The Role of ICT in Tourism Industry: Innovations and Challenges
by Tanya Stoyanova and Neli Boycheva, June 2010

Bulgarian tourism sector

The World Tourism Organization ranks Bulgaria as the second fastest growing travel market in Europe. Bulgaria's improved facilities and hotels, great affordability and accessibility are gaining popularity among business and leisure travelers around the world. Bulgaria offers a wide range of archaeological, historic, scenic and recreational attractions, and is growing 10-12% annually for the past three years. In 2008, the sector contributed about 12% of the country's GDP which helped offset a rising trade deficit. Last year the Bulgarian tourism sector employed almost 29% of the workforce. Despite the crisis, proceeds from tourism amounted to €2.5 bn in 2009 and the prognosis is they will go up to €2.7 bn in 2010, which is an increase of 3-5%.

Tourism and ICT

Tourism is acknowledged to be very information intensive. Tourists need information before going on a trip to help them plan and choose between options, and also increasingly need information during the trip as the trend towards more independent travel increases. In modern societies, time has become a scarce commodity. Therefore, for many consumers their annual holiday represents a major emotional investment that cannot easily be replaced if something goes wrong. Therefore, since travelers cannot pre-test the product or easily get their money back if the trip does not meet their expectations, access to accurate, reliable, timely and relevant information is essential to help them make an appropriate choice. This need for information is heightened by certain characteristics of the tourism product. Foremost among these is its intangibility - unlike manufactured goods, the tourism product cannot be inspected prior to purchase and therefore it is almost completely dependent on representations and descriptions to help consumers make a purchase decision. It is also fixed geographically, and thus the customer must travel-and thus in effect consume the product - in order to experience what they are buying. Two other characteristics are its complexity and its interdependence. Individual tourism products are diverse, and in many cases it is this heterogeneity which makes them attractive in the first place. In addition, tourism products are rarely bought individually, and the endless combinations of alternative travel routes, transportation modes, time and lodging accommodation make travel decisions really difficult.

Given that millions of people travel every day, it can be seen that the communication of accurate, current and relevant information is essential to the efficient operation of the tourism industry.

The Role of Information and Communication Technology (ICT)

The exchange of information is very important at every stage in the sales cycle of the tourism product. Information must be able to flow quickly and accurately between the client, intermediaries and each of the tourism suppliers involved in servicing the client's needs. As a result, ICT has become an almost universal feature of the tourism industry. Its power allows information to be managed more effectively, and transported worldwide almost instantly. As a result, it has a major effect on the methods of operation of the tourism industry. However, it has not affected all functions and sectors equally. It has the greatest impact on the marketing and distribution functions, while leaving others which need more human contact relatively untouched. Similarly, certain sectors, such as the airlines, have been keen adopters of technology, using it to help manage and streamline their operations and gain

strategic advantage. Others, in particular the hotel sector, have been less enthusiastic, but are gradually waking up to the benefits which electronic distribution can bring. Tourism industry needs to understand, incorporate and utilize ICT strategically in order to serve their target markets, improve their efficiency, maximize profitability, enhance services and maintain long-term profitability. Here are some of the potential uses of ICT tools in the tourism industry.

Different aspects of industry: Application
Site development: GIS geographic information system) used for identification of tourist sites and destinations;
Marketing: Advertisements, promotions;
Operations: Purchase and management of supplies and services;
Customer services: Management of customer relationships through booking travel, lodge etc.;
Monitoring: GIS and GPS is also used for managing and monitoring tourist sites.

Key factors for applying ICT in tourism
1. IT education and training for policy makers, managers and other players in the tourism industry;
2. Integration of various sectors like transport, lodge etc.;
3. Technical infrastructure;
4. Human infrastructure, which includes skilled people, vision and management;
5. Legal Infrastructure;
a. Regulation of telecommunication providers;
b. Subsides for Internet service providers;
c. Legal framework for online advertisement or official endorsement for online marketing;
6. ICT culture;
a. Creation and sustainability of ICT environment;
b. Maintenance and updating of websites;
c. ICT training of staff from different levels;
d. Building a computer network linking all related sectors.

From Information to Knowledge industry
The dynamics of information exchange among the tourism industry players has drastically changed in the recent years. The industry is now more complicated as there have been considerable changes in the distribution and sales. Distribution cooperation is expanding. While transport companies now provide opportunity to book accommodation, destination management organizations are developing internet portals to distribute information. Statistical database should be developed and research should be undertaken. Educational institutions should have access to such knowledge and they should promote ICT based courses supported by technical training as well as field-based training and practical experience in the industry. Educational institutions specialized in Tourism education, IT educational institutions and tourism industry players like travel agencies, tour operators, hotels, technology providers etc should have a network and have constant interaction in order to develop a skill base for successful tourism industry and a successful navigation.

Conclusion
Tourism industry is highly influenced by IT innovation. Especially the rise of the internet has expedited innovations in the sector and enabled new business models. It

can be foreseen that this trend will continue and ICT will have an even greater impact on tourism.

Bulgarian tourism sector

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- A wide range of archeological, historical, recreational and cultural sites.
- Tourism contributes about 12% of GDP.
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- Proceeds from tourism amounted to €2.5 bn in 2009; prognosis is to go up to €2.7 bn in 2010, which is an increase of 3-5%.

Tourism and ICT

- Tourism is an information – intensive industry.
- The need for information is determined by the characteristics of the tourism product:
  - Intangibility;
  - Fixed geographical location;
  - Complexity;
  - Interdependence;

The Role of Information and Communication Technology (ICT)

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- Information is managed more effectively and transported worldwide almost instantly.
- ICT has not affected all functions and sectors equally.

Different aspects of industry application

- Site development
- Marketing
- Operations
- Customer services
- Monitoring

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Conclusions

- Tourism industry is highly influenced by IT innovation.
- Rise of the internet has expedited innovations in the sector and enabled new business models.
- It can be foreseen that this trend will continue and ICT will have an even greater impact on tourism.