

# Information Systems in Sustainable Hospitality and the Creation of Business Value

Nikoletta Klada<sup>1</sup>, Asterios Stroumpoulis<sup>1</sup>, Sotirios Varelas<sup>2</sup>, and Nikolaos Georgopoulos<sup>1\*</sup>

<sup>1</sup>University of Piraeus, Department of Business Administration, Piraeus 18534, Greece

<sup>2</sup>University of Piraeus, Department of Tourism Studies, Piraeus 18534, Greece.

\*Corresponding author: Nikolaos Georgopoulos, University of Piraeus, Department of Business Administration, Piraeus 18534, Greece.

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## Abstract

The main study areas of this research are Information Systems, Sustainable Development and Hospitality Industry. During the last years, there have been a lot of surveys, which examine the connection of the above concepts and how it could lead to business performance, aiming a competitive advantage and economies of scale.

There is a gap in the international literature review, regarding the above meanings and the business value. So, the main goal of this research is to find this gap and propose a conceptual framework for future research. The methodology that has been used in this paper is based on literature review, which tries to find the gap in the international literature and understand the concepts which are under examination. The main finding of this research is the development of a conceptual framework, which explains how the sustainability and the resources of Information Technology could lead to the creation of business value. Finally, hotel managers and companies could benefit by this added value and strengthen their position inside their task environment.

**Keywords:** Tourism Industry, Sustainable Development, Information Systems.

## Introduction

According to Melian-Azola et al. (2020) hotel managers have to face a lot of difficult situations affecting the tourism industry, including environmental issues, economic crises, pandemics, regulatory changes, and new customer demands. Moreover, due to the new regulations and policies of European Union and United Nations, tourism companies have to adopt a new philosophy and traditions regarding the sustainable development. However, tourism industry is one of the entrepreneurs, because is one of the first sectors, which establishes definitions and principles for 'sustainable tourism', strategies and action plans [1].

In addition, the Tourism and Accommodation Industries could not be functional and efficient without the use of Information Systems (IS), which provide companies with enormous possibilities. IS provides hotel managers with the ability to identify customer needs, so they could adapt their products and services. Moreover, hotel managers, through the use of IS, have the ability

to choose and collaborate with suppliers and strategic partners who have the same philosophy [2].

In addition, hotel companies have to deal with the Coronavirus Disease 2019 (COVID-19) crisis and the energy crisis, which are a truly global problem. More specifically, this new crisis has created wide-ranging problems for the hospitality industry, driving it into uncharted waters [3]. So, it is very important for the companies in the hospitality industry to come closer to the customers and understand their needs and preferences. This is the most effective way of hotel companies increasing their customer loyalty and their business value.

## Literature Review

In order to develop the conceptual framework, authors must conduct a literature review analysis, in order to understand the meaning of these concepts. Therefore, the main concept of literature review is to understand the main topics and theories as-

sociated with the phenomenon under study and to lead them to develop a conceptual framework [4].

### Sustainability in the Hospitality Industry

Apart from the original and the main definition of sustainable development, there have been a number of issues how sustainability is defined within the hospitality industry. According to the World Commission on Environment and Development and its definition, “sustainable hospitality” defines as: “... hospitality industry development and management that meets the needs of today’s guests, hoteliers and stakeholders without compromising the ability of future guests, hoteliers and stakeholders to enjoy the benefits from the same services, products and experiences” [5]. However, during the last years, there are researchers who claimed that sustainability in hospitality management and tourism is still underdeveloped and not in the desired levels [6].

The hospitality industry embraces and includes a wide variety of accommodation facilities, from resorts and hotel buildings to Airbnb apartments; food and beverage services and facilities, including restaurants, bars and cafes, coffee shops and nightclubs; and travel and tourism, such as package holiday tours and different type of cruises [3]. However, it is true that the hotel companies will deal with new sustainability strategies and invest in new technologies and policies in order to meet a number of the SDGs or whether simply to map their existing strategies on-to the SDGs [5].

### Smart Hospitality Impact on Business Value

Nowadays, customers are living “inside their phones”. These customers could become content creators, and post at any time their opinions, which could influence the reputation and the number of reservations at the hotel industry and create an added customer brand value. So, a new challenge is creating in hotel management, following the new trends in technology [7].

Tourist experiences are set in a traditionally highly technology-dependent industry context and for a long time have been greatly affected by information technology design, both in rela-

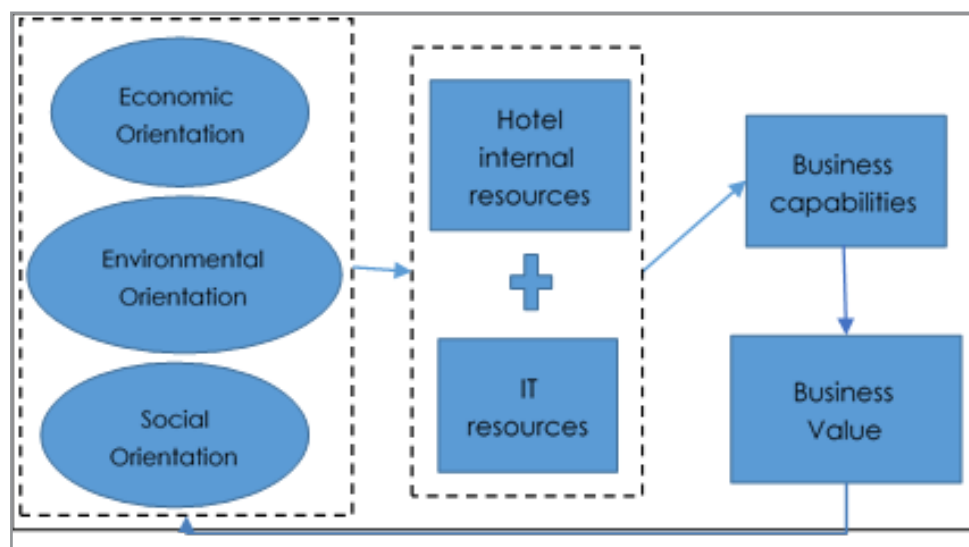
tion to the use of specialized interactive systems (e.g. destination management systems, in-room entertainment, self-check-in kiosks) [8]. or based on general purpose systems for the delivery or enhancement of services (e.g. provider websites, mobile phone applications) [9, 10]. Therefore, it is very important for a hotel company to adopt new technologies and train its staff, in order to follow all the new technologies and cover all the demands of the new generation. Thanks to the information technologies and systems, there are many hotel companies, which have increased their financial performances after adopting new technologies [11].

According to specific surveys [12], IT and mobile applications are able to increase hotels’ competitive advantage by lowering operational cost, improving the financial results, adding extra values, increasing agility, reducing internal processing time and developing new products and services. Value could be created and added to an organization when the costs of producing/ delivering of goods or services are in a lower level than the benefits, which would be gained by selling them. In other words, value should not only be considered in monetary units, because it may include different types of social results, such as the creation of jobs. Besides the social impact, value may include environmental results, such as recycling [13].

Moreover, due to the pandemic COVID-19, customers prefer to use technologies in order to have self-service experience, reducing the time spending with other people [14]. So, e-commerce technologies have an overall positive impact on hotel image and revenues [15]. Therefore, the adoption of IT helps companies to create business value [2].

### Conceptual Framework

Based on the literature review analysis, authors try to develop a new conceptual framework that business value could be better printed and could be better analysed, so that hotel companies are able to understand the full potential of the above combination and start investing in new technologies.



Source: Author’s illustration

**Figure 1:** Business Value

According to Xiang et al. (2021), during the last decade, there has been a significant evolution of information technologies and systems, which affect tourism management [17]. The IT resources are the backbone of a company and could support all the hotel management operations [16]. Therefore, IT has the ability to improve the customer satisfaction, staff productivity, internal operations, and to reduce the operating costs [18].

Apart from the IT resources, hotel companies should use their hotel management re-sources and combine them with those of IT. These resources are human resources and operation resources [19]. The above combination of the resources leads to the development of specific business capabilities, that hotel companies could be benefit from [20].

The above capabilities lead to the development of business value. According to “stakeholders” theory [21], hotel managers are obliged to publish and inform all the different groups of people (who are related to the company), such as the society, shareholders etc., so that they will be aware about the company’s policies etc. By doing that, company could create a legitimate image [22]. This image could lead to the increase of business value because the customer’s loyalty is going to increase, which would turn into more bookings and monetary units, improving both the social and economic dimension of company’s sustainability. Moreover, according to the stakeholder’s theory, company will have the chance to collaborate with all the trading partners, internal staff and society. This collaboration could lead to the respect of the society and the environment. So, the business value will increase, helping company to fulfill its goals and develop new strategies.

### Conclusion and Future Work

According to the above conceptual framework, hotel companies must use their own resources and combine them with the new IT resources, in order to make their internal processes, collaboration with partners and provided services to clients more effective and efficient [12]. The combination of the above resources can create business capabilities which are able to lead to the creation of business value and increase of the performance (customer’s loyalty and financial results). This new business value, which derived by the customers leads companies to develop sustainable strategies in order to adapt and survive inside their task environment [23].

In the near future, authors are planning to develop specific case studies in the Greek Tourism environment with hotel companies which are leading in the adoption of new technologies and sustainable policies, in order to find out in what degree the business value is added in their companies.

### JEL Classification

M15, Z32

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