Chapter 9

System and Environment for Tourism 4.0: How Does a Digital System Work for the Promotion and Evaluation of Gastronomic Tourism Fairs?

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ABSTRACT

Smart cities are a new scheme for urban planning and management, in which smart destinations become key points for tourist attraction. The objective of the present study is to determine through the theoretical review, the most appropriate technological tools to be used in fairs and turn them into smart spaces. The Raíces International Gastronomic Fair of the city of Guayaquil and its satisfaction / dissatisfaction indexes are taken as an example case in order to propose a technological management system that improves its performance, in which the use of Big Data, georeferencing, IoT, and augmented reality are key pieces to guarantee the security, experience, and promotion of the event.

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INTRODUCTION

Industrial evolution has had three major changes or evolutions, and today humanity enters a fourth evolution that has been named 4.0 industries. The first revolution begins with the industrial revolution, which was based on mechanization through hydraulic power and steam engines; the second revolution occurs as a consequence of the first with mass production and assembly lines using electricity. After this, industry 3.0 began giving the path to the introduction of computers in manufacturing processes. At the time, it was seen as a significant change in production processes. However, industry 4.0 has entered as a new way of understanding behavior patterns, and insights through the analysis of big data generated, and that makes companies operation more efficient (Marr, 2018).

Industry 4.0 and intelligent manufacturing will generate large contributions from shorter cycles for the development of new products, integrated and automated production processes to providing real-time information that generates collaboration networks for better decision making. However, there is a need for the creation of government initiatives to develop this industry, as well as the support of institutions that generate training for the use of these technologies. Additionally, the creation of a national plan that defines infrastructure development strategies and competences on use and safety issues (Ynzunza, Izar, Bocarando, Aguilar, & Larios, 2017). Among the technological pillars on which industry 4.0 is based we can find: a) Integration systems; b) Autonomous machines and systems (robots); c) Internet of Things (IoT); d) Additive manufacturing; e) Big data and big data analysis; f) Cloud computing; g) Simulation of virtual environments; h) Artificial intelligence; i) Cybersecurity; j) Augmented reality (Basco, Beliz, Coatz, & Garnero, 2018) which significantly affects the value chain of companies and also the supply chain, making them more efficient.

The digital transformation is not only limited to changing the work environment, but it is intrusive in all social spheres such as culture, education or citizen security (Del Val Román, 2017), where tourism is no an exception, since it is a sector that uses information intensively in every stage of the value chain where the use of storage clouds, mobile devices, Internet of Things and collaborative economies, are of high importance for the development of this industry (Orange, 2016). Such is the case that tourist mobility is generated according to the decisions that are made, according to the ratings they find on the Internet, and generate their purchases through online channels (Barbery-Montoya, Andrade-Vargas & Zambrano-Lozano, 2018).

But not only the purchase process for mobility is a technology issue. Also, from the tourism perspective, the focus of smart cities or destinations is aimed at increasing the sustainability and competitiveness of cities, taking into account the factors of innovation and technologies as critical elements for their development (Fantoni & Soares, 2016). The digital structure that occurs in a smart city creates a communication channel between tourism and culture. For this reason, smart cities use digital channels as a way to exchange communication agile and quickly (Gómez, Server, Jara, & Smart Cities, 2017); and it is in this exchange where the culture of a city is transmitted through events. Today’s events are occasions of frequent celebrations in different destinations around the world whose figures increase annually, causing this market to enter a fast growth in the tourism industry, which is one of the most reliable items in this sector (Kim, Duncan, & Chung, 2015). Non-usual occasions characterize the events, driven by different motivations, from cultural, leisure/entertainment, work and even personal, being developed on specific dates in order to celebrate, teach or communicate to a group of people with the help of content provided by these (Cerro Herrero, 2018). The existence of motivation in the events is crucial because it is the main engine that causes people to make their trips and makes their realization possible; these
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