# Chapter 25 The Roles of Information Technology and Knowledge Management in Global Tourism

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# ABSTRACT

This chapter describes the roles of information technology (IT) and knowledge management (KM) in global tourism, thus explaining the theoretical and practical overviews of IT, KM, and global tourism; the significance of IT in global tourism; and the significance of KM in global tourism. The fulfillment of IT and KM is vital for modern organizations that seek to serve suppliers and customers, increase business performance, sustain competitiveness, and accomplish continuous success in global tourism. Therefore, it is necessary for modern organizations to promote their IT and KM applications and establish a strategic plan to regularly examine their advancements toward satisfying customer requirements. The chapter argues that applying IT and KM has the potential to increase organizational performance and gain sustainable competitive advantage in global tourism.

### INTRODUCTION

Tourism industry is recognized as the foundation of the global economy (Tsiotsou & Ratten, 2010). Tourism industry is a significant driver of jobs in modern business (Rok & Mulej, 2014). Strategic management in the tourism industry describes the long-term business activities across organizations (Probstl-Haider & Haider, 2013). Tourism is a socioeconomic activity (Benyon, Quigley, O'Keefe, & Riva, 2014). Tourism plays an important role in the economic development (Ladeiras, Mota, & Costa, 2010). International tourism is an essential element of the new economy of globalization concerning IT (Anwar, Carmody, Surborg, & Corcoran, 2014).

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#### The Roles of Information Technology and Knowledge Management

Tourism has experienced the relevant changes since the information and communications technology (ICT) has started to extend the tourism industry and the global marketplace (Baggio & Del Chiappa, 2014). IT represents an important element of work in the tourism industry (Lashley & Rowson, 2005). ICT has become a critical issue in the tourism industry (Ali & Frew, 2014). ICT has shortened the distribution channels, making the communication easier and cheaper (Reino, Frew, & Albacete-Saez, 2011). ICT has an intellectual impact on tourism marketing (Pesonen, 2013). Tourism is an information-intensive business (Shi et al., 2014). Tourism industry is recognized as a knowledge-intensive field (Bouncken & Pyo, 2002). The generation, combination, transfer, and storage of knowledge have become the key issues in the tourism industry (Knight & Harland, 2005).

Tourism literature has only a few studies on the subject of KM, expressing that only a few tourism firms professionally manage their knowledge (Braun & Hollick, 2006; Ruhanen & Cooper, 2003). The strength of this chapter is on the thorough literature consolidation of IT and KM in global tourism. The extant literature of IT and KM provides a contribution to practitioners and researchers by describing the multifaceted applications of IT and KM to appeal to the different segments of IT and KM in order to maximize the business impact of IT and KM in global tourism.

# BACKGROUND

Since the early 1970s, scholars have contributed their talent and intellect toward the establishment of the next generation of hospitality and tourism professionals (Zopiatis, Theocharous, & Constanti, 2015). Due to the increasing diffusion of Web-based technologies, Internet represents one of the most employed sources for customers to gain the information about products and services (Pantano & Di Pietro, 2013). ICT refers to any product that stores, retrieves, manipulates, transmits, and receives the digital data (Buhalis, 2003). Buhalis (1998) indicated that the rapid development of Internet provides the economic opportunities for tourism marketing.

As an information source, the Internet has many benefits in terms of accessibility, convenience in updating information, and interactive communications (Bonn, Furr, & Susskind, 1999). Such features make the Internet the unique information source (Castaneda, Frias, & Rodriguez, 2009). Many researchers (Boudreau, Loch, Robey, & Straub, 1998; Griffiths & Finlay, 2004; Stewart, 2007) emphasize the impact of IT investment on organizational competitiveness. Investments in IT have a positive impact on organizational performance (Barua, Kriebel, & Mukhopadhyay, 1995; Hitt & Brynjolfsson, 1996). The purposes of IT investment are to improve organizational performance and to gain competitive advantage (Mahmood & Mann, 1993; Ragowsky, Ahituv, & Neumann, 1996).

Maintaining the competitiveness in the tourism industry is essential to the global economy (Vadell & Orfila-Sintes, 2008). KM becomes a major organizational capability toward creating competitive advantage (Kale & Karaman, 2012). The main purpose of KM is to create the knowledge system capable of providing mechanisms and methodologies in the business enterprise (Oztemel & Arslankaya, 2012). Tourism includes the traveling activities regarding business and vacation (Anup & Parajuli, 2014). Tourism awareness on managing knowledge is important for the effective tourism performance (Sigala & Chalkiti, 2007).

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