

# Recommendations for e-commerce systems in the tourism industry of sub-Saharan Africa

Tonderai Maswera<sup>a,\*</sup>, Janet Edwards<sup>b</sup>, Ray Dawson<sup>b</sup>

<sup>a</sup> *Research School of Informatics, Computer Science Department, Holywell Park, Loughborough University, Loughborough, Leicestershire LE11 3TU, United Kingdom*

<sup>b</sup> *Computer Science Department, Loughborough University, Loughborough, Leicestershire LE11 3TU, United Kingdom*

Received 24 May 2007; accepted 17 December 2007

## Abstract

The recommendations described in this paper are a continuation of research previously reported in the Telematics and Informatics journal. This paper explains how the tourism organisations from sub-Saharan Africa can evolve their websites into marketing tools and how they can overcome the impediments to e-commerce adoption and usage. The recommendations also explain how the other major players within the economies of these countries can make the environment conducive for e-commerce development and growth so that the tourism organisations from this region can break into the lucrative international tourism market. The recommendations were tested by sending them to the African organisations and experts in e-commerce and tourism who have worked in, or are currently based in Africa, south of the Sahara. The results showed most organisations and experts who responded think that these recommendations will help African tourism organisations adopt and use e-commerce. African tourism organisations that intend to implement or are in the process of implementing e-commerce systems should follow the recommendations outlined in this paper to help sub-Saharan Africa reach its tourism potential.

© 2008 Published by Elsevier Ltd.

**Keywords:** Recommendations; e-Commerce; Websites; Tourism; Sub-Sahara Africa

## 1. Introduction

The tourism industry is regarded as one of the biggest sectors in the world generating an estimated 11% of the global gross domestic product (GDP) and employing 200 million people and serving 700 million tourists worldwide – a figure which is expected to double by the year 2020 (Roe and Urquhart, 2001). With the other major sectors of the economy not performing well, the tourism industry has emerged as the biggest contributor of the GDP since the early 1990s in most African countries and is now viewed as the panacea of the African economies (Gauci et al., 2002; Dieke, 2000).

\* Corresponding author. Tel.: +44 1509 635649; fax: +44 1509 211586.

E-mail address: [t.d.maswera@lboro.ac.uk](mailto:t.d.maswera@lboro.ac.uk) (T. Maswera).

Despite the diverse wildlife, unique resorts and the exotic flora and fauna, Africa's tourism potential remains underutilised and undeveloped (Naudé and Saayman, 2005). Today the Internet with its growing population has technologies which provide the African merchants with an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers. Electronic commerce (e-commerce) which operates on the backbone of the Internet could help the African tourism organisations generate additional revenue by reaching the markets they could not access using traditional systems. Adoption and usage of e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Anite Travel Systems, 2000; Paulo, 2000; Accenture, 2002; Werthner and Ricci, 2004). e-Commerce could help achieve the potential of the African tourism industry thus increasing the in-flows of the much needed foreign currency into their economies.

## 2. Methodology

The study described in this paper is a continuation of research previously reported in the *Telematics and Informatics* journal by Maswera et al. (2006). As there is little published information about the e-commerce activities in Africa south of the Sahara (Molla and Licker, 2004), a study (Maswera et al., 2006) was carried to find out if organisations in the tourism industry in four African countries were adopting e-commerce. The countries studied were South Africa, Kenya, Zimbabwe and Uganda. These four African countries were chosen for the study as they are some of the tourist destinations which are better known for safari-type of tourism. This research is described in more detail in the previous paper in *Telematics and Informatics* by Maswera et al. (2006), in the PhD thesis by Maswera (2006), and in papers by Maswera and Dawson (2003a,b, 2004) and Maswera et al. (2005). However, for ease of reference, this section provides a summary of the research undertaken.

There were two phases in this study. The first phase involved examining a large number of websites of various tourism organisations from the above-mentioned countries. Three surveys were carried out, the first to determine what e-commerce features are available on the sub-Saharan African websites, the second to examine the content accessibility and the third to examine the usability of the websites. Availability sampling was used to choose the organisations to survey. Search strings were used to find as many websites as possible relevant to tourism in the African countries. For this purpose the search engines used were Google and Excite. To get the most out of a search the researchers used search strings such as “*Major Hotels in South Africa*” and “*Travel Agencies in Namibia*”. Other websites were found at sites of various associations. For example, the Tourism Business Council of South Africa (TBCSA), the Kenya Association of Tour Operators (KATO), and the United States Tour Operators Association (USTOA) have lists of links to websites of their members.

The limitation of this sampling method is that it is difficult to determine the total population the tourism organisations that the survey represents. However, by obtaining as many companies as is possible with between 300 and 600 websites examined in each survey, all categories of tourism organisations were well represented. The websites which were accessed were those of the various tourism organisations which included national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators. The websites of the aforementioned organisations are likely to provide information a tourist needs before deciding whether to embark on the particular trip. These websites will also enable the customer to carry out the necessary transactions such as making enquiries or online reservations and paying for the products and services.

The analysis of the data gathered from the surveys revealed that although the websites were comparable in terms of providing tourism product information to those of their counterparts in the USA and Europe they need to be evolved into marketing tools for them to attract enough business for the tourism organisations to make an impact in their respective economies. In terms of accessibility and usability, the results showed that although the African websites were comparable to those of organisations from established and more developed markets, this was usually because the African websites were relatively simple and lacked the more advanced features of their American and European counterparts. The African organisations need to follow the Web Accessibility Guidelines when designing and developing websites so that they add more advanced features that are able to fully capture that market which is not being catered for on other websites.

In the second phase of the research, questionnaires were then administered to tourism organisations from sub-Saharan Africa to find out what efforts are being made by the tourism organisations to adopt and use e-commerce and to determine how receptive these organisations are to these Internet technologies. The results showed that many of these organisations are not taking advantage of these technologies to fully embrace e-commerce. A positive aspect shown by the questionnaires is that the tourist organisations are aware of the capabilities and potential of e-commerce, and are planning to fully embrace e-commerce if and when they manage to overcome the barriers and inhibitors to e-commerce implementation. A total of three questionnaires were administered to find out if the African tourism organisations were taking advantage, or planning to take advantage of the Internet to promote tourism to enhance their position within the international tourism market.

The first two questionnaires were administered to African tourism organisations with simple information-only websites or websites with only limited interactive features to discover what barriers they face in implementing e-commerce. The e-commerce barriers were then ranked according to importance the tourism organisations attached to these barriers. A further questionnaire was then sent to African tourism organisations with fully-fledged e-commerce websites to find out how they managed to overcome those barriers rated as significant by the organisations which are yet to adopt e-commerce.

As a result of the previous research described above, the methods employed to overcome the barriers together with the recommendations made from the first phase of the research were then compiled into a recommendations document, the content of which is given in the next section of this paper. These recommendations were then tested as described in Section 4 of the paper.

### 3. The recommendations

Twelve recommendations have been made as a result of the study. The first six recommendations are general actions to enhance and promote an organisation's website. Recommendations seven to twelve are recommendations to overcome the barriers to e-commerce discovered from the questionnaires.

#### 3.1. Recommendation 1: e-Commerce features

Evolve the website into an e-commerce tool and an international website which can be tailored for global markets such as Europe, America and Asia. This will involve adding features such as corporate information, information on products and services, Frequently Asked Questions (FAQs), useful non-product information such as the weather, privacy and security statements, online enquiries, online reservations, reservation tracking and online payment.

#### 3.2. Recommendation 2: Customer relationship management (CRM)

Evolve the website to employ effective electronic CRM components to encourage customers to keep coming back and this will create an impression consistent with the organisations' desired image. CRM components that could help capture customers' preferences, needs and requirements, could include contact details, e-mail, an online feedback form, an electronic newsletter, promotions, special offers and other loyalty schemes, a callback service, and personalisation through customised content.

#### 3.3. Recommendation 3: Website promotional campaigns

The Internet can be used to promote products and services as it provides, at modest cost, an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers. The websites should contain facilities that will attract new customers as well as retain old ones, such as an electronic newsletter, Frequently Asked Questions (FAQs), loyalty systems, callback services, a privacy policy statement, promotions and special offers, customer feedback, an information/brochure request, electronic postcards, and reciprocal links to other websites. The organisations should also employ offline techniques, such as displaying the URL on billboards, newspapers, press releases, television, tourism products, and all other advertising.

### *3.4. Recommendation 4: Knowledge transfer facilities*

Evolve the website to produce an interactive environment that can transfer knowledge from the customers to the organisations and from the organisations to the customers. This exchange of knowledge should be used by the organisations to provide better products and services. For the organisations to gain knowledge from the customers, include features such as data gathering of customer transaction for customer profiling, customer surveys, an electronic guestbook or user review facility, and possibly instant messaging facilities. With the knowledge obtained, the site can then provide loyalty systems, personalised content and a recommendation engine to help customers make decisions. For customers to gain knowledge from the organisations, include features such as electronic newsletters, bulletin boards and online tracking of orders and reservations.

### *3.5. Recommendation 5: Increasing website traffic*

To generate meaningful business the organisations need to increase traffic to the website. The organisations should include on their websites facilities which attract more visitors such as those outlined in Recommendation 3. In addition, the organisations should also use such techniques as doorway pages, customer accounts, effective meta and title tags, and registration of websites on major search engines. They should also aim to host their websites on their own servers to have direct control on the maintenance of the websites and to enable them to update their websites regularly.

### *3.6. Recommendation 6: Web content accessibility*

Ensure that website content is accessible and usable by all people, including those with disabilities. To achieve this, the organisations need to follow the Web Content Accessibility Guidelines ([World Wide Web Consortium \(W3C\), 2005](#)) when designing and developing their websites. The organisations will also need to use qualified website designers, ensure web content cohesion and minimise website load time.

### *3.7. Recommendation 7: Overcoming security and legal barriers*

Customers' sensitive data, such as credit card details and other personal information that is entered into an e-commerce system, must be protected. For an e-commerce system to be successful it needs a high level of security. The organisations should make use of the technologies such as a firewall, proxy server, encryption, user accounts, anti-spyware, audit logs, entrapment server, anti-virus software, Internet usage policy, virus e-mail updates, secure electronic transaction, secure socket layer, digital signatures, digital certificates, prepayment systems, user accounts, disaster recovery plans, trust seals, privacy and security statements, and a security payment link to make the e-commerce website secure and reliable. If the organisations' employees do not trust e-commerce technology then techniques such as using trial versions of e-commerce systems or running dual systems can be used to reassure them.

### *3.8. Recommendation 8: Overcoming the technological barriers*

Use the appropriate technology to setup a fully-fledged e-commerce system. For the organisations to setup e-commerce systems they need modern payment infrastructure and a high speed, reliable Internet connection. To ensure the organisations use the appropriate technology they should setup e-commerce divisions, employ external technical expertise, equip their own technical staff with appropriate expertise, subscribe to e-commerce journals or magazines and approach international banks to get help setting up online payment systems.

### *3.9. Recommendation 9: Overcoming organisational barriers*

Ensure the organisational structure and culture are able to deal with e-commerce-induced change. To achieve this, organisations need to understand the impact of e-commerce by carrying out thorough investigations before implementing the e-commerce-induced changes following a clearly laid out strategic plan. In order

to overcome the shortage of IT-skilled personnel, organisations need training programmes as well as human strategies in place. With the advent of e-commerce, organisations will need to develop electronic logistics to replace their traditional logistics.

### *3.10. Recommendation 10: Overcoming behavioural barriers*

For adoption and usage of e-commerce to be seamless, the organisations must obtain co-operation from its employees. Some people are likely to resist any change. The organisations need to avoid resistance from employees by assuring personnel of job security, convincing employees of e-commerce value and sending employees on courses and seminars on e-commerce techniques. To reduce the risk of key staff leaving after being trained, organisations need to ask employees for commitment before they are sent for training, train more people than required and increase salaries of key e-commerce staff. To generate management support, organisations need to involve top management in decision making for key issues in the e-commerce project so that they feel part of it and are committed to its success.

### *3.11. Recommendation 11: Overcoming the financial barriers*

Ensure adequate finance is available to setup and run the e-commerce system. If financial resources are not readily available, organisations can borrow from a financial institution using calculations such as investment risk analysis, return on investment, cost-benefit analysis to manage the financial commitment. The organisations could start with a relatively inexpensive e-commerce system with basic facilities, develop it in stages whenever the money is available.

### *3.12. Recommendation 12: Training to prepare for e-commerce adoption*

Provide training of key personnel to overcome the barriers likely to be most significant, such as the security and legal barriers and the technological barriers. Technical training is required in building e-commerce applications, e-commerce website security, electronic transactions and e-commerce system administration. Managerial training is needed in financial investment and planning, the management of change and human resource management.

## **4. Testing the recommendations**

The recommendations document was then sent to the tourism organisations that took part in the questionnaires administered in the study, to national government officials and to experts in the areas of e-commerce and tourism from the four African countries. The aim of this exercise was to find out the opinions of the above-mentioned individuals and organisations on the content of the document. This would help determine whether the recommendations will work for all the tourism organisations based in the four African countries and other sub-Saharan African countries.

The recommendations need to help the tourism organisations overcome the security and legal, technological, organisational, behavioural and financial barriers to e-commerce. This would then enable the organisations to implement fully-fledged e-commerce systems to help break into the lucrative international tourism market. This will mark the beginning of African tourism organisations' journey to realising their full tourism potential.

## **5. Circulating the recommendations**

The recommendations document was sent as an e-mail attachment to 200 tourism organisations based in 10 African countries to which tourism is significant, these countries being South Africa, Kenya, Zimbabwe, Uganda, Namibia, Tanzania, Mauritius, Seychelles, Zambia and Botswana (Christie and Crompton, 2001; World Tourism Organisation, 2006). The reason for using 10 African countries was to find out if the recommendations would work in other countries other than the ones studied to derive the recommendations. Again availability sampling was used with the organisations contacted being those where contact details could be

found. These organisations were also invited to submit their comments to the author. The use of e-mail was preferred to other methods of circulating the document, such as postal mailing, because it was cheaper, faster and readily available in most organisations (Tassabehji, 2003). Open questions were used which are more flexible as they allow the respondents to comment on any other issue of their choice relating to the document (Weisberg and Bowen, 1977). These tourism organisations were asked to comment on two aspects of the document which are usefulness and ease of use.

The same document was also sent to 20 experts in the areas of e-commerce and the tourism industry based in sub-Saharan Africa and 10 Government officials from the same African countries to seek their opinion of this document. The experts were identified during a brainstorming session which involved the author and three lecturers from the Computer Science Department at Loughborough, Ray Dawson, Janet Edwards and Tom Jackson whilst the contact details of the government officials were obtained from websites of government departments which are directly responsible for the promotion of the tourism industry. This was done to obtain the widest range of parties who the author believed would have an interest in the document and its contents.

## 6. The findings

A total of 33 responses were received of which 23 (70%) were from the African tourism organisations. The remaining 10 (30%) were received from the experts and government officials who have worked or are based in all the aforementioned African countries. The majority (97%) of the responses indicated that the recommendations document was very useful for the African tourism organisations and that it was very easy to use. Only one tourism organisation indicated that they could not have a look at the document because they were not well versed with e-commerce issues. All the experts and academics said that the recommendations document is useful and important for the tourism organisations from sub-Saharan Africa, though one expert from South Africa suggested that examples will be needed to help the tourism organisations to understand the recommendations better.

A total of 4 (13%) responses were received from tourism organisations and experts based in the other African countries and all of them indicated that the document was useful and easy to use. This indicates that the recommendations will not only be applicable in the African countries from which they were derived but in other African countries with similar environments.

An e-commerce manager of a group of hotels in Kenya, made the following comment about the recommendations document *“I believe the document is very concise and explains e-commerce requirement for organisations in simple terms that can easily be understood by the majority”*. This shows that the recommendations will not only be easy to follow but also cover all aspects of e-commerce adoption and will be useful to tourism organisations of all sizes.

A well renowned researcher in the area of e-commerce and Associate Editor of the *Journal of Information Technology Cases and Applications and Research* who has worked in and visited five African countries said of the recommendations *“This is a powerful document indeed”*. This comment highlights the importance of this document is to the tourism sector of sub-Saharan Africa.

An e-commerce expert from University of Namibia indicated that *“...the document...will serve its intended purpose”* while an academic and IT Consultant from Zimbabwe who is based in South Africa pointed out that *“...your recommendations are needed and they are feasible”*. The comments from these two experts show that the recommendations are very practical and detailed. This was as a result of the approach employed by the author whereby the methods and technologies for overcoming barriers to e-commerce were derived from more successful African tourism organisations rather prescribe solutions derived in other environments.

A South African tour operator had this to say about the recommendations, *“Your recommendations and guidelines are extremely concise and make total sense in today’s fast developing e-commerce climate”*. The comments suggest that the concise nature of the recommendations means that the African organisations should find the recommendations easy to follow. The comments also indicate it is important that the African tourism organisations follow these recommendations to break into the highly competitive international tourism market as otherwise they will soon be left behind by competitors elsewhere. The South African tour operator went on to say *“The basics are already very much part of our development thinking, but you have added many new dimensions that will most definitely assist any tourism organisation in Africa”*. This shows that this document



will not only help those organisations which are planning to adopt and use e-commerce but those who are already using it as well.

## 7. Conclusion

In general the recommendations evolve the website from being a simple information-only website to fully-fledged e-commerce site. The recommendations discussed in this paper are directed towards providing facilities and sufficient content for customers to make purchase decisions and carry out online transactions. The organisations should convert their websites into a marketing tool by employing online and offline website promotional techniques to break into the highly competitive international tourism market. It is also recommended that the African tourism organisations attempt to be always a step ahead of other organisations in the sector with the help of knowledge transfer facilities.

There will be difficulties and barriers to e-commerce that need to be overcome. However, this paper identifies these barriers and gives recommendations to overcome these barriers to be able to capture that market which is not being catered for on other websites. The recommendations for overcoming e-commerce barriers discussed in this paper were devised from tried and tested solutions which have been used successfully by tourism organisations in sub-Saharan Africa. As tourism is regarded as the pinnacle of the economies in sub-Saharan Africa and as there is stiff competition from Western Europe and North America, it is recommended that the all tourism organisations in Africa follow the suggestions made in this document to remain competitive.

The analysis of all the comments from the practitioners and the academics received shows that the recommendations will provide the foundation from which the African tourism organisations will be able to overcome the hurdles and be able to setup fully-fledged e-commerce websites. Receiving positive responses from tourism organisations based in other African countries is an indication that these recommendations will work in any other sub-Saharan African country. The authors strongly recommend that the tourism organisations from sub-Saharan Africa follow the recommendations discussed in this paper as they will be able to overcome the hurdles and be able to setup a fully-fledged e-commerce website to fully satisfy its economic potential.

## References

- Accenture, 2002. Customer-centric systems for the travel and tourism industry. <[http://www.sourceit-travel.com/documents/pdf/wtcc\\_customer\\_centric\\_transformation.pdf](http://www.sourceit-travel.com/documents/pdf/wtcc_customer_centric_transformation.pdf)> (visited 08.01.07).
- Anite Travel Systems, 2000. No turning back: tour operators and E-commerce. <[http://www.eyefortravel.com/papers/anite\\_touropers\\_and\\_ecommerce.pdf](http://www.eyefortravel.com/papers/anite_touropers_and_ecommerce.pdf)> (visited 08.01.07).
- Christie, I.T., Crompton, D.E., 2001. Tourism in Africa. <<http://www.worldbank.org/afr/wps/wp12.pdf>> (visited 05.01.07).
- Dieke, P.U.C., 2000. Developing tourism in Africa: some issues for policy consideration. *The Development Policy Management Forum* 7 (1), 25–31.
- Gauci, A., Gerosa, V., Mwalwanda, C., 2002. Tourism in Africa and the multilateral trading system: challenges and opportunities. <<http://www.propoortourism.org.uk/Gerosa%20paper.pdf>> (visited 08.01.07).
- Maswera, T.D., 2006. Electronic commerce in the travel and tourism industry in sub-Saharan Africa, PhD Thesis, Loughborough University, UK.
- Maswera, T., Dawson, R., 2003a. An evaluation of the use of the internet to promote tourism in four African countries. *Proceedings of the Software Quality Management (SQM) Conference*. British Computer Society, Glasgow, Scotland, pp. 325–342.
- Maswera, T., Dawson, R., 2003b. An evaluation of the use of the internet for customer relationship management by the travel and tourism industry in four African countries. In: Presented at the Business Innovation in the Knowledge Economy Conference, IBM, Warwick, July 2003.
- Maswera, T., Dawson, R., 2004. Website accessibility and usability of tourist organisations in four African countries. *Proceedings of the Software Quality Management (SQM) Conference*. British Computer Society, Canterbury, UK, pp. 367–376.
- Maswera, T., Dawson, R., Edwards, J., 2005. Analysis of usability and accessibility errors of e-commerce websites of tourist organisations in four African countries. In: *Proceedings of the Conference on Information and Communications Technologies in Tourism*, Innsbruck, Austria, pp. 531–542.
- Maswera, T., Dawson, R., Edwards, J., 2006. E-commerce adoption of travel and tourism organisations in South Africa, Kenya, Zimbabwe and Uganda. *Telematics and Informatics*. Elsevier, UK. doi:10.1016/j.tele.2006.11.001.
- Molla, A., Licker, P., 2004. Maturation stage of e-commerce in developing countries: a survey of South African companies. *Information Technologies and International Development* 2 (1), 89–98.
- Naudé, W.A., Saayman, A., 2005. The determinants of tourist arrivals in Africa: a panel data regression analysis. *Tourism Economics* 11 (3), 365–391.

- Paulo, R., 2000. Internet marketing destinations in the global tourism marketplace. <[http://www.isoc.org/inet2000/cdproceeding/7a/7a\\_2.htm](http://www.isoc.org/inet2000/cdproceeding/7a/7a_2.htm)> (visited 08.01.07).
- Roe, D., Urquhart, P., 2001. Pro-poor tourism: harnessing the world's largest industry for the world's poor, World Summit on Sustainable Development, May 2001. <<http://www.propoortourism.org.uk/Dilys%20IIED%20paper.pdf>> (visited 05.01.07).
- Tassabehji, R., 2003. E-Commerce in Business. Sage Publications, New Delhi, India.
- Weisberg, H.F., Bowen, B.D., 1977. An Introduction to Survey Research and Data Analysis. W.H. Freeman, San Francisco, California.
- Werthner, H., Ricci, F., 2004. E-commerce and tourism. Communications of the ACM 47 (12), 101–105.
- World Tourism Organisation, 2006. Tourism Highlights: 2006 Edition. <<http://www.world-tourism.org/facts/menu.html>> (22.11.06).
- World Wide Web Consortium (W3C), 2005. <<http://www.w3c.org>> (visited 18.03.05).