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## **Tourism, technology, information and the relationship with customers**

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### **Abstract**

The tourism industry is well aware of the importance and of the beneficial effects of an *e-management* of the relationships with the customers. In spite of the general belief, and of the declared interest in Customer Relationship Management (CRM) practices and methods, the real adoption of advanced software technologies by the industries of the tourism sector is rather low. Aim of this paper is to assess the penetration and the usage of CRM functionalities by the Italian and the European travel and tourism operators. For its importance and the capability to act as a uniform and easy-to-use interface to most of today's software applications, a website can be thought to represent a reliable indicator of ICT usage in an organization. Several websites belonging to European public and private organizations have been analysed and a functions and services map has been derived.

### **1. Introduction**

The tourism world is focusing more and more attention on matters concerning the usage of what we denote Information and Communication Technologies (ICT).

The relationship between the two worlds is so strict to allow us to think to a kind of genetic tie. Travel and tourism companies have been the first to make a sophisticated use of the possibilities and the capabilities of the applications of the electronic technology to the processing and the management of data and information.

The history of this relationship is well known. In the early 1950s, at the dawn of the history of information technology, one of the largest projects that could have been conceived was started: the design and the implementation of an automatic processing system able to create a complete airline seat reservation making all the data instantly available electronically to any agent, at any place. A few years later, Sabre was the first real-time computerized business application; the largest, private real-time data processing system, second only to the U.S. government's system.

Since then the tourism industry has been consistently one of the more extensive *user* of information and communication technologies and it is no surprise then, that in today's knowledge-based information economy (OECD 1995), the tourism sector is strongly impacted by them.

For tourism, as service industry, information is one of the most significant factors to support the operations, and the recent advances and the wide spreading of technological tools reinforce this importance(WTO, 1999: 146):

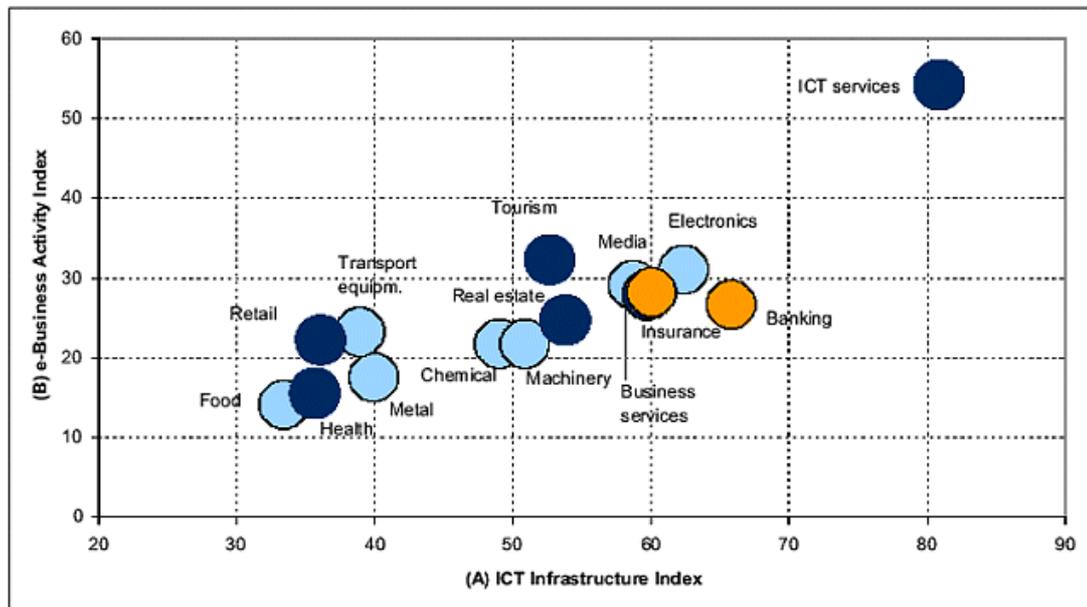
The technology that is moving the world into the Information Age is providing destination marketing [*and all other tourism*] organizations with a cost effective channel through which to reach out across the globe without the high distribution costs of conventional media.

In few other areas the generation, gathering, processing, application, and communication of information are as important for day-to-day operation as they are for the travel and tourism industry. Today's ICTs allow to reconfigure the entire distribution system and are an essential instrument, useful to increase efficiency, reduce costs, and improve customer service. ICTs are changing the value chains and relations of the whole industry by enabling intermediation and disintermediation at the same time, enhancing the role played by the shape and the size of the social network of tourism actors.

Technology, information and tourism are three words that may well characterize a large part of today's globalized society. Put together they represent the most important extensive part of the total economic production of modern world.

The relationship is well confirmed if we compare the so-called *e-readiness* of a number of different sectors of the European economy. Where by *e-readiness* we mean the availability of technological resources in an enterprise combined with the organisational and cultural capabilities to take advantage of them (e-Business Watch, 2003).

The tourism industries show a generally good positioning, at the highest levels even among the other service businesses (Figure 1: showing the results of the 2003 e-Business Watch survey in five European countries).



light circles: manufacturing sectors; dark circles: service sectors / financial services (orange)

Source: e-Business W@tch (2003)

Figure 1 E-readiness of different sectors in five EU countries: France, Germany, Italy, Spain and United Kingdom.

## 2. Network effects

More than in the past the pursuit of any significant human activity, including economic development, is strongly influenced by the connections among the different actors. Even if we question Marshall McLuhan (1964) assertion that “the medium is the message”, we must agree that at present time the world has become a “global village”.

As Castells writes (2000: 3):

...global networks of instrumental exchange selectively switch on and off individuals, groups, regions, and even countries, according to their relevance in fulfilling the goals processed in the network, in a relentless flow of strategic decisions .... *Our societies are increasingly structured around a bipolar opposition between the Net and the self.*

The understanding of this importance is now coupled with discoveries and research in the field of the network sciences, which provide mathematical evidence that there are general physical laws that rule the structure, the evolution and the characteristics of networks of all types: mechanical, biological, electronic and human (Albert & Barabási, 2002; Newman, 2003). This research shows that the topology of a network is not just a curiosity, but a

predictable property that may greatly affect the overall dynamical behaviour and explain and control a number of processes from the diffusion of ideas to the robustness to external attacks to the optimization of the relationships among the network components.

Nowadays, these analysis techniques are considered a diagnostic method for collecting and analysing data about the patterns of relationships among organizations or among people in groups.

Moreover, they can identify blueprints of interaction inside an enterprise or towards the external components of the economic and social system, number and qualities of groups, possible information bottlenecks and knowledge brokers and facilitators.

They provide a view into the network of relationships that gives tourism organizations managers a strong leverage to improve the flow of information and to target opportunities where increased flow may have the most impact on business activities.

Given the structured topology of the network of human social relationships (Albert & Barabási, 2002; Newman, 2003), and the characteristics of the tourism market, tools able to favour and sustain the diffusion of a *message* can have a tremendous impact on the development of companies and destinations.

### **3. The relationship with customers**

The need to attract, acquire, influence, and maintain customers is one of the primary concerns to most businesses. Customer acquisition and retention remains a major determinant for revenue growth and for winning the strong competition struggle. A number of studies show that the average company loses half its customers every five years and that it costs five to ten times as much to obtain a new customer as to keep an existing one (Kalakota et al, 2001).

ICTs make available new possibilities of approach and realization, and one of the main effects of their widespread usage is a change in the attitudes and the behaviours of both consumers and producers.

It is mainly the Internet, in our days, the environment seeming to offer almost unlimited possibilities, and many organizations (public and private) have already experienced significant benefits. One of the consequences of the development of the Internet has been the emergence of the World Wide Web (WWW), and today, the WWW has great potential as a tool for conducting business and management activities (Bell & Tang, 1998).

This situation has been acknowledged by the ICT industry and a series of sophisticated software applications have been deployed.

The “spectres haunting Europe and the World” are now called: CRM (customer relationship management), SCM (supply chain management), ERP (enterprise resource planning), and KM (knowledge management). It is not possible to survive, we are told, in today’s dynamic and heavily competitive economy, without making a good use of these techniques.

Among these technologies, the first one, CRM, looks to be probably the most important one for a sector like the information intensive tourism industry.

CRM refers to all business activities directed towards initiating, establishing, maintaining, and developing successful long-term relational exchanges (Reinartz & Kumar, 2003). One of the results of CRM is the promotion of customer loyalty (Evans & Laskin, 1994), which is considered to bring copious benefits to a provider of services or products. Combined with business intelligence software, CRM can help enterprises use information about customers more efficiently. Behavioural patterns of tourists can be revealed, for example by analysing transaction data, website visits, and destination information usage. Tourism managers may be able to tune their strategies to the needs of the customers and effectively tailor offerings and services. Internal processes can become more efficient, for example by integrating business intelligence into property management or pricing systems.

Since late 1960s we have been instilled the idea that an essential purpose of a company should be to create and keep a customer more than to deal with products or services (Levitt, 1962). Today the CRM is evolved to become a technology-enabled business strategy with the objective to gain thorough knowledge of customers in order to increase profitability, revenue, and customer satisfaction. And the most recent developments in Internet technology have given it the role of facilitating the link between CRM and customer fidelity.

But, even more than in other sectors, in the competitive modern tourism industry, the “simple” customer satisfaction is no longer sufficient to ensure customer loyalty and trustworthiness. Many factors combine together to push private and public organizations to ponder new differentiators in order to develop greater market share or to maintain the current one.

It has long been said that a returning customer is a valuable one and that its profitability is much higher than the one of a new or a “one-shot” shopper. Recent research work, however, give a clear indication that simply satisfying once a client and waiting for the return is not sufficient (Reinartz & Kumar, 2002; 2003). For ensuring a good profitability of a returning consumer, the strong condition seems to be the adoption of sound methodologies and techniques to “manage” the customer.

These technologies can be grouped under the CRM umbrella. In essence, they consist in an efficient computerized utilization of customer information to build durable relationships, with the objective of:

- increasing the loyalty of profitable customer;
- improving cost efficiency and effectiveness of marketing campaigns;
- providing cross selling opportunities;
- tailoring prices, offers, or product components to specific market segments;
- providing single point of contact with a customer

The tourism industry is well aware of the importance and of the beneficial effects of an *e-management* of the relationships with the customers.

Large part (66%) of the respondents to the *Customer Relationship Management in Travel* survey by Genesys (Anite 2002), believe that technology is imperative to the adoption of CRM, and more than one-third of the European tourism enterprises say that these technologies have some effects on their way of conducting business (Figure 2; e-Business Watch, 2003).

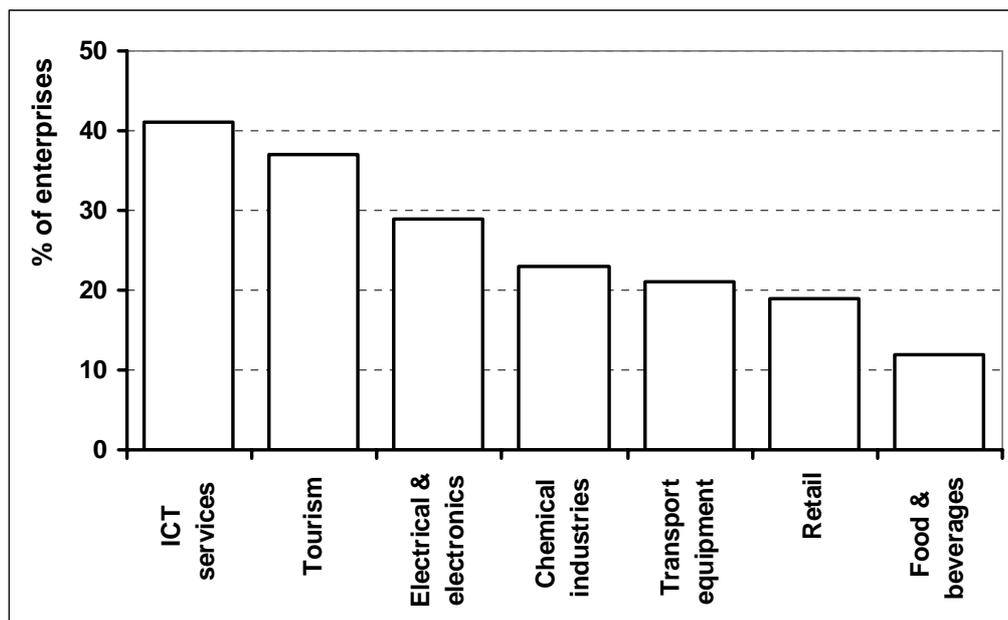


Figure 2 Perceived impact of e-business on customer relationship by industries belonging to different sectors in five EU countries: France, Germany, Italy, Spain and United Kingdom. The picture show the % of companies maintaining that interactive technologies have at least some effects on the relationships with customers

Nonetheless, in spite of the general belief, the *real* adoption of the new advanced software technologies by the industries of the tourism sector is rather low.

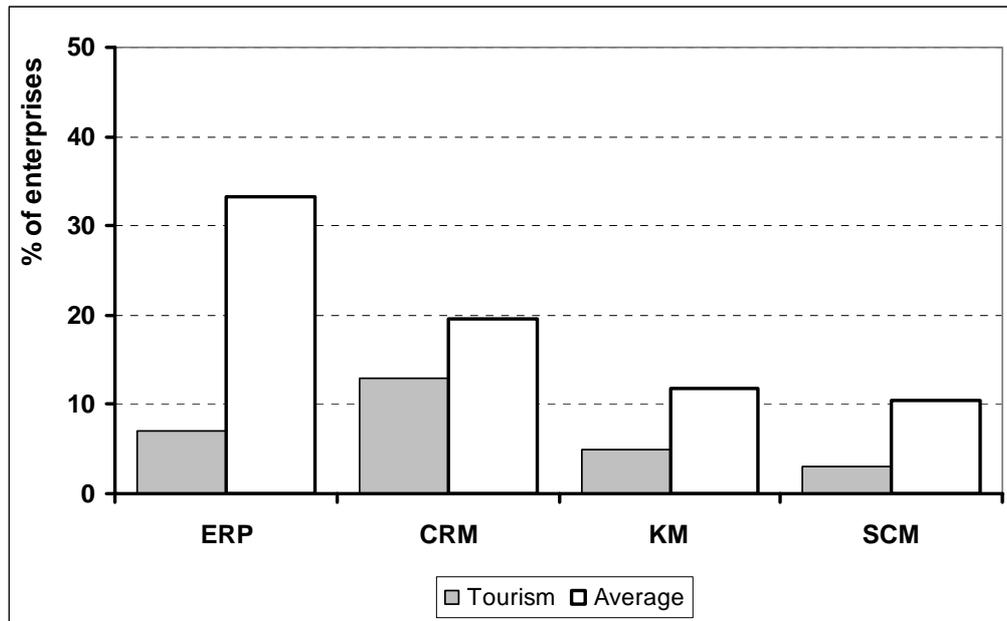


Figure 3 Diffusion of advanced software solutions in European tourism industry compared to the average diffusion in seven industry sectors

The percentage of organizations adopting and using applications in the above mentioned areas (CRM, SCM, ERP, KM) is sensibly lower than in other sectors (Figure 3; e-Business Watch, 2003). This is particularly true for the customer relationship management activities, the ones that should characterize in a strong manner the business of a tourism organization.

A confirmation can be found in a recent research on the usage of Information and Communication Technologies in the Italian hotel industry. A Delphi study has been conducted in order to identify the main activities that need a technological support and to set up ideal coverage and implementation priorities (Baggio, 2004). This model has been checked (Sant'Ignazio, 2004) by surveying a sample of 100 Italian medium size hotels to evaluate their behaviour and their attitude towards ICTs.

The survey shows that, in general, the hotels are using ICTs at a much lower level than it is suggested by the ideal model. This situation is especially true for areas such as the customer relationships management, or the data mining and the yield management that can

be thought as strategic activities. In these cases the role of an appropriate computerized system is not considered at the right level of importance.

The same situation apply to the public destination management organizations (DMO).

Given its importance and the technological capability to act as a uniform and easy-to-use interface to most of today's software applications, a website can well be thought to represent the most advanced indicator of ICT usage in any organization. At least this is the general perception by a casual user.

Influence of website quality on brand building and loyalty has been assessed in a number of empirical and theoretical works (Holland & Menzel Baker, 2001; Ilfeld & Winer, 2002), and many stress the critical role of the first impression created by a website with respect to the whole business conducted by an organization.

A website is one of the primary faces of a company (private or public) towards customers, suppliers, employees, partners and it can be a powerful tool for brand awareness, product information, commerce and customer service. This is remarkably important for all those organizations, such as DMOs, tour operators or travel agents, that act as intermediaries between service providers and the general consumer (Antonioli & Baggio, 2002, 2004).

The essence of customer relationship management is to make every interaction with customer be significant. Using the Web to communicate through methods like e-mail and customized views is a way to build targeted campaigns with a relatively limited amount of resources.

In this context, the impact of website characteristics on the relation between CRM and customer loyalty may assume an important role. There is a strong evidence that the levels of the organizations' Internet presence and interactivity have a significant impact on the link between CRM (in terms of partnerships, empowerment, relations with customers, and personalization), and customer loyalty (Lawson-Body & Limayem, 2004).

A survey conducted on the websites of the main European and Mediterranean countries national tourism websites (Baggio, 2003) show, however, that the main attitude towards the customers is of "advertising" rather than "interactive service".

The number of services that can be classified as apt to build and maintain a strong relationship with a tourist, actual or potential, used by these organizations is quite low.

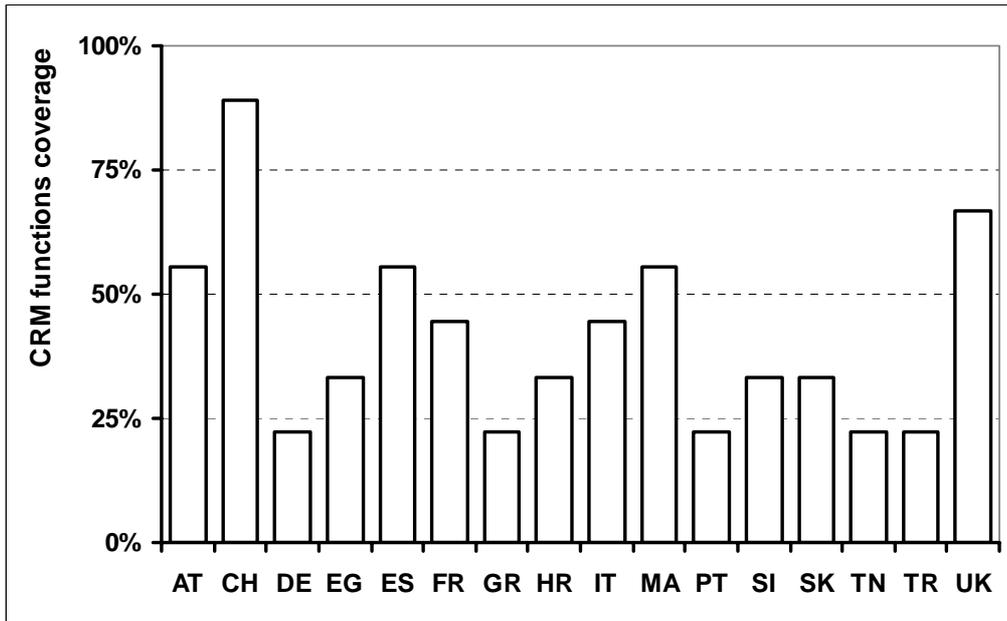


Figure 4 CRM functions coverage on the national tourism websites

Figure 4 shows the proportion of CRM services provided to the users calculated by counting the actual functions present out of a list of possible items (such as: newsletters, chat capabilities, information request forms, personalization services etc.). As can be seen, very few of the websites analyzed reach a level of at least 50%.

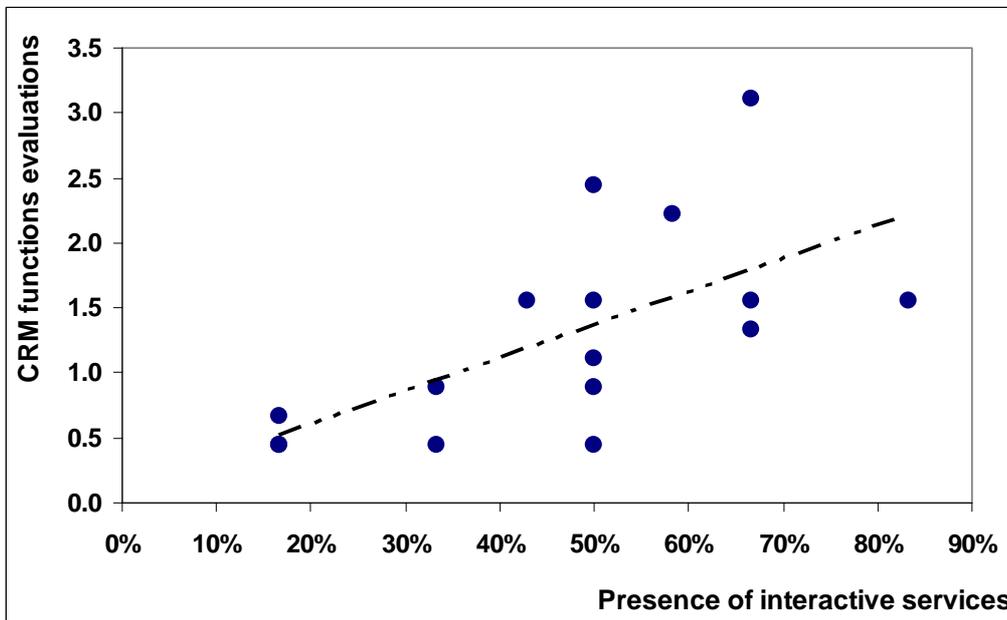


Figure 5 Relationship between CRM functions and general interactive services for the national tourism websites

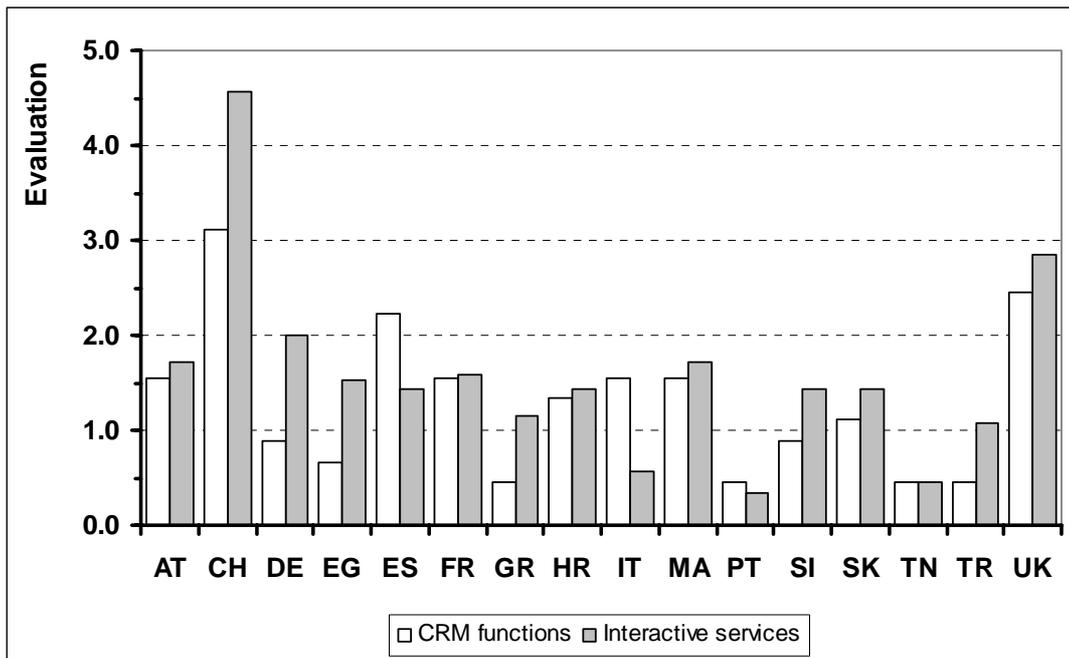


Figure 6 Evaluation of CRM and general interactive services of the national tourism websites

The situation is even worse if we consider the user evaluation, in terms of completeness and usability, of these services. The average score attained (on a 1 to 5 scale, 1 = min, 5 = max) is 1.29. Almost all of the websites are well below the *sufficiency* mark (2.5).

As can be inferred from Figure 6 and Figure 5 there is a good relationship between the user evaluations of CRM functions and the availability of general interactive services (the regression line in Figure 5 has  $R^2 = 0.41$ ) and the evaluations agree rather well (Figure 6).

From the combination of functions coverage and user evaluations it is possible to derive a general readiness index that can be usefully employed to benchmark a specific organization against competitors, or to track evolution and improvements over a period of time.

The CRM readiness index (CRMRI) can be defined as:

$$\text{CRM READINESS} = \text{CRM FUNCTIONS COVERAGE} \times \text{CRM FUNCTIONS USER EVALUATION.}$$

The resulting values will be in the range 1 to 5 and they can be assigned the meaning of:

- excellent:  $3.5 < \text{CRMRI} < 5.0$ ;
- good:  $2.5 < \text{CRMRI} < 3.5$ ;
- satisfactory:  $1.1 < \text{CRMRI} < 2.5$ ;
- fair:  $0.6 < \text{CRMRI} < 1.0$ ;
- poor:  $0.0 < \text{CRMRI} < 0.5$ .

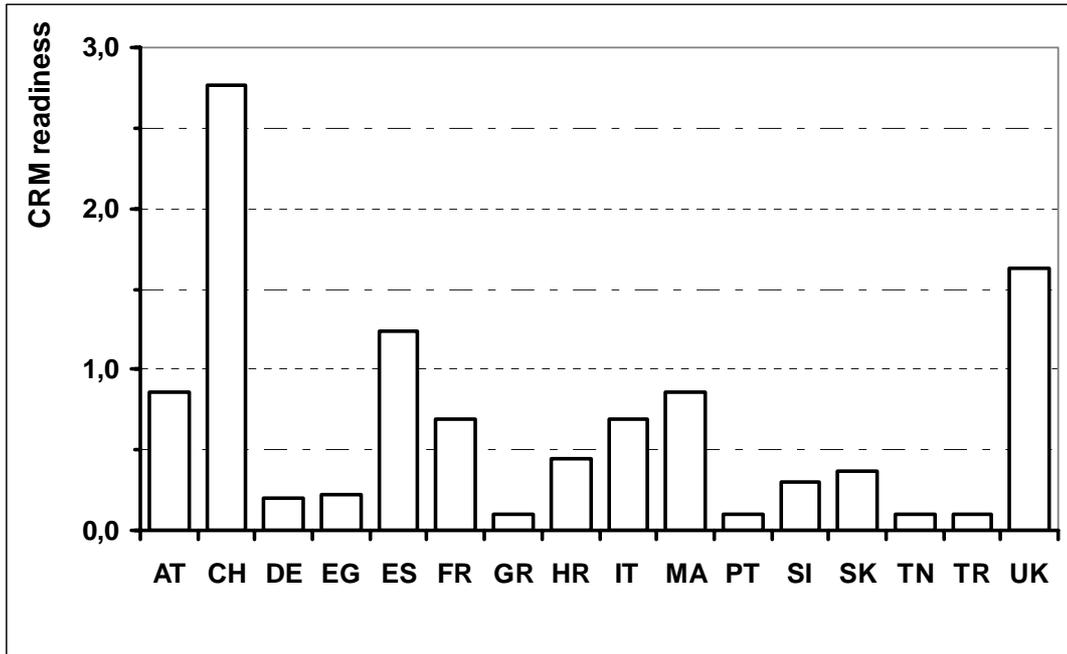


Figure 7 CRM readiness index of the national tourism websites

The CRMRI for the websites analyzed are shown in Figure 7. As can be seen, the vast majority do not even reach a fair level.

This low general quality enhances the risk of disintermediation on the whole sector. The consumer is more tempted to turn to the main providers to fulfil his needs if there is no possibility to find valid websites and, more, if the care with which he feels to be dealt with is considered inadequate.

In the case of a DMO, the low users' evaluation and the relative poverty in terms of contents and services may have serious effects on the development and the competitiveness of the whole destination and may generate a broad distrust that can eventually affect the overall economic performance (Baggio, 2003). It is obvious that, in cases like these, "returning customer" or "loyal customer" are extraneous concepts.

Not managing their customers with appropriate tools, DMOs lose opportunities to increase the profitability of *loyal returning tourists* and may waste large amounts of resources in trying to sustain the levels attained.

#### 4. Concluding remarks

The travel industry does not understand fully the importance and the potential of advanced contemporary ICTs, mainly as far as customer relationship management methodologies and techniques are concerned.

As some recent survey show (Anite, 2002), CRM is generally believed to be just a form of targeted selling or a new name for database marketing. Most of the organizations not already practising CRM are least likely to do so.

On the other hand, tourism organizations believe that technology is important, and some of the most advanced exhibit a wider view, thinking that CRM technology can indeed assist, but only with a clear strategic vision of ideal customer communication suited to the particular business

These advanced companies, creating a seamless technological experience are already realizing the wide CRM benefits, including:

- improved product offering and customer care;
- enhanced customer loyalty;
- reinforced organization brand and image;
- better sales from first time and repeat customers;
- employee retention and satisfaction;
- improved access to information across the enterprise;
- reduced effort and significant cost savings;
- better decision-making power.

The pressure by the ICT industry and the media hype on the topics we have talked about will eventually convince many operators to adopt the basic technologies that can allow them to manage their businesses in more efficient and effective ways.

However, the solution to the problem cannot be a “pure technological” solution. This is today rather simple, a quick hunt on any internet search engine gives hundreds of results in terms of hardware and software available, of any possible size, cost and complexity.

But, as Joseph Licklider (1965: 17) said:

A modern maxim says: People tend to overestimate what can be done in one year and to underestimate what can be done in five or ten years.

In other words, we may tend to underestimate what the long term effects of modern technologies can be. To be able to cope with a dynamic and “highly technological”

environment the only possible solution is a cultural change. A new breed of managers and operators that think in terms of interacting systems capable to adapt themselves dynamically to the complex social and economic networks in order to be able to attain their objectives.

Competing on price alone as an Internet commerce strategy can make agents vulnerable. "It is no longer enough to be the low price leader. If you can make your company easier to do business with, people will do business with you" (Sterne 2000:292).

As customers become more sophisticated, expecting faster, more reliable service around-the-clock, giving them the power to help themselves is key in providing the availability and personalized service they demand. The Web is a great medium to find information quickly and comprehensively anytime, but it can also be a very messy environment. Easy to implement interactive services like chat rooms, newsletters or personalized views of the website provide organizations better customer service, attract new customers and increases customers' loyalty and allow tourism organizations managing relationships with them with a cost-effective tool.

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