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case studies



Roman Egger and Dimitrios Buhalis



eTourism Case Studies

Management and Marketing Issues

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Edited by

Roman Egger
Dimitrios Buhalis



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Preface

Information Technology has changed our economy, our society and our daily life. The Web, the related e-commerce phenomenon, and systems supporting enterprises and guiding users are just the 'latest' examples of this development. And this change is accelerating. The next technological wave, where (nearly) invisible system will accompany, monitor, guide, understand and maybe also persuade humans is just ahead of us. Systems will be embedded, personalized, adaptive and anticipatory; access will be provided anywhere, at any time and for everybody. The interaction, based on intelligent, non-traditional interfaces, will change from the lean-forward mode of today, being work centric, towards a relaxed laid-back mode.

The second 'background' of the cases presented in this book is the general development in the e-commerce and e-business domain, where one can observe an ongoing deconstruction of value chains, accompanied by selective outsourcing. This leads to value networks (in contrast to chains) and flexible cooperation forms, calling for dynamic service design and engineering. Here one can refer to the concept of smart business networks or to the emerging field of service science.

Both developments, the technological/futuristic as well as the economic/structural one, will have an obvious impact on tourism, on its products and services and on the market structure. This impact will be as important (and maybe even more) as the technological developments in the past. Beginning only slightly more than a decade ago, the Internet/WWW has changed the industry, it has become the primary source for travel information worldwide, enabling access to well over a billion web pages describing hundreds of thousands of tourism enterprises and destinations. And user started to create communities and virtual worlds, to organize the Web along their needs, they increasingly turn around the market.

But not only user interaction and access means have improved. Today there is also evidence from the industry that ICTs contributed to the operational efficiency of organizations and it expanded market coverage. Integrated technological solutions with elaborated data

management support internal processes as well as networking with trusted partners. In tourism, as a networked industry, such electronic cooperations seem to be the only way for organizations to address the emerging challenges in the global marketplace. In this context technology empowered interoperability is critical for the effective networking. This enables tourism organizations not only to improve their operations and cost effectiveness but also to expand their geographical and operational scope.

The book *eTourism Case Studies – Management and Marketing Issues* offers a timely and rich resource of best practices and it provides an ‘empirical’ prove of the mentioned developments. Organized along the structure of the travel and tourism industry it contains a wide range of case studies in domains such as transportation, hospitality, intermediation and destinations. The two final chapters deal with specific technology applications and systems (e.g. mobile applications), somehow orthogonal to the other cases described. As such the book presents a number of great examples where technology is used effectively to maximize operational efficiency and to support the respective core business. A number of special cases demonstrate that technology is fundamental in the ability of these organizations to reorganize themselves in order to address the challenges of the future. In several other examples it is evident that technology is critical for the creation of innovative tourism products and the networking of organizations in either geographical or operational clusters.

The book demonstrates that tourism organization will be required to employ innovative technological solutions – not only in the future – to be able to remain in the global competitive arena, it illustrates the need for understanding, developing and applying technological solutions for obtaining operational and strategic benefits. With its set of cases the book fills a gap in the current eTourism literature, it is a rich source of information for practitioners and academics.

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Preamble and acknowledgements

Like all projects there is a great story behind this book too. Back in 2002 a smiling Austrian young person arrived at the University of Surrey to spend a semester attending eTourism classes and using Library facilities to research for his Doctorate. Roman came into Dimitrios office asking whether he could attend classes and reassuring him that he will not cause any problems! This was the start of a fruitful collaboration and a good friendship. Having completed his PhD, Roman joined the Salzburg University of Applied Sciences as Faculty and Researcher and started a great number of projects. A couple of years and many beer later in Salzburg further collaboration was achieved between the two universities. At the ENTER 2005 conference Roman initiated the idea of best practice case studies and invited Dimitrios at the 2006 eTourism Futures Forum to join him as a co-editor to this volume. Several months later, 42 chapters contributed by 65 authors were sourced, developed and edited to create this book.

The book aims to demonstrate that information and communication technologies (ICTs) are an integral part of the strategic management of tourism. Unless tourism organizations appreciate the wide range of opportunities availed by ICTs they will not be able to extend their strategy to achieve their full potential. Equally, unless the ICT strategy is not led by the business strategy and objectives, technology will be unable to fulfil its full potential and provide useful, profitable and innovative solutions that will enable the business to survive, develop and deliver competitive offerings in the marketplace. The case studies demonstrate clearly a number of organizations that have embedded technology in their operations and strategy and have supported their expansion, competitiveness and profitability.

Naturally, many people have been involved in this project. First, we would like to thank our contributors for finding the time to produce excellent quality chapters and Prof Hannes Werthner in particular for offering the preface. Sally North and Francesca Ford from Butterworth Heinemann adopted and managed the project throughout whilst Ismail Khan and Deena Burgess assisted the

xl Preamble and Acknowledgements

production phase of the book. Research assistants Jacob Horl and Thomas Hinterholzer in Austria supported the project by preformatting the book whilst Marianna Zoge in Bournemouth supported the editorial process. Finally, we also would like to acknowledge the support of our families and loved ones for the achievement of this project. We hope that students, researchers and professionals will find this book useful and we welcome feedback and suggestions towards a second edition in the near future.

*Dimitrios Buhalis
Roman Egger*

Introduction

Roman Egger
Dimitrios Buhalis

Tourism is considered to be the world's largest economic activity and is responsible for 10% of the global GDP and 8.7% of all jobs (WTTC, 2006). In our post-industrial society, which is among others characterized by shifts of stress and perception, upheavals and the obsessive liability to new developments, tourism can be seen as a result of ongoing social progression which becomes an integral part of modern life (Egger, 2006). The Internet is the fastest growing medium of all time and is establishing a global communication and transactions infrastructure. Nearly 1 billion people currently use the Internet and, especially in populous regions such as in Asia, high growth rates in usage are being observed. Thus, the merging tourism and Internet developments lead to a subject area marked by exceptional dynamism. In the last four decades, information and communication technologies (ICTs) have become an essential support for tourism. In the beginning, it was important for increasing efficiency in the processing of information. Nowadays, ICT is relevant on all operative, structural and strategic levels.

While the aims set for ICTs by tourism providers are mainly to increase efficiency of business operations, achieve cost savings as well as expand sales, the vast amount of tourism product offers available in the market place lead to increased product and price transparency and improved service quality for tourists. But the rapid advancement and dynamism of eTourism, along with its possibilities, also requires new skills which put providers and consumers in a challenging position. The Internet leads to the restructuring of the industry along the entire tourism supply chain (Buhalis, 2003). A number of conflicting trends such as disintermediation and reintermediation, cooperation and concentration, globalization and customer reorientation indicate the dynamics of the market. A range of new players emerge in the marketplace to provide new tools for both the consumers and the industry, to deal with the volume of information and to process the global tourism offerings efficiently. The system of tourism is therefore constantly redefining itself and requires continual reorientation in marketing and management along the way. Change seems to be the

2 Introduction

only constant. Hence flexibility and innovativeness are needed to build and maintain competitiveness on the long run.

The last few years have seen an increasing research interest in the relationship between ICTs and tourism. The topic is multifaceted and therefore requires an interdisciplinary approach, which results in a variety of standpoints and approaches. Sheldon (2000) observed

the maturation process of tourism information technology research, [...] requires passages through the stages of research such as descriptive, applied, empirical, theoretical and conceptual.

The majority of the existing literature is from a more descriptive and empirical standpoint than a theoretical and conceptual one. Hence, an argument founded in analytically scrutinized examples of best practice is still missing.

This book attempts to bridge the gap in the contemporary literature on this subject by carefully examining the marketing and management issues of companies that have successfully implemented eTourism solutions. A total of 42 case studies can be found in six sections, with the intention of exploring the newest developments in this field, introducing and discussing emerging trends, approaches, models and paradigms, providing a vision for the future of eTourism and supporting discussion and elaboration with the help of pedagogic aids.

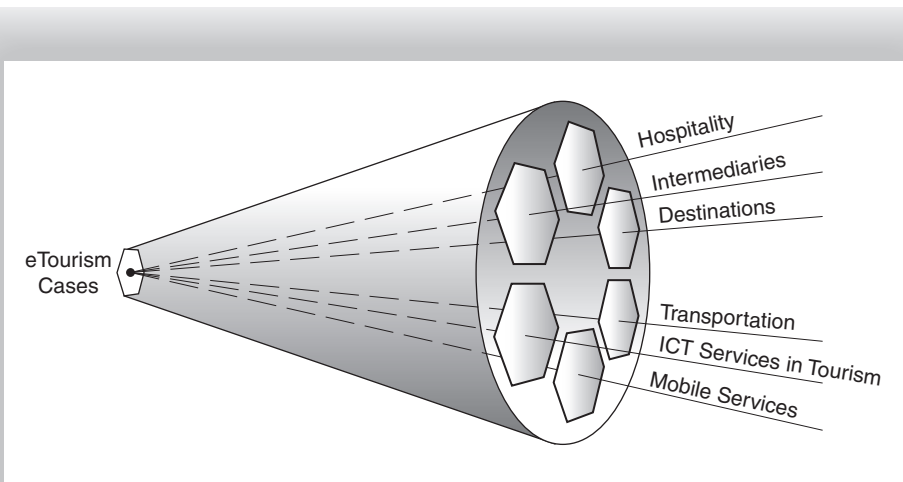


Figure I.1 The case study frame work

This book is unique in giving insights in using ICT best practice at an innovative and successful level in the Tourism industry. It prepares future students and professionals to take advantage of emerging trends, techniques and methodologies to create new products, industry structures and management practices. The book provides a vision that will encourage both final year undergraduate and post-graduate tourism and hospitality students to take a proactive and reactive approach to the fast emerging opportunities and challenges in the industry. It will also be useful for research students who would like to undertake research in the area and will stimulate further investigation in the field.

It is also hoped that this book will provide inspiration to professionals to develop their organizations in a competitive manner and to use ICT tools to shape their future. The book also aspires to supply information and vision to decision makers in public and private sector tourism organizations globally and to empower their pursuit for competitiveness in the emerging challenging global environment. The dynamic nature of this area should not be underestimated and the readers should always be alert to developments and technological innovation that would change techniques, methods and best practice.

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Part One

Hospitality

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Introduction

In comparison to other tourism sectors, the hospitality industry was relatively late in starting to use information and communication technologies (ICT). The structure of the accommodation sector is extremely heterogeneous, ranging from tiny bed and breakfasts to large 5-star chain hotels. The location of the properties as well as the types of clientele determines the demands and requirements made on ICTs (Buhalis, 2003). A number of the factors set out in Table PI.1 are ultimately decisive for whether, and to what extent, ICTs are used in hotels (Camisón, 2000).

In particular it is the ownership, relationships and size of the business that determine the degree of technology used in hotel properties. Larger tourism

Table PI.1 Variables relevant for the features of the hotel trade

<i>Factors</i>	<i>Examples</i>
<i>Place</i>	<i>Urban/metropolitan/peripheral/alpine/rural</i>
<i>Size</i>	<i>Small/medium/large</i>
<i>Ownership relationships</i>	<i>Family/chain/franchise/state</i>
<i>Price</i>	<i>Exclusive/expensive/affordable/cheap</i>
<i>Activities</i>	<i>Sport/all-inclusive/club</i>
<i>Services</i>	<i>Hotel/bed and breakfast/boarding house</i>
<i>Guests' travel reasons</i>	<i>Leisure/business/conference/incentive</i>
<i>Transport links</i>	<i>Airport/motorway/railway</i>

Source: Buhalis (2003)

enterprises and particularly hotel chains have more complex in-company processes and possibly distances in time and space to overcome, which require the use of advanced ICTs. At the same time, they also have the necessary financial resources in order to employ specialists and to be able to implement the corresponding applications (Egger, 2005). Thus, for instance, city hotels differ fundamentally from holiday hotels, and chain hotels differ decisively from small and medium-sized tourism enterprises (SMTEs).

Strategic Use of ICT for Hotels

Although the accommodation sector was for years regarded as 'the most under-automated segment of the international travel industry' (Buhalis, 2003) the rapid development of the Internet has led to most hospitality businesses, irrespective of their size, to engage actively with ICT. In many occasions computers were primarily introduced to facilitate the distribution function of hotels, as intermediaries would often refuse to collaborate with hotels that had no access to the Internet or were unable to receive emails or update their availability online. This push factor would bring a computer into the hotel environment which would then be used for the entire range of business functions and processes. There are many ways in which accommodation establishments can be supported by ICTs at both product and process level. These technologies promote the efficiency and effectiveness of operative processors, accompany strategic planning and are useful for the question of specialization and differentiation. They can be used within the company and between companies, support communication and coordination with all stakeholders. ICTs, for instance, can facilitate the administration and organization of the inventory, reduce distribution and communication costs, open new markets, permit the provision of up-to-date information and support flexibility in terms of pricing and product structure (O'Connor, 1999). In addition, they allow long-term customer relationships to be developed and support the creation of strategic partnerships. They encourage inter-organizational knowledge and know-how transfer and permit well-founded marketing research. The Carnival City study (Case 5), for instance, investigated the marketing strategy importance of ICT-assisted loyalty programmes and the contribution that the analysis of customer value can bring to an enterprise.

The internal and cross company structures in the hospitality industry are complex, and the requirements made of process-assisting information technology is accordingly varied. Figure Pl.1

Business Infrastructure	Expert Systems; Management Information Systems; Yield Management Systems; CRM Systems; Property Management Systems – Back Office			
Human Resource Management	Personnel Information Systems			
Information	Presentation, Consulting and Information Systems; Internet			
Procurement	eProcurement			
	Internet (CRS/GDS) HRS DMS (Interactive TV Mobile Business)	Enterprise Resource Planning	PMS – Front Office Point of Sale Systems; Restaurant Management Systems	Customer Data Base Internet
	Marketing & Distribution	Logistics	Service Production	After Sales

Figure PI.1 ICT in the hospitality industry

Source: Mathies and Weiermair (2003)

by Mathies and Weiermair (2003) uses the value chain analysis to provide an overview of the technologies used in the hospitality industry. The most important are described above.

However, sometimes ICTs support not only individual corporate sectors but also central elements of the entire business model. The example of Omena hotels (Case 4) presents a premium budget-class hotel which challenges the traditional service concept and revenue models by fully exploiting the Internet and other forms of ICT in its operations. The hotel chain takes full advantage of technology to operate its properties with no staff on the premises. Although arguably this is detrimental to the customer service required, there is sufficient evidence from the success of the company to suggest that there is a market segment that would appreciate this type of business proposition.

The fact that today almost every hotel, irrespective of size, has its own website, is an impressive demonstration of the penetration of ICT amongst accommodation establishments. However, the use of this technology must be based on their business's aims and

strategies. The fact that there must be a strict coordination of all e-business activities with business operational and strategic management has not yet become sufficiently widespread. This problem is common particularly amongst SMTEs, that have not recognized the need for a coherent marketing strategy or who do not have the know-how required through their existing human resources.

In recent years, the tourism market has increased hugely in complexity, while at the same time the customer has acquired a new and stronger role that requires a change of paradigm in the understanding of the market. Whilst only a few years ago it was possible to speak of a customer-centric market, today a customer-driven market prevails, in which the consumer has the greatest market power. The development of Web 2.0 applications, such as Tripadvisor and HolidayCheck in the German market (Case 15), empower consumers to share reviews and to assess hotels publicly. In a recent article the *Hotels* magazine explained that consumer reviews on Tripadvisor are becoming more important than the official star ranking that hotels have. Hence if a hospitality company wishes to maintain its market share in the future, it will have to focus on both the distribution channels and also address the community/networking sites used by potential guests.

Distribution

While many SMTEs only upgraded technologically in the last few years, numerous hotel chains first began using ICTs as early as in the 1970s. In the past, the chain hotel industry identified the need to develop international distribution networks that give both customers and the trade the possibility of carrying out price and vacancy enquiries. The development of computer reservation systems (CRS) and global distribution systems (GDS) brought central reservation offices (CRO) of hotel chains to collaborate with Switch companies such as Pegasus to interconnect systems, display availability and rates and to allow reservations on a global scale (Buhalis, 2000; O'Connor, 1999).

Depending on the type of hotel, ICTs have revolutionized the distribution function. A typical business hotel can use a wide range of distribution channels, namely: direct sales ('walk-in'), the hotel chain's own CROs, its own website, marketing via online and offline travel agencies, online intermediaries, destination management systems (DMS), hotel representation and consortium groups or a GDS (O'Connor and Frew, 2000). Depending on the marketing channel selected, numerous intermediaries can be involved, who

are ultimately also responsible for the amount of the marketing costs incurred. In order to serve different markets and address relevant target groups, it is necessary to differentiate in the handling of the individual marketing channels. The InterContinental Hotel group case study (Case 2) shows the significance of brand integrity and price parity as well as the need for coordinated channel management at the group level.

Internal Systems: Property Management System (PMS) and CRS

While larger hotels have implemented comprehensive software solutions in order to manage the inventory, hotel chains use group-wide systems that permit the control of the individual business operation and the management across the hotel chain. The InterContinental Hotel group case study (Case 2) shows in this context how the 'Holidex Plus' solution inter alia optimized capacity and inventory management.

Property management systems (PMS) such as Micros Fidelio Opera are in-house applications that support the central electronic structure of the hotel. They contain all the information about the units of a hotel such as number, price, category and status of rooms whilst managing customer reservations and billing processes. PMSs take on both front office and a number of back-office functions. They administer the booking and reservation processes and are used as an aid to decision-making in management functions through the production of comprehensive reports. The back-office applications include stock management, controlling, book-keeping, financial planning and wage payment. Front office applications simplify and enhance customer contact through customer relationship management and thus contribute to increased service quality. This includes reservations, check-in, room management and customer charging. In addition, PMS can also act as a hub between the different systems of a hotel, bringing all functions under one system (Egger, 2005). The case study of the Sino Group of Hotels (Case 3) shows the advantages that result through the joint use of a central PMS by a number of properties.

Buhalis (2003) identifies the most important functions of a hotel CRS and PMS:

- Improving capacity management and operations efficiency.
- Facilitating central room inventory control.
- Providing last room availability information.

- Offering yield management capability.
- Providing better database access for management purposes.
- Supporting extensive marketing, sales and operational reports.
- Facilitating marketing research and planning.
- Providing travel agency tracking and commission payment.
- Tracking frequent flyers and repeat hotel guests.
- Direct marketing and personalized services for repeat hotel guests.
- Enhancing handling of group bookings and frequent individual travellers (FITs).

External Systems

Direct marketing is often the preferred distribution option, because it is the least expensive and at the same time provides loyal clientele that engage directly with the hotel, rather than whoever happens to be on a distribution channel or cheaper than anyone else. In order to reach the markets needed, however, it is necessary to have access to intermediaries who have a much wider reach to the marketplace via a wide range of channels. In the pre-Internet era the developments in the field of GDS, which originally came from the airline sector, finally made the electronic link-up of CRS possible. From then on, chain hotels were able to participate in the global market by means of GDSs. The electronic marketing channel was gradually extended through the integration of PMS, CRS and GDS. The Switch companies described in further detail in Part Four, ICT Systems, were created in order to ensure interconnectivity and interoperability between the CRS and the GDS. The resulting advantages were reflected in increased efficiency and economy, a simplified controlling system and reduced personnel costs and time spent. The distribution of hotel services via GDS is, however, not without its problems. Firstly, the membership fees charged by the GDS and the costs per booking are too high for small enterprises. At the same time the GDS only permit a limited representation of the hotel and room information and they require considerable maintenance efforts. Figure Pl.2 demonstrates the representation of the Bristol Hotel in Salzburg on the Amadeus system.

In the USA, roughly one half of all hotels are marketed online via GDS and CRS, however, this figure is only around 10% in Europe. The reason lies in the structure of the market. As already mentioned, the majority of businesses in Europe are SMTEs. GDS and CRS are ideal for marketing standardized products such as flight tickets or hire cars or large hotel chains that have standardized

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EXP ** ANR ... LB ... VB ...
**** SUMMIT HOTELS & RESORTS ****
AT SZG FR 10OCT03-13OCT03 *SGL*
XL+BRISTOL HOTEL SZGBRI D TAXI EUR
ENJOY THE WORLDS HIGHEST STANDARDS
-----SELL INFORMATION-----
1) 128.00 CORPORATE RATE
CITCOR 6S HTL/BC-A08A00
-----PRICE INFORMATION-----
128.00 PER NIGHT STARTING 10OCT FOR 3 NIGHTS
384.00 TOTAL RATE STARTING 10OCT FOR 3 NIGHTS
TAXES AND SERVICE CHARGES INCLUDED
STANDARD SINGLE BEDDED ROOM
EITHER WITH CITY VIEW OR COURTYARD SIDE
-----LOCATION-LOC-----
BRISTOL HOTEL
MAKARTPLATZ 4
SALZBURG, AT 5020
PROPERTY PHONE: 0662-873557 FAX: 0662-8735576
PROPERTY IS 5 MI NORTHWEST OF SZG AIRPORT
MORE
>

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Figure PI.2 GDS listing of a hotel inquiry

Source: Amadeus

processes and procedures. However, if heterogeneous products such as rooms in European SMTEs are to be marketed, the systems very rapidly reach their limits (O'Connor, 1999). Leaving aside the excessive user charges, SMTEs do not have the brand names that could guarantee the quality of the service. Accordingly, the Internet is much more suited for the presentation of services in the hotel trade.

Hotel websites and those that offer hotel representations are able to display all hotel facilities and provide photographs and texts that reduce the intangibility of the tourism products. In particular, hotel third-party distributors such as hotels.com or booking.com are increasingly seen as reliable intermediaries by consumers. This makes them ideal collaborators with smaller independent hotel properties, as they offer the quality assurance that they lack. It is becoming evident therefore that branded hotels such as Hilton and Intercontinental will be increasingly dependent on their branded websites for their representation and distribution whilst independent properties will rely more on third-party distribution.

The developments in the hotel trade are, unlike in the airline industry, not primarily due to the disintermediation tendencies that helped to save commission fees. On the contrary, they are due to the need to meet the demands of the do-it-yourself bookers while at the same time distinguishing each enterprise from the competition (Egger, 2005). In traditional tourism regions in particular, hotel businesses have been successfully run from generation

to generation without there being any need for radical changes in the management. It was only with the triumph of the Internet, giving the customer a completely new role and restructuring the market, that rethinking distribution strategies has become unavoidable. These mostly family-owned enterprises have centralized business structures. The hotel owner is often the manager and decision-maker, and thus the strategic decisions depend on him or her. The extent to which ICTs play an operational or strategically relevant role is determined thus by the awareness and ICT affinity of the decision-maker. In addition, limited financial resources, the lack of major advantages, seasonal dependency and an often short-term management perspective constitute obstacles to the successful path into the new economy (Buhalis & Main, 1998). Buhalis (2003, p. 328) comments

SMTes frequently perceive ICTs as a problem and challenge. [...] They feel that ICTs take away some of their independence, as they have to depend on technology experts for their systems.

Nevertheless, there are numerous opportunities for SMTes to use ICTs relatively easily and without major investments. The Hotel Sallerhof study (Case 6) examines the strategies for small hotels in detail and describes how technology can provide competitive advantage through direct distribution. However, even SMTes such as the Emmantina and Palmyra Beach Hotels (Case 7) need to enter into strategic partnerships in order to be able to be present on the various online channels. Channel management and ensuring brand integrity and price parity are of major importance even for small enterprises.

Rogers' innovation theory becomes obvious when considering SMTes, since there is hardly any other tourism sector that so clearly reveals differentiated ICT penetration rates as tourism. While a number of innovators have already dedicated themselves to the online market entirely and while the broad mass seems to be adopters, there still remains a residue of deniers for whom the Internet will continue to remain a challenge. In the future, therefore, we can expect hotel businesses to fall into three categories:

1. Enterprises that continue to be present independently and autonomously on the Internet. These enterprises will be exposed to aggressive competition and need to develop strategies to reach their prospective clientele effectively.
2. The third group of businesses will be integrated in international networks and third-party sites. While attention will be attracted by integration in large networks, there is still the risk of losing the capability to control one's own distribution