demand behavior, businesses, and complexity levels.

A second paper (Brouder, 2020) belongs to *Tourism Geographies* and identifies institutional innovation (considering the demand and supply sides), the pathway for the transformation required by the health emergency.

The third paper (Kasim et al., 2014) was published in *Sustainable Tourism* and proposes an innovative framework for water management that takes into account the level of knowledge and the ability of companies to adopt technologies. This work highlights the technology intensity of a hotel company and the ability to create, assimilate, and share knowledge to achieve a social goal such as sustainable water management.

The fourth paper (Breier et al., 2021) belongs to the *International Journal of Hospitality Management* and describes the role of business model innovation and customers in times of crisis.

The fifth paper (Amore and Hall, 2016) belongs to the *Recreation Tourism Research Journal* and examines the role of tourism policy in the tourism crisis and the role of metagovernance.

Fig. 2.20: Co-occurrence Network



source: our elaboration from biblioshiny

Conceptual structure provides a representation of the relationships between words or concepts in a set of documents. This structure allows us to discover the main topic being studied in a particular research area.

This graph is composed of vertices, called nodes, and of ledges, called links. The size of the vertices represents the occurrence of the element in the document set and the size of the bars represents the co-occurrence of the element.

From the diagram, some of the most recurring words emerge, except for the keywords include *performance, knowledge, management, impact and sustainability*, and it is possible to identify three main clusters.

The first cluster shows the connection between words such as *sustainability, impact, growth and resilience*. Authors such as Romao (2020) emphasize the positive impact of tourism dynamics and smart specialization strategies on the growth and socioeconomic resilience of European regions where tourism is a regional priority. It shows that in these regions, tourism demand is positively correlated with regional growth and resilience, but it also shows that a

high share of tourism in regional employment has negative effects on both. Finally, diversification strategies that include unrelated sectors contribute to increased resilience in these regions. Sustainability is identified as a possible pathway after a moment of crisis (Zenker and Kock, 2020; Brouder, 2020; Kasim, 2014). Brouder points to the need to develop institutional innovations on both the demand and supply sides to ensure a paradigm shift from tourism based on overconsumption to tourism based on well-being (Everingham and Chassagne, 2020).

The second cluster highlights the link between concepts such as *knowledge, economic crisis, recreation, events, and behavior*. Knowledge management is necessary to develop internal innovations (Artic, 2013). The ability to assimilate external knowledge and transform it into new knowledge enables companies to reshape their strategies to change their market position according to the external environment (Kim and Pomirleanu, 2021). Marx and Klotz (2020) highlight the role of partnerships and social ties in innovation projects of different types and at different stages of the innovation value chain.

Stojcic, Vojvodic & Butigan (2019) point out that service innovations mainly emerge through the transfer of knowledge and capabilities through intra-firm channels and that external sources of knowledge and absorptive capacities are the main drivers of firms' innovation efforts.

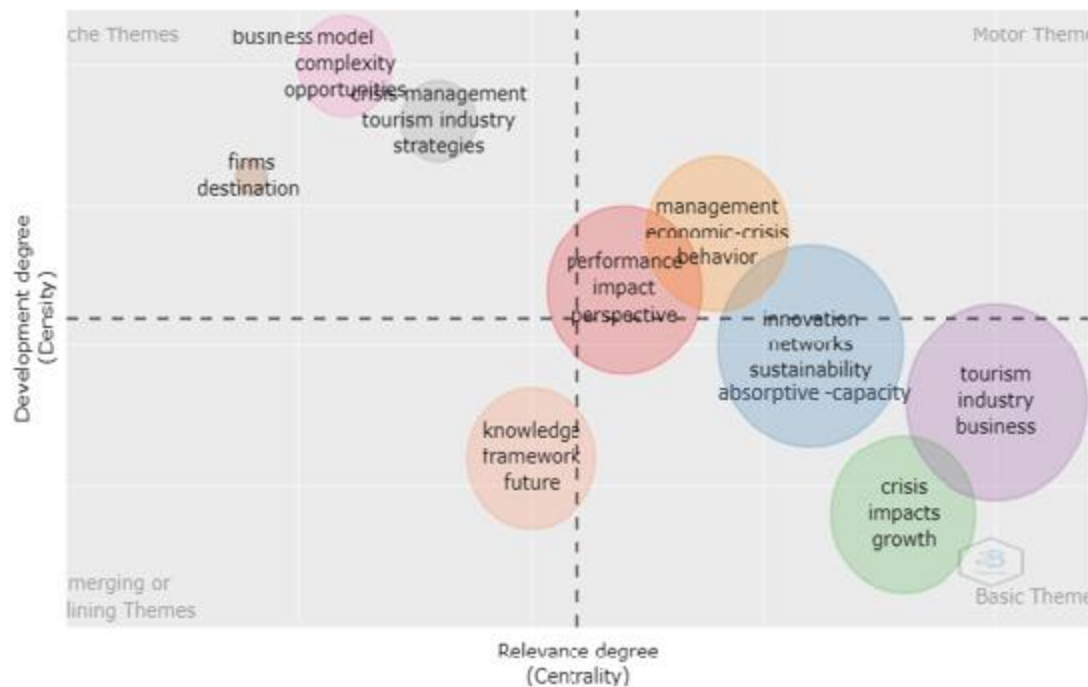
The third cluster illustrates the relationship between concepts such as *business, consumption, strategy, and chaos*.

The proliferation of Covid-19 is defined as an unprecedented crisis that affects economic, social, and environmental dimensions and causes a shift in priorities from economic growth to greater social and environmental well-being. (Everingham and Chassagne, 2020). Tourists prefer domestic tourism to international tourism to recover their own country's economy and maintain tourism business where they are regular customers. This means a shift from long-haul destinations to short-haul destinations. People prefer to avoid crowded places and prefer less populated destinations as destinations during the exploration phase. (Wang and Ackerman, 2019). Tourists may become xenophobic by avoiding eating foreign food and purchasing travel insurance. (Kock, Jossiasen, and Assaf, 2019) Tourism businesses need to innovate to ensure health and safety. Innovation plays a key strategic role in this shift in perspective (Gretzel & Scarpino, 2018). A collaborative approach is required to meet emerging values and achieve

customer satisfaction (Crick, 2020). Collaboration among tourism stakeholders is required (Ivan, 2020).

The Thematic Map figure (Figure 22) allows us to identify four typologies of themes considering two main dimensions: *Density and Centrality*. Centrality refers to the importance of the topic in the research field and density indicates the development of the topic.

Fig. 2.21 Thematic Map



source: own elaboration

Themes in the upper-right quadrant themes are known as “*motor themes*” characterized by high centrality and density, this means that these themes are important for the research field and well developed.

In the upper-right quadrant the motor theme is represented by words such performance (13), impact (8), perspective (4), spain (4), economic growth (2), entrepreneurship (2), increasing returns (2), internet (2), systems (2), tests (2). The literature investigates the influence of innovation practices on external and internal performance (Li et al., 2021), the influence of dynamic capability on performance through the acquisition of new knowledge (Marco-Lajara et al., 2021), and the influence of organizational training on firm performance (Celemín-Pedroche et al., 2017).

Themes in the lower-right quadrant are known as “*basic and transversal themes*” characterized by high centrality and low-density. They are relevant for the research topic and not well developed. In this quadrant “*basic and transversal themes*” are represented by words such as network (6), sustainability (6), governance (4), policy (4). Authors (Brouder, 2020) study possible future pathways addressed to sustainable tourism by leveraging on institutional innovation both in terms of supply and demand and at destination level.

Suggestions in terms of policies focused on sustainable tourism are provided considering domestic economy, financial and political risks, and other determinants of sustainable development such as innovation, infrastructure, health and primary education and global crisis (Athari and Alola, 2021). At firm level (Dick-Forde, Oftedal and Bertella, 2020) it is investigated the role managers' awareness of sustainability and their ability to change their business models to achieve sustainable goals.

Themes in the upper-left quadrant are known as “*highly developed and isolated themes or niche themes*”, this means that the themes are well developed (high density) and they have a limited relevance for the research field (low centrality), they are considered niche themes. In this quadrant there are three main clusters. The first one includes words such as model (9), complexity (3), opportunity (2).

Crises can foster the development of new pathways in entrepreneurial decisions (Pappas and Brown, 2020), such as crisis conditions, entrepreneurial operations, and entrepreneurial capabilities. Breier et al., (2021) focus on the role of Business Model Innovation as a potential solution to overcome the Covid 19 crisis, noting that BMIs are used to develop new revenue streams.

The second cluster includes concepts such as enterprise (2) and destination (2). An interesting emerging theme is the interaction between companies to develop a sustainable destination and ensure a high level of safety (Shrestha and Decosta, 2021).

The third cluster is represented by terms such as crisis management (5), tourism industry (3), and strategy (2). Pappas (2015) examines the strategies that Greek companies used during the recession in terms of cost reduction, innovation, human resource management and marketing. Management strategies to strengthen the position and competitiveness during the crisis are presented.

The issues in the lower left quadrant are referred to as "emerging or declining issues." They are characterized by low density and low centrality, meaning that the topics are not relevant to research and are not well studied.

In this quadrant, "*emerging and declining topics*" are represented by the words knowledge (8), framework (5), future (3). Authors (Kumar, Antony, and Douglas, 2009; Tarlow, 2005; Celemín-Pedroche, 2017) describe the role of organizational learning in risk and crisis management in sustainable tourism. Managers' sustainability awareness influences the development of a sustainable business model (Dick-Forde, Oftedal, and Bertella, 2020).

Small and medium enterprises interact to ensure incremental changes for the development of a sustainable destination, such as the path of plasticity in coastal tourism in North Jutland, Denmark (Halkier and Therkelsen, 2013).

Innovation is favored by a company's relational capital and intellectual capital. Relational capital includes the ability to interact with customers, receive feedback from them, and develop new ideas and knowledge (Celemín-Pedroche et al., 2017); some studies support the role of customers as idea generators in BMI (Breier et al., 2021). The development and use of technological platforms promote the exchange of knowledge and the creation of new ideas that generate new value for participating members. (Franco et al., 2021)

2.7 Conclusions

Several dimensions of innovation have emerged from our investigation. New strategies and innovation practices are required to deal with an emergency and recover from a crisis. Both technological and non-technological innovations are applied, hotels and restaurants have experienced innovation practices that are technologically based. One of the main competencies of a manager is to manage changes in the business model, and business model innovation is seen as a potential tool for crisis management. Both the thematic map and the annual scientific production highlight the relationship between knowledge management and business model innovation. Although external sources of knowledge and absorptive capacity are considered key drivers of business innovation efforts, there is still little research on how business absorptive capacity influences BMI adoption, particularly in the tourism sector. Knowledge about sustainability is seen as a driver of business model innovation, as sustainable goals are conducive to business model change. Companies are called upon to redesign their own strategy

and business model, taking into account the external environment (government regulations, consumer behavior, etc.), their partnerships, and their own vision and internal capabilities.

Chapter 3: Business Model Innovation in Times of Crisis

The introduction of recent technological innovations has fundamentally changed the tourism industry. In particular, the recent wave of technological change, known as digitalization, has led to a transformation of the entire tourism ecosystem (Solvoll, Alsos, & Bulanova, 2015). Both hospitality and tourism are the industries now most affected by digital disruption (Perelygina et al., 2022). In this new context, business model innovation (BMI) is strategically important and even crucial for companies that need to constantly innovate to avoid falling behind. The limited resources of traditional business models (BM) cannot withstand the challenges of the new digital environment. Therefore, companies should drive digital transformation, including reinventing operating models, capabilities, and organizational structures. Under these conditions, the development and implementation of a BMI is essential for tourism companies to gain a competitive advantage (Souto, 2015).

Researchers in the field of tourism have confirmed the current trend of widespread emergence of new BMIs that exhibit high levels of competitiveness and even pose existential risks to traditional BMIs (Hsu et al., 2017)

This paper provides a comprehensive literature review of business model innovations since the concept emerged. The main theoretical contributions are discussed to understand how a company responds to external changes considering value proposition, value creation, and value delivery.

3.1 Literature review: from Business Model to Business Model Innovation

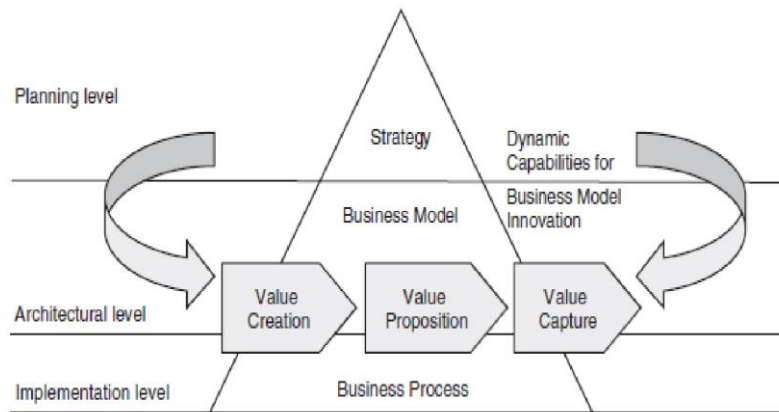
The concept of the Business Model (BM) appeared in the literature in the 1990s, although by then companies were already operating according to this logic, typical of the industrial age, in which products/services were produced and delivered to customers in order to generate revenue from them. BM is described as a way of doing business, an architecture of product, service and information flows, a description of the different business actors and their roles and potential benefits (Timmers, 1998), a tool to make a systematic analysis and plan the organizational units and activities, their functionality and interdependence (Zott and Amitt, 2010; Casadesus-Masanell, and Ricart, 2010; Osterwalder, Pigneur, and Tucci, 2005). According to Magretta (2002), BM provides answers to the following questions: 1) Who is the customer? 2) What does the customer value? 3) How can we make money in this business? 4) How can we add value to

the customer at a reasonable cost? The most popular configuration of BM is associated with Canva's model, which consists of 9 blocks divided into four groups (infrastructures, offerings, customers, and finances).

Casadeus-Masanell and Ricart (2010) identify two main phenomena that have led companies to adopt a "*new way of doing business*": 1) the emergence of post-industrial technologies such as the development of information and communication technologies (Perkmann and Spicer, 2010; Timmers, 2008; Hawkins, 2002; Afuah and Tucci, 2003; Amit and Zott, 2001); 2) the globalization process, which has led companies to enter new markets in developing and emerging countries, and the increasing awareness of sustainable issues (Prahalad and Hart, 2002). Expansion into international markets has focused attention on customers at the "bottom of the pyramid," the "*untapped market of the world's poor*" (Massa and Tucci, 2013), which represents an opportunity for companies to serve people and make profits, calling on companies to rethink their business and to design and reconfigure their business model. Business Model Innovation (BMI) enables companies to commercialize new ideas and technologies, because innovative technologies and ideas have no economic value per se. Authors affirm that the role of business model innovation is to create value for customers through technology (Johnson, Christensen, and Kagermann, 2008; Chesbrough and Rosenbloom 2002). BMI mediates between technology and business, selecting technology, filtering it, and applying it in a specific way to achieve a specific goal and get monetary value from it. BMI also has the role of bringing a new technology closer to the market (Clauss, Abebe, Tangpong, and Hock, 2019; Clauss, 2017; Chesbrough and Rosenbloom 2002). BMI is considered a new dimension of innovation that encompasses traditional dimensions such as product, process, and organizational innovation. BMI can be a source of sustainable competitive advantage because novel BMs can break the logic of an entire industry (e.g., Apple with the iPod or iTunes in the music industry). BM defines how a company creates value for its customers and how it can deliver that value and generate profits. To profit from innovation, pioneers must excel not only in product innovation, but also in business model development. Developing a successful BM is not enough to secure a competitive advantage, as it is often easy to imitate. A BM must be coupled with a competitive strategy to avoid being easily imitated. A business model must be coupled with a competitive strategy so that it cannot be easily imitated. According to Profit from Innovation theory, BMI is defined as a design and technology strategy. Profit from Innovation is useful to design the business model and map it to a strategy. Business model selection/design is an important micro-foundation of the **dynamic capabilities**, the capabilities to recognize, grasp,

and transform, that a company needs to keep up with changing markets and that enable it not only to stay alive, but to adapt to and shape the (changing) business environment (Teece, 2018).

Fig.3.1 Strategy, Business Model and Dynamic Capabilities



source: Rachinger et al., 2018

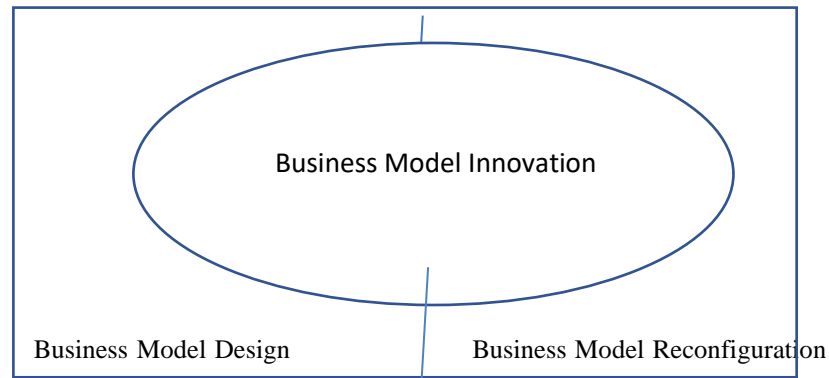
Changes in BM can be represented by *Business Model Design* (BMD) and *Business Model Reconfiguration* (BMR). The former refers to the entrepreneurial activity of creating, implementing, and validating a BM for a new organization. The second refers to the entrepreneurial activity of reconfiguring already existing organizational resources and changing the already existing business model.

According to this distinction, BMI can be considered as a subset of these two dimensions. Reconfiguration assumes that a business model already exists and involves challenges such as structural complexity and management and organizational inertia. Developing a new business model, on the other hand, brings challenges such as technological uncertainty and lack of resources.

BMD involves a series of activities related to content, structure, and governance (Amit and Zott, 2010), in collaboration with a network of partners, to create and sustain value. The main challenge of a new business model is its uncertainty, due not only to the inability to predict consumer response to the new offering and market dynamics, but also to the complexity of the structure and the non-linear interdependence between all the activities of the business model.

The success of a business model cannot be predicted *ex ante* but is rather the result of a discovery-oriented process. The working progress of a successful BM can change constantly, experiments and investigations are the basis of a BMD.

Fig. 3.1 Business Model Innovation a subset of BMD and BMR



source: Massa and Tucci, 2013

BMD can be a source of disruptive innovation. Initially, these new models seem to be more of an experiment and not attractive to incumbents. They operate in niche markets and serve customers not served by incumbents. Incumbents may not initially recognize the threat that BMD can pose. BMR represents a change in an already existing business model, it consists of a BM renewal and innovation in the incumbents. Chesbrough (2010) identifies two barriers to BMR. One is the structural barrier represented by the conflicts between the innovation and the complexity of the structure (assets and operations), and the second barrier is represented by the inability of managers to understand the value of a new technology or idea.

BMRs are classified into three categories (Giesen, Berman and Blitz, 2007): 1) industry model innovation, which consists of moving into a new industry, redefining an existing industry, or creating a new industry; 2) revenue model innovation, innovation in the way revenues are generated; 3) enterprise model innovation, changes of a company in a value chain.

According to their activity system perspective, Amit and Zott (2010) identify three types of reconfigurations: 1) addition of new activities (content novelty); 2) linking the activity in a novel way (structural novelty); 3) changing the person performing the activity (governance novelty).

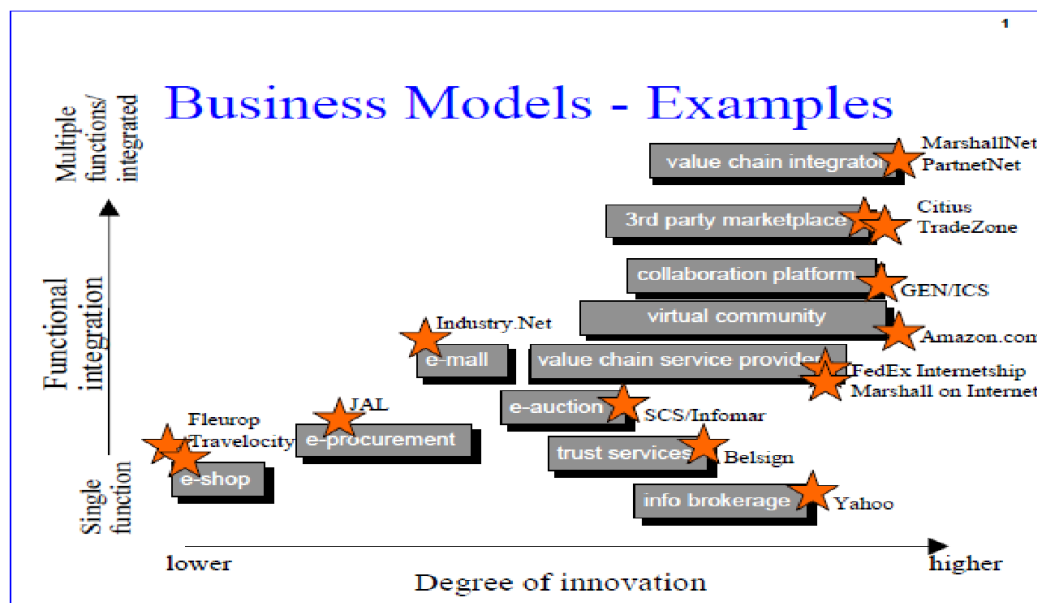
In addition to the structural aspect of an organization, informal dynamics must also be considered.

Leadership is important to spread the culture of change in the organization and to pursue a common goal. In this context, strategic sensitivity, unity of leadership and flexibility of resources represent three meta-capabilities that favor change processes. Through BMI, a

company gains strategic flexibility by exploiting its adaptability to environmental changes and reducing the rigidity of its structures.

In one of the first papers on business model innovation (Timmers, 1993), a qualitative map is proposed to categorize business models based on two dimensions: the degree of innovation and the extent of functional integration, ranging from a single function to full value chain integration. In the lower left quadrant are simple e-shops, which consist of electronic versions of traditional sales methods. On the other side, in the upper right quadrant, is full value chain integration.

Fig. 3.2 Classification of Business Model



source: Timmers 1993

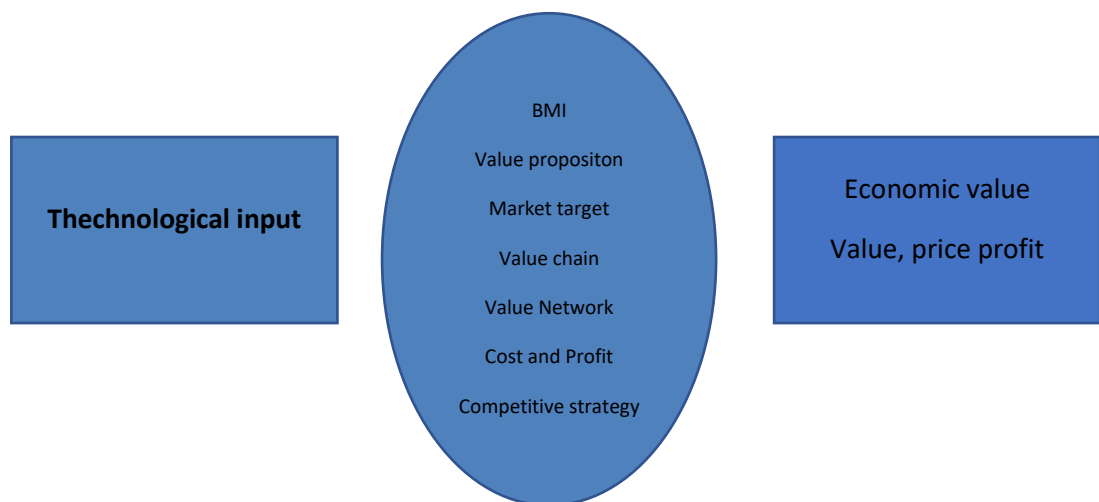
Chesbrough and Rosenbloom (2002) describe BMI as a vehicle to profit from technology. They identify six main attributes of a BMI.

- The *Value Proposition*: the value offered to consumers in the form of product or service based on technology.
- The *Market Segment*: the customer base to which the product is offered, the identification of the market segment helps to understand the revenue mechanism.
- The *Value Chain*: within the firm creates and distributes value and the definition of the firm in the value chain.

- The *Cost and Profit Mechanism* : they are defined considering the value proposition and the value chain.
- *Value Network*: the firm position in the value network and the definition of partners such as consumers, suppliers, complementors and competitors.
- The *Competitive Strategy*: the asset of decisions through the which the innovating firms will gain a sustainable competitive advantage.

These six determinants are all interrelated and interdependent. The value proposition and the market objective are necessary to realize the development of the offer based on technology and to define and redesign it. Customers can evaluate the offering based on the ability of the product/service to satisfy their needs or provide a solution to a problem. There is not one value that consumers can attribute to a product. Economic value refers to the amount the consumer is willing to pay for the product or service. Value chains determine how the company creates and distributes the offering and what complementary assets are needed to support the company's position in the value chain. Identifying the market also allows the mechanism of revenue streams to be determined, i.e., how the customer pays, the amount of payment, and how the value generated is shared among consumers, businesses, and suppliers. The value network determines the role of suppliers and other partners who determine the value generated from the marketing of the product.

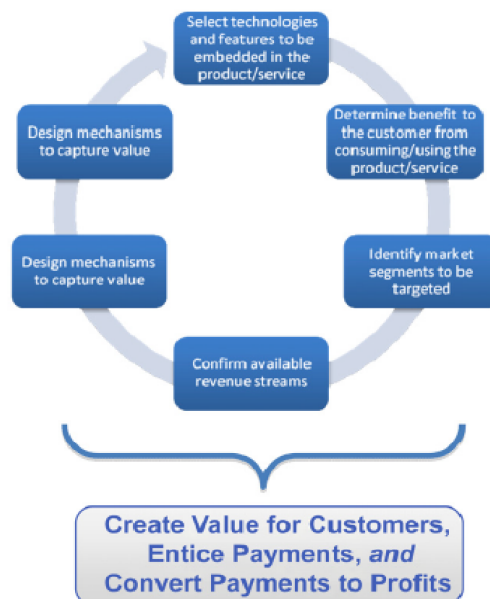
Fig. 3.3 BMI mediates between technology and economic value



source: Chesbrough and Rosenblom (2002)

The authors try to explain the main difference between strategy and business model. First, the business model focuses on the value created for the consumer, and around this the business model is built. Strategy focuses on value creation and sustainability and pays attention to the company's competitive advantage in the face of threats and potential entrants. A second difference arises from the importance of value creation. In the business model, value creation refers to customer value, whereas in the strategy it is linked to shareholder value. In the business model, the financial aspect is left out. Finally, the business model assumes that knowledge coming from partners, customers, and suppliers is limited, while business strategies are based on a huge amount of information consisting of scenario analysis, competitive analysis, etc. A BM represents not only a way to run a business, but a model to achieve the overall goal represented by the value proposition. To be a competitive advantage, A BM must be rare and not easily imitated. Innovation and technology alone are not enough to guarantee successful commercialization. Rather, commercialization must be supported by a good business model in conjunction with a business strategy that can preserve the rarity and inimitability of BM. Strategy development in conjunction with BM is to segment the market and create a value proposition for each target market, figure out how to deliver the value to the customer, and develop an "isolation mechanism" to prevent the business model from being imitated.

Fig. 3.4 Designing a successful Business Model



source: Teece, 2010

According to a strategic approach, the main sources of competitive advantage for firms are their resources (Barney, 2018), their knowledge (Racherla and Hurl, 2009 Spender, 1996), and their

decisions and configurations of activities (Porter, 1991). Casadeus-Mannel and Ricart (2010) state that BMs are the reflection of realized strategy. Strategy favors the development of dynamic capabilities capable of modifying current BMs in consideration of future and current turbulence (DaSilva and Trkman, 2014). BMs shape the management decisions that constitute the logic of a firm through which firms create and capture value.

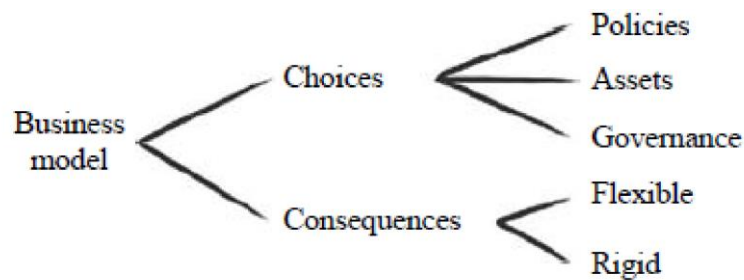
In this view, a business model is a set of decisions and a set of consequences that result from those decisions. Three types of decisions are distinguished: policies, assets, and governance.

Policies refer to action plans for all aspects of a company's operations. Assets refer to physical resources and governance refers to who is involved in setting policies.

Consequences can be flexible and rigid. A consequence is flexible if it depends on the decisions from which it arises. For example, merging two branches into a single branch may result in a reduction in fixed and variable costs, or changing the market target may result in a reduction in revenue but guarantee a sales volume that at least breaks even.

Otherwise, a consequence is rigid if the change is slow compared to the decisions that produced it.

Fig.3.5 Elements in Business Model



source: Casadesus-Masanell and Ricart (2010)

Business Model is described as a system of interlocking blocks. In this system, any change in one block affects the other blocks (Johnson et al, 2009). This model conceptualization is based on the concept that managers can understand how to meet a value proposition and make it profitable using key resources and key processes. Authors identify 4 main blocks.

Customer Value Proposition (CVP): the identification of the target customers and their needs to be satisfied, and the problems to be solved (tasks to be completed). Identifying the customers

and their needs enables them to create an offer that solves the problem and satisfies the needs. The CVP defines not only what is sold, but also how to sell to the customer.

Profit Formula (PF) is closely related to the value proposition. Indeed, depending on the market segment and the offer, it is possible to predict costs and revenues. The PF defines how the company creates value for itself by providing value to customers. It consists of the revenue model (price x volume), the cost structure (direct and indirect costs), the margin model (the contribution required for each transaction to guarantee profit), and the resource rate (the rate at which a resource is used, including lead times, throughput, inventory turns, asset utilization).

Key Resources (KR) represent the key elements (people, technology, products, facilities, equipment, channels and brand) required to deliver the value proposition to the target customer, creating value for customers and the business.

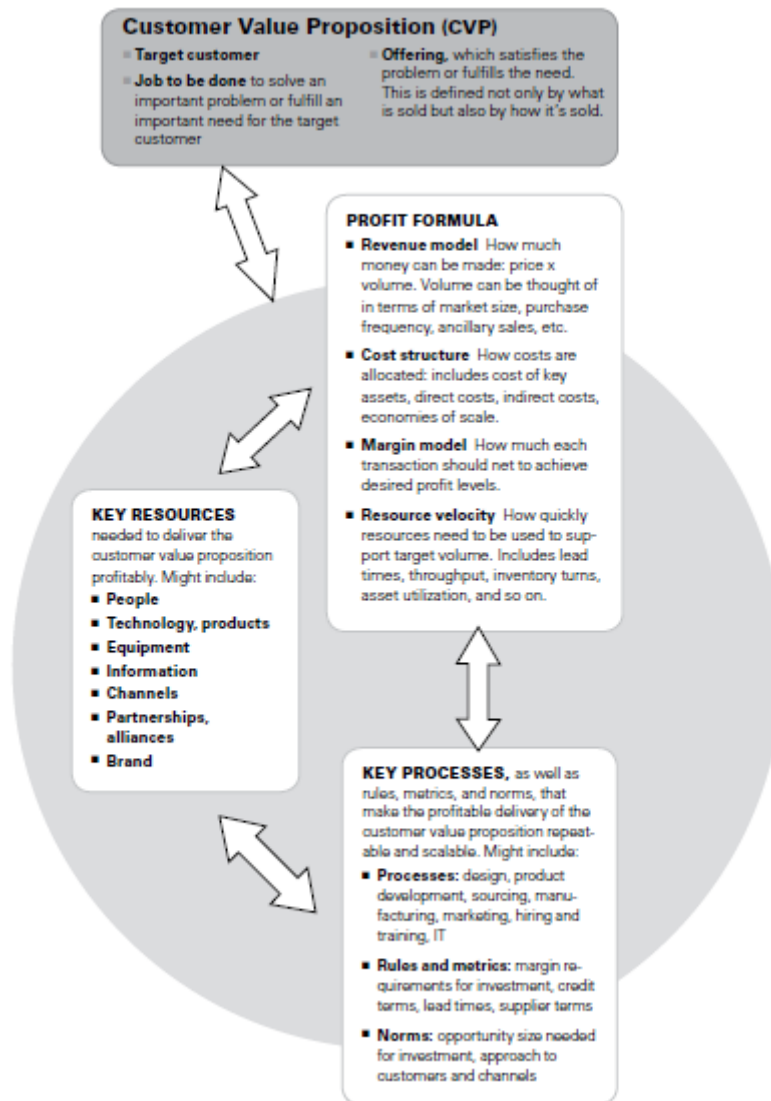
Key Processes are identified in operational and management processes such as training, education, development, manufacturing, budgeting, planning, sales, and service that enable the delivery of value to customers and the business.

These blocks are interrelated and changes in one will impact the others.

Changes may relate to introducing a disruptive innovation product to the market without changing one's business model (Johnson et al., 2010). Five strategic circumstances require changes in one BM.

- 1) The identification of a market target whose needs have not yet been met and the opportunity to reach them through disruptive innovation that allows to satisfy these customer needs.
- 2) The opportunity to test a new technology and to bring it to market, or the opportunity to capitalise a new technology on a brand creating a new BM around this new technology.
- 3) The opportunity to satisfy a need or to solve a problem (job to be done) that does not exist yet in a market where competitors are always engaged to refine existing products.
- 4) The necessity to respond to changes in the competitive market on the assumption that all competitive markets are subject to constant changes.
- 5) The necessity to deal with low-end disrupters.

Fig. 3.6 The four blocks of a business model



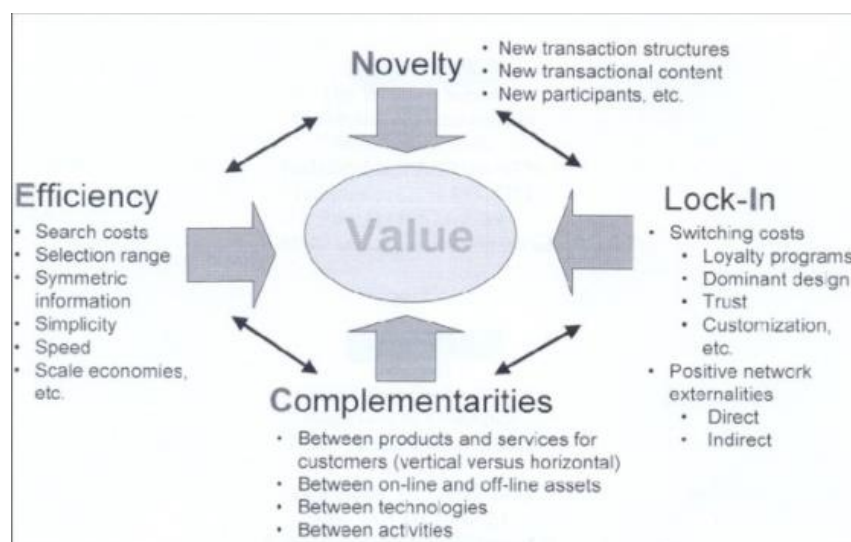
source: from Johnson et al., 2008

Zott and Amit (2010) conceptualize BM as "a system of interdependent activities that transcends the focal firms and spans its boundaries". This activity system enables companies and their stakeholders to create and share value for customers and for the company. Two groups of parameters are identified to describe the activity system: *Design elements (content, structure, and governance)* that describe the architecture of the business model, and *design themes (novelty, lock-in, complementarity, and efficiency)* that describe the sources of value creation. An activity system consists of a bundle of sources and operations that belong to the companies, but also to third parties, to achieve the overall goal of the companies represented by the value proposition.

The content of the activity system refers to the bundle of activities selected to shape the business model, the core activities and the complementary activities. For a business model to be innovative, it must offer something new. In this case, the content is represented by an innovative activity. The structure of the activity system refers to the connections between all activities and how these connections can change. The structure defines the position of the activities and identifies them as core or peripheral activities. Activity system control describes who performs the actions and who is responsible for them.

Design themes represent the configuration of design elements or the degree to which they are orchestrated. Novelty represents the degree of innovation in terms of new activities (content novelty), a new structure and a new combination of connections between activities (structural novelty), and new governance (governance novelty). Lock-in refers to the ability to sustain third-party attraction and can be measured by the switching costs and externalities of the network. Complementarity means that bundling activities generates more value than if the activities were performed individually. Efficiency refers to how companies use their resources, perform their activities, and interact with third parties to achieve better efficiency and reduce transaction costs (e.g., outsourcing, direct and indirect personnel).

Fig. 3.6 Drivers of Value Creation in E-Business

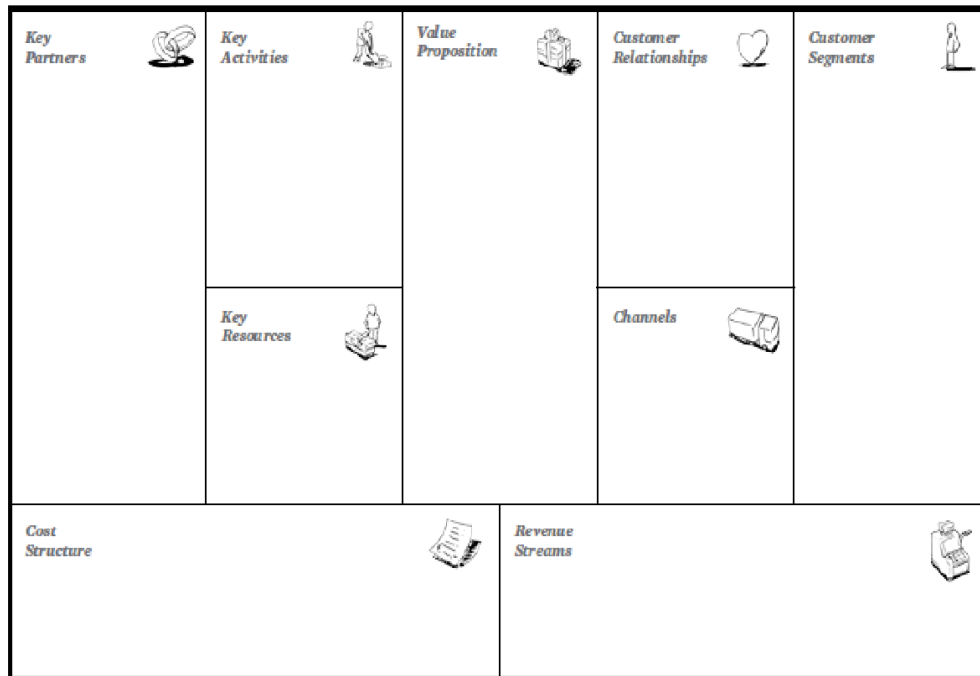


source: Amit and Zott, 2001

A static view of the business model is represented by the Canvas Model (Osterwalder and Pigneur, 2010) that resembles a painter’s canvas—preformatted with the nine blocks—which allows you to paint pictures of new or existing business models. According to this figurative

approach BM describes the rationale of how an organisation creates, delivers, and captures value.

Fig. 3.7 The Business Model Canvas



source: Osterwalder and Pigneur, 2010

Having already fully described the various dimensions of a business model, we will describe only those dimensions that characterize the model in substance.

The customer segments building block defines the different groups of people or organizations that a company wants to reach and serve. A business model may define one or more large or small customer segments. A company must make a conscious decision about which segments to serve and which to ignore.

BMs may address a mass market or a niche market; other BMs address delineated segments with needs and problems that are not very different.

Otherwise, BM can target a very broad group of customers who are not connected and have very different needs. Finally, BM can simultaneously serve two different groups of interdependent customers (multi-sided platforms), such as e-commerce platforms like coupon

platforms that interact with two different groups of interdependent customers (suppliers and buyers).

The value proposition block describes the products and services offered. It can consist of offering something new, a product or service that the customer has never seen before and is therefore perceived as new (novelty content). It can refer to an existing product that improves its performance, or to a highly customized product where customer co-design is the added value, as in the case of Personal Shopper Online Company (e.g., Lookiero), where the interaction between the customer and the online shopper is the core activity of the business model.

The value proposition can be represented by the design offering or by the brand. Some brands are associated with a certain status quo, e.g., staying at an Intercontinental hotel chain is associated with affluence and a particularly luxurious segment.

The choice of a tour operator with which to take a trip may also be related to the need to satisfy prestigious needs. Price and cost also represent a value proposition. Buying services and prices at lower prices can represent a company's value proposition, as with Southwest Airline, the largest low-cost airline in the world. Accessibility to a particular product can represent a value proposition. Car rental, for example, satisfies the need of those who need a particular temporary service. In this case, we move from buying the product to temporarily using a service.

The Channels building block describes how a company communicates and reaches its customer segments to deliver a value proposition. Channels are touchpoints with the customer that play an important role in the customer experience. They can be direct channels, such as physical points of sale or even web stores, or indirect channels, such as partner stores or wholesalers.

The customer relationship block describes how the company interacts with the customer, how it supports them. Customer relationships can take different forms depending on the objective (personal support, self-service, automated services, personalized support, co-creation relationship, community interaction).

Revenue Stream Block represents the mechanisms by which a price is set and how the customer pays. There are several ways to generate revenue: Asset sales, usage fees, subscription fees, rental, leasing, licensing, or advertising. Pricing mechanisms can be fixed or dynamic.

Fixed pricing mechanisms are based on predefined prices such as list prices, depending on product characteristics, customer segments or volumes.

Dynamic mechanisms are based on market conditions: Negotiation, revenue management, real-time market, auctions.

Cost structure blocks describe all the costs that the company bears to create value and the mechanism by which they are determined.

There are two main approaches: Companies are focused on minimizing costs as much as possible (cost-oriented). This type of decision has implications for the other blocks of a BM such as the value proposition (low cost product), key processes (automated process), key resources, and relationships with partners.

The key partnership block describes the network of partners that contribute to value creation. The partnership can be identified in different configurations: strategic alliances between non-competitors and strategic alliances with competitors (cooperation), joint ventures, mergers or supplier relationships.

Tab 3.1 Definitions of Business Model Innovation and configurations

Author, Year of Publication, name of the work	Definition of business model	Items/dimensions
Timmers, 1998 <i>Business models for electronic markets</i>	BM consists in an architecture for the product, service and information flows, including a description of the various business actors and their roles;	Framework for the classification of Internet electronic commerce business models based on two dimensions: the degree of innovation and the integration of functions.
Chesbrough & Rosenbloom 2002 <i>The role of business model in capturing value from innovation: evidence from Xerox Corporation's technology spinoffs companies</i>	Business Model mediates between the technical and economic domain The role of business value is to capture value through early-stage technology.	Value proposition Value offered users based on technology. Market segment the users to whom the technology is useful. Value Chain in the which the firm creates and distributes its offer and determine the complementary asset to guarantee the position of the firm in the chain Cost structure and profit potential Value network /suppliers, consumers, complementors and competitors) Competitive strategy through the which the innovating firm will gain and hold advantage on its rivals

<p>Johnson, M. W., Christensen, C.M. & Kagermann, H., 2008 <i>Reinventing your business model</i></p>	<p>A business model consists of four interlocking elements that, taken together, create and deliver value.</p>	<p>Customer value proposition Target customers; Job to be done, problems to solve; Offering what satisfies the needs and solves problems. Profit Formula Revenue Model; Cost structure; Margin model; Resource velocity. Key resources (people, technology, products, equipment, information, channels, partnership, alliance, brands) Key processes (processes, rules and metrics, norms) Processes (design, product development sourcing, manufacturing, marketing, hiring and training, IT) Rules and metrics(margin requirements for investment, credit terms, lead times, supplier terms Norms: opportunity size needed for investment, approach to customers and channels)</p>
<p>Lindgardt, Z., Reeves, M., Stalk, G., & Deimler, M. S. (2009). <i>Business model innovation. When the Game Gets Tough, Change the Game</i></p>	<p>BMI can break out competitive environment. BMI is more than an innovation product and innovation process, but its an innovation in the business architecture, in the which two or more elements of structure are reinvented to deliver a new value.</p>	<p>Value proposition Target segments Product or service offering Revenue Model Operating model Value chain Cost Model Organization</p>
<p>Casadeus-Mannel, R., & Ricart, J., 2010 <i>Competitiveness: business model reconfiguration for innovation and nternationalization.</i></p>	<p>BMI, integrates three sources of the competitive advantage: activities, resources, and knowledge</p>	<p>Business model consists in a set of choices and in the set of consequences derived from those choices. Choices refers to policies, assets and governance. Consequences are rigid and flexible.</p>

Osterwalder A., 2010	Canvas Model resembles a painter’s canvas—preformatted with the nine blocks—which allows you to paint pictures of new or existing business models.	<p>It consists in 9 blocks</p> <p>Customer segments: mass market, niche market, diversified market, multi sided platforms.</p> <p>Value proposition: newness, performance, customization, solving problems, brands, price, cost reduction, risk reduction, accessibility, convenience and usability.</p> <p>Channels: own and partner, direct such as salesforce, web sale. Indirect such as: own stores, partner stores, wholesaler.</p> <p>Customer relationships: Personal assistance, self-service, automated services, communities, co-creation.</p> <p>Revenue streams</p> <p>Key resources: people, assets, knowledge</p> <p>Key activities: production, problem solving, network.</p> <p>Key partnerships</p> <p>Cost structure: value driven and cost driven.</p>
Zott and Amit 2010 Business Model Design: an activity system perspective	Business model is considered an activity system consisting of a set of interdependent organizational activities.	<p><u>The design elements</u> include:</p> <p>Activity system content refers to the selected activities.</p> <p>Activity system structure describes how activities are linked</p> <p>Activity system governance describes who performs the activity</p> <p><u>Design themes</u> are configuration of design elements, or the degree at which they are orchestrated and connected. They include Novelty, Lock-in, Complementarity and efficiency.</p> <p><u>Novelty</u> is intended as the adoption of new activity, content novelty, new ways of linking activities, structure novelty, new ways of governance, governance novelty.</p> <p><u>Lock-in</u> is the capacity to keep third parties as business model participants. Lock in can be manifested as switching costs or network externalities.</p> <p><u>Complementarities:</u> bundling activities in a system provides more value than separately.</p> <p><u>Efficiency</u> how firms use their activities to aim at achieving greater efficiency through reducing transaction costs.</p>

<p>Teece, 2010 Business Models, Business Strategy and Innovation</p>	<p>A business model articulates the logic, the data and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value”</p>	<p>Selecting technologies to be applied to the product Identifying consumer benefits deriving from the product or service Identify the market segments to be targeted Confirm available revenue stream Design mechanism to capture value Convert payment to profit</p>
<p>Schallmo, 2013</p>	<p>Business model innovation includes changes in singular elements or in the entire structure and covers both incremental and radical changes. It can affect the customer, competitors, the industry, and the company itself. The business model innovation follows a process with a sequence of activities and decisions that interrelate logically and chronologically in a way that creates in a novel way. Thus, a differentiation from the competitors is possible that allows to consolidate customer relations, to build a competitive advantage, to foster inimitability, and to realise synergies between the business model elements to generate growth</p>	<p>Ideation, Concept design, Prototyping Detailed design Implementation Adjustment and diversification</p>

<p>Geissdoerfer, M., Bocken, N. M., & Hultink, E. J. (2016). <i>Design thinking to enhance the sustainable business modelling process—A workshop based on a value mapping process.</i></p>	<p>“Business model innovation describes either a process of transformation from one business model to another within incumbent companies or after mergers and acquisitions, or the creation of entirely new business models in start-ups”</p>	<p>Authors describe the process to think a sustainable business model innovation according to three phases:</p>
<p>Clauss, T., (2017) <i>Measuring business model innovation: conceptualization, scale development, and proof of performance</i></p>	<p>The author develops a new scale for business model innovation. He provides a hierarchical three-level scale for measuring business model innovation.</p>	<p>Value proposition innovation -new offerings New customer and targets New channels New customer relationships Value creation innovation New capabilities New technology/equipment New partnership New processes Value capture innovation New revenue models New cost models</p>

source: own elaboration

3.2 Business Model Innovation (BMI) in tourism sector

As can be seen from the literature, there is not only one definition of the business model, but this concept varies in different contexts. In the service industry such as tourism, business models are considered to be market and customer oriented (Genç and Genç, 2017). The tourism product is sold as a bundle of services that includes tangible and intangible aspects that shape the tourism experience. The tourist purchases not only a product but a comprehensive experience. In the service industry, the customer plays a strategic role, and his satisfaction is crucial to the success of the company. The role of the customer is strongly emphasized, because it is necessary not only to meet his needs, but also to exceed them and maintain the relationship with him. Since the tourism industry is a market-driven sector, it is important not only to communicate with the environment (consumers, employees, suppliers), but also to develop communication with them and receive feedback to strengthen and reinforce the value proposition.

Innovation, employees, customers, technology, internal marketing and value proposition are identified as the six determinants (Langviniena, Daunoraviit, 2017) for the success of the business model in the market and service sector. Identifying a specific market/customer segment and a target (value proposition) is the first step in developing a new business model.

The service industry is highly dependent on the needs of customers (Bagdan, 2013). Changes in consumer lifestyle and behavior force companies to renew their business model.

Scholars (Pikkemaat, Peters, and Bichler, 2019; Hjalager, 2014; 2010; Abernaty and Clark, 1985) classify innovations in tourism into four typologies that take into account the degree of innovation and linkage with functionality: regular innovations, niche innovations, architectural innovations, and revolutionary innovations.

In the tourism sector, regular innovations are considered as small changes that have relevant effects in the long term. They can consist of a group of innovations that can have a cumulative impact.

Niche innovations are based on existing resources that disrupt the existing structure and create new connections (new entry of entrepreneurs to exploit business opportunities, entering into new marketing alliances, combining existing products in new ways).

Revolutionary innovations rely on new resources and competencies without changing the architecture of the organization (diffusion of new technologies in companies, introduction of new methods that change the composition of the workforce, commitment to the same markets but with new methods).

Architectural innovations require new resources and competencies and change the entire architecture, norms and rules (redefinition of physical and legal infrastructure, creation of centers of excellence that treat and disseminate new knowledge based on operational research).

Applying innovation to existing products and processes increases the quality and diversity of products and services. This type of innovation is easily perceived by the company's consumers because this innovation is new to the company. In the hospitality world, these innovations include innovations in food and beverage, booking services, wellness, etc. (e.g., the addition of new dishes to the menu, additional facilities and services). Service innovations usually consist of small adjustments to procedures, incremental innovations, and rarely radical innovations (Sundbo and Gallouj, 1999). Service innovations tend to focus on organizational innovations rather than technologies (new customer interfaces, new ways of delivery, new service concepts) (Den Hertog, Broersma, and Van Ark, 2003). Service innovation is an incremental innovation based on two components: a non-technological component based on intangible aspects such as human contacts and organizational structure (Pires, Sarkar, and Carvalho, 2008), and a

technological component such as information and communication technology (ICT). This type of innovation influences consumer behavior and affects revenue streams. Service innovation helps hospitality companies build strong relationships with customers and meet their needs (Genç, 2014).

Institutional innovation takes the form of a new organizational structure and is based on cooperation and alliances. In this case, the government should support tourism businesses and destinations by developing business networks and alliances, as well as technology investments such as technological infrastructures to facilitate communication, Big Data collection, etc. Innovation plays a strategic role in helping tourism businesses cope with crises. As discussed in the previous chapter, tourists are sensitive to health and safety issues due to political conditions, disasters, and health emergencies. Companies need to rethink their business model to maintain their position in the market.

Changes at BM are caused by both internal and external factors. Company size influences an organization's ability to innovate, as large companies are thought to have more financial resources, professional and skilled labor, and high levels of technology and knowledge (Sirilli, 1998; Hipp, Tether, and Miles 2000). Large business groups such as hotel chains favor the implementation of innovations. Being part of a large group allows companies to accumulate and maximize know-how and knowledge flows (Jacob and Groizard, 2007).

Firms characterized by a high propensity for organizational change are also more likely to pursue innovation strategies (Van der Aa and Elfring, 2002; Lam, 2004). Rigidity and bureaucracy also influence the willingness of tourism organizations to innovate. High levels of bureaucracy and rigidity seem to hinder the innovation process and the adoption of technologies, while large organizations also need automaticity, routines, and complex procedures to achieve high levels of efficiency. In summary, a proper combination of flexibility and rigidity is necessary to drive innovation decisions in large companies (López-Fernández, Serrano-Bedia, and Gómez-López, 2011). Cost is a barrier to the adoption of technology and innovation, but at the same time, managers view technology and innovation as a necessary cost to achieve high levels of efficiency (López-Fernández, Serrano-Bedia, and Gómez-López, 2011; Coronado, Acosta, and Fernández, 2008). The lack of qualified personnel can hinder innovation processes. If we assume that service innovation is based on the experience factor and thus on the relationship between guest and staff, it is assumed that staff must be highly

qualified to use technologies and adapt quickly to changes (Okoe, Boateng, Narteh, and Boakye, 2018; Bruque and Morano, 2007).

Financial support from public institutions, such as tax incentives and loans to promote technology and innovation projects, require high investment in technology, which the expertise of the hospitality industry does not always require. In other words, managers confirm that innovation in the tourism sector is not always based on high technology investment and that public funds are more likely to be directed to the production sector.

The availability of information seems to be an important source of innovation in the hospitality sector, which is always influenced by the external environment and turbulence. Given the market-oriented nature of this business model, customers and competitors are the main source of knowledge (Breier et al, 2021; Lopez-Fernandez 2011). If on one hand the customer can be a source of innovation, on the other hand a certain innovation can be hindered or poorly stimulated by lack of customer interest (Victorino, Verma, Plaschka and Dev, 2005).

BMIs in the tourism sector are not only based on technology. Innovation in tourism businesses often consists of a new value proposition to reach new customers and their needs, which do not always require high investments in technology, but a new way of delivering a service that can be supported by technology. Souto (2015) describes the concepts of BMI and business concept innovation (BCI) and shows the impact of business model innovation and business concept innovation on successful incremental and radical innovation. Technology in and of itself does not constitute innovation, but it does support how to create and deliver value to customers. Changing consumer behavior and the need to dine on the road has forced some restaurants to rethink their BM and invest in new technologies to meet the new needs. In this case, the introduction of a new kitchen that allows multiple items to be cooked and assembled at the same time represents the technology that supports the innovative way of delivering food to guarantee the customer a fast and tasty service.

Digital platforms like Airbnb were born in response to a new, emerging need to provide hospitality. The economic and financial crisis has reduced the purchasing power of many travelers, who find in the sharing economy a cheaper way to use a service. Airbnb also represents an economic source for service providers, who find themselves in private individuals who make their own room or house available for a short period of time. In this particular context, digital platforms represent a source of disruptive innovation that supports the

emergence of a new sector in the tourism industry, a new business model in the hospitality industry that represents a complementary service in the hospitality industry (Guttentag, 2015).

The emergence of free tourist guides through a sharing economy platform represents a disruptive innovation (Navalia and Garcia, 2021) that responds to the trends of today's society, but is also an expression of a service that can threaten the already existing business model of tourist guiding based on economic value. In the case of the free tourist guide, the core activities and resources (value creation) are represented by the volunteer commitment of the hosts. This service favors the development of the freemium business model (Holm and Guenzel-Jensen, 2017). The term freemium refers to an economic structure in which the main service is free and revenue is generated through the sale of additional products and premium services (Sciglimpaglia and Raafat, 2020).

Innovation consists in the application of knowledge to meet customer needs; it is more than a technology; it is a new idea associated with an existing or new business model. In the tourism sector, most innovations are not technological, but consist of something new that is not easy to replicate. The application of external scientific and technological knowledge is applied in tourism companies through business model innovations and business model concepts, which can produce both successful radical innovations and successful incremental innovations (Souto, 2015).

3.3 Family firms and Business Model Innovation

Family businesses seem to be more reluctant to innovate due to limited economic and financial resources, but also due to other factors such as risk aversion, retention of traditional products, family conflicts, and closedness to external investment. The family structure and culture make the company resistant to change. Even if family businesses have financial resources to invest, these resources are rarely invested in research and development. Previous researchers emphasize the conservative nature of family businesses (Hauck & Pruegl, 2015) and the difficulty of collaborating with external actors (Del Vecchio et al., 2019).

In this context, BMI is considered a strategic tool for family businesses that are linked to the territory and tradition and see in BMI a new way to deliver their own products and services and adapt them to changes.

One driver of innovation in family businesses is generational change. In this critical period, the new generations are more willing to gain a competitive advantage through innovation (Arcese, Valeri, Poponi, & Elmo, 2020), the generational process is supported by training and education programs (Sharma, 2004; Banki and Ismail, 2015). If they are interested in running their own family business, the second and third generations prefer to attend international hospitality management schools to update themselves on innovation.

A strong identity with family ownership increases the need to survive over the long term. Concepts such as survivability, sustainability, and ambition encourage family businesses to invest in innovation (Arcese et al., 2020). Strong ties to territory and tradition make these businesses pay special attention to sustainability, which becomes an innovation driver (Elmo et al., 2020). Santiago et al., 2021 describe the family-influence on dynamic capability (DM) affecting BM in dynamic environment. They identify three major DM that favor (Digital) BMI: first, *knowledge exploitation capability* which is the capability to recognize and internalize external knowledge to combine and use with internal knowledge (Easterby-Smith, 2008). Second, *risk management capability*, which enables organizations to deal with threats and uncertainties in order to overcome uncertainties and change their own BM (Arena et al., 2018). Third, the *marketing capability*, which provides insights into new markets, repositioning the corporate brand, and dealing with new customers or changing customer needs (Fang and Zou, 2009; Helfat and Winter, 2011). These dynamic capabilities are particularly useful in times of change (Abrell et al., 2016) because they help companies establish new business models. The close connection between the owning family and the company promotes the spread of family tradition among family members. Family members with different educational backgrounds interact with each other and share their knowledge. This high level of complementary vision is accompanied by a high capacity for *knowledge utilization*. Environmental dynamics encourage family-owned businesses to draw knowledge from both family members and their partners, with whom they have established close relationships. The combination of proprietary knowledge derived from their own core business and complementary knowledge derived from external expertise and partnerships helps reconfigure business activities and competencies.

As family influence increases, the family business tends to focus on control and pay more attention to its financial and socio-emotional endowment. The complementary perspective reinforces the desire to be more independent and reduce business risk. The different approaches to risk assessment due to the complementary perspectives of family members and strong

identification with family ownership are associated with a high level of *risk management capability*.

High level of uncertainty makes family members more risk aware and encourages family members to strengthen their ties and strengthen relationships with their partners

Strong ties to tradition and strengthened relationships with partners are associated with high levels of marketing capability. In fact, companies with high family influence have strong social ties with customers and other partners, which guarantee the family to be in touch with the market and acquire knowledge from customers and competitors. Family businesses with low levels of bureaucracy are more likely to enter into and sustain new collaborations.

3.4 Open innovation and Absorptive capacity

The tourism industry includes multiple players (airlines, accommodations, entertainment) that guarantee a comprehensive experience for customers. The intangible nature of the tourism product and the simultaneity of production and consumption make the customer one of the most important sources of business model innovation. The complexity of the product (the interaction between stakeholders and the intersection of demand and supply) makes knowledge management and knowledge sharing essential for the implementation of innovative ideas and the renewal of ways to market these new ideas.

Open innovation can be defined as a firm's ability to manage knowledge flows between interorganizational linkages and its ability to combine internal and external resources based on innovation to create value.

According to Resource Dependence Theory (RDT), firms are an open system that depends on contingencies in an external environment. Firms are not self-sufficient, but their behavior is influenced by a network of relationships with other actors with whom they share and acquire resources and capabilities (Kanter, 1979; Pfeffer, 1981; Ulrich & Barney, 1984). Open innovation consists of an inbound and an outbound flow of knowledge. Inbound open innovation consists of the acquisition of external knowledge that flows within the organization, while outbound open innovation refers to internal knowledge that flows beyond the boundaries of the organization.

Inbound knowledge flows are mainly two: sourcing and appropriation. Sourcing refers to the way organizations use external sources without providing an economic return. Acquisition requires immediate payment. The sourcing mode seems closer to the concept of open innovation, which is understood as the free exchange of knowledge on a cross-organizational level. Brunswicker and Vrande (2014) distinguish four main external sources of knowledge: 1) Minimal seekers: who are not interested in interacting with other organizations; 2) Supply chain seekers: who interact with other actors in the supply chain, they interact with suppliers, while they do not interact with universities or research centers and do not perform innovation processes that require a high degree of novelty. 3) Technology-oriented seekers: They interact mainly with universities and research centers and manage the inflow of technologies with a high degree of novelty. 4) Application-oriented seekers: They interact with value chain actors such as customers and suppliers and consider customers as idea and knowledge providers. By interacting with customers, they learn more about emerging needs and new ways to satisfy customer experiences; 5) Full-scope seekers: they interact with all kinds of actors, from consumers to college institutions. Companies can also interact with outbound open innovation crowds and innovation crowdsourcing, which connect the company with a wide range of unknown users.

Outbound Open Innovation works in two ways: selling and disclosing. Disclosure means that companies freely give away internal knowledge without asking for compensation. An example of free sharing is the use of open source platforms, which allow the commitment to novelty and market barriers to be overcome.

In contrast, firms can make their own internal knowledge available through licenses and patents. In this way, firms can leverage their own knowledge outside the core business without investing in vertical integration. Managing knowledge flows requires internal capabilities, organizational practices, and routines for managing open innovation. The transition from a narrow to an open system leads to some changes in the business model. Internal capabilities and practices in managing knowledge flows reflect an organization's adaptability to change.

Environmental dynamics and turbulent events impact the entire industry and businesses. To respond to this turbulence, companies must change their business models. The change of BM represents the adaptability of the company (Clauss et al., 2019).

Environmental dynamics encourage companies to develop knowledge exploitation capabilities that help them deal with threatening and uncertain times (Soluk et al., 2021). Indeed, turbulent events force companies to look beyond their boundaries and engage with the market to create new collaborations and find solutions to overcome threats and uncertainties. Combining internal and external knowledge and leveraging it contributes to renewal (BM), improvement or change in business activities, competencies, etc.

In this turbulent environment, companies need to acquire, assimilate, transform and exploit new knowledge. Absorptive capacity is defined as "the ability to recognize the value of new information, assimilate it, and use it for commercial purposes" (Cohen and Levinthal, 1990). Some authors (Martinkenaite, 2012; Andersen and Kask, 2012; Tseng and Hung, 2011) define this capacity as the ability to recognize, assimilate, and apply external knowledge. This capacity, which develops over time, can be characterized as cumulative and dependent on previous experiences. In fact, it is created through a learning process in which external knowledge is acquired by the target companies and transferred within the organization, between employees and managers, and then transformed into new knowledge and used. Absorptive capacities are divided into potential capacities, which include the ability to acquire and assimilate new knowledge, and realized capacities, which include the ability to transform and use (Zahra and George, 2002). According to this view, these capacities are not static but develop through cumulative learning processes (Gebauer, Worch, and Truffeur, 2012). Some authors (Lane et al., 2006) describe this capacity as the ability to use external knowledge through a sequential learning process: exploratory, transformative, and exploitative. The exploratory learning process refers to the acquisition of external knowledge, while the transformative and exploitative process refers to the ability to transform external knowledge into new knowledge and to combine internal and external knowledge to produce new knowledge (Lane, Kokak, and Pathak, 2006). They include the potential ability in the exploratory learning process, while the realized ability in the exploitative learning process. The transformative learning process combines the exploratory learning process with the exploitative one. Transformative learning is described as an activity aimed at retaining and reactivating knowledge and combining existing knowledge with the new (Flatten, Engelen, Zahra, and Brettel, 2011). This learning phase is identified in internal routines that facilitate the transfer and combination of previous knowledge with the new assimilated knowledge (Camisón and Forés, 2010).

Acquisition capability refers to a company's ability to recognize in external knowledge a useful resource for the company's development. First of all, companies are able to identify what knowledge to acquire through a learning process such as reading professional journals, informal conversations with competitors and with companies from other industries. This ability allows companies to access specific knowledge that already exists in other companies and then acquire the knowledge that other target companies already possess. Efforts made to acquire new knowledge can be measured by three elements: Intensity, Speed, and Direction. The speed and intensity with which the company recognizes and acquires external knowledge affects the quality of the knowledge acquired. The direction of the acquired knowledge affects the knowledge content and potential output. The process of knowledge acquisition can take different paths during its development. The acquisition of external knowledge favors the internal innovation process by the research and development department and has a positive impact on the value capture and value creation mechanism (Ferraris et al., 2018; Scuotto et al., 2017).

Assimilation capability refers to the ability of a company to analyze, understand and disseminate within the company a knowledge acquired from outside. It consists of routines and processes that favor the interpretation and understanding of external knowledge (Kim, 1997; Szulanski, 1996). This capability refers to education activities such as participation in workshops, training courses, or the presence of an external consultant that favor the assimilation process. This capability also refers to any action that enables the dissemination of information and knowledge at an interdepartmental level, such as meetings between employees and managers. In addition to acquiring external knowledge and building relationships with target organizations, companies also develop learning processes at the interorganizational level. The acquisition of external knowledge can lead to the improvement of the value proposition or promote the development of new products and services (Santoro et al., 2017, Vrontis et al., 2017, Xie et al., 2018).

Transformation Capability refers to an organization's ability to leverage external knowledge and combine it with internal knowledge to create new knowledge through procedures and organizational routines (Flatten et al., 2011). During this process, the organization absorbs both tacit and explicit knowledge. The conversion of tacit to explicit knowledge and vice versa then occurs through interaction between individuals and groups. Experiences are shared and collected in documents, transforming tacit knowledge into explicit knowledge. The

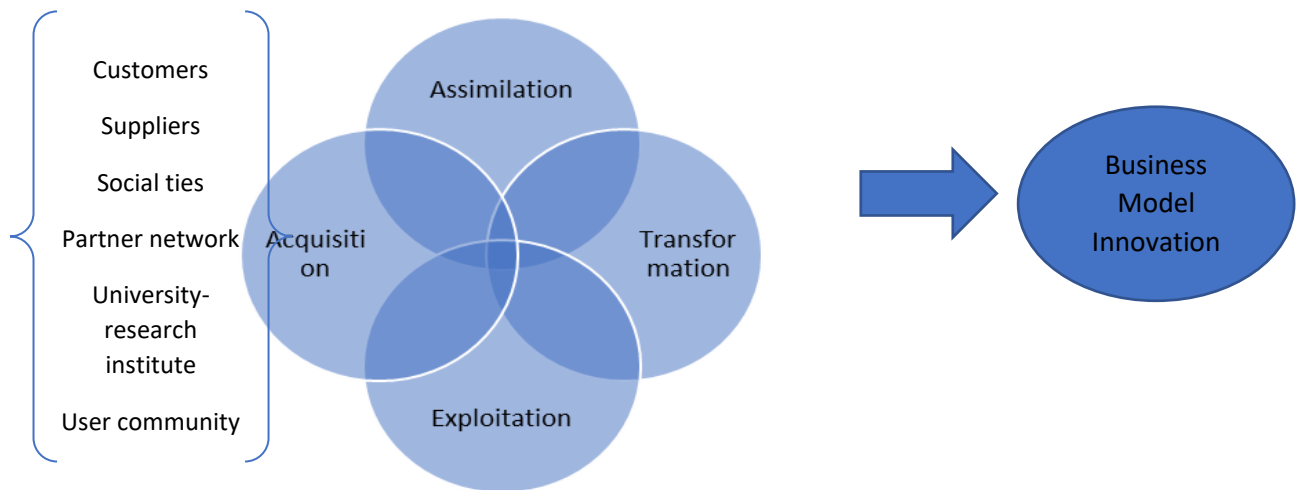
transformation of capabilities accelerates the mechanisms for absorbing and disseminating knowledge within the organization. The combination and reconfiguration of internal and external knowledge can lead to evolutionary changes in business model components or adaptive changes in the overall BM architecture (Xie et al., 2018; Ferraris, Santoro, & Bresciani, 2017; Bogers & Jensen, 2017).

Exploitative Capability refers to the ability of an organization to apply the transformed knowledge in the production process to ensure a sustainable competitive advantage. This capability enables the generated knowledge to be utilized and implemented in the routine process of the organization. The result of the exploitation process can be seen in new goods, systems, processes, and new organizational forms (Spender and Grant, 1996). Exploitation of new knowledge requires overcoming some challenges, such as organizational resistance, lack of knowledge sharing, and an organizational culture that is resistant to change.

Potential Absorptive Capability (PAC) includes the ability to acquire and assimilate external knowledge, but this does not mean that it guarantees the use of the knowledge.

Realized Absorptive Capability (RAC), on the other hand, includes the functions of transformation and utilization. This second capability is related to the first, because companies cannot exploit knowledge without first acquiring it. The ability of a firm to create value from the acquired knowledge is represented by the efficiency factor as the ratio of (RAC) to (PAC). Since companies' profits are mainly generated by (RAC), companies that have a high efficiency factor can potentially increase their performance. The combination of these two capabilities enables the company to achieve a competitive advantage.

Fig. 3.8 Absorptive capability and business model innovation



source: own elaboration

3.5 Business Model Innovation in Health Emergency crisis

The current health emergency, unique in its magnitude, is considered unprecedented and includes a series of crises such as natural disasters, socio-political crises, economic crises and the crisis of tourism demand. To explain how the pandemic affects the world and triggers a social and economic crisis theory, Zenker & Kock (2020) mention two main theories: chaos theory and systems theory. In the case of the pandemic, a small change in one parameter such as the duration of a closure can affect entire systems such as the economic, political, social, and last but not least, the tourism system, where many actors interact, affecting the behavior of others, and also the physical environment such as the carrying capacity of a destination.

Destination image: image is the result of internal and external factors such as symbols and social signs (Della Corte, 2020). Italy and other countries have been affected by high infection rates, which have affected the image of the destination and the perception of health and safety in the structures (Kock, Jossiasen & Assaf, 2016). Destinations affected by coronaviruses may have more difficulty attracting tourists in the future due to the dangerous image that may affect risk-sensitive and susceptible tourists. At the same time, these destinations may benefit from supportive tourists who choose to spend their time in these destinations to support them. Backer & Ritchie (2017) identify two main target groups of tourists as friends and relatives for the recovery period after mad cow disease. These two categories can be considered soft tourists who do not aggressively impact a destination because they are more involved in the lives of

residents. Tourists prefer domestic tourism to international destinations to protect their health and recover their own country's economy. This type of tourist behavior is referred to as ethnocentrism in tourism (Kock et al., 2019). The pandemic causes people to prefer short-haul destinations over long-haul destinations. Tourists are more attracted to destinations that are characterized by a culture similar to their own. The health emergency causes travelers to be less tolerant of the unfamiliar and avoid anything that proves too different, preferring to visit popular destinations (Wang & Ackerman, 2019). Slow tourism activities (Fullagar, Wilson & Markwell, 2012) are preferred to mass tourism, and crowded places are avoided. The pandemic also impacts local residents, who are increasingly less tolerant of tourists (Chien & Ritchie, 2018). Tourism destinations are called upon to find new management models in line with a sustainable approach to ensure safety. More attention is being paid to soft tourism and community). A collaborative approach is needed to respond to emerging values and achieve customer satisfaction (Crick, 2020). Tourism businesses face various challenges, such as operational (employee and customer safety) (Pappas and Glyptou, 2020; Kim et al., 2020), economic (cash flow, costs, debt) (Song et al., 2020), and strategic (Yeh, 2020).

The health emergency has highlighted the lack of strategic plans at the destination and corporate levels, and it has also provided an opportunity to discover and implement recovery plans of this magnitude. Government, businesses and consumers have been forced to change their behavior and make appropriate decisions. The government has taken a series of measures, such as economic policies, government loans (Yeh, 2020), layoffs, reduction of VAT, bridging loans, hardship funds, absorption of fixed costs (Breier et al., 2021).

Companies are forced to rethink their business strategies and redesign their business models, not only to secure their position in the market, but more importantly to survive (Hidalgo et al, 2022; Breier et al, 2021; Li, Zhong and Zhang, 2021; Dilletta & Sandra Sun-Ah Ponting 2020). Technology is changing and shaping society and its future through an increasingly rapid digital transformation process, which is also accentuated by the current healthcare emergency due to the spread of Covid-19. Digital transformation is influencing business models in terms of customer experience and value proposition, but it is also changing the organizational structure of companies and production processes.

This process affects both the social dimension and consumption models. In some cases, the intangible and tangible nature of the tourism product has made this process essential to

overcome the crisis; in other cases, digitalization has brought about a real change in the marketing mix.

In the food and beverage sector, food delivery platforms have made a significant contribution to distribution, and access to menus at the table via the code QR represents an additional element of service. The cultural sector has transformed its product through the introduction of a range of digital initiatives: digital exhibitions, online tours, blogs, Facebook and Instagram stories, tours via live streams, art education apps, YouTube channels with short videos. The hotel industry has recognized digitalization as a useful tool to ensure the safety of their guests. This is done through online check-in procedures and the use of apps that allow guests to receive constant assistance without having to contact the facility's staff directly.

Kronbald and Pregmark (2021) identified four categories of organizations (crisispreneurs, accelerators, endurers, and thrivers) that undertook a digitization process during the pandemic with varying degrees of propensity.

Crisispreneurs are identified in those organizations whose main value proposition is intact (but fundamentally challenged) and who are forced by the crisis to take entrepreneurial actions and digital initiatives aimed at (temporarily) increasing revenue. Examples of such companies can be found in the hospitality and retail sectors.

Accelerators are identified in those organizations that had already undertaken a slow digital transformation before the pandemic and accelerated this process during the pandemic. An example of these organizations are companies that provide intangible services, such as the education sector.

Organizations for which digital transformation is not the optimal choice are referred to as persistent. An example of these organizations are hotels that offer a tangible product that cannot be replaced digitally.

Successful companies are those that were already digitized before the pandemic and are not challenged by the crisis. Examples of such businesses include online gambling and digital broadcasting. Companies need to anticipate consumer expectations and meet their new needs. Companies need to rethink what constitutes value for the customer and how they can deliver that value.

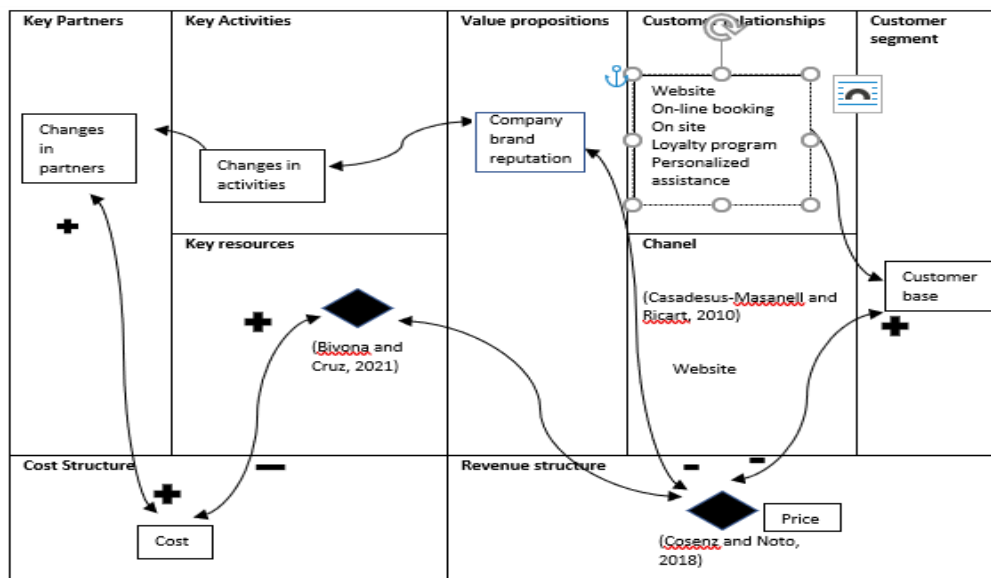
Businesses try to adapt to crises by renewing revenue streams or investing in new human resource programs rather than cutting costs (Williams et al., 2017; Manfield and Newey, 2017). Tourism companies tend to adopt a bricolage approach (Baker and Nelson, 2005; Senyard et al., 2014; Tsilika et al., 2020), mixing tangible and intangible resources to solve current problems, seize new opportunities, and implement the innovation process. The innovation process requires knowledge management skills that not all tourism organizations have, especially small and medium enterprises. Sharing knowledge at inter- and intra-organizational levels with employees, suppliers, customers, and partners fosters formal and informal partnerships that help companies overcome obstacles (Usai et al., 2018).

New collaborations, knowledge exchange, and the use of existing resources shared with partners contribute to change BM, which can guarantee sustainable competitive advantage and high innovation performance. Relational (partner network) and financial sources can help companies identify market opportunities and introduce new or alternative products. An innovation strategy approach allows companies to combine resources and competencies to solve a problem. BMI can be the result of collaboration between partners, recombination of competencies, resources and knowledge, and absorptive capacity.

3.6 A graphic description of changes in BM

To create a Dynamic Vision of BMI, we propose a Dynamic Business Model (Bivona and Cruz, 2021; Cosenz and Noto, 2018).

Fig.3.9 A Dynamic Business Model Representation



source: own elaboration from Bivona and Cruz 2021

In this model, we consider the static representation of a BM in blocks (Osterwalder and Pigneur, 2010; Johnson et al., 2008), to represent the decisions made by organizations and the relative changes and consequences, we use a causal loop diagram (Casadeus-Masanell and Ricart, 2010) in which decisions and consequences are connected by arrows representing causality. The concept of this business model is dynamic and represents the relationships between decisions and consequences (changes) that have evolved over time. In this context decisions are taken according to external dispositions, internal capabilities and partnerships (Kim and Pomirleanu, 2021). Changes in customer target affect the offer in terms of key resources and key activities. These changes also impact the cost structure, New key partners involved in the value creation impact on the customer experience and on costs (Agarwal and Selen, 2009). Bivona and Cruz (2021) investigate the ability of a firm to use already existing resources to create new revenue streams. The starting point of their BMI is represented by the strategic resources and key processes as stock variables that represent the state of the business model. Indeed, stock changes influence cost and revenue streams.

Cosenz and Noto (2018) describe the influence of strategy levers as product-price changes, key partners acquisitions, and investment in assets. The reduction in price can affect the customer base positively.

The decline in international tourism in favour of domestic tourism due to the pandemic has forced the hospitality and food and beverage sectors to redesign their menus and delivery services, to apply reorientation market strategy and so on. All these decisions have had consequences in the business model. On the Amalfi Coast, for example, international tourism has all but disappeared and been replaced by domestic tourism. This change in the customer target, forced by the pandemic, has affected the menu offering, from a meat offering to a fish offering, which has affected the mechanism of costs and revenues. The changes in resources and the resulting changes in costs and revenues have also affected the market position of hospitality companies in the area.

Fourth chapter

The resilience of entrepreneurs

Empirical analysis/case studies

4.1 Introduction

This chapter provides an empirical analysis focusing on the efforts that Italian hospitality companies have been supporting since March 2020. The analysis is based on several case studies focusing on 5 hospitality businesses in art cities and coastal locations. We conducted a semi-structured interview. Changes and consequences were illustrated using the dynamic business model presented in the previous chapter. The results demonstrate the resilience of tourism businesses that have been forced to change their business model in terms of value proposition, value creation and value delivery. The analysis also demonstrates the role of partner networks and the role of absorptive capacity in supporting innovative business models.

Crisis management in the tourism sector has already been studied from different angles: economic aspects (Stojčić 2019; Di Pietro, et al., 2014; Bourdeau, 2009), sustainable aspects (Alegre, 2016; Kasim et al., 2014), health aspects (Li et al., 2021; Dillette et al, 2020), safety aspects (Broshi-Chen and Mansfeld, 2021; Mansfel, 1999), this chapter provides readers with empirical evidence in the context of business model changes due to the current health emergency.

4.2 Context: National Level

By 2020, the tourism sector in Italy was worth € 146 billion, equivalent to 12% of GDP, generated by a supply chain of 216,000 accommodation establishments and 12,000 travel agencies, which will face a decline of 260 million tourist visits. (Assoturismo, 2020).

It was expected a loss of:

- 53 billion in the transport sector (the aviation sector fell by 93%);
- 64 billion in the hotel and catering industry;
- 8.1 billion rental and leasing;

- 2 billion "billed" by travel agencies and tour operators;
- 10.8 billion in entertainment (museums, cinemas and theatres);
- 7.6 billion in sports and leisure.

Turbulent environments at national and global level such as earthquakes (Umbria and Marche 1997; Aquila, 2009), terrorist attacks (Twin Towers 2001 and Paris 2015), health emergencies (Sars flight 2003), political events (the Schengen Agreement) and the economic and financial crisis of 2008 have to some extent affected the hospitality industry in our country, but none of these events has paralysed the Italian hospitality industry in the same way.

Fig. 4.1 Hotel demand (overnight stays) in the last 30 years



source: *THRENDS®* Tourism& HospitalityAnalytics

In the first eight months of 2021, the number of overnight stays in the hospitality sector in Europe was around 1.1 million, registering a 50% decrease compared to 2019. Our country has a negative trend, below the European average, the number of overnight stays decreased by 38.4% (145 million fewer arrivals) and the number of arrivals decreased by 46.5% compared to 2019.

International tourism has a lower recovery (-56% overnight stays) than domestic tourism (-20.3% overnight stays). In terms of hospitality establishments, the hotel sector recorded a 44.3% decrease in overnight stays compared to the non-hotel sector (-28.3%). Compared to 2020, the first nine months of 2021 show an increase in overnight stays (+42.4 million, +

22.3%) and an increase in arrivals (+ 8 million, + 16.2%). In addition, there was an increase in international tourism (+40.3%) over domestic tourism (+14.2%). The accommodation sector recorded an upward trend both in the extra-hotel sector (+27.4%) and in the hotel sector (+18.7%).

Tab. 4.1 Overnights and arrivals in hospitality sector

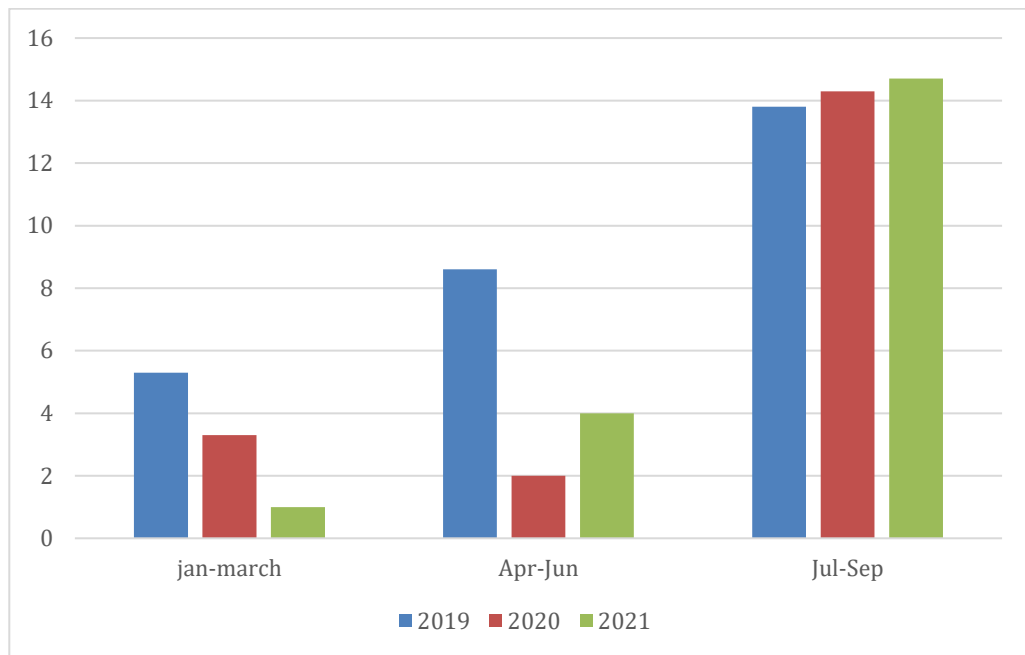
	Var % 2021-2019		Var % 2021-2020	
	Arrivals	Attendances	Arrivals	Attendances
Domestic Tourism	-29,0%	-20,3%	9,6%	14,2%
International Tourism	-63,8%	-56,1%	31,5%	40,3%
Total	-46,5%	-38,4%	16,2%	22,3%

source: Istat 2021

During the summer (Jul- Aug 2021), total presences have been about 86% of that recorded during the same period in 2019. However, while there was a slight increase in the number of domestic visitors (+0.9%), there was a significant decrease in foreign tourists (-30.5%), even though it was lower than the previous year.

For the hotel sector, the decrease in overnight stays in summer 2021 compared to the same period in 2019 was 17.3%, while for non-hotel structures it was -9.7%. On the other hand, the comparison with the summer of 2020 shows a stronger improvement for hotels (+34.3% overnight stays) compared to non-hotel structures (+27%).

Fig. 4.2 Trips in accommodation experiences in Italy for quarter



source: Istat 2021

The "large cities" (made up of 12 Italian municipalities with more than 250 thousand inhabitants), which had recorded about a fifth of the attendance of the entire national territory in the year before the pandemic, suffered the biggest drop in demand compared to the same period of 2019 (-71% compared to -38.4% of the national average), but have recovered slightly compared to 2020 (+ 3.0% attendance). The difficulties in the major cities are also confirmed in the summer, when they recorded a drop in attendance of around -18% compared to the same period in 2019. The municipalities most affected are those where mountain tourism predominates (-42.1%), which, as already mentioned, is due to the absence of the 2021 winter season. These same municipalities had shown greater absorption capacity in 2020. Compared to the same period of 2019, municipalities specialising in maritime tourism (-21.8%) and municipalities specialising in marine tourism (-25.0%) recorded less significant decreases, which largely recovered compared to the first nine months of 2020 (+ 80.8% and + 36.3%, respectively). In contrast, communities with a cultural, historical, artistic and scenic focus recorded a decrease of 35% compared to the same period in 2019 and a recovery of 33.2% compared to 2020.

In the summer of 2021, the interest of domestic tourism in terms of cultural, historical, artistic and scenic vocation has shown (+ 26.5% in August 2021 compared to August 2019).

Mountain tourism has shown a recovery in summer compared to the non-existent winter season and an increase in both August (+ 6.5%) and September (+ 23.7%).

Fig.4.1 Presences of tourist by residence and tourism vocation destination



source: own elaboration from Istat 2021

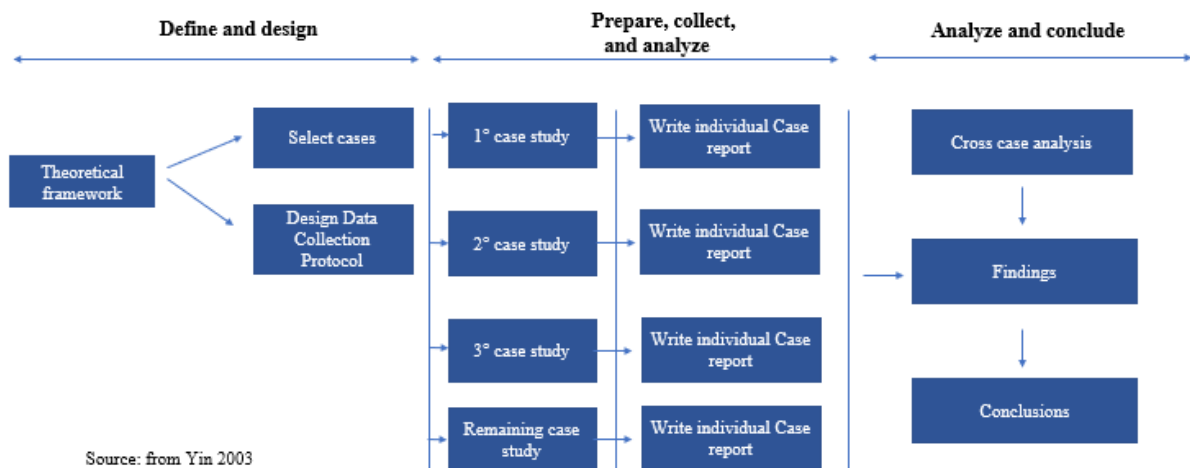
4.3 Methodology:

It is not easy to find a clear definition of case study, as many authors describe this methodology (Yazan, 2015; Hyett et al., 2014; Thomas, 2011) from different perspectives. This methodology is based on a qualitative analysis that results from the researcher's own data collection and secondary data. A case study is defined as "an intensive study about a unit with the objective to generalize over several units" (Gustaffson, 2017). A case study consists of a methodology to define cases and explore a setting to understand the problem (Cousin, 2005).

This methodology explores the real life of a contemporary bounded system (a single case) or multiple bounded systems (multiple case studies) and gathers multiple sources of information (primary and secondary data) such as interviews, focus groups, reports (Creswell, 2013). The case study may comprise a single unit of analysis or a large group of analyses. Case studies are often conducted for a dual purpose: illustrative and confirmatory. This method is often used to evaluate a programme and develop theories (Rashid et al., 2019).

In this paper, a multiple case study is conducted. The main reason for this choice is the opportunity this method provides to understand the differences and similarities between cases and to analyse the data within each situation and across situations (Yin, 2003). Multiple case studies allow us to compare different findings and, in this way, it is possible to validate or not some findings. A series of units allows the literature to support the contrasts and similarities of the case studies. Multiple case studies favour the understanding of the literature and the theoretical concepts derived from it. One of the main goals is to enhance the *generalizability*. The purpose is to discover something relevant from findings, to transcend radical particularism. Secondly multiple case study analysis is conducted to deepen understanding and explanation. Multiple case study also helps to find negative results to strengthen the results. A case-oriented approach considers case as a whole entity and looks at each associations, consequences, outcomes, and then to turn in a comparative analysis. In the *replication strategy* (Yin, 1984), a theoretical framework is proposed and applied to a single case to be analysed in depth and then the same theoretical framework is applied to successive cases to verify the propositions deriving from the investigated literature.

Fig. 4.4 Multiple case study flow



In this particular case, we applied a multiple case study to explore the impact of health emergencies (micro, meso and macro impacts) on hospitality businesses and how business model innovations can overcome the crisis and what internal and external factors influence the changes. To answer these first two questions, a multiple case study seems to be the right method to describe the innovative business model and to identify which factors have influenced these changes and to compare the results.

4.4 Interview protocol and data collection

The interview protocol was structured following the main theoretical frameworks on which the research is built: the Absorptive Capacity Theory, and the main dimensions of BMI (Clauss, 2017), which emerge from the literature. The interview questions were structured following the literature on (AC) and (BMI) and a third section of the interview was designed to explore the external and internal drivers that influence innovation in BM. Interviewees were asked if they agreed with the practices collected in the literature and they were asked to give some examples of their practices.

Tab. 4.2 Absorptive capacities and BMI variables

	Label	Proxies	Definition	References	
Knowledge acquisition (Kac)		Potential absorptive capacity			
	KAC 1	Openness towards external knowledge sources: trade journal consultation, promotion materials, supplier catalogues; licence acquisition; contractual agreement; licence acquisition; contractual agreements, alliance or joint ventures; R&D intensity; prior experience	Ability to detect opportunities in the environment (expectation formation), to recognize external knowledge sources and to obtain specific knowledge that is externally generated and significant to its activities. Classifying and internalising acquired knowledge.	Marrucci et al., 2021; Gebauer *, Clauss 2016; Hagen Worch, Bernhard Truffer, 2012; Jung-Erceg et al., 2007; Zahra & George (2002); Johnson and Craven, 2001; Cohen & Levinthal (1990);	
	KAC 2	Building strong relationships with customers and suppliers as a means of identifying future needs			Marrucci et al., 2021; Clauss, 2016; Johnson and Craven, 2001; Chen 2004; Song & Parry ,1993;
	KAC 3	Regular meetings with externals: informal discussions with competitors, wholesalers to develop new ideas			

				2001; Song & Parry, 1993;
	KAC 4	Networking with other industrial network		Marrucci et al., 2021;
	KAC 5	Interaction with academic institutions		Clauss, 2016
Knowledge assimilation (KAs)	KAS 1	Creation of internal routines and processes to analyse external knowledge, using tools for spreading knowledge throughout the firm	The ability to process, analyse, explain and comprehend the information, knowledge and skills acquired from external sources .	Marrucci et al., 2021;
				Clauss, 2016;
				Hagen Worch, Bernhard Truffer, 2012; Kamal and Flanagan, 2012;
				Lane and Lubatkin, 1998;
	KAS 2	Periodical cross-departmental meetings to interchange new idea developments, problems, and achievements		Miroshnychenko et al., 2021;
				Clauss, 2016; Nazarpouri, 2016; Kim, 1998
	KAS 3	Participating in workshops and seminars and conferences	Marrucci et al., 2021;	
			Clauss, 2016; Szulanski, 2000;	
	KAS 4	Monthly meetings of senior manager and staff to	Clauss, 2016;	
			Johnson and Craven, 2001	
	KAS 5	Organising internal brainstorming session	Marrucci et al., 2021; Clauss, 2016; Johnson and Craven, 2001	
	KAS 6	Number of patents pending Number of research and/or practice communities	Chen, 2004; Johnson and Craven, 2001; Dodgson, 1993	

Knowledge transformation	Realised absorptive capacity			
(KT)	KT1	The capability of employees to structure and to use collected knowledge	Capability of an organisation to integrate the newly acquired knowledge with the existing knowledge through a bundle of procedures that facilitate utilisation of integrated knowledge.	Flatten et al., 2011; Miroshnychenko et al., 2021; Nazarpoori, 2016, Kim, 1998
	KT2	The capability of employees to redesign business model		Miroshnychenko et al., 2021; Gruenfeld, 2000;
	KT3	The capability of employees to apply existing knowledge with new insights		Miroshnychenko et al., 2021; ; Hagen Worch, Bernhard Truffer, 2012; Nazarpoori, 2016; Salk and Brannen, 2000
	KT4	The capability of employees to apply the existing knowledge in the daily activities		Miroshnychenko et al., 2021; Nazarpoori, 2016.
Knowledge exploitation (KE)	KE 1	The development of prototypes, number of patents and new products	Capability to implement the transformed knowledge into its production and operations to maintain continuous growth.	Miroshnychenko et al., 2021; Nazarpoori, 2016; Kamal and Flanagan, 2012; Chen and Levinthal, 1990;
	KE 2	Considering current technologies and adapting them to new knowledge.		Miroshnychenko et al., 2021; Nazarpoori, 2016; Dodgson 1993;
	KE 3	Applying knowledge to commercial purposes Launching innovations to the market – Converting innovative ideas into commercial-		Miroshnychenko et al.,2021; Hagen Worch, Bernhard Truffer, 2012; Szulanski, 2000
	Business Model Innovation			

Value proposition (VPr)	VP1	New target customer New segment customer Customer engagement Customer experience Customer relationship Marketing sales logic	Target customer has completely changed or is the same	Miroshnychenko et al., 2021; Breier 2021; Khan and Rizzato, 2021; Clauss, 2016 Lindgardt, Reeves, Stalk, G, and Deimler, 2009; Chesbrough & Rosenbloom 2002 Johnson, M. W., Christensen, C.M. & Kagermann, H., 2008 Bhatti, Santoro,
	VP2	Activity system content Platform Product/service flows Solutions New customer benefits Technologies	The product and service offering has improved or radically changed	
	VP3	New target market New segment market Branding	The firm's positioning in the market has changed	
Value Creation (VCr)	VCr 1	Core competency Capabilities Leadership capabilities Information People Resources and competences	The firm's core competencies and resources have completely changed or improved	
	VCr 2	Key activities Internal and external structures and processes Internal and external organization	Internal value creation activities have changed Core processes and activities (design, logistics, marketing, etc.) have been improved or developed new one	
	VCr 3	Roles and involvement of partners in the value creation process have changed	Customer Information Key partners – Networking Partnerships/alliances Suppliers Value chain to create (and distribute) value Value network	
	VCr 4	Distribution has changed (s (own stores, partner stores, online, etc.) Existing tools for building customer relationships (personal service, memberships, bonus systems, etc.) have been improved or new ones have been created	Distribution channels Value delivery and linkages Value chain to (create and) distribute value	
Value Capture (Vca)	Vca 1	Revenue mechanism has changed improving sales from existing revenue streams (products, services, leasing, sponsorships etc.) or developing new ways of generating revenue)	Revenue streams – Revenue/Pricing Revenue mechanisms Profit formula Monetization Volume and structure of revenues	
	Vca2	Cost mechanism has changed minimizing existing costs or supporting major costs.	Cost (structure) Estimation of cost structure (and profit potential) Financial hurdle Volume and cost structure	

Source: own elaboration

In the final section, the interview is focused on the internal (knowledge management capacity, crisis leadership, crisis culture) and external factors (Government support, the customer role,

and other factors such as sense of frustration, the forced closure, the availability of time to think) affecting BMI.

Tab. 4.3 External and internal drivers affecting the business model

External drivers		Internal drivers	
Drivers affecting changes in business model innovation during crises	Authors	Drivers affecting changes in business model innovation during crises	Authors
Government support Decrease of vat of non alchoalic drinks, Bridging loan Hardship funds Reduction of fixed costs Reduction or Deferent of rent Epidemic prevention and control	Breier et al., 2021; Bin Li a,* , YunYing Zhong b , Tingting Zhang b , Nan Hua, 2021	Absorptive capacity Ability to transform existing resources; Leverage readily available Mobilizing distant resources from their network; Collaboration with third parties	Bivona and Cruz, 2021
The customer role Marketing Channel, Idea Generator.	Breier et al., 2021 Akram et al, 2021 Majercakova and 2021;	Innovation intervention Customer service innovation Product innovation Innovative marketing strategy	Bin Li, YunYing Zhong, Tingting Zhang, Nan Hua, 2021
Other Factors Available time Overall pressure to change due to the crisis	Breier et al., 2021	Crisis Knowledge Governance Crisis leadership Crisis culture Organizational structure Communication system	Paraskevas et al., 2019

source: own elaboration

4.5 Data sample

"Revenge tourism" is the term coined by the Director General of Federalberghi to define the upcoming 2022 season. People are resentful of the good times the pandemic denied them, and now that things seem to be getting back to normal (finally), people are ready to go out and have the time of their lives. Young tourists are expected to be at the forefront of this movement, forming the first wave of tourists to reach Italy in 2022. The tourism industry also expects a drastic change in tourism culture. In 2022, people will pay more attention to the quality and depth of their time and experiences after spending so much time indoors and

secluded during the pandemic. Instead of focusing on traditional sightseeing experiences, experts in the tourism industry expect that tourists in 2022 will also be looking for rich, unique experiences.

In this context, we selected five companies (two hotel chains and one hotel group, as well as one restaurant franchising company and one restaurant). We included both hotels and restaurants in our sample to find both similarities and contrasts between the cases and to increase the robustness of our findings.

Data was collected through Zoom and on-site interviews, social media (as an interview on youtube), the website and online magazines.

Tab. 4.4 Overview of the case study

Case	Type	Data Source	Family Firms	Seasonal business	Number of employees	Year of foundation
A	Hotel chain	2 Interviews Website Online Magazine Social Media	No	No	50	2000
B	Hotel Chain	2 Interviews Website Online Magazine Social Media	No	No	30	2015
C	Hotel Group	2 Interviews Website Online Magazine Social Media	No	Yes	70	1963

D	Restaurant franchising	2 Interviews Website Online Magazine Social Media	Yes	No	15	2013
E	Restaurant Group	2 Interviews Website Online Magazine Social Media	Yes	No	30	2013

Case study A

It is the most widespread Italian hotel chain in the world: 30 luxury hotels in New York, London, Paris and Italy. It includes 4- or 5-star hotels that focus on the concept of genuine Italian hospitality. It is a privately owned hotel chain based in Florence. The chain is the most important Italian hotel company with family capital and today it is hardly run by the second generation. In a few decades, it has become an international point of reference for a large number of travellers from all over the world. It is an independent group and one of the few cases where the chain is entirely family-owned: every hotel is owned by the family, which is a very significant strategic and economic strength.

Case study B is a hotel chain founded in 2006. It is a 4-star structure with a hybrid and multifunctional character that aims to accommodate different groups of customers and offer a wide range of services. The chain includes a student residence, a four-star hotel, a meeting and event area, a bar and a restaurant. Its aim is to create a community of students, business people and leisure guests. Currently, the hotel chain is present in 13 European cities and has 15 properties. The hotel chain consists of a new business concept that is mainly aimed at an international target group. It is a unique structure that includes accommodation for holidaymakers and business travellers, student residences, co-living and co-working spaces open to non-residents, and nine shops.

Case study C

This hotel group consists of a portfolio of elegant four-star hotels in coastal regions. The hotel group has a long tradition and a history of over 75 years. It has 9 hotels with more than 1500 beds, of which six are in Sorrento, two in Massalubrense and one in Palinuro.

Case study D

This pizzeria and restaurant franchising is a clear example of industrial innovation. In fact, it received the patent as industrial innovation in 2017. The innovative business concept is based on a wood-fired oven located on an *"Ape Car"*, with the aim of marketing a top product such as Neapolitan pizza. Subsequently, this business model was extended to the classic pizzeria model, with the oven on the Ape Car being a characteristic element of this brand. This business model is now being developed on a regional, national and international level through a franchising business model.

Case study E

Opened in 2009, the restaurant is managed by the owner alone and has 30 employees. It is the first restaurant by weight in the city of Naples. It is based on the concept that each customer is the owner of his own food and that, through the buffet formula, he has the freedom to choose and compose his own meal, as if the buffet were his own pantry, to use the microwave to better heat his dish, to open the fridge and so on. The price of the meal is based on its weight. Each customer has a card that stores the weight of the dish and issues a receipt with the weight and the corresponding cost. The ban on buffets has completely disrupted the business model of this restaurant. The manager, with the support of the staff, had to completely change his restaurant to comply with the new regulations.

4.6 Findings:

Case study A

The health crisis has completely wiped out the MICE and leisure sectors, the main customer segments to which the hotel chain mainly appeals. Faced with a sharp drop in bookings and revenue, the company has adopted a cost-cutting policy by reducing staff and merging some departments. The structure has always adopted a system of direct and indirect costs. It has 50

direct employees and 20 indirect employees to transfer some branches of the company to third parties in order to maintain the company in times of crisis.

The organisational structure was changed in terms of staff and departmental organisation. Two departments were merged: the reservations department and the events department, and now there is a single sales office that manages both internal events and individual bookings.

During the health emergency, the hotel chain had to map all available segments to intercept and contact them. To increase domestic tourism, the company has added two major domestic tour operators to its network, which play an important role in adding value. External knowledge and partner networking helped the company to increase the order rate at lower prices.

Tab. 4.5 Finding’s Case study A

Absorptive Capacity	Practices	Reference example
Acquisition capability	<p>Benchmark activities; monitoring systems that allow to monitor competitors both in terms of marketing and rates;</p> <p>Informal meetings in trade associations, consortium, in convention bureau.</p> <p>“Incentive” visiting with TO, travel agents, booking agency</p> <p>Interaction with the Italian craftsmanship</p>	<p><i>“We must always benchmark with the competitors, the market and the whole surrounding the world. Monitoring is daily. We have informal meetings in trade associations, in consortium, at the convention bureau. we organize incentive visiting in our structure with tour operator, the mice sector and OTA.” “Although our main targets are business and leisure, we had to identify other market segments willing to pay less but they allowed us to reach a right occupancy rate to cover certain costs.”</i></p>
Assimilation capability	<p>Official meetings</p> <p>Business review with marketing sale and revenue managers</p> <p>Participation to crowdsourcing program</p> <p>Educational training program</p>	<p><i>“We conduct two official meetings per month, a business-review with sale, marketing, and revenue management”</i></p> <p><i>“Starhotels renews its attention to the future and the challenge it launches for H-Ack “Travel 400 young people from all over the world will join teams to develop innovative solutions that aim to reinvent the tourism sector and respond to the current and future needs of a Group like Starhotels.”</i></p>
Transformation capability	<p>Employees successfully link existing knowledge with new insights</p>	<p><i>“The capacity of our staff to use the knowledge acquired externally depends on the individual propensity. Not all the staff can adapt to new knowledge. We had to</i></p>

	Diversification Routines for knowledge creation	<i>apply all the health protocols to ensure a high level of security to our guests.”</i>
Exploitative capability	<p>Identification of potential customer targets and telemarketing activities to catch them</p> <p>Adoption of technology according to the new knowledge, Continuous update for forecast systems, adapting rates to new customer targets, creating project to promote company hotels.</p>	<i>“If we want consider our ability to acquire and exploit external knowledge we investigate on all the events around the city where we can identify our potential guests. For example, if we consider the football sector and the championship, we have contacts with sports broadcasts and we often host commentators in our structure. Every Monday and Thursday ,10-15 rooms are reserved to the football sector. We host the arbitral backhoes, the Women’s football, the basketball team, the Spring team that plays in Cercola, we do telemarketing activity. In this specific case we study all the championship, we collect information about the sport event in Naples</i>
	Business Model Innovation	
Value proposition	<p>Changes in market target</p> <p>Changes in the offer</p> <p>Strengthening of group domestic tour operators</p>	<i>“You have to guarantee safety and security, those few guests require the security and the application of security protocols. We changed our customer target, we have identified alternative target: sport event, crews and preventive quarantine”</i>
Value creation	<p>Personnel reduction</p> <p>Introduction of new resources (masks and sanitizers)</p> <p>Restructuring investments</p> <p>Technology investments (Be Star-Go Hybrid)</p> <p>strengthening with Italian artisans and artists</p>	<i>“The product is difficult to be improved, we had to reduce the staff and the layoff was introduced. We have merged some offices, we have merged the reservations department and the event department, before we had 2 people at events and 3 people at reservations, now we have one person at events and one at reservations. Dropping the congresses sector, we went to look for domestic group operators such as Imperatore Travel or Avvenire Viaggi. “</i>
Value capture	<p>No changes</p> <p>Decrease in revenues</p> <p>Direct and indirect cost application</p>	<i>“They are businesses that don’t pay much. Normally we have a different type of revenue from a Daily Revenue Room (DRR) which is usually higher deriving from the event sector and from the luxury sector. During the pandemic it was impossible to forecast the demand due to the lack of historical data. We could only apply different cancellation policies that allowed our customer to cancel their reservation without paying any penalties.”“catering and some plans are contracted out in order</i>

		<i>to reduce costs in cases of crisis such as the current one”</i>
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source: our elaboration

Case Study B The business model has not changed but just adapted to the crisis. The General Manager has defined this business model as a hybrid business model characterized by a diversified offer (4 stars hotel structure, co-working spaces, bars, restaurants, student campus and congress centres). This model allowed the structure to adapt the offer to the dominant customer target that survived the crisis (business segment and student segment). In September 2021 the 4 stars hotel rooms were converted into student rooms in order to guarantee the full occupation. The structure had the opportunity to host guests from surrounding structures that preferred to be closed. The structure had to emphasize its attention to health and security, strong efforts at the level communication have been done, press releases aimed to convey an image of a safe hotel, providing an image of a structure ready to guarantee high levels of safety. Human resources have been increased to adopt safety and security protocols. The relationships with suppliers have been strengthened to ensure those high levels of quality, some partner relations have been intensified and some partners have gained a greater weight on the value network. During the pandemic more attention was focused on cost analysis, the cost has been completely revised and revenues have considerably decreased. Considering the absorptive capacity, the acquisition of external knowledge and the transformation of it into internal procedure was represented by the adoption of the safe and security dispositions from the government and from the World Health Organization.

Tab. 4.6 Finding’s case study B

Absorptive Capacity	Practices	Reference example
Acquisition capability	Daily press review consultation: trainings with a network of consultants to develop new ideas and models. consultants who support staff in stress management,	<i>“Our main external resource is represented by the press review that we receive daily. It is related to our sector, and it is mainly focused on hybrid models of hospitality, such as university residence, student residence, hotels. Our company often hosts</i>

	public speaking, keeping up with the needs of the new generation.	<i>external consultants that help us to discover and to develop new ideas and new models of business. External consultants are also hosted to provide our staff with training aimed to improve their capacity to manage stress, their public speaking skills, and to keep up with the needs of the new generation”</i>
Assimilation capability	Daily meetings with staff and external consultants; cross meetings; drafting and reporting official documents as standard operating procedure.	<i>“We have daily meetings, inviting ad hoc consultants via direct channel and official channels such as Confindustria, the Ministry of the Interior, via email and via face-to-face meeting, and virtual call. Cross meeting, where the people of the team are encouraged to share their individual knowledge and to report it in an official document as standard operation procedure”</i>
Transformation capability	Application of health protocol, the conversation of internal activities to answer to changes, educational training to move from the experience approach to the community approach.	<i>“The ability to use external knowledge depends on the individual capacity. The Covid Era has catapulted us into the world of health protocols that we did not before, there are managers and employees who have studied them and have immediately applied them and other employees, despite the diffusion of public information, have waited for official guides from the management. The use of masks was initially borderline and created panic among customers, then the mask became mandatory, and we had to innovate all activities related to the protocol with this change. For us the very innovation was the introduction of Health protocols.”</i> <i>“Also, the concept of community, of creating connection, was a very complex concept to transfer our staff. The recruiting activities are oriented to this type of communication skills. This type of knowledge transformation is the most difficult to assimilate.”</i>
Exploitative capability	New business concept Application of technology according to the new knowledge	<i>“The check-in has been completely revised in the covid era with a virtual check-in, via the kiosks or via machines, We have guaranteed multi access to the rooms by the use of an electronic key or with the use of wireless, or using a cell without having to go to the reception, without the risk of losing the key . This innovation has strongly affected the guest experience” Another important innovation is represented by the shift from the experience to community. Living a structure feels part of it. During the pandemic the sense of community has failed due to social distancing and innovation has</i>

		<i>played its role guaranteeing high security level to guests”</i>
	Business Model Innovation	
Value proposition	<p>Differentiation strategy</p> <p>Identifying alternative guest segments respect to the tourism sector</p> <p>Adjusting the offer and the carrying capacity to the dominant segments</p> <p>Communication strategy aimed at promoting a safety and security image.</p>	<p><i>“Fortunately, I have always managed realities that have not known crisis. Our Business Model consists in a Hybrid model addressed to a young segment, tolerant to risks (from 20 to 40 years old) that tends to move for study purposes even in risky situations. Our structure offers co-working spaces, a student residence, a 4 stars hotel, a restaurant, a bar and a congress center. Diversifying investments generates higher returns. The students tend to stay in the medium long-term for study and work reasons. The demand for co-working space has increased a lot favoring a good occupancy rate. This hybrid model allowed us to have our structure open and to accommodate those few tourists and to welcome guests of other structures that have preferred to remain closed. We did not change our target we have just adjusted it to the crisis. Our differentiation strategy has been adapted to the crisis, in 2021 we have increased the number of student rooms, and we have converted an amount of hotel rooms into student rooms.”</i></p>
Value creation	<p>Relationship with suppliers</p> <p>Introduction of new resources (masks and sanitizers)</p> <p>Not changes in resources but increased human resources</p>	<p><i>“We have not changed our resources, but we have increased them, and we have hired extra staff to carry out security protocols required from the government and OWH, the value proposition was geared towards security, we did a strong effort in terms of communication. The relationship with suppliers has changed, with some of them we have closer relationships as our relationship with our Head of Protection and Security Services”</i></p>
Value capture	<p>Cost-product analysis more attention to cost construction</p>	<p><i>“The cost- product analysis has changed. We have redesigned the cost design, we had to add new attributes to the cost, costs that are completely different from the 2019 The pandemic has certainly taught us to pay more attention to cost management.</i></p> <p><i>“Thanks to our hybrid model we were able to guarantee a high occupancy rate, the achievement of the so-called breakeven point, but we nevertheless had to lower the rates by moving our entire offer to a target with a lower spending capacity and which in any case required a much more service. simple even if a room in a 4-star hotel was adapted to them.”</i></p>

Case study C

The crisis and travel restrictions have affected the hotel group's value proposition on the Penisola Sorrentina. Indeed, the peninsula has always been characterised by international tourism, which has suffered a drastic decline in favour of domestic tourism, which has increased significantly. Also in this case, the value proposition is focused on ensuring a high level of safety and security, and the offer is adapted according to the customer target and their different behaviours and needs. The changes in the customer target group influenced the decisions to adapt the offer to the new target group, key resources were changed and additional staff was hired to ensure safety. The distribution channel also changed, with the channel manager being changed to the new tour operators.

External knowledge, especially interaction with customers and suppliers, is important to improve the guest experience. Meetings with suppliers provide solutions and opportunities to meet customers' needs.

Staff are closely connected to the area and the area identity has an impact on sales. In the off-season, there are monthly meetings between staff and managers, also to identify the few resources that need to be replaced. Participation in fair trade and online webinar gives the hotel group international visibility. The pandemic has favoured the development of online webinars, which have given the company greater visibility. In any case, on-site fairs are preferred, which offer more interaction and development opportunities.

In this case, there were no changes to the business model, but the health emergency had a strong impact on customer destinations, there was a shift from international tourism to domestic tourism. The offer in terms of key resources and activities, work organisation and distribution of channels was adapted to the external changes.

Tab. 4.7 Finding' s Case study C

Absorptive capacity	Practices	Reference example
Acquisition capability	Relations with suppliers Informal meetings with competitors	<i>"The dialogue with suppliers is constant, they support us to improve the customer experience of our guests. For example, today I have several meetings: at 14:30 I have a meeting with a supplier for our doors to</i>

	Trade journal consultation	<p><i>increase the soundproofing level and to improve the acoustic system of our hotel, at 15:30 I have a meeting with the mattress supplier to improve the customer wellbeing, and in the late afternoon I have the daily meeting with heads of service to monitor the trend of bookings and the market in general”</i></p> <p><i>We constantly participate in trade fairs, during the forced closure we participated in many online workshops to have greater visibility”</i></p>
Assimilation capability	<p>Daily meetings with head services</p> <p>Monthly meetings in winter</p> <p>Weekly meeting in summer</p> <p>Participation to training programs with other operators and university</p> <p>Participation at exhibitions</p>	<p><i>“During the summer there are weekly meetings, while in the low season the meetings occur monthly for the development of new projects according to the current situation and for new staff recruiting. Our staff is well established, today it is hard to find high skilled human resources and it is difficult to replace them. “</i></p>
Transformation capability	<p>New staff organization</p> <p>Educational program (to approach new customer target, to new protocols, to new technology)</p>	<p><i>“The Federalberghi Sorrento Peninsula, to raise the level of safety of its guests and operators, in order to restore the trust of travellers, has realized the "Safe Stay in Sorrento Coast" Project in collaboration with Beside/Edi and with the degree course in Hospitality Management of the Federico II University of Naples”</i></p>
Exploitation capability	<p>Application of new health protocols</p> <p>Involvement in new networking</p>	<p><i>“We have adapted our structure to the new customer target needs. Domestic tourism has needs and interests completely different such as breakfast and dinner hours, menu requirements.”</i></p>
	Business Model Innovation	
Value proposition	<p>Offer adaptation to domestic tourism</p> <p>Change in customer market</p> <p>Change in market position</p> <p>Change in the product offer</p>	<p><i>“The peninsula has seen a change with respect to customers, there has been a transition from the international tourism to a domestic tourism, which has different needs and behaviour in terms of menu, services (the Italian prefers sea food menu rather meat menu, they have different lunch hours)”</i></p>

Value creation	Change in resources Change in the work organisation Change in distribution channel	<i>“Introduction of health protocol has been the very innovation. our staff has been increased adapted to the needs of the new reference market. The foreigner goes to dinner at 7pm, the Italian not before 9pm. The foreigner has breakfast at 7am, the Italian at 9.30am. The type of raw material in catering has changed. Much more fish than meat. Costs have gone up a lot. We had to use a channel manager given the increase in the domestic market before we relied on tour operators.”</i>
Value capture	No changes in the mechanism Increase in costs and revenues	<i>“Costs increased in terms of raw materials (fresh fish) but also in terms of revenues from catering. International tourists spend from 30 to 35 euros Italians spend from 30 to 50 euros “</i>

Source: own elaboration

Case Study D

This company had already carried out a business model innovation. It can indeed be called the first travelling pizzeria on an "ape-car". It is the result of the intuition of a young Neapolitan entrepreneur who, over the years, has extended this new business model to the classic pizzeria model and introduced the "Ape-Car" to its affiliated venues. Of course, in this case, the "ape-car" is a characteristic element of the brand and not the main resource. The intuition came from the proliferation of moving vehicles in Europe and through a series of meetings with engineers. The first model was developed in 2012 and the patent application was finally filed after 5 years. During these years, the patent was subject to imitation threats, despite the privilege.

The idea was born from the intuition of combining this innovative industry with a product that has its merits in Neapolitan pizza and wood-fired oven.

The following franchising model "Johnny Take Uè Pizzeria & cucina d'eccellenza" is the indoor translation of the itinerant format "Johnny Pizza a Portfolio". The name of the franchise underlines the close connection with Neapolitan tradition and excellent cuisine. The branches have a capacity of up to 150 seats and are decorated according to the "food style theme" and with the typical brand colours. The secret recipe of the artisan dough is the subject of a cooking course in collaboration with the Mediterranean School of Sorrento. The menu of the

pizzeria and kitchen promotes excellent Campania products such as Latteria Sorrentina, Molina Dalla Giovanna flour and Solania's excellent tomatoes.

The franchising model favours the process of knowledge diffusion among the affiliates and among the group leader. The acquisition and appropriation of knowledge, as well as the transformation and use of knowledge, favour the creation of innovations, and the role of the affiliated companies and the employees contributes to the improvement of the business model.

The business model has changed little, franchising has not been affected by the pandemic, the order rate has decreased but the introduction of the delivery service has been a useful strategy to reach the allowed order volumes.

The service has changed little, with a greater focus on cost. Some temporary changes due to the pandemic could be permanent, such as menu reductions and staff cuts. Suppliers were penalised by the lower volume of business; orders were significantly lower. The secret during the pandemic was to maintain the partnership without revolutionising the relationship of trust that had been built up over the years. Customer loyalty provided a psychological support that required the delivery service.

Tab. 4.8 Findings' Case study D

Absorptive Capacity	Practices	Reference example
Acquisition capability	<p>To strengthen the relationship with competitors and consumers</p> <p>Interaction with wholesalers and with the master franchisee</p> <p>Interaction with the mills</p>	<p><i>“We constantly monitor the market and consult trade journals. Customer and supplier loyalty is necessary to improve our business. Our suppliers are friends that guarantee that high standard of quality to be replicated on the different points of sale. A healthy dialogue with the competitors favours the learning of new technologies and the acquisition of new processing techniques”</i></p>
Assimilation capability	<p>Internal operating manual. constant daily, weekly and monthly meeting.</p> <p>Briefing with the operational staff within the unit with the general manager; meeting with the head group</p> <p>Intercommunication in the department</p>	<p><i>“We provide our staff with internal operating manual to transmit our working techniques and our passion to make them feel an integral part of the project and provide them with a constant updating. Departments are coordinated, there are constant daily, weekly and monthly meetings Briefing with the operational staff of each unit with the general manager, meeting with the head group to establish the group and management policies that we will be</i></p>

		<p><i>transmitted to affiliates. Within our offices there are continuous briefings at a managerial and organisational level. There are three departments that must work in perfect synergy, the marketing and communication department communicate our excellence in terms of raw materials and are in close contact with the purchasing department and the sale point interfaces with everyone, with the supplier of raw materials and with marketing and communication department.</i></p>
<p>Transformation capability</p>	<p>Staff contributes to the creation of the business concept</p> <p>Staff applies the recipes of the company.</p> <p>Application of new management software</p>	<p><i>“If on one side we can transfer our know-how to our dining room staff, on the other side the transmission of craftsmanship and manual skills is more complex. I’ll give you an example. The staff introduce us a different mise en place. First we put our frying pan in a saucepan and the staff introduced us a small pan to serve the frying and then necessarily we had to expand the use of this pan to all the points of sale. We develop a concept not a single restaurant our cooks have to follow our reference recipes to produce our final product.”</i></p>
<p>Exploitative capability</p>	<p>Development of a patent</p> <p>Creation of new idea</p>	<p><i>“We have developed a patent based on the combination of tradition and innovation.</i></p> <p><i>Transaction form Itinerant model to a restaurant franchising.”</i></p> <p><i>Our artisanal dough, a guarantee of softness and digestibility, the protagonist of the course “THE COOK OF PIZZA” in collaboration with the University of Mediterranean Cuisine of Sorrento, which allows the standardization of the product.”</i></p>
	<p>Business Model Innovation</p>	
<p>Value proposition</p>	<p>Change in market position</p> <p>A safe and security services</p> <p>Adjustment of the offer</p>	<p><i>“We have changed our market position, our Business Model was born as an evolved street food. Initially, our Business Model played on outlets linked to street food. After we realised the importance of table seats and moved our attention from a street oven to a pizzeria Bistro and kitchen”</i></p> <p><i>“During the pandemic We could not use the Ape Car, because all the events were cancelled, some restaurants with open space had the opportunity to use it and to create a new product.”</i></p>

<p>Value creation</p>	<p>Change in channel distribution</p> <p>Introduction of new management software</p> <p>Staff downsizing</p> <p>Reduction of the menu offer</p> <p>Partner evolution and strengthening of already consolidated relationships</p> <p>Innovation in services (introduction of sanitizer, surgical masks, security guest remind)</p>	<p><i>“We have improved the delivery service, with an internal management software that is much more attentive to the management of take-away and home service than the room-service”</i></p> <p><i>“Partners have evolved over time as, the previous shipped the raw material while the current one has a completely different logistics, (Km 0 production in northern Italy). In the health emergency the partners were all penalised by the lower volume of business, the orders were significantly lower. The secret, during the pandemic, was to keep the partnership strong “</i></p>
<p>Value capture</p>	<p>No changes</p> <p>Cost reduction in raw materials and personnel but new costs related to disinfection.</p>	<p><i>“The pandemic has taught us to manage costs differently, from the food cost of raw materials and the food and beverage cost, the incidence of the cost of consumables, the cost of personnel has been clearly managed with greater attention. Today the turnovers have not returned yet to those of 2019 but we have certainly managed the impact. Regarding the turnovers, with had lower costs and obtained revenues not like the previous ones, but we have increased the revenues.”</i></p>

Source: own elaboration

Case study E

This restaurant group, based on a self-service formula, has implemented a BMI at a time when the buffet is completely banned, introducing some innovations in the value proposition, such as the 'menu formula', which did not exist before, and proposing new dishes based on macrobiotic diets.

In response to the BMI, the target customer group has changed. While the previous customers consisted of workers and students who found the buffet an opportunity to eat quickly during their lunch break, the new formula and menu are more expensive and have increased the time spent in the restaurant. The new offer is thus aimed at an integrated offer that satisfies both professionals and cultural tourists.

The new menu has expanded the network of suppliers, introduced new key resources and activities, such as table service, the number of staff in the dining room, the production

processes of the meals and the preservation processes with the introduction of fermentation techniques, and has required some technological investments. The revenue mechanism has also changed. Whereas before the price was calculated according to the weight of the meal, now the price is based on the food cost.

Tab. 4.9 Findings’ Case study E

Absorptive Capacity	Variables	Reference example
Acquisition capability	<p>External sources background</p> <p>Prior investments Prior experience</p>	<p><i>“I was watching a documentary about a transmission of a contagion during a buffet . After this documentary I realized that they would have closed us forever. “</i></p> <p><i>“A very counter-current work, because some friends in the sector advised to make traditional Neapolitan foods but I preferred to follow the decision of single dish, which was also included in the previous formula”</i></p> <p><i>“My attention to fermentation techniques derives from family tradition”</i></p>
Assimilation capability	<p>Education staff training</p> <p>Educational programs on innovation and technology,</p>	<p><i>“We had to adapt all the staff to new restaurant concept, before we just assisted people in the dining room, now we receive the command, our staff was educated to have customer focused approach that before was not so necessary ”</i></p> <p><i>“ We provided our staff with a training focused on new disposition, on the new service and new formulas”</i></p>
Transformation capability	<p>Human resources applied new knowledge to practical daily activities</p>	<p><i>“The chef transformed all the menu according to the concept of bowl, fermentation, and microbiota”</i></p>
Exploitative capability	<p>Ideation of a new concept</p> <p>Adaptation of new technologies according to new knowledge</p>	<p><i>“ By modifying the processing and the production line we had to make technological investments by changing the use of computerized ovens that have a system that allows us to have the combined management of cooking and recipe management, cooking is delegated to the machine, the control unit records the temperature and adjust, and in addition we have integrated the vacuum chamber, the blast chilling to manage the new formula in a different way”</i></p> <p><i>According to our new dietary offer, we fry our molecular parmigiana di melanzane</i></p>

		<p><i>with a special oven, which manages the cooking recovery because with its 15 Kw of power it immediately goes to 200 degrees, even when it is opened, and it simulates frying with a minimum of oil, which nebulized on the product it can be useful only in the heat exchange and therefore we have the effect of a real frying, but without immersion in oil”</i></p>
	Business Model Innovation	
Value proposition	<p>New offer</p> <p>New Market Position</p> <p>Ne customer target</p>	<p><i>“People who have a different vision need to be satisfied even in the city of Naples, closed to a tradition. . The bowl was created to satisfy the desire to balance lunch in macro-ingredients, carbohydrates, proteins, fibres, vegetables”</i></p> <p><i>“We are consecrating it to a macrobiotic restaurant, a model of future nutrition. this winter we had a great satisfaction like winning a Michelin star, we had as a guest a maximum exponent of the Microbiome, she made a dedication on her book that I had here, and she wrote a post on her page giving us great visibility”</i></p> <p><i>“We had to turn to a new customer, always younger group (30-35 years), previously the customer saw in us the advantage of self-managing, today they can no longer have the same service speed. Now we have fewer customers with greater spending power, professionals and cultural tourists, developing an integrate menu offer that meets both customer needs. “</i></p>
Value creation	<p>New production process</p> <p>New key resources</p> <p>New key activities</p>	<p><i>“We had to adapt the kitchen to the new protocols, we had to readjust a software, because we initially had to modify a software linked to the classical restoration to the formula of weight, and we transformed the software and reconverted it to the new menu offer”</i>”<i>We had to change everything, the restaurant by weight changed the rules of the restaurant, because in the classic restaurant you prepare the basics of a line, the advantage of the restaurant by weight was that the kitchen continuously cooked small quantities of various products. You replaced it or completely changed the type, not having to follow a vein dedicated to a menu”</i></p> <p><i>“ The second lockdown took place without giving us the time to organize, we had also done the shopping for Sunday. Everything I bought, I took and stored with the fermentation technique I had already done</i></p>

		<i>some experiments that I wanted to develop and integrate by imposing a fermented vegetable on each dish”</i>
Value capture	New price formula New cost objectives	<i>“In terms of revenues we are forced to increase prices to increase perception and quality. Costs have increased too, raw materials, energy, table service, more numerous, before we had a single price, a very complicated formula, the control of the food cost on a buffet since there is no price linked to the recipe but playing on the average value of the food cost. Today it is easier because we have the ability to select the ingredients within a bowl and we are able to formulate a price in a more surgical way from the point of view of food cost and the preparation time for this new type of offer. We had to reformulate our objectives linked to the average cost, to the average receipt, to that we had to worry about increasing the perception of quality and service.</i>

source: own elaboration

In this study, we describe a company's ability to acquire and assimilate external knowledge and translate it into the development of innovations in the current business model. Previous authors have studied this (Marrucci et al., 2021, Clauss 2016; Hagen Worch, Bernhard Truffer, 2012 ; Zahra & George, 2002; Johnson and Craven, 2001; Cohen & Levinthal, 1990). The following table provides some empirical evidence relating absorptive capacity and the dimensions of (BMI) collected in the empirical study.

Absorptive capacity is considered a driver of flexibility and innovation (Miroshnychenko et al., 2021) and favours firms in the innovation process (Cepeda-Carrion et al., 2012; Kostopoulos et al., 2011). From this analysis, it appears that external knowledge, from a managerial perspective, comes from the dynamics of the external environment that surrounds organisations. Managers consider suppliers, competitors, industry associations and consumers as sources of information and, in the meantime, take into account all events that take place in their environment. Consequently, changes in the value proposition (change in product, customer target and market position) due to external factors (e.g. health emergency) lead to changes in the proposition, in the value added and often in the value creation.

Tab. 4.10 Themes relation

Themes relation		Examples
Absorptive capacity and Business Model Innovation		
Transformation knowledge capabilities	<p>Ability to detect opportunities in the environment</p> <p>Background resources</p>	<p><i>“ My interest, my previous studies on fermentation and my family tradition on the conservation techniques helped me to manage the sudden forced closures and to develop this new feed value proposition” (Case study E)</i></p> <p><i>“Knowledge has always supported me in finding solutions to problems, personal knowledge, and my own inclinations” (Case study E)</i></p>
	<p>Ability to detect opportunities in the environment</p>	<p><i>“If we want consider our ability to acquire and exploit external knowledge we investigate on all the events around the city where we can identify our potential guests, also the constant interaction with trade association, convention bureau helps us in that ” (Case study A)</i></p>
Exploitation knowledge capabilities	<p>Technologies adaptation to new knowledge</p>	<p><i>“the daily meetings with the heads of service allow us to understand the booking trends and the market to constantly update our systems” (Case study A -C)</i></p> <p><i>“My previous studies on fermentative techniques and interaction with some experts helps us to reprogram our ovens”</i></p>
Acquisition knowledge capability	<p>Interaction with the value network</p>	<p><i>“Interactions with suppliers help us to improve the guest experience and to introduce elements that can change the customer experience such as the virtual process chek.in that has changed the relationship between the staff and the customer” Case Study B and C”</i></p>
Assimilation capabilities	<p>Staff training</p> <p>Interdepartmental communication</p>	<p><i>“our staff was trained again on health provisions, the new table service, a specific course on the new management software”</i></p>
Business Model Innovation and Crisis		
Value proposition	<p>Changes in customer target</p>	<p><i>“Our Hybrid Model allows us to reach moderate occupancy rate. Diversifying investments generates higher returns. The</i></p>

	Differentiation strategy	<i>students tend to stay in the medium long-term for study and work reasons. The demand for co-working space has increased a lot favoring a good occupancy rate. This hybrid model allowed us to have our structure open and to accommodate those few tourists and to welcome guests of other structures. We did not change our target we have just adjusted it to the crisis.” Case study B</i>
	Changes in the offer	<i>“The crisis has forced us to a transformation. We could no longer use our formula. Fortunately adapting our business model to a service based on table service and changing our price formula we supported small investments to survive” (Case study E)</i>
	Changes in the channel	<i>“The higher cost of new raw materials also led to a consequent increase in revenues. In the food and beverage Italians have a greater expenditure capacity than internationals” (Case study C)</i>
Value Capture	Optimization Cost	<i>“”The pandemic has taught us to manage costs differently, from the food cost of raw materials and the food and beverage cost, the incidence of the cost of consumables, the cost of personnel have been clearly managed with greater attention. 2019 turnover is a long way off, but we have certainly reduced costs and increased revenues. (Case study D) “We review the organization of our departments. We have merged some offices, the reservations department and the events department, before we had 2 people at events and 3 people at reservations, now we have one person at events and one at reservations.” (Case study A)</i>
Customer Role and BMI	Psychological support, generator of new idea, collaborative, impolite and adverse to the new policies, reluctant behavior	<i>“The loyal customers have been close to us through the delivery service, always requiring the same quality standards guaranteed by us” (Case Study D) “Guests were cooperative, empathized and followed our guidelines” (Case study A) “Our clients are the main producers of new ideas through the feedback process” (Case study B) “More problems than anything else, proximity tourism has been difficult to manage. In proximity tourism, the culture of being a guest is missing” (Case Study C) “Some of our loyalty customers have been annoyed by the new gastronomic offer” (Case study E)</i>
Other external factors affecting BM	Sudden closures, the frustration the time availability to think	<i>“The frustration of dealing with something new has prompted us to seek solutions” (Case study B) “The availability of time gave me the opportunity to reflect and find new solutions” (Case study E) “The availability</i>

		<i>of time has time to reflect and find new solutions”</i>
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source: own elaboration

Previous experience and relationships with stakeholders are a source of external knowledge that can lead to an innovative business model. Interactions with suppliers can have an impact on value creation and thus on the customer experience. The introduction of a new partner can shape the offer, changes in key resources have a strong impact on BMI. It is not easy to distinguish the impact of each dimension of knowledge absorptive capacity on BMI. Transformative knowledge capacity enables the firm to identify opportunities in the environment that can be developed into new ideas and translated into a new product or way of doing business.

In the hospitality industry, interaction with the customer is critical to product development. Therefore, we asked respondents what role the customer plays in this time of change (Breier et., al 2021). The results show that, on the one hand, customers supported the changes in the structure and displayed cooperative behaviour by following the security protocols provided by the structure; on the other hand, customers were reluctant to follow the security measures and reluctant to the new business model.

Various crisis factors influenced the changes in the business model, such as the forced closure, the feeling of frustration, the greater availability of time, the sudden closures, which necessarily had to develop the quick problem-solving ability that is essential for survival.

4.7 Discussion and conclusion: a cross- case study analysis

Case A, Case B and Case C did not implement BMI, but made some changes through differentiation strategy, cost-cutting policy and by restructuring staff and department. *Case D* had already implemented a BMI before the pandemic and *Case E* was forced by the pandemic to implement a BMI to cope and survive the crisis.

Both hotel chains used their customer target to achieve an order rate that allowed them to at least break even. In addition to alternative market targets, the luxury hotel has pursued a cost-cutting policy by reducing staff and merging some departments. Indeed, the pandemic has

allowed managers to pay greater attention to cost management. The merging of departments and the restructuring of staff as temporary changes could continue after the health emergency and thus become permanent. Despite the crisis, the first Italian hotel chain has continued its mission to promote Made in Italy and has developed the "Starhotels Collezione Grand Tour" project, a travel offer whose protagonists are the chain's hotels in the main Italian art cities. A Grand Tour concierge will help travellers create their own itinerary, choosing from fascinating historic properties housed in buildings of great value and enriched by refined style and impeccable service.

In this case, the reception capacities favour the identification of alternative customer destinations, and interdepartmental communication supports the continuous updating of the monitoring systems.

The second hotel chain, targeting a young audience (students and business people aged 20 to 40), has already applied a differentiation strategy. In this case, the hotel chain has just adapted its strategy to the crisis by prioritising the segments with the highest turnover, such as students and smart professionals.

Some of the 4-star hotel rooms were converted into student rooms, which led to a decrease in revenue but guaranteed such occupancy to reach the break-even point. Unlike the previous chain, staff was increased to follow all safety protocols.

The third case is represented by a hotel group on the Sorrentina Peninsula. The peninsula has always benefited from international tourism, but this has been absent due to Covid-19 travel restrictions. In the summer of 2020, the guests of the structures were mainly Italians, this change in the reference destination led to a series of changes in the services offered and in the distribution channels, as well as in the work organisations, which also affected costs and revenues. Finally, Italians were more inclined to pay attention to hotel security measures compared to international tourists. Different consumer needs and behaviours changed the offer. For example, more attention was paid to seafood menu offerings, which led to an increase in costs as more fish was purchased. A channel manager was introduced in the company to take reservations, whereas previously the hotel group relied on tour operators. Both costs and revenues have increased, especially in the food and beverage department, as Italians have a higher purchasing power than international customers. In terms of receptivity, relationships with suppliers are a source to improve the guest experience and ensure a high

level of quality. Participating in online webinars that replace trade fairs has allowed you to cultivate international relationships and increase your visibility.

The fourth case concerns a pizzeria & restaurant franchising that has already operated its business model by creating a patent that is considered an industrial innovation in the restaurant sector. This business model has not changed significantly, only some adjustments have been made.

As for the first hotel chain, the pandemic was an opportunity for this restaurant franchising to focus attention on cost management. In fact, a reduction in staff was made, which the manager said had previously been overestimated, and the menu offer was revised and reduced, firstly because orders had dropped significantly, but also because the pandemic had led to the realisation that it was not practical to have such a wide range of products on the menu. In terms of technology, the management software has been adapted to the delivery service. Loyal customers have supported the company through the delivery service.

Knowledge in this case was crucial to the development of the business idea, born from a young entrepreneur's intuition to combine tradition and innovation and develop a travelling pizzeria made up of two symbols of Italian tradition, the monkey car and the wood-fired oven, to market and promote an excellent product such as pizza, and meetings with engineers made it possible to calibrate the vehicle and reduce the weight of the oven until it could become a travelling vehicle. The franchising model favours the dissemination of knowledge and its co-creation. Three departments work in perfect synergy, marketing and communication communicate the excellence of the raw materials and are in close contact with the purchasing department, and the point of sale works with each of these departments to ensure lively communication in the restaurant and maintain authenticity.

The fifth case describes the challenge for a restaurant to survive the pandemic that literally put the business in trouble and forced it to close. The restaurant was based on the buffet formula, which was banned during the health emergency, and the pricing mechanism was based on the weight of the meals.

Changes were made in all areas of BM, starting with the value proposition of ensuring healthy food and promoting a microbiota-based diet, the service was changed from buffet service to table service, the kitchen was changed to a production line that did not exist at all before due to the buffet formula, and finally fermentation technology was introduced. All staff were

converted to the changes and the kitchen's computerised ovens were reprogrammed to suit the new production line. The mechanisms for revenue and costs have also changed. The price is now based on a certain selection of ingredients that make up the dish, and the price and cost are set taking into account the food cost and preparation time for each meal.

Absorbability plays an important role in formulating a new value proposition in terms of what is on offer. The experience and passion of the staff combined with food expertise produced a new offer. The staff was trained according to the new safety regulations and in the basic concepts of macrobiotic nutrition, so that they could pass on the same concepts and values to the customers and explain the dishes to them.

Also in this case, the forced closure gave the opportunity to think about a new solution to be fast. The forced and sudden closures have also required quick solutions in the catering sector, given the fast perishability of raw materials.

Tab. 4.11 Cross-case study analysis

		Case study A	Case study B	Case study C	Case study D	Case study E
Potential absorptive capability	Acquisition	Benchmark with the competitors Informal meetings in trade associations, Consortium, Convention Bureau Incentive voyage Monitoring event industry	Press review Soft skills training Expertise Experience Personal education	Relations with suppliers Participation at trade fairs	To strengthen the relationship with competitors and consumers Interaction with wholesalers and with the master franchisee Interaction with the mills	Educational programs on innovation and technology. Previous entrepreneurial experiences and family tradition; Personal passion and interest
	Assimilation	Two official meetings per month Business review with marketing sale and revenue managers	Daily meetings External consultants Virtual meeting	Daily meetings with head services Monthly meetings in winter	Internal operating manual Constant daily, weekly and monthly meeting Briefing with the operational staff within the unit	Education staff training

		Participation to crowdsourcing program	Cross meeting Drafting and reporting official documents	Weekly in summer Participation to training programs with other operators and university	with the general manager Meeting with the head group intercommunication in the department	
Realized absorptive capability	Transformation	Educational training program	Staff adaptation to new safety protocol Recruiting human resources	New staff organization Educational program (to approach new customer target, to new protocols, to new technology)	Staff contributes to the creation of the business concept Staff applies external knowledge to daily activities	Human resources applied new knowledge to practical daily activities
	Exploitation	Handy technology Online news stand Platform renewal Introduction of innovative personnel figure	New business concept Application of technology	Application of new health protocols Involvement in new networking product	Development of a patent Creation of new idea	Ideation of a new concept Adaptation of new technologies according to new knowledge
Business Model Innovation	Value proposition	New market positioning New customer target	Contemporary hospitality - the customer target was not changed but adjusted Safety and security	New customer target New market position, A modified offer	Change in market position	New offer New Market Position New customer target
	Value creation	Department unification Personnel reduction	Relationship with suppliers Not changed resources	Changes in resources and partnership Changes in the	Change in channel distribution Introduction of new management software	New production process New key resources

		Partnership with domestic TO	but increased hr	distributio n channel	New resource management (staff downsizing, menu offer reduction)	New key activities
	Value capture	Decreasing in revenues associated to low fares Rate variability Cost reduction	Cost-product analysis has changed, more attention to cost construction	Increasing cost Increasing revenues	Cost reduction in raw materials and personnel but new costs related to disinfection.	New price formula New cost objectives
Influencing factors		Customer collaboration Tax credit Layoffs	Frustration Tax credit (positive sentiment) Guests as idea generator	Layoffs Customer hostility	Loyalty customer Layoffs	Layoffs Time available to think Reluctance of historical customers Sudden Closure

source: own elaboration

1) RQ: How can BMI be useful to overcome the crisis in tourism sector?

The case comparison shows that the role of innovation in the business models has been different in the hotel and restaurant industries.

According to Kim and Pimirleanu (2021), in the first three cases, strategies are redesigned considering 1) the externally imposed conditions by the pandemic and the government, 2) the internal capabilities and brand vision, and 3) the partners. In this study, the redesign strategy is based on government regulations and customer behaviour. Safety is the most important factor affecting the value proposition of the tourism business model, and companies are also changing their value chain and partner relationships to meet this new need.

In the hotel industry, managers have taken action to increase occupancy and define alternative customer destinations. The offer has been adapted to the new customer target and measures have been taken to reduce costs (Williams et al., 2017; Manfield and Newey, 2018) by reorganising staff and departments, some of which have been unified, as in the case of Case Study A, where the events department was unified with the reservations department, which

managed both reservations for events and reservations for rooms that were or were not associated with events.

Common to all cases is a new element in the value propositions, namely ensuring a high level of security, which has an impact on costs (Zenker and Cock, 2020; Kim and Pimirleanu, 2021). In doing so, companies have received some benefits from the government, such as a tax credit for the purchase of masks and disinfectants. The customer target changed in 4 cases. Hotel chain A had to map all alternative segments to replace the leisure segment. Hotel chain B had to adapt its strategy (Li et al., 2021) to the crisis by adjusting the carrying capacity of each product to the new demand, which was mainly represented by students and smart workers. In this way, the hotel chain always averted closure.

Hotel Group C, due to its strategic position, experienced a shift from international tourism to domestic tourism and the need to reshape its offer according to the new customers (Kim and Pimirleanu, 2021) by making some changes in key resources (Johnson et al., 2008), e.g. purchasing raw materials such as fish, which had a significant impact on costs but also on revenues. New distribution channels (Johnson et al., 2008) were introduced, such as channel managers instead of tour operators, on whom previous reservations relied. The hotel group increased its visibility by developing its website and improving its digital marketing capabilities (Solvoll, Alsos, & Bulanova, 2015; Li et al., 2021) through campaigns, emails, newsletters, posts on Instagram and Facebook. In this case, too, state support consisted of dismissals, while the seasonal workers got off scot-free.

Case D had already carried out its (BMI), firstly with an industrial innovation recognised by the Minister of Economy and Development, and secondly with a transition from the street food model to the restaurant franchising model. It has adopted a cost-cutting policy (Williams et al., 2017; Manfield and Newey, 2018) by reducing staff, which was considered overvalued, and reducing the menu production line. These temporary changes (Kraus et al., 2020) could also be extended in the long term. The manager also confirms that the health emergency has bought time to think about what needs to be corrected, namely cost control. Loyal customers (Li et al., 2021; Albats, Podmetina and Vanhaverbeke, 2021) have played an important role by providing economic and psychological support through the delivery service. One secret to overcoming the pandemic is maintaining relationships with partners and suppliers (Kim and Pimirleanu, 2021; Marx and Klotz, 2020) Partnerships with suppliers remained strong, even though the volume of raw material purchases declined due to the drop in sales.

In the last Case BMI became a new way of doing restaurant business. The offering was completely changed from a buffet formula to a menu formula. Recipes were changed based on the macrobiotic diet. The market offer changed from a restaurant by weight to a restaurant focused on promoting a new type of diet. As a result, the target group has also changed. The new clientele has a larger spending capacity and is represented by professionals and cultural tourists. This new formula has caused reluctance among regular customers who preferred the previous formula because it guaranteed a faster service that met their needs. In this case, technological investments were supported to adapt the kitchen to the new menu and service, and new management software was introduced to manage prices and costs, which are now calculated differently from the weight formula. The new BMI guarantees higher revenue due to the higher prices, but a lower order rate due to the new table service, whereas the previous buffet formula ensured higher turnover and therefore higher sales. Moreover, in this case, the manager prefers this formula, which he considers more profitable in the long run and easier to manage when controlling costs and revenues.

Both the reshaping of strategies and the introduction of new business models have enabled companies to reduce costs and increase revenues, although sales figures have fallen, so that the turnover of 2019 could not be achieved, but this has in any case enabled damage limitation.

Q2) Which are the main drivers that affect BM in tourism sector during the health emergency?

All managers have stated that the Covid 19 pandemic was the biggest crisis they experienced and that it revolutionised their business models gradually or radically (Souto, 2025). In fact, the forced closure gave entrepreneurs the time they needed to find a solution to the forced closure, to adapt to the new rules that avoided any opportunity to socialise (Krauss et al., 2020). Frustration was an element that led entrepreneurs and managers to find new solutions (Bermúdez-Ruáz et al, 2021; Torrès et al, 2021). The sudden closures that severely disadvantaged the hospitality industry in terms of purchasing and storing materials. In case E, the immediate closure without notice led the manager of the restaurant to use ingredients that are easier to preserve and to apply the fermentation technique, which then became a characteristic element of his new offer.

Customers behaved differently in the different studies (Majercakova and Rostasova, 2021; Akram, 2021). In case (A), they behaved collaboratively, identified with the structure and

followed all safety measures. In case (B), the manager defines that the customer is the first idea generator (Kallmuenzer, 2018). In case (C), customers behaved rudely and did not follow the rules. In case (D), loyal customers (Magno and Cassia, 2021). provided both economic and psychological support through the delivery service. In case (E), some customers have been reluctant to accept the new way of service delivery and the new menu offer. They have relied on their internal capabilities and brand vision (Kim and Pomirleanu, 2021), as well as their partnerships and social ties (Marx and Klotz, 2020). In the context of a crisis, leadership and cultural crisis are two fundamental elements that have favoured the development of BMI and the implementation of recovery strategies (Mitroff, 2001; Paraskevas, 2019). From both the literature review and the empirical analysis, there is no evidence of strategic plans adopted by Italian companies to prevent the crisis. In this context, the use of direct and indirect personnel by the hotel chain (A) can be considered as an element characterising the company's crisis culture (Paraskevas, 2019). The role of crisis leadership, or the manager's ability to spread the crisis culture throughout the company, takes shape with the manager's personal knowledge of the arrangements and training of his or her staff. The communication systems and the organisational structure also allow the departments to be in touch with each other and with the external environment, from the interviews comes the consultation of the press review on the whole tourism sector, the participation in trade fairs, the healthy confrontation with competitors and suppliers and the relationship with customers. Strong leadership from the franchisor was essential in the reopening phase. Franchisees were informed of all the franchisor's actions in line with national policies. Of course, in addition to the franchisor's regulations, each franchisee had to comply with local regulations, which varied greatly from region to region.

Q3) How can absorptive capacity favour BMI in tourism sector?

The complexity of the tourism product, understood as the intersection of supply and demand, makes the interaction between tourism stakeholders one of the most important factors characterising the tourism product. The role of networking is valuable when the knowledge acquired in the network is shared within the company and then transformed and used in innovations (Wood and Thomas, 2014).

In our empirical analysis, external knowledge comes from interaction with partners, especially competitors, suppliers, customers, through informal meetings in professional associations and consortia, another source is press reviews. Assimilation knowledge includes all those

processes and routines that enable the exchange of knowledge within the company and includes daily or monthly meetings between managers and employees (Miroshnychenko et al.,2021;Clauss, 2016; Nazarpouri, 2016) In the case of the hotel industry, daily meetings with service managers and the reservations department allow for constant updates of the tariff system (Marrucci et al., 2021; Clauss, 2016; Hagen Worch, Bernhard Truffer, 2012). Managers state that the introduction of health and safety protocols and subsequent decrees were the most important innovation and novelty. Training for staff was also introduced to ensure safety, such as "Safe Stay in Sorrento Coast", a project in collaboration with Beside/Edi and with the Hospitality Management course of the Federico II University of Naples". The project aimed to increase the safety level of guests and operators in the sector, but also to restore the confidence of travellers.

In the redesign of the strategy in the first three cases, external knowledge, resulting from the interaction with the actors of the value network, played an important role in defining the customer target and redesigning the offer with the customers in mind. Transformational knowledge is considered as the ability of employees to apply the absorbed knowledge in daily practical activities or the contribution of employees to the redesign of the business model. In case E, in response to the forced closure due to the health emergency, the business model was changed, the study of a new menu offer and the adaptation of the already existing technology to the new knowledge led to the development of the new business model. The staff in the dining room and kitchen were trained according to the new government regulations, the new service and the new menu offer using the new preparation techniques. redesigned. In this case, the external inputs and personal knowledge of the general manager, which he imparted to his staff through ad hoc training, led to the development of a new business model. Given the experiential nature of the tourism product, it is impossible to distinguish the four dimensions, but it is obvious that social interactions are necessary to acquire and use the new knowledge. The most important sources of knowledge are the relationships that arise from consolidated networks, such as relationships with suppliers, which enhance the guest experience but do not necessarily lead to innovation, but to the introduction of new resources that are reflected in the guest experience. In relation to the pandemic, new elements such as virtual check-in, the use of kiosks and early screening have impacted the guest experience.

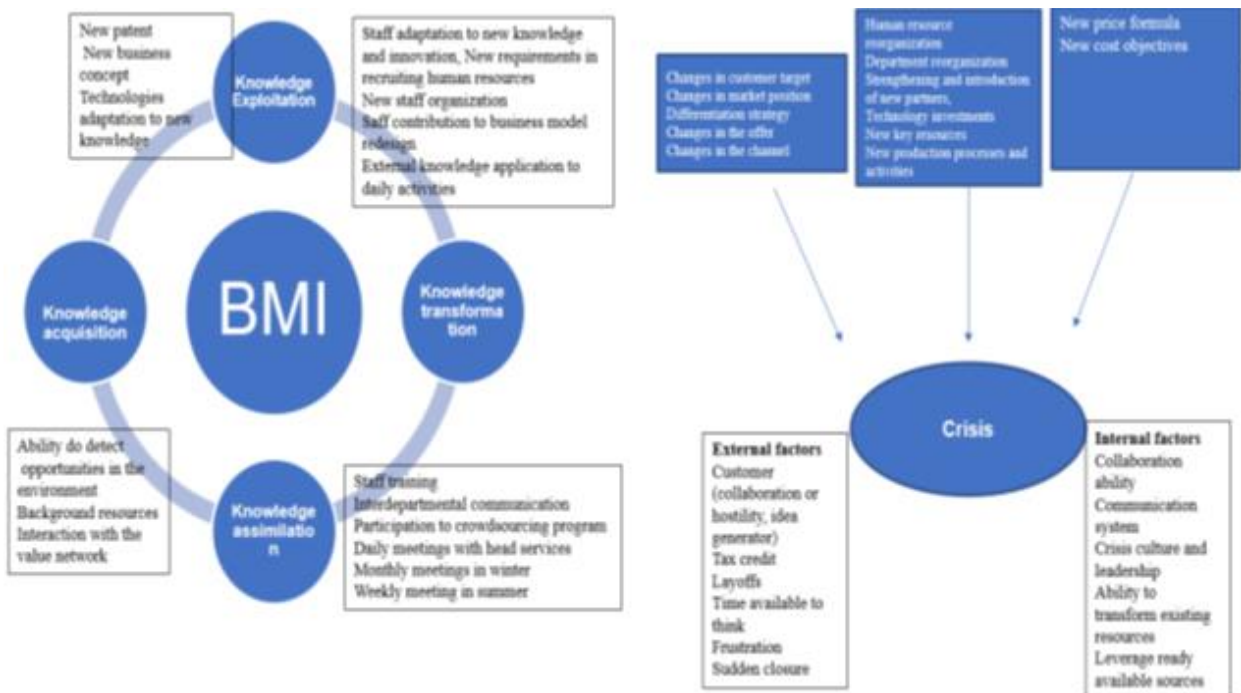
Q4) Can non-technological innovations be driver for business model innovation?

Although Chesbrough and Rosenbloom (2002) and Teece (2008) define Business Model Innovation the way to leverage the value of technology, in the tourism sector technology is often provided by external suppliers (Castellacci, 2008; Evangelista and Savona, 2003). Indeed, non-technological innovations are more common in the tourism sector, and innovation does not only result from technological processes. The acquisition of new knowledge and technology in itself does not constitute innovation; technology and knowledge must be applied to a business model to be brought to market, then they become innovation. In the tourism sector, innovation depends on internal innovation combined with external knowledge and technology. External knowledge and technology are available on the market and can therefore be easily imitated, but it is the way the technology is applied that creates innovation.

In the case study (D), the business model innovation is based on an industrial innovation that represents the Neapolitan tradition. The intuition came from the study of European street food trends and is based on the combination of two elements of Italian and Neapolitan tradition, the Ape Car vehicle and the incorporation of a wood-fired oven with refractory material and a Sorrento biscuit plate. In this case, the business model emerged from an industrial innovation that was recognised by the Ministry of Economic Development after a series of studies to calibrate the vehicle to the weight of the stove, which was subsequently reduced to 2 tonnes.

In case (E), social distance completely affected the Business Model. A BMI was then carried out in order to survive. From a restaurant based on buffet formula to a restaurant based on menu. The menu offering was also changed by offering individual dishes based on a macrobiotic diet. Previously, the business model was an extension of the diner's own home, where they could serve themselves, use the microwave, open the fridge and decide which dessert to have, and pay according to the weight formula. Now the new business model was based on the menu and technological investments were needed, such as new management software adapted to the new turnover and cost mechanism and the reprogramming of the computer-controlled ovens for the new food offer. Finally, new preservation techniques were introduced.

Fig. 4.3 Findings



source: own elaboration

4.8 Conclusions

The aim of this study was to investigate the role of business model innovation in response to the crisis. We examined business model change in response to external influences and contextualised it with the current health emergency.

A review of the literature on crisis management in the tourism sector using a bibliometric analysis revealed that the role of knowledge in crisis management has always been studied and is constantly evolving.

In reviewing previous studies on business model literature, I found that the role of absorptive capacity (ACAP) in the tourism sector has not been studied much. I found studies on BMI and ACAP, but only one on the tourism sector.

To achieve my objective, I followed a deductive approach and applied a multiple case study.

The study was conducted on the Italian territory, and I considered the hotel and restaurant sector. My choice fell on these two actors in the tourism supply chain in order to find similar and contrasting aspects to support the analysis of the results.

A semi-structured interview was conducted in which the dimensions of absorptive capacity were divided into potential and real absorptive capacity. I then considered the Clauss (2017) dimension of business model innovation, as well as internal and external factors affecting BMI, to place the study in the context of the health emergency.

From the empirical analysis, the first three cases made few changes to the business models and redesigned their strategies, the third case had already implemented a BMI, while the last case implemented a new BM.

The redesign of strategy was based on externally imposed conditions, internal capabilities and brand vision, as well as the value network and absorptive capacity.

A new BMI was undertaken to respond to the crisis that had now forced closure. The existing BM was changed in its value proposition, value creation and capture, technologies were transferred to the BMI.

In addition to cost-cutting measures (staff reductions and merging of departments), changes in business strategy and adaptation to new customers enabled the companies to survive, applying cost-cutting measures and merging some departments.

BMI has been supported by small technology investments that have enabled it to survive the crisis. The companies have taken a reactive approach to the crisis. External factors that influenced the changes were time available for reflection, sudden closures, feeling of frustration, customer support or hostility, government support.

Internal factors that influenced change and BMI were identified in the cultural crisis, crisis leadership, communication system and organisational structure. For example, the franchising network in case D has favoured the diffusion of corporate culture and the application of the security protocols imposed by the parent company at national level. Naturally, each unit in addition to being subject to the provisions of the group had to submit to the territorial provisions which in the Italian territory have been very fragmented due to the different trends of the contagion.

From the empirical analysis it emerges that the companies in question did not have plans for crisis management, with the exception of case A in which the manager states that the adoption

of direct and indirect personnel, or the assignment of catering and some plans to third parties is a choice made to prevent times of crisis

The value network and absorptive capacity contribute to changes in the business model to reshape the business strategy. Interaction with consumers, suppliers, complementarians and vendors is the main source of external knowledge. Interaction with suppliers influences the customer experience. From the empirical analysis, knowledge acquisition capacities include interaction with the value network, transformation capacities include employee training activities and interdepartmental communication, transformative knowledge capacities include the ability to identify opportunities in the environment, and knowledge utilisation capacities include the adaptation of new technologies to new knowledge.

Finally, technology is not seen as the main driver of business model innovation in the tourism sector. In the tourism sector, technological innovation is mainly supplier-dominated. Technology in itself is not innovation, but technology supports the implementation of BMI in the tourism sector. Managers and staff had to adapt technologies to new situations and to apply acquired knowledge to the technology, such as continuous updates of the rate monitoring, forecasting and management systems, in the case of catering, adapt management software to the delivery service. In the last case management software has been adapted to the new revenue and cost mechanisms. All managers claim that they offer an experience that technology influences. The adoption of virtual check-ins or the presence of check-in kiosks in hotels have had an impact on the customer experience. Considering the technology support, companies need to be always updated, and the press review, the comparison with competitors and suppliers, participation in holidays are a resource of knowledge that favours this continuous updating process.

4.9 Limitations and recommendations for future research

Some limitations did not allow achieving the research objective. A qualitative approach was preferred because of the difficulty to find data due to an unprecedented crisis and a descriptive approach seems to be more suitable to describe the applied strategies.

Given the experiential nature of the tourism product, it was not easy to investigate the contribution of absorptive capacity to BMI; a quantitative analysis would have been more appropriate for the research question. Indeed, there is more evidence of acquisition and assimilation practises, but little evidence of the use of transformative and exploitative capabilities.

A quantitative study may be useful to measure the importance of each dimension in relation to BMI performance. Another limitation stems from the unprecedented nature of the crisis, which makes it impossible to conduct a longitudinal approach by comparing it with previous crises. The development of new business models is determined by the intuition of the entrepreneur, who combines his own knowledge with external results. The sample could be extended to the other actors in the supply chain and pay more attention to the concept of open innovation. It would indeed be interesting to delve into the concept of open innovation and its support for the development of new business models at a time when social interactions are being restricted, if not eliminated. As shown by the empirical analysis, relations with suppliers, participation in trade fairs and meeting with competitors contribute to the customer experience and the development of innovation. The innovation co-creation could be an interesting theme to investigate.

The role of technology can be emphasized considering the experience and community aspect that emerged from the cases. In future studies it would be interesting to investigate the role of technology in support of customer experience and satisfaction and to see how the technologies applied in the period of the health emergency limiting the social contact can also be supportive in the future, such as Augmented Reality, Internet of Things and so on.

A very interesting theme that emerged in the study is the tendency of managers to extend some temporary changes also in the long term, in other words, to turn temporary changes into permanent changes.

Data and experiences collected during the health emergency can be useful to prevent future waves of infections. In fact, the managers affirm that the 2020 season has helped them a lot in predicting the trend of summer 2021 and the measures to be taken in the future.

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