NOTE TO USERS

A COMPARATIVE EVALUATION OF E-GOVERNMENT APPROACHES IN NEW BRUNSWICK AND DUBAI

by

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ABSTRACT

Online service delivery is becoming an important part of the political agenda today as governments seek to minimize costs and take advantage of the new technology, the Internet. At the beginning of the 21st century, governments all over the globe and at all levels are finding themselves armed with different tools and technologies to serve their citizens than any other time. Internet is revolutionizing how people live, how they work, how companies do business , and how governments serve their citizens.

The benefits of technology are entering into every facet of our lives and, in particular, in our dealings with governments. The result is the emergence of e-government.

The main objective of this report is to describe and define the concept behind e-government, its contributions to land administration/geomatics, and to compare New Brunswick, Canada, e-government with Dubai, United Arab Emirates, e-government. Both are states/provinces of a federal government. Each has responsibility for land related services and each has been innovative in its approaches to providing services for its people.

In New Brunswick, a Crown Corporation, Service New Brunswick (SNB), started implementing e-government around 1998, and delivered about 35% of its services through the Web and through call centers with over 120 services and products from 14 government departments.

The state of Dubai, on the other hand, launched its e-government in October 2001 with 14 online services and a plan to conduct 70% of all government services through innovative channels by 2005.

This report investigates the new service delivery media, the Internet, from different perspectives that both New Brunswick and Dubai are working towards and compares the two government services with respect to intended audience, management style, Website interface, charging for service delivery, accountability, land/property related services, and the future plans for SNB and Dubai. The major conclusion of the research is that both jurisdictions are working towards providing e-enabling services for their people, and each one has strengths and weaknesses in its approach that need to be taken care of.

The next move for SNB is to go towards online democracy in a two way interactions between government and citizens. SNB is quite ready to go towards e-democracy and change New Brunswick political agenda

Dubai's next move would be to make its site task oriented instead of department oriented and to have more services online. Dubai with its available resources, capital and human, along with its leadership can leap-frog its move and make its services e-enabled in a short period of time.

In a broadest sense, the main challenge facing both jurisdictions is the digital divide, that would increase, if no concrete actions are taken.

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1. INTRODUCTION

Information technology is shaping our lives; the availability of information from various sources, 24 hours a day, 7 days a week, makes the public more informed about their needs and opportunities. The Internet is revolutionizing the way governments deliver their services and information to the public.

Governments around the globe, and at all levels, are using different methods and tools to better serve their citizens. Technology has entered into every phase of life, and has changed how people live, how they work, how companies do business, and how governments serve their constituents. The result is: the emergence of e-government. [Deloitte Consulting, 2000].

In the midst of economic concerns along with growing public demands and expectations, governments have come up with new ways to reduce costs and generate more revenues. An ideal concept appeared to be e-government, i.e., offering services online.

The purpose of this research is to highlight and probe the concept of e-government, its benefits to both governments and public, and its contributions to land administration and geomatics. New Brunswick and Dubai have been chosen because of their unique characteristics and mutual interests and also due to the author's acquaintance with both of them.

New Brunswick is a pioneer in this field and has gained a lot of experiences and knowledge. Dubai, is the new business hub for the Middle East, and its leaders have

taken a keen interest in implementing this initiative. Both are small states with diversity of population.

This research should help land administration agencies around the world better understand their new role in e-government and how they can take full advantage of it. It would help them to better inform and educate the public regarding land/property issues.

1.1 The importance of this research

The importance of e-government stems from its universality and adaptation by most governments in both, developed and developing countries. Governments have encouraged their departments and agencies to implement e-government solutions for services to reduce costs, better serve the public, and create new opportunites for revenue. In some cases agencies must meet deadlines for implementing e-government solutions, in order to obtain continuing financial support.

Governments, in their endeavors to implement this new approach, have foreseen five reasons (advantages) to spur the growth of e-government [e-Government in Belgium, 2002]:

1. Accessibility

   The Internet is a permanent medium (permanent medium here means that information is backed-up, through enterprise solutions regardless of the connectivity), accessible from any point at any time. There is no need for people to wait in long queues at the Town Hall or other government offices, or to work

their schedules around the sometimes short opening hours of certain government departments or agencies.

The Internet is also not concerned with distance. For instance, people can vote online or choose a book from the library without leaving their houses, and pick it up later at their convenience. In addition, the web has the advantage of being available 24 hours a day. For instance, persons who need a passport could order it on Sunday at two o'clock in the morning if they want, as long as the required documents have been sent (someday this may also be possible through the Internet).

2. Simplicity

There is no need for people to go to a government agency for some routine paperwork and find themselves having to go from one window to another to collect various documents.

Through a simplified and integrated architecture, e-government is able to reduce the complexity of government services and help the citizens fill out the necessary forms to, for example, start up as a self-employed worker, adopt a child or obtain a building permit. The "e-Government in Belgium" Site [Government of Belgium, 2002] points out that the difficulty and complexity of any government is to a great extent due to its fragmentation. So, the creation of a well designed network that reaches across government departments and agencies can be a solution to this complexity.

3. Transparency

The Internet is not in itself more transparent than paper. However, because it can be accessed from any computer day or night and has search engines and relational databases, it can help make government much more transparent.

4. Traceability

With transparency comes traceability. Traceability is transparency through time. It provides operators with ample information and data, through which they can search for a particular piece of information, regardless of time and location. It is a form of knowledge management.

5. Cost-effectiveness

This is one of the primary motivations for governments to go online. Governments are hoping that they will make significant savings by offering services online. The following are some of the examples where e-government has helped countries cut costs [Government of Belgium, 2002]:

a) In Sweden, the number of vehicle registration offices have been reduced from 24 to 1, and this in spite of an increase in transactions.

b) In France, the fact that Social Security Services are now offered on the web should reduce the number of paper forms by 1 billion.

c) In the Netherlands, the introductions of online tax should save 5 months in processing time.

1.2 Objectives of this research

The objectives for this research are as follows:

1. To examine; e-government, and how governments are trying to implement it quickly.
2. To outline some of the pitfalls in adopting into the e-government approach.
3. To clarify some of the misconceptions about e-government,=.
4. To explore the history of Service New Brunswick (SNB) and its latest venture into e-government.
5. To review Dubai's initiative for going online.
6. To explore the similarities and differences between the ventures in the two jurisdictions in order to determine whether there are any lessons that can be learned.

1.3 Methodology

In this research, different methodologies were followed and adapted for garnering appropriate information and data. The data for this topic were gathered using the following methods:

1. Reading literature on e-government from various sources,
2. Searching the web for related information,
3. Personal interviews with University of New Brunswick (UNB),
4. Personal interviews with Dubai e-government staff.

5. Personal interviews with an expert on the subject of e-government, Mr. Brian Freeman, CGI's Fredericton-based Director of Consulting Services. Since e-government is a quite new topic and everyday there is new and updated information, the research will be a snapshot at a particular time but will hopefully lead to further studies.

1.4 Research contributions to geomatics

The purpose of e-government is to provide better services to citizens from all disciplines and fields. Citizens in general and professionals in particular, would benefit from the e-services, and in their particular fields, professionals should try to provide as much data as possible to improve people's lives.

This research, in its endeavor to highlight the e-government topic, contributes by identifying the key points and benefits that the field of geomatics gains from e-government. In this report, the word geomatics encompasses the fields of GIS, GPS, land administration and land management, hydrography, remote sensing and geodesy. In today's society, not only do these fields play a vital role in specialized sciences, but also society as a whole has a need for these services. For instance, fishers use hand held GPS to get to their nets, and tourists can download a map of a particular city and get information before booking their holiday.

This research enriches the field of geomatics, and shows how new tools and means can help the field better serve its constituents. For instance, by having the maps

linked with their attributes through relational databases via the web, interested people could use them to perform various tasks, such as analysis and location finding tasks.

This research pinpoints the vast opportunities awaiting the field of geomatics and interested professionals and the need to discover and take advantage of these opportunities. This research represents a new role for geomatics in both private and public sectors through the use of technologies regardless of time and location. For instance, people can take advantage of a geospatial data clearinghouse online for data discovery and access.

Since both SNB and Dubai rely heavily on their land/property related services for revenue generation, this comparison research helps identify the vast opportunities awaiting the field of geomatics in both states. SNB can provide better and faster services and information related to timber and fishing businesses, while Dubai can provide better and faster services and information to land owners.

1.5 Organization of Report

The report is organized into seven chapters. This first chapter has provided an introduction about the importance of e-government, the research objectives, and methodology, and its contributions to geomatics. Chapter 2 defines the difference between e-government and e-governance, how each is accomplished, and their importance in land administration and geomatics.

Chapter 3 reviews how the public perceive their governments, how governments are working towards Customer Relationship Management (CRM), and about democracy in e-government.

Chapter 4 provides a case study on the history of SNB and its participation in e-government. This includes SNB's mandate, its status before e-services, its objectives in moving towards e-government, and the strengths and weaknesses of its approach.

Chapter 5 provides a case study on the history of Dubai and its participation in e-government, also including its mandate, its status before e-services, its objectives in moving towards e-government, and the strengths and weaknesses of its approach. This is accomplished within an overview of Dubai's population, income, system of government, and its various departments with their services.

Chapter 6 compares the e-government approaches in the two jurisdictions regarding the intended audience, management style, website interface, charging for service delivery, accountability, land/property related services, technology, and future plans for SNB and Dubai. Chapter 7 is dedicated to conclusions and recommendations.

2. E-GOVERNMENT

2.1 E-government or E-governance?

Actually, e-government and e-governance are similar. However, some people consider e-government as being one way service provision, whereas e-governance is a two-way interaction between government and citizens. E-governance comes after the full implementation of the services online, or in other words, after the implementation of e-government initiative.

E-governance is the stage at which citizens have participated in a democratic process of interaction with their governments, and at this stage the resources can be directed towards the more needy groups within society. In this, governments offer services according to their customers needs and wants, and can offer services to suite an individual's needs. This paper does not distinguish between the two and uses e-government throughout the paper.

What is e-government? Simply, it is the efficient use of web based computer technologies to better deliver the information and services to the public around the clock. Deloitte Consulting [2002] defines e-government as "the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees." So, its concept evolves around service and information delivery, but it is not just using the computer and the web to interact with government; it is more than that.

Another definition is provided by Alcock and Lenihan [2001] which states "... it

is a way of making the delivery of government services more efficient by integrating or perhaps clustering them, and making them available through a single point of access on the Internet…"

The World Bank [2002] has also defined it as "the use of information and communications technologies to improve the efficiency, effectiveness, transparency and accountability of government."

E-government means much more than merely transferring information from one point to another. It means more than having transactions available over the net. It means that governments can go to a whole new level, to create a cross agency nationwide enterprise portal, that would make access to government services available on a task basis, not an agency basis. An enterprise portal can move services out of the vertical agency mentality and approach, and into a horizontal task or function based approach.

An example of the utility of a comprehensive enterprise portal would be people who want to start a business in a particular state. They click on an icon that says "starting a business" and immediately have at their fingertips a full menu of state services and related sites. They can file business permits, apply for corporate tax status, access state and federal start-up loan programs, register for unemployment insurance, search for real estate, and access job banks and placement firms. And they can do all of this from one site, without knowing the agencies involved. And they can do that at lunch hour, at a home computer in the evening, or at a library.

2.2 How is it accomplished?

Whatever the current situation may be, governments have a distinct choice of how to approach web enablement. The first option, responding to demand, is to conduct, department by department, comprehensive surveys and focus groups asking the public what types of electronic services they would like to have and are likely to use. Then governments could determine the feasibility, set priorities and begin development. [Deloitte Consulting, 2002]. Alternatively, governments could employ a supply-side approach, whereby they provide more electronic services as to provide better and positive results.

Although there is no proven best way to approach web-enabled e-government, Massachusetts Secretary for Administration and Finance Stephen Crosby [2001], outlines a general comprehensive four-step process to get to the e-government stage.

1. First, a task force should be formed not only within state government but also from constituent groups with whom government interacts. The effort is across all government agencies because this is meant to be an enterprise-wide portal for all the services of government.
2. Second, through a competitive process, an outside consultant should be hired to provide a less biased vision of what this government can do, design the process of bringing these kinds of services to the public through government agencies, and finally, to anticipate the barriers to making this happen.

3. Third, the diagnostic process evolves here, where the consultant meets with all key members from government, private and public users to build a consensus on what they would like to get out of e-government.

4. Fourth, once there is an understanding of who does what, who would like to do what, and which agencies are ready, psychologically, technologically, and informationally, to move forward, all of this diagnostic information will be used to design a comprehensive e-government approach.

All of these steps and processes should be based around citizens needs, rather than agency wishes, so that citizens could take full advantage of their governments services.

2.3 Its importance in land administration/geomatics?

The prevalent and widespread use of Internet in today's society makes e-government increasingly more important. E-government provides citizens with better and faster services. Land administration and geomatics would benefit from e-government, and the services offered could be enhanced to better serve individual needs.

E-government would help land administration/geomatics meet today's challenges due to the following premises:

1. It improves access to information by providing public servants and citizens with easy access through Internet browser interfaces to the information resources related to this field.

2. It can provide fact-based decision making for professionals through integration of innovative data warehousing technologies to provide them with valuable information related to this field.
3. It provides the land administration/geomatics community with ability to interact and come to a consensus on decisions regardless of its members location and time.
4. It enriches the field of land administration/geomatics with valuable and up to date data regarding latest development.
5. It helps advocate the field of land administration/geomatics for wider reach-out population through the use of Internet.

It is the spatial aspect that makes geomatics important in any e-government initiative. Various government departments can take advantage of the spatial aspect by locating and making different analysis related for instance to crimes occurrences and disease epidemics. Also, private sectors can market their products using the spatial data available about their prospective customers, and public can use the spatial data to better get information and increase their knowledge. Therefore, spatial (geo-referenced) data contributes to e-government rather than vice versa.

2.4 Land administration and land information management in e-government

Land is one of the most important resource for all human beings. Sir Bernard Binns [McLaughlin and Dale, 1988] points out that: "The land is man's most valuable resource. It is indeed much more than this: it is the means of life without which he could

never have existed and on which his continuous existence and progress depend." Since land is so vital to our existence, we should have a complete and comprehensive transparency regarding its various aspects.

Land information is critical for making decisions related to land investment, development, and management. Information about land should be accurate, recent, and available in order for us to take an appropriate action regarding land. As Sir Bernard Binns [McLaughlin and Dale, 1988] remarks that knowledge and information about land should be accurate regarding its natural resources and description in order for us to use it efficiently.

Land information needs to be adequately managed to get the maximum benefits, but managing a vast amount of information manually and during limited working hours, can become cumbersome. Better access to this information is especially important for those who are less fortunate and part of poorer segment of society.

Land administration is the mean by which the nature of rights is managed and kept secure. The nature of rights (tenure) includes, but is not limited to: culture, law, technology, and institutions. The concept of administering the land is not a new activity. Governments, as well as the land professions, have enacted various laws and regulations for protecting people's rights in land.

The emergence of e-government has transformed the concept of both land administration and land information management. E-government can provide information to users about specific parcels of land from various databases; making the connection and flow of land information from different agencies seamless and at the press of button. Land information systems has made e-government possible.

The advantages of administering and managing land information online are:

1. Less storage space is required, since the data is physically compacted.
2. Availability of laws, regulations, and information regarding particular parcel of land 24 hours a day, 7 days a week.
3. Increase of investment in land, due to seamless access and retrieval of vital information at the press of button.
4. Increase of public awareness regarding all land aspects.
5. Availability of customization options for printing different maps and databases by the end-user from the comfort of either home or office.
6. Better feedback and suggestions for authorities before enacting any law regulation regarding land issues, and in a shorter time.
7. Faster response from the authorities regarding individual land owner's requests.
8. Efficiency by performing different data and mapping activities at reduced cost, and generates more products by having access to various websites related to land activities.
9. Effectiveness by providing more or better information to satisfy customers needs.
10. Creation of more equity by increasing the number of those who participate in decisions about land and resources and benefit from this participation, and here the attention shifts to land management activities beyond the agencies to those throughout the community.

In summary, e-government has made life easier for both authorities, who administer and manage land information, and for the public, who are the beneficiaries of this service.

3. E-GOVERNMENT PERCEPTIONS AND OPPORTUNITIES

3.1 Government image

E-government is about transformation – turning today's conventional workflows into an efficient service model. Governments are going through a completely new model in public service, one associated with the use of technology in a way that will make the citizen – government relationship more direct.

The stereotypical image of government as being inefficient, irresponsive, bureaucratic, slow moving, and frustrating is changing dramatically [e.g., Accenture Consulting, 2000]. An example of the common perceptions that citizens have about government, in the recent past include the following [Bahrozian Ahmed, 2001]:

1. From Government Clients:

   - The government is bureaucratic and full of red tape.
   - I never know where I have to go to get anything done and what procedures I need to follow.
   - I will only go to the government when I have to.

2. From Government Staff:

   - I represent the government, and people have to come to me for the service.
   - Service levels, efficiency, effectiveness and other consulting groups do not apply to me, I have no competition.

- I do not get paid enough to worry about people, businesses, and their needs.

Maybe this is a harsh perception of government, but all of these perceptions may change. Governments are beginning to restructure and transform their very nature as a service provider.

There are many incentives for governments to change these perceptions, including:

1. The need to reduce government size and the costs of its services.
2. The growing public expectations to have government services delivered with the same quality as private-sector services.
3. Political pressure for the public sector to do more with less.
4. "Enhancing the overall competitiveness of the economy." [U.S. Dept. of Commerce, 1999]

Going on-line is one way that governments can meet the changing public sector environment.

3.2 Customer-centric government

Governments are all directing their efforts toward customer-centric, or customer-focus approaches to gain customer satisfaction, because it pays off, as the results of a recent study by Deloitte Consulting [2000] show (See Figure 3.1).

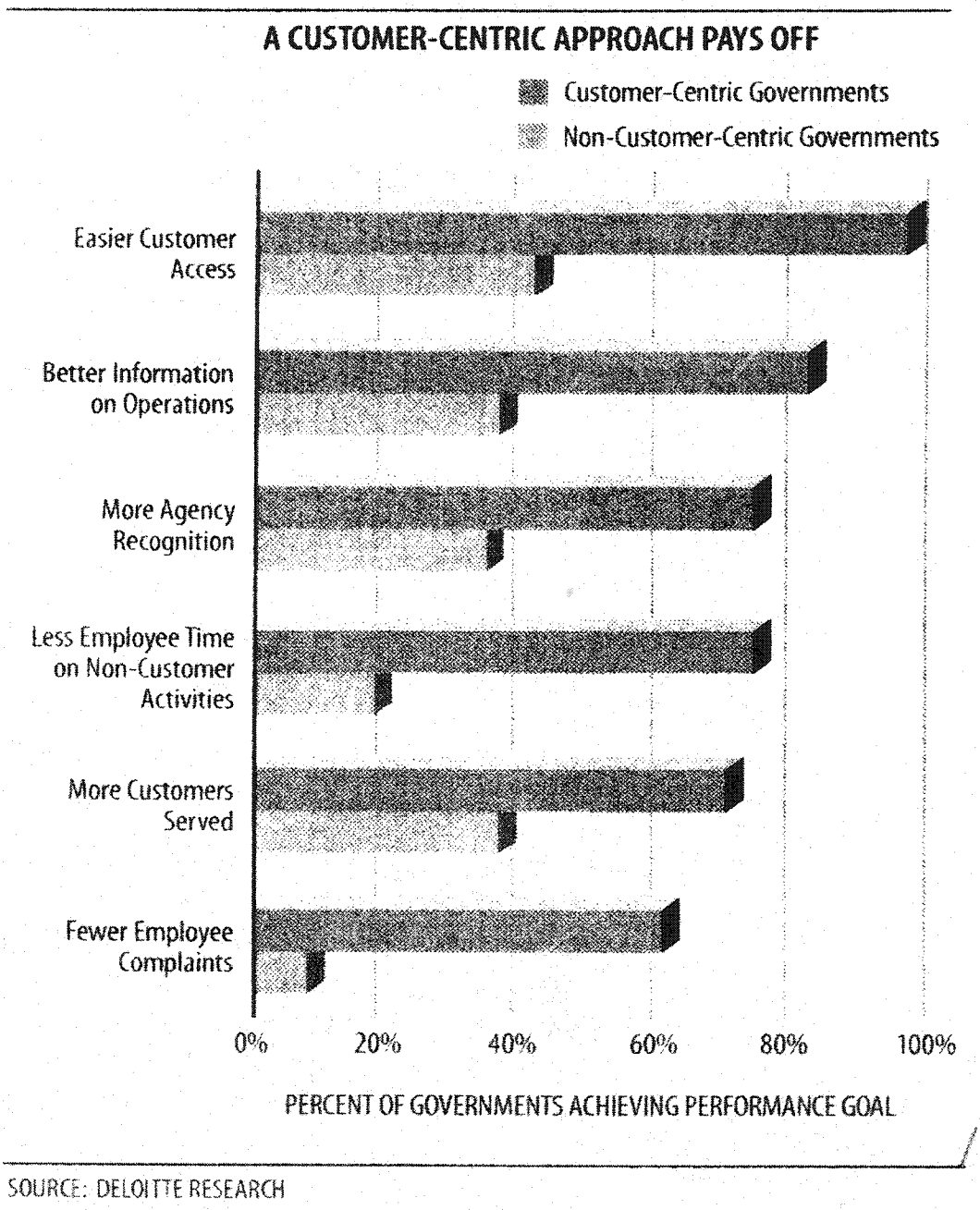

Figure 3.1 Customer-centric vs Non-customer centric governments [from Deloitte Consulting, 2000, p.1]

Implementing a customer-centric approach means hiring the right people with different skills. It means staff members are given more customer service training and greater decision-making authority. It means changing the old way of thinking (silo-

thinking), i.e., everything in one place [Deloitte Consulting, 2000]. It means linking all information to all employees on an enterprise-wide basis, leading to the spread of information [Accenture Consulting, 2000].

Technology is the core of building strong relationships with citizens, but government restructuring and transformation are the heart of the real change. The real change is to reach the point of two-way interaction , and not simply provision of a passive website. Customer-centric government means creating new avenues between customers and their governments, including them in major decision-making process, consulting with them about matters that might have major effects on them, and listening to what they have to say. This seems to be more of an illusion than a reality, but this is a challenge that every government has to face if it wants to take full advantage of e-government concept.

It also means creating new business strategies with customers in focus. It means mixing all the ingredients to suit customers with a variety of tastes and preferences.

3.3 Democracy in the digital age

This section examines the democracy side of e-government, and what it means. Will e-government lead to better democracy? Will everybody (ethnic minorities, poor, uneducated, unskilled, old) have an equitable opportunity to participate?

The gap between the have and have not citizens (or quasi-citizens) already exists, and with the introduction of e-government the digital divide will widen due to technological advances and the costs of acquiring not only the hardware and software,

but also the data and the knowledge of how to use it. Some of the most common aspects related to digital divide are examined below.

3.3.1 Language Preference

The first obstacle helping to create the digital divide is choice or preference for language, especially for voicing one's concerns and interests.

Human beings usually prefer to express themselves in their mother languages (tongues) when they want to let others know what they want and what are their feelings and choices. People might be able to say something or have opinions in another language, but not as effectively as in their original language, unless they are completely immersed in the second language.

Another side to this issue is that by having more choices for language preferences, people with same original language and background would have an opportunity to create a virtual community, to voice their mutual interests regarding their everyday lives issues that affect them and their families. They would have better chances to collectively talk to their elected council members and have a say on whatever they feel necessary. As a consequence they might change how their government function, and this is the core of e-governance.

This problem can be reduced by having choices for language preference for major spoken languages, such as, the website for the City of Sunderlands, England. Another solution might be to create community centers for these people and assign some from these communities to help their peers in overcoming this barrier.

3.3.2 Complexity

Second, the complexity and incomprehensible content of the technical language used, could make a superficial user or a user with little knowledge frustrated. This frustration is increased by the complexity and inconsistencies in the, design and linkages of some sites.

System and content designers should take into considerations different levels of users they are dealing with. If users find the content of the site is too rich or complex, they might quit using it. Sometimes more information does not mean a better site, as Gene Kimmelman, co-director of the Consumers Union, according to Jennifer Freer [2002] said: "The more government wants to put information out on the internet, the more significant the divide develops."

On the other hand, creating a simple site with minimal design, content, and detail, might not attract the eagerness of experienced users and quench their curiosities. This site might be a good starting point for citizens unfamiliar with government processes and for less experienced users, but it will serve as a poor overall resource for active and experienced users.

This problem can be reduced by running a survey questionnaire every once in a while to get public perspectives, and making the appropriate amendments accordingly.

3.3.3 Equitable Access

Thirdly, much of the argument and discussion about this new digital divide has focused on the gap between "haves" and "have-nots" with respect to socioeconomic factors, such as education and income. [Ryan Turner, 2001]

Although the, United States of America (USA) is one of the most developed nations in the world regarding computer and Internet, the divide within American society is increasing and widening. Anthony Wilhelm [2000] in his book "Democracy in the Digital Age" uses an American population survey, from the Department of the Census, to talk about the gap that has increased over time because of socioeconomic factors, such as education and income among other factors.

The findings were as follow [Anthony Wilhelm, 2000]

1. Eighteen percent of households with income under $25,000 had a computer in December 1998, compared to 43 percent of households earning between $25,000 and $50,000 and 73 percent of those households with income over $50,000, as figure 3.2 shows.

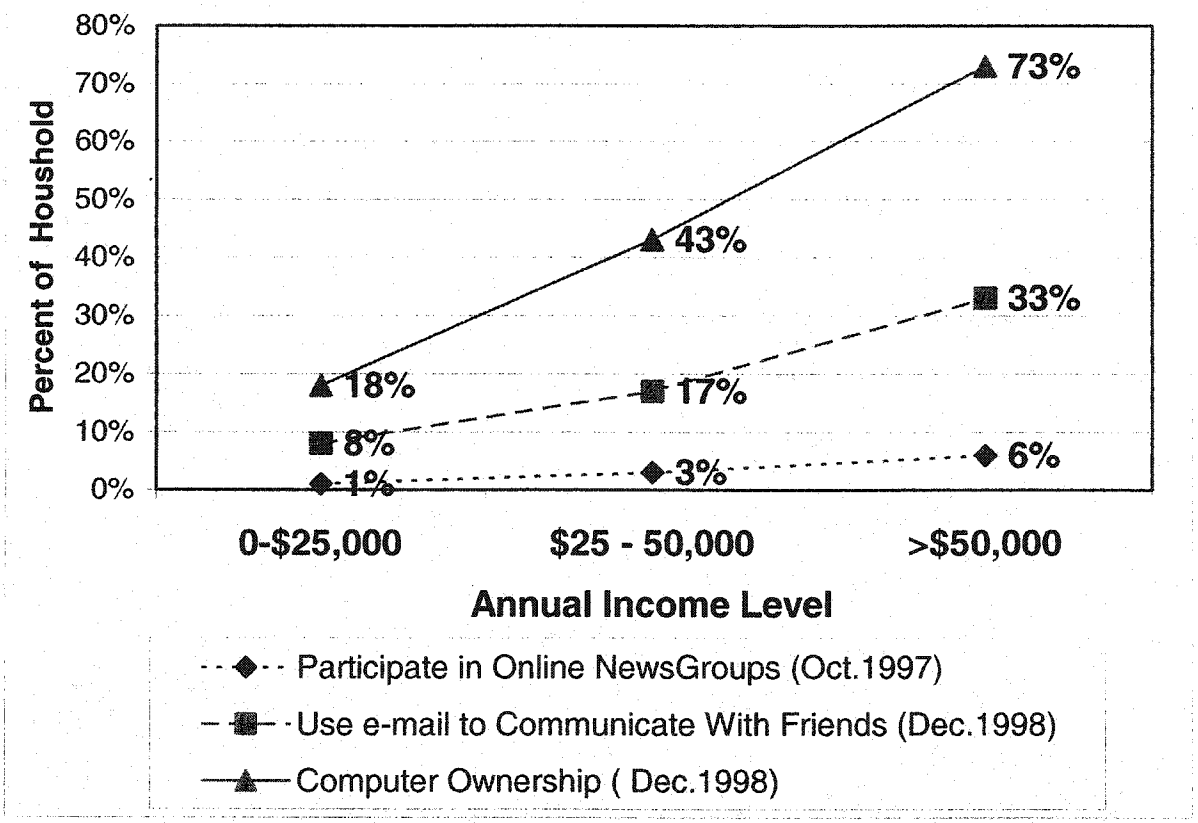

Figure 3.2 Teletechnology ownership and use (by family income level) [from AnthonyWilhelm, 2000]

2. Regarding the use of home Internet, a study reveals that only 8 percent of low-income households using the Internet in 1998, compared to 21 percent of middle-income individuals and 44 percent of households with income at or above $50,000, as figure 3.2 shows.

3. Online participation in newsgroups is quite low (1 percent) for households with incomes under $25,000, and 6 percent for households with incomes above $50,000, as figure 3.2 shows.

Educational level is another vital factor in which one can participate in e-government.

The findings were as follow [Anthony Wilhelm, 2000]:

1. Of those households accessing the Internet in December 1998, 81 percent had attended some college.
2. Only 9 percent of households had a home computer in 1998, who achieved less than a tenth-grade education, as figure 3.3 shows.

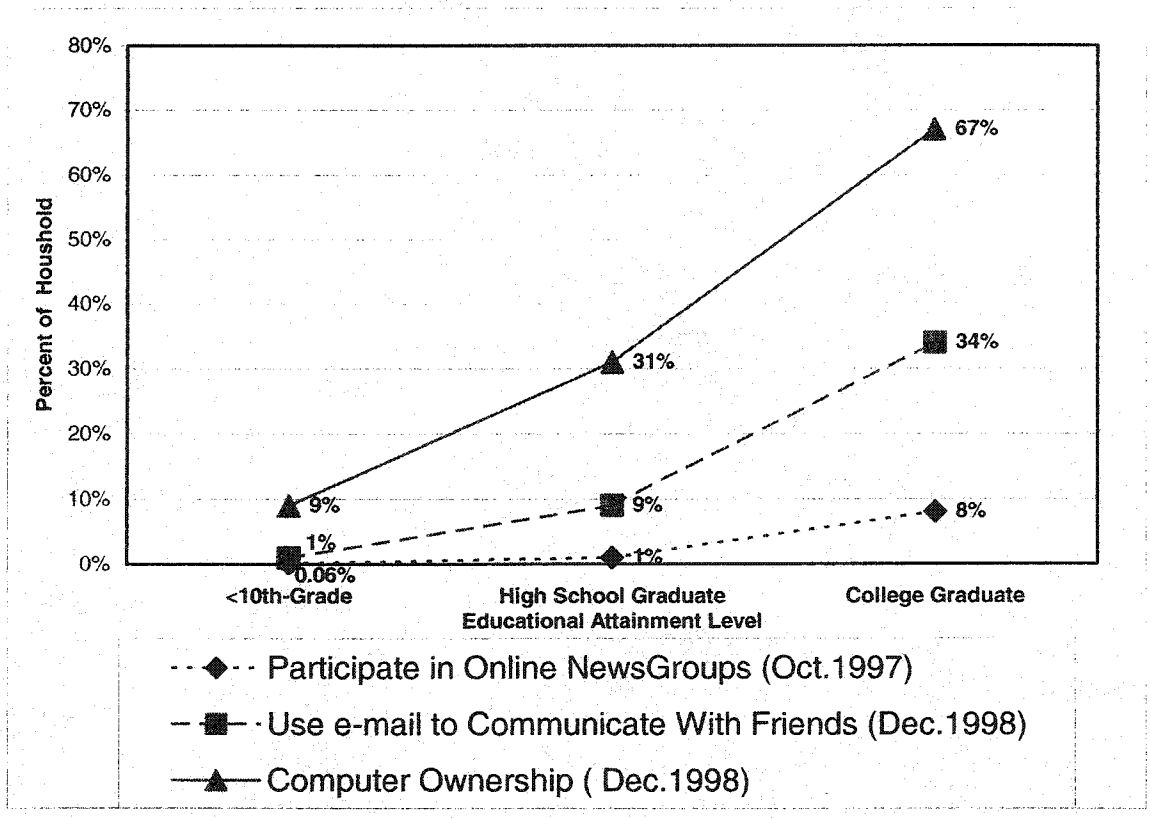

Figure 3.3 Teletechnology ownership and use (by educational attainment) [from Anthony Wilhelm, 2000]

3. Only 31 percent of households with high school diplomas had home computers, whereas 67 percent for those with a bachelor's degree had home computers, as figure 3.3 shows.

4. In terms of using e-mail to communicate with friends, 1 percent of households with below a tenth grade education were using e-mail from home, compared to 9 percent with a high school degree and 34 percent of college graduates, as figure 3.3 shows.

5. Online participation in newsgroups is also quite low (less than 1 percent) for a tenth grade education, while 6 percent of college graduates are subscribing to these newsgroups, as figure 3.3 shows.

Figures 3.2 and 3.3 revealed among other things that level of education attainment plays a major role in attributing to the digital divide.

The discussion regarding democracy and digital divide ends by a paragraph from Thomas Jefferson writing to Edward Carrington on January 16, 1787, as he emphasized the fact that everybody should have an access to the avenue of knowledge, which was at that time the newspaper in order to participate in the democratic society.

The basis of our government being the opinion of the people, the very first object should be to keep that right; and were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate a moment to prefer the latter. But I should mean that every man should receive those papers and be capable of reading them.

4. CASE STUDY 1: New Brunswick, Canada

Canada is becoming the leader in providing services online. An article by the Canadian Embassy in USA [2001], points out that:

> Canada was recently ranked first in e-government among 22 countries in a study by the international consulting firm, Accenture. According to the study, the federal government's continued ability to provide a broad array of services online in a technologically advanced manner makes Canada an innovative leader and a country that many developing countries will look to as a model.

The Province of New Brunswick was chosen as a case study because:

1. Author's familiarity with the Province.
2. The Province is a pioneer in providing e-services since the early 1990s.
3. The Province has gained a good reputation for restructuring its workflow and government processes towards e-government vision.
4. The Province provides advanced land/property related e-services.

4.1 SNB and its mandate

The province of New Brunswick started its public service delivery with a mission to improve the delivery of government services to the public in the early 1990s. In 1990 the New Brunswick Geographic Information Corporation was formed to improve land information services. The Province acquired a good reputation for service delivery through a planned, long-term strategy led by Mr. McKenna, the former Premier from 1987 to 1997. Other provinces in Canada have followed similar paths as New

Brunswick, however New Brunswick stood out because of its reorganization of land related agencies within government and quick entry into on-line services.

Service New Brunswick (SNB) is a Crown Corporation owned by the Province of New Brunswick with an aim of easing the lives of New Brunswickers. "It was first established in 1990 under the name of the New Brunswick Geographic Information Corporation (NBGIC)" [SNB, 2000], and in 1996 it changed its name to SNB by adding the service delivery gateway for basic government services. One of its infrastructure achievements towards e-government is that it led the nation in the wiring of homes with fibre optics through New Brunswick Telephone Co. Ltd [Canadian Business, 1994].

SNB's current mandate is to transform and modernize delivery of services and information and to position the province as a leader in e-services. Also, its mandate includes bringing together government organizations involved with property assessment, registry and mapping, and delivering government services dealing with other registries, licenses, permits and revenue collection. [SNB Business Plan, 1999-2003]

4.2 Before e-services

Service delivery was quite different before e-services, with little cooperation between various departments in the Province for service delivery to the public. In New Brunswick, as Donat Theriault [2002] from SNB described: before 1992 and before the e-service started around 1996-97, each department had its sets of offices and delivered services through its own networks of offices, mail and fax – telecopiers.

There were two exceptions: First, the then Department of Transportation and the Department of Finance had revenue offices that provided motor vehicle products and services and collected some taxes on behalf of the Department of Finance (about 14 services and products all together). The second exception was in the area of the land information business where in 1990 the responsibilities for the Land and Property Registries (Dept. of Justice), for property assessment function (Dept. of Municipal Affairs) and for the mapping function (formerly part of the Land Registration and Information System (LRIS)) were transferred to the New Brunswick Geographic Information Corporation. Land information services were essentially delivered through sometimes centralized and sometimes decentralized physical offices , faxes, mail, and telephone.

Another example of service delivery before e-services were the then Revenue offices in 1992, under the Department of Finance that had approximately 14 services, decentralized into some 40 Revenue offices. At the same time, the NBGIC had about 10 services and were decentralized in 13 NBGIC offices.

In 1996, the new Corporation had approximately 100 services and products in 35 communities, except for personal property registry and topographic and property mapping services. These were essentially over the counter, telephone, fax and mail services. The number of departments involved at that time was approximately 10. The personal property system went alive in 1995.

In 2002, over 120 services and products are offered and 35% of the services are delivered through web and call centers, and the number of departments involved now are approximately fourteen.

4.3 SNB interest in e-government

Service New Brunswick was one of the first agencies in the world to deliver government services electronically. SNB has always been an organization in evolution. The mission has been to make New Brunswick a global leader in the digital economy of the 21st Century [e.g., SNB annual report, 2000-2001]. SNB in its endeavor to become electronically enabled province, has made significant investments. A portion of revenues is allocated for making improvements in business processes to make it easier and simpler for citizens to do business with government [SNB annual report, 2000-2001].

As Mary Ogilvie [2002] SNB Vice President, Development, asserts, the primary reason behind SNB providing services electronically was to improve service for citizens and business, not internal government efficiencies. If the prime driver is internal government efficiencies, then wrong decisions would be made about how to implement electronic services; wrong decisions might be made about which ones to do first; wrong decisions might be made about how much effort to put on technical infrastructure vs. applications; and wrong emphasis would be placed on what gets communicated to citizens about the project.

Also, there were other premises for SNB's move toward e-services, such as:

1. To reduce costs and generate more revenues,
2. To enhance integration and cooperation between various departments and agencies,
3. To provide quality and quantity information around the clock, and

4. To take advantage of the latest technologies in province.

4.4 SNB in e-government

The leadership of Mr. McKenna and his futuristic vision at that time towards creating an information super-highway and the leadership of the province in wiring homes with fibre optics were some of the mile stones for SNB's participation and initiation in an e-government program.

Brian Freeman, CGI's Fredericton-based Director of Consulting Services remarks that the 1992 launch of Service New Brunswick was not simply a matter of changing how the province delivered its services, it was an opportunity to create a new platform for managing smarter [Mark-Ken, 2002].

According to the study done by Malatest and Associates Ltd. in 2001, among organizations from federal, provincial, and municipal levels in Canada, Service New Brunswick's level of citizen/customer satisfaction is highest among the other organizations that participated in this project.

"Service New Brunswick customers are very satisfied (92.3%) with service received." [Malatest and Associates, 2001]. This indicates that the Province has done a tremendous job in delivering services online.

Customer service is a high priority for SNB, and it has adopted the private-sector strategy of serving citizens as customers with an equal opportunity for everybody to participate. To fulfill its mandate towards its citizens

> SNB has become a single-window, multi-channel approach that expanded the province's original, over-the-counter (OTC) service with electronic service

> delivery – call centers in 1997 and the Internet in 2000. Currently, about 37% of SNB inquiries are done online… [Mark-Ken, 2002].

Also, SNB updated the walk-in centers to handle online inquiries, and has given the management of its IT infrastructure to Xwave, a wholly owned subsidiary of Aliant Inc. SNB, being the province's electronic portal, serves as a bond for creating more interaction among different government databases. SNB has developed a long-term plan for staff training and skill development towards e-government concepts, so that they have the ultimate authority to deal with an inquiry faster. [Mark-Ken, 2002].

The top authorities in New Brunswick are assuming personal responsibility for SNB to manage smarter and manage differently. SNB has developed its portal intelligently with providing services first, then moving gradually towards a customer-centric approach [SNB Annual Report. 2000-2001]. The portal development is still under-way and will continue to be developed towards complete customer interaction. The site is not yet customized for a two-way interaction as compared for instance with the city of Sunderland's Website, but it is going in that direction.

SNB manages multiple delivery options to meet customer preferences, but expects more people to use the Internet gradually. The demand for traditional delivery options (call centers, face-to-face, tele-service, etc.) will gradually decrease as a result of Internet. So, SNB tries to put more emphasis on on-line delivery. The delivery option should be based upon customer preferences and not on SNB convenience, and the traditional service delivery should remain to serve its preferred groups [Dr. Keith Culver, 2002].

SNB's homepage offers the following information:

1. New services that have been added recently.

2. Information regarding SNB locations, teleservices (call center), and customer feedback.
3. Current and updated announcements.
4. Link to the whole bundle of SNB online services.
5. Link to other provincial and federal government sites.

4.5 The strengths and weaknesses of SNB approach

As mentioned earlier the study was conducted by R.A. Malatest & Associates Ltd.[2000], to measure citizen satisfaction with services received among various levels of government. The results included, but are not limited to, the following:

1. Service New Brunswick customers are very satisfied (92.3%) with received services. Service New Brunswick's level of satisfaction is highest among the other organizations participating in this project.
2. Customers are accessing provincial and federal agencies using multiple service channels, which include: walk-in, telephone, internet, fax, and mail. So, SNB has approached and provided the e-government initiative with good strategy and implementation, but it has a long way to go. The strengths of what SNB has done include:

a. "The conversion of three local SNB offices into complete service centers offering over one hundred services each in Miramichi, Fredericton, and Richibucto." [Annual report, 2000 – 2001].

b. It started providing e-services with the most important ones; vehicles registration renewal, change of address, assessment services, and land information and infrastructure. Customers wanted practical initiatives, and not rhetoric promises, and this is what SNB has done by providing what customers need most. The next step is to enable customers to express their opinions to political leaders and participate in a policy discussion or debate.

c. Modernizing the land registry by enhancing and providing various land /property related services.

d. Keeping-up with its strategic plan by delivering more products and services through SNB single-window delivery approach [Annual report, 2000 2001].

e. Outstanding leadership and commitment to deliver online services timely.

f. Providing training (including seminars) and tools to increase staff knowledge and competence and to empower service provider to "go the extra mile".

g. Providing multiple service channels to suite everybody's preference, and ensuring citizens have a choice of channels with consistent information across all channels.

h. Establishment of Community Advisory Committee in each region where a service center is located, to get local feedback on the services and provide SNB with feedback on service quality.

i. Making sure that customers can access the web site and get what they want without having to buy the latest browser software, because some customers might not be able to afford that.

The above-mentioned are some of the strengths for SNB in delivering services online. New Brunswick customers are not homogenous and include different segments of people regarding wealth, education, and race.

The weaknesses of what SNB has done include:

a. Low level of community reach-out programs.

b. The online services concentrate on offering services, and lack the customer-centric design.

c. Lack of choice of languages preference in its web site. If the site has more than English and French, other languages speaking ethnic groups would be encouraged to interact with government using on-line services method. However, NB is the only Province in Canada that offers dual language service provision.

The next phase for SNB is to move towards the customer-centric approach by enabling citizens to participate in policy discussions and to express their preferences and opinions.

As Mary Ogilvie [2002] in her presentation, given to students from the Department of Geodesy and Geomatics, UNB, asserts that with the implementation of e-government approach, New Brunswick has gone through dramatic changes in its government structures. She points out that each government department used to keep its data in isolation of other departments, in a silo-thinking mode, and the flow of customer information was rare between the front and back offices in each department. But after the implementation of e-services, many of the offered services were augmented and merged into a few and more efficient services via the SNB Website. Through mutual agreement

between various departments in the Province, SNB became the only department to offer on-line services related to New Brunswick and all the departments Websites or connections are embedded in SNB site. E-government opens new horizontal opportunities by shifting away from traditional bureaucratic structures toward seamless data integration

In New Brunswick the changes in service delivery has made people's lives easier, whether using Internet, Call Centers, or Kiosks. E-services in NB have changed the very nature of citizens interaction with government. New Brunswickers have no concern for time and location for contacting their government using the Internet medium. SNB is continuing its emphasis on on-line delivery of services through placement of more services on-line and amending the regulations as required

5. CASE STUDY 2: Dubai, UAE

The city of Dubai was chosen as a case study because:

1. The author's familiarity with Dubai, United Arab Emirates.
2. Dubai has recently (October of 2001) started offering some e-services, and this research might help the e-government authorities to better understand the concept and implementation behind e-government.
3. The topic of e-government is a high priority in UAE, and in Dubai in particular, with keen leadership vision.

5.1 Dubai and its mandate

The city of Dubai is called and goes by different names due to its importance in different spheres: city of gold, the pearl of the gulf, and the city of business known for its business initiatives. It is the second largest of the seven Emirates (Provinces) that form the United Arab Emirates (UAE), and it is a superb example of a new economy business hub. [DMC, 2002] Over the years, Dubai has built an international reputation as a regional commercial base.

According to the Dubai Department of Economic Development [2002], Dubai's population is approximately 27.7% (862,000) of UAE total population of 3.108 million. Its non-oil GDP (gross domestic product) makes up about 90% of its total GDP. It is a cosmopolitan city with over 120 nationalities. [DMC, 2002]

It is striving to become a leading business hub in the new economy, and all government processes and services must become compatible with new economy realities, as dictated by Shaikh Mohamed, the Crown Prince of Dubai. Shaikh Mohammed is the one behind most of the technological and economic developments and integrations.

Dubai's mandate is to "Ease the lives of people and businesses interacting with the government and contribute in establishing Dubai as a leading economic hub. [Yousef K. 2002]

Its general objectives are improving quality, transparency, responsiveness and efficiency of government services. It has facilitated all the means for acquiring latest technologies along with elevating its human resources side. It has the highest PC and, Internet penetration in the Middle East Region. [DMC, 2002]

Dubai already has many of the ingredients required to create a good environment for e-services, and it is taken a leap toward the new era of e-government.

5.2 Before e-services

Government processes are viewed by people as cumbersome, time-consuming, bureaucratic, and unfair. Dubai services used to be like this. Services before e-government were [Ahmed Bahrozian, 2001].

1. Non-value added.
2. Had too many applications and requirements, and customers needed to interact with more than one single contact point for a given services.
3. Required physical presence of customer.

Dubai has the highest concentration of federal ministers and local departments due to its business and technological importance in the UAE. Each department had and used its own data and generally would not share this data with others, except for the Ministry of Interior which uses the data for security purposes.

This "silo" thinking of keeping all the information in one place was popular, and has long characterized the way departments have operated (departments working independently to meet their own goals instead of together to coordinate customer interfaces and service). [Deloitte Consulting, 2000]

In UAE in general, and in Dubai in particular, there was no mention of customer-centric approach, and this was seen in the area of service provision. Government departments did not share information, and the flow of information was rare between them, because they believed that having and owning information would give them power by not sharing with others.

There was no proper method for the department managers to evaluate the progress of their employees and of work processes, due to lack of integration among various steps. Tracking and retrieving data were quite difficult and time consuming because data were not linked together seamlessly, and flow of information was occasional. With e-government technologies, customer information can be tracked and linked with department system for better tailored services to citizens and businesses.

Since Dubai e-government is still at its infancy stage, the history and organizational structure before e-services have not been grasped and documented, except a in general sense.

5.3 Dubai incentives to implement e-government

Reality is catching up with rhetoric, and governments are realizing the benefits of e-services for everybody. Governments in Dubai are becoming more virtual, able to deliver information and services regardless of time and space. Dubai's interest in e-government is partially rooted in the extraordinary expansion of the Internet and its penetration of market and community. Dubai wants to improve its people's relationship with government by providing access to government information and services through secure means.

For Dubai, e-government meant preparing for the next wave of service delivery. By implementing an e-government approach, Dubai and its people had gain the following benefits:

1. There would be a single point of contact at standard look to all services, making easier to use.
2. User security would be improved with one user ID and password for all sites.
3. Smaller departments would be able to utilize its functionality, such as, e-payment and security, whereas before it was too expensive.
4. Many services are executed across a number of separated departments. The portal would enable the full e-execution of such services.
5. It would be cheaper to build new e-services as no need to develop from scratch, screen templates, security and integration structure already in place.

The incentives to offer e-services are countless and some might not be visible now, because Dubai just started its experience with it.

5.4 Dubai in e-government

Dubai's e-government is a pioneering initiative in the area of service provision in the region to provide online services across the spectrum of corporate and community life in the emirate. After the announcement of the initiative by Shaikh Mohamed in April 2000 with a deadline of 18 months to launch, a Government Information Network (GIN) linking 24 departments was launched in September 2001. [Yousef K., 2002].

By January 2002, 56 online services were made available across the e-government portal and the individual websites of government departments. 200 e-forms were developed and posted, and 3750 pages of content pages exist today. [Yousef K., 2002].

The government of Dubai has initiated several projects to pursue the e-government vision, and they include:

1. Creation of a high level committee to coordinate between government organizations, consolidate planning and management, and build the government's services portal.
2. Hiring of a consulting firm , Eds, to evaluate the current status and come up with an attractive plan.
3. Appointing a Senior Management Office (SMO) to manage the overall initiative.

4. Starting a Community Outreach Program targeted to specific segments of the education sector in an effort to generate awareness of the e-services offered on its portal.

5. Launching a pioneering initiative – Dubai Technology, Electronic Commerce and Media Free Zone – TECOM, comprising the Dubai Internet City, Dubai Ideas Oasis, Dubai Media City, Tejari.com, and Knowledge Village. [DMC, 2002]

Dubai Internet City has placed Dubai on the global map in the IT industry. Dubai Ideas Oasis focuses on e-businesses consulting and venture capital. Dubai Media City in the media community for the region offering world class infrastructure, talent, services and technology. Knowledge Village promotes and facilitates the use of e-learning in education and training in the region. And Tejari.com allows business-to-business transaction, and all government departments are supposed to do all their buying and purchasing through it. [DMC, 2002]

6. Creating an award for electronic excellence government departments award to create competition.

7. Benchmarking trips to India, United States, UK, Malaysia, Singapore, Hong Kong, Harvard, and Research Consortium (MIT, Rutgers, Harvard, RAND) looking for innovative ideas regarding e-government.

The strong points about Dubai's homepage include:

1. A quotation from Shaikh Mohamed regarding the e-government objective as a reminder.

2. Presentation of the latest news, seminars, and workshops related to IT and Internet.

3. Good business orientation, such as, icons for living in Dubai, visiting Dubai, and doing business in Dubai.

4. Presentation of weather, news and feedback option for users to send their concerns.

5.5 The strengths and weaknesses of Dubai approach

In order for Dubai to become the center for business and technology in this region, there should be a clear vision accompanied by achievable plans, which are prepared by Dubai Economic Development Department. The leaders of Dubai are using every means to transfer it into an e-government emirate (province) and to have 70% of government services online by 2005. [Yousef K. 2002]

There could be many pitfalls because the e-government initiative is still in its infancy stage, but reviewing what Dubai has done so far in moving towards e-government, some strengths and weaknesses can be detected.

The strengths of what Dubai has done include:

1. It has initiated good community outreach programs using different means for spreading the e-government message, such as, newspapers, seminars, workshops, and TV.

2. A couple of individual department; Dubai Municipality and Dubai Land Department, have started offering free training for its customers to acquaint them with some of their e-services.

3. Due to the small size of Dubai, such a project can be accomplished successfully without major hurdles.
4. Strong and committed leadership by Shaikh Mohamed personally exists.
5. It has adopted a good marketing approach by hiring a well educated staff with previous experience and good background in this field.
6. Government of Dubai has initiated several projects to assist in establishing a leading e-government emirate (province), such as, Dubai Internet City, Dubai Media City, Tejari.com, and Dubai Idea Oasis.
7. Government of Dubai has sponsored general IT education programs to speed-up the e-government services.
8. Capital resources to support such project are available.
9. The latest technologies have been implemented and effectively used.

The weaknesses of what Dubai has done include:

1. It is more business oriented, which is good for business people to take advantage of, but less private citizen oriented.
2. Services are more prioritized towards expatriates needs and less towards local people's needs.
3. There is a lack of good cooperation between e-government office and other departments, and between departments themselves.
4. There is lack of standards and specifications related to e-services programs.
5. Dubai government Website is not user friendly because the user has to search by department names instead of task name.

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6. COMPARING E-GOVERNMENT IN THE TWO JURISDICTIONS

This chapter highlights some major points of comparison between the two jurisdictions in delivering services on-line. These points include: the intended audience, management style, website interface, charging for service delivery, accountability, and land/property related services. The main objective in choosing these criteria points is to highlight the major differences between the two jurisdictions.

6.1 The intended audience for SNB

In analyzing the intended audience for the two jurisdictions, this research took a citizen's perspective on e-government, and looked for material that would aid an average citizen logging onto a site. This included the design of the site, language option, liability disclaimer, and security statement.

Most of New Brunswick residents are Canadians who speak either English or French, or both languages. Although New Brunswick is the only province in Canada to have a bilingual Website, English and French, some of its residents speak none or little English and French. New Brunswick residents, whether local or immigrants, have citizenship or landed immigrant status, but the expatriates living in Dubai have their own nationalities.

On the other hand, about 80% of Dubai populations are expatriates, who come from more than a hundred countries. Most of them speak English along with their own languages.

The intended audience for Dubai differs slightly from SNB audience because of population diversity in Dubai that exists from more than 120 nationalities, making about 80% of Dubai total population. Currently, Dubai's main concern is business, shopping, renting, and traveling. And so, it has an extra obligation to provide e-services to these nationalities to keep them informed.

6.2 Management style

The management style for SNB is shifting towards a horizontal management type, with less hierarchical bureaucracy and control.

A good side to SNB is that every officer is responsible and can take an appropriate action within their jurisdictions, without consulting others, unless some vital issues need to be resolved. Everybody has a clear mandate for the work which they are supposed to accomplish.

Dubai e-government, on the other hand, is following a more traditional vertical type of government, and less of a horizontal style. Since Dubai e-government is still in its infancy stage, and the departments are afraid of loosing their autonomy, the vertical style works much better (i.e., it suits the current situation). Here, the vertical style means an order is coming either direct from Shaikh Mohamed himself, or from the Dubai ruler's office.

E-government staff have little idea of their long term tasks, and sometimes they cannot impose e-government mandate on departments, unless they are supported with Shaikh Mohamed direct order or ruler's office document.

E-government requires a horizontal management style, and both jurisdictions are moving toward this end. SNB has already shifted its management style to a horizontal type with seamless data integration between departments. Dubai is shifting gradually toward horizontal type because of its success in e-government.

6.3 Website interface

SNB web-delivered government services include downloading government forms, buying or accessing publications, renewing motor-vehicle registration, changing the address on a number of government files, as well as inquiries regarding property, commercial and very limited personal information.

The SNB site is tasks oriented with each of the prioritized services displayed by their names. English and French languages are offered as the two options from the first page. The second page is presented mainly into services for individuals and business, with services names. Each of the offered services is complemented with detailed information and explanations if the user wants elaboration.

A government employee can be found using the "Government Directory" button option. Also, the site has a visible statement that would reassure citizens worried about privacy and security. In recognizing the legal risks of online information and service delivery, the site has posted liability disclaimers, in which the site notes that in a case of linked sites, it is not responsible for information contained on other sites.

The Dubai e-government website offers services for residents, businesses, and visitors, with more emphasis towards business. Upon clicking any of the services, the

site will take a user to the department, which provides that particular service (department oriented).

Dubai e-government site is department oriented, with each of the department name and logo displayed. Sometimes, it is a cumbersome for the user to look through department names to find the required service.

English language is the displayed language upon entering the site, with Arabic language as an option.

The two sites offer general information about each jurisdiction services and information. SNB site is task oriented by offering services according to their names, and hence customers have no concern for each department. Dubai site is department oriented, with each department name and logo displayed. For Dubai to get to task-oriented site, it requires time to change the departments mentality.

6.4 Charging for service delivery

Zul Juwani [2002], the expert on GIS and a consultant to Dubai Municipality GIS Center, points out that Digital data in USA is available for the cost of production of each copy, whereas in Canada, the cost of the same data could be a few thousands dollars, because the policy is to recover some of the cost of creating the data.

As a policy most governments have adopted the principle that charges should cover the costs of delivering the service. Governments usually still charge for online services in the traditional way, whilst the provision of electronic online services cost more, at least in the short term. [Benny Raab, 200]

Some of the premises for governments financing their services through user charging include the followings:

1. Reducing budget deficits.
2. Making the costs and benefits of services more transparent to both users and the government organizations providing the service, so that the users will not have objections because they would know the cost of what they are paying for.
3. Encouraging efficiency and competition among service providers.

SNB charges for its online services the same way it charges for its traditional services, and the charges are not clearly defined with precise amount, so it can change the fees as appropriate, such as, renewing vehicle registration and driving licenses, and paying different municipal fees.

SNB strongly believes in charging for its services to at least cover up part of its cost for delivering the services. [Mary Ogilvie, 2002]

Since the services are offered in Dubai e-government site by their departments, it has little or no concern for the charges. Each department simply charges for online services in the same way it charges in the traditional way, such as, applying for Visa, applying for Site Plan, and paying municipalities and police fines.

In UAE, Dubai has imposed fees on most of its services compared with other emirates (provinces), and through this mechanism, it is increasing its revenues to support various mighty projects throughout the emirate. And by implementing e-services, it can impose the same fees, at least in the short term.

Both jurisdictions charge for their on-line services in the same way they charge for their traditional services, to cover part of their costs in delivering the services. Both

states have no documented policy for charging, but apparently they will have to come up with a mechanism to have such policy. E-service charges should be more than traditional charges, due to high costs of e-implementation. Citizens of both jurisdictions might object to increase in fees for e-services, but with proper education and information about the costs for governments to put services on-line, they would accept the fact.

6.5 Accountability

Accountability comes with control. If an agency has full control and authority over its services, then it is responsible and accountable for whatever action it takes. If there is a joint partnership between a government office responsible for providing the service and an outside consultant, then both of them would share some sort of responsibility and accountability. A government office would be accountable before the authorities and the public, whereas, an outside consultant, such as CGI and Eds, would be accountable before the authorities.

Looking at the SNB site and how it operates and presents the services online, a trend of accountability is clear. SNB is accountable for the services, but if there happens to be a mistake and wrong information, then the agency offering that particular information would be accountable.

Dubai, on the other hand, takes the same argument, but from different perspective. The Dubai site offers services by their department names, and hence, each department is accountable for its services. The Dubai e-government site plays an intermediary role between government departments and people.

It is quite critical for both SNB and Dubai e-government to have a set of policies defining the responsibility and accountability. SNB is more accountable before the public than Dubai, due to its site orientation (task oriented).

6.6 Land/property related services

Service New Brunswick is a leader in government service delivery on the Internet. The land/property related services that SNB offers online, as they appear on its portal, are as follows:

1. Atlas, Maps, and Publications.
2. NB Survey Control Network.
3. Maps and Charts.
4. Land Registration and Information.

   SNB maintains a network of registries across the province where legal plans and documents related to the ownership of real property can be registered. The services that are offered here include:

   - Custom Map Service.

     This allows customers to get ownership and/or assessment information for a particular parcel by choosing the scale and geographic window.

   - Real Property Information Internet Services.

     This provides Internet based access to the property map and ownership information. This includes a feature called the Land Gazette which links

to other government agencies for providing regulations, restrictions and other land related information which may impact the land and its use.

5. Aerial Photography.

SNB offers aerial photos for its various cities for sale, and other air photos for different Canadian cities can be obtained also.

6. Assessment Services.

SNB locates, classifies and values all real property, analyzes available sales and construction cost information and determines the real and true value of each property.

7. Personal Property Registration and Information.

This allows users to register notices of security interests, money judgements, and certain other claims affecting personal property.

8. Land Titles.

This is a new parcel-based land registration system that will replace the old deed system.

In this new system, once a parcel is registered, the Province of New Brunswick guarantees the title of each parcel of land by issuing a Certificate of Registered Ownership (CRO). This system eliminates the time-consuming title searches required by the deed system, and provides security to both landowners and lending institutions.

9. PLANET.

It is a comprehensive, integrated, on-line source of land registration, assessment,

mapping and information services, allowing New Brunswickers to conduct land based transactions quickly, efficiently, and with good information.

10. Land Gazette.

SNB is the custodian of this, but other departments provide integrated information on restrictions and interest on property such as zoning, easements, and environmental contamination.

The land/property related services that Dubai e-government site offers are mainly provided by Dubai Land Department (DLD) and Dubai Municipality (DM). DLD deals only with private lands by issuing deed certificates and a site plan, after transferring the status of the land from granted to private. And a new statistic report just released from Land Department [DLD, July 2002] reasserts Dubai's importance in land/property dealings, which says that land/property transactions has exceeded two billions dollars (Canadian dollar) in the last six months.

DLD offers the following land/property related services online:

1. Updating ownership information

This allows private landowners to update their information.

2. Exchange of land

This allows private landowners to exchange their empty lands with each other upon their request and consent.

3. New Map Issue

This provides customers with options to either renew their site plans (expire after two years), or to get new site plans after privatizing their granted lands.

4. Locate Your Map

This gives customers the ability to locate their lands with their surrounding areas. This is a big project that is still underway designed in particular for brokers, which provides them besides location, the daily transactions of purchases.

5. Registration Status

This allows customers to check their applications status at any time.

Dubai Municipality offers the following land/property related services online:

1. DM Plans

The service allows UAE nationals who own land in Dubai to apply for obtaining a site plan or an affection plan for granted or owned land. And these include:

- Apply for a new land residential allocation.
- Apply to renew site plan – granted land.
- Apply for new or renew affection plan – private land.
- Check the status of your request.
- Cancel your request.

2. Location Finding

This gives customers the capability of locating a place of interest. And this service is less advanced than DLD service.

3. Building Services

This provides contractors, consultants and service agents within Dubai with the facility to submit online different types of requests.

4. No Objection Certificates (NOC)

This provides contractors, consultants and service agents within Dubai with the facility to submit online requests for No Objection Certificates and also allows them to track the status of these requests online.

It is quite clear that the SNB site offers much more services related to land/property than the Dubai site, and this is due to New Brunswick's maturity and long experience in land/property services. Due to the amount of transactions (over 2 billions dollars in the last six months) related to land that are occurring in Dubai, Dubai e-government has to offer more services on-line.

Although SNB site offers varieties of services related to land/property, the level of applying for land/property related services on-line in New Brunswick is still low, due to poor community programs.

6.7 Future plans for SNB and Dubai

There exist many obstacles for SNB to implement its visionary e-government agenda. There are different directions that SNB might take to reach its ultimate goal of having an e-government services accessible by all citizens in the province, regardless of their origin, race, ethnicity, education, and skills,...etc.

SNB philosophy, mentioned by Bob Gamble [2001] in SNB annual report, "is to provide the public in New Brunswick and elsewhere with easy and efficient access to quality government services"

In November of 2002, SNB will initiate an electronic submission of documents of certain types by allowing individual customers to enter some type of authentication proof

for getting into the system and submitting documents [Arseneau , 2002]. Also, Arseneau added that SNB is planning to have 35,000 parcels be converted from the deed system to the land title system, and to have 125,000 parcels converted within the first five years. The electronic submission of plans is not yet decided to go online, albeit, the early objective was to implement it by June 2003. SNB's overall plan for the first 10-year is shown in figure 6.1.

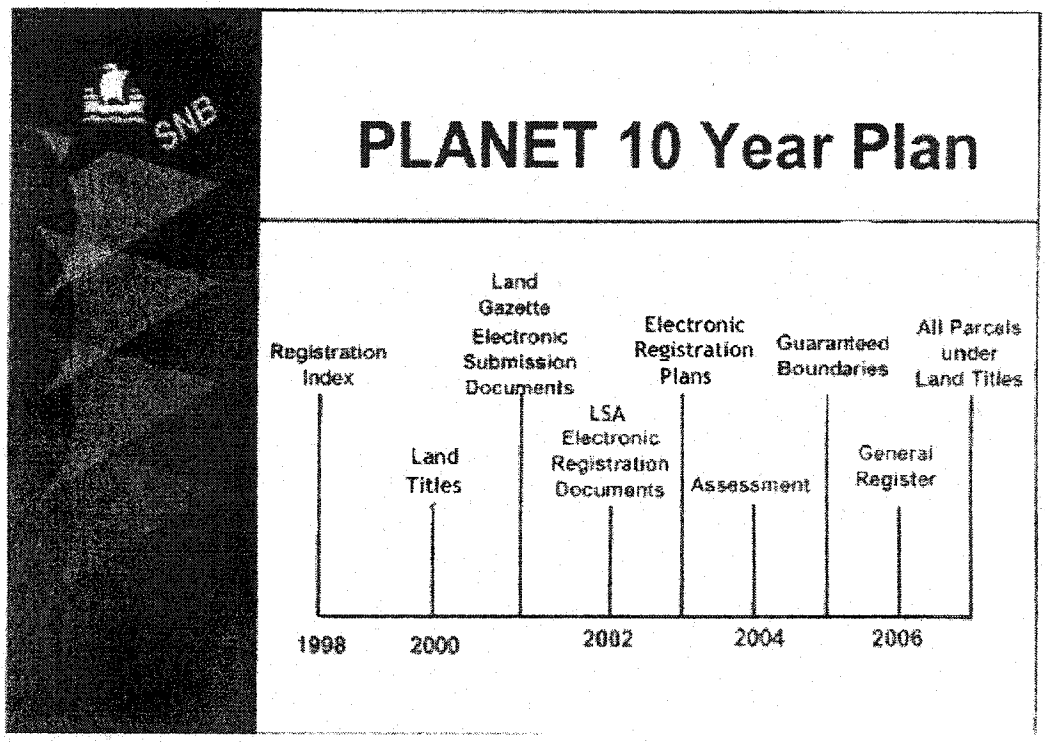

Figure 6.1 SNB ten years plan [Arseau and Ogilvie 2001]

Dubai is known for its strategic and ambitious plans that reach millions of dollars. Dubai is looking to get the benefits of e-government as early as possible, and it's working around the clock to meet the objectives as accurately as possible. There are countless future plans that Dubai wants to attain from its e-government initiative, and they include:

1. Conduct efficiently and effectively 70% of all government services through innovative channels by 2005.
2. Prepare more aggressive plans for Community Outreach Programs to spread awareness of e-government benefits.
3. Opening call centers so customers can use the telephone to order forms, make inquiries, and to conduct some transactions, such as renewing driver license.
4. Investing in interactive voice response (IVR) systems, to allow the completion of transactions such as driver license automatically over the telephone.
5. Making its site task oriented, by offering services directly without department names.
6. Opening community centers with computers and appropriate software to assist those who don't know how to use the e-services.
7. Increasing the number of kiosks.
8. Emphasizing more on security and privacy issues.
9. Implementing a full GIS concept for the emirate.

The overall future plans for both of them look similar, such as to offer more services on-line. SNB, in the short term, would keep other delivery channels running, such as, Call Centers and walk-in offices. The PLANET (land/property related services), ten years plan is an ambitious project that started in1998 and will continue until its full implementation.

Both SNB and Dubai should watch-out for security and privacy issues as data integration between various departments enters a new phase. The whole question of

privacy also requires a plan covering secured data and at the same time enabling people to get any information for their own needs or benefits.

Table 6.1 Summary of the future plans for both SNB and Dubai e-governments.

No.	Points of comparison	SNB e-government	Dubai e-government
1	Intended audience	Most of them Canadians	The majority are expatriates with many nationalities
2	Management style	Horizontal style	Vertical style moving towards horizontal style
3	Website interface	Task oriented (by service names)	Department oriented (by departments names)
4	Charging for service delivery	Charges in the same way it charges for traditional service delivery	Charges in the same way it charges for traditional service delivery
5	Accountability	SNB is accountable because of task oriented site	Other departments are accountable because Dubai site is department oriented
6	Land/property related services	Variety of mature services	Few services currently offered by two departments, DLD and DM
7	Future plans	Many future plans with clear vision and time limit	Many future plans with vague time limit

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Moving into the e-government era, governments are rethinking their interaction with their citizens. Governments are talking about the significant benefits that can be realized by migrating traditionally paper-based and face-to-face services to the Internet. And Portals are emerging as the new e-government single points of access for citizens and businesses.

Technology is the primary ingredients for e-government, but not without trained and knowledgeable individual using it. And business processes should be transparent and streamlined to make sense and help governments to better serve their customers. [Deloitte Consulting, 2000]

There should be a clear set of policies and regulations governing the move of any government wishing to go into e-government, to create a model that provides a framework within which all agencies can work and achieve their goals. Governments are keen on their move into e-government by placing a deadline on their departments and agencies to adhere.

In the short term, both governments and citizens would benefit, albeit governments will have to spend a significant amount of capitals. One of the pitfalls to adopting e-government, is the digital divide, which is increasing, especially in the developed nations.

Both New Brunswick and Dubai have a strong, determined, and visionary leaderships. SNB has acquired knowledge and experience from its e-government, due to its early start and it's moving steadily.

SNB has shifted its management style towards horizontal type, thus empowering employees across lines of businesses and levels of government. Many services are now offered through the SNB Website, in a task-oriented method, and charging in the same way it charges in the traditional way.

Dubai, on the other hand, started its e-government in 2001, in a leap-frog move. Dubai e-government is a pioneering initiative in the region to provide online services across the spectrum of corporate and community life in the emirate. [Yousef, 2002]

Dubai is moving from vertical management style into horizontal type. And the next move would be to offer more services in a task oriented way, instead of the current department oriented service. Although, some of the departments are hesitant in giving up their autonomy, they are moving into an e-enabled environment, due to Dubai's strong leadership.

Dubai's population diversity will put more of a burden on its management to address these minorities needs

In the broadest sense, the main challenge facing both Dubai and SNB, is the digital divide, and they need to address it.

7.2 Recommendations for each jurisdiction

In order for SNB to attain and keep its leadership, it should complement the plans for future development by the following:

1. Re-initiate a community reach-out program in a continuous basis in order to persuade citizens to use the online service delivery as a routine in their daily lives.
2. Contract with private sector to run a survey questionnaire specific for each segment of the community, and use the results as a basis for developing a constant service improvement.
3. Educate and spread the e-government messages and services through universities, colleges, and schools for students to get involved and persuade their parents. (e.g., a project in northern NB is using schools to provide e-services (access to computers and the web) for the community)
4. Reach Aboriginal peoples and help them enhance their lives by offering them more convenient e-services, e.g., through the local Band Council.
5. Initiate programs to encourage students to come with innovative ideas for SNB Web-site through prize winning strategy.
6. Improve service delivery according to the citizens priority rather than making assumptions based on service-quality ratings or other information.
7. Make employees feel that they are part of the organization and even that they are the owners of the organization, in order to encourage them to care for the agency's mission and vision.

8. Make every house that now has television or telephone to always have Internet access [e.g., Newman, 2001]. The province should work towards the goal of having the technology become so commonplace and easy for people to use that they will not think of it as technology, but as a regular daily life business.
9. Ensure citizens know who is responsible and accountable for the delivery of services.
10. Make E-democracy the next phase for SNB. Citizens should be able to express their feelings and opinions and should have a direct communication with their elected councilors. Accenture Consulting [2002] defines this concept as "e-democracy should allow citizens to not only access political representatives, but also to create a forum for interaction and direct discussion to influence discussion and policy." At this stage, citizens will have more information about their elected officials, issues, and candidates, and can make better and informative decisions.

In its endeavor to become the leader of e-government in UAE and in the Gulf, Dubai has a lot to do to make this become reality. Shaikh Mohamed (Dubai Crown Prince) has proven that rhetoric must turn into reality by his keen and solid short and long term plans.

Dubai has to work harder to serve its people better, albeit its excellence record towards customer-centric approach from its inception. Shaikh Mohamed has embraced several actions to speed up the implementation process for e-services, such as setting deadlines. Dubai is well positioned to demonstrate best-practices and become a model user, but it has to shift its path and direction towards its mandate and make contingency plans as needed.

There are several actions that Dubai can and should take to better serve its people, and these are, but not limited to:

1. Dubai should establish solid, concrete, and short-term objectives, which are achievable and reasonable by each department and agency.
2. Citizens should not have to worry about which department delivers which services, and in order to do that, its website should be task oriented (as in New Brunswick) and not departments oriented.
3. It is essential that the Dubai e-government office or department be given more accountability and control to better attain its mandate.
4. The implementation and advancement of such a system will require cooperation, commitment, and good communication among various departments, political figures, and the public, by conducting more seminars and workshops in e-government to increase users awareness of the benefits of e-government.
5. Surveys should be conducted for both citizens and expectations, with slightly different questionnaires for each, to better reflect the needs and preferences of each group. And hence, evaluate and amend the proposed plans as per the results.
6. Dubai should deliver electronic services as per the needs of its people, and not according to its internal plans. And it should divert a little from its business e-services towards customer needs.

The current debate on e-government has been around the benefits to citizens, and little talk or study has been around the benefits of e-government to governments themselves. Further studies and research should concentrate on the real benefits of e-government in the long-term.

The Delta project in Fredericton, led by Dr. Keith Culver, which will be between five to seven years span, will look at the e-democracy side of e-government. Knowing that one of the pitfalls of e-government is the creation of elite of an elite, this project towards its end, will have a significant impact on the current flow of processes at SNB. It is recommended that students from the Department of Geodesy and Geomatics be involved somewhere in the project.

Future research should also look at other e-government projects, such as, Japan, Belgium, and Malaysia, to get their side of the story.

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