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Transición hacia los destinos turísticos inteligentes: Análisis desde de la perspectiva de los agentes turísticos de Lisboa

A transition towards a smart tourism destination: Analysis from perspective of stakeholders in Lisbon

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Resumen

El debate en torno a los destinos inteligentes ha ido ganando importancia en los últimos años. Sin embargo, todavía se considera que este concepto necesita explicaciones más detalladas para facilitar su comprensión e implantación. Con el objetivo de desarrollar un marco de análisis sobre el turismo inteligente de Lisboa, este estudio realizó entrevistas en profundidad a los agentes turísticos involucrados en el turismo inteligente de Lisboa. De los resultados se desprende que Lisboa destaca en términos de cultura y creatividad, innovación, accesibilidad, sostenibilidad, gobernanza y capital humano y social. Los hallazgos también muestran que, a pesar de que Lisboa tiene un plan estratégico de turismo y una sólida asociación público-privada, convertirse en un destino turístico inteligente

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requiere una mayor inversión en infraestructura tecnológica, una mayor participación ciudadana en la gobernanza del turismo y una mejor gestión de la información. La implicación teórica identifica un marco teórico sobre los destinos turísticos inteligentes basado en las percepciones de los agentes relacionados con el turismo, y las implicaciones prácticas destacan el papel que pueden desempeñar las nuevas tecnologías para mejorar la experiencia turística de los turistas y la calidad de vida de los residentes.

Palabras clave: destinos inteligentes; destinos turísticos inteligentes; agentes; gobernanza; Lisboa

Abstract

The debate around smart destinations has been gaining importance in recent years. Nevertheless, the concept is still considered to be in need of more detailed explanations in order to facilitate understanding and implementation. With the aim of developing an analysis framework on smart tourism in Lisbon, this study conducted in-depth interviews with tourism agents involved in smart tourism in Lisbon. It is evident from the results that Lisbon stands out in terms of culture and creativity, innovation, accessibility, sustainability, governance, and Human and social capital. The findings also show that despite the fact that Lisbon has a tourism strategic plan and a strong public-private partnership, becoming a smart tourism destination necessitates increased investment in technological infrastructure, increased citizen involvement in tourism governance, and improved information management. The theoretical implication identifies a theoretical framework on smart tourist destinations based on the perceptions of stakeholders related to tourism, and the practical implications highlight the role that new technologies can play for improving the tourism experience for tourists and the quality of life for residents.

Key words: smart destination; smart destination; stakeholders; governance; Lisbon;

1 Introduction

Nowadays, smart destinations are making an important contribution to the concept of "tourist destination" in tourism research (Jovicic, 2019). Taking into account the challenges of contemporary tourism, such as increased global competitiveness, scarcity of natural

resources, climate change, and the resumption of the post-pandemic tourism sector, governments and DMOs have increased their focus on smart destinations (Femenia-Serra, 2018). Hence, considering the influence of Information and Communication Technologies (ICT) and expansion of the concept of smart cities (Guo, Liu, & Chai, 2014; Zhu, Zhang, & Li, 2014), in the decade of 2000, the definition of smart tourism destination emerges, which mentions innovative destinations, made up of cutting-edge technology, whose objective is the competitiveness and sustainable development of tourism, which are capable of stimulating the co-creation of tourist experiences and providing a better quality of life for residents (López de Ávila & García, 2015).

Smart tourism destinations are an important part of the construction of the smart city system because they rely on the city's technological infrastructure, the use of information resources, and the development of a data intelligence system (Gu, Liu, & Chai, 2014). Smart tourism has a significant impact on tourists' experiences and behaviour at three stages: pre-trip (Bae et al., 2017), on-site (Buonincontri & Micera, 2016), and post-trip (Chung et al., 2021), that can be used as a strategic instrument for policymakers and suppliers to improve destination competitiveness. In addition to ICTs, sustainability, accessibility, innovation and entrepreneurship, human capital, social capital, culture and creativity, and governance and leadership are all components of a smart tourism destination (Boes, Buhalis, & Inversini, 2016; Gomes et al., 2017; Santos-Junior et al., 2020; Ivars-Baidal et al., 2021). According to Buhalis and Amaranggana (2015), "Smart tourism" refers to a destination's ability to use integrated technology platforms to benefit tourists and other stakeholders. A smart tourism platform can improve uses of smart tourism (Huang et al., 2017), support tourists by enabling them to make travel decisions (Yoo et al., 2017), and provide the opportunity for tourists to share memorable experiences (Jeong & Shin, 2020). Furthermore, smart tourism can contribute to the allocation of resources, decision making by management, interaction among stakeholders (Mayer-Schönberger & Cukier, 2013), and sustainability of cities (Laws, 1995). Due to this, regional governments have gradually become interested in the implementation and development of smart tourism in destinations.

Firstly, previous smart tourism research has focused on the following areas: the development of a tourist's perceptional and behavioural model (Yoo et al., 2017), the analysis of tourist-

generated data (e.g., online reviews, geotag posts) (Chua et al., 2016), the implementation of smart tourism technology (Morosan & DeFranco, 2019), a conceptual paper (Li et al., 2017), and a destination case study (Khan et al., 2017). Most studies have attempted to broaden the scope of smart tourism development research by presenting government-related practices (Khan et al., 2017; Park et al., 2016). However, it is perceived in the tourism literature that research on the governance process and the collaboration of the network of actors in smart tourism destinations is still at an early stage. In this sense, the need for research is reinforced to understand the governance process in smart tourism destinations, as well as the role and understanding of the agents involved (Koo, Mendes-Filho & Buhalis, 2019; Ye, Sun, & Law, 2021). Additionally, there is a lack of literature that systematically analyses the state of smart tourism development in a destination and offers sound policy implications as a result (Ye, Sun, & Law, 2020). Therefore, since stakeholders' plans and actions affect a destination's smart tourism development, their perspectives can be useful to academia, industry, and policymakers. Secondly, the present study selected Lisbon as an example to examine smart tourism destination development comprehensively. According to the studies "IESE Cities in Motion Index (CIMI)" and "IMD-STUD Smart City Index", Lisbon, Portugal, is ranked 52nd and 75th out of a total of 174 and 109 cities in the year 2020. Furthermore, Lisbon is a tourist destination with good geographical and climatic conditions typical of the Iberian Peninsula, as well as an extensive cultural and tourist offer. However, due to a lack of policy and theoretical guidance, the development of smart tourism in Lisbon remains in its early stages.

Therefore, this study aims to fill the aforementioned research gap by gathering input from stakeholders and systematically assessing the development status of the smart tourism industry in Lisbon. The qualitative method was used in the study to identify development elements, potential benefits, and current barriers. In-depth interviews were conducted with representatives of various Lisbon institutions/organizations that are directly or indirectly involved with the tourism sector, such as the communication sector, government, public administration, private sector Assoc nations, public-private partnerships, and resident associations. The findings have broad implications for the development of Lisbon's smart tourism, and they will be useful not only to policymakers and suppliers in the development

of smart tourism, but they will also contribute to the research area of smart tourism development.

This study is grounded in the context of smart tourism destination research, more specifically the framework proposed by Boes, Buhalis, and Inversini (2015, 2016). Based on smart destination logic, stakeholders are able to collaborate to create value through the voluntary exchange of operant resources within a dynamic ecosystem (Vargo & Lusch, 2011a; Wieland, Polese, Vargo, & Lusch, 2012; Boes et al., 2016). A theoretical framework of Smart Tourism Destination, which capable of substantively addressing the co-creation of value by all stakeholders in smart tourism destinations (Maglio & Spohrer, 2013, p.666). Thus, it can contribute to a better understanding of the process of value co-creation in smart tourism destinations. Consequently, the purpose of this paper is to identify and analyse the experts' perspectives on the key dimensions that contribute to Lisbon's status as a smart tourism destination.

2 Literature review

2.1 Smart Tourism and Smart Tourism Destinations

A city's smartness is determined by its integration of information and communications technologies (ICTs). The term "smartness" first appeared in the 1990s and has since attracted the attention of a wide range of people (Hollands, 2008). Smart destinations and smart tourism are related to the same concept: the application of new forms of information and communication technology (ICT) to give visitors comprehensive tour information as they explore a place (Gretzel, Sigala, et al., 2015; Li, Hu, Huang, & Duan, 2017). Indeed, the concept of smart destinations arose as cities began to implement a variety of technologies to improve the quality of life for their residents. As tourism destinations adopted technologies (Ye, Ye, & Law, 2020) to improve both tourist experiences and competitiveness, the concept of smart tourism destinations arose (Buhalis & Amaranggana 2015).

Smart tourism destinations (SDs) are a comparatively recent phenomenon, and enforcement them a considerable challenge to destination management organizations (DMOs) (Ivars-Baidal et al., 2021). Indeed, the Smart Tourism Destination term is inextricably connected to the notion of a smart city, where sustainable development is the primary strategic objective

of the tourism planning process (Khan et al., 2017). Hence, nowadays, numerous tourist destinations have recently attempted to embrace this "smart" concept, and with good reason: the uniqueness and difference of the product and services given at smart tourism venues give them an advantage over other tourist destinations (Cornejo Ortega & Malcolm, 2020). Souza (2019) reports that the Smart Tourism Destination coined by "SEGITTUR" is a conceptual framework and strategic tool for improving destination management through enhanced tourist experiences. Its primary goal is to provide real-time services to travellers, collaborating with them and other stakeholders to promote data, information, and knowledge sharing in order to foster innovation (Femenia-Serra et al., 2018). Boes et al. (2016) argue that the establishment of a smart city structure is both a theoretical and practical basis for the development of a smart tourist system. It is worth noting that while smart cities and smart tourism structures share some components, the experiences they provide to their respective tourists can be vastly different (Zhuang, 2015). Nevertheless, incorporating technology into a destination could enhance the visitor experience while also increasing the destination's competitiveness (Buhalis & Amaranggana, 2015). Additionally, it is easy to envision a future where smart destinations can deliver an experience that helps travel experiences after a visitor has left (Gretzel et al., 2018). Smart tourism destinations can be viewed as an integral part of the smart tourism ecosystem since they drive the development of novel business models, interaction patterns, and even new types of tourism companies (Gretzel et al., 2018). For this reason, tourism destinations need to provide a framework that connects technology, business, and social infrastructures to enable smartness. It is inferred that all these factors are interdependent and interrelated and are influenced by the effects of ICT.

Buhalis and Foerste (2015) claim that smart destinations use technology as a marketing platform to attract visitors. In this regard, mobile-connected devices, augmented reality (AR), virtual reality (VR), mobile apps, integrated payment methods, smart cards, and social networking sites are examples of smart tourism technologies (Huang et al. 2017; Wang, Li, & Li, 2013). In fact, technology in tourism can enhance tourist experiences by facilitating a variety of tourism-related activities (such as the dissemination of relevant information and the encouragement of involvement) and communication between various tourism-related

parties (including service providers and visitors) (Swart, Sotiriadis, & Engelbrecht, 2019. According to Alba et al. (1997) using smart technology helps to enhance bilateral interactions between stakeholders and travellers. By allowing travellers to participate, more relevant and applicable information is generated, making it easier to search for travel information efficiently. Furthermore, technology enables smart tourism destinations to collect dynamic tourist data, which in turn allows destination marketers to design and offer more tailored services to visitors (Lee et al., 2018). Tourists can easily appreciate the depth and scope of information available for their tourism activities by utilizing technology (e.g., augmented reality or virtual reality) at smart tourism destinations. Therefore, the acquisition of such comprehensive information assists them in becoming more motivated and stimulated to enhance their travel experience in smart tourism destinations (Jeong & Shin, 2020).

On the other hand, residents of smart tourism destinations could also increase their quality of life (Santos-Júnior et al., 2020), through "ICT-enabled lifestyle, behaviour and consumption, and "high levels of social cohesion and social capital" (Manville et al., 2014, p.28). In this sense, considering the development of tourism in smart cities, it is possible to identify some more recent publications that use the term smart tourism city instead of smart tourism destination (Lee et al., 2020). Thus, the smart tourism city uses the urban infrastructure and increases the tourist attractions (natural and cultural) of the destination, which allows the creation of value and the promotion of well-being for both tourists and residents (Gretzel & Koo, 2021).

In recent years, technology has moved from being a supplementary tool to a necessity, with the use of smart technologies pervasive in everything from civil infrastructures to education services (Hall et al., 2000). Therefore, tourism destination management has developed as a result of the increasing use of information and communication technologies (ICTs) (Xiang, 2018). Additionally, given the importance of the tourist experience and the demand for information technology, hospitality and tourism entities in smart tourism destinations are becoming more active and dynamic in providing smart tourism technology in collaboration with tourists in order to create more meaningful travel experiences (Buonincontri & Micera, 2016).

Hence, conventional concepts and techniques for destination management were questioned (Ivars-Baidal et al., 2019). Indeed, these fundamental structural changes have made it challenging to govern and anticipate tourism destination networks (Ivars-Baidal et al., 2019). Ivars et al., (2021) point out that many smart destinations have made little progress towards real sustainability and highlight the need to strengthen public governance. On the other hand, González-Reverté (2019) highlights that many of the actions carried out by local administrations in relation to smart destinations have little real support and are mere speeches. Finally, Luque et al., (2015) highlights the poor connection between smart destination technology and territorial support.

Therefore, this study develops the (SDs) of Lisbon tourism and identifies the major aspects of improvement for the city's tourism growth based on the content analysis of experts' perceptions. Put differently, as different destination stakeholders have different perceptions about change and the concept of smart, listening to their expectations and experiences seem imperative.

3 Methodology

3.1 Research design

According to Wilson and Hollinshead (2015), qualitative methods can be beneficial when areas of research are novel and prior research is insufficient to develop theory. Therefore, exploratory research is important to define research themes and to provide support for both scientific studies and practice direction. The grounded theory method was deemed appropriate for this study, which aims to develop a conceptual framework for stakeholders' perspectives on smart tourism (Glaser & Strauss, 1967; Strauss & Corbin, 1990). This technique seeks new theoretical insights and advances while eschewing standard deductive logic (Connell & Lowe, 1997), and is referred to as "emergent explicit" (Martin & Woodside, 2008, p. 246). Data collection, coding, memo drafting, theoretical sampling, and saturation constitute the conventional grounded theory process (Corbin & Strauss, 2008; Glaser & Strauss, 1967). The analytical approach that was used in this research enabled us to investigate the subjective nature of stakeholders' views.

3.2 Study context

The case study is about Lisbon, Portugal's largest city and municipality, covering an area of approximately 100 km^2. The of city Lisbon region has a population of approximately 545,923 inhabitants (Pordata, 2021). The city is located at the mouth of the Tagus River in the Lisbon Region, which is also known as Estremadura in central-western Portugal. It reaches a maximum elevation of 227 meters and has an average annual temperature of 17.8 degrees Celsius, which is ideal for tourism. According to data from the Lisbon City Council (Lisbon City Council), Lisbon is part of the Lisbon Metropolitan Area, which includes more than 17 municipalities and is a significant economic development area in Portugal, home to a significant number of companies with a high degree of technology and innovation, as well as the territorial space for approximately 323,000 businesses, generating a GDP of 66,521 million euros and a GDP per capita of 24,885.2€ (Portada, 2020). Tourism is a significant economic driver for the city of Lisbon, accounting for approximately 80,000 jobs. Among the major attractions of Lisbon as a tourist destination are its climate, cultural heritage, hospitality, gastronomy, nightlife, tourist infrastructures, events, and business.

Lisbon is being recognized as the Green Capital of Europe in 2020 as a result of the development of numerous plans, programs, and projects in the fields of innovation, technology, sustainability, and tourism, with the support of government organizations. "Turismo de Portugal," "Lisboa City Council," "Turismo de Lisboa," and "Lisboa E-Nova" are some of the government-sponsored, public-private, and non-profit organizations that promote tourism in Portugal. As an example, among the City of Lisbon's initiatives, the "Smart Open Lisbon" program is noteworthy because it aims to launch projects aimed at improving tourist satisfaction and the quality of life of citizens, particularly in the areas of transportation, energy, and logistics. One of the most significant instruments of "Turismo de Lisboa" is the "Plano Estratégico do Turismo para a Regio de Lisboa 2020–2024" (Strategic Tourism Plan for the Lisbon Region 2020-2024), which was developed in collaboration with the "ERT-RL – Entidade Regional de Turismo da Regio de Lisboa," and includes the following lines of action: increase accessibility, improve the conditions of tourist attractions, intensify the offer, increase innovation and digitization, adapt the promotion strategy.

3.3 *Sampling and data collection*

Based on its approach to the problem, this article is classified as a qualitative study, as well as an exploratory and descriptive study, with the goal of integrating theoretical and practical knowledge. According to Hanna (2012), the development of internet technologies as a research medium has been recognized in qualitative studies and has proven to be particularly beneficial for some difficult-to-reach and geographically dispersed groups of participants.

Purposive sampling, which is frequently used in qualitative tourism research, was used to effectively collect qualitative data (Bustard et al., 2019). The researcher selects the sample using this method based on their personal knowledge of the population and the study's objectives (Seyfi, Hall & Fagnoni 2019). The researchers were able to count on the help of the University of Lisbon and several doctoral students and professors who collaborated in the activity. The authors have a close relationship with the University of Lisbon

Additional participants were recruited using a snowball sampling technique. Additionally, interviewees were asked to recommend additional individuals who could provide additional perspectives. The original interviewees were smart tourism stakeholders from Lisbon, including government or management organization experts, tourism operator managers, and tourism, geographic information system, municipality, and territorial planning experts from the renowned University of Lisbon (ULISBOA and ESHTE). However, in light of the COVID-19 outbreak's impact, the initial request for an interview was made via "Instagram," "WhatsApp," and e-mails to describe the research's purpose.

First, a semi-structured questionnaire of questions was designed for the interviewees. These questionnaires were developed according to the objectives of the study. Second, the potential interviewees were contacted by email, Instagram and WhatsApp to find out if they were willing to participate in the interviews. 70 invitations to the interview were distributed, and 30 interviewees agreed to participate. Once the interviewees agreed to be interviewed, and the interviews were conducted by video call using various platform (Google Meet and Jitsi). The interviewees were asked for permission to be recorded. These recordings have subsequently been transcribed and analysed.

Between February and March 2021, all interviews were conducted via "WhatsApp" and lasted between 30 and 40 minutes. The interviews were conducted in Portuguese because one of the authors is Brazilian and all of the participants were from Portugal. The data were initially analysed in Portuguese, with the final conclusions being translated into English. The transcripts are then read by all authors to ensure accuracy and relevance to the study's purpose. Priority was given to ethical considerations. Each participant received identical information. They were assured that their identities would be protected by remaining anonymous and pseudonymous (Interviewee). The data saturation principle was followed in this study (Creswell & Poth, 2016), and theoretical saturation was reached after 17 interviews. Table 1 summarizes the participants' characteristics.

Table 1. Participants' characteristics

Gender	Interview No	Degree	Institution
M	Interviewee 1	PhD	Lisbon University
M	Interviewee 2	PhD	Lisbon University
M	Interviewee 3	Master	Municipality DMO
F	Interviewee 4	PhD	Municipality DMO
F	Interviewee 5	PhD	Lisbon University
F	Interviewee 6	PhD	ESHTE
F	Interviewee 7	Master	Geographic Information System
M	Interviewee 8	PhD	Lisbon University
M	Interviewee 9	PhD	Lisbon University
F	Interviewee 10	PhD	ESHTE
F	Interviewee 11	PhD	ESHTE
F	Interviewee 12	PhD	Lisbon University
M	Interviewee 13	Master	tourism operator managers
M	Interviewee 14	Master	tourism operator managers
M	Interviewee 15	Master	geographic information system
M	Interviewee16	PhD	ESHTE
F	Interviewee17	Master	Municipality DMO

Source: Authors

3.4 *Sampling and data collection*

The authors used a three-step data analysis procedure based on prior work on grounded theory (Matteucci & Gnoth, 2017; Strauss & Corbin, 1990). Each phase focuses on a specific subject and classifies the codes according to possible themes. To begin, the interviewees' demographic information was analysed, including their gender distribution, work region, industry, interview format, and duration. The constant comparative method (Glaser &

Strauss, 1967) was used to code the text materials in the first round of coding. According to Jennings and Junek (2007), the grounded theory approach allows the researcher to minimize the influence of prior theories or assumptions in order to summarize and extract new theories or concepts from empirical data. Given the length of interview transcripts (nearly 150 pages) and the possibility of methodological discrepancies between researchers (Belotto, 2018), researchers independently participated in a two-round data analysis. Then, the results of the researchers' coding were shared with other researchers to ensure their reliability. In the second round of coding, researchers reviewed the descriptions and themes of codes verbatim, in order to determine the level of agreement on the codes analysed by researchers (Campbell et al., 2021). Selective coding entailed multiple readings of transcripts, reviewing coding decisions, and comparing ideas and principles extracted from the literature. Inter-rater reliability was calculated to be 86 %, exceeding the acceptable threshold of 70 percent (Kurasaki, 2000). Finally, interview transcripts were reviewed and uploaded to the software Nvivo 11 for a grounded theory-based qualitative content analysis (Strauss & Corbin, 1998). Table 2 illustrates how open coding was implemented in practice.

For stakeholders in smart tourism, open-ended semi-structured interview questions in Portuguese were developed. The interview questions focused on the research's central topic areas, specifically how destination stakeholders define, describe, and relate to the concept of smart tourism destinations.

-What would you say is the best way to describe a smart tourism destination?

-What are your thoughts on the current state of smart tourism development in Portugal, especially in Lisbon?

-What advantages do you believe smart tourism can bring to Lisbon?

-What motivates stakeholders to transform your destination into a smart tourism destination, in your opinion?

Table 2. A sample of the coding process

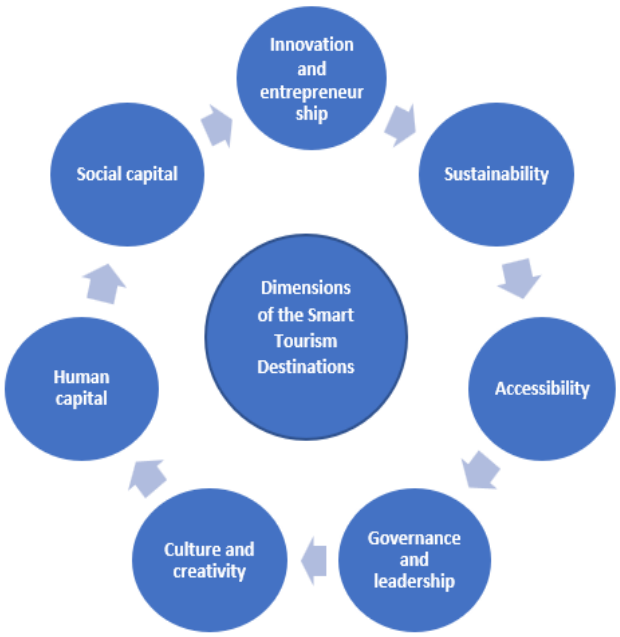
No. of People talking about It	Code	Theme
17	Integration of technology on all urban levels; Mobile application; Economy, Open data.	Innovation and entrepreneurship
12	Smart development of manufacturing sectors; Planning; Development; Environment; construction of sustainable and innovative buildings; Support/encourage inappropriate forms of tourism or types of tourists.	Sustainability
14	Networks, physical infrastructure, Inclusive spaces, modernization of public transport; improvement of traffic, Creation of alternative means of transport.	Accessibility
15	Leadership; local management; Governance; Legislation.	Governance and leadership
10	Talent; knowledge; culture; Development of cultural heritage through the use of ICTs; Conservation and modernization of the culture; Heritage of the destination.	Culture and creativity
7	Local communities; Increasing the level of training and professionalization of residents; Encourage learning and adapting to smart technologies; Knowledge generation.	Human capital
6	Relationships; interactions; Experiences between residents and tourists; Community participation.	Social capital

Source: Authors

4 Findings

According to the information analysis of the interviews with stakeholders, Lisbon appears to be in the very early stages of developing a smart tourism destination. The analysis begins with the keyword smart destination, which was deliberately chosen to serve as the starting point for our research. The participants in this study were asked to reflect on the concept of smart tourism destinations and describe how they define them. In response to interviewee feedback, a framework for developing smart tourism in Lisbon was developed as a case study (Figure 1). With this conceptual framework in place, we can understand the construction of significance and, in turn, get a deeper understanding of how interviewees interpret the concept (Ye et al., 2021).

Figure 1. Dimensions of Smart Tourism Destination



Source: Authors

4.1 *Innovation and entrepreneurship*

In terms of innovation and entrepreneurship, all interviewees identified Lisbon as an advantageous region for the growth of start-ups and new ventures. Throughout the past few years, Lisbon has witnessed an increase in the number of business incubators (Startup Lisboa, Lisbon City Incubator), creative clusters (LX Factory, Creative Cluster of Santa Clara, and FabLab Lisbon), and innovation centres (Mouraria Creative Hub), which are open areas where entrepreneurs can collaborate while fostering innovative and sustainable ideas in sectors like cultural and creative industries. A professor from one of the innovative agencies, the Institute of Geography, Tourism and Spatial Planning, stated (Interviewee 8):

> *Innovative programs like these empower residents to take the lead in addressing neighbourhood issues, including those exacerbated by tourism.*

Among the technology and innovation programs, which were introduced by the interviewers that come to mind is "*Smart Open*", Lisbon. Another interviewee (Interviewee 16) made reference to the "*MICE* segment' and "*Expo98*" which marked a watershed moment in the

city's transformation into a tourist smart destination. The next step toward making Lisbon even smarter will be the completion of an infrastructure project by the end of the year, according to a DMO official with the Municipality (Interviewee 3):

> *We will cross-integrate environmental data, data from external entities, data from numerous municipal departmental applications, and data collected via the Internet of Things with the help of CCOC (a Japanese information technology company) to accelerate the city's digital transformation.*

The innovations that result from the development of ICTs are critical for the development and of smart tourism because they enable tourists to navigate more easily in a smart environment while also enabling the environment to gather more information about tourists (Boes et al., 2016). However, numerous interviewees alluded to financial challenges associated with innovation and entrepreneurship projects. one of them (Interviewee 13) stated that *financing in Portugal is still primarily carried out through traditional bank financing*. Another reason was mentioned by Interviewee 7:

> *There are only a limited number of private investors who are willing to take risks. The primary difficulty is that, due to limited resources, we must prioritise needs.*

Through the use of information and communication technologies, all stakeholders can quickly and easily gain access to information and knowledge (ICTs). This enables them to be more entrepreneurial and innovative in their operations, while also adding value to their customers (Bresciani et al. 2018). This strategy is used to address citizens' concerns and to develop new services and business models that will help the city grow. As such, the smart city can be thought of as an entrepreneurial and innovation ecosystem in which actors contribute human capital, financial and professional resources, and other support systems in order to propel social and economic development in specific geographic areas. Moreover, entrepreneurship and innovation contribute to the success of tourism projects at the smart destination level by concretizing concepts that can attract new entrepreneurial ventures (Boes et al., 2015).

4.2 *Sustainability*

According to Ahvenniemi et al. (2017), sustainable development is a fundamental tenet of the majority of conceptual frameworks and theoretical models that define smart destinations. It goes without saying that the smart city framework is inextricably linked to sustainability. This means reducing the environmental impact of urban activities, optimizing the use of energy resources, and developing innovative services for citizens. Smart tourism destinations promote economic, social, environmental, and cultural sustainability by fusing sustainability concepts with information technology capabilities. They also provide methodologies for effective tourism management through competitive, smart, and sustainable approaches (Gretzel et al., 2015; López-Sánchez & Pulido-Fernández, 2016).

In the category of sustainability, it was determined that the city's public transportation system needed to be improved, as well as the need to provide incentives for people to use alternative modes of transportation such as scooters and bicycles. As some interviewees commented: (Interviewees 3, 13 and 15):

> *We insist on increasing reliance on public transportation, increasing reliance on electric mobility, and increasing reliance on more individualistic modes of transportation that take up less space on the territory, such as bicycles and scooters, similar to what virtually all European cities are doing today, and it has already been recognized that this path must be taken.*

One of the most prominent points raised by interviewees (1, 5, 7 and 10) is the establishment of the "*Viva Viagem*" integrated public transportation card, which enables users to access multiple modes of public transportation throughout the Lisbon metropolitan area while also promoting sustainable environmental development. Additionally, two interviewees also commented on the creation of "*green spaces*", and the "*better use of energy in public buildings*" (interviewees 1 and 9). However, some interviewees raised concerns about noise pollution and environmental pollution as a result of increased tourist traffic.

Researchers have introduced the concept of sustainability as a pillar of smart city indicators, providing a new lens through which to examine the role of sustainability in the currently debated urban strategies and plans (Ahvenniemi et al., 2017: 240). As a broader concept, a

smart tourism destination connects sustainable development with competitiveness (Vegara & Rivas, 2004; Calderero, Sainz & Ugalde, 2006). As a result, a destination cannot be considered smart if it lacks sustainability. As stated by Ivars et al. (2021), the connection between smartness and sustainability can be seen in two ways: the destination's strategy and the use of technology to better manage the environment. Without a doubt, both levels are inextricably linked to a new governance framework, a critical pillar for the development of a smart tourism destination. Thus, it should be acknowledged that the term "smart tourism" is extremely ambitious, given that it is difficult to imagine achieving the desired sustainability that is a component of the smart tourism destination.

4.3 Accessibility

Tourism accessibility is inextricably linked to smart Tourism, which can also contribute to economic growth in destinations. During this decade, the infrastructure of travel and transportation systems have become increasingly intelligent in the way they provide travel information to travellers (Alexis, 2017). Additionally, contemporary technological solutions facilitate inclusive, or accessible, tourism by streamlining transportation and information access. Besides that, mobile phones, which provide access to a wide range of travel data systems from anywhere, have created a culture of information exchange (Wang et al., 2012). Truth be told, they are regarded as new distribution channels (Berezina et al., 2016) that have a sizable impact on smart tourism destination visibility by improving information accessibility.

The majority of respondents agreed that access can provide invaluable feedback – whether positive or negative – while also facilitating robust, constructive discussion and providing opportunities for tourism organisations. Additionally, interviewees stated that providing access should go hand-in-hand with customer service in order to provide the best experience possible to all. A stakeholder participant stated the following (interviewee 17):

> *When you design a city to make it easy for tourists to get around, you're also making it easier for locals to get around. When a city's population is more diverse, society as a whole benefit.*

All stakeholders have agreed that providing access to disabled people is the right thing to do. They emphasized the importance of adopting accessibility as a cultural norm driven by a strong sense of social justice. substantially, lawmakers must serve as "educators" and "enabling agents," promoting business models that promote accessibility and inclusivity (Shaw & Williams, 2009) as the following quote illustrate (interviewee 14):

> *I mean, accessibility is a fundamental human right, to put it another way. To be responsible citizens, we must ask ourselves, what is the point of assisting vulnerable people? It's all about increasing awareness and people keeping an eye out for or being more conscious of certain things. For instance, when I state that my buildings are not accessible to all. It is the beginning to establish a culture.*

Stakeholders emphasized the importance of leveraging federal, state, and local government influence in increasing the government's role as a facilitator of meaningful and inclusive accessible tourism practices, noting that this could be accomplished through leadership, support, positive reinforcement, and destination marketing. As one participant commented (interviewee 2):

> *A key role for these organizations will be to aid in increasing the likelihood that the tourism industry as a whole will begin to become more aware of its needs in the near future.*

According to Buhalis and O'Connor (2005), one of the most critical issues for the future of tourism is mapping current accessible tourism services, enabling people with access needs to participate in tourism activities, and finding out exactly how much potential there is for the accessibility-requiring market. Otherwise, tourism's entire potential would be wasted, and the promise of several important advantages for visitors will continue to be a promise (Higgins-Desbiolles, 2006, p. 1193).

4.4 Governance and leadership

A sound governance structure and a sound leadership style are key components of a smart tourism destination (Boes et al., 2015; Gretzel et al., 2015a). According to Spencer et al., (2012), the leadership approach is necessary to guarantee that technology is adopted as the

foundation of smartness is successful. In the case of smart destinations, the leadership model is varied, with some destinations promoting a top-down approach and others bottom-up (Boes, Buhalis & Inversini, 2016). Despite this, this leadership style runs counter to the literature on smart destinations, which advocates for participatory governance (Boes et al., 2016). "Transparency, modernization, participation, political strategies, data openness, and public involvement" all of them are important aspects of smart governance (Cohen et al., 2014; Della Corte et al., 2017).

The role of governance in the implementation and operation of Lisbon's smart tourism destination was deemed important. One of the aspects ascertained is the existence of a public-private tourism organization known as "Associação de Turismo de Lisboa (ATL)" that, through the increased implementation of smart actions and solutions, has the potential to develop Lisbon as a Smart tourism destination. Another key factor, stakeholders assert, is the existence of strategic plans and programs aimed at transforming Lisbon into a world-class smart tourism destination. As one participant commented (interviewee 8):

> *It is emphasized that community engagement and collaboration with research institutions are critical for establishing Lisbon as a more inclusive, accessible, and environmentally friendly tourist destination in the coming years.*

According to interviewees 7, 5 and 2, "*governance management should promote resident participation, either directly or indirectly through social representations – associations*." According to Chourabi et al. (2012), smart governance is defined by the ability of diverse public and private stakeholders to collaborate through leadership support, alliance formation, and cross-jurisdictional cooperation (Scholl & AlAwadhi, 2016). Another point of view expressed by stakeholders is that the Lisbon City Council must be the primary institution responsible for planning and managing smart tourism destination programs, projects, and plans, as well as for addressing issues arising from tourist activity. As a whole, the stakeholders argued that sound governance is necessary to catalyse a much-needed shift toward an ethical smart destination that is not only effective in formulation and implementation but also transparent and just and responsible. Additionally, they suggested that good governance should pay special attention to the consequences of widespread use of smart technology.

It has been demonstrated in the research on smart tourism destinations that it is critical to create conditions that increase all stakeholders' commitment through incentives for collective cooperation and engagement (Gretzel et al., 2015a). In this regard, destination leadership must be consistent with the previously identified smartness development objectives, and all relevant stakeholders must demonstrate a sufficient level of commitment to achieving these objectives through collaboration and collective decision-making (Chourabi et al., 2012).

4.5 Culture and creativity

Advances in technology, strategic planning, and smart digital creativity in cities all aim to meet the cultural and leisure consumption needs of the local population while also providing the city with a competitive advantage in terms of tourism. It's no secret that cities' economic models have shifted from production to consumption-led growth, and cities have created spaces, activities, and events for residents and tourists to better serve their citizens and visitors (Maitland, & Newman 2009, p. 8). Nowadays, city tourism is affected by this shift in perspective, as smart culture and creativity tourism products are no longer created and marketed solely for tourists but are also considered within a broader context that involves improving the city's quality of life. A digital technology advantage in cities could, for example, be exploited to segment visitors and unique perspectives on local cultures (Waterton & Watson, 2015; West, 2010). Furthermore, smart tourism creativity can enable visitors to actively participate in developing their creative potential, which could serve as a complementary strategy for cultural regeneration (Richards and Raymond, 2000, p. 18).

When it comes to culture and creativity, Lisbon has a dynamic that promotes night tourism, cultural tourism, and urban tourism. According to stockholders, Lisbon is an experiential city with diverse gastronomy and a historically significant cultural heritage. Additionally, the intelligent programs of the Lisbon City Council for the requalification of heritage and modernization of tourist products and attractions were highlighted. As one participant commented (interviewee 12):

> *There is creativity in products and equipment; for instance, something I defended for many years was recently created by city council: a museum and the option to climb the 25 de Abril Bridge.*

Additionally, respondents mentioned the use of smart technologies, particularly mobile apps, to disseminate heritage data. One of these tools was an academic project called "e-Carnide". A stakeholder participant stated the following (interviewee 4):

> *The "e-Carnide" project demonstrates the importance of residents' commitment to research, which contributes to increasing knowledge and heritage through their memories and life narratives. We anticipate that the current and future stages of testing and validating the digital product and disseminating data via a website and a mobile app will strengthen ties between the university and its surrounding community. We hope to promote local tourism in the area.*

The findings of the study (e-Carnide) suggested that new technological strategies can be used to raise the population's awareness of its own heritage as a factor in the development of cultural and creative tourism focus on an authentic and immersive experience of the places. Respondents (Interviewees 1, 6 and 7) also mentioned "*how cultural heritage and the creative economy associated with smart technologies could spur the creation of new businesses and supplement the tourist offer*." However, one of the identified issues was the concentration of tourist attractions in certain areas of the city, which can result in a high volume of visitors and annoy residents.

The benefits of digitization in heritage and culture were first recognized and analysed in the 2000s: Digitization contributes to the preservation of heritage and scientific resources, it expands educational opportunities and tourism, as well as it enables citizens to improve their access to their heritage (Katsoni, Upadhya & Stratigea, 2017; Roque & Forte, 2017). Moreover, smart tourist products combine data aggregation with synchronization, and expand new functionalities such as co-creation and personalization of tourism experiences (Neuhofer et al., 2015). Even though the use of smart technology is still restricted in practice, its increasing prevalence in daily life enables for its consideration as a suitable tool for connecting heritage and tourism.

4.6 Human capital

According to Meijer et al., (2016) city's smartness refers to the human capital that is constituted by the collaboration between various stakeholders. Human capital is a

significant component of contemporary economic growth theory (Storper & Scott, 2009) which is concerned with the knowledge and skills acquired by individuals through educational and on-the-job training investments (Unger, Keith, Hilling, Gielnik, & Frese, 2009). According to the European Parliament's (2014) analysis, it is critical to have the participation of relevant stakeholders and residents in order to develop collaborations, knowledge cross-linking, and, ultimately, innovation in order to become a Smart City (Manville et al., 2014). Consequently, developing a smart tourism industry requires investment in human capital with the goal of enhancing a destination's capacity for learning and innovation.

The findings of the study demonstrate that the relationship between human capital and smart cities is particularly strong in Lisbon. According to stakeholders, smart tourism in Lisbon will not be successful unless the city's human capital is well-developed. Respondents emphasized the importance of education in the development of human capital, which is critical to the success and development of smart cities and smart tourism destinations (Albino et al., 2015). As one participant commented (interviewee 12):

> *Investing in human capital through education, science, research, and culture is critical not only for administrative capacity development but also for the city's long-term competitiveness in the global marketplace".*

In terms of human capital, stakeholders who actively engage in the experiences of tourists (pre-, during, and after their stay) have the potential to make a destination more intelligent and appealing (Bakici et al., 2013). In this sense, several interviewees pointed out that even though the development of human capital is a national priority in the region, the current levels of investment in this field are well below what is required. On the other hand, a stakeholder (interviewee 4) expressed the following regarding Lisbon:

> *Actors who are actively involved in daily city life are those who have the potential to make a city smarter. Smart tourism should not be only a government-led initiative; it should also involve private sectors, businesses, and entrepreneurs.*

Smart tourism destinations are viewed as complex ecosystems in which a diverse range of actors collaborate to create value for the community when viewed through the lens of urban

tourism regions. They value the relationship between society and technology, viewing people and technology as equal partners in achieving economic, social, and environmental prosperity through collaborative efforts (Boes et al., 2016). Consequently, economic growth, the improvement of the quality of life of citizens, and the presence of tourists all require a well-developed human capital base to be sustained. The city or destination cannot be made smarter through technology alone; collective intelligence is developed through the interaction of people. Thus, developing supportive networks among society, educational systems, and government organizations, as well as their inclusion in human capital projects, is critical for achieving the smart city's set objectives.

4.7 Social capital

As defined by Robert Putnam (2001) social capital refers to the relationships between members of a community. Nowadays, the consideration of social capital is gaining traction in the planning of smart cities. Smart destinations are the result of interactions between the destination's various stakeholders, which are facilitated by two drivers: ICT and social capital (Trunfio & Campana, 2019). ICT can facilitate new forms of interaction between organizations and tourists, while social capital – defined as norms, beliefs, and values – provides the structural and relational context for innovation and change (Trunfio & Campana, 2019). According to De Guimaraes et al., (2020) factors related to social capital, such as collaboration, participation, and communication, all contribute to the improvement of quality of life in smart cities and should be leveraged for city governance. Therefore, the concept of social capital contributes to residents' increased satisfaction and sense of belonging in smart cities (Macke et al., 2019).

According to our findings, social capital can help a smart city perform better. Respondents emphasized the importance of incorporating social capital into smart city planning in Lisbon. The interviewee 16 highlighted the following: "s*ocial capital is a significant factor in ensuring sustainability, resilience, and high quality of life in Lisbon*". Another participant (interviewee 5) made the point that "*we define a city as smart when it invests in social capital, modern transportation, and communication infrastructure to support long-term economic growth and a high standard of living while also prudently managing natural resources through participatory governance*. Furthermore, social capital is created through collaboration among various

societal actors' citizens, public and private agents (Caragliu et al., 2011). A respondent emphasized the importance of collaboration between public and private organizations in order to boost social capital (interviewee 13):

> *It is critical for the social capital dimension to have a strong collaborative and cooperative relationship between public and private agencies, academics, and residents. Social capital is inextricably linked to the quality of life and education of residents, which are fundamental to the construction of a smart city.*

One of the most important factors influencing a region's competitiveness and attractiveness as a smart destination is the presence of availability of social capital. Participatory processes and social capital assist organizations in resolving problems, making decisions, gaining knowledge about citizens' interests and ideas, and growing, all of which contribute significantly to the development of smarter cities (Katsoni & Dougali, 2020). In general, From the perspective of S-D logic and the perspective of smart cities, social capital can be considered a significant resource within a smart city which is vital to increasing value-creation and competitiveness.

5 Discussion

The promotion of entrepreneurship and innovation is a primary objective of smart tourism destinations. According to Pirnar et al., (2012) Innovations are crucial to the competitiveness of a smart city, as well as the competitiveness of tourism destinations that rely on human capital. The results of our study indicate that tourist investment has a measurable impact on regional innovation and entrepreneurship. Additionally, the strength and growth of the tourism industry contribute to the success of emerging businesses and start-ups in Lisbon. According to participants, Lisbon tourism has an excellent competitive capacity as a smart tourism destination by developing and adapting technology to tourism products. Stakeholders also emphasized the importance of encouraging greater collaboration between universities and industrial sectors in the fields of research and technology. Some studies highlighted the importance of technology as a key factor for the consolidation of smart destinations (Buhalis and Amaranggana, 2013; Buhalis, & Amaranggana, 2015; Buhalis, 2019; Gretzel et al., 2015; Getzel, et al. , 2016; Ivars et al., 2017; Shafiee, et al.; 2019; Yoo et al., 2017).

Modern technologies are increasingly used in tourism destinations to influence customer experience and boost the competitiveness of destinations and the development of tourism projects (Buhalis et al., 2015). ICT, and their associated systems enable the creation of a diverse range of interactive and dynamic programs for user exchange and cooperation (Katsoni et al., 2017). All of these factors contribute to the establishment, development, and implementation of sustainable smart tourism destinations. Lisbon is a city that is developing numerous initiatives for smart tourism destinations through sustainability plans, programs, and projects developed by government institutions, private partnerships, and agencies. However, respondents emphasized that, despite the enormous potential of Lisbon, very little progress has been made in terms of sustainability measures, according with the studies of Ivars et al., (2021) and González-Reverté (2019).

The most significant concept is accessibility, as it relates to the most significant issues of smartness and smart attractions. According to Kim and Garrison (2009), Accessibility refers to the ease with which travellers can obtain and use online travel information and services. Nowadays, Through the use of various types of smart technology, visitors can easily access and utilize the information provided by destinations. Thereby, travellers may obtain additional information, increasing their level of satisfaction with their destinations, promoting co-creation, and establishing themselves as a significant predictor of memorable tourism experiences (Jeong & Shin, 2020). They were emphasizing how ICTs can help eliminate barriers to environmental accessibility, such as site, service, and information accessibility, for people with disabilities. Similarly, the research has identified several trending aspects, such as the use of mobile applications in Lisbon, such as parking or lodging reservation apps, and the growing citizen participation in smart tourism plans. This is one of the aspects that some destinations have developed the most: accessibility through various electronic devices that allow a direct connection between the information of the destination managers and the visitor. An interesting study on this topic was developed by D'Amico et al. (2022) for Amsterdam.

Government and their leadership support play a main role for smart tourism destination development. According to Zhu et al., (2020), successful implementation of smart tourism destinations is a difficult and time-consuming process that necessitates technological

innovation as well as the involvement of the government, lawmakers, and all stakeholders at all stages of the process, such as planning, installation, and execution. Our study demonstrates how coordinated and inclusive tourism organizations can be enabled by unified planning and the performance of smart technologies. It requires a suitable system of governance that is based on the integration and coordination of a diverse range of stakeholders, to move in this direction. Many authors found that the role of governance and stakeholders is essential for smart destinations to function properly (Boes et al., 2016; Buhalis, 2019; Buhalis & Amaranggana, 2015; Bustard et al., 2019; Femenia-Serra, 2019; Shafiee et al., 2021). These investigations highlight the importance of leadership from local governments and professional associations.

Throsby (2001) emphasizes the importance of considering cultural heritage as a key driver of economic development in smart cities. In recent decades, smart technologies and the digitization of cultural resources have been increasingly viewed as inputs for high-value products and services in fields such as cultural heritage and tourism, which are becoming increasingly entwined. Cultural heritage and tourism have appeared to be sectors in which the potential for urban image and attractiveness is emphasized even more. In other words, the goal of smart tourism is to provide ways for destinations to digitally package their cultural assets as highly visible and accessible virtual representations (Hwang, Park, & Hunter, 2015). Digital phones are the primary means for residents and visitors to incorporate their personal experiences into cultural products through dynamic interaction. Lisbon spreads its heritage and culture using new technologies, just like other smart destinations are doing (Jara et al., 2015)

Without careful resource management and the participation of stakeholders, a destination is unlikely to achieve sustainability (Timur & Getz, 2009; Waligo et al., 2013). In the other words, smart city and smart destination development strategies cannot be achieved without human capital because tourism destinations are knowledge-based economies and people are the main holders of knowledge. The term "smart city" refers to the ability of smart individuals to devise novel solutions to urban problems (Albino et al., 2015). As a matter of fact, innovation alone cannot transform a city or destination into a smart city; it takes a combination of human capital factors and their interactions to create collective intelligence.

Consequently, human capital will continue to grow in the region as more stakeholders participate in the economy. This case study demonstrated that well-developed human capital is necessary for the success of smart cities. We argued that smart city initiatives would have to include investments in human capital to strengthen a city's potential for learning and innovation.

Smart urban areas are characterized by knowledge-intensive and innovative strategies developed to improve cities' economic, logistical, ecological, and competitive performance. These smart cities are built on a promising combination of human and social capital. According to Calzada and Cobo (2015) social capital refers to the network of connections that facilitate the accumulation and distribution of resources that benefit not only the individual but the group as a whole. A comprehensive approach to urban management must consider this fundamental factor (social capital), which is critical to the survival and development of cities. Indeed, social capital serves as a unifying factor for the various components of the urban system that must be managed holistically (Orlikowski, 1992). The stakeholder community emphasized the importance of social capital in enhancing collective intelligence and co-creation through the creation of collaborative spaces and the sharing of open data. The importance of social capital in smart destinations has been highlighted in many studies (Boes et al., 2016; Cacho et al., 2016; Gretzel, 2018).

6 Conclusions

The purpose of this study was to investigate the perceptions of stakeholders regarding Lisbon as a smart tourism destination. Lisbon's position in the tourist landscape has consolidated in recent years, owing largely to the city's reputation as an innovative, sustainable, and experiential destination. According to the findings, Lisbon appears to be in the early stages of developing its reputation as a high-tech tourism destination. It is concluded that information and communications technologies (ICTs) are important and cross-cutting factors in smart cities; however, in order to achieve smart city status in Lisbon, it is also necessary to invest in human and social capital, have good governance, develop actions for sustainability, innovation, and accessibility, and preserve and modernize cultural heritage. The findings of this research informed by main tourism industry stakeholders

reflect a broad range of factors influencing smart cities, which demonstrates their multidimensionality, which is consistent with our findings.

The findings of this study indicate theoretical and practical contributions. First, its principal theoretical contribution is the presentation of a theoretical framework in the context of smart tourism destinations based on stakeholder perceptions. By analysing the interviews, we were able to ascertain the true contribution of Lisbon as a smart destination to sustainable development, revealing the slow progress made under this new approach to urban and tourist space management. Second, based on this study, it is shown that smart destination management has the potential to close significant gaps in managerial knowledge and capacity. For instance, increased use of information and communications technology (ICT) in smart tourism destinations will alter the structure and function of the destination, resulting in a significant increase in technological and social sophistication. Therefore, because of this complexity, there will be a need for changing thinking and acting in both government and the private sector through management approaches where needs and problems are discovered in close cooperation and not through traditional knowledge silos. Also, given the rapid growth of smart tourism in many regions, lawmakers and suppliers require a theoretical framework as well as systematic policy implications. Third, in order to fully capitalize on the opportunities presented by smart technology in Lisbon, destination managers must incorporate the full spectrum of smartness elements and ensure the interoperability and connectivity of both soft and hard smartness elements in their planning and implementation. According to the findings of stakeholder interviews, simply incorporating smartness into a tourism destination will not transform it into a smart tourism destination. Forth, whereas smart cities prioritize the needs of their residents, smart tourism destinations must prioritize ways to improve the visitor experience while also improving the quality of life for locals. Hence, conceptualizing smartness helps destination managers understand the various components and makes it easier to implement and use the concept of smartness. Fifth, the new technologies must serve to control the growth intensity of tourist flows both within the destination, dispersing saturated areas, and in controlling the external attraction of new flows. The quality of the visitor experience and the quality of life of the

residents must be taken into account as references in the management of smart destinations.

7 Limitations and future research

This research conceptualized an overview of the main aspects that contribute to smartness. However, the stakeholder perspectives interviewed do not reflect the perspectives of all stakeholders. Therefore, future studies should include additional stakeholder groups, such as tourists, locals, and specific businesses affected by digitization, to shed light on how they perceive the concept. On the other hand, as suggestions for future lines of research, it would be interesting to conduct a quantitative study on the perception of Lisbon as a smart tourism destination among residents (social capital) and tourism workers (human capital). This triangulation enables the confrontation of opposing perspectives and enables decision makers to make more informed choices, thereby contributing to the development of sustainable smart tourism destination.

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