Role of Information Technology in Tourism Industry: Impact and Growth

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ABSTRACT: According to the World Tourism Barometer of the United Nations World Tourism Organisation (UNWTO), Foreign Tourist Arrivals or FTAs in the World Tourism Market is growing at an average rate of 4% each year and had reached a massive number of 1.2 billion in the year 2015. The vigorous growth of the domain is a great contributor towards the international as well as national economic growth and is the generator of employment in various sectors, directly or indirectly. When it comes to the technological advancement, it was the sector of travel and tourism which became one of the first, to have been revolutionised by the development in Information Technology. In fact, Information Technology or IT has played a critical role not just in the advancement of tourism, but it has helped in spreading the phenomenon of tourism to every part of the world and has made travel safer. In the past few decades, especially towards the end of the previous, and the beginning of the new millennium, IT brought in some radical changes that have altered the scenario of travel and tourism, making travel easier, bridging the gap between customer as well as the seller and by providing the right information at any point in time. The role of Information Technologies which has developed in terms of the tourism industry's proliferation, safety and other aspects are overviewed in this paper.

KEYWORDS: Information Technology, Tourism Industry, Development

I. INTRODUCTION

With the changing trend in the human behaviour, the industry of travel and tourism is evolving itself in a way, so as to cater to the needs and likes of customers belonging to various market segments. This has led the industry giants to create niche for them by being equipped to respond, or better still, take a proactive approach towards the demands of the customers.

One of the biggest challenges faced by this industry is in providing correct, accurate and localised data, while keeping in mind to maintain a cordial relationship with their customers. Their emphasis on establishing long term relationship with the tourists can be greatly boosted by IT and help the tourism operators in building long term relationship with the tourists. In fact, Computerised Reservations Systems (CRS) were among the first applications of IT worldwide. Their main usage is to store and retrieve information and conduct transactions related to travel-fare, reservations, and other activities. As a largely consumer oriented sector, the focus of this industry is to provide services as well as correct information to the end users. The physical infrastructure, met with the service to be provided along with the correct information about the products or services brings in the integration which enables the suitability of individual needs.

II. TOURISM INDUSTRY – AN OVERVIEW

As a sector, tourism has a momentous impact on the environment, economy as well as society at local, national and international level. According to the annual research report presented by WTTC projects that the industry of travel and tourism is one of the major contributor towards the world GDP and has grown for six consecutive years until 2015 and rose to a total of 9.8% of world GDP (US$7.2 trillion). The report of 2015 also showed that the sector supported 284 million people in employment, which is one out of every eleven jobs on the planet. The industry, in general, is a combination of mainly two tires. Tire 1 is dominated by major industry giants such as major tour operators and travel agencies, renowned hotel brands, airlines, entertainment sites and food & beverage caterers, etc. Tire 2 consists of Medium Scale Tourism Enterprises as well as Small Scale Tourism Enterprise. The major differences between the two tires is based on the infrastructure facilities, their management strategies as well as their system of managing information and extent of the use of ICT.

III. ROLE OF IT IN THE TOURISM SECTOR, AND ITS GROWTH

The development in the field of IT and ICT has deeply influenced the ways in which tourism businesses perform their activities. Service standards have rose quite high and customers expect to be served 27/7 around the year and service is not confined to only office hours. Leading to the birth of online portals, the travel business was revolutionised forever as these portals have be successful in effectively organizing and distributing distressed tourism inventories to the clients. Various hotel chains, amusement parks, luxury trains and most certainly the leading airlines have all be using IT in order to reach out to customers and allowing them to directly access their reservation system. Such application of IT or ICT has only helped these companies in getting better understanding about the needs of their customers and also helped them in offering them the freedom of choice. ICT Is critical for strategic management of organisations as they allow –

- Expansion into new market
- Empowerment of employees
- Lowering of costs
- Enhancing distribution

Following are some of the many uses of IT/ICT in the field of Travel and Tourism –

E-Tourism:

E Tourism or Travel Technology is the digitisation of all the processes and value chains in the tourism, travel, hospitality and catering industries that enable organisations to maximise their efficiency and effectiveness. The scope of e-tourism includes not just computer reservation system, but also incorporating the broader tourism sector as well as its subset the hospitality industry. Travel technology, includes all business functions such as –

- E-commerce and E-marketing
- E-finance and E-accounting
- E-HRM
- E-Procurement
- E-Strategy
- E-Planning
- E-Management

Application of E- Tourism:

- **Flight Tracking System:** Travel technology is used to monitor as well as manage travel, and also includes flight tracking system. Global aviation software such as Plane Finder, RadarBox24, Flight Stats.com, etc., are useful in tracing the activities of flights from across the world.

- **Dynamic Packaging:** The freedom offered to customers in order to create their own travel package by choosing the transportation services, flight tickets, accommodation types, activities to get involved in, rental services, etc. instead of choosing a package predefined by the agent is called dynamic packaging. This type of packaging witnesses the real time sourcing of flights, trains, hotels, cars, etc. as per the requirement of the customer.

- **Computer Reservation System:** CRS is famous for the ability to store the information and retrieve it when required. It is also used for conducting transactions related to hotel books, air tickets, car rental, etc. Some of the most widely used CRS around the world are Amadeus, Abacus (currently owned by Sabre), KIU, Mercator, Navitaire, Sabre, Travel Technology Interactive, Travel Sky, Travelport, etc. Global Distribution System is a CRS which sells tickets for major airlines across the globe.

An International Conference on Recent Trends in IT Innovations - Tec'afe 2017

Organized by

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- **Global Distribution System**: GDS forms a is a linkage between the service providers in the travel industry, such as airlines, hotels, car rental companies and enabling automated transaction between travel service providers and the travel agencies. It is mainly through GDS, that the travel agency is able to cater to its needs for various tourism related services, to the end users, which is the customer. It concentrates across three main domains of the industry, viz., accommodation (hotel reservations), ticket reservation in airlines and car rentals. It not only links the bookings, but also the rates in which each of the services are available. Famous GDS are Amadeus, Galileo, Sabre, Worldspan, etc.

- **Extensible Markup Language**: Extensible Markup Language based technologies are of great importance in the travel and tourism industry. As the support the reservation of tickets for airlines, or in implementing merchandising functions and optional services in the booking process. Another important application of XML is the establishing of direct connections between Airlines and Travel Agencies. In order to create a generally accepted XML-standard, the Open Axis Group was founded.

- **Customer Relationship Management:** CRM is famous for the convenience it brings in when it comes to managing an organisation's interaction, not just with current customers, but also future customers. CRM helps in analysing customer data and pulls out the history when need be which helps the company in understanding the needs of the customer and what to cater to. This plays a role in the retention of the customer by maintaining ideal business relationships with customers and ultimately driving sales growth.

- **Audio Tours:** Another interesting development in the world of Information technology's integration into tourism is the Audio Tours. An audio tour is a pre-recorded message or commentary which includes the details of the places the tourist visits. Usually fed into a handheld device with headsets, the commentary provides the background information and other context related to the place of visit. Usually used in historical sites and museums, Audio Tours are also available of outdoor tours at selected locations.

- **GPS Tours:** A GPS Tour, similar to a an audio tour includes pre-recorded audio commentary through a handheld device, for mobile applications such as trains, walking tours, buses, boats, trolley, etc. GPS tours uses the visitor's location via satellite technology and provides the relevant information to them. These tours are available in multiple language simultaneously which can be downloaded in the cell phones and makes it possible to mine the common interest location of the visitors using the data from multiple users.

- **Biometric Passport:** Also known as E-Passport, contains the biometric information that can be used for identification of the traveller. It combines paper passport along with electronic biometric information of the owner. Biometrics is all about the analysis of physical characteristics that are unique to a person. It can include fingerprints, retinal scans and signatures. It uses contactless smart card technology, including a microprocessor chip and antenna which is installed in the front or back cover, or center page, of the passport. Document and chip characteristics are documented in the International Civil Aviation Organization's (ICAO) Doc 9303.India has recently initiated first phase deployment of Biometric E-Passport for Diplomatic passport holders in India and abroad.

- **Virtual Tour:** A virtual tour is an online media presentation that represents a real location in the most realistic form possible. It comprises of videos as well as sill images and may include sound effects, text, narration and music. Virtual Tours are famous in the tourism industry. Especially hotel chains provide a 360 degree view of not just the room buy also the amenities and property in general as well.

Mobile Technology:

Cutting edge developments such as Global Positioning System service, Geo Tagging, search based on location, and online mapping facility, which has become possible through mobile service, has so much more to offer to the traveller at their respective travel destinations. Personal assistant in travel is yet another advancement which is revolutionising the industry of travel and tourism. These applications assist the traveller in having a smooth and safe travel. They also contribute largely on the distribution of resourceful information including great offers and important deals.

Social Networks:

The development of social networking sites related to travel and tourism allow travellers to build a network of other travellers and share their travel stories and experiences. The reviews and feedback left by other travellers gives a realistic picture of the destination or service provider. Sites such as Trip Advisor, Matador, Tripsay, Couchsurfing, GeckoGo, Travbuddy, etc are all example of such sites.

Space Tourism:

One of the latest advancements in the field of travel and tourism is the concept of taking regular people to space. For the purpose of leisure, recreation or business. As an alternative tourism, Space Tourism is promoted by organisations such as Commercial Spaceflight Federation, Russian Space Agency, etc. Remarkable research is still going on in this domain. A name worth mentioning is Elon Musk from SpaceX who aims at flying two space tourist around the moon in 2018.

IV.CONCLUSION

ICT plays a critical role in acquiring information, processing of that information, as well as storing the information for further use. In such cases, information could be in the form of texts, numeric, pictorial or even vocal. Information technology has deep impact on the development of the economy and society. One of its major contribution lies with the increase in the supply of information to be shared with a larger audience. Secondly, IT helps in reducing the cost inculcated in the dissemination of knowledge. It has also reduced the inefficiencies pertaining to the spread of information. Thirdly IT has greatly helped in the reduction of barriers caused by distance and time.

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BIOGRAPHY

Ishrat Nasreen Wahab is the HOD and an Assistant Professor in Tourism at Garden City University, Bangalore. She is pursuing her PhD in Management Studies with tourism as her area of studies. She is an active member of various organizations, working for the spread of tourism in the state as well as the country. She also holds a keen interest in research and has published papers in Peer Reviewed Journals and other journals of repute.