The Effects of ICT Application on the Tourism and Hospitality Industries in London

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Abstract

Information and Communications Technologies (ICT) has extensively altered the role of each player in the value-creation process on the tourism and hospitality market. Evidence designates that an effective application of information technology has turned out critical for the attractiveness and prosperity of tourism enterprises, since it has persuaded their ability to distinguish their offerings, as well as their manufacture and transport costs. The theory of ICT and its application has become so important for the Tourism and Hospitality Industries. Businesses are being encouraged to adopt the modern technologies and reap the benefits available from such developments. Tourism and Hospitality has had a developing history of ICT implementation, benefiting from advances in networks and the global reach of such connections.

This paper is to analyse the strategic and operational implementation of ICT and the establishment of eTourism as a field in Tourism and Hospitality alongside the effects of ICT application on the Tourism and Hospitality Industries in London. Using different kinds of literatures from research papers, articles, books this study highlights and scrutinises the significance of ICT and how these actions contribute towards Tourism and Hospitality sector. Tourism and Hospitality industries should be commended for its use of ICT and adoption of modern technologies such as social networks for engaging with customers. The application of ICT has been cleverly managed and implemented with very minimal cost, requiring little technical resource from the staff. This paper aims to create consciousness among the academicians, researchers, politicians, tourism businesses and government authorities the effectiveness of ICT application on the tourism and hospitality Industries in London. The paper is constrained in inside London and the consequence is attained based on the past studies. The investigation is entirely prepared based on literature in London. The study is conducted in ICT application only as independent variable. Therefore, there may be some other variables which may influence on tourism and hospitality industries in London.

1. Introduction

Tourism and hospitality industry is one of the slightest productive areas in the economies of the most developed countries (Scheidegger, 2006). The feast of ICTs has an extreme effect on ensuring ecological worldwide and tourism advance, above all in less industrialised regions (UNCTAD, 2004). ICTs seem to offer new chances for commercial mostly appropriate in four different features: gaining a competitive advantage, improving productivity, emerging new industries and enabling new ways of management (Gruescu et al., 2009). Information communication technology has been transforming tourism globally. The ICT driven re-engineering has progressively created a new paradigm-shift, altering the industry structure and emerging an entire range of chances and doubts. ICTs empower users to recognise, modify and purchase tourism products and support the globalization of the business by providing tools for increasing, managing and allotting offerings global. Gradually ICTs play a foremost role for the competitiveness of tourism groups and destinations (Coopers and Fletchair, 2005). Jennifer et al. (2003) have scrutinised the method ICT and Internet have progressively altered

the tourism industry. They have used the current hypothetical outline on ICT and e-tourism advances in other parts of the world to scrutinise their influence of ICT application in the tourism and hospitality industries. There have been incredible improvements at the destinations levels in the contemporary years. Internet, Intranet etc. have been widely employed by the (DMOs) which has combined the working procedure and made the system well-organized. ICT practise supports well-organized working of enterprises, since it speeds up management processes and promotions both efficiency and quality of economic procedures performed in an enterprise. The launching of modern information technologies permits for taking better benefit of the assets at the disposal of a hotel enterprise, however their fast improvement imposes the need for rearranging enterprises and making funds. The main benefit of ICT is founding more effective connections between diverse processes and supply chain links by offering easy access, in real time, to data processed in the particular chain components (Porter, 2001). The ICT-based competitive advantages may be accomplished by tourism and hospitality enterprises through distinctive internet marketing campaigns, continuing effective communication with several organizational stakeholders and in a number of other methods (Michalic, et al., 2015). The application of information technologies in tourism, first in airline industry transforms at current hospitality sector. ICT has extensively altered the role of each player in the value-creation process on the tourism and hotel market. Evidence designates that an effective application of information technology has turned out critical for the attractiveness and prosperity of tourism enterprises, since it has persuaded their ability to distinguish their offerings, as well as their manufacture and transport costs (Soteriades et al., 2004). E-tourism regulates the competitiveness of the organisation by taking advantage of intranets for rearranging internal processes, extranets for increasing transactions with trusted partners and the Internet for interacting with all its stakeholders and consumers. The e-tourism theory comprises all business functions like e-commerce, e-marketing, e-finance and e-accounting, eHRM, e-procurement, e-production as well as e-strategy, e-planning and e-management for all sectors of the tourism industry, including tourism, travel, transport, leisure, hospitality, principals, intermediaries and public sector organisations. Therefore, e-tourism bundles together three unique disciplines: business management, information systems and management, and tourism (Mupfiga, 2015). In general the expansion of the use of information and communication technologies in the tourism industry has generated a more competitive environment, and they have become a crucial component of trade development (Berne et al., 2015). Information plays a vital role in tourism products which are information intensive during booking and planning and labour-intensive during the supply phase (Wiig, 2003). The consequences exposed that stakeholders would like to see more inward investment from the private sector to capitalize on the modernization and infrastructure improvements that have taken place in the e-tourism sector and also demonstrated that economic, environmental and social aspects are influenced on e-tourism industry development (Khan, et al., 2018). The tourism and hospitality is an information-intensive industry (Cox et al., 2009) with a quite long value chain (Stiakakis and Georgiadis, 2011) in which information plays conclusively vital role. Creating, seeking, storing, retrieving and transfer of information is core activity of all tourism enterprises. The tourism and hospitality economy in current world is driven by information technology and telecommunications. All of the tourism enterprises such as tour operators, travel agencies, rental agencies, cruisers, and hotels undergo the growing effect of this which is generally known as information and communication technology.

The broad objective of the research is to analyse the effects of ICT application on the Tourism and Hospitality Industries in London. Alongside the broad objectives there are some specific objectives as well and those are as follows:

a) Analyse how the tourism industry combines the effects of ICT, and measure the strengths and weak- nesses in this application.

b) Analyse how the hospitality industry incorporates the effects of ICT, and evaluate the strengths and weaknesses in this application.

c) Analyse the effects of ICT application on the Tourism and Hospitality Industries in London.

2. Literature Review

2.1. ICT in hospitality sector and change in hospitality by adopting ICT

Information and Communications Technology (ICT) is a term used to describe various electronic tools that are capable of transmitting information and data in a network. ICT is a broad genre of communications technologies that includes telephone signals, computers, software, data storage and audio-visual devices that allow information to be accessed, transmitted, stored and modified. ICT allows organisations to carry out their

operations and strategic goals by interacting with stakeholders as well as managing their data and processes (Peppard, 1993). Examples of ICT devices used to communicate information in a business context includes Internet (web), Information Points, Digital TV, Social Media, 3G, GPRS, WIFI telecommunication signals, Computers (software), Email, Mobile Phones, Virtual reality, PDA's, Game consoles, Mobile applications, Digital Radio. ICT has had a transformational impact on the modern business environment by creating a new competitive marketplace. E-commerce is the ability to execute transactions via ICT and e-business is the method of conducting business activities using ICT solutions. The introduction of e-commerce and e-business has increased possibilities and potentials for all industries, including Tourism and Hospitality (Zhou, 2004). E- Commerce is able to benefit modern industries by: Allowing local businesses to access the global market, creating new opportunities to export products and services, increasing the operational efficiency within an organisation. Tourism is currently one of the fastest growing industries in the world (Altin and Uysal, 2011) and as a service industry combining a range of products and services from other stakeholders, e-commerce and the adoption of ICT offers great business potential. The combination of different activities and information in offering a tourism and hospitality product mean that specific product distribution can be catered for and that value adding chains can be established (Werthner and Klein, 1999). The use of ICT in the tourism and hospitality industry, in particular Computer networks, has been in existence for over 30 years with the first major use of ICT included the creation of central reservation and booking systems for Airlines in particular. Sabre, Galileo, Amadeus and Worldspan are all examples of Global distribution systems (GDS) used for such purposes (Gomis and González-Reverté, 2012). The next major transitional technology incorporated by the tourism and hospitality industries is the adoption of the Internet during the 1990s and beyond.

The Internet has been a transformational technology playing a strategic role in the value chain in the industry and in service delivery processes. Poon (1993) remarked the adoption of such technologies marks a difference between the 'traditional tourism sector' and 'new tourism industry' as more customers adapt and adopt the new processes, products and systems of tourism and hospitality delivery by the new technologies. This trend has continued with adoption for destinations in all areas of the world and at different stages of tourism development (Suomi and Li, 2010).

The adoption of the internet and networked ICT systems has brought benefits to those organisations with an increase in internationalisation of business, better efficiencies with greater data exchange and more streamlined booking systems. Modern technology has challenged the traditional manner of business in tourism related organisations by challenging existing business models (e.g. High Street Travel agencies, Airlines and their limited range of services and traditional booking systems). The tourism and hospitality product has become globalised as a result and increased choice for the consumer whilst increasing competition for the suppliers.

The Internet and its related technologies have also advanced since they were first adopted in the 1990s with the creation of search engines enabling consumers to compare services far more easily and quicker. This has resulted in a change in how consumers plan travel, make bookings, their visitor expectations and the way in which they review their experiences for future consumers to evaluate. Other related internet technologies affecting tourism and hospitality operators include review websites, organisational web site design and systems, the adoption and adaption for mobile technologies (e.g. applications for mobile and smart phones), user generated contents (such as travel review sites and blogs and social media) and the possibility for future methods of tourism consumption (e.g. virtual reality).
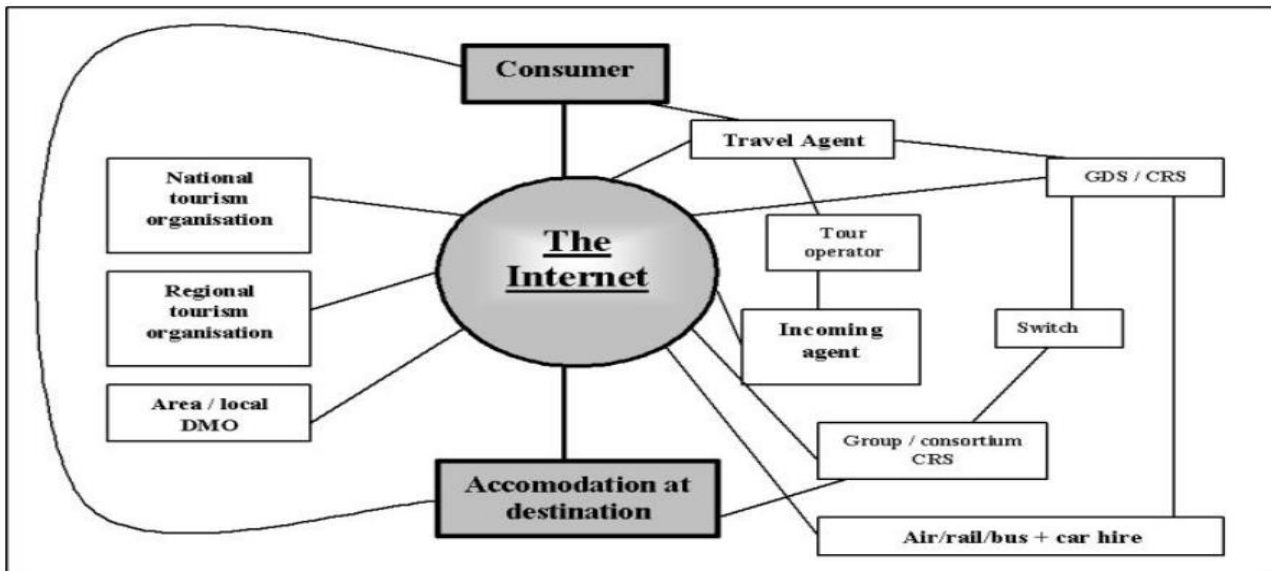
2.2. The Tourism and Hospitality Distribution Channel

The development of Internet technologies, with their universal accessibility and interactive nature, has changed consumer behaviours and attitudes to traditional models of tourism and hospitality services. The way in which tourism and travel products are distributed has changed due to the Internet in particular, and other ICT (Werthner and Klein, 1999, Liu, 2012). This adoption of ecommerce with its application to the tourism industry has been called 'eTourism' (Buhalis, 1998) and has resulted in a shift from existing supply chain models, as seen in Figure 1.

ICT has been progressively adopted in the industry with traditional models incorporating the Central Reservation System (CRS) in the early 1970s, followed by development of the Global Distribution System in the 1980s and leading us to the World Wide Web. Even in the pre-Internet model reservations were distributed electronically to sales offices and partner organisations allowing travel agents to confirm reservations and conduct transactions more flexibly. Travel agents were able to increase productivity and gain competitive advantages as they were able to provide consumers with real-time information meaning more choice and more opportunities.
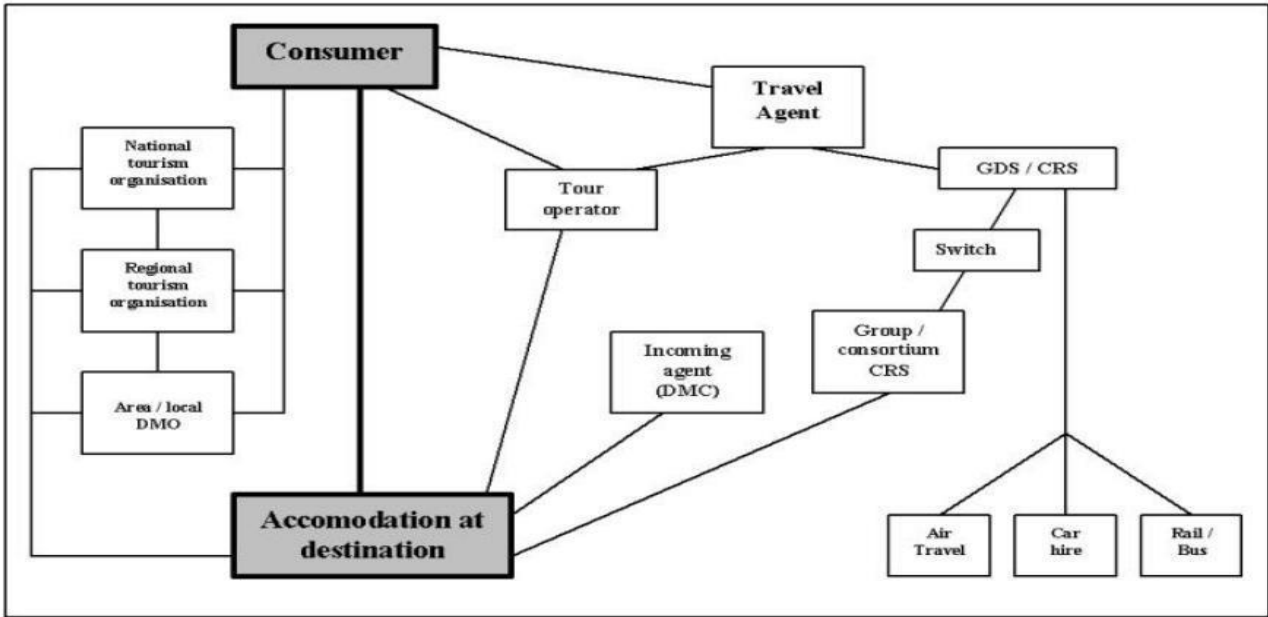
Pre-Internet Distribution Mode (Werthner and Klein, 1999)

Post-Internet Distribution Mode (Werthner and Klein, 1999).

Figure 1. The Change in Tourism and Hospitality Distribution Channels with the advent of the Internet

Source: Werthner and Klein, 1999.

Buhalis and Laws (2008) identified the transformation in the distribution channels with the advent of the internet and supplement the findings of Werthner and Klein (1999) and more recent studies of modern innovations in the tourism industry (Aldebert, B. et al., 2011):

➢ Developments include more direct selling to customers.

➢ An increase in intermediaries and third parties selling specialised tourist products (e.g. Car hire).

➢ Customers having access to the same information and distribution channels as some tour operators within the pre-existing model.

➢ Changing products and services offered to suit the changing tastes and requirements of customers.

➢ An increase in transparency of procedures and costs.

➢ Consumer habit changes in their transaction process, choice and expectations of tourism and hospitality providers.

2.3. ICT and eTourism in the Hotel Industry

Forms of ICT such as computers, networks and information storage systems have been used in the Hospitality industry for internal organisation purposes; these include greater operational practices and efficiencies. The biggest impact of ICT on the Hotel industry presently can be seen through the reservation and booking systems used by customers through eTourism. Accommodation providers are the largest group in tourism (e.g. 12.3m rooms worldwide according to Cunill and Forteza, 2010). The International federation for IT and Travel & Tourism (IFITT) also demonstrate the increasing level and potential for ecommerce in the hotel industry with 22.5% of all eCommerce in the EU being spent on tourism (Marcussen, 1999). Most accommodation suppliers are SMEs with 95.5% of all organisations having fewer than nine employees (Cunill and Forteza, 2010). Most of these organisations are hindered by their small size with little access to markets and technology. This in turn leads to limited distribution channels.

IFITT suggest most hotel reservations are still made directly at the property of these establishments. Bookings can also be made over the phone and by central reservation offices. The industry is dominated by large multinational chain hotels (e.g. Hilton, Holiday Inn, Best Western etc.) and such hotel chains have more sophisticated in-house ICT systems for marketing and booking purposes.

It is common for hotels of all sizes to now have websites for marketing and Customer Relationship Management (CRM) purposes as well as possibly incorporating an ecommerce function for bookings. Other internet marketing methods include adverts, advertorial reviews, and adverts placed on other sites. Such uses allow increased interactivity and communications with customers, maximise sales and yield potentials (Hudson and Gilbert 2006).

Most hotels of all sizes have also incorporated Computer Reservation Systems (CRS) and Property Management Systems (PMS) for managing capacity, inventory control of rooms and offering yield management capability by maximising room occupancies. These systems also include database functions for general management of the hotel such as forecasts and financial administration. The large hotel chains usually have their own bespoke systems for CRS and PMS whereas other smaller sized hotels may have customised systems from software manufacturers such as Gastrodat. These systems are created to link directly with the internet and other General Distribution Systems (e.g. Sabre, Amadeus, Gailileo and Worldspan) to receive and publicise bookings. The hotel will have a type of Computer Reservation System (CRS) which interconnects with the GDS. The CRS can handle more internal functions such as CRM, marketing, mailing and reporting functions. The link with the GDS allows the firm to reach a global audience to maximise reservations and booking yields, as seen in Figure 2.
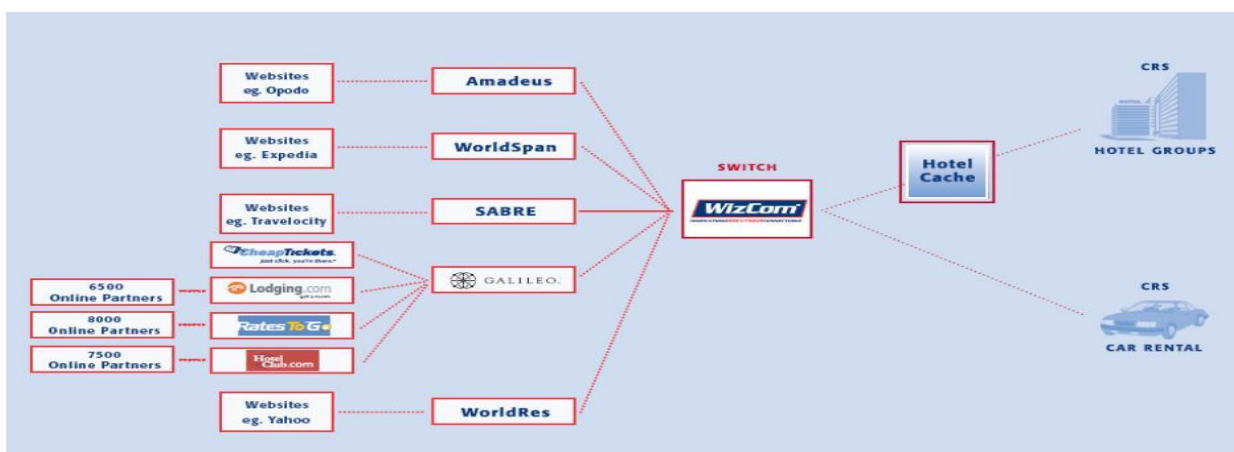

Figure 2. The use of CRS systems to interconnect with Global Reservation Systems

Source: IFITT Report, 2013.

2.4. The Use and Impact of ICT in Small and Medium Enterprises (SMEs)

SMEs in the hotel industry do have issues adopting ICT due the lack of ICT literacy, the lack of understanding and financial constraints to implement such systems (Main, 2002). They may also have cost and training problems. However by implementing ICT systems SMEs are able to collaborate and connect with more customers

and third party organisations, they will be able to benefit from scale economies particularly if they link up with GRS and reach different distribution channels. ICT also enables firms to adopt better operational procedures, integrate internal functions such as manage room plans, bookings, billings and analytics. It enables firms to manage their resources and improves their competitiveness.

ICT enables eTourism which can make the organisation more competitive by using:

a) intranets for managing its internal processes;

b) extranets for accepting connections with reliable partners;

c) the Internet for interaction with all its stakeholders and customers.

2.5. The use of Search engine optimization (SEO)

A search engine is a tool used to find, analyse and retrieve information from the World Wide Web. It can access website pages and present information from the site to the user searching online. Some search engines mine data, use algorithms or human input to identify websites. As a result the large amounts of data online do not always present the user with the necessary "hits" they may be seeking so search engine optimisation (SEO) is a tool used by website creators for making search engines identifies the type of information they may contain which will be more useful for users matching similar interests. For example, a hotel in London can optimise their website with relevant keywords, links with other sites and other relevant categories to be identified by a search engine such as Google or Yahoo Search. So when someone is using Google and looking for hotels in London, that web search will match more accordingly with hotels in London rather than providing endless lists of hotels from all other irrelevant destinations.SEO can lead to greater sales and leads, long term growth in visitors to the site and less marketing effort required.

2.6. Social Media and Internet Marketing

The Internet is an example of a networked technology which interconnects with other forms of ICT and its use is not exclusive. There is a large degree of overlap with other areas of ICT and interconnections with the general sphere of marketing a destination. Destination Management Organisations (e.g. Visit England) are responsible for promoting tourism and hospitality services for a specific location and may operate their own Destination Management Systems (DMS) for collecting, disseminating and promoting services in a certain area. SMEs can use their sites and systems to integrate with local DMS for reservations, providing information and general marketing (WTO, 2011).

Buhalis and Licata (2002) note the modern integration of other organisations and service providers in modern eTourism and also identified the consolidation of existing technologies such as GDS and CRS serving the existing distribution model with travel operators and agents, but they also identified the new 'eMediaries' assisting ecommerce; this being the internet, interactive digital TV, mobile devices and mobile commerce ('mCommerce') as demonstrated in figure 3.

Social media plays an increasing role in modern eTourism and the interaction between stakeholders in the industry Social media is defined as being an online platform and technology used by people to share their opinions and experiences. Social media can also include photos, videos, music and opinions expressed by contributors. This for example means consumers can promote certain hotels or destinations when they have had an experience and this can affect the image perceived by future consumers. Social media is a powerful democratic force expressing social opinion and can enable communication and collaboration significantly. Integration of websites, ICT systems with the social network can lead to future commercial potential and also run the risk of bad promotion or adverse media reaching a wider audience so must be considered by businesses before developing marketing campaigns. However SMEs do have resource constraints limiting their ability to adopt ICT and integrate with modern social technologies compared to larger organisations (Kuttainen and Lexhagen, 2011).
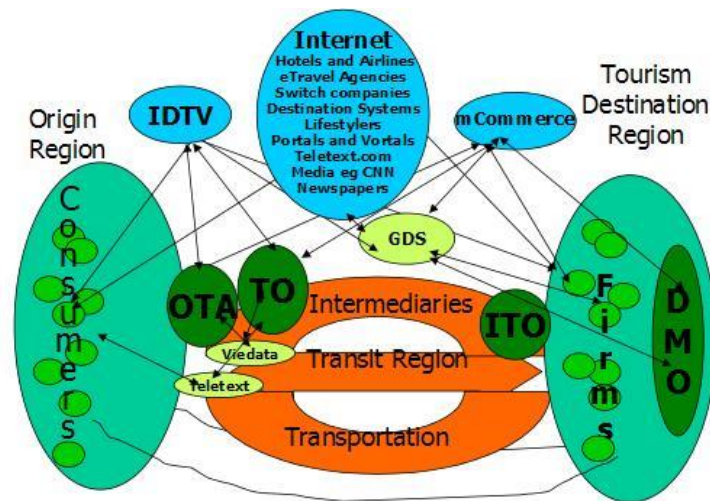
Figure 3. New tourism eMediaries

Source: Buhalis and Licata, 2002.

5. Conclusion and recommendations

Tourism has a long history with the use of ICT originating from the use of Computer Reservations Systems (CRS) in the 1970s and the Global Distribution System (GDS) in the 1980s. However the biggest impact and a paradigm shift in the business model for organisations in the accommodation and hospitality business has been made by the adoption of the Internet and modern global communications. The Internet has transformed distribution channels and the operational and strategic practices of organisations in the tourism and Hospitality business. ICT has had a positive impact for organisations in the industry as they are able to use ICT for internal efficiencies, processing and disseminating information, managing distribution and creating new avenues for future commercial growth with a global audience. E- tourism has been a new industry for companies to enter and be able to compete with other rivals who may have considerably more resources. Such a development has been a great discovery and tool for ambitious businesses and owners. However the new technology has also presented a challenge to existing models, practices and organisations in the industry. The internet has given consumers more bargaining power due to their ability to compare services, costs and read past reviews before making a purchasing decision. They also have less transaction costs when seeking tourist services and can switch easier and far cheaper using the internet. This has created an atmosphere of intense competition. The rivalry has also created lower barriers to entry, where Tourism and Hospitality industries can enter Global Distribution Systems for a mere £149.99 compared to larger rivals who may implement more bespoke databases and hire staff to maintain such systems. There is a greater degree of transparency for consumers to exercise their power before they make a purchase decision. Whilst ICT has created such challenges, it also provides great potential for organisations to engage with consumers in marketing practices and adopting ICT to engage with consumers. Twitter, Facebook and other forms of social media provide methods for even small organisations to connect with potential customers and with successful Customer Relations Management (CRM) they may be able to create a long lasting rela- tionship for future commercial benefit. Buhalis and Licata (2002) stress the importance for the tourism industry to use ICT and incorporate the benefits of multi-channel and multi-platforms for increased business in the future. These need to be adopted at a strategic and operational level in all organisations across the industry.

Tourism and Hospitality industries should be commended for its use of ICT and adoption of modern technologies such as social networks for engaging with customers. The use of ICT has been cleverly managed and implemented with very minimal cost, requiring little technical resource from the staff. This is an example to all Hotels and other similar organisations of a small size who may not yet have adopted ICT. However Tourism and Hospitality industries suffer greatly by being located in London against the vast competition from other rivals with greater resources who are able to market more effectively online. Tourism and Hospitality industries perform poorly in online searches for hotels and accommodation in London. Greater development is needed by the site owner to adopt Search Engine Optimisation (SEO) practices which can improve this occurring. However a redesign of the existing site will be costly to Tourism and Hospitality industries but strategically important if it is to perform better in online searches. Tourism and Hospitality industries could also benefit

further from developing more video content on YouTube and creating more graphic and moving images for dissemination on the internet. The organisation could also maximise its online sales conversions by more co-operation with other intermediaries who are in the tourist related field, such as theatres, attractions and flight operators. There remains a large scope for Tourism and Hospitality industries to develop and online presence after making significant improvements in recent years. The website for Tourism and Hospitality industries are functional but can be improved in terms of usability with the introduction of language options and customisation options. Navigation can be improved with the introduction of a sitemap, more links to external and internal sites. The content aspect of the website is good and more could be done with features such as the blog to promote the brand and market on the internet more. Colour and graphics utilised are good but the content will need regular updating to keep users interested and keep information fresh.

The paper is restricted in inside London and the result is obtained based on the past studies. The study is conducted in ICT application only as independent variable. Therefore, there may be some other variables which may influence on tourism and hospitality industries. The paper is entirely prepared based on literature in London.

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