

INFORMATION COMMUNICATION TECHNOLOGY IN THE FUNCTION OF IMPROVEMENT OF COMPETITIVE POSITION OF TOURIST DESTINATION

UDC 338.48:658.8

Mira Avramović

High Business School of Leskovac, Serbia
mail@vpsle.edu.rs

Abstract. *Information communication technology is becoming more and more the crucial element of everyday life. It is widely used in business activities, as well as in leisure time at home. This also applies to tourism as a form of human activity. Tourist enterprises are significantly using information communication technology for marketing purposes. This applies to the field of support in marketing decision making as well as the field of communication and sale. However, for the purpose of marketing, information communication technology is used in tourism by public sector, specifically by national, regional and local tourist organizations dealing with marketing for their areas (countries, regions, places) as tourist destinations. Thus this paper takes into consideration the possibilities of the use of information technology in tourism destination marketing. Various information technologies applied in tourism are explained, and their present and potential role in the marketing of a destination is assessed. The term of electronic market is defined, together with electronic marketing as marketing activities carried out on electronic market with the assistance of information technology. The need to incorporate electronic marketing in the whole strategy of tourism destination marketing is also underlined. For this paper relevant references were used, mostly from the field of marketing, but also from other economic and historic methods.*

Key Words: *marketing in tourism, marketing strategy, tourist market, information communication technology, electronic marketing, destination marketing systems.*

INTRODUCTION

For successful and efficient business in an environment characterized by dynamism, information and globalization, it is necessary to be flexible and react quickly to any changes on the market. Such company's reaction may be only the result of continuous,

rapid and accurate flow of information enabled by information technology and information systems. In industrialized countries, information and knowledge represent a new base of overall operation, present in all spheres of production, tourism, trade and services, to non-economy and state administration.

Continuous development of information and communication technologies during the last decade has had a profound implication on tourism. In the modern business conditions, for enterprises in tourism, it is important to consider two forms of technological competencies in order to achieve competitiveness. These are the areas of computer technology and communication technology.

Computer technologies include achievements in the field of hardware, software, etc. Achievements in the field of hardware provide almost limitless opportunities for the development of software programs designed to solve any problems. Communication technologies enable solving the problems of transfer of information. Message transmission rate is continuously increasing.

Application of ICT in enterprises in the tourism, digitize all processes in the field of tourism, catering, travel, etc. Moreover, these technologies affect all business functions in the tourism industry: sales and marketing, finance and accounting, procurement, research and development. At the tactical level, this includes e-commerce and application of information technology (IT) to maximize efficiency and effectiveness of organizations in the tourism industry through the reduction of operating costs and communications costs. In addition, IT enables more effective strategic decision making through improved management processes, control procedures, more efficient response to changes in the environment and the like. Constant interaction with customers and partners helps to be more flexible and competitive in pricing, which can increase the yield of the company. Sales control enables company to adjust products and prices to the requirements of consumers, as well as to initiate promotional campaigns and the like, in the quest to maximize sales.

The efficiency of the tourist economy of a country or destination will largely depend on the total computerization of business enterprises in tourism, and the availability of tourism products presented through the modern computer technology. The effects of the implementation of information technology are numerous and primarily relate to better information and faster transaction, to significantly improving operations in many areas on the tourist market.

1. CHARACTERISTICS OF TOURISM DESTINATION MARKETING

Tourism is a complex, open system which is composed of set of subsystems and their interaction of resulting socio-economic and natural phenomena and relationships. Its subsystems themselves are composed of a set of own elements such as: system of holders supply (accommodation facilities, restaurants, airlines, retail trade, built attractions, activities, etc.) subsystem intermediaries (tour operators, travel agencies), subsystem of business associations and chambers, a subsystem of the public sector (state authorities responsible for tourism, national, regional and local tourism organizations, tourist information centers, etc.) a subsystem of tourists (consumers), a subsystem of residents (both because of the importance of their attitude towards tourists and as users of the same facilities and services), as well as related services subsystem (guide services, educational institutions etc.).

Tourism is an activity that involves movement and stay of people in such places that are not places of their permanent residence. They visited other countries, religions, settlements, and this is called by a name – a tourist destination.

Since there is no place on Earth which tourists do not visit, it should be emphasized that, in the context of modern tourism, a place can become a destination only as a result of two sets of related activities: the development of facilities designed for meeting the needs of tourists who visit the destination and the existence of the destination marketing activities such as the tourists offers in places where it is needed.

Marketing in tourism is management philosophy by which holders of tourist and business policies tend to create and maintain the target group of tourists through the identification and (effective and efficient) trying to meet their needs, and on that basis to achieve their organizational goals and social interest.

Today in the international tourism, countries, regions and cities are competing as a destination, not just companies. Marketing of products of tourism destinations can not be left only to the enterprises because they are not usually capable to support independently, financially or otherwise such efforts. For this reason it is necessary that such activities are done by Tourist policy holders, and various state bodies which are responsible for tourism (such as public sector). But we should not underestimate the role and importance of the various initiatives of the private sector.

The development of mass tourism has threatened and somewhere damaged not only natural but also man's total environment. It is necessary to take into account the long-term interests of society (i.e., destination) and preserve the environment (natural, socio-cultural and other) so that the tourist destination would not become a victim of its own development. Therefore, the application of marketing in tourism assumes the acceptance of concept of socially responsible marketing.

Marketing in tourism, in general, has a number of specific details that are related to tourism as an activity. These are: intangibility of services, their connection with those who provide them, variability of quality, the impossibility of their storage, significant time distance between the decision to purchase and own consumption, often weak loyalty to the brand, focusing demand to offer, seasonal concentration of demand, its heterogeneity and flexibility, heterogeneity and inelasticity as well as high risk in buying their product.

It should be said that besides the numerous features of marketing in tourism in general, a tourist destination carries additional specifics that arise from the following characteristics: Tourist destination, regardless of physical covers, usually has a multifunctional character; spatial coverage tourist destination, that is seen by tourists, often differs from the one that is seen by the destination authorities; It may happen that some sets of objectives of public and private sectors do not overlap or that they are in conflict; the destination method of using the product differs substantially from the use of any product or services, and finally, those who manage the destination (which is the public sector), have little or no control over the various elements of the tourist destination.

Specific services include marketing and use of specific marketing concepts, besides the one related to the four marketing mix instrument. It is about internal marketing and interactive marketing.

Destination marketing organizations (DMO) can implement internal marketing on three levels: the micro level, ie. within the DMO, where the main target audience is the personnel employed in the DMO, then at the level of tourist activity, where the "target" is

the employees in the industries of tourism and finally at the destination as a whole, where the target audience is the residents. Talking about interactive marketing opportunities the implementation of these activities is smaller than in the case of internal marketing. It is of great importance for the marketing of a tourist destination to maintain and improve the relations with tourists that are usually committed towards attitudes and behaviors of service providers. Interactive marketing has its place in the domain of tourism information centers and checkpoints, through constant contact, by providing information, assistance and in processing complaints.

2. INFORMATION TECHNOLOGY IN DESTINATION MARKETING

Information technology, by itself, can not be a source of lasting competitive advantage of tourist destination. It may contribute hardly to the competitive advantage through its impact on strengthening the microeconomic basis of competitiveness which consists of human resources, physical infrastructure, administrative infrastructure, information infrastructure, scientific and technological infrastructure, developed domestic market and competition, sophisticated and demanding request.

In the marketing of tourist destinations, its application is found in a large number of information technologies: teletext, videotext, information kiosks, computer reservation systems, global distribution systems, destination marketing systems, databases, expert systems and the Internet.

2.1. Teletext

Teletext is a technology of one-way broadcasted information through continuous transmission of groups of information in cycles from one center, along with broadcasted television signals. The idea of this invention was patented in early seventies in the UK, and the idea was to free the lines of TV signal which were not used for transmission of video signals and to assert an additional digital signal. The digital signal carries the information presented in the form of numbered pages, which can show text and images. Decoded information in order to be read on screen requires TV with decoder. Pages of information are broadcast in cycles, and the user, with the help of the keyboard, select the desired page. The disadvantage of Teletext, in this regard lies in the fact that it must wait until the desired page appears in the broadcast cycle. This limits the capacity of several hundred pages which means that the selection and detailed information are limited.

For the purposes of the tourist industry, the home information system, can provide updated information, such as weather forecast, traffic conditions on roads, time of departure and arrival of aircraft and trains etc.. Besides this, there is the possibility to make a purchase, for example, which means to buy the package of tourist arrangements and to buy for it by the phone with the credit card. This is particularly suitable for the package of arrangements that are unsold just before the start of travel.

2.2. Videotext

Videotext is an electronic system for sending information and messages that allows two-way communication, usually by telephone, with the information shown in the form of text or graphics on a custom TV or some other terminal such as personal computers.

Videotext services are used both in private and in business purposes. Some of the information can be obtained via videotext services include: news and weather, training or education at home, tourist information, catalog sale. Besides this, videotext can be used to perform the reservation of tickets, cinema, various calculations (eg calculation of interest), then to send messages between users.

Videotext can be publicly accessible or private, or restricted to private users (so-called closed-user group). Publicly available videotext was developed in many countries. Travel agencies, particularly in the UK, often use videotext. Thus, the British passenger agents, through any of the existing videotext system, can get information about departure and arrival times, and prices of all major air and ferry companies, and prices on the rent-a-car services, the remaining places in charter flights and the remaining package information on visas, exchange rate etc..

Videotext in the tourism industry is far more used to getting information rather than booking. When it comes to usual travel (leisure travel) especially the package in the UK, in most cases, these products can be booked on-line exclusively through videotext. On the other hand, in Germany, for example, tour operators in this regard are less restrictive, and through videotext book only a few percent of the package arrangement. Booking services for business travelers, for the most part use the computerized reservation systems, airlines and system-START Amadeus.

France is the only country in Europe (and in the world) with the wide use of videotext system in business and private purposes, with <<Minitel>> device in millions of offices and homes. A study done for the French national telecommunications company and the Ministry of Tourism in 1991, has shown that the use of <<Minitel>> for collecting information on tourism services among its customers is popular, although lagging behind the brochures and information presented by travel agencies.

2.3. Information kiosks

Development in the field of information technology has led to the appearance of information kiosks. It is the kind of information system for the independently access of the client and autonomously usage. New generation systems are of multimedia characters, consisting of computers, speakers, keyboard (required if your monitor is not the type of touch-screen), CD-ROM drive, sometimes the small printer and stored in robust housing. They are usually set in the hotel lobby, shopping centers, at the airports, bus and railway stations and on similar places. Users (tourists) can freely approach and use it to get the specific information (through text, images, video and sound), and to book the accommodation. The features of information kiosks are [1, p.102]:

- Good balance in the use of different media,
- Good quality content,
- Simple but clear and understandable organization of content,
- Consistency in the way the material is fragmented, connected and presented on the screen,
- Consistency in the presentation of different functionality and
- It links clearly the meaning and function (sometimes with explicit explanation).

Information kiosks have also disadvantages. There may be negative impacts on the environment (noise and general excitement). Availability / accessibility of kiosks may depend on

the working hours where they are located. Also, the frequency locations lose their privacy in obtaining the information through the kiosks, as passers and those waiting in line for the kiosk can see (and hear) the information that is broadcasted across the screen of the kiosk.

In any case, information kiosks are widespread in tourism information technology and are devoted to the visitors on the destination. Their function is to inform the tourists and persuade them to stay longer in the particular destination as well as to spend more money there.

2.4. CD-ROM

CD-ROM (Compact Disk Read Only Memory) system allows the laser compact disc to store colored recordings: hotel, gallery, landscapes, cities etc. and to display them by color-screen personal computers that are installed in travel agencies. This new technological innovation is often called "electronic brochure". It allows potential tourists to view any selected destination or partial tourist products and facilitate a decision on purchase. Electronic brochures can be made by national and regional and local tourism organizations, tour operators, hotels, owners of computerized booking system CD-ROM (or video disc) is very suitable for mixed use with videotext system. Namely, videotext has access to large databases that are updated continuously, but is limited to their text and simple graphic display. On the other hand, video-disc is inflexible from the point of updating the information (once registered the information on laser compact disc can not be deleted), but the possibility of displaying static and moving images of high quality and sound. Thus, for example tourists' travel agency or tourist information center can require hotel accommodation in a particular destination. Videotext on its page gives information on pricing and availability but the image of the hotel, room etc., are shown by a video-disc.

2.5. Computer reservation systems, tourism enterprises (CRS)

Reservation systems are the most important element in the system of distribution of tourist services. Their formation is the result of the desire of management in tourism enterprises to establish pre-booking system, which, with price changes and the formation of waiting lists, is one of the techniques of controlling demand in the short term, without changes to the offer. In addition, the reservation system enables organizations whose resources are not limited to better demand and accordingly to that it takes steps to increase supply. Also, CRS enables providers of tourist services to maximize capacity utilization through price changes and rearranging the package of services, and sometimes through the transfer (redirect) consumers with the products whose demand exceeds the offer to those with weaker demand. CRS may be organized in one of three ways [2, p.254]:

- As manual (manual) system, where the requirements are taken by the phone, and then enroll in these special books, diaries, and tables;
- As a computerized system where the requirements are also received by phone, but all records of the reservation is processed and stored on a computer;
- As a fully automated computer reservation system, for which agents have directly access (on line) from terminals in their offices and perform booking.

2.6. Expert systems

Expert systems have found their first application in a highly structured problem solving in science and engineering. In the field of tourism about they appeared during the

mid-eighties of the last century, when it began with the development of prototypes of these systems for operational and physical management of tourist companies, especially for airlines and large hotels. Expert systems contain the knowledge of experts in such form to enable them to bid for specific problem solutions or make intelligent decisions. Expert system should have the ability to explain and justify its conclusion, as well as the ability to do data on actions with uncertain consequences. Characteristic of these systems is that they are able to remember the good solutions and include them in the bank of knowledge for later use in solving other problems. For management purposes, the adoption of such systems and learning about them are essential.

The relatively recent literature, which covers the area of application of information technologies in tourism, began to till the issue of application of expert systems in advising tourists in selecting the most appropriate destination. Expert systems in this regard could be used as agents of assistance (travel counselors) in providing assistance to tourists in the choice of destinations and services in total. The tourists can find the same application but without the agent.

What are the prospects in the area of application of expert systems in destination marketing? Apart from the expert systems which should help in the selection of one, the most suitable destination between multiple options, which in this case are (controlled) means of marketing, there remains the possibility of applying for a narrower or wider destination, in order to assist in choosing the best routes and itineraries, and according to preferences of tourists, regardless of whether the tourists had direct access or through an agent. Expert systems have not had wide application in this area or agents in the area of assistance in giving advice to tourists. The reason for doing this, is a great complexity in modeling preference for intangible products and expand of the scope of influence on decision-making process. The immediate future will not bring significant changes in this regard. We should expect the first concrete attempt to introduce expert systems in travel agencies, while the process of implementing the expert system with direct access will go slower except, perhaps, over the Internet.

3. TOURIST INFORMATION SYSTEMS ON THE INTERNET

The rapid development of Internet at the end of 90 years has brought a revolution in tourism. The Internet has moved the gap between consumers and businesses and it enables interactive communication and trade. Tourism has always been a complex activity, which is based on a partnership between the individual organizations within a defined system of values. Distribution channels in tourism include the number of stores which include travel agencies, tour operators and other organizations. B2B Internet commerce has enabled many organizations in the tourism industry to redesign its business operations and expand their business models.

We can say that almost every serious company in the tourist economy in the developed countries, has its own website. This applies to the airlines, hotel chains, RAC companies, railways. But in less tourist companies that are seen on the Internet as a relatively inexpensive medium for getting the international market. It is interesting to note that due to the relatively rapid acceptance of the Internet by the tourist customer and there occur authors who speak of the end of the tourist agencies and the absence of the needs of their mediation. As well as it shows the need of the agencies to get know its customers, and the profile of the tourists (in fact develop Database marketing) so not to remain without them.

With the new information technology, especially Internet, Marketing department is changing rapidly in five fronts [3, p.18-20]:

- ***From mass marketing to database marketing.*** Given that companies tend to all aspects of the organization work smarter, making more with less, the cost of unsuccessful advertising will grow. For these reasons, marketing experts must, use the technology of data gathering to target more precisely desired segments of their propaganda. This involves collecting more customer information and customizing the message by using the information needs of the target audience and to make the differentiation between products and services.

- ***From mass media to interactive media.*** Customers increasingly want to choose when, where and how to meet the holders offer. This means addressing the individual needs of clients and services in a way that the client prefers. Interactive media will play a critical role in this process and it should be involved in marketing strategy at the first opportunity.

- ***From the market share to the relationship wealth.*** Since marketing departments can serve rather than sell their performance should be measured differently. The emphasis will be on the wealth of relations with consumers, rather than just the market share. To be effective, this transition must be strongly communicated to all levels of the company.

- ***From sales to service customers.*** Marketing no longer means to convey your message to the widest possible audience. It means to take care of customers. It moves into production, logistics, customer service centers, help desks, helping to remove barriers in the way of sale to consumers.

- ***From technologically sophisticated to the most creative.*** The Internet was not for many marketing departments important thing but it was an interesting thing. Today, it is a basic requirement in all marketing strategies. In the past, the best marketing experts, they were most creative. Today, the best marketing experts are those who are most technology sophisticated. The importance of creativity remains, but the importance of having technologically sophisticated use of marketing, gives opportunities for geometric growth.

Internet is not used only for tourist information, but also for sale. Association of American hotels and motels (AHRMA) points out that electronic sales service accommodation over the Internet beginning of the XXI century has reached a value close to 3 billion USD. [4, p.174]

All important tourist destinations of the world have their presentations on the Internet (or more accurately on the Word Wide Web). It is a medium that no one wants to drop in their marketing activities.

Our country is connected to the Internet from 1996. year. Since then a number of tourist companies, as well as some destinations, develop their presentations on the Internet. Yet it is increasingly used to collect different information in order to find new content, for monitoring communication, for creation and design of tourist services.

CONCLUSION

From the standpoint of marketing tourist destinations, teletext and videotext have almost no potential. CD Rom has been a traditional marketing tool known as "Electronic brochure", although a number of destination presentations on the CD Rom suffer from the stereotype views. Information kiosks are designed for those who have already visited the destination, in

order to extend their stay and increase consumption. In that sense, it is a widespread technology. Computer reservation systems, tourism companies, including global distribution systems, are oriented to increase the efficiency of sales, therefore the transaction. Therefore, the weak interest for a marketing destination is expressed. Many of the destinations marketing organizations (DMO) with the construction of destination marketing systems make their destination more accessible electronically. Experiences are different, and it is obvious that we should wait with giving the final score. Database of visitors can be a solid foundation for database marketing. In fact, it is necessary to set up and develop a coherent system of collecting data on visitors, in cooperation with the private sector (eg tourism industry). Expert systems, for now had wider application in the area of destination marketing, and the first attempts will be related to the operation of travel agencies. The Internet probably carries the greatest potential, particularly because of the possibility of combining with other information technologies. Destination marketing organizations is already using the Internet for their activities. Despite its limitations, it is certain that the Internet will have a significant place in integrated marketing activities of tourist destinations.

REFERENCES

1. Desinano P., Vigo C., *Information Technologies and Tourism Markets*, John Wiley & Sons, Shichester, 2008.
2. Goelder R., Ritchie B., *Tourism (Principles, Practices, Philosophies)*, 9 edition, Wiley & Sons, inc., New Jersey, 2007.
3. Holloway J., *Marketing of Tourism*, Prentice Hall, 2008.
4. Coltman M., *Tourism Marketing*, Van Nostrand Reinhold, New York, 2005.

INFORMACIONA KOMUNIKACIONA TEHNOLOGIJA U FUNKCIJI POBOLJŠANJA KONKURENTSKE POZICIJE TURISTIČKE DESTINACIJE

Mira Avramović

Informaciona komunikaciona tehnologija postaje nezaobilazan element čovekovog života. On je uveliko koristi u svojim poslovnim aktivnostima, ali sve više i u slobodno vreme, u svom domu. Ovo važi i za turizam, kao vid ljudske aktivnosti. Turistička preduzeća u značajnoj meri koriste informacionu komunikacionu tehnologiju u marketing svrhe. To obuhvata kako polje u donošenju marketing odluka, tako i područje komuniciranja i prodaje. Međutim, u marketing svrhe informacionu komunikacionu tehnologiju u turizmu koristi i javni sektor, tačnije nacionalne, regionalne i lokalne turističke organizacije, zadužene za marketing svojih područja. Stoga, rad razmatra mogućnost korišćenja informaciono komunikacione tehnologije u marketingu turističke destinacije. Objasnjene su različite informaciono komunikacione tehnologije koje se koriste u turizmu i ocenjena njihova sadašnja i potencijalna uloga u destinacijskom marketingu. Definisana je pojam elektronskog tržišta, elektronskog marketinga kao marketing aktivnosti koje se uz pomoć informaciono komunikacione tehnologije odvijaju na elektronskom tržištu. Naglašena je potreba inkorporiranja elektronskog marketinga u ukupnu strategiju marketinga turističke destinacije. Za pisanje rada korišćena je relevantna literatura iz oblasti marketinga i drugih ekonomskih disciplina.

Ključne reči: *marketing u turizmu, marketing strategija, turistička destinacija, informaciono komunikaciona tehnologija, elektronski marketing, destinacijski marketing sistemi.*