Authors:

Catarina Antónia Martins

catarina@ipb.pt
Instituto Politécnico de Bragança
Escola Superior de Comunicação Administração e Turismo de Mirandela
Rua João Maria Sarmento Pimentel, Apartado 128
5370-126 Mirandela, Portugal
Tel. +351 936 293 580
Fax: +351 278 265 733

Carlos Manuel Martins da Costa

ccosta@ua.pt
Departamento de Economia, Gestão e Engenharia Industrial
Universidade de Aveiro
Campus Universitário de Santiago
3810-193 Aveiro, Portugal
Tel. +351 234 370 361
Fax: +351 234 370 215

Osvaldo Rocha Pacheco

orp@ua.pt
Departamento de Electrónica, Telecomunicações e Informática
Universidade de Aveiro
Campus Universitário de Santiago
3810-193 Aveiro, Portugal
Tel. +351 234 370 355
Fax: +351 234 378 157

TITLE: E-BUSINESS STRATEGIES FOR DESTINATION MANAGEMENT ORGANIZATIONS

ABSTRACT
Destinations Management Organizations (DMO) are the organizations responsible for management and/or marketing of destinations. With the advent of Internet and the easy way in which anyone can communicate with the consumer, the role of DMO as intermediaries is based on the need to add value. If DMO actively join e-business they can add value to the consumer but also to suppliers. Destination Management Systems (DMS) are a collection of computerized information about a destination, accessible in an interactive way. The concept is defined as a synonym of the technological infrastructure of a DMO. The present study aims to present the conceptual framework of an investigation intended to define the main factors behind the success of DMS. The research model is based on the assumption that success factors fit in three spheres of action: the dynamics of the system implementation within a DMO, the very specific features of DMS and the organizational environment in the destination.
Keywords: Destination Management Organizations; E-business; Economic Development; Destination Management Systems; Touristic Destination.

INTRODUCTION
Tourism is an information-intensive activity, the product is established on the basis of trust since it cannot be seen or tested before being consumed. Tourist products require the collection of information both on the demand and supply side and this collection has associated costs. These features of tourism activity establish a long chain of information and value that today it is imperative that is established electronically.

DMO are the organizations responsible for management and/or marketing of destinations and they must play a more active role in winning increasingly demanding and experienced consumers through the intensive use of Information and communication technologies (ICT). With the advent of Internet and the easy way in which anyone can communicate with the consumer, the role of DMO as intermediaries is based on the need to add value. If DMO actively join e-business they can add value to the consumer but also to suppliers. Information and communication technologies (ICT) along with the advent of Internet are at the base of significant changes that have been registered within the tourism industry. Tourism is the economic activity where e-business is most used not only in terms of information search but also for the acquisition of services (Águas, Rita, & Costa, 2004; Werthner & Ricci, 2004; World Tourism Organization, 2001). It is especially at the destination level that information technologies allow for local collaboration and use of Destination Management Systems (DMS) to represent the different actors in global markets (Buhalis & Spada, 2000). DMS have been referred in recent years as the ICT infrastructure of Destination Management Organizations (DMO) (World Tourism Organization, 2001). Increasingly these systems have been supporting multiple functions drawing on central product and customer databases (Carter & Bédard, 2001). One of the main benefits of having an e-business strategy and a DMS in place is reducing dependence on intermediaries for the distribution of tourism products. As a result, tourism suppliers are able to improve their negotiating power with large tour operators and are

able to develop a healthier distribution mix. This is particularly important for remote, peripheral and island destinations where tourism is an important economic activity base.

It is not yet clear on literature what are the success factors underlying the implementation of these systems and if traditionally DMS have failed to achieve the initially expected benefits (Buhalis & Spada, 2000)   today some successful cases can be identified (Buhalis & Egger, 2008). The present study aims to present the conceptual framework of an investigation intended to define the main factors behind the success of these systems. The research model is based on the assumption that these success factors fit in three spheres of action: the dynamics of the system implementation within a destination management organization, the very specific features of those destination management systems and the organizational environment in the destination. These three spheres of action are the issues that are going to be the subject of this study. In the theoretical back ground the interconnectivity between DMO, e-business and DMS will be explained. DMOs assume the function of building the tourism product, presenting the offer, committing stakeholders and marketing in order to achieve long term competitiveness as a strategic objective. Typologies and the role of DMO are then discussed as well as the reasons why these organizations should lead the process of e-business adoption. Interconnectivity will be explained as we discuss how e-business and DMS can help DMO improve ICT contribution to more successful destination management. In the second section of this paper the key issues in implementing a DMS will be presented. The need to thoroughly prepare a project prior to implementation and the need to establish a new business model for the DMO seem to underpin a successful implementation process. Barriers to successful DMS implementation that can be identified both on SME and on DMO side will be also discussed.

In addition to the importance of the DMO role in implementing a DMS and the incorporation of the latest technology tools to be made available through the DMS, we argue that the success factors inherent to DMS implementation are also based on the premises that underlie the development and prosperity of a region in what concerns tourism. The question that then arises is what promotes growth and development of a region and this will be thoroughly presented in the final section. The paper concludes with a conceptual framework of an investigation where we intend to define the main factors underlying the successful implementation of a DMS.

THEORETICAL BACKGROUND

DMOs are the organizations responsible for management and/or marketing of destinations and generally fall in one of the following categories (World Tourism Organization, 2004): national tourism agencies or organizations (NTA or NTO), regional or provincial organizations and local organizations. According to Buhalis (2000, pp. 109) "DMOs have an overall responsibility for the entire destination product and through incentives and policies facilitate the development of products, which is desirable from the demand side, and at the same time does not jeopardize local resources".

In destination management DMO must play a more active role in winning increasingly demanding and experienced consumers where ICT play a major role (Buhalis & Egger, 2008; King, 2002; Petti & Passiante, 2009; Wang, 2008). The new realities in tourism distribution prompted by advances in technologies and the new demanding consumers require a different market approach.

Tourism is an information-intensive activity, the product is established on the basis of trust since it cannot be seen or tested before being consumed. At the time of decision making potential consumers only have available an abstract model of the product, based on information gathered through multiple channels such as television, brochures, word-of-mouth or the Web. Tourist products require the collection of information both on the demand and supply side and this collection has associated costs. These imperfections inherent to the tourism activity establish a long chain of information and value that today it is imperative that is established electronically.

There are several contributions in academic literature about the role that DMO must play in the implementation of e-business (Buhalis, 2003; Presenza & Sheehan, 2009; World Tourism Organization, 1999, 2001, 2004, 2007, 2010). These organizations assume the function of building the tourism product, presenting the offer, lobbying and marketing in order to secure long term competitiveness as a strategic objective (Buhalis & Egger, 2008). Traditionally there have been two sets of distinct value chains that connect the touristic product supplier to final consumers – commercial value chains (mostly involve global distribution systems, travel agents and sometimes other intermediaries) and the DMO value chain. The commercial value chains concentrate mainly in transactions and provide little information about the destination. With the DMO value chains the opposite occurs and usually it has not been established any interaction between these two value chains (World Tourism Organization, 1999). Internet and the availability of information in digital format can help change this situation. DMO have become more prominent in the role of responsible for destination development acting as catalysts and facilitators of tourism development (Presenza & Sheehan, 2009; World Tourism Organization, 2007). However, only through professional use of ICT can DMO communicate and process the vast masses of existing information at the right time, for the intended target audience. Thus, only the ability of DMO to integrate all relevant stakeholders, each with their information needs, will determine the long-term competitiveness of a destination (Buhalis & Egger, 2008).

DMO have recognized that there are a number of factors motivating the adoption of new technologies (Buhalis & Egger, 2008). First, ICT have become a vital tool to DMO and stakeholders in destinations in the promotion of touristic networks in a given geographic area. ICT are also key in establishing efficient processes and access to new markets, new products and especially in meeting the needs of tourists. In addition to the pressures on de supply side there is also a strong pressure for the online marketing development of destinations. Second, given that tourist expectations include not only information gathering but also the thematization of destinations and the possibility of booking individual services, DMO must strive to meet these requirements. Third, since small and medium-sized tourism enterprises are not represented in global distribution systems destinations also face the challenge to fill this gap in the field of electronic distribution

Despite the potential that Internet brings to DMO it has been noticed a slow adoption in what concerns establishing a Web presence. It is only since 1996 that some DMO took the Web seriously recognizing opportunities specially in what concerns the potential of interactivity and multimedia (World Tourism Organization, 1999). After, DMO understood that they could not expect consumers to discover their websites but they had to actively promote them. With the advent of the Internet and the easy way in which anyone can communicate with the consumer, the role of DMO as intermediaries is based on the need to add value. If DMO actively join e-

business they can add value to the consumer but also to suppliers. In the next paragraphs we will discuss how e-business and destination management systems can help DMO improve ICT contribution to more successful destination management.

Despite some contributions (Buhalis & Egger, 2008; Buhalis & Spada, 2000; Ndou & Petti, 2007; World Tourism Organization, 2001) it is not yet clear on academic literature what are the success factors underlying the implementation of a DMO e-business strategy materialized in a DMS. E-business is defined as the development and coordination of fundamental business processes through the use of information and communication technologies and digital information (Gouveia, 2006) and it should be implemented by organizations when they identify a need to be in the electronic market. A business model is a description of the value that a company offers to one or several customer segments, as well as the architecture of the enterprise and its network of partners, to create, promote and distribute this capital of value and relationship in order to generate sustainable revenue streams (Osterwalder & Pigneur, 2002). Much of the academic research about business models is made in the context of e-business (Pateli & Giaglis, 2004; Weill et al., 2006) and the conclusion is that successive advances in information technologies promote these new ways of doing business.

DMS are a collection of computerized information about a destination, accessible in an interactive way (Buhalis, Kärcher, & Brown, 2006; Buhalis & Spada, 2000). The concept is defined as a synonym of the technological infrastructure of a DMO (World Tourism Organization, 2001). Its emergence and subsequent development is mainly based on three aspects: a growing number of increasingly demanding consumers more informed and open to new innovative tools to access information; the fact that tourism is an information-intensive industry; the technological innovations that lead to huge developments in touristic organizations. Horan & Frew (2007) present a more comprehensive concept: DMS are systems that consolidate and distribute a comprehensive set of tourism products through a variety of channels and platforms, often regional, as support to the activities of a DMO. Furthermore, DMS try to use a consumer-centric approach to manage and sell the destination as a single entity. They generally provide exhaustive information on destination, on-line reservations and destination management tools and pay particular attention to the support of small and independent touristic suppliers.

In what concerns the organizational level DMS constitute the strategic info-structure for DMO to coordinate their activities. These systems provide the tools that allow information distribution and gather all actors in a network environment. The concept of DMS has attracted considerable attention by numerous researchers as supported by Buhalis & Spada, (2000), Buhalis et al. (2006), Buhalis & Egger (2008) and Law et al. (2010).

The components of a DMS defined by the World Tourism Organization (2001) include: the technical infrastructure of a network of computers, hardware, software and communication links; a database or a series of databases with a content management system that allows users to manage the existing content in database(s); several applications, that is, the software that carries out the functions that support business activities; the data content. In what concerns the DMS features, success lies mainly in the high quality of content. Services and technology functions that allow for value creation must be of simple and efficient maintenance and a low level of complexity must be combined with high performance (Buhalis & Spada, 2000). DMS coordinate the needs of all stakeholders in the destination, structure and provide information

and stimulate internal and external communication with partners and consumers. In addition, they support strategic management decisions and the marketing process.

The functionalities of a DMS must reflect the external dimension of e-business by enabling the transformation of the value chain (suppliers and customers) and the supply chain (linking the touristic providers with their own suppliers) through the three components of e-business (World Tourism Organization, 2001): e-marketing that exploits the Internet and other electronic forms of communication to communicate more efficiently with target audiences, allowing partnerships with other organizations with which there is a common interest; e-Commerce as the sales activity carried out through electronic distribution channels; and e-procurement as optimizing the purchasing process to allow the connection between the enterprise inventory and its own acquisition systems and the systems of shipment and payment of respective suppliers and vice versa. Not only reduces costs by automating processes, as it facilitates the identification of the best sources of value for the offer.

There are choices for the design of the ICT system architecture where de DMS runs since there are several DMS providers who have establish key applications (e-marketing and services, e-commerce and e- CRM (Customer Relationship Management.) in technology-based application service providers (ASP) solutions. Two cases can be mentioned: Tiscover and Feratel. The Tiscover system is one of the most successful examples and one of the most referred in literature (Buhalis & Egger, 2008; Buhalis, et al., 2006; Pröll, Retschitzegger, & Wagner, 1998; World Tourism Organization, 2001) The functionality provided by Tiscover can roughly be categorized according to the different user groups which are distinguished by the system into three different components: the public Internet component which interacts with the costumer, the Extranet for touristic information providers and the Intranet for the system provider. All are located around the central Tiscover database (Pröll, et al., 1998). Tiscover DMS solution include a wide range of modules to support DMO's internal, partner and consumer communications, including accommodation booking, brochure processing and customer relationship management; web solutions which empowers DMO and tourism suppliers in the destination; e-marketing through a number of consumer facing sites. Feratel's DMS is comprised of back office modules and online information and reservation services based on Internet applications. Data updating and availability information are handled via interfaces to the hotel's software or by the businesses themselves with the help of a user-friendly application (Buhalis & Egger, 2008).

Once the DMS is settled on a network organization concept, there are several requirements to establish an ICT infrastructure. Buhalis & Egger (2008) identify the most important issues related to the implementation and management of a DMS: the need to provide information through different channels (Internet, kiosks, mobile phones or call centers); data management must be made centrally at the DMS to allow for a comprehensive destination management; decentralized maintenance of information must be made through a content management system (CMS). Since considerable funds are required, in order to establish a high performance system, it is necessary to have independent partners that support the management and marketing at micro and macro levels. Further, active stakeholder participation must be enhanced and a public-private partnership for the development and management of the DMS must be established.

KEY ISSUES IN IMPLEMENTING DMS

The successful implementation of a DMS is a matter openly complex (Alford & Clarke, 2009; Braun, 2004; Buhalis, 2003; Buhalis & Deimezi, 2004; Buhalis & Spada, 2000; Christian, 2001; Doolin, 2005; Gretzel, Yuan, & Fesenmaier, 2006; Lu & Lu, 2004; Mistilis & Daniele, 2005). Andrew Frew, President of the IFFIT – International Federation for Information Technologies in Travel and Tourism, referenced by (Alford & Clarke, 2009) states that in contrast to the high levels of performance of electronic tourism intermediaries, DMS (with the exception of a few cases) have recorded high rates of failure because they seem unable to attract and secure support and commitment necessary from either the private and the public sector.

In his manual on e-business for tourism the World Tourism Organization (2001) presents a step by step guide to the implementation of a DMS. They highlight the need to thoroughly prepare a project prior to implementation, establish a cohesive work team and prepare specific plans for content management, training and communication.

In what concerns which e-business model to implement the intermediation model, where organizations act as market facilitators putting buyers and sellers in contact and facilitating their transactions, or the infomediary model, where organizations act as information intermediaries (Rappa, 2009) are referred in literature as being associated with success cases (Buhalis & Egger, 2008). For these authors, from the customer's point of view a touristic destination should develop and operate an integrated system that allows for search, counseling and booking. The incorporation of the latest technologies is critical as well as the availability of several tools associated with a DMS: product database, content management tools, customer relationship management, e-commerce services, among others (Buhalis & Egger, 2008; World Tourism Organization, 2001).

The need to establish a new business model for the DMO is one of the critical success factors in implementing a DMS however there are other factors (World Tourism Organization, 2001): top management involvement; the awareness that is an investment in the short to medium term that cannot even be financially self-sustained; implementation should be phased, with a carefully established implementation plan, all employees should be involved and adequate training should be provided; the supplier of the technology must be carefully chosen (since it will be a long term relationship) and the system should already be tested; the development and maintenance of a digital database of high quality is a substantial task for which the necessary resources should be allocated.

Barriers to the implementation of DMS can be identified concerning the organizational, technological and managerial issues of small and medium-sized enterprises (SME) in touristic destinations (Sigala, 2009): (1) reluctance in using ICT, (2) lack of training (3) poor marketing and management skills, (3) managers short-term vision (4) the connection to the DMS is made through the allocation of a lot of time and resources in inefficient manual process since these enterprises lack basic ICT infrastructure, (5) reluctance to allocate and/or maintain an inventory of availability in the DMS, (6) poor perception about marketing and cost efficiency of a DMS, (7) the inter-organizational relations between SME and the DMS operator, (8) reluctance to pay commissions for sales and/or participation in the DMS. Buhalis and Deimizi (2004) add to these barriers the low level of cooperation between SME touristic enterprises and the inability of DMO to coordinate the destination. For SME joining the virtual world involves clarify the technical jargon associated to ICT, reduce linkage costs, gain

online visibility, gain confidence in the new media leadership and obtain e-commerce skills through links with local networks (Braun, 2004; Christian, 2001).

There are other barriers to implementation of a DMS in what concerns organizational capabilities of the DMO: (1) financial barriers related to the investment in the development and maintenance of touristic applications online, including costs for staff training; (2) lack of cooperation between business partners and (3) the failure on the DMO side to implement changes to organizational culture that support the adoption of the new technology of on-line services (Doolin, 2005; Gretzel, Yuan, & Fesenmaier, 2003; Gretzel, et al., 2006; Lu & Lu, 2004).

Resuming, barriers to successful DMS implementation can be identified both on SME and on DMO side. Addressing these barriers involves organizations empowerment in what concerns ICT skills and the enhancement of inter and intra- organizational relations.

THE CONTRIBUTION OF REGIONAL ECONOMIC DEVELOPMENT

In addition to the importance of the DMO role in implementing a DMS and the incorporation of the latest technology tools to be made available through the DMS, the success factors inherent to DMS implementation are also based on the premises that underlie the development and prosperity of a region in what concerns tourism. The question that then arises is what promotes growth and development of a region. The relationship between tourism specialization and economic growth is one of the main topics of discussion in studies related to the tourism economy (Figini & Vici, 2010; Matarrita-Cascante, 2010; Milne & Ateljevic, 2001; Oh, 2005; Sequeira & Nunes, 2008; Sinclair, 1998).

Literature review identifies five key issues that appear to underpin the development and prosperity of a region in what tourism is concerned. First, lack of financial support from governments urges regions to take the best advantages of possible local investments. In this context, regions that want to develop as touristic destinations should create capacity to attract foreign investment to the area (Costa, 2006). The second issue arises from the previous since it is closely related to local cooperation, that is networking between organizations and the establishment of partnerships between the different local actors. The third issue in regional economic development is about creating products-territory, offering unique and unforgettable experiences, which should constitute the core of competitiveness between destinations. What is distinguishable and not comparable are territories and so the emphasis should be placed on the development and promotion of territories instead of products (Costa, 2006). Fourth, networks governance and local planning governance are key to the development and prosperity of a region in what tourism is concerned. Destination governance relates to the development and implementation of a cohesive policy, a consistent management system and the existence of an efficient management structure within a DMO (World Tourism Organization, 2010). In what concerns networks governance, since destinations success largely depends on the continued collaboration between different actors, the high levels of coordination needed can only be obtained if there is a governance structure in place. This is implemented through the organizational structures required by product-oriented tourism clusters. The importance of network governance has been widely advocated and referred to in literature through the concept of industrial districts (Coe, Hess, Yeung, Dicken, & Henderson, 2004; Hjalager, 2000; MacKinnon, Cumbers, & Chapman, 2002; Mottiar & Ryan, 2006; Raco, 1999; Sainaghi, 2006; Scott, Cooper, & Baggio, 2008) as areas where there has been a

significant prosperity despite the huge competitiveness between regions. In fact, regions have emerged as a central concept in the theory of economic development and institutional links appear as their basis of competitiveness and cohesion. (Kong, 2007; MacKinnon, et al., 2002; Raco, 1999; Rigall-I-Torrent, 2008). Finally, the importance of economic criteria for enterprises, which cannot be set up away from the respect for territory and sustainability, means that only economically viable products are economically sustainable and are attractive to businesses. It is the awareness that the individual success of each business incorporates the notion of common economic achievement but also respect for the territory that supports it, that creates the link between the networks and the territory and provides guidance for what sustainable tourism must be (Costa & Buhalis, 2006).

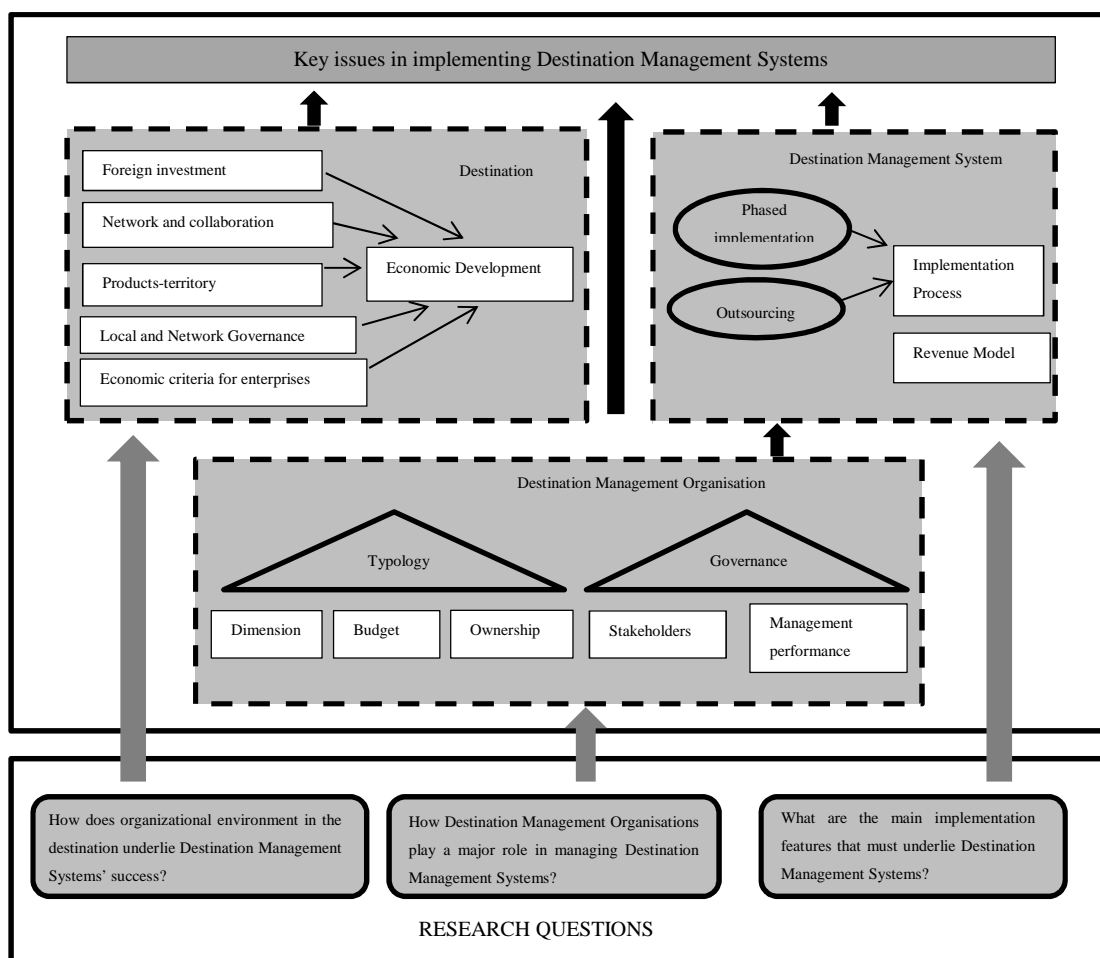## METHODOLOGICAL APPROACH SUGGESTED

Figure 1 – Conceptual framework

This article aims to present the conceptual framework of an investigation where we intend to define the main factors underlying the successful implementation of a DMS. Schematically in Figure 1 we propose a model based on the assumption that these success factors lie in three spheres of action: the dynamics of the system implementation within a DMO, the very specifics of DMS and the organizational environment inherent in the destination. The model is divided in three main parts that allow for the association between each of the three research

questions and the levels of analysis: the Destination, the DMO and the DMS. In the first part, at the DMO level, we argue that the type of governance structure and the typology of the DMO play a major role in managing destination management systems. In the second part of the model the main implementation process and the revenue model are defined as key to DMS success. Finally at the destination level the conceptual model proposed considers the five key issues that in literature appear to underpin the development and prosperity of a region in what tourism is concerned.

CONCLUSION

On the basis of an extensive literature review the present study intends to introduce the success factors inherent to e-business implementation in touristic destinations. DMO arise as organizations that should lead the process of implementing a DMS. In addition to this role, DMO must incorporate the latest technology tools to be made available through the DMS which generally provide exhaustive information on destination, on-line reservations and destination management tools and pay particular attention to the support of small and independent touristic suppliers. Furthermore DMS provide the tools that allow for information distribution and gather all actors in a network environment.

At the destination level we state that the success factors of these systems are based on issues that underlie the development and prosperity of a region in what tourism is concerned, in particular, the attraction of foreign investment to the region, network organization and the establishment of partnerships, the creation of products-territory based on clusters for tourism, the governance of networks and institutions involved in local planning, and finally the importance of the economic criteria, namely the importance of profitability. The empirical research inherent to this study involves testing the proposed model by inquiring the different national and regional DMO of the six European countries leaders in international tourists' arrivals. It is expected to confirm the theoretical model proposed here.

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