# Barriers to Implementing Information Communication Technology (ICT) in Managing Small to Medium Tourism Enterprises (SMTEs): the Case of Hogsback, Eastern Cape, South Africa

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Information Communication Technology is recognised worldwide for its contribution towards SMTEs development and the economy. However, the level of ICT implementation as a management tool, its contribution and the extent of benefits on SMTEs is a debateable phenomenon. The purpose of this study was to investigate the barriers to the implementation of ICT within the context of small and medium tourism enterprises in Hogsback. Both quantitative and qualitative research methods were applied in this study. Questionnaire interviews were conducted with owner/managers in Hogsback. The stratified sampling method was utilised to collect data. The study indicates that (46.2%) of the business respondents were operating the accommodation establishments. The findings of the study underscores that (25.6%) of the business owners identified the barriers of ICT appears to be high costs. Further (23.1%) stated that accessing technology was also an impediment. Moreover, the study elucidates that (94.9%) of the SMTE concur that implementation ICT as a management tool helps to meet objectives of the business for the daily operations of the business. It is therefore recommended that ICT be implemented as a management tool for small and medium tourism enterprises. Furthermore, the study recommends that the managers/owners should invest in technology to ensure the success of the SMTEs in all aspects. Furthermore, the study serves as the basis for future studies in the area of ICT within the SMTE sector.

**Key words:** *Information Communication Technology (ICT), Small to Medium Tourism Enterprises (SMTEs), Hogsback, South Africa*

## Introduction

There is a body of literature on the significance of ICT implementation within the small tourism business sector and its profound impact on economic and business activities (Fairlie, 2020). For instance, small businesses risk losing business within a very short space of time because of barriers that hinder the implementation of the latest ICT technologies, in some instances thiscan be attributed to insufficient funds in this sector.

Information and communication technology (ICT) is an umbrella term for technological developments for the production, exploration, storage, search distribution and use of information. ICT entails a combination of hardware, software, telecommunications and human-ware (Jamsandekar, 2013). ICT implementation allows efficient data processing and communication, organizational assistance and it also provides significant abilities for customers. In the modern era ICT provides a conduit for the development of modern small tourism business to interact with customers across the global spectrum (Fairlie, 2020).

ICT has also provided new tools and allows new distribution channels, therefore creating a new business environment. These ICT tools have assisted business operation in the industry by networking with trading partners, distribution of product service and providing information to customers worldwide (Sadr, 2013). Thus the customers are also using online to acquire information and plan their trip hence information is the key component in the tourism industry. Therefore, it is of importance for small and medium tourism businesses to utilise information and communication technology as a management tool. Thus avoiding the barriers to ICT implementation is imperative in the context of small business in the tourism industry.

Mxunyelwa (2016) avers that in Africa ICT is said to represent the technology required for information processing and transfer: innovative tools which form an integrated system of software and net worked equipment that facilitates data processing, information sharing, communication, searching and selecting from the existing variety of products and services used for an organization's benefit. ICT is an umbrella term which refers to any product that stores, retrieves, manipulates, transmits and receives digital data and how these several applications work with each other (Buhalis, 2003). It is therefore essential for SMTEs to utilise ICT as a management tool for managing enterprises in their daily operations.

Bethapudi (2013) writes that the ICTs have transformed SMTEs in many part of the world. The ICT-driven re-engineering of SMTEs has increasingly generated a new paradigm shift, embodied the alteration of the industry structure and the development of a whole range of opportunities and threats. ICT plays a major role in the development of SMTEs both in developing and developed countries. Therefore, it is an inevitable part of the tourism industry's expansion. In this context the vast majority of the hotels, resorts, travel agents, tour operators and tourism organisations need upgrading in line with the latest ICT trends (Bethapudi, 2013).

The upgrading of ICT tools helps the organisations to reach the next level of user engagement and market penetration. The utilising ICT as a management tool of these enterprises must be understood as the ICT evolution in the industry, through keeping abreast with the developments. For example, in the past people used to carry guide books, maps, compasses and more things that help them to know the route. But today with rapid changes in the technology where all the industries are adopting mobile apps such as Airbnb for making their business wider (Fatoki, 2018).

Airbnb is an online marketplace which lets people rent out their properties or spare rooms to guests. Airbnb takes 3% commission of every booking from hosts, and between 6% and 12% from guests. Authors such as Mxunyelwa (2016) contend that little consistent information is publicly available on the state of the ICT industry in South Africa.

Mxunyelwa (2016) arguers that the implementation of ICT by SMTEs in developing countries, especially in Africa, has not yet been sufficiently researched. However, for a smooth running of the business, managers of small and medium tourism businesses are well poised to perform better when the utilisation ICT as a tool for managing these enterprises is implemented.

SMTEs can utilise ICT as a management tool for building awareness and the promotion of their services and products, and for penetrating the potential global markets. Increasingly, ICT has become an enabler that plays a pivotal role in the competitiveness of small tourism businesses. Consequently, the current study sought to investigate the barriers of implementing ICT as a management tool within the context of small tourism businesses in Hogsback.

**Methodology**

The main objective of this study was to examine the barriers of ICT implementation within SMTEs in the tourism industry in Eastern Cape, South Africa. Zikmud and Babin (2013) postulates that the research instruments that can be used for primary data collection are: interviews, observations, questionnaires, standardized tests, archival records, and documentations. Stratified sampling technique was utilized to collect data from the business respondents. For this study, the research instrument developed to obtain primary data wasa questionnaire. The study adopted both qualitative and quantitative research approaches. The owner/managers of the small tourism business were the respondents in the context of this study.

**Literature review**

**Overview of Information and Communication Technology for Small Medium Tourism Enterprises**

Bethapudi (2013) highlights that ICTs have transformed SMTEs globally. The ICT-driven re-engineering of SMTEs has increasingly generated a new paradigm shift, embodied the

alteration of the industry structure and the development of a whole range of opportunities and threats. As it plays a major role in the development of SMTEs both in developing and developed countries. Therefore, it is an inevitable part of the tourism industry's expansion. In this context the vast majority of the hotels, resorts, travel agents, tour operators and tourism organisations need upgrading in line with the latest ICT trends (Bethapudi, 2013).

These upgrades help the organisations to reach the next level of user engagement and market penetration. The utilising ICT as a management tool of these enterprises must be understood as the ICT evolution in the industry, through keeping abreast with the developments. For example, in the past people used to carry guide books, maps, compasses and more things that help them to know the route. But today with rapid changes in the technology where all the industries are adopting mobile apps such as Airbnb for making their business wider. Airbnb is an online marketplace which lets people rent out their properties or spare rooms to guests. Airbnb takes 3% commission of every booking from hosts, and between 6% and 12% from guests.

Mxunyelwa (2016) contends that little consistent information is publicly available on the state of the ICT industry in South Africa. He further writes that the implementation of ICT by SMTEs in developing countries, especially in Africa, has not yet been sufficiently researched. However, for a smooth running of the business, managers of small and medium tourism businesses are well poised to utilise ICT as a tool for managing these enterprises.

Modimogale (2013) highlights that South African SMTEs contribute positively to the country's Gross Domestic Product (GDP) and the reduction of unemployment levels. Constantly, the South African government is pushing for South African SMTEs to adopt ICT in order for them to continue with the good work.

South Africa faces similar challenges to several developing countries such as Botswana, Afghanistan and Samoa, resulting in similar motivations for adopting ICT, such as the promise of solutions for economic and social problems, reduction of the digital divide between third world (poor and developing) countries and first world countries and integration of ICT with the delivery systems of foreign aid investments (Faye, McArthur, Sachs & Snow, 2004).

Fink and Kenny (2003), caution against the belief that the digital divide is widening between the developed and the developing countries. The increase in network development in developing countries is growing at a faster rate than in the developed countries. For example, between 2013 and 2014, a median of 42% across these countries said they accessed the internet at least occasionally or owned a smartphone.

The internet use among the 17 advanced economies surveyed has remained relatively flat, with a median of 87% across these nations using the internet at least occasionally in 2017. This is similar to the 86% who said this in 2015 or 2016 (Poushter, Bishop & Chwe, 2018). Fink and Kenny (2003), further argue that the way the division is measured needs to be reviewed. This

means that the drivers of ICT should be considered carefully, as many governments' drives for the adoption of ICT are based on this assumption.

## The relationship between Information and Communication Technology and Small Medium Tourism Enterprises

World Travel and Tourism Council (WTTC) (2019) underscores that tourism remains a main foreign exchange earner and a support industry for many countries across the globe. In terms of a holistic approach, it is a strongly intertwined discipline, with ties to other sectors of the given economy. Chen,Lin, and Kuo, (2013) view tourism to be a powerful wagon for socio-economic advancement and development, and, as such, SMTEs are seen to be creating capacity for people to participate with the industry.

The past decade's development of ICT and social media has dramatically influenced and improved howtourism and hospitality sectors produce, market and supply their products, with their use having, unquestionably, become a vital tool and strategy. Karimidizboni (2013) states that the accelerated collision among technology and tourism in recent years has brought about indispensable changes in theunderstanding of the nature of tourism, with all its economic ramifications, within the entire tourism industry as a whole. Therefore, the use ICT as a management tool for SMTEs is important.

Werthner and Klein (1999) show the relationship between the overall ICT, using the Internet as an example, and the variables that are related to it from a tourism perspective. Consequently, a sequence of communication is created. The overall structure of the industry has been transformed since ICT and the Internet has become the vital communication tool for the industry. Bughin, Corb, Manyika, Nottebohm, Chui, Barbat, and Said, (2011) present the dispute that the importance of the Internet, andof online presence, is demonstrated by means of the high levels of Internet penetration.

The availability of Internet resources, and the internet itself, offers the tourism industry opportunities to provide wider, deeper and more customized offerings than before to a pool of clients, by achieving active relationships at reasonable cost, and without substantially altering the quality of information delivered (Buhalis, 2002).

Shanker (2008) argues that modern information society has made tourism a highly information-rich andintensively structured sector, as the dispersion of ICT has huge potential impacts for tourism business.Alam (2009) states that the business world has become deeply influenced by ICT, with the applicationof ICT among businesses being widespread. The impact of ICT on businesses relates to the facilitationof communication among organizational stakeholders, with it serving as an effective sales channel, andproviding an effective platform for engaging in marketing and other like-minded pursuits (Wang & Xiang, 2012). It is therefore, important to use ICT as a management tool for SMTEs.

In the light of the above, ICTs have become important tools in terms of an organization's capabilities to endure and to extend to a position of advanced competition in the global economy, and, additionally,in the digitalized economy (Munar, 2012; Parsons & Oja, 2013). A link between tourism and ICT can,unquestionably, not be established without ICT having given organizations new managerial techniquesin which to retrieve information (Alam, 2009).

The last decade's growth of ICT, and especially of the social media has, undeniably, reinvented how the tourism and hospitality industries produce, market and deliver their offerings, as well as communicate both internally and externally (Leung, Law, Hoof & Buhalis, 2013). Lee and Wicks (2010), Buhalis and Law (2008) and Munar (2012) debate that ICT has become an invaluable businesstool and strategy that is capable of being used efficiently within the travel sector. Travel agencies and physical bookings are now almost outdated. So much that a recent survey by eMarketer shows that travel-based mobile apps are the 7th most downloaded category and that 60% of smartphone users prefer travel apps for planning their leisure tours. However, its use does require up-to-date awareness of the latest technological trends.

**Importance of Information and Communication Technology in Small Medium Tourism Enterprises**

Effective and high-speed ICT infrastructure and software applications in the tourism and hospitality industry are crucial for tourism development. ICTs allow customer -management relations and supply chain management to be combined into a single source that facilitates a range of operations - product selection, ordering, fulfilment, tracking, payment and reporting to be performed with one easy-to use tool. ICTs ultimately cut costs by enabling the provider to be in direct contact with the consumer and also impact employment through the need for required maintenance of ICT equipment. Management within tourism companies use ICTs to undertake a range of tasks that improve the efficiency of employees in the workplace, notably online reservations (Bethapudi, 2013).

The development of ICTs has also led to changes in demand and supply. A higher demand for flexible,individualized options and quality of information has personalized leisure and tourism behaviour, a consequence of increased ICT use. Through new technology and social and economic ratings (e.g., social media platforms like Facebook, Twitter, blogs) customers have the ability to share information and research ratings on destination, quality of service in hotels and restaurants and environmental and social conditions. Number of hotels (e.g., Marriot Hotels and Resorts, Ritz Carlton Hotels, Hyatt Hotelsand Resorts) have strengthened their brand image and communicate directly with their customers by posting links to a press release or promoting new package via Twitter (Bethapudi, 2013).

Donath and Boyd (2004) and Madden and Zickuhr (2011) are off the view that the social networking are on ascending trajectory. Therefore, sites usually feature requests for assistance, which can be attributed to the new phenomenon of electronic word-of-mouth (eWOM)

communication. The word ofmouth is a powerful tool that has potential to provide impetus to small tourism business. It is for this reason that ICT as a management tool is such an imperative aspect to managing small tourism businesses.

The aforementioned sites offer an interesting opportunity for businesses to disseminate information totheir clients in their catchment areas. As such, some businesses have recognised the potential benefits to be gained from Social Networking Services (SNSs), including increased networking, opportunities for better presentation to clients and customers, and the payment of closer individual attention to all parties concerned (Buhrmester, Kwang & Gosling, 2011). Thus appreciating ICT as management tool for small tourism businesses is highly practiced in developed economies.

## Barriers of implementing Information and Communication Technology in Small and Medium Tourism Enterprises

### Internal Challenges

Internal challenges refer to challenges that are faced by SMTEs, which come from within the SMTE itself. Generally, these kinds of challenges can be managed and controlled by the SMTEs. Manpower compatibility problems are one of the most common challenges faced by SMTEs in the adoption of social media. This includes the problem of the short supply of skilled personnel who have basic skills and knowledge of handling the internet, as well as social media (Calli & Clark, 2015).

At large SMTEs are family run businesses, especially for businesses operated in the outskirts and villages. Hence, their knowledge in handling and use of technology may be quite limited. Although social media may be simpler to handle as compared to blogs and websites, business operators still facechallenges in terms of handling the communication through social media. Their lack of language proficiency has also become a barrier for them in creating content to be shared with their public spectators (Zeng & Gerritsen, 2014; Aboushouk, Lim, & Megicks, 2013). Due to this, they are unable to correspond and share information about their business to the general public, using universal language,English.

Another challenge faced by SMTEs are related to financial issues (He, Wang, Chen, & Zha, 2015; Calli& Clark, 2015), where some SMTEs find it difficult for them to invest in technology as it means they have to suffer additional costs in obtaining the technologically related tools, for example, Computer andinternet connection device. These SMTEs also find it taxing for them to maintain a monthly subscriptionof internet connection as it again includes additional expenses.

### External Challenges

Factors outside the organization can also cause harm in the adoption of social media by SMTEs.

These problems are commonly out of the organization's control and they must be able to manage these challenges well. One of the most common external challenges is the accessibility of internet connection in the area of operation (Shemi & Procter, 2013). SMTEs, especially in less developed countries and rural areas, generally are faced with internet related problems, where the speed is slower as compared to other areas in the city and developed nations.

The non-existence of internet coverage and slow internet speed will delay the adoption of e-commerce or any internet related activities by the SMTEs (Abou-Shouk, M et.al, 2013). This lack of internet access will make businesses shy away from adopting social media. In addition to that, some rural areas are also faced with lack of electricity supply problems and have to rely on solar or diesel generated energy. This is another big challenge for them since electricity is a must for all technological devices to work (Shemi & Procter, 2013).

## Results and discussion

### Age

| Table 1: Age group of respondents (*n*=39, in %) | |
|---|---|
| | Total (*n*=39, in %) |
| 18-30 | 7.7 |
| 30-40 | 41.0 |
| 40-50 | 38.5 |
| 50-60 | 7.7 |
| above 60 | 5.1 |

Table 1 depicts that (41.0%) of the respondents were in the age category 30-40 years, while those who were between the ages of 40 and 50 years constituted (38.5%), followed by those between 18 and 30 years of age (7.7%). Furthermore, those that were between the ages of 50 and 60 years (7.7%). While those that were between the ages above 60 years old constituted (5.1%). It is evident from these findings that the owner/managers of these enterprises are youthful, thus implementing ICT as management tools in their enterprises should occur unhindered.

### The type of business

| Table 2: The description of the business type (*n*=39, in %) | |
|---|---|
| | Total (*n*=39, in %) |
| Accommodation | 46.2 |
| Event | 2.6 |
| Tour | 15.4 |
| Restaurant | 33.3 |
| Attraction | 2.6 |

Table 2 depicts that (46.2%) were businesses operated in the accommodation sector, followed by (33.3%) were restaurants, (15.4%) were tour operators, (2.6%) were events and (2.6%) were attractions. It is evident that business respondents were dominated by the accommodation sector and restaurants. The findings seem to suggest that tourism small business predominantly encompass accommodation and restaurants. Therefore, barriers to implement ICT as management tool in making bookings can create challenges for these business in their effort to maximize the profits. The accommodation and restaurant sectors can effectively utilised the ICT tools for advertising their products and booking systems online.

**The utilisation of Information and Communication Technology as a management tool.**

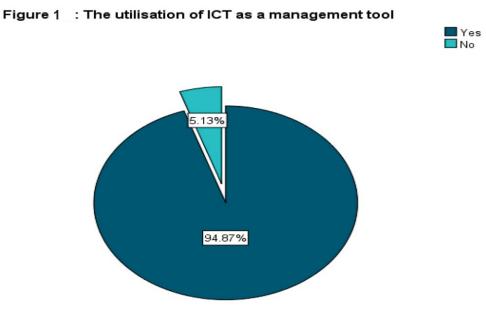**Figure 1 : The utilisation of ICT as a management tool**



Figure 1. shows that (94.9%) of the businesses utilise ICT as a management tool. However, (5.1%) indicates that they do not utilise ICT as a management tool. In recent times, technology has proven one of the highly utilised tool by businesses. Therefore, it is imperative to invest in the ICT tools in order to manage the business optimally.

**The business dependency on technology**

| Table 3: The business dependency on technology (*n*=39, in %) | |
|---|---|
| | **Total (*n*=39, in %)** |
| Yes | 87.2 |
| No | 12.8 |

Table 3 shows that (87.2%) highlighted that they depend on technology and (12.8%) highlighted that they do not depend on technology. Seemingly most businesses depend on ICT in order to make its business operations to be more effective. It is evident from the findings that implementing ICT as management tool for small tourism businesses has become one of the fundamental manager's responsibilities. Therefore, the lack of ICT infrastructure can pose a challenge to the success of these businesses as the findings elucidates that businesses depend on ICT in the modern era.

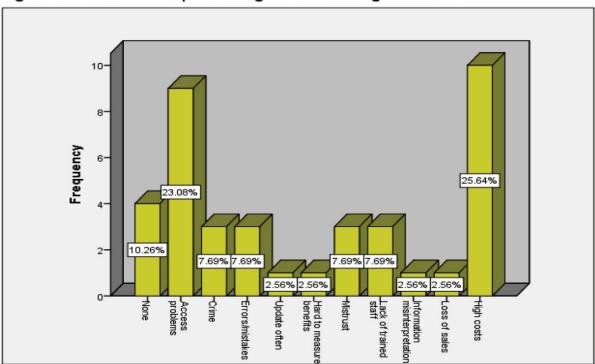**Barriers to implementing ICT as a management tool solution in the business**



Figure ___: Barriers to implementing ICT as a management tool

Figure 2. shows that (25.6%) of the businesses indicated that high costs was a barrier, while (23.1%) indicated that accessing technology was the barrier. On the other hand (10.3%) indicated that they did

not experience barriers. The results further elucidate that (7.7%) indicated that crime was the barrier, (7.7%) indicated that errors/mistakes appears to be a barrier, and (2.6%) indicated that often updating software. While the findings indicate that (2.6%) highlighted that it is hard to measure benefits. On the other hand (7.7%) highlighted that mistrust was the barrier, (7.7%) highlighted that there is lack of trained staff. The results further indicate that (2.6%) highlighted that information misinterpretation was the barrier, and (2.6%) highlighted that loss of sales was the barrier.

**Forms of Information and Communication Technology tools that are used to communicate with suppliers**

| Table 4: Forms of ICT tools to communicate with suppliers (*n*=39, in %) | |
|---|---|
| | **Total (*n*=39, in %)** |
| Email | 84.6 |
| Homepages | 2.6 |
| Internet | 10.3 |
| Electronic documents, invoices, delivery notices etc. | 2.6 |

Table 4 show that (84.6%) use email, (10.3%) use the internet, (2.6%) use homepages and (2.6%) use electronic documents, invoices, delivery notices etc.

**Discussion**

The literature review in the current study highlighted that past decade's development of ICT and socialmedia has dramatically influenced and improved how tourism and hospitality sectors produce, market and supply their products, with their use having, unquestionably, become a vital tool and strategy. Themajority of respondents indicating that they do utilise ICT as a management tool in SMTEs in Hogsback. The study, however, revealed an alarming trend in the findings, in that, even though most ofthe respondents indicated that they used ICT as a management tool for SMTEs in Hogsback, the majority expressed concern with some of employees who are not trained in terms of ICT. Most of the literature has been directed towards studying contexts, with less recognition having been given, on the whole, to the potential barriers implementation of ICT as a management tool for SMTEs in the context of small towns.

**Conclusion**

The use of ICT as a management tool has become of significance to SMTEs on their daily operations. Despite the positive benefits that accrue from the utilisation of ICT in SMTEs, there are negative impacts that also emanate from them. Of critical importance is the fact that managers/owners pursuingthe implementation of ICT as a management tool for SMTEs to meet objectives for business operationsas well as the competence of SMTEs.

## Recommendations

In light of the findings of this study, it is recommended that further investigations should be conductedto broaden the understanding of the barriers of ICT implementation as a management tool within small and medium tourism enterprises in the context of small cities/towns. Furthermore, longitudinal studies should be conducted to address the gap in the literature pertaining to the barriers of ICT implementationas a management tool within small and medium tourism enterprises.

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