

An Evaluation Framework for Saudi E-Government

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Abstract

E-government supports the integration of technology into the social structure to transform administrative procedures to achieve a more effective form of government. Technological advances and the miniaturization of Information and Communication Technologies provide tools to enhance the diffusion of information and services to form part of an intellectual society serving citizens, customers, and professionals. Global e-government evaluation reports, such as the Brown University global e-government report, ranked the Saudi e-government at 72 in 2005, 98 in 2006, and 89 in 2007, while Saudi e-government jumped in the UN global ranking from 70 in 2008 to 58 in 2010. The purpose of this research was to assess the current state of the Saudi e-government by evaluating its ministries' web sites using a citizen-centered e-government approach. An interactive services e-government framework circumvents the limitations of existing evaluation frameworks examined in the literature while simultaneously building on their strengths. This study's framework quantitatively assesses stages of the Saudi ministry e-government web site and its problems. It was found that 8 (41%) of 21 ministries did not implement the main features of an e-government web site. In addition, 10 ministries (45.4%) were completely or partially in the first stage (web presence); 3 ministries (13.6%) were in the second stage (one-way interaction); and 6 ministries had no online service at all. These findings clearly demonstrate that the evaluated ministries were not citizen-centered e-government web sites and lacked transactional services, resulting in citizen dissatisfaction and frustration.

Keywords: E-government Framework; Web site evaluation; Saudi e-government; Yesser

Introduction

All over the world, the impressive power of information and communication technology (ICT) and its technological advancements have influenced nearly every aspect of people's lives. It has transformed the way people learn, communicate, and conduct business with the private sector as well as governments. ICT tools such as the Internet act as access methods to connect people. Although it took 75 years for the telephone to reach 50 million users after its invention, it took the World Wide Web only 4 years to reach the same number of users (United Nations 2005).

Advances in ICTs are undoubtedly making cities increasingly knowledge-based because city development changes according to activities in the knowledge sector that require different conditions and environments than commodity-based manufacturing activities (Baum, Yigitcanlar, Mahizhnan, & Andiappan 2008). Many in the urban development field view the transformation of a city into a knowledge city as both a possible solution to the sustainability challenges of the modern city and a recipe for citizens' prosperity (Dvir 2005).

Governments are a dynamic mixture of goals, structures, and functions, and

e-government initiatives are complex change efforts intended to use new and emerging technologies to support a transformation in the operation and effectiveness of government (Riad et al. 2010). E-government is the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology (Riad et al. 2010).

In 1990, the governments of the United States, Britain, Canada, and other Western countries led the world by putting their governments online (Lee, Tan, & Trimi 2005). In 2005, 179 (93.7%) of 191 member states were online (United Nations 2005). The Internet provides governments with the necessary tools to enhance their diffusion of information and services. Thus, a new face of government can be seen through electronic web sites, which form "the virtual state" or "the virtual government" (Fountain 2001). Certainly, the world is moving toward e-citizens, e-societies, and e-governments. Putting citizens online, not in line, is currently a reality and a necessity for governments that will improve the lives of the people (Al-Kibsi, Boer, Mourshed, & Rea 2001). The city of Tampere, Finland made a local effort to generate a citizen-centred knowledge society. Inkinen (2008) concluded that ICTs offer solutions to overcome many problems related to the distribution of information. Major challenge for future design of end user services is the creation of relevant contents. Technological development and enhancements require recognition of the social conditions underlying the access, skill, and motivation of citizens to use the provided services beneficially. These issues are related to all of society, whose scope of change is much longer than that of technological development. The successful and purposeful development of digital governance is thus a question of integrating technology into a social structure (Inkinen 2008). Technological advances in the miniaturization and portability of ICTs suggest that in the future, e-government will form part of an intelligence environment in which

technology will surround people and serve them as citizens, customers, and professionals (Pankowska 2008).

According to Abanumy, Mayhew, and Al-Badi (2003), e-government can be classified into four categories: government to citizens (G2C), government to business (G2B), government to government (G2G), and government to employees (G2E). This research focuses on citizen-centred e-government web sites by evaluating Saudi e-ministries. An e-government framework was developed for this research to assess e-government web sites by comparing existing evaluation frameworks described in the literature. In recognition of the importance of implementing citizen-centred e-government and to fill a gap in the literature on Saudi e-government, this research examines the current situation of Saudi ministries' web sites.

E-government

E-government includes government activities that take place over electronic communications among all levels of government, citizens, and businesses to deliver products and services; placing and receiving orders; providing and obtaining information; and completing financial transactions (Riad et al. 2010). E-government is not merely an automation of government services and a dissemination of public information online but is a radical transformation of government, technology, and administrative processes that has the potential to change the way that services and information are presented to citizens (Information Society Commission 2003).

There are numerous definitions describing e-government concepts. They all primarily concentrate on two important axes: the use of ICT by governments as a new way of delivering services and information and citizen-centred e-government. For example, the United Nations defines e-government as government utilization of the Internet and the web to deliver information and services to citizens (Abanumy & Mayhew 2005). Curtin, Sommer, and Vis-Sommer (2003) defined it as the government's usage of any and all

forms of ICT to enhance the delivery of public information and services, engagement of citizens, and public participation. If a web definition for e-government services is necessary, it can be understood as the information and services provided to the public on government web sites (Wang, Bretschneider, & Gant 2005).

The current thinking on e-government focuses on great quality and efficiency in public services by being more knowledge-based, user-centric, distributed, and networked (Pankowska, 2008). The vision of e-government in the European Union in the next decade places e-government at the core of public management modernization and reform, where technology is used as a strategic tool to modernize structures, processes, the regulatory framework, human resources, and the culture of public administrations to provide better government and ultimately increase public value (Pankowska 2008).

E-government is more about government than about "e". For example, Benkert (2007) stated that e-government is 80% "government" and 20% "e". The technical part is the easiest component of e-government; therefore, governments must reengineer their internal structure and reorganize their administration (Mehra 2005). A major challenge for governments involves how they see, manage, and respect citizens and effectively serve them equally. Consequently, many see e-government as a necessary reform tool that eliminates corruption, develops democracy, saves time, increases efficiency, enhances ICT infrastructure, and improves the quality and quantity of services. In this context, information is not a secret but rather a public right and asset. Citizens demand and expect quick diffusion of valuable information 24 hours a day, 7 days a week, through a high-speed Internet connection, which reduces costs for both the government and citizens and builds trust between them (Kaaya 2003; Lee, Tan, & Trimi 2005; Wang, Bretschneider, & Gant 2005). A knowledge city's creativity and appeal are reflected in the effectiveness and quality of its web site development, which meets citizens' needs and

expectations (Ergazakis, Metaxiotis, & Psarras 2006).

The development of e-government evaluation frameworks began around 2000 (Hu, Xiao, Pang, & Xie 2005). The four frameworks most cited in the literature from official organizations, consultants, and universities are as follows (Hu, Xiao, Pang, & Xie 2005; Peters, Janssen, & Engers 2004):

- 1) United Nations (2002): applied worldwide
- 2) Accenture (2000): applied to 22 developed countries
- 3) Brown University (2001): applied worldwide
- 4) Capgemini Europe (2002): applied to European countries

Researches such as the e-Europe benchmarking project, the UN research of benchmarking government, the Brown University study, and the Accenture study of e-government benchmarking have ranked countries for e-government implementation (Sharma 2004). However, these studies are media hype and proclamations such as "Country X is ranked behind in e-government" or "Country Y leads in international e-government race". They do not account for many important measures of e-government implementations that are significant in the full scope of an e-government framework (Sharma 2004).

E-Government in Saudi Arabia

Today, new global standards of governance are emerging, and citizens of developing countries are demanding better performance and more accountability from their governments while becoming increasingly aware of the costs of poor management and corruption (Nair 2009). The 2011 riots and uprisings in the Middle East are a testament to how far their citizens may go to demand accountability from their governments. An example of a developing country is the Kingdom of Saudi

Arabia, where the majority of citizen services are provided by government offices with the same office hours as educational institutions and private companies. Citizens frequently need to be excused from work and must wait in long lines for hours or even days to finish their paperwork. This dilemma is even more difficult for a woman because she needs her legal guardian or a hired agent with her to enter a government office. E-government promises to eliminate diminished productivity, frustration, and wasted effort, time, and money. With several clicks, citizens can perform their tasks whenever and wherever they want at their convenience 24 hours a day, 365 days a year. Therefore, in this unique Saudi culture, e-government is a necessity, not a luxury. Further, given that most of the Saudi population has little experience with the Internet, it is more important to design citizen-centred web sites that promote higher acceptance and create more positive attitudes toward e-government.

In 2001, the Saudi government established the Telecommunication Commission. In 2003, the Ministry of Communication and Information Technology was created (Al-Sabti 2007). It was necessary to specify standards and implement guidelines for e-government projects through the development of the e-government program "Yesser" in 2003 (Abanumy & Mayhew 2005). The program was officially launched in 2005 (Al-Suwail 2007). Yesser is an Arabic word that means "to make it easy". Consequently, Yesser will provide services and information easily to all Saudis and residents. It serves as an enabler and facilitator for transforming the public sector into the information society, whereas government agencies are responsible for the actual execution of their own web sites (Al-Sabti 2007). In 2007, the beta version first phase of the national e-government portal was launched.

According to the National e-Government Strategy and Action Plan (Yesser 2006), the Saudi government made the following vision statement: "By the end of 2010, everyone in the Kingdom will be able to enjoy—from anywhere and at any time—

world-class government services offered in a seamless, user-friendly and secure way by utilizing a variety of electronic means". The vision has 10 specific objectives that can be achieved through the implementation of the aforementioned initiative and are addressed with three themes: providing better services, increasing efficiency and effectiveness, and contributing to the country's prosperity.

The National e-Government Strategy and Action Plan (Yesser 2006) also describes the e-government model to be followed during the initiative as the "integrator" model. In this model, the goal of providing better government services to the user is achieved by putting the user at the centre of all services and thinking of government as a service provider for a customer.

To implement such a model, services that may involve more than one government agency are integrated across the agencies involved, providing users with a one-stop shopping experience when using the services in question. As a result, they no longer have to contact all agencies involved, one after the other, to confirm their identity and enter the same data several times. The plan suggests that because the integrator model incorporates services across various government agencies, its complexity is high; therefore, implementing it requires both the ability to change internally within one agency as well as in coordination with other government agencies and the willingness to standardize, integrate, and share data.

According to the action plan document, the projects to be implemented under the first National e-Government Strategy and Action Plan (Yesser 2006) are structured along the components of the e-government initiative, which has five components:

- 1) A vision and objectives component to guide the initiative.
- 2) An e-services component to put into place world-class user-centric government services aimed at redesigning, e-enabling, and

implementing improved government services.

- 3) A national application component to provide major cross-departmental applications as a catalyst for increasing efficiency and effectiveness comprising three major government-wide applications: e-procurement to implement a government-wide electronic purchasing platform; government databases to make available data already stored in several government databases; and government correspondence to implement a government-wide system for the electronic exchange of messages and documents.
- 4) An infrastructure component to build a strong and reliable infrastructure for enabling e-services and national applications containing several different projects, including an e-government network to implement a network infrastructure and establish standards for data exchange; an integration infrastructure to implement an integration bus, shared services (user authentication, user authorization, payment gateway), and a user interaction toolkit; an e-government portal to offer a single point of access to e-services and information about them; an intranet portal to offer a single point of access to internal government services and information; e-services shared data to facilitate data sharing between government agencies; and an interoperability framework to define common standards and protocols for data exchange.
- 5) An organization component both to provide appropriate governance and funding model and to address change management issues.

The Saudi e-government budget was close to \$3 billion for a five-year plan created in 2006 (Yesser 2006). By the end of 2010, the vision of the Saudi e-government was to have created 150 top-priority services available to all citizens and residents 24 hours a day, 7 days a week, with a 75%

usage level and an 80% user satisfaction rating (Al-Suwail 2007).

E-readiness in Saudi Arabia

The United Nations (UN) Telecommunication Infrastructure Index of Saudi Arabia scores for 2003, 2004, 2005, and 2008 were as low as 0.119, 0.139, 0.145, and 0.2110, respectively. In 2000, only 200,000 Saudis of a population of 24,069,943 were using the Internet, but by 2007, the figure had increased to 2,540,000 users. That represented 10.6% of the Internet population penetration, whereas the usage growth was high—approximately 1,170.0%. In 2011, Internet usage is at more than 90% in the United States and the Scandinavian countries and nearly 70% for neighbouring United Arab Emirates and Israel. Thus, Saudis should be optimistic about the promise of technology use in the country because by 2011, Internet usage growth reached 11,400,000, or 46% of the current estimated population of 26,131,703 (Internet World Stats, 2011).

In global e-government evaluation reports, the Saudi E-government performance is ranked poorly. For example, the UN global e-government reports for 2003, 2004, and 2005 ranked Saudi Arabia 105th, 90th, and 89th, respectively, out of 191 total countries (Lanvin 2007) while dropping from 70 in 2008 to 58 in 2010 (UN 2010). Using different criteria, a Brown University global e-government report showed that Saudi Arabia was ranked 30th in 2004 with a score of 30.7, 72nd in 2005 with a score of 27.4, 98th in 2006 with a score of 27.9, and 89th in 2007 with a score of 30.9 (West 2004, 2005, 2006, 2007). From 2003 to 2005, a regional e-government comparison showed that the Saudi ranking was low compared to other Arab countries, such as Bahrain, the United Arab Emirates, and Jordan (Murphy 2007).

E-government Evaluation Frameworks

An evaluation framework for e-government must classify the site content and focus on the important and critical factors that influence the success of e-government.

Based on e-government definitions, the critical component of e-governance is online services (Holzer & Kim 2005). Hence, providing online services to citizens is the true start of e-government. Nevertheless, in this context, unrelated services and internal services of the agencies (G2E) are excluded. Another important factor to be considered is the web site-driven interaction between the user and the government, such as that used by the Accenture framework and the European framework.

Some e-government agencies may take a few features from different e-government phases; therefore, they cannot be ranked correctly in any of the UN phases because they did not complete a single phase. It is also not useful to put two sophisticated major functions together in one phase. For example, the transaction was a phase that contained online forms and e-payments at the same time. Both required advanced technologies and were considered two major developmental steps that e-governments seldom reach simultaneously.

Moreover, the Accenture model assigns a large weight (70% of the overall maturity of e-government) to service maturity, which is the product of service breadth (number of online services) or service depth (level of completeness). The problem with this framework is that it only focuses on 22 countries, omitting numerous countries around the world (Holzer & Kim 2005). Similarly, the study performed by Capgemini on behalf of the European Commission was limited to European Union nations (Holzer & Kim 2005).

According to Brown University (West 2007), methodology for ranking countries was 72% based on web site features and 28% on online services, where each of the 18 web site features was given four points, only one point was credited for each online service. By assigning too little weight to online services, researchers using this framework underestimated that such services are at the heart of e-government. It was unreasonable to equate a government web site offering 28 services with another web site offering hundreds of services

because the maximum number of points that could be awarded was 28.

Another limitation of the Brown methodology was that the researchers decreased their measurement criteria over the years. In 2001, 2002, 2003, 2004, 2005, and 2006, the measures were 24, 25, 20, 19, 19, and 18, respectively (Holzer & Kim 2005; West 2006). Consequently, there were inconsistencies in Brown University's annual rankings. For example, Korea fluctuated in the rankings as follows: 45th in 2001, 2nd in 2002, 87th in 2003, 32nd in 2004, and 86th in 2005. The significant variations in the rankings can be attributed to the limited number of measures and not using native speakers of the languages in which the evaluated web sites were written.

Research Methodology

To assess the status of a country's or city's e-government project, the first step is to evaluate the e-government web sites by analysing the main features of the site based on the definition of e-government and the requirements of Yesser. An interactive services e-government framework for assessing e-government web sites was developed for this research based on the types of services, basic web features, and the Accenture and European frameworks. The framework developed quantitatively assessed the stages of each Saudi ministry web site and their resulting problems.

To determine the number of ministries, data from Yesser was used. Although there are 22 ministries in Saudi Arabia, only 21 ministries had web sites during the research period. Careful inspection and analysis of the 21 ministry web sites was conducted twice by following all the internal and external links provided on the web site.

To compare the web sites, the framework developed for this research included five stages:

- **Stage 1:** Web presence. Each element that contains static information in the

native language and any number of contact information receives a score of 1.

- **Stage 2:** One-way interaction. Each element that contains offline services, such as offline forms and information services, receives a score of 2.
- **Stage 3:** Two-way interaction. Each online service, such as online forms, receives a score of 3. The number of online forms or online services is considered because this stage is the true start of e-government.
- **Stage 4:** Transaction. Each transactional element receives a score of 4 for each transaction, such as e-payment services.
- **Stage 5:** Integration. Each element receives a score of 5 for each integration service, such as those processed through a one-stop government portal.

Further, the following important features are added to the interactive services e-government framework according to specific criteria and justifications:

- 1) The search feature was added and was worth 3 points for the following reasons:

a. It is considered a two-way interaction;

b. Nielsen and Tahir (2002) considered search as an essential recommendation in designing web pages and assigned it a 3-point rating; and

c. Yasser's guidelines, approved by the Saudi Ministry of Communications and Information Technology (MCIT 2006), required the presence of a powerful search function in the site as minimum recommended web site content.

d. The search receives 0 points if no functioning search exists.

- 2) The site map receives 2 points because it is one-way interaction. In addition, Nielsen and Tahir (2002) considered it to be a strong recommendation for web pages and assigned it a 2-point rating.

- 3) The native language of the site deserves 1 point because it is the mother tongue comprehended by all citizens.

- 4) Average load time was assigned a score of 0 because this aspect was more dependent upon the speed of the processor and the type of connectivity than a function of a ministry web site.

- 5) Five or more broken links resulted in a deduction of 1 point from the overall ministry score. The WebXACT program, a free online service, counted these broken links.

Saudi Ministries' Web Site Evaluation

In light of the interactive services e-government framework developed for this research, the different ministries' web site content was counted and analysed. Some measures of the framework were checked for their existence, absence, or efficiency whereas other features were counted as occurrences. Therefore, each ministry was evaluated for the following (Zahran 2008):

- 1) The number of online and offline forms.
- 2) The number of contacts.
- 3) The number of online and offline services and whether related or unrelated to the purpose of the web site.
- 4) The number of the related information services provided.
- 5) The availability of a site map and the search function and whether it works effectively.
- 6) The main language of the web site.
- 7) The average load time.
- 8) The number of broken links as a deduction from the total score.

In analysing ministry web site content, 8 of the 21 sites were disregarded due to lack of services to citizens, English-only web sites, too many broken links, or a web address that did not end with gov.sa. Thus, from the

initial selection of 21 ministry web sites, only 13 were examined; 41% of the web sites were excluded from further evaluation.

Based upon the interactive services e-government framework and the e-ministries content data, the researchers determined the e-government stage that

was reached by each of the 13 ministry web sites along with its overall score. A ministry reached and completely covered a certain e-government stage only if it fulfilled all of the required features. On average, the majority of the 13 ministry web sites covered only stage 1 and had a limited range of stage 2 and 3 features, as shown in Table 1.

Table 1: Evaluation of the Remaining E-Government Saudi Ministry Web Sites

Rank	Ministry	E-government Stage	Scores
1	Ministry of Higher Education	Completely covered stage 1 Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, malfunction of search)	62
2	Ministry of Education	Completely covered stage 1 Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, no search)	57
3	Ministry of Foreign Affairs	Completely covered stage 1 Partially covered stage 2 (no offline form, no site map) Partially covered Stage 3 (no online forms, malfunction of search)	40
4	Ministry of Civil Services	Completely covered stage 1 Completely covered stage 2 Partially covered stage 3 (no online forms, malfunction of search)	23
5	Ministry of Labor	Partially covered stage 1 (no higher official contacts) Partially covered stage 2 (inaccurate site map, no information services) Partially covered stage 3 (no online forms, malfunction of search)	21
6	Ministry of Water and Electricity	Completely covered stage 1 Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, no search)	21
7	Ministry of Agriculture	Partially covered stage 1 (no higher official contacts) Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, malfunction of search)	18
8	Ministry of Finance	Completely covered stage 1 Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, only 1 e-service, malfunction of search)	12
9	Ministry of Justice	Partially covered stage 1 (no higher official contacts) Partially covered stage 2 (no site map) Partially covered stage 3 (no online forms, only 1 e-service, malfunction of search)	12
10	Ministry of Commerce and Industry	Completely covered stage 1 Completely covered stage 2 Partially covered stage 3 (no online forms, only 1 e-service, no search)	11
11	Ministry of Municipal and Rural Affairs	Completely covered stage 1 Partially covered stage 2 (no information services) Partially covered stage 3 (no online forms, only 1 e-service, malfunction of search)	11
12	Ministry of Transport	Completely covered stage 1 Completely covered stage 2 Partially covered stage 3 (no online forms, only 1 e-service, malfunction of search)	11
13	Ministry of Social Affairs	Completely covered stage 1 Partially covered stage 2 (no information services) Partially covered stage 3 (no online forms, only 1 e-service, malfunction of search)	9

Combining all of the information from the 21 e-ministries, the current situation of the e-government in Saudi Arabia based on this framework's five stages is as follows (Table 2):

- 1 ministry did not have a web site.
- 8 ministries did not implement a true e-government web site, which means that either the site did not end with .gov, was in English only or was too erroneously programmed.
- 10 ministries were completely or partially in stage 1.
- 3 ministries were in stage 2.
- There were no ministry web sites that qualified for stage 3, 4, or 5.

Table 2: Status of the Saudi Ministry Web Sites

Stage Reached	Number of Ministries	% of 22 ministries
No presence	1	4.6%
Not an e-government web site (missing main requirements)	8	36.4%
Partially in Stage 1: Web presence	3	13.6%
Stage 1: Web presence	7	31.8%
Stage 2: One-way interaction	3	13.6%
Stage 3: Two-way interaction	0	0%
Stage 4: Transaction	0	0%
Stage 5: Integration	0	0%

Saudi ministry web sites are still in the early stages of e-government, primarily stage 1, with a low rate of progress. In addition to the above findings, there were no online forms available in any web site, and most ministries had problems with regard to search, site map, information services, and online services.

These findings clearly demonstrate a serious problem for Saudi e-government web site development. The results of this study also confirm Abanumy and Mayhew's (2005) conclusion that the UN model could not be applied correctly to Saudi e-government web sites because they covered varied elements from different e-government stages.

Conclusion

E-government is the gateway for the public to access information and services. E-government web sites should promote citizens' trust in their government. With

the increasing growth of Internet penetration and usage in Saudi Arabia, e-government is quickly gaining solid ground. Unfortunately, the Saudi e-government project faces many problems. From 2003 to 2010, out of 191 countries, the UN ranked the Saudi e-government 105th, 90th, 89th, 70th, and 58th in 2010. Brown University ranked the Saudi e-government 30th in 2004, 72nd in 2005, 98th in 2006, and 89th in 2007.

An evaluation framework for e-government must classify the site content and focus on the important and critical factors that influence the success of e-government, yet the UN, Accenture, Brown University, and the Capgemini Europe framework all have limitations. An interactive services e-government framework for assessing citizen-centred e-government web sites was developed for this research based on online presence, the types of services, basic web features, and the Accenture and European frameworks. The framework

developed quantitatively assessed the stages each Saudi ministry web site and their resulting problems.

This research on the Saudi e-government focused on Saudi ministry web sites because they provide the most services citizens need and because most government agencies belong to one of the ministries. This research's e-government framework evaluated the current Saudi ministry e-government status through their web sites.

Based on the results of this research, Saudi ministry web sites are still in the early stages of e-government, primarily stage 1. Nine ministries (41%) did not implement a true e-government web site; one had no site at all, ten (45.4%) were completely or partially in the first stage, and three (13.6%) were in the second stage. The second stage was the most advanced stage reached by any single ministry. Important web elements were missing or not working efficiently, such as search, site map, and contact links. Errors were also frequently encountered, such as a network or server error, broken links, pages under construction, non-active links, empty white pages, and pages that could not be found. These errors led to user frustration and dissatisfaction and reduced the credibility of the site's services.

The vision and expectation of the Saudi e-government program and the Ministry of Communications and Information Technology is that government web sites provide 150 services with a 75% usage level and an 80% user satisfaction by 2010. As a result, ministries and the Yesser program must make major improvements to reach this goal. However, Saudi citizens have begun to sense and enjoy a shift in their daily lives toward using modern technologies and taking advantage of up-to-date information on the World Wide Web. In fact, the Saudi government possesses assets that can put it on the right track within the e-society and make its mark in the knowledge age. Reaching the expectations of the Saudi e-government seems challenging based on the current slow growth of e-government services.

Nevertheless, it is manageable through extensive work of ministries with close supervision from the Ministry of Communications and Information Technology. E-government must pursue its mission and continue its efforts because the success of any e-government depends considerably upon the extent to which the web site content is usable, useful, service-oriented, relevant, and current.

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