Electronic Marketing and E-Commerce in The Tourism Industry: Fundamentals for Developing and Implementing Business Initiatives

RAKESH KUMAR GIRI

Research Scholar, Department of Computer Science & Engineering, Sunrise University, Alwar, Rajasthan

Abstract— The development of information and communication technologies (ICT) permeates all aspects of tourism marketing. This article proposes a methodological framework that will enable travel agencies to develop and implement their activities in the field of marketing and e-commerce. This article first reviews the literature on e-commerce models, and in the second section, the impact of ICT in marketing and tourism is discussed. Next, we will represent a business model with an electronic tourism, and then provide a structure that contributes to the plan and implementation of e -commerce initiative. This methodological structure can also be used to analyze electronic applications in sight seeing. It is envisaged that an integrated strategic approach can enable businesses in the travel and tourism sector to overcome the challenges and exploit the opportunities offered by ICT.

Index Terms- E-marketing, E-commerce, Business models, Tourism and Travel industry, Methodological framework.

I. INTRODUCTION

The rapid advancement of information technology, notably the Internet and the World Wide Web, has created challenges and opportunities for the tourism industry. ICT has considerably changed the role of each player in the value-creation process of the industry. Evidence indicates that effective use of information technology is crucial for tourism businesses' competitiveness and prosperity, as it influences their ability to differentiate their offerings as well as their production and delivery costs.

Barnett & Standing (2001) argue that a rapidly changing business environment, largely brought about by the Internet, requires companies to quickly implement new business methods, develop new networks and alliances, and be creative in their marketing. ICT stimulates radical changes in the operation, distribution and structure of the tourism industry (Buhalis, 2000). Structural changes in the tourism industry involve the necessity to elaborate an appropriate response to communication and transaction needs within a given nexus of market forces and opportunities. Therefore, there is an imperative need for tourism businesses to actively select between business models or frameworks that can best support an effective online strategy.

From a marketing perspective, the Web gives rise to a new and very effective tool and changes the way marketers define marketing mix variables (Kotler, 2003; Siegel, 2003). A plethora of tourism products and services are easily available over the Web. However, tourism is a highly competitive industry and consumers have many choices as to how and where they allocate time and money to their preferences.

This paper initially reviews the e-business models literature. In the second section ICT influences in marketing and tourism are discussed. Then it presents the e-tourism business models and subsequently suggests a framework, which will enable tourism businesses to plan and implement effective electronic marketing and commerce activities.

II. ELECTRONIC BUSINESS MODELS

Internet commerce has changed traditional business models and has given rise to new kinds of business models. However, there is no commonly acceptable definition of the business model's concept. Business models have been defined and categorized in many different ways. The probably best known definition and classification of electronic models is the one of

Timmers (1998). According to him, a business model is an architecture for the product, service and information flows, a description of the various business actors and of their roles, as well as a description of the potential benefits of these actors and finally a description of the sources of revenue. In addition, he acknowledges the necessity of providing a marketing strategy, in order to accomplish a business mission. Timmers classifies the eleven generic e-business models he outlines, according to their degree of innovation and their functional integration.

For Rappa (2001) a business model spells out how a company makes money by specifying where it is positioned in the value chain. His taxonomy consists of nine generic e-business models, which classify companies among the nature of their value proposition or their mode of generating revenues. A very interesting framework is described by Rayport & Jaworski (2001). They divide an e-business model into four main pillars, which are the value cluster, the marketspace offering, the resource system and the financial model.

Osterwalder & Pigneur (2002) approached a business model as the conceptual and architectural implementation of a business strategy and as the foundation for the implementation of business processes. Three elements make up a business model: Revenue and product aspects; business actor and network aspects; and marketing specific aspects.

Obviously, the e-business models are implemented in a variety of ways and continue to evolve. Moreover, a company may combine different models as part of its overall Internet business strategy.

It would seem that a framework is more useful than a definition in contributing to the analysis of a business model's structure and in determining the critical success factors in e-commerce. Osterwalder & Pigneur (2002) formulated and proposed an e-business model ontology (e.g. rigorous framework) that highlights the relevant e-business issues and elements firms have to consider in order to operate successfully. This framework is founded on four main pillars, which are product innovation, customer relationship, infrastructure management and financial aspects, as presented briefly in Table 1. According to these authors, a business model is nothing else than the value a company offers to one or several segments of customers and the firm's architecture and network of partners for creating, marketing and delivering this value and relationship capital, in order to generate sustainable revenue streams.

Table 1. The pillars of an e-business model

Pillars	Content & Components
1. Product Innovation	The products and services a firm offers, representing a substantial value to the customer and for which he is willing to pay. The main elements are the value proposition a firm wants to offer to specific target customer segments and the capabilities that a firm has to obtain in order to deliver this value.
2. Infrastructure Management	This element describes the value system configuration that is necessary to deliver the value proposition. This comprises the activities to create and deliver value, the relationship between them, the in-house resources and the firm's partner network.
3. Customer Relationship	Through the use of ICT firms can redefine the notion of customer relationship. The relationship capital the firm creates and maintains with the customer, in order to satisfy him and generate sustainable revenue.
4. Financial Aspect	It is transversal because all other pillars influence it. This element is composed of the revenue model and its cost structure. The revenue model determines the firm's profit model and therefore its ability to survive in competition.

Source: Adapted from Osterwalder & Pigneur, 2002

It is obvious that the four pillars are interrelated and mutually supported. As for the business strategy, it is worth stressing that e-commerce initiative is not an activity that might or should be developed and implemented independently and separately. It has been suggested (Porter, 2001; Strauss & Frost, 2002) that it is necessary to have a strategic approach to e-commerce as a medium to accomplish the business aims. Therefore, marketing in the electronic era requires innovative strategies.

III. E-MARKETING AND E-COMMERCE IN TOURISM

Developments in ICT influence all marketing functions and the electronic marketplace brings new ways of marketing. It is obvious that ICT slashes marketing cost, removes intermediaries, and redefines marketing relationships (Rayport & Jaworski, 2001). The potential benefits resulting from e-commerce can be grouped into two categories:
- Improved effectiveness of current activities
- Broaden opportunities and new activities.

E-commerce has been defined as being "every kind of commercial contact or transaction between two or more parties, being done with electronic means and network, and having as direct or indirect aim to sell products and services" (Demetriades & Baltas, 2003: 40). It seems that this definition encompasses all marketing activities.

Rayport & Jaworski (2001) suggest that in order to compete in the electronic era, businesses must be prepared to use technology-mediated channels, create internal and external value, formulate technology convergent strategies, and organise resources around knowledge and relationships. On the marketing side, communication and customisation are among the new demands of the knowledge economy, whereby mass markets are a phenomenon of the past and interactive markets are the future (Wind & Mahajan, 2001).

ICT INFLUENCES ON MARKETING MIX

Evidence shows that ICT influences nearly every aspect of services marketing and the main stages in the marketing mix (Middleton, 2001). Kotler has restated the "Ps" (Product, Price, Promotion and Place) as "Cs" to reflect the consumer orientation that is central to modern services marketing thinking in an era of growing competition (Kotler & Armstrong, 1999). Product means Customer value; Price means Cost to the consumer; Promotion means Communication; and Place means Distribution, access or Convenience.

Moreover, the original four variables have been expanded to encompass People, Process (of service delivery) and Physical Evidence or design. These new marketing orientations are particularly relevant in the tourism field (Law, 2002a).

ICT has various influences in the fields of tourism and marketing. The Internet constitutes a medium of interactive communication and offers multiple uses for marketing purposes. Technological developments enable customers and businesses alike to change the way that they conduct exchange transactions, which are the core of all marketing (Hanson, 2000; Middleton, 2001).

The main implications of ICT on the principal processes in marketing include:
- Market research and marketing information systems.
- Customer Relationship Marketing (CRM): The Internet has a catalyst role in CRM applications. The e-CRM tools contribute to the implementation of various marketing activities (Demetriades & Baltas, 2003; Vlachopoulou, 2003).
- Strategic Planning and Networking: Virtual marketing companies provide distribution and marketing services. They facilitate and provide a platform for the exchange of information and for e-commerce transactions for a wide range of products. The Internet also allows the creation of virtual enterprises in which ICT provides the linkages – especially networks for micro-businesses.
- Advertising and Public Relations: The Internet provides a completely new medium to communicate to targeted customer groups.
- Information materials: The commercial developments of Web sites made the Internet an excellent and relatively low-cost medium for creating customer awareness using multimedia methods.
- Sales Promotion and Pricing: The Internet is an ideal medium for communicating prices, special offers and late availability of product. Through connectivity between databases and yield management programmes, sales promotions can now be customized to individuals.
- Distribution and access: ICT has come to dominate the industry's way of thinking regarding the role and costs of distributing travel products. As a new channel for direct marketing communications, the Internet is also reinventing distribution. Distribution channels are the new forums for product innovation and development; they

establish the parameters for pricing against competitors and are becoming the most important tool for sales promotion and merchandising.

- Consumer behaviour: The Internet - as a communication and promotional tool - is important, not only because customers buy products and services via electronic channels, but also due to its extensive use as an information medium (Turban *et al.*, 2000).

Tourism is an important user of ICT and the industry is singularly well placed to benefit because of its special characteristics. Table 2 shows the main influences of the Internet in the tourism market.

Table 2. Consumption behaviour and Internet's influences in the tourism industry

Information search	Evaluation of alternative options	Purchase / transaction	Comments
- High information asymmetry - Mainly operational value - Satisfactory value Already in high degree on-line	- Personal preference -High informative content -Low direct opportunity Already in high degree on-line	- No particular contract requested -Simple payment -Simple delivery -High informative content -Purchase mainly for the result Already in high degree on-line	-Frequent search is translated into frequent purchases -Low potential for consultative intermediary (preference market) -No prior assessment of the quality Fast development in the Internet

Source: Adapted from Zeng & Reinartz, 2003, pp.125-130.

In the first decade of the twenty-first century, travel and tourism is one of the world's largest and most refined information based industries (Middleton, 2001: 218-219). Access to the Internet as a marketing tool provides a completely new means of bringing the two dimensions together by integrating promotion and distribution. The power of Web sites is that they can simultaneously advertise, inform, display, promote special offers, make a sale and provide instant booking and confirmation in customers' homes or offices.

IV.   E-TOURISM BUSINESS MODELS

Because tourism is an information-based industry it is one of the natural leading industries on the Internet (Anchi *et al.*, 2003). It is anticipated that most, if not all, sectors in the travel and tourism industry throughout the world will have sites on the Internet; showing the suitable marriage of two of the world's fastest growing industries: information technology and tourism. That is why e-travel is the leading and fastest growing category of e-commerce (Law & Leung, 2002; Demetriades & Baltas, 2003). In order to exploit these opportunities in the market environment, tourism businesses have developed and implemented several business models. Table 3 shows the most frequently used models in the tourism industry.

Table 3. Business models used in the tourism and travel industry

Type of Model	Description and Forms
Brokerage	Brokers are market makers; they bring buyers and sellers together and facilitate transactions (Law & Huang, 2003). Brokerage models include the following forms: Marketplace Exchange: offers a full range of services covering the transaction process, from market assessment to negotiation and

	fulfillment (example: Orbitz) (Law, 2002b). Demand Collection System: it is the "name-your-price" model pioneered by Priceline.com. Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfillment. Auction Broker: conducts auctions for sellers. Broker charges the seller a listing fee and commission scaled with the value of the transaction (examples: eBay and Skyauction.com)
Advertising Model	The web-advertising model is a Portal; usually a search engine that may include varied content or services. A high volume of user traffic makes advertising profitable and permits further diversification of site services. A personalized portal allows customization of the interface and content to the user. (examples: Yahoo.com; In.gr)
Infomediary Model	Firms function as infomediaries (information intermediaries) assisting buyers and/or sellers understand a given market. Travel infomediaries are globally branded

	'virtual businesses' on the Internet that collect and sell information about a specific sector of a market and create a convenient platform (Cyber marketplace) on which buyers and sellers can gain information and do business (examples: Expedia; Travelocity; BargainHolidays and Travelselect).
E-tailing	Business operating exclusively in electronic retailing. This model might take three forms (Turban *et al.*, 2000; Kleindl, 2001): E-store: a single tourism shop E-mail: consisting of many electronic stores E-broker: simply provides aid to customers searching for products and business. It gains a commission from the businesses (example: Travelforall.gr]

R. Law (2001) provides valuable insights into the Priceline.com model. It offers products for sale in two categories: a travel service that offers airline tickets, hotel rooms, rental cars, packaged vacations and cruises; and a personal finance service that offers home mortgages, refinancing and home equity loans through an independent licensee. Priceline.com has pioneered a unique new type of e-commerce known as a "demand collection system" that enables consumers to use the Internet to save money on a wide range of products and services while enabling sellers to generate incremental revenue. Priceline.com is the world's first buying service through which consumers

name the price they are willing to pay. Priceline.com licenses its business model to independent licensees.

Orbitz.com has implemented the Marketplace Exchange model. It is a leading online travel company that enables travellers to search for and purchase a broad array of travel products, including airline tickets, accommodation, rental cars, cruises and vacation packages.

V. A FRAMEWORK TO DEVELOP AND IMPLEMENT E-TOURISM BUSINESS INITIATIVES

This section examines the factors that are critical to the success of an e-tourism business initiative and subsequently proposes a framework to plan and implement related activities.

Researchers have attempted to approach and analyse the critical success factors in electronic tourism business initiatives (Bindiganavale *et al.,* 2002; Demetriades & Baltas*,* 2003). Evidence indicates that these factors include Value/ Product; Marketing Uses; Supporting Systems; Service Provision; ICT Infrastructure. Apparently, the most important factor for a successful Web site is its ability to focus on customer needs. The key is how to satisfy travelers' individual needs precisely and conveniently. (Anchi et *al.,* 2003; Sigala, 2004). Additionally, the Web presence must be used efficiently; that is to say for marketing purposes. Web sites have to be dynamic interactive relationship marketing tools rather than electronic brochures (Morrison *et al.,* 1999). Law & Leung (2002) have proposed an e-travel business framework to assess airfare reservation services in travel Web sites. This framework consists of information quality, system use, system quality, service quality, and customer loyalty. Rodríguez (2003) suggested a methodology for designing and deploying electronic enterprises-a step beyond intuitive or rule-based approaches and provided a framework for guiding the e-business development process.

Demetriades & Baltas (2003: 212-213) have summarized the various elements and have suggested five constituting dimensions of an e-business model / framework. These dimensions are:

- Value Proposition to customers and other business actors (products, services). This is the main corporate marketing decision.
- Revenue Model: Choose the potential sources of revenues (sales, advertising, subscription, and affiliation).
- Organisation Structure and Cost Structure: operational structure, business processes, and management information system.
- Positioning to the Market Value Chain: strategic positioning and business relationships.
- Networks: alliances and partnerships.

It is clear that every company might determine its own business model, a mix of the above five dimensions. Hence, adapting Osterwalder & Pigneur (2002) ontology and taking into account the factors proposed by the related research, we suggest the e-tourism business framework which consists of five elements shown in Figure 1. Its right side could be considered as managerial and the left one as being marketing-oriented. Therefore, the proposed framework takes into consideration the two important pillars of tourism business operations, namely management and marketing; the emphasis being placed on the latter.

Figure 1. Framework to develop and implement e-commerce initiatives in the tourism industry
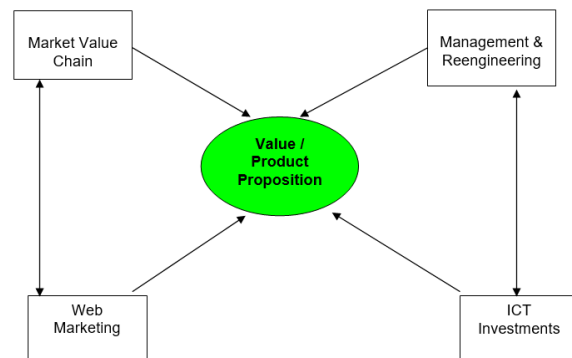
It should be noted that these factors – briefly described below - are interdependent and interlinked.

1. Value / Product Proposition: The customer's purchase should be approached as a search of "solution" for its needs, a solution that gives a benefit and involves a cost (Kotler, 2003). Select the appropriate marketing strategy.
2. Market Value Chain: Build up the appropriate network and alliances in regional / destination

level. Recognize that business processes will change; for example, through new linkages and partnerships with portals and other e-commerce operators.

3. Web Marketing: Aiming at customer attractiveness and interactive marketing relationship. Create a meta-market offering the whole package of travel services in order to support the customer experience's customization.

4. Management & Reengineering: Resources and assets management. This element encompasses the financial aspects (costs and revenues). Reengineering services processes producing and delivering the service offered (Tinnilä, 2002).

5. ICT investments: Necessary information technology investments; the electronic media and tools to be planned and implemented; and their adequate uses.

The above-proposed framework reflects a strategic approach (Christian, 2001; Kleindl, 2001) in order to integrate e-commerce initiative into business operations as a medium to serve the corporate strategy and aims.

CONCLUSION

Information technology leads to flexible and market-oriented business, and success depends on quick response to rapidly changing customer needs, using ICT in order to deliver the appropriate products to the targeted segments.

The use of the Internet and the WWW enable tourism businesses to improve their flexibility, interactivity, efficiency and competitiveness.The new economy is radically changing distribution models and traditional customer behavior.The key question for all travel companies is how to transition their businesses from the old economy to the new economy.There is no doubt that the Internet, as a channel and technology, has brought about disruptive changes in the travel and tourism industry, and it has been suggested that only a strategic marketing approach will enable the tourism industry to reap the benefits of ICT (Soteriades, 2002 , Siegel, 2003).

Tourism businesses have to consider and approach the Internet as a form of technology offering strong

potential, a set of tools that can be used in almost every market and business. The crucial point is not whether a company should use it or not, but the way it should be exploited in order to create value (Porter, 2001). To take full advantage of the Internet; a company has to take into account the informative content of the product / service, the whole value proposition, contact and the interactive relationship that can be developed with its customers. In addition, it is important to point out that the "conventional" (off-line) and electronic (on-line) activities and applications must be complementarily planned and implemented.

We believe that the above-proposed framework contributes, on the one hand, to the development and implementation of effective and successful e-commerce initiatives; and on the other, constitutes a basis to evaluate the use of a commercial Web site as a marketing tool. We believe that it is worth stressing the following points:

- There is an imperative need for an integrated planning and implementation of e-commerce initiatives and Web presence.
- Beyond the strategy's formulation and organizational planning, the development of an Internet business presence involves some particular and specific actions in order to ensure its quality, thereby, contributing to the general marketing strategy's effectiveness.
- Evidence indicates that failing to introduce innovations, such as ICT, is due either to the lack of strategic planning or to the non-acceptance and implementation of the strategy in-house (Porter, 2001; Demetriades & Baltas, 2003). Therefore, the integration of e-commerce activities into business operations should be considered as a 'top-down process', which must be supported by general management.
- Finally, the e-commerce operation is not an aim *per se*, neither an activity that might be developed independently and implemented separately. It should be incorporated as a new media that serves current or future corporate general strategy and aims.

REFERENCES

[1] Anchi, K., Konishi, M., Lei, M., Petalas, N., Stiegler, M. and Sugiyama, N. (2003) The Impact of the Internet on the Travel Agency Industry. In Krannert on e-Business and Technology *The Effect of the Internet and Technology on Business*, Chapter 11, pp. 161- 173, available at http://digitalenterprise.org/rd

[2] Barnett, M. and Standing, C. (2001) Repositioning Travel Agencies on the Internet. *Journal of Vacation Marketing*, 7(2), 143-152.

[3] Bindiganavale, S., Vijayaraman, P. and Gurdeep, B. (2002) A Framework for Determining Success Factors of an E-Commerce Initiative. *Journal of Internet Commerce*, 1(2), 63-75.

[4] Buhalis, D. (2000) Tourism in an Era of Information Technology. In B. Faulkner, G. Moscardo and E. Laws (Eds.) *Tourism in the Twenty-first Century: Lessons from Experience*, London: Continuum.

[5] Christian, R. (2001) Developing an Online Access Strategy: Issues Facing Small to Medium-sized Tourism and Hospitality Enterprises. *Journal of Vacation Marketing*, 7(2), 170-178.

[6] Daniele, R. and Frew, A.J. (2004) From Intermediaries to Market makers: An Analysis of the Evolution of E-mediaries. *ENTER Conference 2004*, Cairo, January 26-28.

[7] Demetriades, S. and Baltas, G. (2003) *Electronic Commerce and Marketing*. Athens, Rosili Publications.

[8] Hanson, W. (2000) *Principles of Internet Marketing*. Cincinnati, Ohio, SouthWestern College Publishing.

[9] Kleindl, B.A. (2001) *Strategic Electronic Marketing*. Cincinnati, Ohio, SouthWestern College Publishing.

[10] Kotler, P. (2003) *Marketing Management* (11th edn). New York, Prentice-Hall.

[11] Kotler, P. and Armstrong, G. (1999) *Principles of Marketing* (8th edn). New York, Prentice-Hall.

[12] Law, R. (2001) Internet and Tourism-Part VI: Priceline.com - Exploring the "Name Your Own Price" Model. *Journal of Travel & Tourism Marketing*, 11(4), 97-102.

[13] Law, R. (2002a) 'Across the C's: Commerce, Convergence, Communications and Change', ENTER 2001, Montreal, Canada 2001. *Journal of Travel & Tourism Marketing*, 12(1), 97-101.

[14] Law, R. (2002b) Internet and Tourism-Part VIII: Orbitz. *Journal of Travel & Tourism Marketing*, 12(2/3), 141-145.

[15] Law, R. and Huang, T. (2003) Internet and Tourism-Part XII: ebookers. *Journal of Travel & Tourism Marketing*, 14(2), 105-109.

[16] Law, R. and Leung, K. (2002) Online Airfare Reservation Services: A Study of Asian-based and North America-based Travel Web sites. *Information Technology & Tourism*, 5(1), 25-33.

[17] Middleton, V.T.C. (2001) *Marketing in Travel and Tourism* (3rd edn). Oxford, Butterworth-Heinemann.

[18] Morrison, A.M., Taylor, S., Morrison, A.J. and Morrison, A.D. (1999) Marketing Small Hotels on the World Wide Web. *Information Technology & Tourism*, 2, 97-113.

[19] Osterwalder, A. and Pigneur, Y. (2002) An e-Business Model Ontology for Modeling e-Business, *15th Bled Electronic Commerce*, Bled, Slovenia, June 17-19.

[20] Porter, M. (2001) Strategy and the Internet. *Harvard Business Review*, 79(3), 62-78.

[21] Priceline.com, available at http://digitalenterprise.org/index.html

[22] Rappa, M. (2001) *Business Models on the Web*, available at http://digitalenterprise.org/models/models.html

[23] Rayport, J. F. and Jaworski, B. J. (2001) *e-Commerce*. Boston, McGraw-Hill.

[24] Rodríguez, W. (2003) E-Business Method: A Cyclical-Model for Internet Commerce Development. *Journal of Internet Commerce*, 2(3), 87-98.

[25] Sigala, M. (2004) Designing Experiential Web sites in Tourism and Hospitality: A Customer-Centric Value Approach. *ENTER Conference 2004*, Cairo, January 26 -28.

[26] Siegel, C. (2003) *Internet Marketing: Foundations and Applications*. Boston, Houghton Mifflin Company.

[27] Soteriades, M. (2002) *Incoming and Outgoing Travel Agencies* (2nd edn). Athens, Propompos Publications.

[28] Standing, C. (2000) *Internet Commerce Development*. Boston, Artech House.

[29] Strauss, J. and Frost, D. R. (2002) *Marketing on the Internet: Principles of On-Line Marketing*. New York, Prentice Hall.

[30] Timmers, P. (1998) Business Models for Electronic Markets. *Journal on Electronic Markets*, 8(2), 3-8.

[31] Tinnilä, M. (2002) Service Processes In Electronic Travel Services: A Summary. *Information Technology & Tourism*, 4, 203-214.

[32] Turban, E., Lee, J., King, D. and Chung, H. M. (2000) *Electronic Commerce: A Managerial Perspective*. New Jersey, Prentice-Hall.

[33] Vlachopoulou, M. (2003) *E-Marketing – Internet Marketing* (2nd edn). Athens, Rosili Publications.

[34] Wind, J. and Mahajan, V. (2001) *Digital Marketing*. New York, John Wiley & Sons.

[35] Zeng, M. and Reinartz, W. (2003) Beyond Online Search: The Road to Profitability. *California Management Review*, 45(2), 107-130.