

Stakeholders' perspective on smart tourism development: a case study of the West Bank, Palestine

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Abstract

Purpose – This study aims to investigate the tourism stakeholders' opinions about developing smart tourism (ST) in the West Bank, Palestine. This research fulfils intriguing gaps in the literature on stakeholders' perceptions and views on developing ST in the West Bank, Palestine.

Design/methodology/approach – The research study employed a qualitative methodology using semi-structured interviews with nineteen respondents. All data collected were in April and May 2022.

Findings – The findings show that the understanding of ST-related stakeholders in the West Bank is mainly linked to information communication and technology, digitalisation, and online use of technology within the tourism industry. Moreover, the results show the high potential of developing the ST industry in the West Bank. However, this study revealed that challenges could affect the West Bank's development at different levels, such as managerial, technological, awareness, public sector restrictions, infrastructural, financial and political challenges.

Research limitations/implications – This research has some shortcomings. The first restriction of this study was the political restrictions and the checkpoints, which limited the reach of some of the participants who reside in Jerusalem or other cities outside of the West Bank, which delayed the time of the interviews or converted it to be done through a digital platform. Secondly, the sample of this study was small in tourism stakeholders in the West Bank.

Originality/value – To the author's knowledge, this paper is the first on ST from the stakeholders' perspectives. Therefore, this study has set the first step in closing the existing gap in the literature.

Keywords Smart tourism, Palestine, Stakeholders, Technology, Poor infrastructure, Data management

Paper type Research paper

Introduction

Researchers have studied different aspects of smart tourism (ST) to lay the foundation blocks of ST. Many researchers tried to define ST, but there is no standard definition for it by scholars until today, though most of the definitions clarify that it is a type of tourism combined with information communication and technology (ICT) or modern technologies (Li *et al.*, 2017; Gretzel *et al.*, 2015a, b). ST has different elements that shape this type of tourism, such as data, the Internet and human resources (Wang *et al.*, 2020; Koo *et al.*, 2017). Modern technologies in tourism have led to dynamic changes within the tourism industry. A smart tourism destination (STD) is distinguished by sophisticated services, a high level of innovation and the existence of open, integrated and shared processes that improve the quality of life for both locals and visitors (Caragliu *et al.*, 2009; Wang and Xiang, 2012; Komninos, 2013).

Prior ST research has focused on various areas, which include: building a tourist's perceptual and behavioural model (Yoo *et al.*, 2017), which investigates the impact of the important smart tourism technology (STT) characteristics on travel decision support satisfaction and the moderating effects of self-efficacy on the primary relationships;



conceptual papers (Li *et al.*, 2017), in which ST encompasses networked ICT, providing opportunities for both tourism consumers and organisations and destination case study (Khan *et al.*, 2017) which their study identified best practices related to Dubai's smart city and ST.

The role of stakeholders in the ST business has tremendous importance because the ST experience is founded on a tangible smart business ecosystem at a location operated through data exchange among stakeholders (Lee *et al.*, 2020). With the use of ICT in the tourism industry, stakeholders can develop the industry by decreasing the negative impacts or increasing the positive benefits (Buhalis and Law, 2008). Although there is vast interest in studying ST, there needs to be more research on stakeholders' perceptions of developing ST (Khan *et al.*, 2017). Moreover, most relevant studies on ST are consumer-focused, highlighting another research gap recognised by many academics (Mehraliyev *et al.*, 2020). As a result, this study will fill a knowledge gap in the literature. Therefore, the purpose of this paper is (1) to discuss the status of developing ST in the West Bank, which includes stakeholder understanding of ST, (2) technologies used in the tourism industry, (3) the potential to develop ST, (4) the benefits and drawbacks of developing ST and (5) the challenges that can affect developing ST in the West Bank. The findings of this study are critical for industry and academia, as well as for stakeholders such as destination managers, academics and politicians, because they provide insight into aspects that influence the creation and design of smart destinations. In light of the growing trend toward smarter destinations, tourist planners and managers will benefit from a greater understanding of the fundamental elements of STDs, which will aid in their efforts to increase destination competitiveness.

Implementing the smart idea in tourism destinations will result in a dynamic interaction between travellers and the destination, adding value to tourism stakeholders (Neuhofer *et al.*, 2012). Furthermore, smart destinations promote the appropriate designation of tourism resources and aid in integrating tourism providers at the micro- and macro-levels by developing tourism destination sustainability (Lamsfus *et al.*, 2015).

While other studies aimed at the perception of stakeholders, Cornejo Ortega and Malcolm (2020) surveyed the opinion of ST stakeholders on the status of STDs and their future trends in Puerto Rico Vallarta in Mexico. Ye *et al.* (2021) have also studied this aspect, but they focused only on the positive aspects of ST and are limited to Hong Kong in China as a developed area.

Palestine is vital in attracting and motivating tourists interested in religions, history, cultures, traditions and the environment. Palestine is sacred for the three monotheistic world religions: Islam, Christianity and Judaism. Regarding the Christian religious sites of Jerusalem, these places are regarded as the most important in the world, containing various churches and monasteries of the Christian religion, such as The Church of Holy Sepulcher (Shahin, 2007). As Jerusalem is a unique place and significant consideration in religious tourism, there are a lot of villages, districts and towns considered sacred which attract tourists and pilgrims to visit and stopover in them, such as Hebron, Bethlehem, Jericho, Nazareth and Nablus. After the Oslo Peace Accord in 1993 with Israel and the establishment of the Palestinian National Authority in 1994, numerous steps were carried out to promote and develop the tourism sector in Palestine, particularly in the West Bank and the Gaza strip. The Palestinian Ministry of Tourism and Antiquities (MOTA) was established and took responsibility for recognising the tourism sector. According to Isaac *et al.* (2016, p. 1) "tourism in Palestine has been receiving an increasingly important profile given its economic and religious significance, as well as the substantial role it can play in Israeli-Palestinian relations vis-à-vis representations of Palestinian statehood and identity".

Unfortunately, more research on ST needs to be conducted in Palestine. In general, most academic papers focus mainly on conflict challenges and impacts on tourism in Palestine (Ghodieh *et al.*, 2019; Isaac and Abu Edi, 2019), alternative tourism and practices of different forms of tourism in Palestine, such as dark tourism (Isaac, 2010a), tourism trends and

transforming through different periods (Al-Rimmawi and Butcher, 2015; Isaac, 2010b). Therefore, this paper will study the tourism stakeholders' opinions about developing ST in Palestine to fill the existing gap in the literature. This research fills intriguing gaps in the literature on stakeholders' perspectives in the context of ST in a developing destination. To the author, this paper is the first on the ST from the stakeholders' perspectives. Therefore, this study has set the first step in closing the existing gap in the literature. Therefore, this study aims to analyse the opinion of ST-related stakeholders, which can include negative and positive views regarding the development of ST in the West Bank, aiming to help to reach better usage, management and planning for the development of the future ST system in Palestine.

Literature review

Defining smart tourism

The concept of ST started to become prominent after the development of smart cities (SC) and the spread of the Internet around the world (Buhalis and Amaranggana, 2015). ST is the most modern concept in the tourism industry from the practical and the theoretical levels (Pradhan *et al.*, 2018) and has developed through logic levels from ancient tourism and E-tourism (Yoo *et al.*, 2017; Gretzel *et al.*, 2015a, b). SC can be defined as an "urban municipality that brings together technology, government and different layers of society, utilising technological enablers, such as the Internet of things (IoT) and artificial intelligence (AI). These enablers, in turn, facilitate the development of various aspects of the smart city" (Ruohomaa *et al.*, 2019, p. 6).

Li *et al.* (2017, p. 5) define ST as the "process of using data and information by tourists during the tour or the visit to the destination," while Wang *et al.* (2016, p. 310) define ST as an "information & communication technology-integrated tourism platform" that merges tourism services and technology.

The application of ST in various destinations worldwide has become one of the main drivers supporting the competitiveness of these tourist areas (Buhalis and Amaranggana, 2015; Del Chiappa and Baggio, 2015). Nevertheless, the concept of ST is linked with the smart city concept. Therefore, to create ST, there is a need to place the foundations of SC before remembering the situation of the inhabitants to guarantee sustainability (Gretzel *et al.*, 2015a, 2015b). However, according to scholars, "Smart" is still conceptually unclear from the tourism destination aspect (Buonincontri and Micera, 2016). Gretzel and Mendonça (2019) state that it is crucial to understand the term smart within the field of tourism, especially since the theoretical foundations are not clear yet for stakeholders (Li *et al.*, 2017).

Components of smart tourism

In the era of ST, tourism started to be supported by new technologies such as robots, AI, virtual reality (VR), game-added applications and automated applications that have a personal character (Buhalis, 2020; Garcia *et al.*, 2019; Xu *et al.*, 2017; Buhalis *et al.*, 2019). Meanwhile, scientists within the tourism and technology fields work permanently to develop the foundations of ST (Ye *et al.*, 2021).

Since the first use of "Smart" technologies in tourism, many scholars have studied the components of ST. Therefore, there are many arguments and differences on this subject. ST components can be classified into complex features such as technologies and infrastructure and soft components such as innovation, human resources and leadership. Both are important for creating a ST environment (Boes *et al.*, 2016).

These include information and communication technologies such as cloud computing and the IoT technologies which are very vital elements that create the base of the ST system

(Buhalis and Amaranggana, 2015), especially the use of IoT, which can facilitate the exchange of data and the connection with the other things, devices and systems used in the tourism experience (Darby, 2018). The data aggregator and the tourist destination platform are major elements of the ST system (Koo *et al.*, 2017).

Internet usage within the tourism industry can also have different applications, such as self-guided tour applications, electronic navigation, smart shopping websites and applications (Wang *et al.*, 2016). It can also develop ST at the destination, for example, by using mobile phones, 5G, VR, blockchain, massive data, drones, IoT, complex networks and AI (Wang *et al.*, 2020).

Development of smart tourism

The technological revolution led to the creation of SC, defined as “urban settlements that make a conscious effort to capitalise on the new ICT landscape strategically, seeking to achieve prosperity, effectiveness and competitiveness on multiple socio-economic levels” (Angelidou, 2014, p. 4). This has been the reason for new research about “Smart Tourism” (Gretzel *et al.*, 2015a, b). SC based on innovations and modern technologies are the bridge to creating STDs (Baggio and Cooper, 2013).

The connection between modern technologies and tourism together is the base of creating the ST system. Now that tourism is supported by a new process that collects, analyses, and responds to data, it is the way to convert this data to enrich travel experiences and make them more effective and sustainable (Gretzel *et al.*, 2015a, b). For example, a study on Mauritius Island which adopts a ST strategy that focuses on sustainability reveals that the data analysis has to be as close to the real-time of the original data to ensure the success of the tourism experience and sustainability (Dabeedooal *et al.*, 2019). The differences in the tourism experience that arise with technology can help stakeholders create, manage and put strategies for new markets (Sigala, 2018). Additionally, it can help with the management process for modern tourism. The management process in the ST industry is dynamic now, meaning that the use of technology is the tool to manage the tourism process, which can help all players and stakeholders to engage in decisions on the shape of tourism and its related technologies (Sigala, 2018).

The social phenomenon of ST (Hunter *et al.*, 2015) has faced many changes in the methods and operations with the developments of ICT (Colby and Bell, 2016). According to the heavy usage of data and information within the tourism industry, the concept of “Smart” is used in different steps and levels. This means that “Smart” has been used in the tourism experience, industrial development and the management process to use better resources and data (Wang *et al.*, 2020).

The continuous development of ST is creating more interest in developing digital technologies to provide more pleasure for tourists and better use of tourism resources by stakeholders. Nowadays, there are more applications at different levels, such as smart tourist guides (Matos *et al.*, 2019) and augmented reality (AR) technologies that can analyse big data to help tourists decide, make plans and strategies for market brands and enrich the participation of visitors.

Challenges of smart tourism development

According to Sigalat-Signes *et al.* (2020), most studies focus on developing ST rather than shedding light on the new challenges and barriers accompanying this industry’s development. According to González-Reverté (2019), creating a ST system is surrounded by several managerial, cultural and technological challenges. For example, one of the leading technical challenges is decreasing energy consumption while using technology to design various smart infrastructures.

Liburd *et al.* (2017) studied the challenges of developing ST in Northern Denmark from the point of view of stakeholders, which revealed different challenges that face the sector in their development process, such as collecting data and using it appropriately through the ICT tools and bringing all stakeholders together at the table to work together to agree on the same opinions about ST. Additionally, Buhalis and Leung (2018) aimed in their study to build a ST ecosystem based on the data from different tourism networks, applications and external tourism environments and indicated that there are considerable barriers to developing ST in terms of data, including sharing data, data ownership and accessibility to data.

Another challenge can be explained by Wang *et al.* (2021) in their analysis of the challenges of developing ST in China, where one of the main challenges was the difference in the cities with smart infrastructure, especially in marginalised areas such as rural areas which are rich in tourism resources but lacking on “tourism intelligence” as they described it. Regarding data issues, a study focused on two case studies (Seoul Metropolitan City in Korea and San Francisco City in the United States) Lee *et al.* (2014) indicated that creating a balance between opening data to the public and keeping the security of personal and private data for tourists and stakeholders at the same time can be challenging in developing ST because the data is one of the major elements in ST. In addition, one of the main challenges in developing ST is the misuse of tourism data resources, as shown in the study by Wang *et al.* (2021) in China, which clarified that one of the limitations that affect the development of ST in China was the exchange of data between different areas due to the administrative divisions.

Smart tourism positive impacts

The smart technologies used within the ST system have created serious changes at the business and consumer levels, leading to new tourism models (Gretzel *et al.*, 2015a, b). For example, tourism has become more accessible and fun with the use of smart devices such as mobile phones (Liu and Wei, 2014). Moreover, the travelling costs such as bookings, planning and travel decisions also have become cheaper and faster.

ST can be used as an effective tool by stakeholders to raise the quality of the destination (Ye *et al.*, 2021). This can be shown in the case of Seoul city, as indicated by Gretzel *et al.* (2018) that Seoul city has been through continuous development in multiple aspects such as developing smart infrastructure and open innovation, and that has all aimed at developing a high-quality smart destination and attracting tourists with similar interests in smart technologies adoption and travel patterns. The literature illustrates that ST can affect the tourist’s experience through different levels (Buonincontri and Micera, 2016).

For tourists, ST makes it easier to search and reach data by using their smart devices to search the Internet for more data about travel details, prices and packages (Chung *et al.*, 2015). It can also ensure the tourist’s safety and save money (Li *et al.*, 2017).

Lee *et al.* (2020) studied the role of smart technologies within the tourism industry to obtain sustainable development was studied because ST cities are places that work to provide a better lifestyle for their residents and quality experiences for tourists, so it can solve the problems of the traditional tourism industry, protect its residents and provide them a better life. A comparative analytical study by Li *et al.* (2017) conducted in China has explained that modern technologies used in the ST system can provide a VR model of the site or the destination itself for visitors, which can create a mental stability state for tourists before they even travel to the site and therefore making their experience more enjoyable (Li *et al.*, 2017).

ST, with its applications and technologies, can facilitate tourists related-data collection and analysis simultaneously, which create new opportunities for stakeholders to renew and change the services according to the need of tourists (Gretzel *et al.*, 2015a, b; Kim and Fesenmaier, 2015). AI has created new ways to deduct reality and added methods to interact

with it, which can help tourism companies to develop their ability to manage tourist visits with modern and creative methods (Tussyadiah, 2020).

Smart tourism negative impacts

Only a few studies argued that ST has adverse effects (González-Reverté *et al.*, 2018). At first, relying on technology in the tourism industry can lead to opposite results such as opening the door for cyber-crimes and making tourism more dependent on electricity and network, which can affect the traditional tourism destinations and require these areas to develop more on the public policies and smart infrastructures (Pencarelli, 2019).

A study by Herrera Priano *et al.* (2016) on the Canary Islands, which used smart technologies to develop the destination, showed that focussing on smart development can ignore the other essential elements in the tourism development process. For example, the focus on collecting data to build a smart system sometimes is not enough because there are other elements that are needed to have in mind such as collecting and accurately analysing data with the correct and well-needed data and turning the island into a smart one cannot be shown in the collected data but only when the collected data are helping to solve the problems and helping the residents to reach for a better and easier life.

On the other hand, ST has included privacy issues because it deals with sensitive data of the tourists and their financial data. Many tourists feel insecure about using smart technologies while travelling and do not trust them. In addition, it can be complicated to use, so it is outside everyone's reach (Pradhan *et al.*, 2018). According to Buhalis and Amaranggana (2015), these problems can affect the tourist experience negatively.

In general, cooperation between different stakeholders in the ST system can lead to better use of these technologies. All introduced data should be helpful during the whole travel process. It is crucial to provide a technological infrastructure, a database and different recourses to develop the destination as a STD (Lee *et al.*, 2020). Consequently, all stakeholders can benefit from the process, tourism development will become smoother, and the tourism industry will become more modern and sustainable (Li *et al.*, 2017). For these reasons, it is important to develop the governance of ST in the West Bank, considering different stakeholders' perspectives about developing ST to build the right policies and plans and be ready to keep up with the fast development within the tourism market at the global level.

Smart tourism and stakeholders

There needs to be more research on governance, stakeholders and the development plans for the ST system (Errichiello and Micera, 2021). However, as of late, and especially after the Covid-19 pandemic, a flame has started to appear in this subject area. Starting with Ye *et al.* (2021) study, which is adopted in this research, used semi-structured interviews to collect qualitative data about the perception of tourism stakeholders on the developing ST system in Hong Kong and revealed the importance of smart governance and stakeholders within the development process.

Woyo and Ukpabi (2022) adopted the same methodology to collect qualitative data about building a technological approach to fight the pandemic and revive the tourism industry in South Africa. One of the main results explains the importance of governance in running this technology-based tourism. For instance, Ghana needed the correct governance to build a smart ecosystem for tourism. Those previous examples concluded that governance is the key to organising the work between all stakeholders to get a higher level of competitiveness (Del Chiappa and Bregoli, 2012; Paunović *et al.*, 2020).

There is a need to focus on stakeholders; as mentioned by Baggio and Del Chiappa (2014) that it is vital to create a network of different stakeholders who engage and share delivering

services and experiences to visitors, with a technological infrastructure that makes a digital ecosystem to maintain the development among other stakeholders. This was revealed in the literature on SC, which was conducted by [Yin et al. \(2015\)](#) and showed that many studies indicated the role of stakeholders is crucial within the ST system to invest more resources to reach sustainability, solve old tourism problems and to help residents have a better and safer life.

Methodology

Tourism researchers commonly use this qualitative method to gather and analyse empirical data ([Pernecky and Jamal, 2010](#)). New research areas with few previous works that support a strong theory require a qualitative method to enrich the study with explorative work based on in-depth data ([Wilson and Hollinshead, 2015](#)). Therefore, a qualitative approach was used in this study.

The case study of the West Bank was chosen for its importance as one of the most visited destinations for religious tourism and for its upgrading of alternative tourism to be used for managing the tourism industry in the future.

The use of interviews in new studies is essential because interviews as a tool can facilitate the linguistic expression of meanings, help code the information, reflect the description of complex phenomena and provide individual perspectives about the subject concerning the current situation and how to develop it ([Ivanova-Gongne and Tornroos, 2017](#)). Regarding ST as a new concept and a driver of change, using interviews can help understand different expressions and perspectives and prepare for the digital and smart shift in tourism destinations ([Pesonen, 2020](#)).

The interview questions were adopted from the two previous works developed by [Ye et al. \(2021\)](#) and [Gelter et al. \(2022\)](#). The two studies mentioned earlier were chosen to create the questions for the interview of this study because they meet the study objectives. Both studies aim to analyse the perspectives on the ST concept, elements, applications and challenges, which are very important to provide the background to develop ST in the West Bank. The purposive sampling technique is the deliberate choice of a participant due to the participant's qualities. We have decided what needs to be known and set out to find participants/stakeholders who can and are willing to provide the information by knowledge or experience.

In total, 19 interviews were conducted and included different parties, representatives of the public sector, in this case, the MOTA, representatives of NGOs and alternative tourism organisations such as the Palestinian Heritage Trail (PHT), Siraj Center, The Holy Land Incoming Tour Operators Association (HLITOA), Network for Experiential Palestinian Tourism Organization (NEPTO), Bedouin Without Borders, representatives of the private tourism sector such as The Arab Hotels Association (AHA), tourist guides, souvenir shops owners, hostel owners, tourism platform directors, representatives of municipalities, academics and researchers, locals who are engaged with the tourism industry, representatives of web and digitalisation companies and international consultants. These parties were selected as they constitute the tourism industry in Palestine.

The purposive method was used by many researchers, such as [Ye et al. \(2021\)](#) and [Bustard et al. \(2019\)](#). This combination of methods was used in similar studies such as [Woyod and Ukpabi \(2022\)](#).

This study uses a collection method to reach data saturation ([Fusch and Ness, 2015](#)). According to [Bernard \(2012\)](#), this method is very effective in research based on in-depth interviews. The number of participants cannot be defined previously and can be specified during the interviewing process when the data are enough for the subject. The saturation point was reached at interview No. 19.

All interviews were conducted between 23/April/2022 and 18/May/2022. The shortest interview lasted 25 min, while the longest spanned 1 h and 16 min. Furthermore, the language of the interviews varied between Arabic, English or a mix of both languages according to the interviewee's preferences.

Data analysis

The thematic analysis method (Braun and Clarke, 2006) was used in this study to analyse the data. This method was chosen because it can explain participants' data and perspectives under a conceptual or theoretical framework. This method helps organise and describe the frames of the subject. It can also help with studying the different perspectives of multiple interviewees to generate unusual insights and opinions.

Results

Nineteen in-depth interviews gave professional perspectives on creating ST in the West Bank. It was possible to collect data from the stakeholders from different angles, which covered the research objectives to understand better this concept to use and plan for ST in the West Bank through analysing stakeholders' perspectives. Based on the thematic analysis of the interviews, three themes emerged. The three sections include (1) the status of developing ST in the West Bank, which covers the stakeholder's understanding of ST, the technologies used within the tourism industry and the potential to develop ST in the West Bank, and (2) advantages and disadvantages of developing ST in the West Bank and management platform of ST, (3) the challenges that can affect developing ST in the West Bank.

Status of ST development in the West Bank

In terms of the awareness of the ST concept by the participants of this study, nine of the interviewees, in their understanding of ST, stated that it is related to ICT, whether it is ICT-based tourism, tourism integration with ICT, a tool to use ICT, technology-based tourism or a new form of adaptable tourism with the latest technologies. Four interviewees described ST as a digital platform or tourism digitalisation, while 3 participants expressed it as an online tourism system. Interviewee No. 11, representing the Visit Palestine platform, stated:

ST is a kind of tourism that utilises ICT on the practical side and also an interpretation for visiting, booking, accessing and getting information and navigation.

From the previous answer, the interviewee indicated that information and communication technology is the second face of ST, which have to be applied in the sites to facilitate the tourist's experience in ways such as helping tourists book their trip and visit the destination and its location, help with navigation to provide the directions to the targeted sites or access to information and sites of their journey.

The second part of their understanding included the examples and applications verified by the participants. It included VR tours, digital infrastructures, digital tools and platforms, and modern technologies such as smartphones, computers and interactive tools. Interviewee No. 19, representing the perspective of the content developer at InterTech company, stated:

ST is to find ways for tourism to be adaptable to emerging technologies, which include smartphones, computers, and interactive tools. It is Innovative based tourism, which means continuous development to adapt to developments. Innovative-based tourism.

The previous quote describes that tourism is based on developing and born technologies. This definition is a mix of the previously mentioned two definitions by the participants, including both ICT and digitalisation. This definition also explains that ST can develop and have new and different applications and forms, which means an up-to-date form of tourism.

According to the participants, there were different functions of ST, which included providing access to information for tourists, facilitating online marketing and promotion, online booking, attracting and communicating with tourists online, giving accessibility to sites or services, and helping with tourists' experience. The use of smart technologies by the participants included different applications. 10 out of 19 participants are using websites at their institutions, 6 of them use digital booking systems, 6 use VR services, 4 of them use smartphone applications, three use AR technologies like AR mirrors, in addition to other applications such as audio services, interactive touch screens and media centres. Interview No. 4, from the point of view of the marketing department of MOTA:

Regarding smart technologies, we provide digital training platforms for tourism stakeholders and the private sector. We are focusing on social media to promote Palestine. We created the Media Center for the "General Administration of Marketing and Tourism Media", equipped with all tools and devices to make movies and photos to promote tourism through social media. We also have a virtual reality movie of Hisham's Palace. Moreover, the websites for the MOTA promote Palestine.

On the other hand, half of the participants are working to develop websites and smartphone applications for their businesses. There are also serious intentions to create digital data systems or libraries, QR (quick reading) code systems, audio-visual signs or guides, and other services such as signal boosters in rural areas and tracking devices for the tourist's safety. Another important topic was mentioned by the public sector participants, who stated the intention of MOTA to set a law for tourism-related applications and sites. Interviewee No. 8 represents the current work that MOTA carries out for the future:

We are currently in the process of issuing a new law that considers the licensing, follow-up, and supervision of all digital applications or websites on the basis that they are under the official control of the ministry. We are working on an application that organises a visit and books the dates for the entry of tourists to the Church of the Nativity.

Regarding creating a ST system in the West Bank, 9 participants think there is a high potential to develop ST in the West Bank. Seven interviewees stated that the area could develop an ST system. However, it has to overcome several issues, such as digital data, smart infrastructures, a holistic plan and cooperation between the related stakeholders. One of the participants thinks that different cities have different capabilities for developing ST. For instance, Ramallah and Bethlehem are more able to create ST than other cities in the West Bank because they have a more developed infrastructure and community awareness to use smart applications. Two participants needed clarification about the area's ability or thought it was incapable of developing ST. Interview No. 1, from the Visit Palestine Platform, indicated:

I think different cities in the West Bank have different readiness levels for smart tourism. Nothing against cities, but the infrastructure is different. Society's acceptance of tourists differs, and the infrastructure is also different.

From a different point of view, the other interviewees suggested that Palestine is ready to start ST. For example, interviewee No. 16 from Bedouin Without Borders stated:

I think the area is ready to develop the ST; the human resources are ready to develop and learn everything required to develop tourism in their areas.

Advantages and disadvantages of developing ST in the West Bank

Nineteen benefits were mentioned 77 times, while the disadvantages were mentioned 12 times, focussing on job loss issues. This indicates that the benefits of ST are much more than the disadvantages. According to interviewee No. 5, the executive director of AHA:

ST is a double-edged sword. Having too much information, visual videos, or virtual reality might make the tourist think that he saw it and does not need to visit the real site. On the other hand, it can help to make a better promotion and give stakeholders the access to reach more individual people.

The benefits of ST were listed under five main themes, which branch into 19 sub-themes. The main advantages of ST are the following:

(1) Develop Information Management

According to the participants, 17 points suggested ST's role in better-managing tourism information in the West Bank. This is divided into three sections. First, ST can facilitate the accessibility to information by tourists and stakeholders, allowing the stakeholders to access a broader range of customers and deliver the right information at the right time in the participants' opinion. The second point is that ST can help provide the right information and the Palestinian narrative to tourists, including the Palestinian message and the real story of the situation. The last point is that ST can help change the negative image of Palestine published by others. Interviewee No. 7, the director of Siraj Center, chairman of the executive council of the NEPTOs and the presidents of HLITOA, indicated:

As a positive impact, we will bring them a better understanding of the situation. Secondly, if we have enough information, we have increased the number of people visiting us. Finally, it will give more security to people.

This quotation revealed the critical role of ST with the correct methods to provide more information, target more tourists and offer more safety for tourists.

Interviewee No. 13, the director of the Visit Jenin platform, stated:

I see that Smart Tourism has advantages only. Many marginalised areas are now known to people due to the use of technology. So, it helps with publishing new destinations for tourists. Furthermore, it helps deliver information to tourists, facilitating their travel and decision-making about their destination.

(2) Develop the targeted markets.

Interviewees mentioned three main benefits the tourism market which ST can bring to the West Bank tourism market. ST can target new markets, such as Individual tourists; it can help increase the number of tourists coming to the West Bank and, subsequently, the length of stays in the West Bank by facilitating the direct booking between services providers and tourists and reaching for a wider range of tourists, which leads to an increase in the money spent in the area.

Interviewee No. 12 from the Hantour platform explained:

I think Smart Tourism has no disadvantages, but only advantages. It increases the number of tourists coming to the West Bank. Moreover, it increases the length of stay. It improves the distribution of value (distribution of wealth), which means it can benefit a wider range of stakeholders.

(3) Improve the tourist experience.

The Participants indicated that ST could facilitate the travel experience by developing services, providing safety and security for tourists, providing navigation and direction services, helping with the online booking service, and facilitating the connection between tourists and service providers.

Interviewee No. 8 from MOTA stated:

The tourist has become more demanding with the increased information and options. ST gives the tourist or visitor a look and understanding of more details of the area intended for tourism in terms of culture, eating, beautiful places, the negatives he can face, and the nature of the people who want to visit. It could be a positive, complete, and integrated viewpoint that provides you with a vision of the country tourists want to visit.

According to the participants, ST can help raise the West Bank's competitiveness, which can be achieved through the good use of modern promotion methods, which is more effective than traditional methods, and this can help tourists make the travel decision to the West Bank.

Interviewee No. 1, the owner of the Visit Palestine platform, added:

The old way of estimating information is expiring. I think the more we integrate information technology and different communication into our market and promotion, the better chance we have to attract tourists. Moreover, if we want to ride this wave, we must take advantage of smart tourism. Every tourist service provider must use technology as an opportunity to get more business.

The disadvantages of ST were mentioned a few times. However, in general, it was clear from the participant's answers that the biggest drawback of ST was job loss. Due to modern technologies, service providers will need fewer human workers. For example, using digital booking systems decreases tourists' need for tour companies, and smartphone guides can cancel the need for a human tourist guide. According to the participants, the most affected sector will be tourist guides. Participants indicated that human resources should not be replaced with modern technologies. The other disadvantages, which were mentioned rarely, are: sharing fake information, the difficulty in using modern technologies by some people and some facilities, and decreasing the intention to travel by tourists because they might use VR tours from their homes.

Interviewee No. 10, an academic instructor and a tour guide, explained:

If we digitalise everything with all the detailed information like you have an app, and you can listen, then you will cancel the work of the tour guide. This will affect our livelihoods, especially if we think about tourism, as we want to have tourism as constant as possible. Going online concerning tour guides, online guiding, and other things that might negatively affect sustainable tourism, which has to support the people in the area. On the other hand, if we adopt the use of presented smart audio guides, we will never get human guides again.

According to this interviewee, there is a threat to their jobs as tourist guides in the ST industry, such as in the case of smartphone guides and other similar applications. On the other hand, other interviewees, such as interviewee No. 4 from MOTA, suggested that:

Management platform of ST

According to the interviewees, several elements are needed to build a management platform for ST in the West Bank. First, the partnership work includes cooperation between all parties, such as the public and private sectors, tourists, international companies and locals. This also includes a digital platform for all stakeholders, service providers and tourists. All tourism parties should work together to develop a holistic strategic plan for ST. Interviewee No. 2, the General Director of the PHT, suggested:

We need a general strategic plan for the tourism sector, in which brands and platforms are tied into a unified platform and marketing. Service Providers must have a tourism product and be part of tourism governance. As a civil society, our role is to develop, and the government encourages the private sector and the local community to carry out development.

The second element is qualified human resources, which should include professionals from the tourism and technology sectors. This also requires periodic training and updates for modern technologies in the industry. The third element is the data, which requires collecting

information, creating the content and information about sites, creating a database by MOTA, and creating a good narrative to promote Palestine. Interviewee No. 6, a marketing expert from Japan Development Agency (JICA), stated:

The most important elements are the infrastructure, which means a good Wi-Fi system and applications. The second, which is very important, is the knowledge of the private sector and the qualified human resources; therefore, MOTA has to partner with the private sector.

For the public sector, there are two main elements that it has to provide. The first is creating a legislative body supported by laws and legislation to manage the legal aspect of this industry. The second is to provide and facilitate the funds for private sector projects. The last element is developing the area's infrastructure to facilitate the West Bank's tourism process.

Challenges of developing ST

According to the participants, 78 challenges were mentioned. The challenges were divided into six categories. The most mentioned challenge was the political challenges, which were mentioned 15 times, followed by financial challenges (14 times), infrastructure challenges (11 times), public sector restrictions (9 times), data management (9 times) and lack of awareness (6 times) of all mentioned challenges.

(1) Political challenges

The political situation in the West Bank can be the most challenging aspect of developing ST in the area. This was the most mentioned challenge by the participants. The answers included difficulties, such as the restrictions forced by the Israeli occupation on the West Bank, the Israeli control over borders and the Israeli government's control of the coming tourists. On the other hand, this leads to other problems created by the occupation, such as safety and security issues, the published image by the occupation of the West Bank as a dangerous place to visit, and the invisibility of Palestine's name as a destination which is usually replaced with Israel by many online tourism platforms. Interviewee No. 6, a marketing expert from JICA, stated:

It is very difficult to collect data about tourists because the Israeli side controls the border, even though they direct from Jordan the Israeli side control, so it is difficult to collect accurate statics numbers, and this is a problem because when we are creating the strategy, we need the basic data.

The previous quotation displays one of the restrictions threatening the development of ST in the West Bank, which is the control of borders by the Israeli occupation, which can affect ST's planning and management processes.

(2) Financial challenges

According to the participants, there are many challenges on the financial level that can be explained under four subjects. The West Bank's economic crisis has resulted in a lack of money and financial resources. The second challenge is the need for more funds from the government. Thirdly, investments in the tourism sector are low. The last financial challenge is restrictions on online payment methods in the West Bank. Interviewee No. 16, the director of Bedouin Without Borders, interpreted:

Online payment services are not available in Palestine, and when available, it charges the business owner high fees. The only Bank that provides this service is the Bank of Palestine, which monopolises it. There is low capital (money). And low investments in the tourism sector in the West Bank.

(3) Poor infrastructure

It is clear from the answers that there is a big challenge in the infrastructure of the ST system in the West Bank. The most mentioned challenge was needing more internet connections and modern generation networks such as 4G and 5G.

Interviewee No. 14, the head of the tourism department at Hebron Municipality, stated:

The biggest challenge is infrastructure, which needs to be fully organised in the city. Many applications need the Internet to be available within all tourist areas. We have a problem with access to Wi-Fi permanently, 4G and 5G are not available for us, and the Internet for us is expensive for the citizen.

(4) Data management challenges

According to the answers, there are several challenges in terms of data. First, there is a lack of information and difficulty collecting information between all parties. There is a problem in managing content and materials in the tourism sector; the sector needs a better narrative and disinformation published about Palestine.

Interviewee No. 11, a site management expert from JICA that works in cooperation with MOTA, indicated:

you are not providing your narrative or your information. So, you are not controlling the information that you want to present. This should be solved, even if Israeli tourism companies operate it. That is why lacking information tools, Palestine's narrative.

(5) Awareness challenges

The answers included two aspects. One explained the need for more awareness among the private and public sectors and the lack of awareness of the ST concept. The second part described the refusal to develop ST by the local community and some sectors, such as tourist guides which make it challenging to reach acceptance to create ST.

Interviewee No. 19, a content developer at InterTech company, explained:

There is a difficulty in promoting and accepting new technologies to stakeholders and service providers. Furthermore, this is not only for ST, but all new developments are also faced with the refusal by the community at their first time, and it always needs time to get their acceptance.

ST industry can be variable according to the new inventions in the tourism industry. The previous quotation explained that the awareness by stakeholders could be a challenge to accept the new form of tourism, which can be a big challenge due to the continuous development of the ST system.

Discussion

ST was defined as a platform that uses ICT with tourism, providing tourism services through technology. This study revealed that the interviewed stakeholders of ST are divided into three points: integrating ICT with tourism, digitalisation and an online tourism system. The first point can intersect with other definitions in previous studies, such as [Wang et al. \(2016\)](#) and [Hunter et al. \(2015\)](#).

ST aims to give access to information and services, smart promotion, online booking, a direct connection between stakeholders and tourists and a better tourist experience. The previous definitions included some of the mentioned aims, and [Li et al. \(2017\)](#) and [Jovicic \(2019\)](#) said that access to information by tourists. Other studies noted that ST aims to connect tourists with stakeholders and stakeholders to share information ([Buhalis and Amaranggana, 2015](#); [Gretzel et al., 2015a, b](#)).

According to [Tu and Liu \(2014\)](#), two types of ST can be challenging: technologies and infrastructure and soft components, such as leadership, human resources and innovations. While the interviewees in this study use or work on different technologies such as AR, VR, interactive touch screens, QR systems, audio-visual signs, navigation technologies and self-guided tours. The interviews revealed that the West Bank needs to provide a complete ST system for tourists regarding ST components and usage.

Establishing ST in the West Bank might face some challenges. The main challenges are political, financial, poor infrastructure, public sector, data management and the need for more awareness. All these challenges were studied in other case studies. [Buhalis and Leung \(2018\)](#) and [Liburd et al. \(2017\)](#), in their studies, mentioned data challenges which included data collecting, sharing, ownership and accessibility challenges. In terms of infrastructure, [Wang et al. \(2021\)](#) revealed that developing ST in China is facing the challenge of differences in the level of infrastructure in different cities, which the interviewees in this study mentioned.

According to [Li et al. \(2017\)](#), ST can help with tourists' experience and safety, and it can help stakeholders create new electronic trade models and facilitate their use of information and data. The study indicated that ST could help develop information management, tourism products, targeted markets, tourists' experiences and the destination's competitive advantage.

On the other side, it may have drawbacks. In this study, most answers indicated that ST could result in some service providers losing their job, especially in the guiding tour sector. According to [Bowen and Morosan \(2018\)](#), robots might replace 25% of the hospitality workforce over the next decade, creating a real threat to industry workers in the foreseeable future. This is only one aspect of ST's disadvantages. For example, it can open the door to cybercrimes and privacy issues ([Pencarelli, 2019](#)).

Previous studies have mentioned that stakeholders play a major role in developing the ST industry. Good governance is the key to managing ST to achieve higher-level competitiveness ([Del Chiappa and Bregoli, 2012](#); [Paunović et al., 2020](#)). The current study indicated that all sectors' roles are essential, especially the private and public sectors. The community and stakeholders must raise awareness about ST to follow the updated technologies within the tourism industry and infrastructure.

Conclusions & implications

The purpose of this study was to investigate tourism stakeholders' perspectives on creating ST in the West Bank, Palestine, using semi-structured interviews with 19 stakeholders from various sectors relevant to ST in the West Bank. The analysed data were divided into six subjects. Firstly, regarding the current status of developing ST in the West Bank, the participants needed more understanding of the ST concept, which is expected as it is a new phoneme in the tourism industry in general, as mentioned by [Buonincontri and Micera \(2016\)](#). The participants use or are willing to use one or more ST applications.

Due to the restrictions of the COVID-19 pandemic, there were signs and motivations by stakeholders and tourists to move forward in developing more advanced tourism based on adopting new innovations and technologies within the tourism experience. Therefore, many studies were conducted to discuss ST, which mentioned the vital role of COVID-19 in developing ST, such as [Ye et al. \(2021\)](#).

However, ST has many benefits regarding data management, product development, market increase, experience development and competitive advantages. It also has disadvantages, such as job loss which were mentioned in the results of this study. Other studies mentioned additional disadvantages such as cyber-crimes and difficulty to use by some tourists and service providers ([Pencarelli, 2019](#); [Pradhan et al., 2018](#)).

ST can face some political, financial, infrastructure, managerial, public sector and awareness challenges. Infrastructure can be varied from one site to another in the same

destination (Wang *et al.*, 2021), stakeholders can be hard to connect and manage as well (Lee *et al.*, 2014), and data can be hard to collect or access tourists or stakeholders (Buhalis and Leung, 2018; Liburd *et al.*, 2017).

Some elements are needed to build a platform for managing ST, including cooperation between all stakeholders, qualified human resources, a database with a good narrative, a legislative body, smart infrastructure and constant funds. Other important elements were also mentioned in previous studies and focused on the critical role of stakeholders, governance and creating a balance between all parties within the ST management platform (Del Chiappa and Bregoli, 2012; Paunović *et al.*, 2020).

Even though ST is a new concept in the West Bank, it is clear that stakeholders have a prior understanding of the ST concept, which they defined as integrating ICT with tourism or the digitalisation of tourism, which aims to facilitate the tourism experiences which include marketing, booking, data management, communication between tourists and stakeholders, accessibility to information, services and sites. Regarding ST applications, there are no specific applications approved by all researchers as a whole collection of ST applications. The establishment of ST in the West Bank might need some help with the financial, political, managerial, awareness, infrastructure and governmental levels. Accordingly, there is a need to focus on cooperation to limit the effects of these challenges. However, there is still a high potential to set up a ST platform in the West Bank.

ST can bring advantages and disadvantages to the stakeholders and tourists on the West Bank. It can help develop tourism products in the West Bank using modern technologies, improve the information management system, target a more comprehensive range of markets, facilitate the tourist experience and advance the destination's competitive advantage. On the other hand, it can cause some disadvantages, such as job loss, especially in the tourist guides sector, because using smart guides will affect the work of human tourist guides. Other disadvantages can happen, such as cyber-crimes and privacy issues as well.

From an empirical perspective, this study is the first to focus on stakeholders' views in the context of ST in a developing destination (Palestine) and a destination under occupation. This study revealed new findings regarding the disadvantages of ST, unlike other research studies focussing on the general advantages of ST. This study provides further information for future researchers regarding the challenges that might face in developing the ST industry. The current study provides a comparison material used by researchers to compare set and developing destinations and the use of ST elements and applications within each destination. Most previous studies shed light on the development of ST in more advanced case studies. Therefore, the current study indicated many similarities between this developing destination and other more advanced and developed destinations. This study enriches the literature with additional material for future studies focussing on stakeholders' perspectives on ST.

From a managerial standpoint, the outcomes focused on the importance of having a strategic plan that includes developing ST in the destination plans. This is a cooperative role between all the related sectors in the destination, including the public sector, private sector, NGOs and civil society, within the planning process. The destination should follow and learn from the other experiences and updates used by other destinations or service providers. This role is highly recommended for the private and, in some cases, the public sectors.

Cooperation work should be conducted to ensure the successful completion of any work and reach sustainability goals. In the case of ST, as it is a new type of tourism based on continuous development, the cooperation work, in this case, should also include international parties and other non-direct parties, such as the technology sector. ST is based on the use of ICT, which is a continuously developing sector. Therefore, it is essential to keep following and using updated innovations and technologies within the tourism sector.

This research has some shortcomings. The first restriction of this study was the political restrictions and the checkpoints, which limited the reach of some of the participants who reside in Jerusalem or other cities outside of the West Bank, which delayed the time of the interviews or converted it to be done through a digital platform. Secondly, the sample of this study was small in tourism stakeholders in the West Bank.

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