

Special Issue on Smart Destinations: Foundations, Analytics, and Applications

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While the importance of Information Communication Technology (ICT) to travel and tourism had been long recognized even before the commercialization of the Internet (Sheldon, 1997), ICT has never been so tightly knit into the fabrics of the travel experience as well as the management of the tourism product than today (Buhalis, 2003). In recent years we have witnessed tremendous growth of search engines, new distribution channels, virtual tourism communities, and numerous social media platforms that are essential for travelers to make smarter decisions (Sigala et al., 2012; Xiang et al., 2015, Buhalis and Law 2008, Law, et al., 2014). The widespread diffusion of mobile technology especially the smartphone has further transformed the tourism experience and empowered today's travelers by bringing together information search, communication, entertainment, social networking as well as mobility-related functionalities to the fingertips of the on-the-go travelers (Tussyadiah & Zach, 2012; Wang & Xiang, 2012, Buhalis and Foerste 2015).

The growing capabilities of cloud computing and embedding and connecting a variety of sensors into physical environments to create the so-called the Internet of Things have led to a ubiquitous IT infrastructure that supports travel and tourism on an unprecedented scale and scope (Atzori, Iera, & Morabito, 2010). This IT infrastructure has created new modalities of communication, new ways for data collection, analysis and exchanges, and thus, new opportunities for value creation and management (Lazer et al., 2009). Porter and Heppelmann, 2014 suggest that "smart, connected products offer exponentially expanding opportunities for new functionality, far greater reliability, much higher product utilization and capabilities that cut across and transcend traditional product boundaries. The changing nature of products is also disrupting value chains, forcing companies to rethink and retool nearly everything they do internally." Smartness is propelling the Internet of everything interconnecting all organisations and individuals.

Buhalis (2015) suggested that "smartness takes advantage of interconnectivity and interoperability of integrated technologies to reengineer processes and data in order to produce innovative services, products and procedures towards maximising value for all stakeholders. This reengineering enables shaping products, actions, processes and services in real-time, by engaging different stakeholders simultaneously to optimise the collective performance and competitiveness and generate agile solutions and value for all involved in the value system. Smartness is the glue of interconnected and mutually beneficial systems and stakeholders and provides the infostructure for the value creation for all."

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 some emerging economies the concept of smart destination is becoming an integral part of the national policy for economic development and overall improvement of service quality with the aid of ICT. The Smart Destination Initiative proposed by China's State Council of the Central Government aims to build a platform on which ICT can be seamlessly integrated into tourist activities, the consumption of tourism

products, and the management of tourism resources through a variety of end-user devices (Wang, Li & Li, 2013). Therefore, the smart destination concept has been adopted as a conceptual framework as well as a strategic tool for destinations worldwide to support tourism experience creation, to communicate with consumers effectively, and to measure and evaluate destination competitiveness.

Recently, there has been a growing interest from the tourism academia to conceptualize the smart destination. In general, smart destination has been borne out of the notion of smart city, which envisions the new urban development strategy to be based on the use of ICT in several key areas such as economy, environment, mobility and governance to transform the city infrastructure and services (e.g., Bakici, Almirall, & Wareham, 2013; Taafe, 2014). Lopez de Avila (2015) defines the smart destination as an innovative tourist destination built on an infrastructure of state-of-the-art technology, which guarantees the sustainable development of tourist areas, facilitates the visitor's interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents' quality of life. Buhalis (2015) suggest that "based on Smart Cities research and methodologies, a Smart Tourism Destination successfully implements smartness which is fostered by open innovation, supported by investments in human and social capital, and sustained by participatory governance in order to develop the collective competitiveness of tourism destinations to enhance social, economic and environmental prosperity for all stakeholders. Interoperability and ubiquitous computing ensure that everybody is interconnected and processes are integrated towards generating value, through dynamic co-creation, sustainable resources and dynamic personalisation and adaptation to context. All suppliers and intermediaries, the public sector, as well as consumers and various interested parties are networked, dynamically co-producing value for everybody interconnected in the ecosystem."

From the consumer's perspective, a destination is said to be smart when it makes intensive use of the technological infrastructure in order to enhance the tourism experience of visitors by personalizing and making them aware of both local and tourism services and products available to them at the destination. From the managerial and governance perspective, a smart destination can empower destination management organizations, local institutions and tourism companies to make their decisions and take actions based upon the data produced in within the destination, gathered, managed and processed by means of the ICT infrastructure (Lamsfus et al., 2015). Within this environment, stakeholders of tourism are to be dynamically interconnected through technological platforms to collect, create and exchange information that can be used to enrich tourism experiences in real-time (Buhalis & Amaranggana, 2014). Recently Gretzel et al. (2015) envisions the smart destination as integral part of the smart tourism ecosystem wherein technology breeds new business models, interaction paradigms and even new species of tourism businesses. In general, the smart destination remains an emerging topic in tourism research that requires the integration of knowledge from a number of relevant fields such as information systems, travel behavior, marketing, urban planning, destination management and governance, as well as the increasingly important data analytics and data sciences.

In response to this need the *Journal of Destination Marketing & Management* presents a special issue to disseminate the latest research development on the smart destination. There are six ??? papers published in this special issue and they can be roughly grouped into three categories with each addressing different aspects of the smart destination. The first two papers discuss two important foundations, i.e., knowledge management and marketing, for smart destination management. The first paper, Knowledge Transfer in Smart Tourism Destinations: Analyzing the Effects of a Network Structure, aims to contribute to the debate on knowledge management by applying a network analysis approach to study the cases of three destinations. It reveals that knowledge-based destination management should consider both the virtual and real components of the network structure of the destination. The second paper, SoCoMo Marketing for Travel and Tourism: Empowering Co-Creation of Value, brings together different concepts of context-based marketing, social marketing and personalization, as well as mobile marketing to develop a

framework that describes value co-creation at tourist destinations. By recognizing the capabilities of big data, it also discusses the opportunities and challenges for tourism stakeholders.

The next two papers demonstrate the utilities of data analytics for destination management using cases of specific destinations. The first one among these two, *Tourism Analytics with Massive User-Generated Content: A Case Study of Barcelona*, deconstructs the online image of Barcelona using data collected via social media in more than 100,000 blogs and online reviews. The methodology employed in this study outlines a process of gathering, cleaning, analyzing of massive tourism-related user-generated content, which collectively constitutes the image of the city. The fourth paper, *Goespatial Analytics for Federally Managed Tourism Destinations and Their Demand Markets*, employs visualization and analytics techniques enhanced by Geographic Information System (GIS) technology to support a range of destination management task such as planning, marketing, natural resource preservation, and resident and visitor experience management. Market profiles built using such techniques can be used by destinations at any geographic level to effectively understand and manage their markets of origin.

The final set of two papers apply analytics approaches to understand traveler behavior. The fifth paper, *Assessing Destination Image: An Online Marketing Approach and the Case of Tripadvisor*, examines the cognitive, affective, and conative components of the image of Istanbul using Traipadvisor data. It emphasizes understanding behavior of travelers using the Internet. The final paper, examines the effect of prior experience with a destination and change in users' perceptions following exposure to user-generated content. The findings show that having visited a destination does not reduce the likelihood that users will change their opinions after being exposed to social media content.

While this collection of articles is by no means a comprehensive coverage of topics related to the smart destination, this special issue provides a basis to examine smartness and to stimulate further research. It offers fresh ideas and directions for researchers and destination managers to challenge their thinking in order to tackle real world problems and to stimulate more valuable insights into smart destinations.

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