DMS BUSINESS MODELS DESIGN AND DESTINATION CONFIGURATIONS:
CHOICE AND IMPLEMENTATION ISSUES

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Destinations differ in the modalities of coordination and collaboration, the intensity of interactions, local tourism supply organization and skill sets, technological structure, and, more generally, on the e-Readiness of the entire system. These features may affect the viability and success of destination management systems (DMS). This article argues that for successful embarkation in e-Business, the choice and design of DMS business models should be aligned to destination-specific characteristics. With this aim, a theoretical framework for the identification of DMS business models suitable to the different configurations of destinations is presented. The conclusions will show that this framework is not static, but it follows and represents an evolutionary e-Business implementation pattern for destinations.

Key words: Business models; DMS business models; DMS implementation

Introduction

In the past 10 years, nothing has changed within the tourism sector as much as ICTs and the Internet. The widespread diffusion of e-Business and rising global competition have prompted a dramatic rethinking of the ways in which tourism business is organized, and destinations have become key units of competition. Regional cooperation together with internetworking, in enhancing collaboration and coordination at the destination level, and in fostering the development of innovative business models, are increasingly important factors for several tourism service providers, and can be seen as a key to the competitiveness of tourist destinations. Moreover, due to their internal structure, destinations may be considered virtual enterprises, which are predestined for the use of e-Business applications (The European e-Business Market Watch, 2005; Werthner & Klein, 1999). Over the same period destination management systems (DMS) have emerged as the key technological infrastructure of destinations’ e-Business activity, as they enable local tourism authorities (DMOs) and independent tourism enterprises (mainly SMEs) to better coordinate their operations and relationships, by forming networks aimed at providing consumers with an entire range of tourism information about services for the destination (Buhalis, 1994; The European e-Business Market Watch, 2005).

The main objective of these systems is to make...
all suppliers accessible online from everywhere, to increase the level of customer satisfaction with an area, and to promote the whole destination in global markets (Buhalis & Spada, 2000). Over the years DMS have produced significant benefits for destination competitiveness in terms of gains in distribution power and in improving returns on investments, in particular through differentiation of their products and the attraction of niche markets (Buhalis, 2003) while, at the same time, reducing costs of integration, distribution, promotion, and commercialization, increasing flexibility and responsiveness, and ensuring a greater openness to new players, services, and applications (Petti & Ndou, 2004). Nevertheless, it has been observed that although DMS are already appearing in almost every destination (Buhalis, 1997) and that the operation of those kinds of systems in destinations is now more or less commonplace (World Tourism Organization [WTO], 2004), only a very small number of them have moved on from development and pilot stages to become operational and offer the promised benefits (Buhalis, 1997).

Most DMOs are still implementing e-Business in respective destinations, or do not have a strategy for the implementation of e-Business at all (WTO, 2004). Recent data, reported from the responses of 241 DMOs surveyed worldwide in the 2004 WTO study, suggest that even nowadays, the implementation of e-Business in destinations is still at half way, as still almost half of the DMOs surveyed (mainly regional and local DMOs) are not implementing an e-Business strategy, and that among the ones that have an e-Business strategy, only 5% declared they have completed implementation, and 12%, again, mainly regional DMOs, still have not started. Moreover, according to the latest European e-Business Market Watch Report (The European e-Business Market Watch, 2005), there are still a number of tourism enterprises, mostly SMEs, completely refusing to engage in e-Business. To some extent, the reluctance of these tourism companies to use ICT and adopt e-Business is probably due to a lack of awareness of the potential benefits of these technologies. This factor generates, along with the high up-front costs perceived, a substantial refrain from getting the necessary ICT infrastructure and the related know how to use e-Business applications productively, eventually leading to competitive rather than cooperative attitudes within the destination.

This lack of support of important stakeholders within the region, coupled with the limited finances, technology skills, and management capabilities of the competent DMOs may have significantly hampered the prospects for successful implementation of DMS within destinations. So it might well be that because of those reasons, up to now only a relatively small number of cases have been capable of really exploiting the opportunities of ICTs and the Internet for the creation of effective e-Business networks centered on DMS. These networks may enable collaboration and coordination at the destination level, the creation of destination-wide technology/management capabilities, as well as the development of innovative business models aimed at sustaining the development and the competitiveness of destinations in the global tourism market.

It is the contention of this article to argue that, among all the possible explanations for the difficulties that destinations are experiencing in implementing DMS and/or in reaping the full benefits of such systems, there is a “mismatch” between the DMS business model and destination-specific features. This means that the choice and design of the DMS business model fails to take into account the context characteristics, such as the number of players involved in key decisions and the degree of collaboration, as well as destination conditions concerning overall management and the technological capabilities of pivotal players, such as local DMOs, that are necessary to undertake a DMS project. In addition, the coevolution of technological capabilities and localized skill sets, which needs to be activated at some point in time to nurture e-Business diffusion and adoption, as well as their relationships with the development of the entire local tourism system, is often overlooked. So the aim of this article is to present a theoretical framework for the identification of DMS business models suitable to the different configurations of destinations and to propose a DMS implementation pattern for sustaining successful embarkation of tourism destinations in e-Business.

With this aim, this work starts with an attempt to identify in the literature a meta-classification of business models that will result in a translation
framework for transporting business model archetypes and features back and forth from one taxonomy to another along two dimensions: innovation and value integration. Afterwards, in order to identify which kind of business model is more appropriate for implementing a DMS within a particular destination, the work will first identify and characterize the possible configurations of a tourism destination, and then match those configurations with the e-Business model categories identified. Finally a DMS implementation framework is suggested. It is believed that the results of this work will provide a useful framework for increasing the likeliness of success of DMS projects.

**Business Model Categories**

A business model can be defined as “nothing else than a description of the value a company offers to one or several segments of customers as well as the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams” (Osterwalder & Pigneur, 2002). Business models have become increasingly common talk among e-Business researchers. There is also much talk about the changes in traditional business models, but there is yet little clear-cut evidence of exactly what this means, especially for those changes produced by the Internet. There is still a great deal of confusion that stems from numerous different definitions and classifications provided in the literature. In practical terms this confusion renders the task of finding the suitable business model to adopt or to choose the best approach to apply particularly difficult. It is for this reason that it might be useful to use a meta-classification of business models and group them under a limited number of generic categories. For this purpose this article will take into consideration the most well-known and cited contributions provided by Tapscott, Ticoll, and Lowy (2000), Timmers (1998), and Rappa (2001). These authors propose different dimensions for categorizing business models: functional integration and degree of innovation (Timmers, 1998); economic control (both hierarchical and self-organizing) and value integration (Tapscott et al., 2000); revenue source and firm position in the value chain (Rappa, 2001). According to these dimensions, they provide different types and classifications of business models ranging from Tapscott et al. (2000), who list five generic categories of business models (agoras, aggregations, value chains, alliances, and distributive networks), to Timmers (1998) and Rappa (2001), who go into more detail and list 11 and 9 different possible e-Business models, respectively, that could be encountered based on value chain construction/deconstruction and the degree of innovation of e-Businesses. Regardless, even if different classification dimensions lead to different taxonomies, some similarities and matches between different taxonomies could be established with a simple analysis of the cases reported to describe different types of business models, as indicated in Table 1.

As can be seen from Table 1, analyzing the type of business model of some well-known Internet companies one could easily see that the same business case is mapped in different categories. In particular, some of them, such as Amazon and Travelocity or Cisco, Dell, and Tiscover, are described both under the three taxonomies and under different business models within the same taxonomy. This means that detailed business models are not exclusive and a firm can develop multiple categories of business models to interact and interface with different groups (e.g., suppliers, partners, customers) in order to achieve its objectives. This simple analysis also indicates that Tapscott et al’s (2000) taxonomy could be used as a generic business model taxonomy composed of a mix of more specific business models that allow the company to perform B2B and B2C side activities and functions. For example, Amazon is categorized as an aggregation business model for the fact that it is positioned as a value-adding intermediary between suppliers, distributors, publishers, and customers. But obviously in the B2B and B2C interface it could adopt different, more specific forms (respectively, a Virtual Merchant in the B2C side—that is, an electronic retail merchant that operates solely over the web; and an affiliate model in the B2B side following its strategy to provide purchase opportunities wherever people may be surfing and so on). According to this analysis it is worth saying that there is not one best business
model to adopt. Thus, a company can chose to adopt a multicategory business model strategy to achieve its objectives in interactions with suppliers and customers. But which are the specific business models that compose a multiple category of business models? And which multicategory business model does a firm need to choose to pursue its objectives? To respond to these questions different business models have been clustered along the same dimensions into homogenous categories.

### Business Model Clustering

The methodology used for clustering business models was mainly a desk research analysis, starting with determining common denominators or dimensions to be used for mapping business models. Although authors use different dimensions to categorize business models, all of them contend that companies that decide to embark on an e-Business model seek to innovate their company value through a restructuring of structures, assets, resources, products, and services. They all seem to converge on two main aspects: first, the degree of value innovation and, second, the degree of integration they want to realize with their business model. Thus, the multicategory business models a firm could chose to implement differ depending on the degree of innovation and on the integration level they want and are able to realize in the contexts where they are rooted. If a company simply wants or can only sell and market its products/services over the Internet it needs to simply approach an eShop, eAdvertising business model that doesn’t require a high level of integration and innovation.

Having these two new dimensions we proceeded with mapping all types of business models in the same graph by trying to find out homogeneities and similarities among them. For that we took in consideration:

1. All the possible matches that could be established between molecular taxonomies of Rappa (2001) and Timmers (1998) based on their descriptions and features.
2. The insights that emerge from the comparative analysis of business models of some well-known Internet companies to find out the matches among different categories (see Table 1).

Through these steps a map of business models was constructed that allows us to realize the multicategorization of business models according to the innovation and integration level realized.

Tapscott et al.’s (2000) business model categories are used as meta-models as they are recognized as single, specific types of business models that describe, in a generic manner, the value in terms of innovation and integration that could be realized, the main features, the organizational structure, and processes to be realized. But in order to have a broader and detailed view of different molecular parts of business models that need to be blended together in a generic model to realize personalized and effective interface with customers, suppliers, and partners, we mapped the molecular business types around the generic categories. As Tapscott et al. (2000) admit, some business model subtypes need to be blended together in each generic business model. Given that Timmers (1998) and Rappa (2001) give a very detailed level of business models that can be used, we tried to identify which of these molecular business models could be combined in the generic business

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**Table 1**

Cases Reported to Describe Different Business Model Taxonomies

<table>
<thead>
<tr>
<th>Cases</th>
<th>Business Model Taxonomies (Tapscott et al./Rappa/Timmers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon, Travelocity</td>
<td>Aggregation/Advertising model, Brokerage model, Merchant model, Affiliate Model/eShop, eMall (Amazon), Info Brokerage (Travelocity)</td>
</tr>
<tr>
<td>eBay, PriceLine</td>
<td>Agora/Brokerage/eAuction</td>
</tr>
<tr>
<td>Aol/Lonely Planet</td>
<td>Alliance/Community model/Virtual Communities</td>
</tr>
<tr>
<td>Cisco/Dell/Tiscvery</td>
<td>Value chain/Manufacturer model/eProcurement, Collaboration platforms, Information brokerage</td>
</tr>
<tr>
<td>AT&amp;T/UPS/Fetish</td>
<td>Distributive Networks/Value chain service provider</td>
</tr>
</tbody>
</table>

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model to effectively interact and collaborate with different stakeholders (customers, partners, suppliers, etc.). In this way we came up with a multiclassification of business models provided by different authors (Fig. 1).

This clustering has two meanings. First, it shows which types of molecular business models could be combined in a generic business model (Tapscott taxonomy). Some molecular business models are present in almost all types of generic business models (such as the merchant, eShop, eAdvertising, etc.), but some others could be developed only when the e-Business strategy of the firm is highly innovative and its business model integrated. However, it is worth noting that moving to upper to more advanced stages doesn’t mean that firms need only to develop, for example, collaboration platforms, virtual communities, and knowledge communities, but the previous basic business models such as eShop, eAdvertising, and eProcurement are integrated and enhanced with new advanced and sophisticated services, technologies, and solutions. The upper molecular business models such as collaborative platforms, virtual communities, and value chain integrator are not present in lower levels. This fact is related to the second insight that comes out of this analysis.

Second, the clustering is an evolutionary pathway, as well. That means that to pursue greater integration and innovation levels firms need to keep changing their business model, shifting toward higher levels in the graph. In higher levels more complex and sophisticated solutions, services, and technology architectures are used. Stage by stage firms will develop organizational structures, routines, assets, resources, and capabilities that allow them to pursue high innovation levels. Reaching upper stages is very challenging. It requires firms to have a good base of customer data and customer relations, have strong social capital with their partners and suppliers, and to have a good knowledge and technology infrastructure. Hence, the context where firms are rooted, the social and structural capital they pose are very im-

![Figure 1. Business model multicategories.](image-url)
important elements to consider in finding the business model cluster that a firm can approach and the evolutionary pathway to pursue.

Business Models for DMS

Identification of Destination Characteristics

The mission of a DMS is mainly to construct, through the Internet, a broad network of suppliers, activities and functions necessary to realize synergies in management, marketing, distribution, branding, advertising, and technology planning of the entire destination. It tries to provide customers with integrated value and the service innovation of the destination. However, pursuing this objective depends on the context characteristics as well as the social and structural capital of firms. In fact, many DMSs might have experienced difficulties to deliver their value propositions and to evolve toward higher innovation levels because they might not have considered the destination-specific features as well as the prerequisites to implement the business models chosen for the DMS. The destination-specific features concern the culture of collaboration among destination firms, the intensity and density of interaction, the social climate, the technological structure, or, more generally, the e-readiness state of tourism firms (Gretzel & Fesenmaier, 2001), modalities of coordination and the way the tourism supply is organized. Hence, in such contexts where the culture of collaboration is low, the supply is very fragmented, and e-readiness is low, it is necessary to start with some preliminary actions that seek to create a culture of collaboration, increase dynamic interaction between diverse participants and to create new skills and capabilities to cope with a complex new environment. In these contexts starting with sophisticated business models could be a slaughter for the implementation of the DMS. So the determination of destination features is paramount for identifying the appropriate business model for the DMS and the evolutionary pattern to follow. Rispoli and Tamma (1995) and Tamma (2002) have identified three main configurations that characterize the dynamics of tourism production and consumption in a destination, according to two dimensions: the forms of coordination (autonomous, cooperative, and centralized) and the extent of control/integration of the supply (none/low, medium, and high), with control/integration meaning both the extent of control that tourism operators have on the configuration of the final product, and the degree of integration of the final product itself.

Fragmentation (autonomous coordination, low control/integration) is characterized by spontaneous entrepreneurship and scarce planning, unstructured supply, no decisional centers or integration poles, weak relations and interactions among players, and scarcity of resources (relational and technical). In this context the configuration of tourism experience is managed totally by the user through a series of relations with each single operator. The single operators do not have any control on product configuration. The tourist experience in this case assumes the form of a composite product realized by the tourist himself/herself, who aggregates different pieces of the tourism product.

Cooperation (cooperative coordination and medium level of control/integration) is characterized by relatively structured supply, a limited number of decisional centers, the relational dynamics of players presenting diverse levels of intensity, and could be of short or medium/long-term duration (consortiums, associations), characterized by operational or strategic content, differentiated base of resources, and competences. In this context the configuration of tourism experience is managed by some operators of the supply who assemble diverse alternatives on which they possess some control and among which the final user can effectuate a guided and qualified choice. The tourism experience in this case assumes the form of a modular product, relatively integrated that could be assembled in a flexible way.

Leadership (centralized coordination and elevated integration level) is characterized by very structured supply, the presence of a unique decisional center, and existence of some subjects that are able to aggregate and control the supply. In this context the configuration of tourism supply is completely managed by the lead operator who resolves ex-ante the problems of uniqueness and coherence of supply. The tourism experience in this case assumes the nature of an integrated product, a package product with solutions and conduits
predefined and where the only maneuver that the final customer could make is to include or exclude the components.

Starting from this categorization and overlaying the experience gained in research projects related to ICT for tourism and cultural heritage, a fourth configuration of destination has been added—distributed leadership—according to its specific characteristics related to a distributed form of coordination—slightly different from traditional cooperative behaviors mentioned by Rispoli and Tamma (1995) and Tamma (2002)—and a variable extent of control/integration of the supply. Distributed leadership is characterized by a strong maturity of the tourism destination context where the strong accumulation of human capital (in terms of management and technological capabilities), structural capital (in terms of technological infrastructures and applications), and social capital (in terms of culture and experience of collaboration) lowers the trade-off between coordination and integration and thus the need for strong coordination between the different components of the local tourist supply, which rather tends to self-organize and converge around multiple offerings conceived to satisfy comprehensively the needs of different tourist segments. In this sense this context differs from the “cooperation” one both for the major sophistication required in terms of managerial and especially technological capabilities and for the nature of the product, which becomes multiple and personalized on the specific needs of, ideally, the single tourist. However, this new categorization is still more a theoretical classification than a reality for any particular destination, and it can be seen as a further, more advanced, evolutionary stage of tourism destinations towards e-Business, in which technologies become embedded in the context and almost disappear in an enabling infrastructure—as now is the case for telephone networks—on which anyone (people, organizations, and networks) is allowed to produce, deliver, and exchange tourism and tourism-related information, services, and goods regardless of the technologies used, the position in the supply chain, or even the kind of business in which the player is operating.

Following those considerations, there are four destination models based on the different configurations of the local tourism supply system: point-to-point, network, package, and digital ecosystem (a new category introduced in this work).

Identification of DMS Business Model

At this point we have all the elements to identify the appropriate business model for a DMS according to the particular features of the destination. For this purpose the level of integration has been used as a common denominator for mapping business models and destination models. In this regard the concept of the level of integration as both the degree of integration of the “final product” (i.e., the tourist experience) and the extent of control that tourism operators have on the configuration of the product itself, allows one to consider the resources and capabilities required (relational, technical, and infrastructural) as a key variable for the selection of an appropriate DMS business model. Following those considerations, Table 2 highlights proposed DMS business models for each kind of destination model identified above.

What this table highlights is not only a mere matching between local tourism supply context features and the appropriate business models to manage them, but it traces an ideal evolutionary path that destinations need to follow, linearly in some cases and nonlinearly in others, for developing progressively the necessary resources and capabilities (relational, technical, and infrastructural) for enhancing their competitiveness with e-Business. In what follows, the main characteristics of each of the scenarios highlighted in Table 2 are sketched.

When confronted with fragmented scenarios there isn’t really an appropriate business model for the DMS as this situation represents more a point of departure rather than an objective. In fact, most of the time, destination management policies, relevant decision centers that can undertake those policies, and a network of relationships to increase the likeliness of success of such policies simply don’t exist. In such contexts starting any destination management initiatives that point directly to the integration of the local supply, through the identification of managing players and/or the development of technological tools, risks encounter-
Table 2
Matching Business Models to Destination Features

<table>
<thead>
<tr>
<th>Form of Coordination</th>
<th>Autonomous</th>
<th>Cooperative</th>
<th>Centralized</th>
<th>Distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td><strong>Distributed Leadership</strong></td>
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<tr>
<td><strong>Leadership</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>Alliance/Agora</strong></td>
</tr>
<tr>
<td><strong>Value Chain</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>Value Chain</strong></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resources &amp; Capabilities</strong></td>
<td><strong>Scarce</strong></td>
<td><strong>Low</strong></td>
<td><strong>Medium/High</strong></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td><strong>Degree of Innovation</strong></td>
<td><strong>Low</strong></td>
<td><strong>Low</strong></td>
<td><strong>Medium/High</strong></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td><strong>DMS Typology</strong></td>
<td><strong>Aggregation</strong> (project)</td>
<td><strong>Aggregation</strong></td>
<td><strong>Managed</strong></td>
<td><strong>Distributed</strong></td>
</tr>
<tr>
<td><strong>Managing Actor</strong></td>
<td>Internet Service Provider</td>
<td>Tourism Operators/DMO</td>
<td>DMO</td>
<td>DMO/Infrastructure Provider</td>
</tr>
</tbody>
</table>

Dealing with the difficulties related to particular features of this destination model. Rather, what can and needs to be done as a first step in this context is to initiate a change management process aimed at creating, over time, the necessary cultural, organizational, and technological prerequisites for any further intervention aimed at developing and enhancing the competitiveness of the destination. So the *aggregation* business model proposed in the table needs to be seen in perspective as both the context and the result of an overarching destination management project aimed at creating the necessary “platform” of human, structural, and social capital for transforming fragmented models into more structured and competitive configurations on which to develop more incisive actions. In this sense the DMS is here seen as the means, rather than the end (or an instance) of a destination management policy. A final consideration is that what has been argued does not exclude the possibility of developing, or, conversely finding, electronic solutions or even e-Business models for promoting and commercializing the tourist supply of such a kind of destination. As a matter of fact, it is very likely to find “elementary forms” of aggregation such as e-shops, which promote the goods and services of single local tourism operators, or aggregations of multiple local tourism operators, often organized and managed by local tourism offices and backed by an Internet service providers.

In *cooperative* settings where the supply appears, to varying degrees, more structured and some relevant decision centers start to emerge or already exist, the appropriate business model for a DMS would be that of an *aggregation* as the integration level where the required resources and capabilities as well as the innovation level are still low. In these contexts the mission of the DMS will be to aggregate suppliers, tourism information, and resources in a one single point-of-sale for its promotion and commercialization in the global tourism market. A single player (a tourism authority such as a regional or local DMO, or a private organization or company) has to take the responsibility of doing this job and for this it needs to position itself as a kind of broker/intermediary that selects and organizes local tourism information and services, and helps customers in fulfilling their needs. In general, in this scenario, tourism authorities start and lead the DMS in order to present all tourism players equally as well as to stimulate the creation of some important conditions (social capital, cooperation culture, trust) for successive development stages. The DMS in this case preserves the autonomy of single operators; it only seeks to add value to its territory through an integrated qualitative supply for tourists and through serving autonomous operators with strategic services and tools that they are not able to develop singularly. This is the first phase, indispensable for creating the right conditions for initiating an evolutionary e-Business implementation pattern towards destination competitiveness.
In leadership settings, as the resources and capabilities (human, relational, and infrastructural) are medium to high, the principal objective of a DMS project should be that of reinforcing the existing relationships among different players, creating new ones, and exploiting partnerships in order to enhance customers’ services. The appropriate business model for a DMS initiative is thus a value chain. In these contexts there is no need to start from aggregating and integrating information and resources, as aggregation and some level of integration are already realized by the decisional centers [i.e., the destination management organizations that are (now) present in the context]. So, the DMS initiative is aimed at supporting destination organizations in its role of “orchestrating” local tourism supply for the provision of integrated experiences and comprehensive solutions to prospective tourist segments. Also, such a kind of DMS empowers participants with more advanced collaborative technologies in order to further reinforce and facilitate business-to-business interactions, relations, knowledge exchange, and information flows. In these contexts the DMS serves mainly as the infrastructure for the managing player that creates a web-enabled context where different participants network and interact digitally to realize integrated value propositions faster, better, and cheaper. Obviously, advanced technology tools, applications, and solutions need to be put in place for this purpose and so the innovation level of this configuration is quite high.

Finally, in distributed leadership settings, where internetworking technologies allow for the distributed management of tourism in the destination, the level of integration can be high or low according to the kind of solution put in place, an alliance rather than an agora. A DMS initiative in these contexts needs to lever on the integrated and collaborative culture of the context (so a value chain model seems a prerequisite for such a kind of model) to create distributed knowledge networks, composed of a set of dynamic linkages among diverse members who are engaged in deliberate strategic and operational exchanges of information, knowledge, and services to design and produce both integrated and/or modular and personalized products. As pointed out, the choice of the business model in this case depends mainly on the strength of ties and cooperation among players, the sophistication and the capabilities related to the use of advanced e-Business solutions, and especially the extent of control of the context provider over the offerings. If oriented towards setting directions, vision, and standards for the offerings to which each player contributes autonomously, we will have an alliance; if oriented towards simply providing the infrastructure and applications to facilitate exchanges between independent groups of buyers and sellers, we will have an agora. In this second case we might have a complete lack of the need for centralized management tasks, which will be transferred to the players in the supply chain according to their roles within it. In this scenario DMOs can become just one of the components in the supply chain, leading eventually to the upsurge of infrastructure providers, such as software companies or innovative project spin offs as leading players that will perform the role that telecommunication companies play in actually providing technologies and related services for allowing any kind of participant, in any kind of industry, to interact and collaborate. As has been pointed out before, in these contexts the integration level may be high, so that it would not be possible to start with an alliance business model if the accumulation of human, infrastructural, and relational capital in the destination is low. This scenario might happen if the relational, capabilities, and infrastructural effects of a value chain business model are already in place or conversely those effects need to be created—eventually with a value chain business model—as a starting point before approaching further evolutionary stages towards alliances or Agora.

The DMS Implementation Framework

After having identified the appropriate business model for the kind of destination in which the DMS is to be implemented, the next step is to implement the DMS within the destination. As has been pointed out, the overall approach is based on the contention that it is not possible to implement a DMS if the proper conditions (cultural, organizational, and technological) are not in place. And in order for the proper conditions to be in place, a relatively structured supply system, a limited num-
ber of decisional centers, a certain intensity of relational dynamics, and a basic endowment of management and technological capabilities are needed. The bottom line is that for successful implementation of a DMS such preliminary conditions need to be in place, otherwise they need to be created. The DMS implementation pattern presented here starts from those premises and thus has as a starting point fragmented settings, and has as the main purpose leading those settings toward more cooperative ones in which DMS can be more effectively implemented.

Let’s take for example the Southern Mediterranean countries, in which the authors have developed some experience related to some collaborative projects in place, mainly with Morocco. In these countries the supply system is mainly fragmented, with a great number of small and medium enterprises (mostly family businesses with scarce resources and capabilities) and a relatively low level of local cooperation, especially compared with the cooperation culture and the centralized management structures typical of Anglo-Saxon realities in which DMS have been created and to which DMS are still more suited. Such considerations suggest avoiding the choice of solutions that tend toward strong centralized coordination of the supply, and that assume as a prerequisite the empowerment or the creation of a dedicated structure. Rather opting for “lighter” solutions, to start involving a limited number of operators, particularly aware and interested, but not necessarily equipped, around a simple solution that requires lower levels of innovation and coordination capabilities by the local DMO (or whoever handles, formally or informally, the management of the destination’s offerings such as operators associations, consortia or even civilian associations) while at the same time requiring the lowest possible integration efforts for tourism suppliers. A kind of “online” supermarket opened by the DMO in which tourism suppliers can publish, promote, and market easily and “seamlessly” their products and services for which the aggregation business model is the more suited. This is just the core of a more comprehensive modular strategy that foresees the evolution towards more sophisticated applications and services as other sophisticated needs emerge from the stakeholders in the platform, and/or other more sophisticated operators may join. So aggregation is only the first step of an evolutionary learning process of creation, development, consolidation, and renewal of destination competitiveness through e-Business.

However, any solution, no matter how simple, will not automatically be adopted if not framed in a wider awareness initiative aimed at informing the relevant stakeholders of the impacts and benefits that this solution can have for them over the short and the medium/long term.

For this purpose the first necessary actions to undertake should be oriented towards making local tourism operators aware of two main things: the need to cooperate for developing comprehensive propositions that can attract tourists to the destination, and the benefits of e-Business solutions in doing so. In this phase (awareness) the focus is mainly to build and increase local SMEs’ capabilities regarding business and technology management through the launch of graduate and executive education programs focused on ICTs and e-Business for tourism. In these programs local operators will also appreciate and learn in action—seeing and using tourism e-Business platforms and applications—the advantages and the features of different e-Business solutions for developing and managing tourism within the destination (the Evaluation Phase). The main objective of those phases is to develop a “business case” for the pilot project that shows its potential benefits and lays the grounding for those and other players to be involved in the pilot project for the realization of the DMS. At this point some of the operators that have been involved in education activities, once having acknowledged and appreciated the advantages of e-Business for their business, but in the context of the destination as a whole, can decide to join the pilot project for the realization of the DMS. That is the Design Phase, which has as a primary aim the creation of a successful business case for tourism development within the destination, which lays the foundations for other operators to join on concrete and documented outcomes, for the launch of a destination-wide development of a DMS. At this point the stage is left to private companies to industrialize the solution
experimented and to local tourism authorities and operators to use this solution to organize, promote, and commercialize the destination online.

As pointed out before, the DMS in our approach is the means of an overarching destination management policy whose aim is to initiate and lead e-Business diffusion and adoption for sustaining a balanced and successful embarkation of tourism destinations in e-Business, relying on a coevolutionary pattern between technological infrastructures and local skill sets.

Figure 2 schematizes these steps in an overall framework that sketches the basic guidelines of an iterative e-Business strategy for ICT-driven development of destinations—here referred to as the e-Tourism Destination Development Framework—for leading the transformation of traditional destinations towards more innovative and competitive e-Business configurations.

Conclusions

The thesis underpinning this article is that destination-specific features shape the type of business model, the DMS, as well as the evolutionary pathway it needs to follow. It is argued that it is not possible to implement a DMS if the proper cultural, organizational, and technological conditions are not in place. So the main implication is that before starting a DMS initiative, destination managers and public decision makers need first to undertake a context assessment, to establish the level of collaboration among firms, the intensity and density of interactions, the social climate, the technological infrastructure and coordination modalities, and then to choose and design the DMS business model. However, starting at the right point and in the right way doesn’t automatically guarantee success and competitive advantage to destinations. In today’s business environment firms and destinations need to continuously upgrade and develop organizational structures, assets, and capabilities and the social and customer capital to enhance their competitiveness. Thus, destinations need to adopt a coevolutionary approach, stimulating the reciprocal reinforcement of technological capabilities and localized skill sets. On this basis a DMS implementation pattern has been discussed and a specific e-Business strategy—the e-Tourism Destination Development Framework—has been presented. The aim is to contribute to the DMS implementation discussion.
and to try to shed further light on issues sometimes taken for granted, which relate to preimplementation and local “capacity-building” steps that need to be undertaken when DMSs, as is more and more the case, need to be implemented in new destinations. In such cases it is our belief that the main question that needs to be addressed is not what destinations can do with DMS once online, but what destinations need to do in order to go online. It is the intention of this article to present a theoretical framework to stimulate discussion on some important and supposedly overlooked factors underlying the success of DMS implementation. However, detailed empirical studies to establish whether and to what extent factors cited are responsible for effective implementation of DMSs as well as to validate the evolutionary stages in tourism e-Business development framework are the subject of ongoing research. Future research is needed to address the specific implementation of technological applications, human skills, and managerial capabilities that are required in each evolutionary stage. Finally, researchers and practitioners might use survey instruments and interview data to define a set of practical indicators and measures that could enable the categorization of destinations in one rather than in another configuration.

References


