

***EXPLORING E-GOVERNMENT IN THE STATE OF QATAR:  
BENEFITS, CHALLENGES AND COMPLEXITIES***

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***Abstract***

Information and communication technology facilities offered by the Internet have encouraged not only business enterprises, but also governments around the globe to invest significantly into electronic service delivery in the form of e-government. Despite many lessons that can be learned from the experiences of those e-government initiatives, developing countries are still faced with various issues pertaining to the implementation of e-government services in their countries. Like many other developing countries, the e-government initiative in Qatar has faced a number of challenges since its inception in 2000. Using survey and interview based research this paper examines some of these challenges from a citizens' and governments' perspective. Among others, this research found that although having a superior ICT infrastructure and being one of the regional broadband leaders in the Arab World, issues such as lack of awareness, bureaucratic business practices, socio-cultural issues and citizens' satisfaction levels of current national e-government strategy was influencing the adoption of e-government services in the state of Qatar.

***Keywords:*** *E-government, Qatar, Benefits, Challenges, Complexities.*

**INTRODUCTION**

Since the advent of the Internet some forty years ago (Ho, 2002), the number of Information and Communication Technology (ICT) driven services have quadrupled making today's society a technology and Internet savvy one. While the 1990s saw the e-Commerce revolution (UN, 2005) with private and multinational organizations, in the new millennium we have witnessed public sector organizations embracing the same principles of e-business through the introduction of national e-government initiatives. Since the 1990s ICT has played an important role in incrementally changing and shifting traditional and bureaucratic government models into the current e-government model where services are delivered according to customers' needs.

While all developed countries have now implemented some form of e-government (Al-Kibsi et al. 2001; Accenture 2005) – with most having implemented transactional level services (See for instance Layne and Lee, 2001; Weerakkody et al., 2007), the majority of

developing countries are beginning to follow suit (Kurunananda and Weerakkody, 2006). Not surprisingly, in the wealthy Middle Eastern region countries such as Dubai and Qatar have made plans to provide e-government services to citizens and businesses. As in many countries, the national e-government focus in Qatar is to achieve the highest performance in executing governmental transactions electronically, through streamlined business process and integrated information technology solutions (Qatar eGov, 2003).

Like many other developed and developing countries, the e-government initiative in Qatar has faced a number of serious challenges since its inception in 2000. The national e-government program has been delayed more than once and its strategy and focus has also been changed in recent times. The authors argue that these problems are largely due to socio-cultural influences and not technology, economic or skill related. The socio-economic structure in the state of Qatar is such that its population is made up largely of immigrant workers and professionals who are considered as citizens of the country. Therefore, the largest proportion of recipients of e-government and early adopters are seen as those professional workers employed in numerous state, private and multinational organizations. Consequently, the national e-government efforts are primarily focused towards these recipients (who we will refer to as citizens).

Given the above context, the rationale for this research is to gain a better understanding of the e-government initiative in Qatar. Using a survey questionnaire and interview technique this paper hopes to identify key issues that may need to be considered for e-government success from a citizen's and government's perspective in Qatar. By doing so the authors hope to answer two questions, i) why the progress of e-government has been slow in Qatar, and ii) what is the disparity between the government's and citizens' expectations of e-government in Qatar. In order to answer these questions, the paper is set out as follows. The next section presents a literature review on e-government followed by an outline of the background to e-government in Qatar in section 3. This is followed in section 4 with an explanation and justification of the research method adopted for this study. Section 5 then presents the results of a survey and interview carried out in Qatar and highlights the key issues influencing e-government as seen by the citizens and government. Furthermore, there is a comparison of both perspectives in terms of access, awareness, government support and future directions for the current e-government project. Finally, the paper concludes in section 6 with some recommendations of how to address these issues and suggests pointers towards future directions for e-government in Qatar.

## 1. RESEARCH BACKGROUND: E-GOVERNMENT BENEFITS AND CHALLENGES

With the popularity of e-government growing, various researchers have offered different definitions to explain the concept (Seifert and Petersen, 2002; Holden et al., 2003; Jain, 2002). However, these definitions differ according to the varying e-government focus and are usually centered on technology, business, process, citizen, government or a functional perspective. For instance, Seifert and Petersen (2002) explains e-government with a *functional* focus; Burn and Robins (2003) defines it with a *citizens* focus; Zhiyuan (2002) views e-government with a *technology* focus; Wassenaar (2000) classifies it with a *business* focus; Wimmer and Traunmuller (2000) takes a more *government* centered view; and Bonham et al. (2001) defines it with a *process* focus.

The definition considered to be most suitable for the purpose of this paper is one that defines e-government as a *radical change and strategic tool that supports and simplifies government for other stakeholders such as government agencies, citizens, and businesses* (Gupta and Jana, 2003; Evans, 2003; Basu , 2004). This definition is particularly relevant for the Qatari context as it not only identifies the stakeholders as citizens, but also as government agencies and businesses. In Qatar the initial e-government efforts were aimed more at the business community rather than the average citizens like in many other countries and therefore the above definition captures the e-government focus in the country well.

Like e-business, e-government promises to deliver a number of benefits to citizens, businesses and governments. The most significant benefits of e-government according to the literature are: delivering electronic and integrated public services through a single point of access to public services 24 hours a day, 7 days a week (Reffat, 2003); bridging the digital divide where every citizen in society will be offered the same type of information and services from government (InfoDev, 2002); rebuilding customer relationships by providing value added and personalized services to citizens (Davison, et al., 2005); fostering economic development and helping local businesses to expand globally; reducing the opportunities for corruption in governments (Hazlett, 2003); and creating a more participative form of government by encouraging online debating, voting and exchange of information (InfoDev, 2002; Davison, et al., 2005; Reynolds and Regio, 2001; Bonham et al., 2001).

As with any other new technology or organisational concept, the introduction of e-government to a country will also result in a number of challenges for the citizens and

governments alike (Margetts and Dunleavy, 2002; Seifert and Peterson, 2002; Zakareya, 2005). Overcoming these challenges therefore would be one of the biggest tests for the government and citizens of any country planning to implement the concept. Research on e-government has identified issues such as lack of awareness (Reffat, 2003), access to e-services (Fang, 2002; Darrell, 2002; Silcock, 2001), usability of e-government websites (Porter, 2002; Sampson, 2002), lack of trust (Navarra and Cornford, 2003; Bhattacharjee, 2002; Silcock 2001; InfoDev, 2002), security concerns (Harris and Schwartz, 2000; Javenpaa and Tractinsky, 1999), resistance to change (Margetts and Dunleavy, 2002), lack of skills and funding (Federal Computer Weekly, 2001), data protection laws (Bonham et al., 2003; Harris and Schwartz, 2000), digital divide (Silcock, 2001; InfoDev, 2002; Carter and Bélanger, 2005); lack of citizens' interest (Porter, 2002; Sampson, 2002); lack of government support (Karunananda and Weerakkody, 2006) and lack of strategy and frameworks (Reffat, 2003; Damodaran et al., 2005) are hindering the adoption of e-government in many countries.

Given the above context, it is fair to suggest that adopting an e-government system is a long-term challenge that affects all aspects of government (Chander and Emanuels, 2002). Some authors have also classified the above mentioned challenges under the broader context of organizational (Layne and Lee, 2001); and technical, economical and social categories (Chesi et al., 2005; Oreste et al., 2005). The ultimate objective for governments therefore should be to ensure that e-government efforts successfully overcome these challenges and deliver to users (citizens) systems that are easy and convenient to use and most of all meet their expectations.

## **2. E-GOVERNMENT IN QATAR**

While most developed countries have already implemented e-government services (Accenture 2006, Accenture 2005) some developing countries are aiming to emulate these more successful e-government efforts at an accelerated pace (Chircu and Lee, 2005; World Markets research Centre, 2001). Qatar is one such country in the Middle East. The state of Qatar is a peninsula with a strategic position that is situated at the centre of the west coast of the Arabian Gulf. The total land of area is approximately 11,437 sq km. The population amounts to around 885,359 (as of July 2006); however, only a minority (around 25%) of the population are citizens by birth, while the rest are residents who live in Qatar and are not Qatari's by birth (CIA Facts, 2006).

E-government was first launched in Qatar in July 2000 with a pilot project to renew resident permits. For this pilot project three parties were involved: Ministry of Interior – service provider; Qatar National Bank – payment gateway for this service; and Qatar

Central Bank - the host for the e-government pilot project system. As a result of the success of this pilot project government support was given to start the second phase of e-government that was aimed at assessing all ministries for their ability to commence electronic transactions. At this stage, it was found that local government agencies “ministries” were providing 1350 different services. From these services, 22 services were grouped and assessed as being able to be ‘available online’ within a two year time frame commencing October 2002. However, the ‘*Emiri decree*’ (who is responsible overall for ICT strategy and spending in Qatar) gave the e-government executive committee 30 months to implement those services.

The vision of the Qatar e-government project was “*Qatar online services, anytime, anywhere, providing government transactions, information and knowledge*” (Qatar eGov, 2006). By stating the vision of Qatar e-government project, the definitions of some key terms were outlined as follows:-

- **Anytime** means e-government services available 24/7.
- **Anywhere** means e-government transactions will be available through multiple internet channels such as Kiosks, wireless mobile, and digital TV.
- **E-Government transactions** mean full integrated transactions that are offered by the government agencies to be provided through internet channels.

In the light of continued improvements to the central services portal ([www.e.gov.qa](http://www.e.gov.qa)), in 2005 the UN considered the Qatar e-government project as regional (western Asia) best practice (UN, 2005). In addition, the report specified that the portal, which comes in a default Arabic version but with mirror English pages, is well worth a visit, both for its services and for inspiration. Also, Qatar e-government site offers many services, ranging from student registration and paying traffic violations to applying online for visas and permits. In August, 2005 the site claimed 115,000 visitors – a 66 % growth compared to July 2005 (UN, 2005). In February 2006 the e-government website achieved (22,127) transactions for the month with a growth of (22 %) compared to the previous month, January. Also, it reached a new milestone in achieving (50,778) transactions for the month of April, 2007. This 5% growth compared to March, 2007 was due to the increase in number of companies (businesses) and individuals wanting to use the e-services on the site. (Qatar eGov, 2006; Qatar eGov, 2007). Sadly though, in global terms the UN Global E-government readiness report (2005) ranked Qatar’s e-government project as number (62) worldwide (UN, 2005). However, this is encouraging compared to 2004 where it was ranked as number 80 worldwide. Moreover, within the Western Asia region Qatar e-government was ranked number six in 2005 compared to number eight in 2004.

This implies that major improvements and developments have been made during recent times

### 3. RESEARCH APPROACH

The only sources of published information on e-government in Qatar are official government reports and publications. Despite their significance, these publications neither provide an overall picture of the current situation nor highlight the benefits and current challenges facing e-government in Qatar in adequate depth. The purpose of this research is to investigate the current status of the Qatar e-government initiative and to examine the benefits and challenges of the project from a government as well as a citizens' perspective.

To explore the arguments set out above and understand the context of the e-government initiative in Qatar, survey questionnaires (Saunders et al., 2002) and informal open ended interviews (Yin, 1994) were conducted with citizens and employees of government agencies and e-government project team members. Yin (1994) classifies interviews as structured, semi-structured and unstructured. The main advantage of using semi-structure interview is its flexibility and possibility of getting more detailed information from the respondents. In this research semi structured interviews were conducted with employees from different government agencies and the national e-government project team members in Qatar. These interviews involved talking to three e-government project members who were initially involved in the Qatar e-government project (referred to hereafter as EG01, EG02 and EG03) and three senior level members of Government Agencies (referred to hereafter as GA01, GA02 and GA03). The interviews lasted between 30 minutes to an hour and provided a detailed picture of the government officials' perceptions about e-government implementation in Qatar. All interviews were conducted face to face and by visiting the interviewees official premises during the last quarter of 2006. Questions covered the status of the e-government project, inquiring about good e-government practices implemented as well as problems and challenges encountered.

To explore the citizen's perspective of e-government the above mentioned interviews were complemented with a survey questionnaire which was distributed to one hundred Qatari residents. A survey questionnaire was selected as it is inexpensive, less time consuming and has the ability to provide both quantitative scale and qualitative data from a large research sample (Cornford and Smithson, 1996). The questionnaire used had 22 closed-ended questions which was both quicker and easier to answer for the respondents (Saunders et al., 2002). After the questionnaire was designed, a pilot testing was done

using two researchers and three practitioners. This was important to improve the questions and to test respondent's comprehension and clarity before the actual survey was administered (Saunders et al., 2002). After piloting, amending, and re-formatting, the final questionnaire was distributed to randomly selected candidates from different professional backgrounds. This process helped to eliminate any bias from forming in the data collected (Saunders et al., 2000). Also, the authors ensured that they approached a cross number of users covering different demographic aspects such as age, gender, nationality, organisations represented and qualifications. From one hundred questionnaires distributed, sixty one responses were received of which one was unusable leaving a total of 60 usable responses.

#### 4. SUMMARY OF SURVEY AND INTERVIEW RESULTS:

##### 5.1 THE CITIZENS' PERSPECTIVE OF E-GOVERNMENT IN QATAR

The survey data was analyzed using selected statistical inference techniques and findings of the analysis are reported here. First, examining the demographics, out of the total of 60 survey respondents, 58 were employees (government and private sector), one student and one classified as others (businessman or retired). From a citizenship perspective, 30 can be classified as Qatari "Citizens" (i.e. from birth) and the rest were immigrant workers (or resident workers). From a gender perspective, 28 were male and 32 females.

While the respondents' age distribution varied from 15 to over 50, figure 1 shows that the majority of respondents were aged between 26 and 40. This is followed by the 21-25 year age group with 17 percent, and the 41-50 age group with a 15 percent response rate.

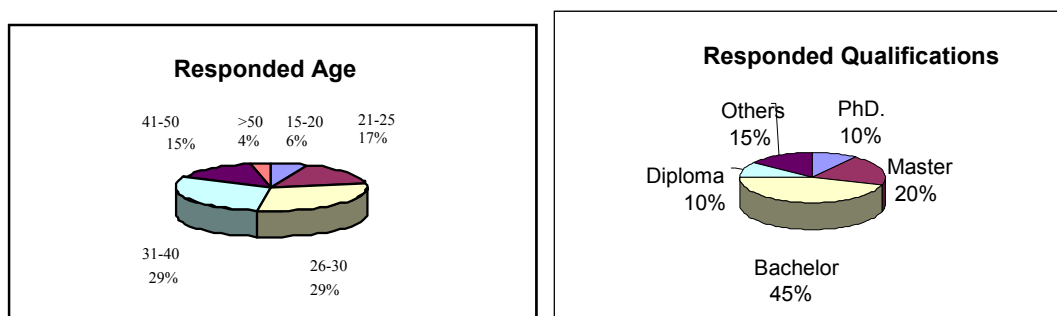


Figure 1: Respondents Age and Qualification

Figure 1 also shows that majority of the respondents of the survey questionnaire are educated to university level: out of 60 respondents, six had doctorates (PhD's) (10

percent), 12 were educated up to Masters (MSc/MBA/MA) level (20 percent), 27 held a Bachelor Degrees (BSc/BA) (45 percent) and nine identified other secondary school, diploma or certificate level qualifications (10 percent). In summary, the majority of the respondents possessed a university level education and thus it can be assumed that they were competent in answering questions about ICT and e-government.

One of the main pre requisites for accessing e-government services is the availability and access to Internet services. In this case all but one respondent stated that they have access to and frequently use the internet from home or at work. However, only 32 respondents have accessed the e-government website or used any e-services offered by the Qatar government (figure 2). Yet, the majority of respondents thought that the level of government support for e-government was high. This may correlate to the fact that Qatar has an excellent ICT infrastructure and is one of the regional broadband leaders in the Arab World (Sofiane, 2005).

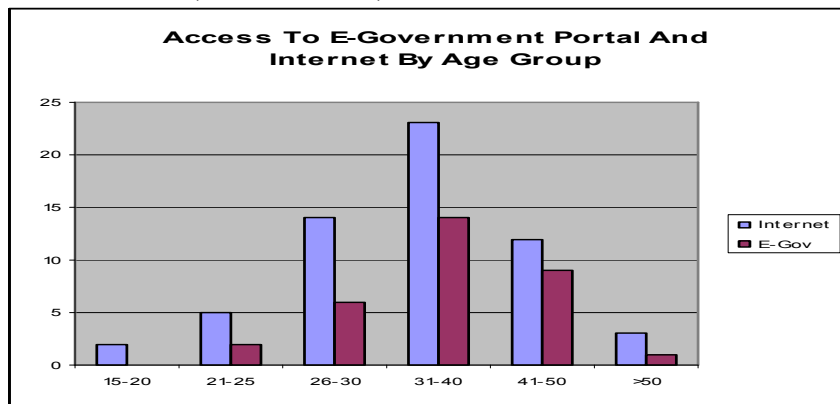


Figure 2: Access to the Internet and National E-Government Website

The survey results also found that the most popular channel to access the e-government website was via personal computers or wireless mobiles devices. However, most were aware of other government information services that can be accessed via other channels, such as Kiosks and digital TV. Another recent development is the opening of the i-park initiative where the government of Qatar has implemented free 24/7 high speed wireless Internet access in the three biggest public parks; here people can access the internet using laptops and other wireless mobile devices (Alsharq, 2006).

Not so surprisingly, the survey result indicates that people between the age of 31 and 40 accessed both the internet and e-government website more than any other age group whereas the elderly and younger generation hardly accessed the e-government portal. Of those who accessed the e-government Website, most were satisfied with website content



and level of information. Also, the majority found the information provided to be useful (figure 3).

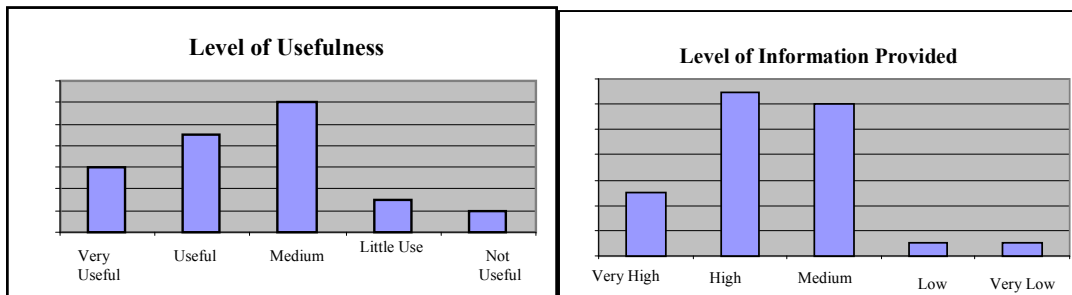


Figure 3: User Satisfaction with E-government Website Content

While the majority of respondents believed that the level of awareness among Qatari citizens about e-government and the Website was reasonably high, as shown in figure 4 below, the majority of respondents also suggested that they trust the e-government Website and the services offered therein. The most prominent response group here again though is the age group 31-40 who indicated that they trust and have confidence in the safety of the e-government website and its content.

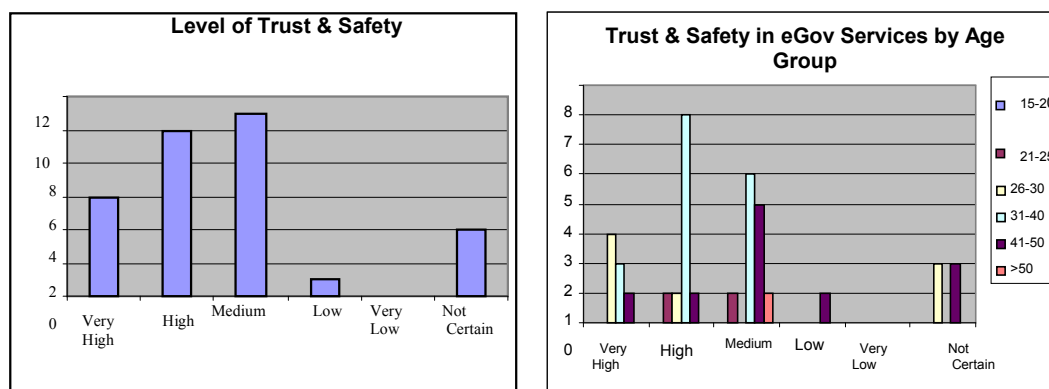


Figure 4: Level of Citizens Trust in E-Government and Perceptions about Security

Not surprisingly, again when it came to awareness, the age group 31-40 topped the scale with high level of awareness, whereas for the age group of 40 and above awareness levels declined sharply. On the other end of the age range, the 21-25 year group indicated that

the level of awareness is between low and medium level for e-government services. Also, the awareness levels were at the highest with those with a Bachelor level Degree as opposed to those with PhD level qualifications.

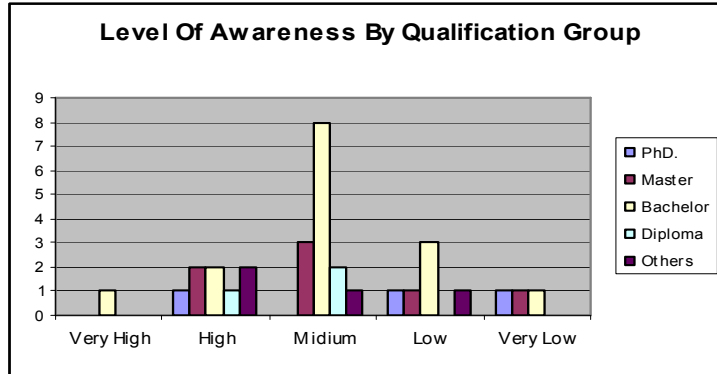


Figure 5: Level of E-Government Awareness by Educational Background

Finally, the survey results also show that 12.5 percent of respondents (of the total sample of 60 citizens) were unhappy with the current e-government project and website and recommended that they would like to see the current website being disposed of and a new more user friendly system being introduced. In contrast, 9.4 percent believed that the current e-government project status is acceptable and there is no need for any changes. Overall, the majority (78.1 percent) of respondents criticized the current e-government project and believed that major improvements are needed to enable the website to offer more diverse government services and to make it more acceptable and user friendly to citizens.

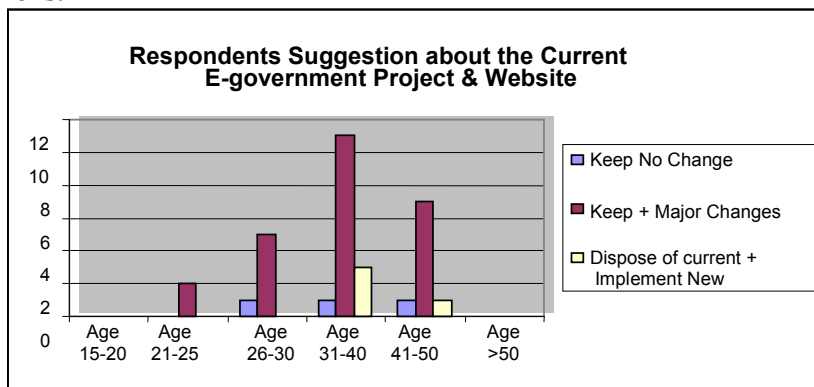


Figure 6: Citizens Perceptions about the Current E-Government Efforts in Qatar

## 5.2 THE GOVERNMENT'S PERSPECTIVE OF E-GOVERNMENT IN QATAR

Interviews with government officials, ex-project managers and members of government agencies showed both positive (facilitators) and negative (barriers) factors that were influencing the implementation of e-government in Qatar. First, the factors that were seen as facilitating e-government are discussed below.

### 5.2.1 E-Government Facilitators

*Improved Services:* The national e-government project team was focusing on providing a number of key services that can impact on citizens positively such as passport, visa and immigration services. However, many of these initial e-services were targeted at business and immigrant workers while fewer services were actually focused at native Qataris.

*Government Support:* Many government officials who were interviewed also thought that there was a high level of government support for the national e-government initiative. For example, an ex-member of the national e-government project team (EG01) stated, “without the high level of government support we have from top management in government we would not be where we are today with e-government in Qatar; the national e-government project was considered best practice in the region for the year 2005” [also see (UN, 2005)]. Furthermore, according to Raffat (2003) Qatar's ICT infrastructure is considered as one of the regional leaders in the Arab World. Therefore, the level of top management support and ICT capabilities can be seen as a major driving force and facilitator for e-government in the country and thus a major advantage in comparison to regional neighbours.

### 5.2.2 E-Government Barriers

On the negative side however, there were many issues that were influencing the deployment of e-government and related services in Qatar. Ex-members of the e-government project and some government officials pointed out a number of challenges that were faced by the project team to implement e-government in Qatar. The key issues identified during interviews are summarised below.

*Awareness of the E-government Project:* It was revealed that the e-government project had an awareness campaign problem where most of the government officials interviewed thought that not enough was done by the government to promote and raise awareness of e-government. Interviewee EG01 stated that, “I think the main point that we have not

covered completely is awareness and advertisement campaigns. This resulted in a lack of awareness from the citizens and other users. We have to conduct a huge awareness campaign which would help us to make the public aware of the benefits of e-government as well as the changes and improvement to public services.” Also, another government official (GA03) said, “I notice that the e-government project implementers have given low priority for the awareness issue and not considered it as important”. This therefore is an immediate, but not so difficult challenge that the Qatari government needs to address.

*Accessibility and Trust Relating to the National E-government Website:* Another disappointing aspect was the lack of government to citizen (G2C) trust when it came to completing public services online. “It has been noticed that most of Qatar’s citizens are more comfortable with face-to-face meetings with government agencies than using an online service. This is mainly because the majority of the currently available e-services such as passport applications and visa services required the citizens to refer back (physically) to the relevant government agencies before a service could be completed” suggested one government official (GA02). This environment prevents citizens from accessing some online information; this often results in low levels of trust between government and citizens.

*The Issue of Change:* From an organizational perspective, some staff and government agencies were resisting the change in roles and responsibilities. An ex e-government project member (EG02) stated “we faced some type of resistance to change because of the level of empowerment, especially when we tried to implement new services”. However, one government agency member (GA01) disagreed when suggesting that “it is not the issue of resisting any changes. The issue is that most of the development in the e-government project has been done by IT people without much involvement from the respective government agency staff whose services have been e-enabled. These new services need to be announced on the relevant agency (ministry) websites and staff made aware of these before they are made available on the national e-government website”. Another interviewee (GA02) mentioned “The problem with the e-government team is that, they do not listen to any suggestions. They just want to know the problems only and do not want any others to be part of the solution”. These suggestions indicate that the e-government project in Qatar needs to be more closely attuned with the citizens’ needs and be more open to the views and suggestions of relevant stakeholders and other experienced professionals in the country.

## 6 CONCLUSION

E-government is widely accepted and seen as a growing trend worldwide. In the Middle East most countries have implemented e-government services. However, the growth and adoption of e-government in a country will depend on basic prerequisites such as education, trust, marketing and awareness (Reffat, 2003; Navarra and Cornford, 2003; Bhattacharjee, 2002). The Qatar e-government strategy was centered on the provision of 20 transactional services online by mid 2004. Currently 21 services are available online in a single access portal. Qatar e-government project serves Qatari nationals, foreign residents and workers, and business and government agencies.

This paper has presented the results of a survey of Qatari residents and interview findings with government agencies that was conducted in Qatar during the last quarter of 2006. The survey and interviews were targeted towards citizens with professional backgrounds and employees in government agencies, national e-government project team members and private organizations; although this may represent a certain degree of bias, it can also be argued that these categories of people are the ones most likely to use e-government services (early adopters). Therefore, we propose that results from this research sample provide an accurate account of the citizens' perceptions and government official's views of initial e-government efforts in Qatar.

This study shows that there is a high level of trust in e-government and most citizens are happy with the way the e-government initiative is being managed in Qatar although many thought that major changes were needed to improve it. Although 21 services were offered online, the majority of these services required the citizens to refer back (physically by visiting an agency, sending signed documents by post, or telephone queries etc.) to the relevant government agencies before a service could be completed. In this context, this research has shown that lack of trust on the part of the government (government to citizen trust) as well as lack of awareness on the part of the citizens may prevent or reduce the interest in e-government services. On the positive side though, the level of internet access was seen to be high in Qatar and this will be further supported by the free internet park (i-park) concept introduced by the government in 2007. This is very significant as the people most likely to use e-government services were the age group of 31-40 and less awareness and usage levels were seen in other age categories both younger and older. The i-park concept will encourage particularly the younger citizens such as students to explore e-government services using the free internet access provided in public places (parks). These public parks can also be made use of to advertise and market the Qatar e-government website and services and to raise awareness among Qatari citizens both

young and old. It will be interesting to note the impact of the i-park concept on e-government and internet access in general and this can form the basis of future research efforts.

The overall government official's and citizens' perspective of e-government in Qatar can be summarized as follows in table 1.

<b>Challenges</b>	<b>Government's perspectives</b>	<b>Citizens' Perspectives</b>
<b>E-government Awareness</b>	The majority of government officials interviewed thought that there was a reasonable level of e-government awareness among work colleagues	Analysis of the survey responses indicate that e-government awareness was at a medium level when it came to citizens.
<b>Access to the Internet and E-government Website</b>	Internet access levels were seen to have increased especially after the implementation of free Internet access in public parks through the i-Park concept).	Access can also be considered as medium, with some limitations particularly when it came to availability of other internet channels such as Kiosks, wireless mobile, and digital TV.
<b>Respondents Suggestions about the current National E-government Project &amp; Website</b>	Many interviewees felt that Qatar should keep the current e-government strategy as it is and implement the next phase of e-government services.	Majority criticized the current e-government project and believed that major improvements are needed to enable the website to offer more diverse government services and to make it more acceptable and user friendly.
<b>Government Support</b>	Government support was seen to be high according to the various interviewees attached to government agencies. Furthermore, Qatar has an excellent ICT infrastructure and is one of the regional broadband leaders in the Arab World	Many citizens surveyed also thought that government support for e-government was high in Qatar.

*Table 1. Summary of Citizen' and Government's Perceptions about the Current E-Government Efforts in Qatar*

Given the overall results of this research, it can be concluded that although the Qatari e-government efforts are ranked highly in the region, much more needs to be done in terms of providing better, more value added and user friendly services that meets the citizens' high expectations for e-government. This research only focused on a limited sample of citizens and government employees and future research efforts are planned to survey a larger audience. Future research efforts will also focus on conducting more in-depth case study based interviews with government officials and project managers responsible for the Qatar e-government initiative to understand the government's perspective of e-government. It is hoped that by combining these research efforts it will allow the authors to identify and better understand the gaps that may exist between citizens' expectations and the government's provisioning of e-government services in the state of Qatar.

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