Chapter 10
Augmented Reality for Smart Tourism in Religious Heritage Itineraries:
Tourism Experiences in the Technological Age

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ABSTRACT
Pilgrimages and travel for other religious reasons are two of the major drivers of human mobility. Information and communication technologies (ICTs) can contribute to sharing knowledge about religious heritage with tourists, residents, and religious communities. ICT innovations that help individuals find information and acquire knowledge about cultural heritage can bring new experiences and sensations to tourists and residents, in general, and to those who have accessibility problems, in particular. These innovations include augmented reality, location-based services, social networks, gamification, and intelligent interfaces. This paper focuses on religious and spiritual routes and itineraries, presenting a religious tourism experience model that allows tourists to acquire additional knowledge about cultural and religious heritage, based on technological architecture using intelligent human-computer interactions displayed on personal mobile devices. This approach expands personal and spiritual experiences when travelers visit religious heritage sites associated with itineraries.

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INTRODUCTION

Due to the expansion of leisure time and paid vacations, religious tourism has increased exponentially over the last 70 years. Currently, people are not interested in only passively visiting sites and monuments. Tourists ask for more responsiveness and shared personal and spiritual experiences of this heritage. In this context, information and communication technologies (ICTs) can contribute to deepening and intensifying tourists’ knowledge about tangible and intangible, as well as religious and spiritual, heritage, bringing these visitors closer to the values of the host community while they participate in learning processes.

Any technological innovation that helps individuals to find information during the process of selecting a product or service has an impact on tourist behavior. The acquisition of knowledge about religious heritage by tourists, residents, and, in particular, those who have accessibility challenges (i.e., physical and mental disabilities) requires specific innovations in order to offer new experiences and sensations. One solution is augmented reality (AR) based on locations, social networks, and intelligent human-computer interfaces, as well as usability and accessibility concepts, which integrate user-centered functionalities.

These technologies, when associated with a religious itinerary such as pilgrimages or religious routes, can enhance the personal and spiritual experiences of tourists, residents, and religious communities, while contributing to preserving heritage sites. Tourism combined with AR can provide alternative ways to access threatened places that lessen the negative impacts of tourism by reducing visitor overcrowding.

In this context, the present chapter proposes a framework for the development of a technological architecture for mobile devices that integrates different user-centered technologies, including AR functionalities, to be used by tourists visiting regions that provide personal and spiritual experiences associated with itineraries. In order to achieve this objective, the authors start by describing the contributions that ICT makes to religious tourism, adding value to religious tourism experiences through AR techniques associated with location systems and mobile devices. These allow the development of services that present each region’s religious practices, taking into consideration religious itineraries in innovative ways that contribute to creating an updated model of religious tourism experiences.

The next section presents the framework of this religious tourism experience model (RTEM), including all the technologies that contribute to creating smart environments and facilitating the development and definition of the methodology needed to build the technological architecture associated with the proposed religious tourism model. This technological architecture consists of an intelligent application applied to religious tourism by creating technology-based religious itineraries that tell stories and cultivate and disseminate tourist information about heritage through mobile technology.

The last section suggests future directions in research and ways that the proposed technological model can be improved. Finally, some conclusions are presented about the RTEM and technological architecture presented in this chapter.

TOURISM AND TOURISM EXPERIENCES IN THE TECHNOLOGICAL AGE

The rise of the economy of experiences (Pine & Gilmore, 1999, 2011) has led to the definition of the concept of “tourist experience,” which combines tourists’ actions with a set of memories and emotions related to the places visited (Noy, 2007). These are influenced by the tourists, scenes (i.e., destinations), and residents (Cutler & Carmichael, 2010).