

# Chapter 104

## Perspectives of the Adoption of Cloud Computing in the Tourism Sector

**Pedro R. Palos-Sanchez**

*University of Extremadura, Spain*

**Marisol B. Correia**

*ESGHT, University of Algarve, Portugal & CEG-IST, Universidade de Lisboa, Portugal*

### ABSTRACT

*This chapter aims to expose the current situation of the adoption of cloud computing in companies in general and in enterprises of the tourism sector in particular. For this, a review of the literature has been carried out to establish the conceptual framework of technology and of the new economic model that underlies its adoption. Cloud computing is one of the technologies less known to many organizations and especially users, as it is a new technology based on the Internet, through which information is stored on servers, is provided as a service and on clients' demand. Therefore, the main theories of adoption that have been used to explain the different adoption models are presented, as well as, the different solutions that are being used in the tourist industry.*

### INTRODUCTION

Information and Communication Technologies, also known as Information Technology (IT) have been widely adopted by the society, but especially by the enterprises. These technologies have been widely adopted under the concept of solutions that are provided through IT services. This solution provides effective low-cost communication tools for customers (Tan & Teo, 1998). This is something to be considered for the small and medium-sized enterprise (SME), which adopts IT in a gradual and precise way, not having the need to make large investments, distributing the effort for years.

The adoption of Internet-based IT has made it possible to develop the paradigm of everything as a service, where the user pays only for the use made of the service. These services can range from soft-

DOI: 10.4018/978-1-7998-5339-8.ch104

ware applications (Application Service Provider or ASP and Software as a Services or SaaS) to systems infrastructure (Infrastructure as a Service or IaaS). This formula is intuited as a good solution for small and medium enterprises SME, in the line of jumping the barriers that prevented them to take advantage of IT. In the following section, as well as throughout the whole chapter, this concept will be expanded.

Heart and Pliskin (2002) defined this concept as “eRent” of Information Systems (IS), made through the Internet and thanks to an ASP. They say that for SMEs, the IS through “eRental” could be an attractive solution to the expensive and complex acquisitions and implementations of traditional IT.

Johansson (2004) also states that the main reason for SMEs to adopt IT by contracting an ASP is that they allow full control cost and a lower cost when adopting and maintaining them. In spite of this, it assures that if this decision is examined in detail, it is observed that the customers do not emphasize these reasons, and it induces to think that the perspective of the cost is secondary for the SME.

In this way it identifies the three main reasons why ASP clients hire their services. The main reason is that the company is looking to outsource everything that is not basic competencies of its business, which most usually meet the IS. The other two reasons are the lack of qualified personnel and the overall strategy of the organization.

The adoption of IT in the tourism sector is evolving with changes of habits of the travelers, driven by the adaptation of IT as the Internet of Things (IoT), which consists of an automated connection through the Internet of the information generated by the devices and systems. IoT can be defined as a set of interconnected things over the Internet, which have the ability to measure, communicate and act all over the world. The key idea of the IoT is to obtain information about the environment to understand and control and act on it (Díaz, Martín, & Rubio, 2016). According to these authors, the cloud computing and IoT integration, known as Cloud of Things, solves such problems as IoT’s limitations, data access, computing, data analysis, and can create new opportunities.

Another adoption of IT in the tourism sector is SoLoMo (Social, Local and Mobile), which reflects consumers’ preferences for sharing content and habits through the social web (social purchase, recommendations, etc.), only to say some examples (Junta de Andalucía, 2012).

Thus, travelers or tourists increasingly use different devices connected to the internet to find information, locate offers, book all services related to travel or make purchases at destination, which has resulted in the explosion of travel agencies (Online Travel Agencies), internet portals that intermediate in the booking of tourism products at worldwide level, the sale of second-hand travel through Internet, offering huge discounts through online outlet portals, or the emergence of new typologies of solutions to optimize the management of these channels and the presence based on solutions such as the Central Reservation System, Channel Managers (Channel Manager System) or online communication systems (Online Reputation, Social Networks, etc.).

The aim of this chapter is to present the different models of adoption of cloud computing by companies and organizations and, in particular, by enterprises of the tourism sector. The description and features of cloud computing, the benefits and obstacles for the companies, the added value for adopting the cloud, as well as, some examples of open source solutions are presented. Finally, the characteristics of the solutions adopted by the enterprises of the tourism sector are explained and discussed.

This chapter is structured as follows. After this introduction, a brief review of the state of the art of the literature of cloud computing is developed in Section Theoretical Background. Then, in Section Cloud and Enterprise, the basic principles of adoption of cloud computing by enterprises in general are presented, while in Section Smart Tourism Destinations and Cloud Computing in the Tourism Sector, the adoption of cloud computing by the different subsectors of activity of the tourism sector is explained.

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/perspectives-of-the-adoption-of-cloud-computing-in-the-tourism-sector/275383](http://www.igi-global.com/chapter/perspectives-of-the-adoption-of-cloud-computing-in-the-tourism-sector/275383)

## Related Content

---

### Dynamic Capabilities of Decision-oriented Service Systems

Rainer Schmidt, Michael Möhring and Alfred Zimmerman (2021). *Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing* (pp. 957-984).

[www.irma-international.org/chapter/dynamic-capabilities-of-decision-oriented-service-systems/275322](http://www.irma-international.org/chapter/dynamic-capabilities-of-decision-oriented-service-systems/275322)

### Architecture for Big Data Storage in Different Cloud Deployment Models

Chandu Thota, Gunasekaran Manogaran, Daphne Lopez and Revathi Sundarasekar (2021). *Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing* (pp. 178-208).

[www.irma-international.org/chapter/architecture-for-big-data-storage-in-different-cloud-deployment-models/275285](http://www.irma-international.org/chapter/architecture-for-big-data-storage-in-different-cloud-deployment-models/275285)

### Queuing Analysis of Cloud Load Balancing Algorithms

Santosh Kumar Majhi, Shankho Subhra Pal, Shweta Bhuyan and Sunil Kumar Dhal (2021). *Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing* (pp. 729-750).

[www.irma-international.org/chapter/queuing-analysis-of-cloud-load-balancing-algorithms/275311](http://www.irma-international.org/chapter/queuing-analysis-of-cloud-load-balancing-algorithms/275311)

### EdgeCloud: A Distributed Management System for Resource Continuity in Edge to Cloud Computing Environment

Jamuna S. Murthy (2021). *Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing* (pp. 2684-2700).

[www.irma-international.org/chapter/edgecloud/275412](http://www.irma-international.org/chapter/edgecloud/275412)

### On-Demand Routing Protocols for Vehicular Cloud Computing

Ramesh C. Poonia and Linesh Raja (2021). *Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing* (pp. 96-122).

[www.irma-international.org/chapter/on-demand-routing-protocols-for-vehicular-cloud-computing/275281](http://www.irma-international.org/chapter/on-demand-routing-protocols-for-vehicular-cloud-computing/275281)