



Information and communication technology : a best decision support system for managing tourist destination

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Abstract

Within a very short time, Information and Communication Technology (ICT) has become one of the basic building blocks of modern society. The uses of ICT are necessary in all aspects of today's economic and social changes. It has great impact on one of the world's largest and pervasive industry – the Travel and Tourism. It has affected this industry for at least the last 50 years. ICT is one of the key factors of competitiveness as far as tourist markets and strategic tourism management are concerned. The implications of the ICT revolution for tourism competitiveness and management are identified in different sectors of tourism. Internet has profound impact on this industry. Research shows that 50% of German tourists use Internet to get information about destination. This paper discusses the importance of ICT in the development and management of tourist destination and also discusses how ICT can be used as Decision Support System for tourist as well as travel industries.

Keywords: Decision Support System, Information and Communication Technology (ICT), Internet, Tourist markets, Strategic Tourism management, Tourist destination.

1. Introduction

The gamut of definitions describing a tourist destination is awfully large that makes difficult to set a clear cut boundaries to it. Based on different definition proposed, a tourist destination can be seen as 'a place for holiday' or 'a place to visit' in general. Compilation and consideration of different projected definition over the years, a tourist destination may be defined as a geographical area that offers the tourist the opportunity of exploiting a variety of attractions and services or more simply; a physical space in which a visitor spends at least one overnight (Jafari, 2000).

The tourist destination brings together all aspects of tourism – demand of tourist, supply of services and marketing in the form of a useful framework. Destination can be considered as the hub of facilities

and services designed to meet the needs of the tourists. Most destination comprise a core of the components like Attractions (Natural and manmade), Access, Amenities and Ancillary services for the tourist. An amalgam of these components of a destination comes together in many different ways and in many different cultural, economic and environmental contexts.

In the age of competitiveness, it always raises a strong discourse on the issue of managing a tourist destination. Destination development and promotion involves proper planning of the available tourism resources to an extent that it can attract tourist and more importantly, can induce them to stay on and return. In the arena of managing a tourist destination the most challenging part is to design, develop, distribute and disseminate of tourism products (goods

and services) as per with the demand of the intending tourist by taking care as well as ensuring a balanced and sustainable progress of the local resources and also avoiding any threat to the people and the environment in general. However in most of the cases, it is being observed that planning and formulating a suitable strategy act as the weakest part in the process of destination development because the spectrum of tourism industry is limitless with so many facets. Therefore, the decision-making process requires high professionalism decision support system to communicate effectively and establish co operation in order to reach the set goals of tourist destination management and development.

2. ICT and Tourism

The implication of ICT for the tourism industry is being greatly felt because of the intangible facet of its products. Although, there is no such product which is totally intangible in nature but it is through information service that makes it more complete and accessible across the globe. In tourism, at the moment

of product buying decision, the consumer had only the abstract model of the product that is being communicated by the producer at the time of contractual agreement. Hence, decision making and consumption are separated in time and space. Such gap can be minimised or overcome through information technology.

In the world of information driven society, the role of ICT in tourism is becoming an unavoidable phenomenon as it provide new tools and distribution channels, thus creating a new environment of tourism business. The companies related to this industry make the extensive use of this technology in the processing and management of data and information, thereby strengthening them to face the challenge that comes in their way due to the ever increasing market demand and competition. The role of ICT in tourism industry in the management of tourist destination in different aspects could be visualised through its different applications. Following table gives the idea about the applications of IVT in tourism industry.

Table-1 : Application of ICT in Tourism Industry

Different Aspects of Tourism Industry	Application of ICT
Site development	GIS used for identification of tourist site and destination
Marketing	Advertisement and Promotion
Operation	Buying and selling process
Customer service	Management of customer relationship by information dissemination
Monitoring	Used of GIS and GPS to monitor environmental impact.

ICT has played a strategic role in restructuring the tourism industry and consumer are gradually adopting to the new values, lifestyles and new tourism products that is re-engineered by this technology.

Three important innovations that are responsible in bringing a revolutionary change in world tourism scenario are given below:

1. Development of the Computer Reservation

System(CRS)

2. Development of the Global Distribution System(GDS)
3. The Internet

The evolution of CRS, GDS and Internet has provided all players in the industry an easy access to the end users. The advantages of such technology could be summarised by the following table.

Table-2 : Advantage of ICT in tourism Industry

Sl. No.	Players of the tourism industry	Advantage
1	Tour Operators, Travel Agency, Accommodation sectors and Airlines etc.	Direct selling becomes easy and has increased.
2	New intermediaries	Increased
3	Tourist	Have easy access to the distribution channel like Tour Operators, Travel Agency, Accommodation sectors and Airlines etc.
4	Tour Operators, Travel Agency, Accommodation sectors and Airlines etc.	Production and modification of tourism product becomes possible based on the needs and expectation of the clients.
5	Tourist and Tourism Companies	Increased in transparency leads to effective relationship.
6	Tourist	<p style="text-align: center;"><u>Changes in Behaviour</u></p> <ol style="list-style-type: none"> 1. Asking better service. 2. Becoming more specific. 3. Cost conscious. 4. Making comparison between two products.
7	Tourist	Automated booking of product of different tourism supplies around the world from one place through the intermediation of a travel agency.

3. Decision Support System (DSS) and Destination Management

A DSS by definition is very difficult to define due to its different aspects (Keen1980). However; a DSS is nothing but a computerised information system that supports business and organisational decision making activities. It is an interactive software-based system intended to help decision makers extract useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and take decisions.

The attitude towards a system able to give enough rational inputs to support the complex decisions in the tourism arena is generally good, as for the other

information systems available to the tourism enterprise and to a Destination Management Organisation (DMO). The perceived usefulness, ease of use and a positive attitude towards information technology is the factors that most strongly influence the acceptance of a DSS among the managers of this sector. (Wober & Gretzel 2000)

The uses of ICT as DSS in tourism industry is a vital one in a way that it provide expertise in decision making process in the management of tourist destination and organisation along with infrastructural development programme and stakeholders progress on sound and rational pedestal. The functions of DSS in the management of the Tourist Destination are shown in the following Table.

Table-3 : ICT as decision support for Tourism Industry

Sl. No.	DSS functions	In the management of Tourist Destination
1	Track current situation	Gathering and communicating current information on visitors and their use of travel and tourism products during their stay at destination.
2	Measure travel motivators	Identifying and measuring main determinants that influence travel decision for a particular tourist destination.
3	Gather competitive intelligence	Monitoring and assessing, marketing activities, initiatives, success of the key competitors etc.
4	Recognize new opportunities	Searching and profiling growing areas of potential and market trends for tourism to a destination.
5	Evaluate marketing activities	Measuring the effects of the marketing activities, initiatives and campaign.
6	Monitor industry satisfaction	Monitoring satisfaction of tourism operators with tourism activities performance.
7	Measure return on investment	Assessing the return on investment of the establishment, programme, the policies and the decision taken
8	Monitor the resources and the impact of tourism activities	Application of GIS to monitor the basic resources of tourism (physical, cultural and environmental) and quantify the impact of tourism activities on it.

4. Conclusion

As we already know that a tourist destination is a complex system composed by many diverse elements whose interaction are highly dynamic and open to external influences. The task of any organisation to manage such a system (partially or fully) is a very difficult task. In tourism industry, the role of DSS in the management of a tourist destination is a very crucial one and the DMO's executing such type of system needs to be properly equipped. A DMO should

be able to gather an accurate knowledge of the available and potential destination resources along with different public and private organisation operating at the destination, and prevailing social, economical and environmental situation both at the destination level and at a wider national and international level. Such information has to combine with a good intelligence of diverge methodologies and techniques for analysing, forecasting, planning and overall management of a tourist destination.

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