

The Effectiveness of e-Service in Local Government: A Case Study

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Abstract: e-Technology has become a catalyst for enabling more effective government through better access to services and the democratic process. As public interest in the Internet and e-Technology solutions continues to grow, there is an increasing expectation that they will be utilised in national and local governments for not only more efficient governance but also improving public access to information and services. This paper, based on a case study discusses some of the key aspects of electronic government and e-Service. It examines the value and the effectiveness of e-Services within the public sector with a focus on four specific facets of effectiveness: the view of management and ICT strategists; social, cultural and ethical implications; the implications of lack of access to ICT; and the customers'/citizens' view of the usefulness and success of e-Service initiatives.

Keywords: e-Technologies, e-Service, e-Government, e-Readiness, Local Government

1. Introduction

The most prominent of the recent advancements in Information and Communications Technology (ICT) has been the emergence of the Internet, Web-based technologies (e-Technologies) and global networked economies. Today, e-Technologies play an increasingly significant role in our day-to-day lives. They have fundamentally transformed the technological, economical, political and social landscapes.

The competitive imperative of the private sector has driven businesses into the digital world. To deliver the products and/or services in a timely and cost effective manner, the private sector has had to increasingly streamline business processes. As a result, the private sector has steadily set higher standards of service (through the application of e-business and e-Service solutions) both domestically and internationally. The most significant reform in private sector has been that of revolutionizing the supply chain management and the value change management through the application of e-Technologies. However, as public interest in the application of e-Technology solutions grows, there is an increasing expectation that they will be adopted within both national and local government organizations alike. Public sector organizations (including local governments) deal with complex networks of suppliers (and distributor) and sophisticated value chain systems on an ongoing basis. Within the last decade, many public sector strategists have acknowledged the strategic value of e-Technologies (Figure 1). They also recognize the need for improved efficiency of business processes, enhanced citizens' access to information and services, and more productive relationships with both citizens and private sector agencies alike. Consequently, many innovative

public sector agencies world-wide (e.g. Canada, the UK, Australia, New Zealand, Singapore, Hong Kong SAR – to name but a few) have had to create new ways in which to use e-business and e-Service solutions (known as electronic or digital government) so as to respond to the need for change (Heeks 1999). Local, regional and national governments throughout the world are attempting to broaden service delivery and citizen involvement by providing effective e-Services. This reflects a growing acceptance that achieving excellence in customer service is just as critical for the public sector as it is in private companies.

The introduction of e-Service solutions within the public sector has primarily been concerned with moving away from traditional information monopolies and hierarchies. What's more, e-Service and e-business (through digital government) have fundamentally transformed the ways in which the logistic processes and supply chain dynamics are managed within the public sector. However, e-Service remains a challenge to both citizens and public sector agencies alike. Governments must not only maximize the benefits that are offered (through the application of digital government and e-Service) but must also avoid the many pitfalls (economical, social and cultural) associated with rapid technological change. That is to say, despite advancements in technology solution, the challenges to effective government within today's knowledge society are profound.

Within the past few years, there has been much debate (e.g. Accenture 2001b, Asgarkhani 2002b, Asgarkhani 2003a, Asgarkhani 2004, Heeks 1999, Nath 2003 and Reschenthaler et al 1996) over the effectiveness of e-Service in the public sector. Technology is undoubtedly the backbone of the infrastructure that is required to support electronic government initiatives. Yet there is a danger in

placing too much emphasis on the technology aspect of e-Services. What's more, political and financial support for e-Service projects can be accompanied by political rhetoric and hype. The potential benefits of e-Technologies in the public sector can only materialise when they are introduced as part of a well-planned and properly supported social, cultural and political environment. There is also a need for

performance measures in order to assess progress (and effectiveness) and ensure that rhetoric of e-Service is matched by reality. If citizens are to benefit from the efficacy and potential cost-effectiveness of e-Service, it is essential that traditional public sector structures and conventional governance paradigms are revised.

Efficiency	
Time	Accelerating business processes and activities
Distance	Reducing geographical and distance inhibitors/barriers
Creativity	Enhancing existing business processes and activities
Effectiveness	
Time	Improving the flow of information and business intelligence throughout the supply and the value chain components
Distance	Enabling integrated control of the supply and the value chain processes
Creativity	Enabling new (and/or modified) processes
Growth	
Time	Obtaining early market entry/presence
Distance	Introducing new products to new markets
Creativity	Developing new products and services

Figure 1: The strategic value of e-Technologies

This paper elaborates on the strategic role, the value and the effectiveness of digital government that enables e-Service. Four specific facets of effectiveness have been examined:

- Effectiveness from the point of view of management and ICT strategists (concerning the implications of ICT and e-Service in the public sector).
- Effectiveness as it concerns social, cultural and ethical implications of e-Service and e-business.
- Effectiveness with reference to differences in access to ICTs (digital inclusion/exclusion).
- Effectiveness from the point of view of citizens - a preliminary study of the citizens' view of e-Service and e-business.

The paper is presented in two parts. Part one (based on a review of previous studies and analysis of digital government and e-Service cases (Accenture 2001b, Asgarkhani 2002b, Asgarkhani 2005a, Asgarkhani 2005b, Asgarkhani 2005c, Asgarkhani 2003c, Bhatangar et al 2001, COMNET-IT 2000, Heeks 1999, Lin et al 2001, Orrego et al 2000, Radics 2001 and Perri 2000) reviews the fundamental concepts of digital government and e-Service followed by discussing the effectiveness as outlined in (a), (b) and (c) above. Part two is based on a case study of a digital local government and e-Service project within the Canterbury region of New Zealand. The case study examines the effectiveness of e-Service as outlined in (d). The methodology for gathering information included interviews with project sponsors (and a number of other

stakeholders) and a combination of formal interviews and surveys of several focus groups of users.

2. e-Technologies and e-Service in the public sector: An overview

Electronic government forms the foundation for digital or electronic service (e-Service) and depends upon a sound technology infrastructure. However, e-Service is not a technical exercise, but rather an attempt to improve the political and social environment and to drive a fundamental change in the ways in which functions are performed. The introduction of ICT in order to automate public sector functions and introduce e-Service will not automatically create a better or more open government - unless it is based on policies to promote the effective utilization of technology. e-Service initiatives inevitably need to take into consideration issues such as new models of policy formulation; alternative forms of citizenship; different patterns and trends of relationship and power; new solutions for economic development; and alternative approaches for connecting people to the political process.

Extensive research has been conducted by various practitioners (e.g. Asgarkhani 2004, Asgarkhani 2003c, Asgarkhani 2003a, Samaranayake 2003, Radics 2001, Tapscott 1997 and Wiener 1984) in an attempt to answer questions about the key issues concerning the adoption of ICT and e-Service. What's more,

certain advisory and interest groups have been formed in order to provide answers to some of the issues that were mentioned above (e.g. International Centre for e-Governance – www.icegov.org).

As the application of ICT in governments within developing nations becomes widespread, a progression through the various stages of e-Government and/or e-Service can be observed (Asgarkhani 2002b, Asgarkhani 2003a):

- *Basic Internal Functional Efficiency* - Improving internal functional efficiency through the application of ICT.
- *Improved Internal Communications* – Improving internal communications (through the application of electronic mail) and introducing workflow management systems for increased process efficiency.
- *Improved Access* - Providing access to information concerning services and the democratic process.
- *Electronic Interconnection of Services* - Putting in place applications that would not only enable citizen participation through feedback, but would also allow for transactions between citizens to government (C2G), businesses to government (B2G) and government-to-government (G2G).
- *Electronic Democracy* - Introducing digital democracy - technological solutions that would enable participatory action and democratic processes.
- *Total Electronic Service Integration* - Introducing integrated electronic or digital governance services through one central e-Service hub.

A review of various case studies of e-Government and e-Service (e.g. Webster 2001, Radics 2001, NIC 2000, Asgarkhani 2003b, and Asgarkhani 2004) suggests that local government objectives in introducing e-Service are likely to concentrate on:

- *Prompt, accurate service* – as local governments potentially receive millions of calls per year, setting a target to resolve a high percentage of these calls the first time they occur (through establishing a customer contact centre) can result in significant efficiency gains and cost savings.
- *Improved quality of service* (by reducing redundancy in service) - One client of a local government can potentially generate up to dozens of files in different locations. Local governments are seeking to convert these to one secure and accessible file - helping to provide continuity and coordination of local government support.
- *Removing barriers and tackling social exclusion* – Local governments are aware that

many clients do not have the skills to use electronic services, yet seem keen on setting up networks of learning centres in libraries and community centres that teach people relevant Internet and Web technology skills.

- *Local access points* – It appears (Webster 2001) that up to 20% of customer queries cannot be addressed immediately. Clients often need to meet with a “professional.” Local governments can benefit from setting up community access points to let clients meet ‘professionals’ through online video links.

Today, e-Services appear in various shapes and forms. Typical applications (within both local and national governments) can include: providing access; connecting to a service or a process; facilitating consultation; and enabling active citizen participation (Figure 2)

3. The value of e-Service: Management and ICT strategists’ view

A review of various viewpoints over the implications and effectiveness of e-Government and e-Service (e.g. Perri 2000, Asgarkhani 2002b) indicates that there are at least four schools of thought: pure optimism; optimism with some concerns; pessimism; and those who view technology as a tool only - but not a driving factor on its own.

The optimists argue that the use of ICT in governance represents a major once-and-for-all improvement in the capabilities of governance through a more effective management of all domains Wescott 2001. The only cost is the investment and the day-to-day operational running costs. They believe that e-Government can reduce the costs of decision making, management and day-to-day operational activities (such as acquiring, ordering, coding, organising, selecting, managing and using information) steadily over time. That is to say, the initial investment costs would be compensated through the cost savings and efficiency gains that are likely to be achieved over the lifetime of the systems (Reschenthaler et al 1996). This optimistic view appears to be based on the classical cybernetic theory (Wiener 1984) – that views information as control.

The second group (optimists who have some concerns) accept at least the possibility of greater control, quality and rationality in decision-making. However, they dispute that the efficiency gains achieved through e-Government come at a price. That is to say, unless safeguards are put in place, e-Government may result in compromising citizens’ rights - such as the right to individual liberty and privacy; the right to influence

governmental decision-making (Perri 2000 and Raab 1997) and the loss of control over

politicians' decision-making agendas (Zuurmond 1988).

Type of Electronic Service	Typical Application(s)	Phase
Providing Access Making information accessible to citizens (public kiosk, Internet, CDs, and so on)	Citizen access to general information Directory and directions to parks and community centres Calendar of city-sponsored events and activities Manual of policies and procedures Phone directories	Improved Access
Connecting to a Process or Service Provide information and/or access to government ICT-based systems, information management solutions and true web-based services	Property information License renewal and payment Payment of parking tickets, court fines Registration for class and sports activities Online permits, business licenses, court documents Online auctions Electronic posting of commodity products with purchase order and invoice transactions Sales tax collection Job postings; online application forms Self-service benefits administration	Improved Access Electronic Integration of Services
Raising Awareness Provide information about the political process, services, and options that are available for the decision making process	Government functions and services Citizen services Business services (information) Employee services Employee newsletter Legislative agenda and pending legislation	Improved Internal Communications Improved Access
Facilitating Consultation and/or Communication Initiate and develop means of capacity building, exchanging prior gained experiences, access to experts, and any other information/knowledge of mutual interest.	Posting of RFPs (Request for Information) and Bid Documents Distance learning resources Web casting of City/County Council Meetings	Improved Access Electronic Integration of Services Electronic Democracy
Active Citizen Involvement/Participation Involve citizens in government decision-making, problem solving and election processes.	Digital democracy Communications with Council Members	Electronic Integration of Services Electronic Democracy

Figure 2: Typical applications of digital government and e-Service

The pessimists argue that e-Government actually compromises the quality of decision-making and that excessive demand for policy analysis (based on many categories of information) will cause delays in action – “paralysis by over-analysis.” There is a fear that due to mechanical rule following (as suggested by overly simple data

interpretations, overly simple modelling and overly simple expert system flows from analysis to recommendation) the cultivation and the exercise of judgement in decision-making will be downplayed.

The last group view technology as a tool only and argue that the impact of ICT solutions cannot be viewed in isolation - where it concerns technical or political rationality of decision-making. They view both continuities and changes in governance as being driven socially and politically, not by technology itself. Technology is seen as a tool for either changing or preserving the *style of governance* – e.g. *conservative* and *radical* styles of governance (Mackenzie et al 1985 and Bijker 1997).

Each theory that has been mentioned above has some empirical support - although most empirical studies have been of a rather limited scope and are not in general designed to test, let alone falsify these rival theories. It is fair to say that applying these theories in a unified manner to every case across the board would be unrealistic. These theories need to be discussed with reference to: social and cultural aspects; the technological infrastructure; experience with the application of ICT; and the level of education and interest in the political process.

4. Social, cultural and ethical implications of e-Service

The perceived effectiveness of e-Service can be influenced by public's view of the social and cultural implications of e-Technologies and e-Service.

Impacts on Individuals' Rights and Privacy – as more and more companies and government agencies use technology to collect, store, and make accessible data on individuals, privacy concerns have grown. Some companies monitor their employees' computer usage patterns in order to assess individual or workgroup performance (Asgarkhani 2002a) Technological advancements are also making it much easier for businesses, government and other individuals to obtain a great deal of information about an individual without their knowledge. There is a growing concern (e.g. Asgarkhani 2002b) that access to a wide range of information can be dangerous within politically corrupt government agencies.

Impact on Jobs and Workplaces - in the early days of computers, management scientists anticipated that computers would replace human decision-makers. However, despite significant technological advances, this prediction is no longer a mainstream concern. At the current time, one of the concerns associated with computer usage in any organization (including governments) is the health risk – such as injuries related to working continuously on a computer keyboard. Government agencies are expected to

work with regulatory groups in order to avoid these problems.

Potential Impacts on Society – despite some economic benefits of ICT to individuals, there is evidence that the computer literacy and access gap between the haves and have-nots may be increasing. Education and information access are more than ever the keys to economic prosperity, yet access by individuals in different countries is not equal - this social inequity has become known as the digital divide.

Impact on Social Interaction – advancements in ICT and e-Technology solutions have enabled many government functions to become automated and information to be made available online. This is a concern to those who place a high value on social interaction.

Information Security - technological advancements allow government agencies to collect, store and make data available online to individuals and organizations. Citizens and businesses expect to be allowed to access data in a flexible manner (at any time and from any location). Meeting these expectations comes at a price to government agencies where it concerns managing information – more specifically, ease of access; data integrity and accuracy; capacity planning to ensure the timely delivery of data to remote (possibly mobile) sites; and managing the security of corporate and public information (Asgarkhani 2001).

5. The implications of e-Readiness

Access to ICT is critical for economic and social development. There is much optimism that we are facing a myriad of digital opportunities where the means exist to broaden participation in the network-based economy and to share its benefits. At the same time, differences in diffusion and the use of ICT appear to be deepening and intensifying the socio-economic divisions amongst people, businesses and nations. Differences in access to and use of ICT and electronic networks can lead to: divides between countries; social divides within countries; divides within countries related to income, education, age, family type, and location; and business divides related to sector, region, and firm size.

Overall, developing effective e-Service solutions depends on the state of the ICT industry and e-Readiness within countries, organisations and societies (e.g. Information Society Index 2002 [www.idc.com], Workshop – Digital Divide – OECD 2000, META Group 2000 and Asgarkhani 2002b). That is to say, the digital divide can be

considered as a barrier to the successful rollout of e-Government initiatives. Some of the causes of the digital divide that can limit the successful implementation of e-Service include:

- lack of telecommunications and network infrastructure and limited PC access
- lack of financial resources for developing an infrastructure
- lack ICT literacy and cultural resistance
- limited networking and Internet access (lack of infrastructure or high cost)
- high cost of business investment
- strategic business impediments – applicability; the need to reorganise; the need for skills, security and privacy considerations

The digital divide can potentially limit the success of e-Service initiatives. Even though governments in a number of developing countries receive funding and support for introducing e-Government solutions and e-Service, the effectiveness of these solutions are limited – unless the barriers to e-Readiness within these countries are addressed.

A review of some of the studies on the digital divide and e-Readiness (e.g. UN E-Government Report 2001, Accenture 2001a, COMNET-IT 2000, META Group 2000 and UNESCO/COMNET-IT 2000) indicates that there are significant differences in the level of ICT adoption and network economy worldwide. In this section we review a small sample of these studies with a focus on the Asia Pacific region.

In 2000, the META Group (META Group 2000) examined the digital commerce competitiveness of 47 countries in an attempt to establish a digital economy index. The author, Howard Robin wrote, “Traditional industrial-age measures of production and performance have lost relevance in the information age. Currently, information processing capability is a better indicator of national competitive advantage.” The countries were ranked in five different categories in order to establish an overall ‘information age technological competitiveness’ - knowledge jobs; globalisation; economic dynamism and competition; transformation to digital economy; and technological innovation capacity. The results (with regards to the overall technological competitiveness) as they concern some of the countries within the Asia Pacific region (including New Zealand and Australia) are: Japan (2nd); Australia (8th); Taiwan (10th); New Zealand (11th); Hong Kong SAR (15th); Singapore (17th); Philippines (25th); Malaysia (33rd); India (34th); China (37th); Korea (38th); Thailand (46th); and Indonesia (47th).

The 2002 Information Society Index published by the IDC (www.idc.com) considered 23 parameters

to compile a ranking list of 55 countries. The countries that featured in the ISI index were classified under four categories (along with examples of Asia Pacific countries that featured in the 2002 ISI index) – see Figure 3

Skaters	Countries in a strong position to take full advantage of the information revolution, as they appear to have advanced ICT and social infrastructures. Asia Pacific countries that were classified under this category included: Australia (ranked 9 th); Taiwan (ranked 10 th); Hong Kong (ranked 11 th); Japan (ranked 12 th); and Singapore (ranked 13 th).
Striders	Countries that appear to be moving purposefully into the information age with much of the necessary infrastructure in place. This category included New Zealand (ranked 17 th) and Korea (ranked 18 th).
Sprinters	Countries that are moving forward in spurts before needing to catch their breath and shift priorities due to economic, social and political pressures. Malaysia (ranked 30 th) was the only Asian country in this group.
Strollers	Those moving ahead but inconsistently, due to limited financial resources in relation to their vast populations. Countries that were considered under this category were: the Philippines (ranked 45 th); Thailand (ranked 46 th); China (ranked 52 nd); India (ranked 53 rd); Indonesia (ranked 54 th); and Pakistan (ranked 55 th).

Figure 3: Categories of the ISI index

The first eight countries in the 2002 ISI index were: Sweden; Norway; Switzerland; the United States; Denmark; the Netherlands; the United Kingdom; and Finland.

This relatively small sample of previous research cannot be applied to all countries. However, it appears that many countries (including some Asia Pacific governments) are still at the early or half-way stage of adopting ICT in order to introduce e-Service.

Studies (e.g. UNESCO/COMNET-IT 2000, Webster 2001, Wescott 2001, Asgarkhani 2003b and Asgarkhani 2003c, Lau 2004, Jenkins 2003, Muller 2004 and Nordby 2003) indicate that numerous other factors can hinder the successful the introduction of e-Government and e-Service initiatives including: lack of ICT skills; inadequate resources; too many initiatives; resistance to change; low take-up; and lack of public access.

6. The value of e-Service: A New Zealand local government case study

In December 2001, one of the local governments within New Zealand introduced an e-Service initiative. This particular local government (referred to as the Council hereafter) aims to introduce e-Services through the implementation of its electronic governance initiative in an attempt to facilitate improved two-way exchange of information and enhance its public image as a professional customer service oriented organisation. The Council acknowledges that successful implementation of electronic governance does not result in merely automating the collection and distribution of information, but results in the flow of useful information between the government organisation and its citizens.

The Council measures the success of its e-Service project on an ongoing basis – by looking at: website hits; customer feedback; and quantifiable efficiency benefits.

- *Customer Feedback:* The Council monitors customer feedback from facilities on the service websites. Feedback is assessed to measure customer satisfaction and service level impact. Suggestions may also result in changes to the services provided.
- *Website Hits:* are monitored to determine the utilization of services.
- *Quantifiable Efficiency Benefit:* Services provided by the e-Service project are intended to contribute to a reduction in operating costs. Services must continue to meet the desired levels of efficiency – which includes cost savings, time saving, and service level impact.

Overall, *Web-site hits* are not an effective measure of the usefulness and usability of a web site – unless it is combined with statistics concerning the number of users who actually proceed to access services past the home page. Customer feedback through service websites can be a more effective measure of user satisfaction. However, it would be beneficial to include feedback from other sources (e.g. phone calls).

A combination of surveys and interviews (focus groups) were considered in order to assess public knowledge and opinion of this particular e-Service initiative. Participants were chosen from various age groups - more specifically, 61% of the respondents were 18-34 years, 26% were aged between 35 and 49 and the rest were over 50 years. It appeared that 76% of the respondents were aware of the e-Government services that are provided by the Council online whilst 87% of those who were already aware of the Council's online

services viewed the electronic delivery of services as being useful. From those who were previously unaware of the Council's web site, 81% considered online local government services desirable.

Results indicated that from those who knew of the Council's online services, the majority (49%) became aware of the Council's website through word of mouth. Web surfing or search engines were second (32%) whilst 19% of them knew of electronic service delivery solutions through advertising. Those respondents, who provided additional information, seemed to have used the following services: library information/catalogue (42%); services and hours of operation (38%); events in the city (32%); maps (31%); community services and events (30%); rates information (25%); bus timetable (23%); permits (13%); art gallery (12%); job advertisements/applications (11%); water resources (10%); and population statistics (7%).

Most respondents (who had used the website services) rated the Council's online service as being effective. Those who provided additional information stated the following reasons: immediate access to information anytime/anywhere (77%); saving time – no need for time consuming phone calls and/or visiting the Council (55%); access to information with reasonable details, simple to follow (40%); high level of usability (27%); links to relevant and useful pages and sites (25%); and easy to navigate (20%).

One respondent mentioned that the website did not work correctly. Other difficulties mentioned by those who had used the Council's web site included: could not find the required information (9.5%); download time slow (26.2%); access time slow (32.1%); and navigation was difficult (8.3%).

Overall, participants did not have any major problems in locating the information they needed. This can be due to participants' familiarity with the basic requirements of using a computer and launching and navigating Web-based applications as well as the local government website's ease of use.

Participants suggested that the following services should be considered for online availability: rates payments (37%); other council fee payments (27%); additional general and contact information for the Council's service departments (25%); online submission of applications - e.g. building permits (30%); interactive services: online forums and discussion groups (23%); multimedia: streaming video and audio of local events (30%); and online voting facilities (23%).

Participants were asked to state their concerns about using online services. It appeared that data security was the greatest concern (71%); followed by confidentiality of data (66%), document compatibility (6%) and the technical infrastructure and speed of access (26%). However, 19% of participants had no concerns over using the Council's online services.

On a scale of 1 to 10, (10 being the greatest), the rating for the website contents was 7.18. Overall, on the scale of 1 to 10 (10 being highly desirable), results showed the average rating of the Council's online services was 7.52. Furthermore, respondents gave the importance of access to online services (in general, not just the Council's services) a score of 7.5 (10 being highly desirable).

The results of this pilot study have not yet been finalized. However, it appears that this particular digital government and e-Service initiative is rated as being reasonably effective - in enhancing public access to services and facilitating the democratic process. The results of this study to date appear to be consistent with New Zealand's state of access to ICT and its e-Readiness - as outlined in Section 5. We cannot assume that the preliminary outcome of this study is applicable to every digital government solution across the board. However, there is room for optimism with caution.

7. Conclusions

Within the past few years, much has been debated over the use of e-Technologies and their effectiveness in reform within the public sector. Some of the key issues concerning e-Government and e-Service (as discussed in this paper) can be summarised as follows:

- e-Government is to encompass the reform in public management through the improvement of service delivery to the citizen, the creation of economic activity and the safeguarding of democracy.
- e-Government must be oriented towards the citizen. As the citizen does not need to be aware of who exactly in the government provides the required service, inter-agency and intergovernmental e-governance dimensions are essential.
- e-Government requires electronic or digital citizens (e-citizens). That is to say, before we can call an e-Service initiative effective, it must be made available to all citizens - not just to a minority who can afford to have access to the required electronic infrastructure.

e-Government can provide opportunities for building viable and sustainable partnerships between the private and the public sectors whereby each party would be responsible to provide electronic infrastructure (e-capacity) so a competitive economic advantage can be achieved.

e-Government can be effective if it is adopted alongside business process re-engineering. That is to say, merely automating existing services is inadequate and does not necessarily produce results. The benefits of e-Government and e-Service can only materialise when they are introduced within an environment that supports public access to information and services.

We examined the value of e-Service and e-Government by considering the different aspects of effectiveness – including:

- The view of management and ICT strategists with regards to the implications of e-Government – ranging from the optimists who view e-Government as being an effective tool (without concerns) to those who view technology as a tool only (arguing that technology on its own cannot be a driving force for effectiveness).
- Social, cultural and ethical aspects of e-Service and e-Government – including the impact on information management, workplaces and individuals' right and privacy - to name a few.
- The implications of the digital divide and e-Readiness – the effectiveness and success of e-Service in a country rely on the country's state of e-Readiness and the ways in which the barriers to the 'digital divide' can be overcome.
- A case study of citizens' views of the usefulness and success of e-Government initiatives in facilitating public access to information and services – initial results of a study of focus groups indicate that citizens rate e-Government solutions that were offered as being effective. However, these results are not yet final and are not applicable to all e-Government initiatives across the board.

It appears that practitioners and management scientists tend to agree that the trend for government transformation and public sector reform through e-Service is irreversible. However, technical innovation on its own is not enough to drive the development of effective e-Service. E-Government is a tool and regardless of its potential power, it has limited value and relevance on its own. In other words, access to the right technology for enabling e-Service is essential but insufficient. Undoubtedly, most of the shortcomings (as they concern the effectiveness of e-Service) can be resolved by improving the

technology infrastructure and access to e-Technologies. Nevertheless, technology by itself does not necessarily result in better, more efficient and socially inclusive government. e-Technology solutions are only effective if they are considered alongside other key parameters such as: social structure; cultural values and attitudes; governance process re-engineering within governments; and ethical issues.

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