

# Getting The Benefits Of ICTs In Tourism Destinations: Models, Strategies and Tools

Claudio Petti

E-Business Management Section/Scuola Superiore  
Isufi,  
University Of Salento,  
C/O Incubatore Mediterraneo, Via Per Monteroni Sn  
73100 Lecce (Italy)  
[Claudio.Petti@Ebms.Unile.It](mailto:Claudio.Petti@Ebms.Unile.It)

Giuseppina Passiante

Department Of Innovation Engineering,  
Faculty Of Engineering,  
University Of Salento,  
C/O Campus Ecotekne, Via Per Monteroni Sn  
73100 Lecce (Italy)  
[Giuseppina.Passiante@Unile.It](mailto:Giuseppina.Passiante@Unile.It)

**Abstract** *Tourism is a relevant opportunity for economic development and social well being. Information and Communication Technologies (ICTs) are important tools for seizing tourism developmental opportunities arising from integrating and strengthening the local tourism value chain. Nevertheless, 'productivity paradoxes' showed that technologies (IT first and the Internet now) cannot produce any significant benefit unless accompanied by complementary organizational changes. Who's in charge of managing tourism destinations is thus facing a double challenge: the redefinition of traditional destination management activities to suit ICTs and the diffusion of such tools in a fragmented, SMEs-driven sector.*

*In this aim, the present paper presents an ICT-enabled model and the related diffusion strategy as it is applied in different experiences in Italy, Morocco and Jordan. Then a detailed description of how in practice this strategy is implemented and its main components is provided. The results of five-years long research and practical experiences as well as field experimentations as related to the application of the strategy will be used to conclude with a number of insights as related to ICTs diffusion in tourism destinations. In particular different clues as related to the diffusion of innovative destination management models and the role of technology in doing so will be discussed.*

**Keywords:** *Destination Management, ICT Diffusion Strategy, Sensitization and Competence Building.*

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## 1. Introduction

The use of ICTs is a relevant opportunity for growing and strengthening a local tourism industry, and for the development of destinations economies overall. Specifically ICTs have the potential to increase destination incomes for financing economic and social development in [10], [11]:

- developing and reinforcing local tourism and tourism-related entrepreneurship and activities;
- developing genuine tourism offerings that rely on local productions and traditions (for ex. food, furniture, handicrafts and constructions);
- enabling direct promotion and commercialization of local tourism offerings in international markets reducing dependence on big foreign intermediaries.

Basically ICTs allow destinations to improve online presence (i.e. visibility and participation to Internet market) and offline connectivity (i.e. collaboration, clustering as well as intersectoral linkages among local public and private tourism and

tourism-related actors) required to compete in nowadays global tourism market.

More specifically the beneficial effects of ICTs are to be found in the opportunity to reduce the traditional disadvantages of small operators. First ICTs provide direct, cheap and effective access to (actual and potential) customers. At the same time ICTs make profitable to use multiple distribution channels and target niche markets [1], [2], [12]. before almost impossible for SMEs to reach, serve and even to identify.

But for this to happen we already know from experience that a mere improvement of ICT infrastructures is not enough. Even an appropriate endowment of *e-skills*, as advocated by international organizations is by now a necessary but not sufficient condition. As for every new technology, the introduction ICTs cannot produce the promised benefits if it is not accompanied by complementary changes in organizational settings and structures to fit them with its distinctive characteristics [5]. In the context of this work this means that to reap the full

developmental benefits of ICTs, destination's management activities must be redefined and new ICT-enabled organizational models developed. Nevertheless change is never easy, and in a fragmented, SMEs-driven business such as tourism, it might be even more challenging. So here's the double challenge on which this work is focused: how traditional destination management structures can be redefined to leverage ICTs and how such tools, as well as the resulting new models and practices can be diffused within tourism destinations.

In this aim, after a brief background on the potential benefits of ICTs for destination management, this paper is structured in two main parts. The first part discusses the new role of the organizations in charge of the management of destinations - referred as Destination Management Organizations (DMOs) - and presents the main characteristics of an ICT-enabled model for the management of destinations referred as "*virtual incoming agency*". Then a brief overview of the main barriers and relevant international policy orientations related to the diffusion of ICTs will follow to introduce the second part of this paper. In this part a three-phased diffusion strategy - integrating *e-skills* creation, ICT development and local networking and cooperation projects - will be described as it is implemented in different experiences currently undertaken in Italy, Morocco and Jordan. In particular, emphasis will be given to how this strategy is usually initiated, providing a detailed description of sensitization tools and initiatives used to trigger ICTs adoption in local institutions and firms. In particular, a detailed description of the e-business case methodology crafted for spreading ICT awareness and the educational approach practiced to create the necessary competences to sustain the adoption and usage of such technologies will be offered. ICT awareness and competences can be considered, as a matter of fact, the firsts basic requirements for the implementation of more complex and beneficial ICT-enabled models such as the "*virtual incoming agency*". So that is why the paper is focused on such issue.

The contribution of this paper is both theoretical and practical. Theoretical as it identifies a possible evolution in the management of destinations triggered by ICTs and an innovative organizational model for such scenario. Practical as it offers insights in how to implement this model, not just a set of guidelines, but the provisioning of a proven step-by-step strategy and related tools emerged as the result of ongoing field experimentations. Also a different perspective in the usage of technologies, not simply as a tool, but as a context for learning and the base of innovative learning approaches for the creation of new tourism professionals is advocated and explained.

## 2. Background

ICTs are changing significantly the ways in which traditional destination management activities (i.e., Planning, Development, Marketing, Promotion, Delivery, Management, Coordination and Monitoring of destination's offering) are being carried out.

For example in the past, few DMOs were equipped and/or confident enough to undertake market research. That was rather a domain of costly consultancies. Now with e-mail or web-based questionnaires is easy and cheap to undertake customer analysis. With web sites is possible measure the effectiveness of an advertising campaign as well as to analyze in detail behaviours of tourists. The same can be said for planning and development as well as for almost all the other destination management activities.

So ICTs can produce a number of benefits for destination management activities in terms of:

- reducing costs, for instance lowering the need to print and distribute promotional material, with savings that can reach the 90% just for brochures;
- reducing times needed for undertaking activities, for instance the collection and analysis of tourism data, while at the same time increasing their effectiveness (e.g. augmenting periodicity without additional costs);
- increasing quality, for instance with the introduction of authorization processes enabling distributed editing of tourism contents, ensuring up-to-dating as well as precision and truthfulness of information provided;
- increasing effectiveness, for instance through the delivery of targeted promotional campaigns for specific high-value segments or even individuals (using CRM applications) or using web-based learning systems for vocational training, ensuring a wider diffusion of knowledge and competences.

Furthermore, ICTs add new sources of revenues to fund the activities of DMOs such as real profits coming from booking commissions (where it is allowed by the laws or the governance structure adopted), the selling of services (e.g. training, production of ad hoc studies and statistics, design and development of websites, consultancy and assistance for e-marketing activities) and even royalties and licences on applications and technologies developed (see Tiscover for instance).

In synthesis, the discussed benefits highlight as ICTs can provide local tourism public and private actors in charge or involved in destination management with the tools, the applications and ultimately with the opportunity to undertake these activities in more cost-effective, autonomous, and in perspective more qualified manner. Qualified means that ICT-driven

development is beneficial for tourism not only in raising employment (as a consequence of boosting local entrepreneurship and growth), but especially in creating the opportunities for more high-skilled jobs. This will bring about more MBAs, Engineers and Web Developers in addition to *conciierge* and housekeepers, increasing the capability of the sector to attract and retain qualified workers. ICTs can thus act as fundamental drivers for tourism-driven development in developing as well as in developed countries.

To seize these benefits, there is the need for an extension of the role of DMOs beyond the traditional promotion of the destination, the collection and diffusion of statistics and the organization of tourism activities within the destination. In this perspective DMOs become the key actors in the promotion and diffusion of ICT culture and awareness and in the creation of the necessary organizational capabilities and infrastructures to embed ICTs in the local tourism industry setting. Organizations dedicated and capable of involving tourism and tourism-related operators, transforming them in *stakeholders*: active partners in projects for building an integrated system in which each actor can benefit and contribute to tourism development. At the limit, when the local tourism industry will be strong enough, DMOs can undertake another transformation, from pivotal actors to just one of the multitude of actors involved in destination's management, devoted to:

- orchestrate and coordinate activities designed and realized autonomously from tourism operators,
- promote and ensure the linkages with the other local productive sectors, and
- manage the technological services and the necessary equipments.

This foreseen repositioning requires an enhancement of resources and capabilities as well as of the prerogatives of DMOs. Mainly the development of managerial and technological competences, the capabilities to elaborate and manage complex processes and to scout for the necessary funding, both in the public sector and in the market. From this last consideration it is clear as the (prevalent) public nature of such a kind of organizations should change to accommodate private actors and logics. So a transition from public entities to public-private partnerships. Of course augmenting financial endowments of such organizations is an essential pre-condition, but privileging just such a kind of interventions could be like "fish for them instead to learn them to fish". It is thus necessary to broaden the scope and the possibilities of interventions of these entities, and perhaps also their autonomy in procuring the (financial) means they need, as it is already happening in different Countries (such as in Canada). Anyway the

one proposed it is clearly a distant far-ranging scenario and so the question is, what can be done in the mean time? It is opinion of the authors that to answer this question the contribution of universities and specialized research centres (i.e. excellence/competence centres) especially as related to *know-how*, infrastructure and competences development should not be underestimated. The one in here is thus a widened conception of public-private collaboration made up of institutions, enterprises, non-profit associations as well as academic institutions, with their 'portfolio' of research activities, projects, laboratories, and mainly, their human capital.

### 3. The Virtual Incoming Agency model

Developed as a results of a number of research projects undertaken in Italy as well as in Mediterranean Countries over the last five years, the *virtual incoming agency* (or VIA) is conceived as an evolution of the concept of DMO. Specifically, according to the considerations above the *virtual incoming agency* is conceptualized as the organization in charge of the promotion and coordination of an integrated tourism system within a tourism destination - including the creation of the necessary cultural, organization and technological conditions to ensure its effective implementation - that relies on ICTs to undertake its functions. It is a technological and organizational (ICT-enabled and ICT-native) model for the management of tourism destinations. Can thus be considered *virtual incoming agencies* all the public or public-private destination management organizations, that:

- have as mission the integrated promotion, valorization and development of a destinations' tourism industry;
- make use of integrated ICT systems (i.e. Destination Management Systems or DMSs) for the management and coordination of their activities;
- aims at attracting visitors and tourists and to develop destination's economy and social well-being.

In which that follows the VIA model is described in detail in terms of its objectives, actors, functions and services offered.

The objectives of a *virtual incoming agency* are:

- to optimize the benefits of tourism for the local economy (incomes, employment, investments);
- to organize the local tourism supply to attract visitors and meet their expectations while maximizing their spending and its distribution;
- to support tourism operators in increasing the quality of their offerings and their profitability.

Accordingly the integrated ICTs Systems are being used to support *virtual incoming agency* in the achievement of those objectives and in particular:

- to promote and commercialise destination offering on a global scale;
- to ensure support to potential visitors/tourists in providing the necessary information and services to plan and enjoy their vacations;
- to help and assist the local tourism industry (SMEs as well as public authorities) in the acquisition and enhancement of their competitiveness in international markets.

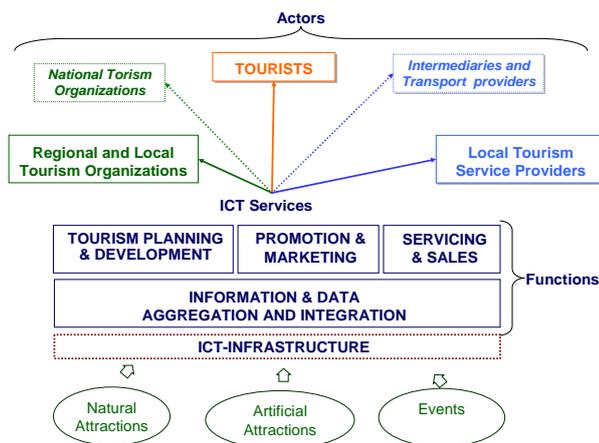


Figure 1. The virtual incoming agency model

As it can be seen from figure 1 there are three main categories of actors involved in the *virtual incoming agency*:

1. Tourists, including same-day visitors, but also residents interested in organizing their free time in the surroundings.
2. Enterprises, mainly all the local providers of tourism and tourism-related services, such as hoteliers, restaurant owners, entertainment service providers, travel agencies, local transports and other complementary services providers within the destination. Also intermediaries and transport providers (such as airlines, rent-a-car or cruises) that are usually outside the destination region can be targeted by some of the *virtual incoming agency* services, for example the creation of personalized packages to be sold to their customers or the provisioning of local reliable tourism information for their catalogues and brochures.
3. Institutions, in particular local and regional tourism authorities. For their functions in the coordination and promotion of local tourism offerings these actors are the main beneficiaries of *virtual incoming agency* services. Institutions include also other local and regional authorities concerned with tourism activities (for example regional investment boards or

infrastructures/environment authorities) and even national ones (for the production of statistics useful for their planning and monitoring functions).

The functions of the *virtual incoming agencies*, are summarized in the table below.

Table 1. Functions of the Virtual Incoming Agency

Functions	Activities
<i>Aggregation &amp; integration of information/data</i>	<ul style="list-style-type: none"> <li>-research, acquisition, organization and management of information on tourism attractions and services;</li> <li>-collection of statistical data on tourism demand and supply;</li> <li>-management of access and accounts of tourism (-related) service providers;</li> <li>-realisation of electronic catalogues.</li> </ul>
<i>Tourism planning &amp; development</i>	<ul style="list-style-type: none"> <li>-market research and intelligence, which include the analysis of demand, supply and tourism market trends, as well as the impacts of tourism activities on the destinations and the monitoring of the tourism system as a whole;</li> <li>-tourism marketing planning, which include the formulation, implementation and control of integrated marketing plans for the destination;</li> <li>-support to local tourism businesses, which include the accompaniment in finding and servicing target markets, the improvement of the quality of the offerings as well as processes employed through benchmarking, consulting and training services.</li> </ul>
<i>Promotion &amp; marketing</i>	<ul style="list-style-type: none"> <li>-coordination of the activities aimed at the creation and management of destination notoriety and image;</li> <li>-management of branding and marketing mix;</li> <li>-creation of packages, co-marketing programs;</li> <li>-in general, all the activities directed to attract tourism flows (new and/or repeated) within the destinations such advertising, participation to exhibitions, organization of educational tours and so on.</li> </ul>
<i>Servicing &amp; sales</i>	<ul style="list-style-type: none"> <li>-delivery of services in order to allow tourist to plan, book and enjoy their vacation at the destination;</li> <li>-facilitation of selling activities of local tourism service providers (for example in providing and managing an e-booking engine),</li> <li>-management of relationship with customers (or the support to local firms in doing so effectively).</li> </ul>

The ICT services of the *virtual incoming agency*, indicated by the arrows in figure 1, can be organized in three main categories according to the three main types of users identified:

1. Services to tourist, services mainly related to the servicing and sales functions, but also to the promotion and marketing ones, which concern:
  - search services (navigation and research of information on destination's attractions and services by area, theme/interest or categories, with the possibility to store, organize, access, modify and reuse of information collected);
  - interactive services (services through which tourists can interact with VIA employees, local tourism enterprises and institutions, as well as with other tourists, but also with residents, in asynchronous and synchronous manner);
  - transactional services, through which tourists can book and pay for tourism services directly on the Internet;
  
2. Services to firms (mainly primary suppliers, and secondarily – the dotted arrow - intermediaries and carriers) related mainly to promotion and marketing function and also to servicing and sales ones, which concern:
  - publication services (publication and management of their offerings on the Internet);
  - e-marketing services (management of the promotion and pricing of products and services offerings, but also the management of relationships with suppliers and customers, according to the level of e-readiness and the managerial capabilities of the enterprise);
  - e-booking and e-payment services (allows tourism firms to offer the possibility to book and eventually pay on the Internet);
  - collaboration services (exchange of documents, invoices and information as well as basic project management functionalities);
  - management services (accounting, employees payroll, performance, business intelligence etc..).
  
3. Services to institutions (mainly local and regional tourism authorities, and eventually national or higher level tourism organizations – the dotted arrow in figure 1) related mainly to tourism planning and development and the integration and aggregation of information and data. In particular aimed at integrating, managing and monitoring destinations' tourism offering. Includes all services offered to institutions and firms for the tourism marketing planning, dashboards, the management of tourists' and suppliers' accounts, the functioning and the management of the ICT platforms and the destination's web site, as well as the communication of data to linked or higher level institutions.

As related to the ICT platform architecture and components, this has been designed and realized in a

modular manner, in a way to be built and enriched progressively according to the needs and capabilities of current and potential users. The idea beneath the platform is to create an open and scalable system, with a low threshold in terms of costs and complexity, which allow access to actors at different levels of ICT sophistication (from just a dial-up Internet connection to the availability of its own ICT system) and technological capabilities. The platform is built to support the increasing in time, number and typologies of operators, users and services. Heterogeneous data formats are allowed, as well as multi-channel presentation of contents and services and a multi-lingual interface. In particular the platform has been realized according to the following guidelines:

- Component-based approach;
- Service-oriented architecture (SOA);
- Openness, interoperability, scalability
- Semantic web services usages;
- Reuse of existing and open source components;
- User-centric web-based platform;
- Multi-lingual support (enabled for Arabic);
- Deliverable in application service provisioning;
- Accessibility to disabled people.

The platform has as objective to support the aggregation of tourism information, attractions and services providers in one single logical point of access. An actor (a public authority, a consortia of public and private tourism operators or a public-private company) should have the responsibility to operate as a value-adding intermediary between local tourism services providers and potential customers, providing the facilities to distribute and sell offerings to the customers, just like a shopping mall. In particular, as related to the management model to operate the VIA, in its most basic form, there is the need of:

- a local public tourism authority (a DMO) that acts as facilitator of information collection, exchange and transactions by supplying directly or indirectly (through an application service provider) the technological infrastructure, selecting products and services, targeting the different customer segments, fixing prices and fulfilment;
- local tourism enterprises that provide or upload data and descriptions related to products/services offered and take care of bookings and their settlement (especially for accommodation providers);
- an application service provider (ASP) or a web agency that eventually take care of the realization, provisioning, operations, and maintenance and upgrading of the software of the platform;
- where payment is allowed a bank or a trusted payment solution provider (e.g. PayPal) can be involved to support transactions & security systems.

The following table presents some of the main benefits for the different categories of actors to be involved in the VIA.

Table 2. Benefits of the Virtual Incoming Agency

Tourists/ Residents	<i>A.A.A. and personalized info &amp; services. Planning in mobility and improved interactions with suppliers, other tourists, and residents.</i>
Primary suppliers	<i>Better quality and reliability of offerings Improvement of market segmentation, reach and offering as well as promotion and commercialisation capabilities.</i>
Public Institutions	<i>Improvement of planning and monitoring capabilities as related to the quality of services supplied, tourism impacts and customer satisfaction. Improvement of integration and marketability of destination's offering.</i>
Intermediaries Transports	<i>Better knowledge of destinations and reliability/quality of information Reduced costs and better quality in the services/packages offered.</i>

#### 4. Implementing Virtual Incoming Agencies: strategy for the diffusion of Icts in Tourism destinations

Table 1 highlights a number of benefits of using ICT-enabled models for the management of destinations, such as the one described in here. Nevertheless, despite these benefits and more than a decade of good records as related to the usage of ICTs in tourism, the diffusion of ICT tools and practices in institutions, enterprises and destinations as a whole is far to be automatic, and the results of this process are not certain. The main motivations and barriers can be summarized in the following [3], [4], [6], [9].

- some factors related the peculiar characteristics of the sector, in particular the high intensity of Small and Micro enterprises, but also the nature of tourism business, strongly based on volumes and commissions and thus particularly antagonistic;
- the low awareness of the benefits and usefulness of ICTs especially in decision-makers (SMEs managers as well as civil servants), which most of the times is underneath the limited attitude to invest the necessary time and money, but also the low level of utilisation of such tools from the ones who are endowed;
- a significant perception, in tourism operators, of being unprepared to the organizational changes needed from the introduction of ICTs, and thus the (latent) need to endow with the necessary competences to use productively such tools.

As related to how to overcome these barriers, strategies and policies set up for this purpose can be summarized in three main typologies, more specifically [3], [4], [10]:

- the creation of a favourable environment to innovation, mainly by stimulating the development of ICT solutions and promoting interoperability and the definition of standards (for software, information exchanges and processes as well);
- the promotion of the diffusion of ICTs and e-Business in firms, more in particular the smaller ones, with sensitization initiatives as workshops, and the collection and dissemination of 'good practices', but also with the creation of specialized competences both in managers (through awareness programs both in employees (through targeted training programs or train for trainers initiatives);
- the support and promotion to initiatives aimed at encouraging cooperation and the creation of networks/clusters of firms.

Therefore sensitization, competences development, organizational change and collaboration, are complementary elements for the diffusion of ICTs and related ICT-enabled models in destinations, but also essential factors for the creation of the necessary 'human' and 'social' infrastructure for the integration and competitiveness of local tourism supply. These factors, together with the usage of technologies and context/laboratories for the creation of human and social capital and the recognition of the indissoluble link between digital and organizational innovation, are the pillars of the strategy set up for the diffusion of ICTs and the integration of local tourism offering in an integrated supply system. This strategy, based on the experiences, projects and research being undertaken over the last five years in Mediterranean tourism destinations is in synthesis an integrated strategy, being realized through a series of initiatives focused on:

- the design and development of applications and solutions enabling advanced ICT services for the management of destinations;
- the usage of the same ICT applications and solutions for the development of competences necessary to their productive usage, as well as for the realization of local cooperation projects for their diffusion adoption in firms and institutions, and the integration of the local tourism system.

More in concrete this strategy is based on the usage of ICT solutions' development projects - for instance the development of a Destination Management System - to trigger the creation of competences and the necessary organizational changes to start-up a process aimed at fostering interactions and collaboration dynamics among local actors, with the final aim to create the necessary prerequisites for the

integration of the local tourism system [9]. Starting from these premises, ICTs and especially the projects related to their realization and diffusion, are conceived as the mechanisms necessary to the creation of the cultural (collaboration attitudes and behaviours), organizational (business and ICT management competences) and technological (infrastructures and applications) conditions for the effective implementation of innovative models for the management of destinations [7]. As figure 2 below shows, this strategy is articulated in three main phases [8], each characterized by specific initiatives with defined objectives and roles (for the university, the institutions and firms).

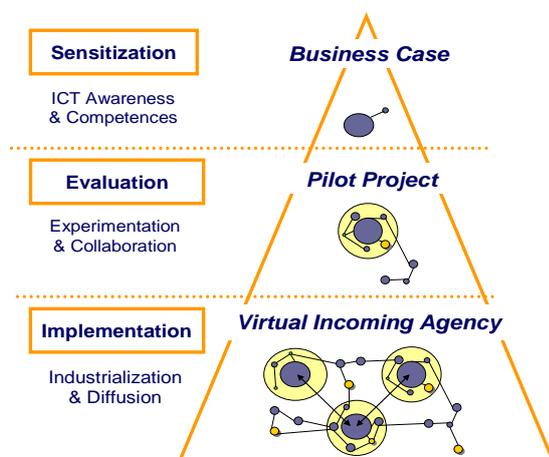


Figure.2. The ICT-enabled strategy

First, a ‘sensitization’ phase, undertaken through the organization of workshops, vocational training and education programmes. The aim of these initiatives is to make local public and private tourism operators aware of the need to cooperate in the development of comprehensive propositions that can attract tourists to the destination and the benefits of ICT solutions in doing so. The objective of this phase is to involve a first nucleus of actors, interested but not necessarily equipped, in the realization of an *e-business cases* that demonstrates the benefits in the usage of ICTs for local tourism institutions, enterprises and the destinations overall. The *e-business case* will then be used for further and more effective sensitization initiatives and in the next phases. The focus is mainly on increasing local ICT and e-Business competences (*e-skills creation*). Second, an ‘evaluation’ phase through the experimentation of ICT applications and solutions identified previously with the aim to have people ‘touch with their hands’ the potential benefits of such technologies; to collect the requirements for the realization and/or the implementation of the technological platform, and to test the business model defined. The objective of this phase is to realize a pilot project for the development and implementation of an ICT platform for the management of the destination

(*ICT development and diffusion*). The pilot project will be the tool for involving all the other relevant stakeholders, on the basis of local experiences and documented results in the launch and realization of a *virtual incoming agency (local networking and cooperation projects)* in the destination. This is the third phase, the ‘implementation’ phase. In this phase research institutions leave the initiative to private enterprises - for the development and the industrialization of the experimented solution - and to local public and private tourism operators, that will use and manage the solution realized for their activities of organizing, promoting and commercializing the destination.

So, as previously highlighted, the development and diffusion of ICT applications and solutions are not the end, but rather the means of an overarching innovation policy, aimed at facilitating the evolution of destinations’ tourism supply systems from fragmented towards integrated configurations. This through a participative process of progressive increase of the technological endowment, the creation and adjustments of necessary ICT-related competences, as well as the strengthening collaboration attitudes and capabilities of tourism destinations [9]

## 5. The Strategy in Action: how to get started

The sensitization phase is the phase in which the necessary conditions for the success of the overall strategy are being built. Is in fact in this phase the foundations for a successful destination-wide diffusion of ICTs and e-Business are laid down, and more in particular:

- a group of local public and private stakeholders interested in adopting and using ICTs and e-Business for their activities is identified;
- a set of ICT applications and solutions of interest and a project for their implementation are defined;
- a pool of competences for helping spreading the introduction, adoption and productive usage of these applications and solutions in local tourism institutions and enterprises is created.

As pointed out, the objectives of this phase are:

1. to spread awareness about the benefits of the ICTs and e-Business in local in tourism institutions and enterprises and, where lacking, the necessary cooperation attitudes;
2. to develop local ICT and e-Business competences that can then help in diffusing, leveraging, updating and renewing these technologies.

These objectives are strictly interrelated and at the same time well distinct, as they entail different tools,

targets and rationales. More specifically, the first objective is pursued with *Sensitization Workshops*, *Executive Programs* and/or *e-Business Cases*. The second objective is pursued with specific *Post-graduate Programs*. As per the targets the first set of 'tools' is geared towards public and private managers and SMEs entrepreneurs. The rationale is to show the relevance of ICTs and e-Business for their activities and stimulate the interest to adopt such tools and engage their institutions/firms in collaborative projects. Post-graduate programs, instead, are geared towards young graduate and professionals with the rationale to have the decisions taken implemented within institutions, enterprises and the destination overall.

Starting from the first objective the sensitization can start with each of the three 'tools' mentioned (or a combination). In our experience this mainly depends on the local conditions and the willingness of key stakeholders to be involved. In some cases, such in Italy, we started directly with the *e-business case*, in other cases, such our programs with Mediterranean Countries, the *e-business case* is preceded by either an executive program or a sensitization workshop. In other cases where ICT awareness and competences can be so low to heighten the barriers mentioned before, all three tools might need to be deployed. This might be the case, for example, of Least Developed Countries. Nevertheless in all three scenarios the *e-business case* is essential as it is the tool that generate the 'tangible' results needed (and often perceived as fundamental by local stakeholders) to go ahead with the strategy.

Usually the functions of a standard business case are:

- to support the related decision to engage in a project in presenting a solution and motivating the necessary investments for its adoption;
- to communicate the project to different stakeholders involved.

In our the specific context, we refer to *e-business case* as a change project aimed at motivating and supporting the introduction of ICT and Web-based solutions in an institution or an enterprise. By ICT and Web-based solutions we mean both the software applications and both the innovative services based on (and often delivered through) the *Internet* (also known as web2.0 applications), as well as the related organizational enablers needed for their productive usage. So the objectives of the *e-business case* are:

1. to identify the most appropriate ICT applications as related to the specific operational context and objectives of the organization/s involved;
2. to evaluate the opportunity and feasibility of the introduction of ICT applications and solutions identified and the related organizational changes.
3. to set up an action plan for the realization of the changes designed.

In this perspective the *e-business case* is thus a tool to provide a solution that will demonstrate to concerned organizations – according to their degree of usage of ICTs and the Web – how the adoption of ICTs and e-Business can enhance their activities and help them planning for their introduction. So it is in this sense that we refer to the *e-business case* as a 'sensitization' tool, i.e. a tool useful to increase the awareness of the benefits of ICTs and e-Business and to encourage their diffusion and productive usage in tourism destinations.

The *e-Business case* methodology used has been realized mainly on the field, starting from a basic framework generated from a review existing general purpose and e-Business specific approaches, then contextualized to tourism and refined as a consequence of the experiences gained as related to the specific needs of the research projects, contexts and organizations in which it has been applied. The results is a four-phased methodology, described below as it has been used in the case of an Italian local DMO.

*Phase 1 – As-is Assessment.* Collection and analysis of information related to the external and internal organizational context, current and future projects, endowment and usage of ICTs/Web-based applications and related perceptions as regards to this (possible) usage. This phase requires:

- a preliminary desk-based analysis of the external context aimed at analyzing trends, characteristics and dynamics occurring in tourism within the area of reference of the target organization in order to identify issues of interests of the local stakeholders and possible scenarios for defining the possible objectives of the *e-business case*
- a field analysis aimed at collecting the information necessary to evaluate the current situation and related opportunities for the introduction of ICT/Web-based applications. This second activity is normally being carried out with one or two meetings with organizational referents aimed at defining iteratively specific project objectives and applications of interest.

*Phase 2 – Transition Strategy.* Identification and description of the most appropriate applications according to the actor's objectives and concerns as emerged from the previous phase's analysis. This phase is based on defining the ways in which the solutions identified can be implemented, considering the current situation of the organization/s as well as the potentialities, processes and functionalities of available applications and solutions (developed in eBMS/SSI research projects and/or available on the market and the web, mainly open source). The aim is to identify the components of the solution, the possible changes, assess their feasibility according to the situation/opinions of main stakeholders, as well as the appropriate transitional path and its organization (in

terms of implementation priorities and practices needed to be changed and/or introduced).

*Phase 3 – Solution’s Design.* Realization of a set of Demonstration Scenarios of the (software) solution identified and synthesis of information collected, analysis made and the solution proposed in an action plan with an accurate identification of technical (i.e. hardware and software) and organizational (i.e. costs, changes and training needed) requirements as well as the solution’s implementation plan.

*Phase 4 – Demonstration and Feedback.* In this phase the solution designed will be discussed and evaluated with the stakeholders in order to collect feedbacks, requirements and priorities. This information will be useful for the development of a customized solution for the ‘evaluation phase’ and eventually generate commitments to be engaged in a pilot project to implement the solution. In this phase the necessary organizational changes - mainly related to processes changes and training requirements for the solution - the action plan crafted as well as the enlargement to other actors in order to define the pilot project, is discussed and defined with the actors.

As per the sensitization workshops and executive programs, topics vary and are to be defined according to the needs of the destination (and local stakeholders) concerned. Anyway it is believe of the authors that the fundamental objectives for these events should be to help attendants:

- to discuss the relevance of collaboration for local tourism development;
- to identify the opportunities and challenges of ICTs and e-Business for tourism destination’s development;
- to evaluate directly the benefits of ICTs and e-Business for their activities and choose the most appropriate applications and solutions according to their needs;
- to facilitate the adoption and productive usage of ICT and e-Business in their organizations.

For these objectives to be fully achieved should be clear as the availability of ‘hands-on demonstrations’ on which to show (in sensitization workshops) and to practice (in executive programs) how stakeholders activities can be undertaken ‘online’, is paramount.

As related to the second objective, once the decision to diffuse technologies within the destinations has been taken and in the mean time the project is being crafted, there is the need to create the necessary competences to ensure its implementation and sustainability overtime. In the experience of the authors this task requires new professional figures, at the interface between technology and business. These new professional figures should be capable to leverage on the distinctive potential of ICTs and to identify, to set up and then to implement the most appropriate technological, applicative and organizational solution

as related to the local needs Such professional figures should thus be endowed with:

- deep knowledge of technologies and applications, their functionalities and the issues related to their management (including the topics related to their realization, acceptance and diffusion);
- deep knowledge of business management, specialized on the needs and peculiarities of the tourism domain, as well as of its characteristics and dynamics;
- the capability to lead and manage the adoption, the productive usage and the diffusion of ICTs in firms, institution and in the destination overall.

The multidisciplinary nature of this professional figures raises the question on whether traditional education approaches and program for the creation of human capital in tourism are appropriate and effective for the creation of such figures. The response to this question is what informed eBMS/SSI approach as well as the *post-graduate programs* undertaken over the last five years. In particular we think that to create new professional figures, new learning approaches are required. Approaches that transcends the actual separation between economics, management and technology. Approaches that abandon the traditional distinction and sequence between theory and practice towards new modalities that integrate knowledge, and practical experince in an indistinguishable continuum of ‘learning in action’ through:

- trans-disciplinary curricula (integrating economics and management aspects with technological ones);
- attention to processes and competences rather than to disciplines (it is the activity that needs to be carried out, the problem to be solved and the objective to be reached that drives the choice of contents);
- the individualization, autonomy and flexibility in learning (the learner should be supported in defining his own way to learn and to do it when needed for the task at hand);
- the adaptation of learning contents and activities to the context of reference by the involvement of stakeholders in the design and realization of the program (local stakeholders are co-designer of the learners’ experience).

More in concrete the four points mentioned are applied: engaging young talented people coming from different educational backgrounds (and countries) in learning programs linked to ICT diffusion and development projects. These projects are the basis identifying learning contents. The activities of the projects are defined and carried out with the collaboration of projects’ partners and stakeholders. The projects are thus the target and the context in which competences are created. International experts and experienced researchers in the topics and the fields of interest defined, as well as an electronic knowledge-

base, web-learning modules and a virtual collaborative working environment are made available to participants in order to guide, advice and endow them with the necessary knowledge for the task at hand. Below it is offered an example of a project-oriented program organized:

**Objective**

Analysis, design and development of pilot e-Business applications/services

**Structure**

Three main parts: training, analysis, application

- Study Tourism domain competition dynamics, main market trends, and future scenarios related to the diffusion of ICTs and e-Business at the international and at the local level;
- Analysis of tourism in the area chosen as field of application.
- Design and development of 'proof-of-concepts' to demonstrate the potential benefits that the Internet can bring to local tourism sector

**Deliverable**

An e-business case aimed at demonstrating the benefits of experimenting the solution in the selected area

## 6. Conclusions

The experiences gained over the years spent on the diffusion of ICTs in tourism destinations, offer a number of insights as related to the arguments of this paper, in particular on the main barriers towards the utilization and diffusion of ICTs, and their role as a sensitization and aggregation tool.

First, most of the times the main barriers are related to perceptions, primary on the benefits and usefulness of particular technologies/applications and secondly on the feeling to be organisationally unprepared for their introduction and usage. This is consistent with statistics cited [3], [4], [10] and offers a very straightforward explanation to why it usually difficult to engage local tourism actors in sensitization activities such the ones undertaken. As a matter of fact, thinking in terms of benefits and costs, if one does not see any benefit from an initiative and at the same time is exposed only to its costs (and in tourism time is a cost), value perceived is simply negative. So even one-hour interview can become costly. This implies the relevance of selecting the right actors and the right contexts for the initiatives aimed at the diffusion of ICTs. It is thus essential that in the initial phases of such initiatives the actors more sensible and interested towards innovation and new technologies are involved. As a matter of fact, not all actors in the territory shows the same level of propensity to innovation and the capability to influence local tourism supply. So it is necessary to leverage on more sensitized and willing actors to create the local experiences and the documented results with which involve the more reluctant ones. And this regardless of whether the former are invested of formal responsibilities as related to the organization and management of tourism within

the destination. As a matter of fact most of the times decision-makers needs to be convinced as and even more than the other local actors, and for this to happen concrete examples and local experiences related to their reality, objectives and responsibilities are needed. That is exactly what 'lead users' can provide. Moreover, sensitization initiatives such as *e-business cases* should focus on relevant initiatives and projects for the territory, possibly already in place involving a number of local actors as partners. This will facilitate the sensitization task and accelerate its impact.

Second the effectiveness of concrete and contextualized demonstration scenarios of how applications work. Since the beginning 'application in context' have been given priority over the 'functional demonstrations'. This means to develop demonstration scenarios of ICT applications and services as they can be used for the specific context, objectives and needs of the organization/s involved in *sensitization workshops* and *e-busienss case*. This means that from the very first examples to the final demo realized, one should not simply show the different functionalities of the tool (the what) but needs to reproduce online critical activities of the actor/s in order to demonstrate the value-added of ICTs for their specific activities (the why and the how). In particular this second factor is in our opinion what can really make the differences in sensitization and involvement of key stakeholders. This leads to the third point.

Third, the need of an appropriate models of reference, such as the VIA one presented in this paper, to be used as a tool to build a clear and shareable (with stakeholders) representation of the context. The VIA model is really useful to represent and to analyze the role and activities of each actors of the local tourism supply system. Of course is possible to start without a model, but the risk, as a result of our experiences, is that this approach might lead to privilege ICT tools functions over their application. This can contribute to augment confusion and possibly lead to undesired effects, such as confirm or reinforce the perception of complexity of ICT tools.

Finally the relevance of competences development and especially the creation of local qualified human capital. For this, the need to create strong collaboration and partnership among academia, industry and institutions is paramount. In this field the approach pursued by the eBMS/SSI in its Mediterranean activities, is to concentrate local competences and infrastructures in competence centres with the mission to support local public and private actors to effectively use ICTs and e-Business. These centres, configured as joint public-private laboratories will integrate research, development, diffusion and educational activities, as well as provide advanced services and specialized consulting to promote and sustain ICT-driven tourism development. These centres – located and operational

in a specific destination or region but linked with national and international excellence centres – could act as catalysers of public and private interests. Moreover these centres are the organizational infrastructure to support the overall diffusion strategy envisaged in this paper, especially as related to the ‘evaluation’ and ‘implementation’ phases.

These brief considerations offer some insights and solutions that, together with the encouraging results of our field experimentations, demonstrate the feasibility and effectiveness on the strategy proposed in this paper. In synthesis the strategy consists in using ICT development and diffusion projects as a kind of ‘experiential laboratories’ for the creation of the necessary cultural and organizational pre-conditions integrate and enhance local tourism industry for competitiveness and developmental purposes. The question is whether and to which extent the strategy and presented can be generalised to other destination settings, especially as related to those destinations where offering is fragmented, collaboration culture very low and tourism organization weak. As a matter of fact the approaches described in here have been created with in mind such settings and so, as pointed out, different ‘tools’ can be used as related to the degree of ‘maturity’ or ‘structure’ of a destination. In any case we insist that the basic requirements are to identify one or more actors willing to be involved in an e-business case, a number of applications to let them try and use and a pool of local young talents to train for follow-up and develop.

Nevertheless, we strongly believe that further empirical research is needed to enrich and certificate the set of tools for practitioners and decision makers engaged in this field. In particular the generalisability of the considerations made as well as the impact of different factors mentioned in this work for effective introduction implementation of ICTs in tourism destinations should be enriched. Also, more and more relevant data should be collected to offer quantitative

demonstration of the impacts of ICTs introduction on firms performance measures.

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Claudio Petti is Assistant Professor at the e-Business Management Section at the Scuola Superiore ISUFI, University of Salento. His research

interests span in the fields of Strategic Management, ICTs and e-Business Impact, mainly in the tourism industry. He is regularly engaged in teaching such topics in graduate and post-graduate programs. He is involved in applied research projects related with digital and organizational innovation issues mainly at the Mediterranean level (Morocco, Tunisia and Jordan) where he is undertaking sensitization and capacity building initiatives for the diffusion of ICTs and e-Business culture and practices in Tourism Destinations and Small and Medium Enterprises.



Giuseppina Passiante is Full Professor at the Department of Innovation Engineering, Faculty of Engineering, University of Salento. Currently her

research fields concern the e-Business management, and more specifically the management of learning Organizations and learning processes in the Net-Economy. Her focus is mainly on the development of Intellectual Capital, both in the entrepreneurial and in the academic organizations. She is also expert in development of local systems versus information and communications technologies, ICTs and clusters approach, complexity in economic systems: in these research fields she has realized programs and projects, and published several papers.