E-Government implementation Challenges: A Case study

Ramzi EL-Haddadeh  
*Brunel Business School, Brunel University, ramzi.el-haddadeh@brunel.ac.uk*

Vishanth Weerakkody  
*Brunel Business School, Brunel University, vishanth.weerakkody@brunel.ac.uk*

Shafi H. AL-Shafi  
*School of Information Systems, Computing and Mathematics, Brunel University, shafi.alshafi@brunel.ac.uk*

Maged Ali  
*Brunel Business School, Brunel University, maged.ali@brunel.ac.uk*

Follow this and additional works at: [http://aisel.aisnet.org/amcis2010](http://aisel.aisnet.org/amcis2010)

Recommended Citation

[http://aisel.aisnet.org/amcis2010/312](http://aisel.aisnet.org/amcis2010/312)
E-Government implementation Challenges: A Case study

ABSTRACT
The purpose of this paper is to explore empirically the implementation of e-government in a developing country in the Gulf Cooperation Countries (GCC) and the key challenges that influence implementation. A case study (using interview-based research) was undertaken within the State of Qatar. After reviewing the available literature, the paper first proposes a conceptual model, which was then used to explore e-government related change by considering the key forces influencing implementation from an organisational, technological, social and political context. The empirical results confirmed previously findings in literature and identified a number of new issues that were influencing e-government implementation in Qatar which were not explicitly discussed in prior e-government research.

KEYWORDS
E-government, implementation, Challenges

INTRODUCTION
With the emergence of the concept of e-government, public services around the world have realised the importance of making their services more efficient and available (Affisco and Soliman, 2006; Sarikas and Weerakkody, 2007). While citizens have become more Internet savvy and experience good electronic services (e-Services) from the private sector, they begin to expect the same high standards from government agencies. E-government promises to emulate the private sector by offering more efficient, transparent and accessible public services to citizens and businesses (Al-Shafi, 2008: Sahraoui, 2005). When analysing the existing literature on e-government, different researchers have identified various factors that influence e-government implementation (Weerakkody et al., 2007; Gichoya, 2005). For instance, Moon (2002) proposed that IT and web-based public services could help governments to restore public trust by coping with corruption, inefficiency, ineffectiveness and policy alienation. Conversely, lack of access to e-Services (Chircu and Lee, 2005), and digital divide (InfoDev, 2002; John and Jin, 2005; Carter and Bélanger, 2005; Ifinedo and Davidrajuh, 2005; Chen et al., 2006; Carter and Weerakkody, 2008) are challenges that may influence trust and thereby impede the further take-up of e-government services. For instance, research in the US and UK has identified a number of socio-economic factors that widen the digital divide in terms of using e-Services (Thomas and Streib, 2003; and Dwivedi and Irani, 2009). To bridge the digital divide, Reffat (2003) suggests that governments could help by providing computer education especially to elderly and younger people. These findings indicate that various researchers and practitioners have attempted to offer insights into the implementation and acceptance of e-government services in different national contexts (Al-Shafi and Weerakkody, 2008).

The paper is structured as follows; a literature perspective of e-government for the key themes that influence its implementation is discussed in the next section. Section 3 then presents a conceptual model for e-government implementation. This is followed by an outline of the research approach used for the study in Section 4. Section 5 then discusses the results of an empirical study to explore further the key themes drawn from the literature. Finally, the paper concludes by discussing the research implications and identifying areas for future research.
CRITICAL THEMES INFLUENCING E-GOVERNMENT IMPLEMENTATION

A close examination of the e-government literature reveals that, although different researchers have identified various factors that influence e-government implementation, these factors can be broadly classified under the four broad themes of organisational, technological, political and social as discussed above from an institutional theory perspective. In order to better understand the makeup and influence of these four broad themes on e-government implementation, current government literature is examined in detail to identify what challenges and complexities can be classified under each of the themes.

Organisational Themes Influencing E-Government Implementation

Organisational Structure

Organisational structure is seen as the way that organisations separate the responsibility relationship that entails a structure and how to coordinate it (Strens and Dobson, 1994). Jackson and Morgan (1982; 81) defined organisational structure as: “the relatively enduring allocation of work roles and administrative mechanisms that creates a pattern of interrelated work activities and allows the organisation to conduct, coordinate, and control its work activities”. In the context of e-government, public sector agencies will be induced with fundamental changes that will require radical reengineering of work processes in a manner that has not been encountered before (Weerakkody and Dhillon, 2008; Scholl, 2003; 2005; Al-Mashari, 2006; Janssen and Shu, 2008). In addition, Layne and Lee (2001) state that as e-government become more established, the organisational structure of the public agency may be changed accordingly in two main aspects, internal and external. These changes might raise some challenges like resistance to change as public employees get suspicious about the threat to their jobs by the use and adoption of these technologies (Al-Shehry et al., 2006).

Power Distribution

Norris et al., (2000) argue that the implementation of a new IS/IT environment would involve major organisational change. Additionally, the implementation of new IS/IT in public organisations may result in user (government employee) resistance (Doherty and King, 2005) as well as employees losing their authority and power over traditional business processes. Therefore, these employees who lose their power will try to resist the e-government project because it is seen as a threat to their power and positions (Doherty and King, 2005; Heeks, 1999).

Information System Strategy Alignment

Information systems strategy facilitates and leads organisations in their information systems development work. According to Basu (2004) the strategic objective of e-governance is to support and simplify governance for all stakeholders including government, citizens, and businesses. Therefore, a comprehensive e-government strategy is essential to effectively and efficiently deliver the successful implementation of online public services (Pilling and Boeltzig, 2007).

Prioritisation of deliverables

If the e-government services, their deliverables and relationships with their stakeholders and customers are not prioritised, e-government projects are likely to face major challenges such as loosing citizens’ confidence and satisfaction (Lee et al., 2008). This will result in delay in take up / adoption of new services (Rotchanakitumnuai, 2008; Alhamidah, 2007). Furthermore, in terms of project management, prioritisation of deliverables will ensure that the most strategically significant services are managed and delivered appropriately.

Future Needs of the Organisation

E-government projects are viewed as a set of activities that starts as an ICT project and needs to (Marchewka, 2006). Moreover, an e-government project is a long-term initiative. Therefore, according to Ebrahim and Irani (2005), the adoption and implementation of e-government systems needs time and appropriate frameworks to support implementation.

Technological Themes Influencing E-Government Implementation

An examination of the e-government literature reveals a number of factors that can be discussed under the technological theme.
Information Technology (IT) Standards

Technology standards are an important requirement for e-government implementation. The literature has identified many obstacles that impede collaborative efforts between government agencies (Joia, 2007; Fedorowicz et al., 2009). It is common for different government agencies to have different hardware and software that may not work, integrate and interoperate together; this may lead to e-government implementation difficulties. According to Layne and Lee (2001), e-government implementation is expected to provide the access to citizens and other users from one single integrated gateway. Also, it requires participating government agencies to share their data to serve and achieve the citizens or e-government system users needs. Therefore, information technology standards are needed to avoid any hardware and system barriers that would hinder the implementation of e-government systems. Keen (1991) defines standards as an agreements of procedures, formats and interfaces standards that assist system and hardware designers to develop new services differently from each other, but can be well-suited and compatible with each other if it is required. Nyrhinen (2006:10) argues that IT standards “dictate how IT assets are to be acquired, managed, and utilized within the organization. Standards act as the glue that links the use of physical and intellectual IT assets. Shared services are thus a result of the blending of physical and intellectual assets according to the rules and guidelines prescribed by standards.” Therefore, to conclude to a successful implementation of e-government, the IT standards should be considered as a main and an effective factor from an e-government implementation perspective.

Security and Privacy issue

“Cyber security can simply be defined as security measures being applied to computers to provide a desired of protection” (Conklin and White, 2006:2). Wilford (2004) argues that researchers in the field of e-government consider security and privacy as one of the key challenges for the implementation of an e-government system. Security issues commonly consist of computer security, privacy and confidentiality of personal data (Layne and Lee, 2001; Smith and Jamieson, 2006; Al-Khori and Bal, 2007). Conklin and White (2006) justify that information that is stored in databases and systems remain very valuable. In this case, security and privacy issues should be monitored and reviewed continuously. Underestimating the importance of this factor can result in unauthorised access to sensitive information and loss of citizens’ trust, which might lead to e-government failure. Therefore, building a solid trust environment by providing a high level of data privacy, data integrity and user authorisation will ensure electronic transaction security and online identity authentication (Al-Khouri and Bal, 2007; Conklin and White, 2006). Common security services include public key infrastructure (PKI), electronic signature, passwords, biometrics, and the policy enforcement mechanism (Kaliontzoglou et al., 2004). Zweers and Planque (2001) stated that security and privacy are counted in the USA e-government implementation as one of four important issues.

System Integration

Layne and Lee (2001) divided system integration into two types, vertical and horizontal. They explained that the vertical integration is where local systems are linked to higher level systems and within smaller functionalities, whereas, horizontal integration integrates system across different functions which would provide a full and real one stop shop. This integration assumes that all participated agencies efforts are joined together (Al-Khouri and Bal, 2007). Furthermore, the more complex and transformational e-government developments (Baum and Di Maio, 2000) require integration among internal and external applications (Baum and Di Maio, 2000; Zarei et al., 2008; Weerakkody and Dhillon, 2008). Al-Khouri and Bal (2007:94) argue that “overall system integration is one of the biggest obstacles in e-government implementation”. Many researchers have stated that e-government systems need to link vertically and horizontally between front and back office information systems in different government agencies for effective one-stop delivery of online services (ElSheikh et al., 2007; Layne and Lee, 2001; Al-Sebie and Irani, 2005; Weerakkody et al., 2007; Kamal et al., 2009).

Digital Divide issue

Digital divide occurs as a result of the gap between those who are able to access and use ICT, and those who cannot, between different ethnic, gender, age, income, language and social (Im and Seo, 2005; Caldow, 2001). On the other hand, Silcock (2001:7) emphasises that “Digital divide is no so much a question of access but of education. You can put computers in libraries, for example, but they are not going to be used by those who do not have know-how”. Marchioninini et al., (2003) categorise digital divide into three types: access to information; transaction services; and citizen participation. Thus, e-government officials should be aware of the ‘Digital Divide’ that exists, and they diffuse this…. By , for example providing multi channels of access to new technology. Furthermore, offering computer literacy education to citizens, especially to the elderly and less computer literature users will ensure that the digital divide will be minimised (MIIT, 2006; Al-Shafii, 2008; Helbeg et al., 2009) argue that e-government and the digital divide are intertwined social phenomena theoretically and practically. Additionally, they specify that “the market will eventually close the “perceived” gap over time and that public
intervention is not necessary” (Helbeg et al., 2009:91). Moreover, some scholars specify that digital divide can be of different forms: a) global divide, (b) social divide, (c) democratic divide, d) skills divide, and e) economic opportunity divide (Norris, 2001; Mossberger et al., 2003).

**E-Government Portal and Access Issues**

Not only in e-business but also in e-government, success of online services depends on the mechanism and payment process that is in place for services rendered (Wittmann et al., 2003) As the payment method in online transactions is complex and dynamic. For example, in Germany, the use of “Geldkarte” payment is only possible inside Germany and it is not possible internationally as the payment process involves inserting a card into a card reader which is located only in Germany (Ibid). In online payment systems, the widespread availability of a payment gateway service 24 hours a day, 7 days a week is one of the major benefits to users (Deakins and Dillon, 2002). Trkman and Turk (2009:417) states that “the assurance of a suitable institutional environment (‘the rule of law’, credible payment channels etc.), is an important prerequisite for the usage”.

**Political Themes Influencing E-Government Implementation**

An examination of the e-government literature reveals a number of factors that can be discussed under the political theme.

**Government Support**

Apart from government top management, support is strongly required throughout the implementation of an e-government project. It needs continuous approval and commitment from high authority to sustain and to continue without any unanticipated delays or project failures (Heeks, 2003). Authors such as Weerakkody and Dhillon (2009) and, Kurunamanda and Weerakkody (2006) suggest that top managers should fully understand the strategic objectives of e-government and the associated benefits. Furthermore, the involvement and support of the government’s top authorities would enable egovernment officials to implement the project with more confidence. This will result in higher levels of success and avoid problems such as resistance to change, unclear position, and top management uncertainty of the e-government project (AlTameem et al., 2006; Zarei et al., 2008). Chen and Gant (2001: 343) argue that “continual top management support is necessary for dealing with possible initial resistance and ensuring interdepartmental communication and cooperation”.

**Funding**

Okiy (2005) argues that the importance of funding superior services cannot be over accentuated. Funding facilitates the infrastructure (such as building, technology, human resources) that is needed to implement e-government and helps attain the associated targets and milestones in terms of e-government implementation. Moreover, Gottipati (2002) argues that the way e-government projects are being reviewed and funded in the Arabian gulf is that, such projects appear to be “… budget based projects rather than being project-based budgets” Also, as mentioned previously e-government initiatives are long term projects, therefore, it needs long-term financial support from the government. Moreover, Eyob (2004) argues that financial issue is one of the main challenges for the development of successful e-government. Furthermore, he added that it is a major challenge especially when the funding has to come from government where political influence may interfere with decisions taken by high level officials (ibid).

**Leadership**

Leadership in an e-government context is closely tied with the political context as success depends on the level of commitment and innovative vision shown by politicians (or government officials) who govern a country at the time of e-government implementation. According to Heeks and Stanforth (2007) leadership in e-government projects means a number of things. Murphy (1996; 1) defines leaders as: “People to whom others turn when missions need to be upheld, breakthroughs made, and performance goals reached on time and within budget”. E-government projects are long-period projects, and thus need a strong leadership in order to avoid most challenges. Research has identified leadership and vision as main factors for the success of e-government projects (Ke and Wei, 2004; Elmaghi et al., 2007). In this respect, innovative leaders provide innovative solutions for citizens and businesses (Hunter and Jupp, 2001). Likewise, Denison et al., (1995) state that effective leaders express more complex and contradictory behaviours than ineffective leaders. Zairi (1994: 9) claims that “Nowadays leadership is considered as a must for survival. It comes from the level of inspiration, commitment generated and corporate determination to perform.” Moreover, Jaeger and Thompson (2003) argue that leadership is one of the key challenges to to implementing any e-government project.
Legal and regulation issues

Akomode et al., (2002:45) state that “the concept of e-government is radically changing the way the public sector is doing business, new legal issues continue to arise”. E-government systems require many regulations and legislation acts to cope with the changes that are caused by e-government systems. These legislations may include electronic signatures, archiving data protection, preventing computer crimes and hackers, and the freedom of information act. Heeks (2001) clarified that regulatory changes are required for a host of activities from procurement to service delivery. Moreover, legal risks in terms of technology may expose public agencies to serious liabilities (Watts, 2001) and therefore, new e-services legislative acts have to be developed and updated periodically to avoid unexpected results or delaying of project. Failing to do so may result in e-government progress being severely delayed and hindered. A good example of this is in the UK, where according to Bonham et al., (2003) e-government progress is hindered by the data protection and privacy laws that prevail in the country.

Social Themes Influencing E-Government Implementation

Citizen-Centric Focus

E-government is about using new technology to develop better, more accessible citizen focused government services (Al-Sebje and Irani, 2005; Al-Sherey et al., 2006). Therefore, e-government activities should focus into citizens needs and deliver services that are of added value to the citizen (Parent et al., 2005). Misra (2007) argues that citizen-centric government is one of many important criteria’s that make e-government unique from traditional forms of service delivery. Additionally, Misra (2007: 11) states that “it is necessary to define e-government afresh and propose a citizen-centric criteria-based definition of e-government as a lodestar to guide the efforts of e-government policy makers and implementers”. According to Undheim and Blakemore (2007:23) e-government is concerned more with the process of ‘customer insight’: “Insight can be defined as ‘a deep ‘truth’ about the customer based on their behaviour, experiences, beliefs, needs or desires, that is relevant to the task or issue and ‘rings bells’ with target people.”

Organisational Culture

Hofstede (1998) identifies organisation culture as a group of programming in the brain which differentiate members of different organisations. According to Irani et al., (2005), e-government implementation might be affected by the variety of organisational culture issues. Therefore, governments are required to be ready for these changes and consequently adopt new strategies for e-government initiation (Burn and Robins, 2003). Additionally, Irani et al., (2005: 68) states that, “the organisation perceives itself as progressive and does not to lag behind other authorities with regards to service delivery and e-government infrastructure. Generally, departments do not act corporately but instead, compete for political recognition, status and resources. Departmental objectives are idiosyncratic, and they is often a limited corporate approach to issues, including IS evaluation’. Moreover, Zarei et al., (2008) specifies that the creation of a public culture is apart from the physical infrastructure. Also, Weerakkody and Choudrie (2005) mentioned that the paradigm shift and change of culture would result to resistance. According to Coombs et al., (1992) culture exposes the socially organised character of the practices which comprise organisational life. Such practices are irremediably supported by a web of meaning mobilised by organisational members as they orientate themselves to their work. The authors recognise the different dimensions and wide ranging implications of culture in terms of technology implementation. However, it is beyond the scope of this paper to examine all the various different dimensions of culture in the context of e-government.

Training and Educating Citizens

According to Zarei et al., (2004) training is one of the fundamental issues where employees and managers need to get familiar with work under new circumstances, and are prepared for changes. Given the rapid advancement in technological innovations, skills in using a particular technology can quickly go out of date. Therefore, education and training employees on the new technologies would lead them easily to change (Weerakkody and Choudrie, 2005). In this context, e-government officials must consider training and education as one of the most imperative factors influencing the success of e-government implementation (Read and Kleiner, 1996). Greig (1997) divides training into three types: training that can be done more effectively: externally; within the organisation internally; and equally well outside or inside the organisation. The main factor that would suitably decide which type of training to be conducted is the number of employees as well as the cost of the required courses. Furthermore, training is an important factor while systems’ users need the necessary skills to implement and operate the system well (Clegg et al., 1997). Heeks and Davies (1999,32) specifies that “Senior public officials-both managers and politicians-often lack IT skills and even IT awareness” and that e-government officials should consider their current employees needs for training to improve their technical skills that would help them deliver successful
implementations. Heeks, (1996) also suggests that developing countries should be aware of and consider the possible difficulties in attracting the right skilled employee.

**Awareness**

The general population (or citizens) often have limited awareness about what e-government is and its benefits (Al-Omari, 2006). This lack of awareness might prevent citizen from participating in e-government services (Reffat, 2003). Therefore, the growth and implementation of e-government will depend much on marketing and awareness (Reffat, 2003; Navarra and Conford, 2003; Bhattacharjee, 2002). Moreover, Morris and Venkatesh (2000) specify that older people often lack awareness and have limited trust in technology. Additionally, Fang (2002) mentioned that governments often tend to cooperate more with elderly due to the generation gap and lack of expertise in the use of modern technology. Therefore, it is imperative that, “the importance of e-government services are exploited and their benefits emphasised to the citizens” (Choudrie et al., 2005:565). Given this context, strong campaigns are needed to promote e-government to achieve more citizens’ participation in e-government and to achieve a successful implementation (Weerakkody and Choudrie, 2005; West, 2004). These campaigns would motivate and raise the citizens’ awareness of e-government initiatives. Examples of such campaigns may include government sponsored seminars and workshops, mailing newsletters, displaying posters and banners to citizens in public malls and so forth. Also, advertising through public media services about e-government benefits would encourage citizens to be more involved, convince them to use e-government, and raise awareness about participating in e-government services (Weerakkody and Choudrie, 2005).

**A CONCEPTUAL MODEL FOR E-GOVERNMENT IMPLEMENTATION**

While the literature and theoretical analysis offered above outlined the various factors that influence e-government under the broad themes of Political, Social, Technological and Organisational contexts, these themes can be synthesised and captured in a conceptual model as key factors that need to be considered from the government (or service providers) perspective for e-government implementation. In figure 1 we propose such a conceptual model that would consequently form the basis for empirically exploring e-government implementation in Qatar.

![Figure 1: A Conceptual Model for Understanding E-government Implementation](image-url)
RESEARCH METHODOLOGY

As the focus of this research involved studying e-government implementation from the perspective of the government, a qualitative approach (Miles and Huberman, 1994; Walsham, 1995) involving interviews were used as the main method of data collection to study the government’s efforts of e-government implementation (Yin, 2009). A semi-structured interview approach was followed for data collection and eight senior and middle level government employees and officials responsible for e-government implementation in Qatar were interviewed. An interview guide was developed and used during the data collection process and the e-government literature and conceptual model presented in Figure 1 offered guidance for the questions and interview guide. The main advantage of using semi-structure interviews is the flexibility they offer to collect more detailed information from the respondents (Yin, 2009).

Access to the eight interviewees was gained through personal contacts and the researchers had all of the interviewees’ permission to use a tape recorder. Interviews were conducted in enclosed meeting rooms free of any external disturbances and lasted around two hours. Follow up interviews were conducted more than once where necessary to clarify any unclear information. On occasions, this was complimented with brief telephone conversations and email exchanges to clarify certain issues when necessary. Furthermore, a variety of secondary data source were used to collect data such as internal reports, other publications that from apart of the case study organisations’ history and past project documentation (Irani et al., 2008). This process allowed for triangulation and validation of the findings (Yin, 2009; Miles and Huberman, 1994). Furthermore, the interviewers were given the transcripts to check and resolve any discrepancies that may have arisen and eliminate any bias (Irani et al., 2005; Jick, 1979).

FINDINGS AND DISCUSSION

E-Government in the State of Qatar

The State of Qatar is a peninsula with a strategic position at the centre of the west coast of the Arabian Gulf. The total land area is approximately 11,437 sq km. The population estimated to be around 1,500,000 (The Peninsula, 2008); however, only a minority of the population is citizens by birth, while the rest are residents who live or work in Qatar and are not Qatari’s by birth (Al-Shafi and Weerakkody, 2008).

E-government was launched in Qatar in July 2000 and the initial period of strategy formulation and implementation was lagged compared to e-government efforts during the same period in developed countries. However, with the establishment of ictQATAR in 2004 and their consequent takeover of the national e-government initiative a year later resulted in accelerated progress in the last three years. Parallel programmes were introduced in key areas such as health, interior affairs and education (ictQATAR, 2009).

The Qatari e-government site offers many services, ranging from student registration and paying traffic violations to applying online for visas and permits (Al-Shafi, 2008). In global terms the UN e-government readiness report (2008) ranked Qatar’s e-government project as number 53 worldwide from 189 countries analysed in their research, whereas in 2005 it was ranked as number 62 worldwide (Al-Shafi and Weerakkody, 2008). This ranking has now dipped back to number 62 again in 2010 (UN, 2010) showing a lack of progress and consistent plans. In addition to this, the UN (2005) report considered the Qatari e-government project to be regional (West Asia) best practice. This implies that major improvements and developments have been made during recent times. As part of Qatar government’s ongoing efforts to increase accessibility to e-government services and bridge the digital divide, free wireless internet access in public parks – (iPark) initiative was launched in March 2007; this concept provides “Broadband for all” and aims to foster knowledge based society. The primary goal of the initiative is to increase internet usage by establishing “hot spots” in public parks (IctQATAR, 2009). There are currently three designated wireless internet hotspots throughout selected public parks in the city; these parks are targeting visitors who have internet access available on their laptops, PDAs, and other internet-ready devices (Ibid).

Factors influencing E-government implementation

Organisational Factors

The case study findings showed that ictQATAR has nine key national ICT Programs: a) building a ultra high speed infrastructure for all, b) developing a regulatory and legal framework, c) ensuring safety and security of online services, d) integrated e-government system, e) e-education, f) e-health, g) e-business, h) innovation and capability building, and i) moving towards an inclusive society. E-government is considered under the ictQATAR strategy master plan. Therefore, the aligning of the e-government strategy with other initiatives is important and showed that they fall under one ICT strategy and responsibility of ictQATAR. According to the e-government director, “the government in Qatar has its own socio-economic
development priorities and we have tried to firm our master plan into this Qatar vision and it was called earlier as Qatar vision 2025, and now it is called Qatar vision 2030". The e-government director explained that the Qatari government has its own development priorities and icctQATAR tried to integrate their master plan into this Qatar vision 2030. Also, he stated “this procedure was one of the inputs that we used for the development of our master plan and priorities”. Finally, the e-government director confirmed that they have accomplished around 35% to 40% of the overall e-government master plan.

Technological Factors

Security and privacy issues are seen from e-government implementers and users as one of the most critical concern due to the high level of sensitive information being transferred online. The Qatari government has realised the importance of this issue as this might hinder the use of e-government services in Qatar. Therefore, the government of Qatar has implemented the smart cards, public key infrastructure (PKI), and biometrics that are utilised to provide and cover a reliable and trusted security infrastructure for e-government services. The case study findings showed that the smart cards were issued in two stages; first to companies and then to the Qatari citizens (by birth) only; the non-Qataris residents will be offered their smart cards in third stage.

In the area of IT standards, currently, most public agencies and citizens have various user interfaces, as acknowledged by many interviewees; one e-government employee stated “we have some standards related problems... for example we use an old version of JAVA whereas in some government agencies and most customers use a new version which results in compatibility problems”.

As for the e-government portal and access, the e-government implementers have decided to implement an online transactional service from the first day of the national e-government project in 2000. Also, the development of the e-government payment gateway was chosen to be the only government payment gateway for all government electronic services; this prevented other government agencies from building other payment gateways for any of their e-service payments. However, the case study findings revealed that the payment gateway was encountering problems and shut down for a few services such as traffic violations and electrical and water payments during the month of November, 2008.

Political Factors

Four key factors dominate the political theme as discussed in Section 2. Not surprisingly, the first factor, leadership qualities was found to vary between case study employees from fair to adequate. As one of e-government employee specified, he does not know if the e-government project is a priority for the leadership. In contrast, according to news media and various initiatives that have been launched in recent years (such the iPark initiative as described before) government support for e-government was seen to be strong in Qatar with a high level of commitment. Yet, a senior e-government project manager suggested that the government support has varied from time to time.

Also, the case study findings showed that financial issue and funding is not a problem for e-government in Qatar. A senior manager stated “I think we cannot consider the financial and funding issue as a key challenge, but it takes time due to the process of getting financial approval and funding resources”. Additionally, according to the e-government director, “we have great financial support from the leaders of this country for the transformation of our e-government project”. Echoing the previous comment, the e-government director explained that legislation and legal issues were however very slow in Qatar.

Social Factors

In the social domain, training was not considered as a challenge by the interviewees except for the external courses and training that needs to be organised especially for the non-Qatari employees. For the awareness issue, the e-government director pointed out that at present they have communication and marketing campaigns in shopping malls, newspapers, as well as targeting the private business sector for marketing e-government services. The e-government director stated that this is important because “most of the e-government services that are available through the e-government portal (Hukoomi) are targeted to businesses more than citizens”. Nevertheless, all of the interviewees agreed that e-government implementation in Qatar has a citizen centric focus. For example, one of the e-government employees stated that “it was initially focusing on transactional benefits for the citizens, but now it is wider to give awareness and information covering all aspects of benefits to the citizens”.

CONCLUSION

A comprehensive literature review showed that the factors influencing e-government implementation can broadly by classified under the themes of organisational, technological, political, and social contexts and associated challenges that are
surrounding e-government systems. This paper has presented a number of organisational, technological, political and social challenges by reviewing prior literature and synthesising these into a conceptual model. The literature and conceptual model was then used as a guide to empirical study and analyse their relevance in Qatar, a developing country in the GCC region. While majority of the challenges mentioned in literature were relevant to Qatar, some new issues were identified that were not explicitly identified in prior research. These issues were largely of a social nature and revolved around training and education to bridge any skills gap for employees who were non Qatari’s that were involved in e-government implementation. The other key challenge that was prominent was also a social issue and revolved around the delays that are caused due to the nature of the process that is involved in the authorisation of financial resources for e-government implementation. This was interesting as financial resources were not seen as an obstacle for e-government at a national level. 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 meet the citizens’ high expectations for e-government.

Future research efforts are needed to conduct more case studies in a number of different public ministries in Qatar to explore the relevance of the issues identified in this paper and to identify any new issues that may have been missed in this research. Also, surveys to understand Qatari citizens’ needs in terms of e-government adoption would help to bridge any gaps between e-government implementation and use. It is hoped that combining such research efforts will allow in better understanding such gaps and help in progressing the government’s efforts of implementing e-government in the State of Qatar.

REFERENCES


Murphy, E.C. (1996), Leadership IQ, Wiley, New York, NY,


