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Current Issues in Tourism

ISSN: 1368-3500 (Print) 1747-7603 (Online) Journal homepage: www.tandfonline.com/journals/rcit20

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To cite this article: Jennie Gelter, Maria Lexhagen & Matthias Fuchs (2021) A meta-narrative analysis of smart tourism destinations: implications for tourism destination management, Current Issues in Tourism, 24:20, 2860-2874, DOI: 10.1080/13683500.2020.1849048

To link to this article: https://doi.org/10.1080/13683500.2020.1849048

Published online: 15 Dec 2020.

CURRENT ISSUES IN TOURISM
2021, VOL. 24, NO. 20, 2860–2874
https://doi.org/10.1080/13683500.2020.1849048

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A meta-narrative analysis of smart tourism destinations: implications for tourism destination management

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ABSTRACT

The concept of smart tourism destinations has gained increased interest in tourism research. In this study, we show how previous research has shaped the current discourse on smart tourism destinations. By analysing meta-narratives, we outline how the use of language has influenced the research domain of smart tourism destinations. When the scope of a research field is broad and still unclear, a systematic meta-narrative analysis of the literature is recommended, to provide a holistic view and an understanding of how narratives unfold over time. Our findings highlight that there are certain words that dominate the contemporary discourse in this research field, presented as meta-narratives of smart tourism destinations. Our study shows how language plays an important role in providing frameworks for the research discourse and offers a legitimation of master ideas. By analysing the language used in published scientific texts for describing and defining smart tourism destinations, we identify the meta-narratives that build major language-based concepts and how these have formed the research field of smart tourism destinations.

ARTICLE HISTORY
Received 23 June 2020
Accepted 3 November 2020

KEYWORDS
Smart tourism destinations; meta-narrative analysis; destination management

Introduction

While tourism scholars continue to argue that the concept of smart tourism destinations is fully understood neither in practice nor as a scientific concept (Gretzel & de Mendonça, 2019), some key aspects found in definitions and descriptions can be used for adding new perspectives to our understanding of destinations and their management (Femenia-Serra & Ivars-Baidal, 2018; Ivars-Baidal et al., 2019). One such key aspect is *information technology*, which plays a central role in the development and growth of the tourism industry (Werthner & Klein, 1999; Buhalis & Law, 2008). With the widespread use of Information and Communication Technologies, ICTs, the term 'smart' has become a new catchword to describe everything that is assumed to be 'enhanced' by means of ICT (Werthner et al., 2015; Gretzel, Sigala et al., 2015).

The concept of smart tourism destinations emerged as ICTs came to be viewed as major drivers of destination competitiveness (Buhalis & Amaranggana, 2015; Del Chiappa & Baggio, 2015). However, despite the growing number of studies on smart tourism destinations, several scholars argue that the notion of 'smart', especially with regard to tourism destinations, is still conceptually unclear (Buonincontri & Micera, 2016). From a *practitioner's* perspective, for example, the various tourism stakeholders need improved explanations for understanding the concept if it is to have an impact on destination management (Gretzel & de Mendonça, 2019). In fact, according to Gretzel and de

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Mendonça (2019) the *understanding* of 'smart' is an important and critical aspect, which has thus far not been discussed in the tourism literature, and further stress that most published research focuses on technology and governance. From a *research* perspective, there is awareness that the theoretical foundations of 'smart' remain scientifically unclear (Li et al., 2017). Therefore, there is a need for further research in order to clarify the concept of smart tourism destinations and to better recognize the elements it is comprised of.

The way tourism destination management is understood has changed due to the increased use of ICTs (Buhalis & Law, 2008; Xiang, 2018). The link between ICTs and destination management was first discussed in the late 1980s due to the emergence of the first Information Technology, IT-based destination management systems (Bruce, 1987). The interactions between travellers and the technological environment of devices, constituting the *digital tourism ecosystem*, also shaped the role of destination management (Benckendorff et al., 2014). Consequently, traditional definitions of and approaches to destination management were challenged (Ivars-Baidal et al., 2019). In particular, the increased use of technology in tourism destinations requires structural and organizational changes as destinations become increasingly *integrated* with the global digital ecosystem (Gretzel, Werthner et al., 2015; Ivars-Baidal et al., 2019). These profound structural changes have caused tourism destination systems to become difficult to manage and predict (Baggio & Sainaghi, 2011). Consequently, management has become a new challenge that was expected to be solved by the use of new ICTs, which, in turn, led to the emergence of smart tourism destinations (Jovicic, 2016; Xiang, 2018).

Tourism scholars have been criticized for producing few theories of their own (Xin et al. 2013; Stergiou & Airey, 2018). In particular, there is a lack of *conceptual research* (Xin et al., 2013). This is a serious drawback, as concepts, through their descriptive powers and as the building blocks of theory, serve critical functions in the sciences (Tähtinen & Havila, 2018). More specifically, if studies focusing on the same phenomenon are using a variety of labels and terms to refer to it, without explicit definitions or commonly agreed descriptions, the consequence is conceptual confusion (Suddaby, 2010). Therefore, since we could identify a lack of clarity regarding the concept, and as there is not *one* established definition of smart tourism destinations, it seems relevant to systematically identify conceptual advancements and consensus within scholarly literature (Femenia-Serra & Ivars-Baidal, 2018). For the article at hand, the analysis focuses on language and categories of language used in definitions and descriptions that has influenced the research domain of smart tourism destinations. First, we will present the method employed, followed by a presentation of major findings and the implications for destination management. Finally, a platform for developing new and complementary research approaches is offered.

Methodology

Conceptual research encourages a systematic review of published knowledge to clarify scientific concepts (Dreher, 2003). As an approach to systematic literature review, the methodology of meta-narrative analysis was developed by Greenhalgh et al. (2005). Especially in contexts where the scope of a research field is still unclear, with no universally agreed definitions, a meta-narrative analysis shows its specific strength in providing a holistic view of major concepts forming the particular research (sub)-domain (Greenhalgh et al., 2005). Table 1 presents the process of meta-narrative analysis as applied to this study, according to Greenhalgh et al. (2005).

We follow Lyotard's (1979/1984) concept of 'meta-narrative', also known as 'grand narrative', which is a perspective that guides perceptions about a phenomenon. The method of meta-narrative is discussed in critical theory and in post-modernism as a narrative *about* narratives of experiences or knowledge that offer a legitimation of a master idea (Lyotard, 1979/1984). Lyotard (1979/1984) observes that modernism relies on meta-narratives, which he argues hide various contradictions and inconsistencies. Postmodernism, on the other hand, criticizes meta-narratives as incapable of

Table 1. Phases in meta-narrative analysis, according to Greenhalgh et al. (2005, p. 420).

Phases in meta-narrative analysis
(1) *Planning phase*
1. (a) Outline the initial research questions.
(2) *Search phase*
1. (a) Electronically search for papers in key databases, 2. (b) Search for seminal papers by tracking citations of references. Evaluate these according to comprehensiveness and contribution to work within the tradition.
(3) *Mapping phase* Identify:
1. (a) The key elements of the research paradigm (conceptual, theoretical, methodological), 2. (b) The main findings of the research, 3. (c) The prevailing language used to describe and define the concept.
(4) *Appraisal phase*
1. (a) Evaluate each study for its validity and relevance to the research questions, 2. (b) Extract and collate the key results.
(5) *Synthesis phase*
1. (a) Identify the key dimensions of the concept that has been researched, 2. (b) Analyse the conceptual and descriptive concepts through different types of definition, 3. (c) Consider the dimensions in turn and give a narrative account of the contributions.

representing reality and giving very little space for alternative views of the world (Lyotard, 1979/1984). Instead, postmodernism focuses on micro narratives, and as Patton (2001, p. 11875) stresses, 'accept[s] the plurality of micronarratives and address[es] the conflicts that arise other than through the imposition of a single master narrative'.

Therefore, the method thus neither achieves 'proof' of ideas, nor offers definite conclusions, but rather provides useful support in moderating an ongoing scientific debate (Kincaid, 2004). Thus, according to Badke (2012), the key to meta-narrative analysis is to seek a better way of seeing. In fact, by analysing prevailing *grand narratives* and by coming to an understanding of them, tourism scholars should be helped to understand and contextualize the concept for their further research.

The literature emphasizes that definitions are important expressions of the meaning of a concept, and Copi et al. (2018) stress that they can be divided into stipulative, lexical, précising, theoretical, and persuasive categories. A *stipulative* definition assigns meanings to a word, such as technical terms; e.g. *smart tourism destinations consist of three ICT components: Cloud Services, the Internet of Things (IoT), and the End-User Internet Service System*. A *lexical* definition reports the extant meanings of a word; e.g. *a smart tourism destination facilitating access to tourism products through ICT-based tools*, while a *précising* definition adds sharpness to a word with vague meanings; e.g. *a smart tourism destination is a digitally connected tourism destination*. A *theoretical* definition provides a word with its scientific meanings to capture a more comprehensive meaning; e.g. *smart tourism destinations consist of platforms where information on tourist behaviour, tourism consumption, and resources are integrated and then fed back to the various stakeholders*. Finally, a *persuasive* definition assigns meaning to a word through expressive rather than informative language; e.g. *smart tourism destinations harness the available technological tools to enable pleasure and enhance experiences for tourists at the same time as increasing profits for the organizations and destinations*. These different types of categories are used as interpretative guidelines (synthesis phase, Table 1) to analyse the language used in published

Table 2. Number of hits for the keyword combination.

Database	'Smart Tourism Destination'	'Smart Tourism Destinations'	No. scanned	No. analyzed
Google scholar	745	1,220	309/144	68
Wiley Online Library	1	1	2	1
Web of Science	47	38	30	17
Taylor & Francis Online Journals	17	15	11	8
ScienceDirect	34	34	17	8
Academic Search Elite	3	2	2	1

scientific texts for describing and defining smart tourism destinations. We summarized the content of the selected articles in order to identify the meta-narratives through the use of language.

For the search phase of the meta-narrative analysis (Table 1), a database search was conducted with the following keyword combination: 'smart tourism destination(s)'. The combination 'smart destination(s)' was excluded due to significantly more articles being found using the 'smart tourism destination(s)' combination, the results of which also contained overlaps with 'smart destination(s)'. We used the following databases: Google scholar, Wiley Online Library, Web of Science, Taylor & Francis Online Journals, ScienceDirect, and Academic Search Elite. Table 2 summarizes the number of hits for the keyword combination for each database.

The results from Google Scholar were used and the other databases excluded due to overlaps, since articles found there also appeared in Google Scholar. In total, 1,220 hits were scanned according to the 'smart tourism destination(s)' keyword combination. For the meta-narrative mapping phase, the 1,220 hits were then scanned according to the following inclusion criteria: Is the article in the tourism research field? The result was a corpus of 309 research articles. The 309 hits were then further scanned according to title, keywords, journal, book chapter and conference article, and non-English articles were excluded according the criteria of specifically addressing the research field of smart tourism destinations. This resulted in 144 research articles. These 144 articles were subsequently more strictly narrowed down by scanning the full text and ascertaining whether the article had been cited by other scholars within the research field of smart tourism destinations. The final result was 68 articles with which to conduct a meta-narrative analysis. Both empirical and theoretical/conceptual articles on smart tourism destinations were included in the analysis. The search period for published scientific articles was not defined by a specific starting date. Therefore, the search results include all hits until 2019. To extract textual descriptions, definitions, methodological approaches and main research findings in the mapping phase (Table 1), the NVivo 12 (Edhlund & McDougall, 2019) software was used for coding textual content of the 68 articles.

Results

The majority of existing research on smart tourism destinations is conceptual in nature, even though case studies have increased over the years (Boes et al., 2016; Buonincontri & Micera, 2016). Although empirical works have increased, our analysis shows that the majority of studies are based on rather small samples. Therefore, when aiming to generalize their findings, these empirical studies risk lacking validity and reliability. The analyzed empirical studies comprise online questionnaires and physical survey-based approaches, interviews (Femenia-Serra, Perles-Ribes et al., 2019; Buhalis & Amaranggana, 2015), Delphi methods (Ivars-Baidal et al., 2017; Ivars-Baidal et al., 2019), and surveys based on expert groups (Vargas Sánchez, 2016). Finally, machine-learning is used for big data, such as sentiment analysis (Kim et al., 2017) and travel blog analysis (Marine-Roig & Clavé, 2015).

The prevailing language used in the 68 articles indicates that there are a number of principal words that are often deployed to *describe* a smart tourism destination (mapping phase, Table 1).

Table 3. Principal words to describe smart tourism destinations.

Principal words	Frequency	Author[a]
Smart ICT – Cloud Computing, Internet of Things and End-User Devices	40	2; 5; 7; 8; 9; 10; 13; 14; 15; 16; 17; 18; 20; 22; 23; 25; 28; 30; 32; 33; 35; 36; 37; 40; 41; 44; 45; 49; 48; 52; 51; 52; 54; 56; 59; 60; 63
Smart city principles	22	1; 8; 14; 15; 27; 29; 34; 36; 41; 45; 53; 59; 60; 61; 62; 64; 65; 67
Interconnection	22	7; 12; 17; 19; 21; 25; 26; 32; 32; 34; 35; 38; 44; 47; 51; 52; 53; 55; 57; 60; 63; 68
Enhanced tourist experiences	14	2; 4; 6; 9; 14; 22; 25; 29; 32; 39; 41; 48; 60; 67
Knowledge transfer	12	13; 23; 25; 29; 32; 38; 46; 47; 54; 56; 60; 65
Innovation	11	1; 2; 3; 9; 17; 22; 23; 25; 28; 39; 49
Competitiveness	11	1; 2; 3; 4; 9; 31; 43; 45; 48; 49; 60
Sustainability	9	1; 12; 24; 28; 43; 45; 51; 59; 64
Information/data sharing	9	18; 23; 29; 38; 45; 56; 57; 58; 63
Human and social capital	7	1; 3; 20; 26; 41; 46
Enhance quality of life	7	11; 16; 39; 42; 43; 45; 66
Value co-creation	6	12; 17; 26; 31; 34; 49

[a]Names of the authors: 1: Boes et al. (2015), 2: Gretzel et al. (2015a), 3: Buhalis (2015), 4: Buonincontri and Micera, (2016), 5: Wang et al. (2013), 6: Lamsfus and Alzua-Sorzabal (2013), 7: Koo et al. (2016), 8: Xiang et al. (2015), 9: Buhalis and Amaranggana (2013), 10: Vargas Sánchez (2016), 11: Buhalis and Amaranggana (2015), 12: Boes et al. (2016), 13: Cavalheiro et al. (2020), 14: Savic and Pavlovic (2018), 15: Abdel Rady and Khalf (2019), 16: Huertas et al. (2019), 17: Femenia-Serra et al. (2019a), 18: Tussyadiah (2015), 19: Vargas-Sánchez and Saltos (2019), 20: Khan et al. (2017), 21: Sheehan et al. (2016), 22: Ivars-Baidal et al. (2019), 23: Liberato et al. (2018), 24: Perles Ribes and Ramón-Rodríguez (2018), 25: Ammirato et al. (2018), 26: Arenas et al. (2019), 27: Ballina et al. (2019), 28: Bernabeu et al. (2016), 29, Del Chiappa and Baggio (2015), 30: Del Vecchio et al. (2018), 31, Fabry and Blanchet (2019), 32: Femenia-Serra and Ivars-Baidal (2018), 33: Ghaderi et al. (2018), 34: González-Reverté (2019), 35: Gretzel and de Mendonça (2019), 36: Hodžić and Alibegović (2019), 37: Femenia-Serra (2018), 38: da Costa Liberato et al. (2018), 39: Romero et al. (2019), 40: Rotchanakitumnuai (2017), 41: Marine-Roig and Clavé (2015), 42: Jeong and Shin (2019), 43: Kumar (2016), 44: Gretzel (2018), 45: Femenia-Serra and Neuhofer (2018), 46: Hernández-Martín et al. (2017), 47: Jovicic (2019), 48: Femenia-Serra et al. (2019b), 49: Cimbaljević et al. (2019), 50: Kim et al. (2017), 51: Perles Ribes and Ivars-Baidal (2018), 52: Gahr et al. (2014), 53: Shafiee et al. (2019), 54: Jovicic (2016), 55: Baggio (2019), 56: Ivars-Baidal et al. (2017), 57: Jasrotia and Gangotia (2018), 58: Kasahara et al. (2017), 59: Mandić and Praničević (2019), 60: Trunfio and Campana (2019), 61: Tran et al. (2017), 62: Sigalat-Signes et al. (2019), 63: Sedarati and Baktash (2017), 64: Mandić and Praničević (2019), 65: Gretzel and Scarpino-Johns (2018), 66: Gomes et al. (2017), 67: Lamsfus et al. (2015).

These principal words emerged from the NVivo 12 coding as most frequently used in full texts, abstracts and keywords (Table 3).

Extracting and collating these principal words shows that 'Smart ICT – Cloud Computing, Internet of Things and End-User Devices' is among the most frequently used, followed by 'Smart city

Table 4. Core words used to define smart tourism destinations.

Core words	Frequency	Author[a]
Smart ICT – Cloud Computing, Internet of Things and End-User Devices.	34	1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 12; 13; 14; 15; 16; 17; 20; 22; 23; 24; 26; 27; 28; 29; 30; 32; 33; 34; 35; 36; 37; 38
Enhanced tourist experiences.	17	4; 5; 7; 8; 9; 11; 14; 17; 19; 20; 23; 24; 26; 30; 36; 37
Interconnected stakeholders and tourists.	15	7; 10; 11; 12; 14; 17; 19; 20; 23; 24; 25; 28; 29; 30
Enhanced quality of life.	13	2; 7; 14; 17; 18; 20; 21; 22; 24; 30; 35
Improved innovation	13	3; 14; 20; 21; 22; 24; 27; 28; 30; 31; 37; 37
Personalised information sharing	11	1; 2; 7; 10; 11; 13; 13; 15; 19; 33; 37
Enhanced sustainability	10	2; 7; 12; 18; 20; 24; 27; 30; 37
Value co-creation	8	1; 2; 5; 7; 12; 13; 34; 36
Improved services	8	1; 2; 8; 12; 13; 21; 22; 28
Enhanced competitiveness	5	3; 4; 23; 26; 34
Smart City principles	5	2; 3; 8; 9; 18

[a]Names of the authors: 1: Boes et al. (2015), 2: Gretzel et al. (2015a), 3: Buhalis (2015), 4: Buonincontri and Micera (2016), 5: Wang et al. (2013), 6: Lamsfus and Alzua-Sorzabal (2013), 7: Koo et al. (2016), 8: Lamsfus et al. (2015), 9: Xiang et al. (2015), 10: Buhalis and Amaranggana (2013), 11: Buhalis and Amaranggana (2015), 12: Boes et al. (2016), 13: Abdel Rady and Khalf (2019), 14: Femenia-Serra, Perles-Ribes et al. (2019), 15: Tussyadiah (2015), 16: Khan et al. (2017), 17: Liberato et al. (2018), 18: Perles Ribes and Ramón-Rodríguez (2018), 19: Arenas and Urena (2019), 20: Bernabeu et al. (2016), 21: Del Vecchio et al. (2018), 22: Femenia Serra and Perea Medina (2016), 23: Femenia-Serra and Ivars-Baidal (2018), 24: Ghaderi et al. (2018), 25: Hodžić and Alibegović (2019), 26: Femenia-Serra (2018), 27: da Costa Liberato et al. (2018), 28: Marine-Roig and Clavé (2015), 29: Kumar (2016), 30: Gretzel (2018), 31: Femenia-Serra and Neuhofer (2018), 32: Hernández-Martín et al. (2017), 33: Jovicic (2019), 34: Cimbaljević et al. (2019), 35: Jovicic (2016), 36: Jasrotia and Gangotia (2018), 37: Sigalat-Signes et al. (2019), 38: Gretzel and Scarpino-Johns (2018).

principles', 'Interconnection' and 'Enhanced tourist experiences' (Table 4). Although Femenia-Serra and Neuhofer (2018) state that there is a research gap in smart tourism destination literature focusing on aspects of experiential tourism, 'Enhanced tourist experiences' are still found among the principal words used to describe a smart tourism destination. 'Smart city principles' are also commonly used and are seen as the foundation for developing smart tourism destinations. There is also a close connection between them and the goals of smart city development (Gretzel, 2018).

When identifying the foundations for smart tourism destinations, our study makes a distinction between *principal words* (textual descriptions) and *core words* (definitions). Nevertheless, the multiple definitions are still dependent upon how principal words have been used, interpreted and operationalized. Thus, a lack of clarity and logical use of combinations of principal words causes definitions to be undermined and, consequently, definitions to become ambiguous (Govier, 2013). In the following section, the core words used to define smart tourism destinations will be further discussed in order to unveil the building-blocks of prevailing definitions.

As to how smart tourism destinations are explicitly *defined* (mapping phase, Table 1) in the current research literature, 38 of the 68 included articles did portray and discuss definitions. Table 4 shows the identified core words used in *defining* smart tourism destinations.

After extracting and collating the definitions in the literature, Table 3 shows that, 'Smart ICT – Cloud Computing, Internet of Things and End-User Devices' is among the most frequently used core words. This is followed by 'Enhanced tourist experiences', 'Interconnected stakeholders and tourists', and 'Enhanced quality of life'.

A further analysis shows that *persuasive* definitions and descriptions (Copi et al., 2018; Lai & Li, 2016) are most frequently used, such as 'Enhanced tourist experiences', 'Enhanced quality of life' and so on (Tables 3 and 4). *Persuasive* definitions assign meaning to a word through expressive rather than informative language (Copi et al., 2018; Lai & Li, 2016), and Govier (2013, p. 77) states that 'persuasive definitions attempt to alter our attitudes and beliefs by redefining terms instead of stating reasons and arguments'. When reading merely the definitions, we would not have enough information to guide us to the intended meanings. The definitions are thus ambiguous (Govier, 2013). In fact, vagueness – which is a lack of distinct meaning – arises when a word is indeterminate, i.e. is not sufficiently clear in order to convey the necessary information in a given context (Govier, 2013). As Govier argues, to avoid vagueness and ambiguity, words should be used to mark out boundaries; otherwise, several different bounded areas are interpreted. To give an example, 'Enhanced quality of life' and 'Enhanced tourist experiences' are concepts frequently used to define and describe smart tourism destinations. But it cannot be known to whom the words are directed. Even if residents and tourists are identified, it is not *clearly* and *explicitly* bound in the definitions; i.e. who is the *intended* resident and tourist, and more importantly, who is not? This is an important example of vagueness and ambiguity found in the literature on smart tourism destinations.

Additionally, ambiguity in definitions and descriptions, resulting in more than one distinct and plausible interpretation, will have practical consequences for both tourism destination management and scientific practice. Govier (2013, p. 272) emphasizes that 'a lack of clarity can seriously undermine our efforts to understand and apply the research'. In a similar way, if the building-blocks of the definitions – the core words – are loose, they can be deceptive. To give an example, Govier (2013, p. 340) argues that 'when the analogue is too related to attitudes, emotions, values etc., this can easily be carried over to the subject, even if there is no obvious similarity'. Therefore, 'Enhanced quality of life' easily appeals to positive emotions, but the point is not convincing, as there is no guarantee of an enhanced quality of life at smart tourism destinations. Additionally, there is a lack of definitional clarity regarding 'quality of life' in the context of smart tourism destinations, and too much focus on quality of life in relation to an increased use of ICTs. There is a risk that other aspects of quality of life are overlooked, such as the relation to sustainability and over-tourism.

In conclusion, by summarizing the language used in definitions, descriptions, applied methodologies, and research questions, we give a meta-narrative account of the research field of smart

tourism destinations (appraisal and synthesis phase). Below, we describe the meta-narratives that are driving the research field; i.e. what has formed the backdrop for the 'storyline' of smart tourism destinations (Greenhalgh et al., 2005).

Meta-narrative

Our result indicates that a smart tourism destination is portrayed as building on three forms of ICT: Cloud Computing, Internet of Things (IoT) and End-User Devices. According to the literature, these three major ICT infrastructures seem to be essential for a smart tourism destination (Boes et al., 2015; Buhalis & Amaranggana, 2013; Buonincontri & Micera, 2016), and are also considered a 'competitive advantage' (Buhalis & Amaranggana, 2013). Accordingly, Xiang et al. (2015, p. 143) stress that: 'These recent developments have culminated in the notion of the smart destination, whereby ICT is touted as the driver and foundation for destination innovation and competitiveness.' In fact, these types of ICT infrastructures are discussed in the literature as providing the capacity to dynamically interconnect destination stakeholders through platforms that collect and process data and exchange information (Vargas-Sanchez, 2016; Gretzel, Sigala et al., 2015). Therefore, following the analyzed literature, the aim of ICT is to provide valuable information about tourists' activities, thereby enriching and enhancing their experiences (Femenia-Serra, Neuhofer et al., 2019). However, although the tourist experience is considered fundamental to smart tourism destinations, the research field is in great need of scrutinizing how so called 'smart tourism experiences' occur and under which circumstances and contextual conditions. In a similar vein, Gretzel, Werthner et al. (2015, p. 185) emphasize that 'whether smart tourists are actually having better experiences has yet to be empirically investigated.'

Beyond the impact of smart technologies on smart tourist experiences and destination competitiveness, its impact on residents' quality of life is frequently addressed in the literature (Boes et al., 2015; Koo et al., 2016; Liberato et al., 2018). However, again, there is an absence of research that critically discusses what 'quality of life' really means in the context of smart tourism destinations, as it is almost taken as a given that a better quality of life will emerge in parallel with the development of ICT (Shapiro, 2005). The majority of the reviewed articles that focus on aspects of quality of life and enhanced tourist experiences are conceptual. However, it is agreed in the literature that the aspects of quality of life and experience outcomes are in need of empirical investigation in actual smart tourism destination projects to test this hypothesis (Femenia-Serra & Neuhofer, 2018; Gretzel, Sigala et al., 2015). Even more critically, Gretzel, Sigala et al. (2015) conclude that research on enhanced experiences needs to be counterbalanced with more empirical research on the drawbacks of the presence of too much technology and the potential psychological and health risks with being 'bombarded with data' (Gretzel, Sigala et al., 2015, p. 185). Additionally, from the tourist perspective, Femenia-Serra and Ivars-Baidal (2018) show through case studies that, to actually enhance the experience outcome, destination managers need to adopt a more user-centric or human-centric concept of 'smartness'. Thus, the same authors emphasize that as smartness is an emerging paradigm, research on 'experiences and tourists' participation in smart tourism requires more efforts' (Femenia-Serra & Neuhofer, 2018, p. 145).

The development of smart cities has also been considered a foundation for the formation of smart tourism destinations (Buhalis & Amaranggana, 2013; Xiang et al., 2015). Additionally, the concept of the 'Smart City Wheel', a tool to support the development of smart city strategies, was developed by Cohen (2012). Essentially, the tool covers six principles of smartness: (1) Smart Governance, (2) Smart Environment, (3) Smart Mobility, (4) Smart Economy, (5) Smart People, and (6) Smart Living (Buhalis & Amaranggana, 2013). These smart city principles have also been adopted and discussed in relation to smart tourism destinations (Buhalis & Amaranggana, 2013). For example, Gretzel, Sigala et al. (2015, p. 180) stress that 'many of the smart tourism initiatives were born out of smart city projects'. Analysing these smart city principles through the lens of different types of definition, the word 'smart' used in relation to the notions of governance, environment, mobility, economy, people and living are all

examples of vagueness; i.e. there is a lack of distinctness of meaning (Govier, 2013). The main problem is that the prefix 'smart' is not sufficiently clear in these contexts, resulting in unclear messages (Govier, 2013). To give a concrete example, at which point would governance be considered smart? Another question would be, how 'smart' does governance need to be? Or how 'smart' does an economy have to be? Unfortunately, even the basic question, 'What *is* a smart economy?' remains unanswered in the literature at this time. In fact, these definitional boundaries are neither precisely or explicitly discussed nor problematized, resulting in implicit though vague dichotomies, such as 'smart' vs 'not smart'. In fact, these semantic categories are strongly related to 'the traditional and neoclassical theories of growth and development' (Albino et al., 2015, p. 10; Samerski, 2018; Gretzel et al., 2020). Applying smart city principles to smart tourism destinations has, however, been criticized due to the risk of urban bias (Gretzel, 2018). But, despite smart cities and smart tourism destinations having elements in common (especially the technological foundation) their objectives are different (Tran et al., 2017). Khan et al. (2017) stress that one difference between the two concepts is that smart cities mainly serve their residents, while smart destinations typically focus on visitors and tourists. However, again, this discussion lacks clarity, as, in social reality, there are no differences between residents of a *city* and those at a *destination*. Accordingly, Ivars-Baidal et al. (2017) emphasize that smart city solutions are based more on vendor push than city government pull. They therefore stress that this is a 'situation that tends to be reproduced in the smart destination initiatives' (Ivars-Baidal et al., 2017, p. 4), which may result in incorrect applications of ICTs that do not change the scope of management of the tourism destination. As briefly highlighted, several case studies have been conducted in relation to smart cities and smart tourism destinations. One example is the case study by Tran et al. (2017, p. 201), which concludes that:

> Even small destinations, which are not considered smart and do not have as their objective to get that recognition, are evolving in the direction of applying new technology with the aim to improve their tourism services and to be more competitive.

However, Sigalat-Signes et al. (2019, p. 7) can show from their data that 'adapting a smart model is largely going to be a very laborious process, as the sector is very traditional.' The implementation of ICT in the tourism destination context is also seen as very costly, giving rise to questions about its return on investment (Sigalat-Signes et al., 2019).

Smart tourism destinations are also discussed in terms of innovation and sustainability (Boes et al., 2016). Sustainability is considered in the literature to be ensured through new models of destination management (Ivars-Baidal et al., 2019). Accordingly, Vargas-Sánchez and Saltos (2019) emphasize that tourism destinations determined to become smart need more knowledge about implementing technological tools and sustainability. For example, Perles Ribes and Ivars-Baidal (2018, p. 166) propose a theoretical model that transmits smartness to sustainability, which thereby 'facilitates the understanding of the causal mechanisms which link smartness and sustainability'. However, they conclude that this model needs to be validated through empirical research, as the relationship between sustainability and smart tourism destinations is conceptually emphasized (Perles Ribes & Ivars-Baidal, 2018). Therefore, from a practical perspective, these 'causal mechanisms which link smartness and sustainability' are highly ambiguous and consequently fail to guarantee sustainability at all. A further definition of smart tourism destinations that relates to sustainability and innovation is coined by Lopez de Avilia (in Xiang et al., 2015), 'The smart destination as an innovative tourist destination builds on an infrastructure of state-of-the-art technology, which guarantees the sustainable development of tourist areas'. Again, this is a persuasive definition, as the notion of 'sustainability' is argued to be 'guaranteed' as long as smart destinations build upon *state-of-the-art* technology. Although Perles Ribes and Ivars-Baidal (2018) state that the 'relationship between smartness and sustainability cannot be conceived linearly' (Perles Ribes & Ivars-Baidal, 2018, p. 166), persuasive arguments occur frequently, thereby dominating definitional concepts of smart tourism destinations. However, although the importance of sustainability is common knowledge, its relationship with smart tourism destinations lacks robust investigation (Boes et al., 2016). In fact, the articles included

and systematically reviewed in our study use the concept of sustainability mostly in a rhetorical fashion.

Emphasized research gaps particularly concern the link between smart tourism destinations and the global sustainability goals (Boes et al., 2016). In 2015, UN member states agreed on Agenda 2030, a universal agenda containing 17 global goals for economic, social and environmentally sustainable development. Achieving these goals requires collaboration between governments, the private sector, civil society and the public. Regrettably, these collaborative aspects are, to the best of our knowledge, not addressed in the literature on smart tourism destinations. In order to advance sustainability, Sheehan et al. (2016, p. 552) says that 'new approaches are needed that promote stakeholder collaboration and learning on an organizational as well as destination level'.

From a destination management perspective, managers need to understand 'the complexity between the different core components of smartness and how they are interlinked' (Boes et al., 2016, p. 120). Similarly, Gretzel, Sigala et al. (2015, p. 185) state, 'what business models can and should be adopted in this context remains a mystery. Therefore, more research from an organizational and management perspective is needed.' More research is also needed as to how Destination Management Organisations, DMOs, may exploit the 'disruptive power of ICT' to facilitate 'knowledge sharing and collaboration' (Trunfio & Campana, 2019, p. 7). Ivars-Baidal et al. (2019) likewise seek to analyse management scenarios by applying the concept of smart tourism destinations. However, as the focus is on business efficiency, there is an absence of literature that addresses a bottom-up approach, thereby risking an overshadowing of the core for implementing and accepting socially smart developments; namely, the humans (Cavalheiro et al., 2020).

Empirical findings by Ivars-Baidal et al. (2019), among others, further show that the smart tourism destination approach still suffers from conceptual imprecision and is mainly conceptualized and propagated by the interests of technology companies. Additionally, Ivars-Baidal et al. (2017) show that the technological impact will require new management scenarios for tourism destinations. However, most tourism destinations are currently not prepared for these investments due to technological complexity (Ivars-Baidal et al., 2017). Ivars-Baidal et al. (2019) also highlight destinations with more agile organizational structures that will be favoured in the process of ICT adoption.

The interpretative categories of our study reflect lexical definitional concepts (Copi et al., 2014), such as 'Smart ICT' and 'Smart City principles', which are stated as essential attributes. Copi et al. further stress that definitions must not be circular. However, when analysing the identified definitional concepts, clear patterns of circularity can be seen, particularly due to the use of the catchword 'smart'. For example: 'Smart tourism involves multiple components and layers of smart that are supported by ICTs … it refers to Smart Destinations, which are special cases of smart cities' (Gretzel, Sigala et al., 2015, p. 180). This implies the risk of circular explanations when defining the concept. More specifically, even if smart tourism destinations are defined as meaning 'Smart ICT and Smart City principles', the meaning of the smart tourism destinations concept has not been adequately determined by such definitional concepts, especially not by use of the word 'smart.'

These definitional concepts are also persuasive in nature as they are 'formulated and used to influence attitudes or stirring emotions, relying upon the use of emotive language' (Copi et al., 2014, p. 89, 2018). In fact, when persuasive definitions are used, important issues are often at stake. Such language can often be found in political statements (Govier, 2013). Interestingly, Gretzel (2018) underlines the importance of considering political agendas related to smart tourism and is thus fully aware of the use of persuasive language. In fact, persuasive definitions contain conceptual words with strong emotional components, with either positive or negative connotations. Thus, it is important to be aware of patterns that preserve connotations while changing the denotation of the concept. A concrete example highlighted by Gretzel and de Mendonça (2019, p. 576) is the current persuasive conceptualization of smart tourism destinations in terms of discourses being 'rooted in techtopian ideology and shaped by the rhetoric of powerful corporations' to sell the concept. This smart tourism destination rhetoric risks providing an idealized version of a

tourism destination and, as Gretzel and de Mendonça (2019, p. 576) strongly emphasize, 'run[s] the risk of alienating challenges such as over-tourism' and also sustainability.

After summarizing the above-mentioned use of language for defining and describing smart tourism destinations, our study shows that there are several research gaps and recommendations for future research on smart tourism destinations. Technology, privacy and security, for example, was identified as a research domain in need of more extensive investigation in terms of the privacy and security risks incurred when gathering personal data through ICT tools (Femenia-Serra, Perles-Ribes et al., 2019). A more systemic approach is requested by Shafiee et al. (2019) as an important research issue. This is supported by Sedarati and Baktash (2017) who state that addressing the complexity of smart tourism is needed in order to develop models to scrutinize how the different elements of smart tourism relate to one another. From a management perspective, Mandic and Pranicevic (2019) argue that more research is needed on the involvement of the community at smart tourism destinations. More research is also required regarding business models designed explicitly for smart tourism destinations (Tran et al., 2017; Reinhold et al., 2020).

Additionally, the combination of the smart tourism destination approach and the use of ICTs has resulted in the emergence of new scenarios for tourism destination management, according to Ivars-Baidal et al. (2019). There is therefore a need to bridge tourism destination management *theory* and tourism destination management *practice,* and, according to Boes et al. (2015), a holistic perspective is therefore necessary. Since management has become more complex due to an increased use of technology, actors within the smart tourism destination ecosystem experience additional interactions with one another (Boes et al., 2016). It is also crucial to understand which technologies are considered to make a destination smart (Ivars-Baidal et al., 2019), which affects destination management. Altogether, these approaches that have resulted in new management scenarios also relate to how open data and the application of big data analysis techniques (Fuchs et al., 2014) have been applied at tourism destinations. Taken together, the identified definitional concepts indicate that a complex system approach would provide a holistic understanding in order to embrace the various aspects that steer the research field as well as the emergence of the above-mentioned management challenges. In fact, as destination management traditionally considers management from an economic perspective, considering a smart destination as a system means considering both stakeholders and processes in terms of 'belonging and functionality in reference to the local macro-system' (Varra et al., 2012, p. 376). More precisely, a systemic approach to smart tourism destinations would shed light on the various destination management networks (Varra et al., 2012, p. 376). However, Femenia-Serra (2018, p. 438) emphasizes that 'the specific skills and knowledge managers will need within smart destinations haven't been specified to date'. A reason for that might be a lack of cohesion in the research field, as shown in the research literature summarized above.

In sum, we show that the research discourse needs to challenge current master ideas, which are dominated by persuasive use of language, and lift the smart tourism destination concept to meet many of the global challenges societies are facing. We show that there is a lack of theoretical and precising language and that several scholars argue for the importance of study sustainability in the context of smart tourism destinations (Tran et al., 2017; Shafiee et al., 2019). Therefore, we propose that further research directions address and consider the UN global goals for economic, social and environmentally sustainable development. We propose a working definition: A smart tourism destination builds on smart digital infrastructure (*stipulative*) and the principles of sustainability (*lexical*) according to the UN sustainability goals (*precising*), and offers the tourism industry transparent, innovative, creative and learning partnership opportunities (*theoretical*) to more efficiently and sustainably utilize destination tourism resources to improve the tourist and resident experience (*persuasive*).

We also propose additional research perspectives through the lens of *complex adaptive systems* (CAS) theory (Baggio & Sainaghi, 2011). As this is an emerging field of research, the CAS perspective would allow, not only flexibility to acknowledge various concepts, but also a focus on the entire destination system (Baggio & Sainaghi, 2011) instead of a few master ideas as shown in the current use

of language. Therefore, when considering possible research approaches for studying smart tourism destinations, the realisation that it might possess complex characteristics is crucial (Baggio & Sainaghi, 2011). As we could identify a lack of theoretical and precising definitions and descriptions of smart tourism destinations, a CAS perspective would stimulate additional use of language in this context by addressing the whole system. To be specific, as smart tourism aims at operating the whole system (Shafiee et al., 2019), a whole system research approach would not only strengthen the theoretical and precising definitions, but also support the understanding perspectives of smart tourism destinations.

Conclusion

This study shows that the concept of smart tourism destinations is derived mainly from the introduction of ICT infrastructure and efficiency in tourism and destination management. We also found that the majority of definitions refer to the enhancement of experiences, improved information sharing, destination competitiveness and advancement of ICTs. In conclusion, Gretzel and de Mendonça (2019) emphasize that research on smart tourism destinations calls for more *critical* perspectives that challenge both public and academic discourses. Therefore, the research field of smart tourism destinations would benefit from paradigms and ideologies being challenged so as to provide greater context to the research (Hassan et al., 2018). Current research achievements would also 'transcend across into constellations of other disciplines' (Hassan et al., 2018, p. 264) due to more pluralistic and cross-border research approaches.

This study is, to our knowledge, the first that has conducted a meta-narrative analysis on the concept of smart tourism destinations. It has enabled us to discover how the research field risks causing bias in further research on smart tourism destinations. Since research primarily focuses on the implementation of technology (Boes et al., 2015), with a strong market-driven perspective, it is crucial that these important definitions and descriptions are analyzed, in order to enhance the understanding of smart tourism destinations. Using language categories has the advantage of being able to create awareness of the use of words in a language as public instruments for communication (Govier, 2013). However, the disadvantages include the risk of becoming too categorical and uncritically accepting stereotypes as universal generalizations for *all* smart tourism destinations (Govier, 2013).

Because there is a lack of theoretical and empirical clarity regarding smart tourism destinations, destination management will be affected, since there are dominating research ideas and beliefs that tend to steer the research field, and consequently affect destination management practice. Therefore, it is of importance to critically discuss these meta-narratives and instead accept the plurality of this emerging research filed, addressing the conflicts that arise other than through the imposition of a number of master ideas. There exist many conceptual aspects that are not fully elaborated in published scientific texts. This lack of scientific clarity is also an opportunity to nourish the academic discourse by offering new perspectives highlighting the tourism-specific aspects of smartness in the context of tourism destinations.

The limitations of this meta-narrative analysis include the need to make a series of judgments and trade-offs due to the different types of definition. Additionally, the synthesis of the meta-narratives is compiled based on the most frequently used definitional and descriptive concepts. Discussions about the 'storyline' in other concepts for smart tourism destinations are therefore excluded. Another limitation of this study is that it excludes literature on smart tourism destinations from publication outlets *other* than those within tourism. An additional limitation is that the search terms may miss some potentially valid articles since some that do not include the term in their title, abstract, keywords and text may nevertheless be works on the concept.

By highlighting current research on smart tourism destinations, we have shown that accepted knowledge can be challenged, which opens up for additional explorations. For future research about smart tourism destinations, meta-narrative analysis should be done in the context of sense-

making from the perspective of destination management stakeholders. For tourism destinations that are in the process of attempting to become smart destinations, it would be valuable to analyse discrepancies and/or conformity with prevailing research literature. In the future, this nascent research area would also benefit from in-depth reviews of the axioms and mechanisms that are frequently used in the research field of smart tourism destinations. Our review is in no way exhaustive and needs to be supported by more studies about the storylines for other related concepts and orientations of smart tourism destinations.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

Abdel Rady, H., & Khalf, A. (2019). Towards smart tourism destination: An empirical study on Sharm El Sheikh city, Egypt. *International Journal of Heritage, Tourism and Hospitality*, 13(1), 78–95.

Albino, V., Berardi, U., & Dangelico, R. M. (2015). Smart cities: Definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, *22*(1), 3–21. https://doi.org/10.1080/10630732.2014.942092

Arenas, A. E., Goh, J. M., & Urueña, A. (2019). How does IT affect design centricity approaches: Evidence from Spain's smart tourism ecosystem. *International Journal of Information Management*, 45, 149–162.

Ammirato, S., Felicetti, A. M., Della Gala, M., Raso, C., & Cozza, M. (2018). Smart tourism destinations: Can the destination management organizations exploit benefits of the ICTs? Evidences from a multiple case study. In L. Camarinha-Matos, H. Afsarmanesh, & Y. Rezgui. (Eds.), *Collaborative networks of cognitive systems. PRO-VE 2018. IFIP advances in information communication technology* (Vol. 534). Springer.

Badke, W. (2012). Tentative case studies in disciplinary research process instruction. In W. Badke (Ed.), *Teaching research processes: The faculty role in the development of skilled student researchers 2012* (pp. 139–162). Chandos Publishing.

Baggio, R. (2019, September, 7). *Advanced technologies for smart tourism destinations*. International Conference on Developing smart tourism, Ho Chi Minh City.

Baggio, R., & Sainaghi, R. (2011). Complex and chaotic tourism systems: Towards a quantitative approach. *International Journal of Contemporary Hospitality Management*, *23*(6), 840–861. https://doi.org/10.1108/09596111111153501

Ballina, F. J., Valdes, L., & del Valle, E. (2019). The Phygital experience in the smart tourism destination. *International Journal of Tourism Cities*, 5(4), 656–671.

Benckendorff, P., Sheldon, P. J., & Fesenmaier, D. R. (2014). *Tourism information technology* (2nd ed). CABI.

Bernabeu, C., Antonio, M., MazónLópez, J. N., Giner Sánchez, D., Baidal, I., & Antoni, J. (2016). *Big data and smart tourism destinations: Challenges and opportunities from an industry perspective*. New approaches for tourism destinations planning and management: Conceptualization, case studies and problems. Definition of smart tourist destinations models (CSO2014-59193-R) under the Spanish National R&D&I Plan financed by the Ministry of Economy and Competitiveness.

Boes, K., Buhalis, D., & Inversini, A. (2015). Conceptualising smart tourism destination dimensions. In I. Tussyadiah & A. Inversini (Eds.), *Information and communication technologies in tourism 2015* (pp. 391–403).

Boes, K., Buhalis, D., & Inversini, A. (2016). Smart tourism destinations: Ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, *2*(2), 108–124. https://doi.org/10.1108/IJTC-12-2015-0032

Bruce, M. (1987). New technology and the future of tourism. *Tourism Management*, *8*(2), 115–120. https://doi.org/10.1016/0261-5177(87)90013-6

Buhalis, D. (2015). *Working definitions of smartness and smart tourism destination*. http://buhalis.blogspot.co.uk/2014/12/working-definitions-of-smartness-and.html

Buhalis, D., & Amaranggana, A. (2013). Smart tourism destinations. In Z. Xiang & I. Tussyadiah (Eds.), *Information and communication technologies in tourism 2014* (pp. 553–564). Springer.

Buhalis, D., & Amaranggana, A. (2015). Smart tourism destinations enhancing tourism experience through personalisation of services. In I. Tussyadiah & A. Inversini (Eds.), *Information and communication technologies in tourism 2015*. Springer.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management*, *29*(4), 609–623. https://doi.org/10.1016/j.tourman.2008.01.005

Buonincontri, P., & Micera, R. (2016). The experience co-creation in smart tourism destinations: A multiple case analysis of European destinations. *Information Technology and Tourism*, *16*(3), 285–315. https://doi.org/10.1007/s40558-016-0060-5

Cavalheiro, M. B., Joia, L. A., & Cavalheiro, G. M. D. C. (2020). Towards a smart tourism destination development model: Promoting environmental, economic, socio-cultural and political values. *Tourism Planning & Development*, 17(3), 237–259. https://doi.org/10.1080/21568316.2019.1597763

Cimbaljević, M., Stankov, U., & Pavluković, V. (2019). Going beyond the traditional destination competitiveness–Reflections on a smart destination in the current research. *Current Issues in Tourism*, 22(20), 2472–2477.

Copi, I. M., Cohen, C., & McMahon, K. (2014). *Introduction to logic*. Harlow (UK).

Copi, I. M., Cohen, C., & Rodych, V. (2018). *Introduction to logic*. Routledge.

Del Chiappa, G., & Baggio, R. (2015). Knowledge transfer in smart tourism destinations: Analyzing the effects of a network structure. *Journal of Destination Marketing & Management*, *4*(3), 145–150. https://doi.org/10.1016/j.jdmm.2015.02.001

Del Vecchio, P., Mele, G., Ndou, V., & Secundo, G. (2018). Creating value from social big data: Implications for smart tourism destinations. *Information Processing & Management*, 54(5), 847–860.

Dreher, A. (2003). What does conceptual research have to offer? In M. Leuzinger-Bohleber, A. Dreher, & J. Canestri (Eds.), *Pluralism and unity? Methods of research in prychoanalysis* (pp. 109–124). IPA.

Edhlund, B., & McDougall, A. (2019). *Nvivo 12 Essentials*. Lulu.com.

Fabry, N., & Blanchet, C. (2019). Monaco's struggle to become a smart destination. *International Journal of Tourism Cities*, 5(4), 672–684.

Femenia-Serra, F. (2018). Smart tourism destinations and higher tourism education in Spain. Are we ready for this new management approach? In *Information and communication technologies in tourism 2018* (pp. 437–449). Springer.

Femenia-Serra, F., & Ivars-Baidal, J. A. (2018). Do smart tourism destinations really work? The case of Benidorm. *Asia Pacific Journal of Tourism Research*. https://doi.org/10.1080/10941665.2018.1561478.

Femenia-Serra, F., & Neuhofer, B. (2018). Smart tourism experiences: Conceptualisation, key dimensions and research agenda. *Journal of Regional Research*, *42*, 129–150. http://rua.ua.es/dspace/handle/10045/86748

Femenia-Serra, F., Neuhofer, B., & Ivars-Baidal, J. A. (2019). Towards a conceptualisation of smart tourists and their role within the smart destination scenario. *The Service Industries Journal*, *39*(2), 109–133. https://doi.org/10.1080/02642069.2018.1508458

Femenia-Serra, F., Perles-Ribes, J. F., & Ivars-Baidal, J. A. (2019). Smart destinations and tech-savvy millennial tourists: Hype versus reality. *Tourism Review*, *74*(1), 63–81. https://doi.org/10.1108/TR-02-2018-0018

Fuchs, M., Höpken, W., & Lexhagen, M. (2014). Big data analytics for knowledge generation in tourism destinations – A case from Sweden. *Journal of Destination Marketing & Management*, *3*(4), 198–209. https://doi.org/10.1016/j.jdmm.2014.08.002

Gahr, D., Rodríguez, Y., & Hernández-Martín, R. (2014). Smart destinations. The optimisation of tourism destination management. In *Seminario de Economí a Canaria*. Tenerife, Islas Canarias, Spain.

Ghaderi, Z., Hatamifar, P., & Henderson, J. C. (2018). Destination selection by smart tourists: The case of Isfahan, Iran. *Asia Pacific Journal of Tourism Research*, 23(4), 385–394.

Gomes, E. L., Gândara, J. M., & Ivars-Baidal, J. A. (2017). Is it important to be a smart tourism destination? Public managers' understanding of destinations in the state of Paraná. *Revista Brasileira de Pesquisa em Turismo*, 11(3), 503–536.

González-Reverté, F. (2019). Building sustainable smart destinations: An approach based on the development of Spanish smart tourism plans. *Sustainability*, 11(23), 6874.

Govier, T. (2013). *A practical study of argument*. Cengage Learning.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., Kyriakidou, O., & Peacock, R. (2005). Storylines of research in diffusion of innovation: A meta-narrative approach to systematic review. *Social Science & Medicine*, *61*(2), 417–430. https://doi.org/10.1016/j.socscimed.2004.12.001

Gretzel, U. (2018). From smart destinations to smart tourism regions. *Journal of Regional Research*, *42*, 171–184.

Gretzel, U., & de Mendonça, M. C. (2019). Smart destination brands: Semiotic analysis of visual and verbal signs. *International Journal of Tourism Cities*, *5*(4), 560–580. https://doi.org/10.1108/IJTC-09-2019-0159

Gretzel, U., & Scarpino-Johns, M. (2018). Destination resilience and smart tourism destinations. *Tourism Review International*, 22(3–4), 263–276.

Gretzel, U., Fuchs, M., Baggio, R., Höpken, W., Law, R., Neidhardt, J., Pesonen, J., Zanker, M., & Xiang, Z. (2020). E-tourism beyond COVID-19: A call for transformative research. *Journal of Information Technology & Tourism*, *22*(2), 187–203. https://doi.org/10.1007/s40558-020-00181-3

Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: Foundations and developments. *Electronic Markets*, *25*(3), 179–188. https://doi.org/10.1007/s12525-015-0196-8

Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, *50*, 558–563. https://doi.org/10.1016/j.chb.2015.03.043

Hassan, N. R., Mingers, J., & Stahl, B. (2018). Philosophy and information systems: Where are we and where should we go? *European Journal of Information Systems*, *27*(3), 263–277. https://doi.org/10.1080/0960085X.2018.1470776

Hernández-Martín, R., Rodríguez-Rodríguez, Y., & Gahr, D. (2017). Functional zoning for smart destination management. *European Journal of Tourism Research*, 17, 43–58.

Hodžić, S., & Alibegović, D. J. (2019). The efficiency of regional government expenditure in smart tourist destination: The case of Croatia. *Tourism in South East Europe*, 5, 307–318.

Huertas, A., Moreno, A., & My, T. H. (2019). Which destination is smarter? Application of the (SA) 6 framework to establish a ranking of smart tourist destinations. *International Journal of Information Systems and Tourism (IJIST)*, 4(1), 19–28.
Ivars-Baidal, J. A., Celdrán-Bernabeu, M. A., Mazón, J., & Perles, Á. (2017). Towards an ICT roadmap for smart tourism destinations based on prospective analysis. *E-Review of Tourism Research*, *8*, 1–5.
Ivars-Baidal, J. A., Celdrán-Bernabeu, M. A., Mazón, J. N., & Perles-Ivars, Á. F. (2019). Smart destinations and the evolution of ICTs: A new scenario for destination management? *Current Issues in Tourism*, *22*(13), 1581–1600. https://doi.org/10.1080/13683500.2017.1388771
Jasrotia, A., & Gangotia, A. (2018). Smart cities to smart tourism destinations: A review paper. *Journal of Tourism Intelligence and Smartness*, 1(1), 47–56.
Jeong, M., & Shin, H. H. (2019). Tourists' experiences with smart tourism technology at smart destinations and their behavior intentions. *Journal of Travel Research*, 1–14.
Jovicic, D. Z. (2016). Key issues in the conceptualization of tourism destinations. *Tourism Geographies*, *18*(4), 445–457. https://doi.org/10.1080/14616688.2016.1183144
Jovicic, D. Z. (2019). From the traditional understanding of tourism destination to the smart tourism destination. *Current Issues in Tourism*, 22(3), 276–282.
Kasahara, H., Iiyama, M., & Minoh, M. (2017). *Tourism service portfolio for smart destination*. Enter 2017, Rome, Italy, 1.
Khan, M., Woo, M., Nam, K., & Chathoth, P. (2017). Smart city and smart tourism: A case of Dubai. *Sustainability*, *9*(12), 2279. https://doi.org/10.3390/su9122279
Kim, K., Park, O. J., Yun, S., & Yun, H. (2017). What makes tourists feel negatively about tourism destinations? Application of hybrid text mining methodology to smart destination management. *Technological Forecasting and Social Change*, *123*, 362–369. https://doi.org/10.1016/j.techfore.2017.01.001
Kincaid, H. (2004). Contextualism, explanation and the social sciences. *Philosophical Explorations*, *7*(3), 201–218. https://doi.org/10.1080/1386979045000258312
Kumar, S. (2016). Developing India as smart tourism destination-a sap-lap analysis. *SAJTH*, 9(2), 124–136.
Koo, C., Shin, S., Gretzel, U., Hunter, W. C., & Chung, N. (2016). Conceptualization of smart tourism destination competitiveness. *Asia Pacific Journal of Information Systems*, *26*(4), 367–384. https://doi.org/10.14329/apjis.2016.26.4.561
Lai, K., & Li, X. (2016). Tourism destination image: Conceptual problems and definitional solutions. *Journal of Travel Research*, *55*(8), 1065–1080. https://doi.org/10.1177/0047287515619693
Lamsfus, C., & Alzua-Sorzabal, A. (2013). Theoretical framework for a tourism internet of things: Smart destinations. *tourGune Journal of Tourism and Human mobility*, 2, 15-21.
Lamsfus, C., Martín, D., Alzua-Sorzabal, A., & Torres-Manzanera, E. (2015). Smart tourism destinations: An extended conception of smart cities focusing on human mobility. In *Information and communication technologies in tourism 2015* (pp. 363–375). Springer.
Li, Y., Hu, C., Huang, C., & Duan, L. (2017). The concept of smart tourism in the context of tourism information services. *Tourism Management*, *58*, 293–300. https://doi.org/10.1016/j.tourman.2016.03.014
Liberato, P., Alen, E., & Liberato, D. (2018). Smart tourism destination triggers consumer experience: The case of Porto. *European Journal of Management and Business Economics*, *27*(1), 6–25. https://doi.org/10.1108/EJMBE-11-2017-0051
Lyotard, J.-F. (1979/1984). *The postmodern condition: A report on knowledge, Vol. 10*. Manchester University Press.
Mandić, A., & Praničević, D. G. (2019). Progress on the role of ICTs in establishing destination appeal. *Journal of Hospitality and Tourism Technology*, *10*(4), 791–813. https://doi.org/10.1108/JHTT-06-2018-0047
Marine-Roig, E., & Clavé, S. A. (2015). Tourism analytics with massive user-generated content: A case study of Barcelona. *Journal of Destination Marketing & Management*, *4*(3), 162–172. https://doi.org/10.1016/j.jdmm.2015.06.004
Patton, P. (2001). Postmodernism: Philosophical aspects. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social & behavioral sciences 2001* (pp. 11872—11877). Elsevier.
Perles Ribes, J. F., & Ivars-Baidal, J. (2018). Smart sustainability: A new perspective in the sustainable tourism debate. *Journal of Regional Research*, *42*, 151–170. http://rua.ua.es/dspace/handle/10045/86733
Perles Ribes, J. F., & Ramón-Rodríguez, A. B. (2018). Obliquity in tourism economics: Smart and sustainable tourist destinations. *e-Review of Tourism Research (eRTR)*, 16(1), 45–55.
Reinhold, S., Zach, F. J., & Laesser, C. (2020). E-Business models in tourism. In Z. Xiang, M. Fuchs, U. Gretzel, & W. Höpken (Eds.), *Handbook of e-tourism*. Cham: Springer. online first. https://doi.org/10.1007/978-3-030-05324-6_71-1.
Romero, A. S. M., de Esteban Curiel, J., & Antonovica, A. (2019). Experiencing smart tourism destinations in Madrid: Primary and secondary drivers. *RITUR-Revista Iberoamericana de Turismo*, 39-58.
Rotchanakitumnuai, S. (2017). Barriers to Bangkok as a smart destination with internet of things technology. *Thammasat Review*, 20(2), 1–17.
Samerski, S. (2018). Tools for degrowth? Ivan Illich's critique of technology revisited. *Journal of Cleaner Production*, *197*, 1637–1646. https://doi.org/10.1016/j.jclepro.2016.10.039
Savić, J., & Pavlović, G. (2018). Analysis of factors of smart tourism development in Serbia. *Hotel and Tourism Management*, 6(1), 81-91.
Sedarati, P., & Baktash, A. (2017, June 20–22). *Adoption of smart glasses in smart tourism destination: A system thinking approach*. Travel and Tourism Research Association: Advancing Tourism Research Globally 2017 ttra International Conference.

Shafiee, S., Ghatari, A. R., Hasanzadeh, A., & Jahanyan, S. (2019). Developing a model for sustainable smart tourism destinations: A systematic review. *Tourism Management Perspectives*, *31*, 287–300. https://doi.org/10.1016/j.tmp.2019.06.002

Shapiro, J. M. (2005). *Smart cities: Quality of life, productivity and the growth effects of human capital. National Bureau of Economic Research*. NBER-Working Paper 11615. Cambridge, Chicago.

Sheehan, L., Vargas-Sánchez, A., Presenza, A., & Abbate, T. (2016). The use of intelligence in tourism destination management: An emerging role for DMOs. *International Journal of Tourism Research*, *18*(6), 549–557. https://doi.org/10.1002/jtr.2072

Sigalat-Signes, E., Calvo-Palomares, R., Roig-Merino, B., & García-Adán, I. (2019). Transition towards a tourist innovation model: The smart tourism destination: Reality or territorial marketing? *Journal of Innovation & Knowledge*. https://doi.org/10.1016/j.jik.2019.06.002.

Stergiou, D. P., & Airey, D. (2018). Understandings of tourism theory. *Tourism Review*, *73*(2), 156–168. https://doi.org/10.1108/TR-07-2017-0120

Suddaby, R. (2010). Editor's comments: Construct clarity in theories of management and organization. *The Academy of Management Review*, *35*(3), 346—357. https://doi.org/10.5465/amr.35.3.zok346

Tähtinen, J., & Havila, V. (2018). Conceptually confused, but on a field level? A method for conceptual analysis and its application. *Marketing Theory*, *13*, 1–25. https://doi.org/10.1177/1470593118796677

Tran, H. M., Huertas, A., & Moreno, A. (2017). (SA)6: A new framework for the analysis of smart tourism destinations. A comparative case study of two Spanish destinations. In *Congresos-Seminario Destinos Turisticos Inteligentes 2017-Libro de Actas* (pp. 190-214). http://rua.ua.es/dspace/handle/10045/70149

Trunfio, M., & Campana, S. (2019). Drivers and emerging innovations in knowledge-based destinations: Towards a research agenda. *Journal of Destination Marketing & Management*, *14*, 100370. https://doi.org/10.1016/j.jdmm.2019.100370

Tussyadiah, I. P. (2015). Personal technology and tourism experiences. In Egger, R., & Maurer, C. (Eds.), *ISCONTOUR 2015, tourism research perspectives* (pp. 1--10).

Vargas-Sánchez, A. (2016). Exploring the concept of smart tourist destination. *Enlightening Tourism. A Pathmaking Journal*, *6*(2), 178–196.

Vargas-Sánchez, A., & Saltos, A. E. (2019). Smartness and social networks as shapers of the tourism industry. *Worldwide Hospitality and Tourism Themes*, *11*(6), 748–759. https://doi.org/10.1108/WHATT-09-2019-0057

Varra, L., Buzzigoli, C., & Loro, R. (2012). Innovation in destination management: Social dialogue, knowledge management processes and servant leadership in the tourism destination observatories. *Procedia-Social and Behavioral Sciences*, *41*, 375–385. https://doi.org/10.1016/j.sbspro.2012.04.044

Wang, D., Li, X. R., & Li, Y. (2013). China's "smart tourism destination" initiative: A taste of the service-dominant logic. *Journal of Destination Marketing & Management*, 2(2), 59-61.

Werthner, H., & Klein, S. (1999). *Information technology and tourism: A challenging relationship*. Springer-Verlag Wien.

Werthner, H., Koo, C., Gretzel, U., & Lamsfus, C. (2015). Special issue on smart tourism systems: Convergence of information technologies, business models, and experiences. *Computers in Human Behavior*, *50*, 556–557. https://doi.org/10.1016/j.chb.2015.03.042

Xiang, Z. (2018). From digitization to the age of acceleration: On information technology and tourism. *Tourism Management Perspectives*, *25*, 147–150. https://doi.org/10.1016/j.tmp.2017.11.023

Xiang, Z., Tussyadiah, I., & Buhalis, D. (2015). Smart destinations: Foundations, analytics, and applications. *Journal of Destination Marketing & Management*, *4*(3), 143–144. https://doi.org/10.1016/j.jdmm.2015.07.001

Xin, S., Tribe, J., & Chambers, D. (2013). Conceptual research in tourism. *Annals of Tourism Research*, *41*, 66–88. https://doi.org/10.1016/j.annals.2012.12.003