Chapter 8
Supporting and Promoting Tourism Network Systems through ICT Applications

Marco De Maggio
University of Salento, Italy

Valentina Ndou
University of Salento, Italy

Laura Schina
University of Salento, Italy

ABSTRACT
This chapter explores the concept of Destination Management Systems (DMSs), as opportunity for innovating in Tourism Industry, enabling different forms of collaboration and cooperation, with a particular focus on Small and Medium Enterprises (SMEs). Firstly, it argues on the capability of DMSs to combine new technological applications with managerial and market requirements in order to support and promote a Virtual Tourism Network System characterized by online communities, and secondly on the possibility to involve the small and medium segment in complex networks for value creation and the knowledge sharing. The importance of DMSs is also addressed in the creation of virtual linkages inside and outside specific boundaries with consequent provision of new learning processes. Furthermore, the authors, hope that from the assumptions and the insights of the studies reported will follow a high spread of the concept of DMSs considered as a significant contribution for developing strong innovative patterns of collaboration in Tourism Industry.

INTRODUCTION
The proliferation of network studies was the corollary of growth and success of the industrial districts of small and medium enterprises in Europe, particularly in Italy. These networks, also identified with industrial clusters, have been acknowledged as successful models for local development, where small organizations can thrive and compete in a continuously changing environment. Evidence of their excellent performance has been extensively reported in literature (Goodman,
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As in the industrial districts, tourism industry is generally made of enterprises of small and medium size, generally located in the same area and characterized by variably strong links among themselves and with the local community. The common characteristics of tourism industry and industrial districts are represented by the interdependence of the participating firms; the cooperative competition and the importance of trusts to support collaboration; the “community culture” and its dependence on public policies (Baggio, 2008; Hjalager, 1999)

The district interpretation looks at the tourism destination as a network of groups of actors, economic and non economic, involving stakeholders whose core activity can be directly or indirectly related to providing tourism related services (Baggio, 2008; Beccattini, 1990)

A new technological wave during the last decade saw the rise of easy and accessible means to foster interaction and collaboration among organizations and the wide range of actors within their external environment (Laudon & Laudon, 2007), but created new challenges to the actors of the Tourism sector, and the need to interpret and guide successfully the digitalization of processes and value chains in tourism organization, identified as “eTourism” (Buhalis, 2003).

Starting with an overview of the technology diffusion in European Tourism industry, the following sections describe the Destination Management System as the key managerial approach able to combine the potential of the new technological applications with the managerial and market needs that Tourism industry is facing, towards the support and promotion of Tourism Network Systems. The creation of ICT enabled virtual network systems is presented as a means through which small and medium firms can collaborate horizontally, vertically and diagonally, achieving economies of scale and scope, profiting from cost effective use of technology and reaching customers in a more efficient and effective way.

The in dept analysis of virtual networks in tourism is supported through the development of three case studies related to well known tourism DMSs, useful to define the status, features and characteristics of virtual tourism networks and to extract useful insights and policy recommendations for their implementation and development.

Following, a section devoted to the presentation of Web 2.0 Technologies as enablers of Online Communities to support Destination Management success is introduced, pointing the importance of transferring the effectiveness of the real “pass the word” mechanism in the digital sphere, to overcome the criticalities of promoting a product characterized by high level of complexity and intangibility.

Finally, according to the evidences coming from field and case studies, supporting prerequisites and policy recommendations are presented for successful ICT application in Tourism, intended as the main conditions and issues to stimulate and facilitate the creation of network tourism systems,

ICT APPLICATIONS IN TOURISM SECTOR

During the last decades three important technological waves have contributed to change tourism operational and strategic processes in a dramatic way: the Computer Reservation System (CRS), in 1970; the Global Distribution System (GDS), in 1980; and mainly the Internet era in 1990 (Buhalis, 2003; Emmer, Tauck, Wilkinson, Moore, 1993; O’Connor, 1999).

Since 2000 a new radical shift took place about the communication technologies, marked by the development of a wide range of new tools and services able to facilitate the interaction among players located all over the place (Buhalis, Law 2008). Information Systems, applied as means to collect, process, store and disseminate information within