



Contents lists available at ScienceDirect

# Journal of Destination Marketing & Management

journal homepage: [www.elsevier.com/locate/jdmm](http://www.elsevier.com/locate/jdmm)

## Editorial

### Smart destinations: Foundations, analytics, and applications

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 fabric of the travel experience and 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 (Buhalis & Law, 2008; Law, Buhalis & Cobanoglu, 2014; Sigala, Christou & Gretzel, 2012; Xiang, Wang, O'Leary & Fesenmaier, 2015). 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 and mobility-related functionalities to the fingertips of on-the-go travelers (Tussyadiah & Zach, 2012; Wang & Xiang, 2012).

The growing capabilities of cloud computing, as well as embedding and connecting a variety of sensors into physical environments to create the so-called Internet of Things, have led to a ubiquitous ICT infrastructure that supports travel and tourism on an unprecedented scale and scope (Atzori, Iera, & Morabito, 2010). This ICT 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, n.p.) 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.' They further suggest that smart products disrupt value chains, forcing companies to rethink and retool nearly everything they do internally.

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 the 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 the State Council of the Chinese 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, the idea of the smart destination has been borne out of the notion of smart city, which envisions a new urban development strategy 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. Bakıcı, 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. 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, Martín, Alzua-Sorzabal & Torres-Manzanaera, 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, 2013). Recently Gretzel, Werthner, Koo and Lamsfus (2015) envisioned the smart destination as an 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 developments 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 important conceptual foundations 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 in tourism 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, personalization and 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 of these, 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 second, 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 first of these, 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 TripAdvisor data. It emphasizes understanding behavior of travelers using the Internet. The second, the Role of Prior Experience in the Perception of a Tourism Destination in User-Generated Content, examines the effect of travelers' past experience with a destination and change in users' perceptions following exposure to user-generated content (UGC). The findings show that having visited a destination does not reduce the likelihood that travelers will change their opinions about a destination after being exposed to social media content, while it is more likely for younger and less educated travelers to change their opinions due to a brief exposure to UGC.

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 the smart destination and to stimulate further research. We hope that this special issue will offer 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.

## References

- Atzori, L., Iera, A., & Morabito, G. (2010). The internet of things: A survey. *Computer Networks*, 54(15), 2787–2805.
- Bakıcı, T., Almirall, E., & Wareham, J. (2013). A smart city initiative: The case of Barcelona. *Journal of the Knowledge Economy*, 4(2), 135–148.
- Buhalis, D. (2003). *eTourism: Information technology for strategic tourism management*. London: Pearson, Financial Times/Prentice Hall.
- Buhalis, D., & Amaranggana, A. (2013). *Smart tourism destinations. Information and communication technologies in tourism*, 2014. Springer International Publishing.
- Buhalis, D., & Law, R. (2008). Progress in tourism management: twenty years on and 10 years after the internet: the state of eTourism research. *Tourism Management*, 29(4), 609–623.
- Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, 50, 558–563.
- Lamsfus, C., Martín, D., Alzua-Sorzabal, A., & Torres-Manzanera, E. (2015). *Smart tourism destinations: An extended conception of smart cities focusing on human mobility. Information and Communication Technologies in Tourism*, 2015. Springer International Publishing.
- Lazer, D., Pentland, A. S., Adamic, L., Aral, S., Barabasi, A. L., Brewer, D., et al. (2009). Life in the network: the coming age of computational social science. *Science (New York, NY)*, 323(5915), 721.
- Law, R., Buhalis, D., & Cobanoglu, C. (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 26(5), 727–750.
- Lopez de Avila, A., Smart destinations: XXI century tourism. In Presented at the ENTER2015 conference on information and communication technologies in tourism, Lugano, Switzerland, February 4–6, 2015.
- Porter, M. E., & Heppelmann, J. E. (2014). How smart, connected products are transforming competition. *Harvard Business Review*. 1–23
- Sheldon, P. J. (1997). *Tourism Information Technology*. Cab International, Pennsylvania State University.
- Sigala, M., Christou, E., & Gretzel, U. (2012). *Web 2.0 in travel, tourism and hospitality. Theory, practice and cases*. Ashgate Publishers.
- Taafe, J. (2014). Europe's Cities Get Smarter on Tourism. Available at: (<http://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1488545>).
- Tussyadiah, I. P., & Zach, F. J. (2012). The role of geo-based technology in place experiences. *Annals of Tourism Research*, 39(2), 780–800.
- 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.
- Wang, D., & Xiang, Z. (2012). The new landscape of travel: a comprehensive analysis of smartphone apps. *Information and Communication Technologies in Tourism*, 2012, 308–319.
- Xiang, Z., Wang, D., O'Leary, J. T., & Fesenmaier, D. R. (2015). Adapting to the Internet: Trends in travelers' use of the Web for trip planning. *Journal of Travel Research*, 54(4), 511–527.

Zheng Xiang\*

Department of Hospitality and Tourism Management, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, USA  
E-mail address: philxz@vt.edu

Iis Tussyadiah

School of Hospitality Business Management, Carson College of Business, Washington State University Vancouver, 14204 NE Salmon Creek Avenue, CLS 308T, Vancouver, WA 98686, USA  
E-mail address: iis.tussyadiah@wsu.edu

Dimitrios Buhalis

School of Tourism Bournemouth University, Dorset House D202, Talbot Campus Fern Barrow, Poole BH12 5BB, UK  
E-mail address: dbuhalis@bournemouth.ac.uk

Received 7 July 2015; accepted 9 July 2015

\* Corresponding author.