Developing Destination Management Systems (DMS): roles, functionality and future trends

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Abstract: DMS are interorganisational information systems aiming to support the development and management of tourism destinations through the facilitation and fostering of collaboration practices amongst the numerous destination stakeholders. As the various destination stakeholders usually have different and sometimes conflicting aims and goals, the agreement of the aims of DMS and the development of DMS functionality to support the achievement of their goals is not always an easy process. In this vein, the goal of this paper is to first identify the roles of DMS and then discuss the functionalities and services that DMS should develop for achieving the former roles. Specifically, the first section adopts a multi-stakeholder approach for analysing the roles of DMS that meet the needs of the totality of the stakeholders found in the destination. The second section of the paper delineates the functionalities and services that DMS should develop for meeting their roles by providing several examples from effective DMS projects. Finally, the last section analyses the future trends and challenges faced by DMS developers.

Keywords: ???????????

Introduction

The role of Information & Communication Technologies (ICTs) to increase the performance of tourism firms, but also of tourism destinations at a macro-economic level is widely advocated (e.g. WTO, 2007; Sigala, 2009a; Wang & Fesenmaier, 2006). The totality of the ICTs developed by Destination Management Organisations (DMO) for marketing their destinations represents the Destination Management System (DMS) of the destination. In general, DMS are regarded as inter-organisational ICT aiming to link the geographically separated tourism supply with the tourism demand. For example, Chen & Sheldon (1997) defined the DMS as an inter-organisational system that links tourist products, suppliers and offers, with consumers and intermediaries in...
order to enable easy access to complete and up-to-date destination information and to allow reservations and purchases. A more comprehensive DMS definition was recently developed from a Delphi study that took into consideration the responses of several tourism stakeholders (Frew & Horan, 2007: 63): “…DMS are systems that consolidate and distribute a comprehensive range of tourism products through a variety of channels and platforms, generally catering for a specific region, and supporting the activities of a DMO within that region. DMS attempt to utilise a customer-centric approach to manage and market the destination as a holistic entity, typically providing strong destination information, real-time reservations, destination management tools and paying particular attention to supporting small & independent tourism suppliers”.

It becomes clear from the above definition that the major role of DMS is to act as an electronic intermediary providing functionalities related to e-distribution, e-marketing and e-sales for the whole destination and its tourism suppliers. Indeed, the impact and the necessity of DMS for the survival and the competitiveness of small and medium tourism enterprises (SMTEs) is considered so indispensable, specifically when considering that although SMTEs represent the majority of firms at many destinations, they lack the technological, managerial and financial resources for exploiting ICTs for e-commerce and e-marketing purposes. Therefore, SMTEs heavily depend on DMS for having an e-presence and an alternative e-distribution channel that may in turn reduce their dependencies on tour operators and other intermediaries (e.g. Frew & O’Connor, 1999; Frew & Horan, 2007; Sigala, 2009a). Nevertheless, although the major raison d’être of DMS is focused on SMTEs’ support and e-empowerment, it should be highlighted that DMS should serve a much wider role that first aims to support a sustainable (socio-economic and environmental) destination management and then to electronically enhance the marketing of this tourism product. The management role of DMS should not be overlooked, as any DMO should first developed its product and then aim to market it; otherwise, marketing a product that is not sustainable and competitive may result in negative long-term effects.

In this vein, the goal of this paper is to first identify the roles of DMS and then discuss the functionalities and services that DMS should develop for achieving the former roles. Specifically, the first section adopts a multi-stakeholder approach for analysing the roles of DMS that meet the needs of the totality of the stakeholders found in the destination. The second section of the chapter
delineates the functionalities and services that DMS should develop for meeting their roles by providing several examples from effective DMS. Finally, the last section analyses the future trends and challenges faced by DMS developers.

The roles of DMS: a multi-stakeholder and sustainable development approach

Tourism destinations comprise different types of complementary, interlinked, interdependent but also competing public/private organizations coming from multiple sectors that create a diverse and highly fragmented supply structure. The various destination stakeholders that often hold diverse and divergent views, needs, interests and values may include: local businesses, residents, employees, activist groups, government/regulators, educational institutions, heritage and cultural operators, competitors, business chains, trade associations and tourists. Within this fragmented nature of destinations that often acts as a barrier to the recognition, acceptance, and adoption of collaborative practices, DMOs become “destination developers” by acting as catalysts and facilitators for realizing tourism developments and by offering a supporting role and infrastructure to their stakeholders to facilitate them to improve their competitiveness and to ensure the sustainability of the destination’s tourism resources. To that end, DMS should represent the digital platforms providing the functionality and the services to synthesize and meet the divergent needs of all destination stakeholders as well as to e-empower them to better achieve their operations in a sustainable development way. In other words, the roles of DMS can be identified into the following three dimensions (Sigala, 2009; WTO, 2007):

1. support and foster the economic development of the destination: the economic role of DMS can be analysed into the following sub-aims:
   – empower tourism firms (specifically the SMTEs) to exploit and use ICTs for e-commerce and e-marketing purposes in order to reduce their expenses (e.g. distribution costs and commission, attract a wider international audience with less resources, globally disseminate and update multimedia information in an effective way) and increase their marketing effectiveness (e.g. provide personalized services, develop customer relations, collect and exploit customer intelligence).
   – improve the performance (reduce costs and/or increase outcomes) of tourism information centers by digitizing their operations related
to: the provision of tourism information; customer services; and sales-marketing activities such as public relations, development of customer relationships and communication.

– globally e-promote the destination, create, manage and e-disseminate its image, brand name and resources in order to create and attract more tourism demand and increase tourism spending at the destination

– diffuse tourism demand at the destination spatial but also through time in order to reduce seasonality, manage the flow of travellers and carrying capacity as well as to support regional development for enhancing the socio-economic development and quality of life of citizens located at peripheral areas. To achieve this, DMS should promote, educate and inform tourists about all and the geographically dispersed tourism resources in destinations so that tourists visit wider geographical areas, do not concentrate and stay in all-inclusive resorts and spread their expenditures and spending in more tourism firms and all over the year avoiding to extensively use specific tourism capacities during certain time periods.

– increase the competitiveness of the destination in order to: attract more investors; maintain local entrepreneurs and increase their entrepreneurship activity; provide and create employment opportunities etc.

– providing a platform in order to increase the collaboration and networking of tourism firms, e.g. e-procurement services, collaborative e-marketing, co-development and co-marketing of thematic routes such as wine tourism.

2. promote the socio-cultural development of the destination: this DMS role can be achieved by meeting the following sub-aims:

– create an electronic platform enabling the local community and travellers to meet and communicate with each other, exchange and share their cultural values and interests, overcome and stereotypes and cultural misunderstanding and achieve a better cultural mix

– electronically preserve, promote and interpret the cultural and heritage resources of the destination
– enabling the local community to actively engage in the creation and promotion of the destination image and resources
– support e-democracy and collaborative destination management by providing the local community with the tools and ways to participate in the tourism development policy making and implementation processes: to that end, DMS should first educate and make the community aware of the current situation and problems, and then, provide a platform for gathering, consolidating and synthesizing different stakeholders’ voices for designing and implementing tourism development strategies

3. support the environmental destination development by achieving the following aims:
– using ICTs (like geographical information systems) for measuring and managing the carrying capacity of regions and identifying areas that need protection, further development and/or better management
– inform the local community, the tourism suppliers and the travelers about the environmental sensitivities of the destination, while also promote and educate them to adopt certain codes of behavior and ethics for protecting the destination while exploring the destination and developing their economic activities.

**DMS functionality for managing tourism destinations**

The need to involve citizens (i.e. any community stakeholder) into the democracy’s sphere increases rapidly during the last years, as current ICT advances afford and boost citizens’ engagement in democratic processes. e-Democracy aims to enhance the quality of democratic processes by breadthing and deepening the citizens’ participation into the democratic processes and assisting the application of direct democracy on a large scale. Breadthening and deepening refers to the increased, active and effective participation of citizens’ in all stages of public decision-making (referring to: problem identification, setting and understanding; development of policies, directions and solutions; implementation of decisions; and evaluation of decisions) with increased power, interactive communication and collaborative decision-making and with possibilities to set and negotiate the agendas of
decision-making processes. It is evident that e-democracy aims to exploit ICT for empowering people participate in bottom-up decision processes, to make informed decisions, and to develop social and political responsibility. Nowadays, collaborative destination management is widely advocated as an effective approach for designing and implementing sustainable tourism development policies and strategies that cater and balance the different interests of the variety of the tourism stakeholders. In this vein, DMOs can exploit the electronic platform of DMS for empowering tourism stakeholders to actively participate in tourism development processes and for implementing collaborative destination management and policy making processes e-democracy. By doing this, DMS would represent a type of an e-democracy tool in the tourism field whose exploitation can lead to the following benefits (Sigala & Marinidis, 2010): better quality of decision-making processes and outcomes for all stakeholders-citizens involved; transparency and openness; better informed-community; balance of all stakeholders interests and enhanced quality of life increased accountability and less corruption. Overall, the e-democracy role of DMS should support a community based approach for destination development and management, which is based on building tourism community capacity (i.e. knowledge and awareness) and fostering community participation.

Similar to e-democracy projects, a community based approach to collaborative tourism development requires the existence of stakeholders’ social capital. Hence, the e-democracy functionalities that a DMS should provide would need to support stakeholders’ participation in collaborative decision-making at the following levels (but by starting with functionalities aiming o build the stakeholders’ social capacity): 1) e-information referring to a one-way channel that informs stakeholders about a variety of resources available and the current situation/problems; 2) e-consultation which is a limited two-way channel aiming to gather feedback from stakeholders, but without DMOs being obliged to use and incorporate this feedback into their decision-making processes; and 3) active e-participation which is a more enhanced two-way channel where stakeholders have more power over policy formulation and decision-making processes. Other authors have identified the following dimensions of e-democracy representing these different levels of stakeholders’ participation (Sigala & Marinidis, 2010): e-information (information acquisition & formation of an opinion), e-participation (direct
<table>
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<th>decision making process</th>
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<td><strong>Information provision</strong></td>
<td>To represent, structure, collect, disseminate, share and manage the required information</td>
<td>RSS for stakeholders’ alerts and information provision; electronic publication and analysis of policies; Q&amp;A blogs informing stakeholders of policy makers’ policies, aims and development plans; use of tags (folksonomies) for categorising and searching policies and information (e.g. statistical data of tourism demand); representation of a destination on a virtual world (Secondlife) for informing stakeholders on public issues and problems, e.g. traffic and pollution problems, training stakeholders by simulating piloting crisis management plans.</td>
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<td><strong>Building of community capacity</strong></td>
<td>To support stakeholders coming together to form communities of interests, to progress shared agendas and to shape and empower such communities</td>
<td>Development of digital communities on social networking websites for creating stakeholders’ cohesion and community building. For example <a href="http://www.moveon.org">www.moveon.org</a> was one of the first online activist groups, founded in 1998, which introduced the concept of e-politics. Similarly, DMS can support the development of online “political” communities and/or a “stakeholder forum” within a destination context.</td>
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<td><strong>Problem – setting &amp; Formulation, evaluation and selection of solution</strong></td>
<td>To collect stakeholders’ feedback, opinion and information in order to identify and prioritise problems and issues</td>
<td>e-Consultation: forums, blogs, wikis that allow stakeholders to contribute their opinion, either privately or publicly, on specific issues, e.g. use a wiki whereby stakeholders can share their expertise and collaborate on the formulation of a legislation, policy or destination marketing budget formulation and allocation. e-Campaigning: stakeholders using web 2.0 tools (e.g. blogs, groups in social networks) for lobbying, petitioning and other forms of collective action. For example, ecologists starting up a group on Facebook running a petition to protect a region from tourism development. e-Deliberation or e-discussions: chat, forums, virtual worlds that support virtual, small and large-group discussions, allowing reflection and consideration of issues. For example, using Secondlife for conducting an open dialogue with several stakeholders. e-Mediation: web-based discussions aiming to resolve disputes or conflicts. e-Spatial planning, using geocollaborative portals for urban planning and environmental tourism impact assessment. e-Voting: for elections, referenda or local plebiscites (stakeholders’ opinion is policy binding). For example <a href="http://www.teledemocracy.org">www.teledemocracy.org</a> is an innovative e-democracy system that strengthens public understanding and participation in democratic decision-making process. Also, <a href="http://www.e-konsultation.de">www.e-konsultation.de</a> is an official portal initiated by the German Government to foster the participation and the dialogue between citizen and their government. Similarly, an alike concept of a “collaborative destination platform” would potentially serve all the above utilities among the stakeholders.</td>
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<td><strong>Implementation &amp; Evaluation and Monitoring</strong></td>
<td>To provide stakeholders the tools to enforce and push the appropriate implementation of policies and collaborative actions by creating transparency and awareness of policy implementation or non implementation. To monitor and evaluate the results of policies and collaborative actions.</td>
<td>Use of web 2.0 tools (e.g. blogs, forums, social networks etc.) so that stakeholders: pressure governments and DMOs to implement policies accurately; e.g. stakeholders showing on a publicly available map regions whereby DMOs need to take action, e.g. clean a beach; support each other in issues related to government policies; e.g. tourism entrepreneurs providing information to others on how to submit a bid for a development grant, an application for getting an operation license etc; report offenders to government; submit online offenders; expose offenders of political regulation; e.g. publish material and evidence on websites showing which firms and how they do not obey to certain policies.</td>
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Source: Sigala & Marinidis (2010)
or indirect participation in decision making processes) and e-voting (empower to final decision outcome). Table 1 provides some examples of e-democracy functionality that DMS can develop for fostering a community based approach to destination management and development.

### DMS functionality for marketing tourism destinations

Several studies have focused on examining and identifying the critical factors enhancing the marketing effectiveness of DMS. For example, Kaplanidou & Vogt (2006) identify navigation, content and accessibility as major determinants of a DMO’s perceived usefulness. In their qualitative meta-analysis about success factors for destination websites, Park & Gretzel (2007) screened more than 150 papers published between January 1997 and September 2006. After having identified more than 700 different concepts, they presented a unified framework defining the following nine commonly used success factors: 1. information quality; 2. ease-of-use; 3. responsiveness; 4. security/privacy; 5. visual appearance; 6. trust; 7. interactivity; 8. personalization; and 9. fulfilment. Interestingly, information quality tops the list of tourism publications as the most important criterion followed by ease of use and security/privacy. The fulfilment factor representing order processing, billing accuracy, online booking process and confirmation can be most often found outside the tourism literature; however information quality has the second rank in close distance. Easy-of-use relates to website navigation characteristics such as the website’s set-up and structure, the use of search engines for enabling information search and personalised filtering, loading time, browser compatibility and hyperlinks. In general, it can be argued that these success factors of destination websites can be grouped into four major categories: technical issues; website attractiveness; consumer perspective; and marketing effectiveness. As factors relating to the first two categories are valid and similar to any type of website, the following section analyses best practices and approaches for developing DMS that meet the critical success factors related to the customer and marketing perspectives.

First of all, a customer-oriented destination website should support travellers during all their phases of experiencing the destination (before, during and after they have visited the destination). Thus, a destination website should provide information and services in order to make travellers aware of
the experiences and resources that they can experience at the destination, and then create them the desire and the aspiration to travel to the destination and lively experience these places and resources. The website would also need to provide the appropriate tools and functionalities enabling travellers to evaluate alternative tourism experiences and services and select the ones that are more appropriate to meet their individual needs and wants (e.g. the provision of recommender systems, price comparison tools, meta-search engines for information searching etc.). Effective website should also enable travellers to not only find information but also finalise the purchase and booking of their travel choices. While at the destination, DMS should enable travellers to make changes to their travel itineraries and choices on the last minute while also augment their on-site experiences (e.g. provision of mobile tourists guides, social networking with local community and other travellers etc.). Finally, when travellers are back at home, the DMS also needs to provide some functionality and services enabling tourists to reflect, memorise and share with others their experiences (e.g. electronic collection and publication of customer feedback and user-generated content in the form of videos, photographs etc). This electronic word-of-mouth that DMS can support can play a major role in supporting the decision-making of other travellers (as it is regarded as more authentic and reliable), in increasing travellers’ loyalty with the destination, in developing good customer relationships and networking as well as in collecting travellers’ feedback for improving future practices and development policies.

Regarding the marketing functionalities and services of DMS, the following framework aims to consolidate the best practices reported by a wide field of research (e.g. Fesenmaier & Vogt, 1993; Feng, Morrison & Ismail, 2002; Fesenmaier & Vogt, 1993; Wang & Fesenmaier, 2006; Gretzel, Yuan & Fesenmaier, 2000; Ha & Love, 2005; WTO, 1999 and 2001; Wang & Russo, 2007). Specifically, in developing their marketing functionalities, DMS should provide online services and functionalities that expand the following five dimensions:

**Virtual Information Space**

The development of this dimension refers to the creation, maintenance, management and publication of the website’s content defined as the
combination of functional information and motivating visuals that encourage the user to plan and realise a trip to the destination. In other words, multimedia information (including text, photographs, videos, live webcams, 3D pictures, videos etc.) should be provided in order to fulfill both the functional – practical as well as the emotional and social informational needs of travelers, as research (e.g. Sigala & Sakallaridis, 2004) has shown that travellers search for information for several reasons (e.g. plan a trip – itinerary, find a tourism supplier, experience and evaluate a destination before purchasing, entertainment and having fun with friends etc.), while the significance that different travelers give to these dimensions of information may differ depending on their profile, context and culture. Overall, best practices referring to the development and provision of excellent website content include the following:

1. provision of quality, interactive, multimedia and edutainment information:
   a. tourism information should be provided for all 4As of the destination, i.e. Amenities, Accommodation, Attractions, Accessibility, A real Time Representation (e.g. weather conditions, latest news, current events etc.)
   b. the breath and richness of information: e.g. the type of sand in different beaches (portal of Portugal), the type of spa treatments catering for special skin types offered by different spa centres
   c. provision of specialised content such as gay & lesbian tourism, family tours, wedding tourism etc, that can be developed in thematic mini-portals
   d. multilingual information and information in different formats, e.g. in pdf, downloadable to mobile devices etc
   e. continuous update of information, e.g. a section relating to what’s new
   f. multimedia information for interpreting tourism resources in a edutainment way
   g. provision of suggested itineraries based on different criteria, e.g. type of experience, number and type of people traveling, number of available days etc.
   h. provision of user-generated content and development of social networks (see section below regarding web 2.0 exploitation)
2. multiple and interactive ways for searching and filtering information:
   a. possibility to search and find information on the top of a map (e.g. www.visitmarocco.com), e.g. (see Sigala & Marinidis, 2009 for the different applications and benefits of web map services in tourism)
   b. website accessibility and navigation for people with disabilities
   c. provision of several search engines for finding information (e.g. based on location, type of experiences, specific supplier, etc.)
   d. use of tags and social search (see section on web 2.0)
3. provision of personalised information and recommendations:
   a. personalised services such as: RSS updates, blogs, newsletters, e-mail campaigns
   b. Itinerary and trip planning tool (e.g. http://www.visitbrighton.com) whereby travellers can design their travel experience by finding and plotting on the map places and suppliers they wish to visit at the destination
   c. recommender systems suggesting travel experiences matching the travelers’ profile
4. content and/or mini-portals development for specific travel segments such as:
   a. individual travellers
   b. business travellers
   c. tourism suppliers
   d. convention & meeting planners
   e. expatriates & local residents
   f. journalists and media (e.g. press releases and press kits)

**Virtual Communication Space**

The effective development of this dimension should first identify the stakeholders of the communication and then the types – media used for communication:

1. stakeholders in communication:
   - DMO-2-traveller communication: this should use several media (e.g. call me back options, e-mail, blogs, newsletters, chat, forums etc.)
in order to provide customers information and services wherever they are and at whatever device they use (e.g. mobile, iPhone, PC etc.)

- communication of the website to search engines and portals for improving Search Engine Optimisation and Search Engine Marketing
- buying and using a URL with a .travel domain name, e.g. www.visitegypt.travel
- communication amongst travellers and local community: functions such as “ask the locals”, social networks amongst travellers, wiki applications whereby everyone can upload his/her own content and start a communication with others (e.g. www.visitlondon.com social networks, www.visitjordan.com a wiki application whereby any local stakeholder can update with cultural events, www.visitbrigthon.com find and liaise with a local – buddy for exploring the destination with him/her)

2. see comments about the Virtual Distribution Space for potential media that need to be used for communication

Virtual Transaction Space

The majority of destination websites tend to have only an information role as providing a tool to accomplish also bookings and transactions entails several political costs for those DMOs that decide to also enable online transactions. The major argument against the provision of online transactions tools at a DMS portal relates to the fact that such a practice is considered as an unfair competition and practice by other travel professionals offering similar services (e.g. travel agents, tour operators etc.). If a DMS enables travellers not only to find travel information but also to complete transactions, then the DMS would act as a travel intermediary by using public funds (i.e. in the case of publicly owned DMS) generated by grants and citizens’ taxes, which is unfair for those travel agents that try to support and sustain their business model with private funds. To address this issue many publicly owned DMS have decided to act as meta-intermediaries, i.e. by providing travellers all the information and contact details through which they can complete their transactions. In some other destinations DMS portals are developed through a Public Private Partnership
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agreement in order to avoid such problems related to political costs and benefit from the positive aspects of each sector (e.g. efficiency and effectiveness of private firms and the interest to public benefit and quality of life that public organisations place as priority when dealing with destination management issues) However, there are also several cases (e.g. www.visitlancashire.com, www.visitbrighthon.com, and many other destination portal mainly from the Anglo-Saxon economies whereby the public intervention in economic life is more evident) whereby destination portals have established a commercial relationship with an existing cyberintermediary (e.g. www.boomings.com, www.expedia.com) in order to use the latter’s booking engine on their portal and enable online transactions instead of developing their own booking engine. In general, if the provision of a booking – purchasing tool is desirable to be provided on a destination portal by all or the major destination stakeholders, then the major functionality that such a booking engine should feature include:

1. Secure sock layers and technology to assure secure online transactions
2. privacy policy and technology to guarantee the appropriate collection, storage and analysis of personal data
3. multiple payment options, e.g. many credit cards, paypal, money transfer, debit cards etc.
4. booking engine with multiple search engines through which the traveller can find, filter and compare alternative products and suppliers very easy
5. personalisation – recommender systems for enabling upgrades, cross-sales and up-sales of complementary and/or substitute products in case of lack of availability
6. dynamic packaging tool based on which travelers would be able to synthesise travel products and assembly personalised travel packages that can buy in a single and usually better price than the accumulation of the price of every individual travel component. This functionality is critically important in cases destinations promote thematic itineraries and tour, so that travelers can diffuse their expenditure and visitation in more places and suppliers
7. online advertising (e.g. banner options) opportunities for tourism suppliers
8. a special section with last minute deals and online promotions
Virtual Distribution Space

Travelers are characterized by an increased mobility which in turns require DMS to distribute and make their information and services available at different devices and media, so that travelers can get help whenever, wherever and at whatever device they may have access to at specific times and contexts. To that end, DMS should follow a multiple distribution strategy that can include the following distribution media:

- Internet
- mobile devices such as iPhone
- navigation tools and devices (e.g. in rented cars etc.)
- digital TV
- information kiosks
- Blue raids and DVDs
- printed material
- call centres
- information centres and offices
- creating and developing profiles in social media and social channels, e.g. a youtube.com channel, a profile on facebook.com, an account on delicious.com etc.

Virtual Relationship Space

(e)-CRM aims to identify and build a long term relationship with profitable customers in order to maximise the benefits that the firm derives from customers during their whole customer lifecycle and interactions with the firm. The operation of a loyalty scheme and programme (for identifying customer based on their customer worth and rewarding them based on their value to the firm) is always one of the major components of an (e)-CRM strategy. (e)-CRM also requires firms to interact with customers in a personalised way by providing them with customised solutions and offers as well as to develop and build social networks of customers fostering the C2C and B2C communication and interaction. The C2C and B2C interaction can nowadays be supported by several web 2.0 tools (Sigala, 2009b). Overall, the major functionality and services to be provided for developing an (e)-CRM strategy may include: e-mail newsletters; special offers/best buys for club members; direct e-mail
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campaigns; free news updates; personalization/customization services; privacy policy; incentive programs; cross-selling/upselling opportunities; secure transactions; customer loyalty programs; social community functions.

The impact of (e)-Customer Relationship Management (e-CRM) on the competitiveness and performance of individual tourism firms is highly argued in the literature (Sigala, 2006). Practice and industry examples have also shown that the (e)-CRM can also be developed and provide significant benefits for the whole destination (at a macro-economic level) and for all tourism suppliers involved in this relationship building programme. For example, Engadin destination in Switzerland (http://www.engadin.stmoritz.ch/en/) operates a destination loyalty card (http://www.engadincard.ch/) providing to its cardholders access to special prices and offers, possibility to personalise travel itineraries and tourism products-services etc. travellers also gather points whenever they purchase and make bookings at different firms at the destination, which they can later exchange for free travel services – products at the destination as well. The major impacts of this CRM programme are: increased loyalty of travellers to the whole destination; large percentage of repeat visitors to the destination as they need to come back for exchanging points and getting the special prices; increased travelers’ spending at more tourism firms; destination publicity and promotion. Such destination cards are adopted in many other ski resort destinations aiming to increase tourists’ loyalty and repeat visits to the destination but also to reward repeat travellers according to their spending. Developing a CRM programme at a destination level is also appropriate when: DMOs wish to diffuse tourism spending in several firms; tourism firms are too small and they lack technological, managerial and human resources to develop and operate such a CM programme; CRM programmes developed by individual firms face difficulties in getting customer loyalty because it takes too long for a customer to accumulate the required points for free services when the traveller collects points only though one firm. On the contrary, destination loyalty cards can involve many enterprises (e.g. hotels, restaurants, bars, ski lifts, souvenir shops etc). meaning that travelers can easier and quicker collect points and increase their customer worth value for obtaining free services and special prices. As a result, customer loyalty and commitment to destination loyal card can be greater and easier to achieve than loyalty cards developed by individual firms. Destination loyalty cards can also be aligned and co-ordinated with themed routes and experiences.
at destinations in order to increase tourists’ loyalty and bonds with the CRM programme and so, tourists’ expenditure at the destination, e.g. wine tourism loyalty cards whereby the tourist would have a greater benefit to participate for having access to wine clubs, wine news, wine purchases, visits to places etc.

Conclusions and future developments

This paper aimed at first analysing the aims and roles of a DMS and then presenting the major functionalities and best practices adopted by international DMS for achieving these aims. Based on this analysis, it can be concluded that DMS represent a technology platform (a mixture of software and hardware) that comprises three basic elements that are dynamically and closely interrelated and interdependent:

– content (creation, aggregation and distribution-promotion): destination content and User Generated Content
– processes (transactions, CRM, customer service, dynamic packaging, etc.): internal DMOs processes such as provision of tourists’ information as well as inter-firm processes such as collaborative destination decision making and management, dynamic packaging and destination loyalty cards
– community (users, stakeholders and their interrelationships): web 2.0 tools have enabled the active involvement and engagement of tourists and local communities in DMOs traditionally “internal” processes such as marketing, new product development, decision-making and policy development. Tourists become co-marketers and co-developers of travel experiences, while stakeholders can propose and monitor the implementation of destination tourism policies.

Figure 1 illustrates the design of DMS as a platform enabling and supporting the interactions of several tourism stakeholders through different media and distribution channels. At the centre of any DMS should be the customer-oriented content databases that can support the effective functioning and provisioning of several processes (e.g. CM, content publishing etc).
In this vein, the development and management of DMS requires an inter-organisational and multi-stakeholder approach as well as socio-technical perspective. Any factor or issue affecting any of these components of DMS (e.g. new technologies, new collaborative processes and/or changes in destination stakeholders’ profile and needs) can have tremendous implications on the challenges and future developments of DMS.

**Figure 1.** DMS design and components

References


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