

USING INFORMATION TECHNOLOGY FOR TOURISM BUSINESSES STRATEGIC ADVANTAGE

KORIŠTENJE INFORMACIJSKE TEHNOLOGIJE U TURISTIČKOM POSLOVANJU – STRATEGIJSKE PREDNOSTI

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Abstract: *The paper envisages aspects concerning identification of the ICT impact on promoting and selling the destination. The emerging ICT developments have direct impacts on the competitiveness of enterprises, as they determine the two fundamental roots to competitive advantage, i.e. differentiation and cost advantage. The continues development of information technology has profound implications for the entire tourism industry. Information technology is used today in many sectors of the tourism industry and a number of activities, from the internal to external communication with various other branches of the entire industry.*

Keywords: *information technology, competitiveness, development, strategy, internet*

Sažetak: *Rad razmatra utjecaj informacijske tehnologije na promociju i prodaju turističkih destinacija. Razvoj informacijske tehnologije ima izravan utjecaj na konkurentnost jer određuje dva osnovna izvora konkurentske prednosti: diferencijaciju i troškovnu prednost. Neprestan razvoj informacijske tehnologije ima značajan učinak na kompletnu turističku industriju. Informacijska tehnologija danas se koristi u mnogim sektorima turističke industrije, kako u unutarnjim i vanjskim komunikacijama, tako i u brojnim drugim granama industrije.*

Ključne riječi: *informacijska tehnologija, konkurentnost, razvoj, strategija, internet*



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1. Introduction

This paper examines problems and solutions related to electronic and computational technologies in the tourism industry and suggests recommendations for successful e-commerce strategies in tourism to be applied by the industry and the government. This paper discussed a series of available strategies for harnessing the power of the media for hospitality and tourism providers to stimulate their marketing efforts and suggests some recommendations for decision makers, entrepreneurs and practitioners in the tourism industry field, particularly for SMTEs.

Study examines what kind of information consumers seek online and how they actually use the information they acquire online from other consumers to make their travel and hospitality decisions. How much weight do they give personal sources versus impersonal sources?

The informational technology is a synthesis of “electronic technologies, computational and telecommunication technologies that enable effective communication and processing data” [1]. According to Sofield [2], the information technology is affecting the tourism industry in four main areas, namely in the bidding tourism management, the tourist marketing and the relationship between produces and customers.

First, information technology has radically changed the way in which the information is transmitted. Therefore, it change the way in which the tourist services are tendered. As the customers’ expectations grow vary fast, the interest for holidays as flexible and independent of those required to ensure services provide new ways and new opportunities to meet the requirement of tourists.

Secondly, the information technology has profound implications in the management of the tourism industry. Since the information is the binder which unites various manufacturers in this field, namely the airlines, the tourism operators, the travel agencies, the hotels, the rental cars, the cruise lines and the other suppliers, it is very important that all sectors of activity in tourism to adapt new of management. The information technology enables effective cooperation between these sectors and also provides on advantage in terms of cast. Monitoring competitive prices, the sectors of tourism can quickly change and adapt their own prices. Since electronic investment and internet distribution lead to serious financial economy, many sectors of the industry have used this king of technology[3].

Thirdly, the use of new technologies is required by the increase of the application complexity and the expansions and diversification of products. Therefore, the very fast development of bath, the demand and supply makes tourism informational technology to became the key in touristic marketing that modify organizational competitiveness.

Fourth, the information technology reduces the distance between consumers and suppliers. It implements the best operational practices in such a way that the inventive operators use and take advantage of various operational tools to attract most customers. The success in tourism depends of the fast identification of the customers needs and the interaction with potential customers and this can achieved only through the updated information.

In conclusion, "a comprehensive information technology spreads fastly into tourism industry and can escape of this impact whit the information". Any travel company can put itself on such a more competitive way using the implementation of this technology and using it effectively.

2. The Modernization of Tourism Using the Information Technology

The development processes in information and communication technology and the internet particularly, have revolutionized the entire tourism industry, generating new models of business, changing the structure of distribution channels used by tourism industry and redesigning all processes connected to this industry and last but not least, influencing the suppliers with touristic packages, destinations and stakeholders [4].

The E-tourism is joining some of the fastest growing technologies such as the communications and information technology the hospitality industry and management, the marketing and the strategic planning. E-tourism is the keyword that brings out the effects and consequences of the tourism industry which we have not expected a few years ago. "E" indicates the state of electronic and represents "e-marketplace", where the e-business meets the e-consumers, the e-governance, the e-partners and many others e-business sites on electronic platforms.

The E-tourism is a part of area "operations" of electronic commerce, and has a grown number of travel agencies and tourism enterprises in global, national and regional levers that provide travel services through online transaction. They offer to the users hotel information, flights, trains and restaurants in order to help them to plan their business and holidays. Currently, is gaining ever more the ground reconstruction present tourist destinations, and "placing" in the circuit of tourist destinations and moments disappeared with the help of VR(virtual reality) technologies, thanks to PC 's technologies, and some accessories – headset and glove – cyber glove, CAD technology – to create virtual models, the boom (binocular Omni-orientation monitor), CAVE (Cave Automatic Virtual Environment),VRLM –Virtual Reality Modelling Language, 3Dglasses and thanks to a great reconstruction work from many specialists such as architects to developers[5].

The largest companies (including those in Romania) use the PC reservation systems (CRS-computer reservation systems, Galileo International, Sabre, Amadeus, World span, System One, Abacus), which are characterized that they unify the information systems, reservations and sales systems. The tourist who appeals to an agency which uses such kind of system benefits from a tour of safe, high quality and an optimal rate.

The Global information networks and distribution-CRS-Computers Reservation System, GDS-global distribution system and the internet play a decisive role in international tourism because they put in contact the producers and the consumers of tourism products. These system are the backbone of international information networks, which offer to the tour operators, travel agencies, airlines, facilities to obtain and process the information, make reservations and sell the products.

If in the beginning the CRS sites were developed (1970) by the large airlines to process flight reservation, have subsequently evolved and were developed to provide additional services related with air transportation such as: the storing of information in a word basis, the issue of the tickets, marketing – by informing the passengers about the costs, cut-offs and other specific conditions, or setting the products and services. They cover today, among the services offered by airlines those on the ground which offer to the tourist travel packages (transportation accommodation meals sightseeing's and performances) or car rental. Due to broadening of the range of services they become known as global distribution systems witch allow the significant improvement of the business efficiency of travel agencies. Because of strategic alliances and other forms of cooperation they occur on the most important markets and allow the minimizing of the costs, reducing the need for the direct trade. On the international tourist market are in use some global distribution systems well recognized and with an international prestige, their number of users and services provided evolve permanently. We will stop of some of the most important.

-AMADEUS- provides marketing –distribution service, and sales tools for all companies from the transport industry. It was established in 1987 with the fallowing founding members: Air France, Iberia, Lufthansa and SAS. There are 155.000 agents connected to its system. Amadeus is the only system that allows airlines to use the facilities for sale, of the airports. It offers to its clients the process management and sale softwares and the network of agents. Amadeus is a leader in Europe and Shout America, with a major shave on the US market, Asian and African.

-SABRE was established as a holding company (Sabre Holding Corporation) taking the system with the same name from American Airlines adding through the purchase of 35% of shaves the distribution system ABACUS from Asia .This holding sells touristic arrangements and software for the agents in work with. Sabre also owns the Travelocity site which provides on line services for potential consumers.

-GALILEO INTERNATIONAL - originally ware the name Apollo, being the propriety of Covia company from U.S.A. Covia was allied with the European consortium Galileo (the four founding members were: Alitalia, British Airways , KLM, Swissair), then merged and formed Galileo International. Soon after Canada has been associated in consortium. In 1997, the 11 companies of the Galileo system sold 35% of the company , the company became a public society. Galileo offers booking services, information and other products such as Wireless Galileo, Galileo e-cruise, XML, Select and Galileo View Trip. Galileo provided the Rail Master service which is an arrangement of reservation on French railways last year.

- WORLDSPAN-is another global distribution system which offers a huge range of additional service connected with air travel. The holder system is organized in such a way that it can conduct three types of activities: the distribution itself of the travel and tourism service, e-commerce and consulting service offered to the travel agencies. The World span reservation system offers travel information for more than 20000 travel agents and users around the world. World span is the leader in the sale in transport industry it sales are 50% of online sales. This system, relatively recently created (1990) has 3200 employees and its activity is spreads in 70 countries.

The born of Destination management Systems(DMS) at the end of years 1980 has enable the new comprehensive complex and updated information on various tourist destination and offered optimal opportunities for planning, management and marketing for regional companies and travel agencies in this way. DMS is an important tool of promotion distribution and operation for travel agencies.

Buhalis took the DMS concept further and has introduced the Destination Integrated Computer Information Reservation Management Systems (DICIRMS), a strategic tool used to maximize economic benefits, social, cultural and environmental tourist destinations. Today, the tourism is one of the most important applications on the World Wide Web Initially, the access to the Internet appeared to be related to young people and those with training in the field. Today, there is a wide range of user who want to know travel information or to purchase travel services using the Internet. As a fact, the era of networks modifies the importance of location and of quantities in the delivery process of the products [2].

As is known these information systems come to manage the activities of travel agencies or individual agents globally. It is good to late into account that at present, the "bulk air transportation is directed to the business travel or for the pleasure. People travelling for business do so for economic reasons and expenses are supported by the companies for which they work (Edgel, D., 2008). As a result, there is a need for flexibility in achieving an arrangement taking into account that may be willing to be treated as "friendly". To know these is required a more complete information, faster and easier to perform. All these are offered by information systems that use the Internet. The Internet has the potential to have a major effect on haw the hospitality and tourism product are distributed, redefining the modality in which the tourists discover and buy tourist products. It has the potential to overcame many problems associated with the traditional electronic distribution. Addressing to the consumer directly, it bypasses the GDS, giving rise to much lower costs and making possible the distribution of cheap products. The absence of requirements in terms of structure gives the flexibility to distribute heterogeneous products, white the simplicity and the general acceptance of the user interface introduces consistency in haw the information is accessed a necessary prerequisite in tourism . The freedom of entry, low costs and the fact that one does not need any special equipment to make it attractive as a medium distribution for the small tourism operations white the multimedia capabilities and global scope make it very effective as a marketing medium. Its potential has been officially by the tourism sector. It has predicted that the Internet will be the key of leadership future in the national tourism sector.

Only those operations that will exploit the technology to properly identify the consumers' needs and provide proper products will survive. The entrepreneurs' market in tourism it is not a small one and they know to use informational solutions and applications. The Internet is the main virtual gate which enterprises can promote their services and attract customers but the extent to which it is operated is still a little one.

The role of a website must not stop here. The idea of a website is not only the full presentation of travel offers but their actual sales to customers. Thus the

implementation of solutions that allow the user to buy online the offer saw on the website is the great advantage that a travel agency or on enterprise from this branch can obtain from on website [6]. This means the full using of the resources that posting on the Internet can be offered. The firms seen to realize (as the dynamic online presentation of the offer in recent years) with the idea that the migration to online is beneficial, but the practice continues to leave desired. At the moment, most website of this kind offer to the clients only the possibility of the study online of the offer which are on the market and to compare with the competition. The payment and other services are unfortunately still in the classic way. A little better is the chapter of online bookings, but, in this case the processing of the application (or the necessity of telephone confirmation) makes that the advantage of operation processing in real time to be lost. The website that accept credit cards can make reservations in real time.

Only in this way one can make reservations in real time. Most of them have application forms in which the command is transmitted by e-mail and the hotel/tourist agency rings the client. The non-use of maximum benefits brings on relationships with other agencies and companies from abroad and deepens the gap between the companies from and outside [7]. The westerns companies have adapted the new trend requires adding more touristic services in one online package (booking the air ticket, hotel booking, the confirmation of reservations , payment , rent a car, etc). According to specialists, the customers whom access this kind of offsets are the category of Internet users with a minimum experience of two years in terms of shopping online. Therefore the actual situation existing in Romania e-commerce and in the region , the launch of such offers by local tour operators could mean targeting a limited number of customers.

The initiative may be considered as one with low profitability only if the offer is viewed from the perspective of attracting customers exclusive from the county, and not abroad, more familiar with the purchase of such products. In this case also, the mechanism of money collection is quite complicated. For example, a foreign tourist, he paid the money to the company by bank transfer is much greater. One of the factors considered to be the basis of the limitation of the development of the online tourism in Romania is the poor understanding of the benefits that online credit card payments offers. There are 7,1 million cards in Romania , there are a billion of users of the Internet in the world and foreign buyers are educated in payment for travel services online. In these circumstances it is not clear that backs request .The agencies and companies from the region put the blame on the trading commissions which they like at the level of transactions through the POS. The future of tourism seems to belong entirely to the Internet. According to a recent estimation of the main actors from American tourist market in maximum 10 years the online companies will be majority, the tourism will practically became the biggest industry on the Internet. A forecast justified by the scale on which the Internet has become in recent years in the tourism industry all over the world not just overseas. Even if Americans are leaders in e-tourism, the Europeans have not left behind. Europe has quickly adapted to new trends, the constant increase of the number of internet users worldwide, the expanding capacity of distance payment instruments having a direct impact on this international industry. Even so, it is estimated that Europe will reach the level of

American online tourism in 3-5 years. There is not an unique technology (such as computers, internet, phones, videotext) which is widespread in the tourism sector, but a whole system of these technologies. In addition, the technology is not only used by airlines, hotels or travel agents, but all of them. The developments in the application of development technologies in tourism sectors are made in a fast way. However, these subjects seem not to attract the imagination of the tourism industry, which in some limits, been overcome by the development of technology.

3. Information Technology and Tourism – a Challenging Relationship

Tourism businesses need to enhance their competitiveness by employing the emerging tools and re-engineering all processes. Tourism businesses need to become more flexible, more efficient and quicker in responding to consumer requests. The ICT revolution offers a variety of tools and mechanisms that allow innovative and dynamic players to take advantage and strengthen their competitiveness.

The use of ICTs in tourism businesses digitises all processes and value chains in the tourism, travel, hospitality and catering industries. All business functions - sales and marketing, finance and accounting, human resource management, procurement, research and development, and production, as well as strategy and planning for all sectors of the tourism industry, including tourism, travel, transport, leisure, hospitality, principals, intermediaries and public sector organisations - are influenced by the emerging capabilities of ICTs. Technological solutions are normally incorporated to increase efficiency and reduce the cost and time required for undertaking particular activities and processes.

The rapid growth of both tourism demand and supply in the last decades has demonstrated that the industry could only be managed by powerful computerised systems.

The world networks of information and distribution – *CRS- Systems of computerized reservation, GDS- systems of global distribution and the internet* play a decisive role in the sector of international tourism, because they connect the producers to the consumers of touristic products [8]. These systems represent the vertebral spine of the international networks of information, that offer the touristic operators, tour-operators, travel agencies, air lines, facilities in order to obtain and process information, to book and commercialize tourist products [9]. If, initially, the CRS were developed (1970) by the great air companies for the processing of flight reservations, afterwards they evolved and developed themselves to offer a plus of services connected to the transportation by air: the stocking of information in a world wide bases, the emission of tickets, marketing- by informing the passengers on the cost of the travels, the discount and the specific conditions, or the sell of products and services. Nowadays they cover, beside the services offered by the air lines also the land ones, offered to tourists such as: travel packages (transportation, accommodation, meals, visits and shows) or rental of vehicles. Due to the enlargement of the range of services, they become known as systems of strategic alliances and of other forms of cooperation these systems interfere on the most important markets and allow the minimization of costs, reducing the need for the

presence of the direct commerce. CRSs and GDSs were the most important facilitators of tourism industry changes until the arrival of the internet, as they provided a comprehensive travel marketing and distribution system and were often called 'travel supermarkets'. GDSs have been used in order to facilitate and manage the drastic expansion of tourism enterprises and destinations globally. GDSs comprise the essence of the tourism industry as they connect the vast majority of the tourism suppliers with the travel trade and tourism intermediaries. They enable immediate itinerary building and reservation confirmations. In tourism the web-based distribution systems can help satisfy the consumer needs of easy access to a wide choice of information and hassle free reservations. Increasingly tourist satisfaction depends on the timely availability of accurate and relevant information. Improved access to information on all aspects of tourist activities has made it possible for marketers to offer personalized services at the same prices as standard packages. In tourism, the internet instantly bridged the gap between consumers and businesses enabling interactive communication and trade. The proliferation of e-commerce enabled electronic trading, both from enterprises to consumers (B2C) and perhaps more importantly between businesses (B2B). It also enabled consumer-to-consumer (C2C) services and communities to emerge providing a wide range of tourism information services online. Not only did it enable tourism businesses to increase their reach but also intensified online trading and globalised the market of all types of products and services. The electronic-business revolution gathers momentum everyday and transforms communication, collaboration and commerce. E-business replaces some of the offline business transactions, but more importantly it enhances the total transaction volume as both organisations and consumers take advantage of the new tools to purchase products and services that many were unable to purchase before. Although the internet is more suitable for trading services, since they do not require the transportation of products, it is increasingly evident that no organisation can escape its impacts [10]. To the degree that producers develop their presence in the global marketplace and offer their products in favourable terms in comparison with intermediaries, they will be able to attract consumers and sell directly, saving commissions and distribution costs.

4. Conclusion

Next, at the strategic level, eTourism revolutionises all business processes - the entire value chain as well as the strategic relationships of tourism organisations with all their stakeholders [3]. As with other industries, ICT's penetration into tourism should provide strategic tools for the networking of the industry, for adding value to products and for enabling organisations to interact with all stakeholders in a profitable way. In addition, ICTs can improve the managerial processes in order to ameliorate control and decision-making procedures, and to support enterprises to react efficiently to environmental changes and consumer behaviour trends [11].

The emerging ICT developments have direct impacts on the competitiveness of enterprises, as they determine the two fundamental roots to competitive advantage, i.e. differentiation and cost advantage. On the one hand, ICTs enable tourism

businesses to differentiate and specialise their products to each consumer. By unwrapping the tourism product and by enabling consumers to put together all the elements for their individual needs, ICTs offer the opportunity to target the market segment of one, i.e. each individual customer. This is only possible because ICTs support flexible and responsive value-added chains and empower consumers to repackage products through endless combinations.

On the other hand, ICTs become instrumental to cost management in the industry and particularly for the distribution and promotion costs. Organisations around the world have reduced their costs by reducing commission to intermediaries, whether by trading directly from their web page, by paying lower distribution fees to electronic intermediaries, or by cutting commission levels and fees. In addition, redesigning processes and eliminating repetitive tasks reduced labour costs and increased efficiency

5. References

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