E-govt.nz:

A Sociological Exploration of E-government in New Zealand

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Contents

ABSTRACT

E-government is a relatively recent phenomenon that has emerged out of developments in Information Communication Technologies (ICT), especially the Internet and the World Wide Web. Along with many other Western nations, New Zealand is embracing ICT as a way of making government more transparent, cheaper to run, more efficient, and more accessible to its citizens. As a result, there has been an upsurge in the use of ICT at all levels of government in New Zealand. Part of this reflects the direction that central government has taken with its plans to implement a system of e-government by 2007, and part is the increasing emphasis that all tiers of the public sector have placed on efficiency and the need to curtail costs while improving outputs. It is not only central government that is involved in these developments, however. Local government (regional and local) is also increasingly appreciating the benefits that ICT can have for its operations.

Through a combination of documentary analysis and interviews with e-government officials, this thesis seeks to present a qualitative analysis of how e-government in New Zealand has been implemented at a local level (particularly by four local authorities), strategised at a national level (through the work of the national E-government Unit) and sits within a comparative international context (by comparing New Zealand e-government developments with what has taken place in the United States, the United Kingdom, Canada, Singapore and Australia).

The literature on e-government focuses overwhelmingly on the technicalities involved in setting up an ICT system. As a result, many of the social issues that are associated with e-government are often ignored or not given adequate coverage. This thesis seeks to address this imbalance by focusing on the issues of security, privacy, trust, the digital divide, the lack of social and cultural capital and the tensions that exist between the roles of client, customer and citizen within this emerging e-context.

CHAPTER 1

Introduction

1.1 Introduction

In 1996, John Perry Barlow of the Grateful Dead rock band, made the following proclamation in an online discussion group and on his web site:

> "Governments of the industrial world, you weary giants of flesh and steel, I come from cyberspace, the new home of mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather. ...You have not engaged in our great and gathering conversations, nor did you create the wealth of our marketplaces. You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions." (Barlow, 1996) [1]

Some eight years later, Barlow's claims do not have the same ring to them as they did in 1996 when the Internet was the best "new, new thing" that was available in information and communication technology (ICT).[2] Now governments worldwide are increasingly exploring the possibilities that these "new, new" technologies might have for their activities and operations. E-government is a term that is increasingly coming into vogue. Its implications for the "culture, "ethics" and "unwritten codes" of cyberspace are numerous and warrant exploration. Hence, this thesis seeks to explore some of the background to this from a sociological perspective – especially as it relates to e-government in Aotearoa-New Zealand.

1.2 From ARPANET to the Internet

About the same time as Barlow published his *Declaration of the Independence of Cyberspace*, Netscape and Microsoft released the first versions of their Internet

[1] The full version of Barlow's *Declaration of the Independence of Cyberspace* can be found at http://www.eff.org/~barlow/Declaration-Final.html accessed on 8/04/03

[2] See Michael Lewis (2000) *The New New Thing: A Silicon Valley story*

browsers, software applications that enabled people to access the Internet in a form that was easy to use. This made the World Wide Web more accessible.[3] However, the beginnings of the Internet and the World Wide Web occurred well before this.

The infrastructure for the Internet initially emerged in 1969, when the United States government set up the Advance Research Project Agency (ARPA) with the brief of investigating a way of communicating between military institutions in the event of a nuclear war (Castells, 2001; Slevin, 2000; Shapiro, 1999).[4] As a result of this a telecommunications network was set up between four research institutions and was named ARPANET.[5] The network allowed individuals from these four institutions to communicate with each other electronically. Within 16 months of being established, ARPANET had expanded to include fifteen nodes at various university research centres throughout the United States. The ARPANET system eventually enabled an estimated 2,000 users to communicate with each other using a system similar to email. In its early stages, access to ARPANET was limited because of the capacity of the computers that were used and because of the extremely high cost of computing equipment in the early 1970s.

In 1972, ARPANET was publicly demonstrated at an international conference in Washington DC,[6] but access was still mainly restricted to academic and research institutions who could afford the costs that were involved. Around the mid- to late-1970s, two Chicago university students invented a faster modem, which allowed digital data to be transferred over phone lines without the need to upgrade any telecommunication infrastructure (Slevin, 2000). The implications of this rather ingenious device meant that more institutions could have access to ARPANET since

[3] The World Wide Web was an advance on the Internet. Tim Berners-Lee and Robert Cailliau devised a way of storing, retrieving and communicating data and documents as hyperlinks and hypertext, which is the basis of web pages that are prevalent on the Internet now (Berners-Lee, 2000).

[4] Of necessity this historical account of the Internet and the World Wide Web is brief. For fuller accounts see Spar, (2001) *Ruling the waves : cycles of discovery, chaos, and wealth from the compass to the Internet*; Berners-Lee, (2000) *Weaving the Web*; Gillies and Cailliua, (2000) *How the Web was Born*; Ferguson, (1999) *High St@kes, No Prisoners: A Winner's tale of greed and glory in the Internet Wars*; Hafer and Lyons, (1996) *Where Wizards Stay up Late: The origins of the Internet.*

[5] The first institutions involved in ARPANET were the University of California in Los Angeles, Stanford Research Institute, the University of California in Santa Barbara and the University of Utah.

[6] In terms of the development of the Internet, this was a rather momentous event. For a description of what took place at this conference, see http://www.netvalley.com/intval1.html, accessed 18/06/03

there was no longer a requirement to have very expensive and independent telecommunication equipment.

In 1983, following concerns about possible security breaches, the United States Defence Department withdrew from ARPANET and formed its own communications network thus freeing up access to ARPANET (Castells, 2001). The network thus became publicly accessible to all who could afford it and was renamed ARPA-INTERNET, or more commonly the Internet. Many institutions and organisations realised the potential that the Internet could have for communications and so the number of users increased rather dramatically following this, particularly within the United States. It is worth bearing in mind, though, that all the key technological developments that led to the Internet emerged from government institutions, major universities and research centres (Castells, 2001; Grönlund, 2002; Slevin, 2000; Berners-Lee, 2000; Gillies and Cailliau, 2000; Shapiro, 1999). Business considered the technology to be too daring and expensive to really try to capitalise on it. This is one of the reasons why no single corporation or business owns the Internet.[7]

The World Wide Web developed after the Internet was in place. In 1990, Tim Berners-Lee and Robert Cailliau, working out of the European Laboratory for Particle Physics (CERN) in Switzerland, devised a way of storing, retrieving and communicating data and documents as hyperlinks and hypertext.[8] This was to revolutionise the Internet (Berners-Lee, 2000; Gillies and Cailliau, 2000; Hafner & Lyon, 1996). This system of hyperlinks (http), hypertext (html) and URI (later called URL) was publicly demonstrated in 1991, and was released on the Internet in August that year (Berners-Lee, 2000; Gillies and Cailliau, 2000). The main advantage of the World Wide Web was that it ran on a multi-user system so that numerous people could access the same information at the same time, thus creating a many-to-many communication system (Castells, 2001; Berners-Lee, 2000; Gillies and Cailliau, 2000;

[7] This lack of commercial domination is, of course, one of the appeals of the Internet to many people (Castells, 2001). It is this quality of the Internet that makes it a double-edged sword, in the sense that it appeals to many since there is no commercialisation and privatisation of the Internet, nor is it bound by geopolitical boundaries (Lehr and Pupillo, 2002; Ebo, 2001; Everard, 2000; Loader, 1997). It is precisely these qualities, however, that make the Internet very hard for governments and organisations to regulate or control.

[8] Hypertext was used before 1990; however, Berners-Lee enabled the first use of global hypertext via the World Wide Web. Found at http://www.sun.com/950523/columns/alertbox/history.html accessed 1/06/03

Slevin, 2000; Shapiro, 1999). However, in these early stages one of the main problems with the World Wide Web and the Internet was that they were rather complicated and cumbersome to use. This restricted access since only computer "geeks" could actually use the systems and web applications.

In the early 1990s Marc Andreessen and Eric Bina, who were based at the University of Illinois National Centre for Supercomputer Applications, developed and modified a web browser programme called Mosaic.[9] Mosaic was based around a graphical interface and so for the first time graphics could be retrieved and distributed over the Internet (Berners-Lee, 2000). In January 1993, Andreessen publicised and released the software on the Internet.[10] Subsequent to this, Jim Clark, a leading Silicon Valley entrepreneur, contacted Andreessen to recruit him for a new company that Clark was planning (Lewis, 2000). Mosaic Communications was formed out of this meeting, and Andreessen, along with Bina and several of their co-workers began to work on a web navigation programme. Mosaic Communications later changed its name to Netscape Communications and in October 1994, Netscape Navigator, the first commercial web browser, was posted on the web. The first copy of the product was shipped on December 15, 1994. In 1995, Netscape released its Navigator software over the web - free for educational use and at a cost of $39 for businesses (Castells, 2001; Berners-Lee, 2000; Lewis, 2000). The Netscape browser allowed people to access the Internet via mouse or keyboard navigation rather than having to write computer code (Lewis, 2000), and while there were other web browsers that could be downloaded and used for the same purpose, Netscape Navigator was the first commercial browser and was, therefore, deemed to have set the benchmark for what was to follow. Suddenly, the Internet was more widely available and people were able to use the Internet and navigate the web in a way that had not previously been possible before.

The popularity of the Internet grew not only in terms of the volume of web pages posted, but also in the number of people that were able to access the Internet and

[9] For a much more detailed account of Mosaic and various other Web browsers see Berners-Lee (2000) *Weaving the Web*, chapters 6, 7 and 8; Gillies and Cailliau, (2000) *How the Web was Born*, chapters 6 and 7.

make use of this rather powerful interactive communication tool. In time this has had significant social impacts – improved communication, increased accessibility of news, the beginnings of e-commerce, the emergence of Internet cafes, to name but a few (Lichterman, 1996). It is important to realise, however, that the Internet is only an interactive communication tool that provides the means for large numbers of people to form networks and communicate information in a many-to-many situation (Castells, 2001; Fountain, 2001; Slevin, 2000; Dutton, 1999; Shapiro, 1999). It is not the Internet or ICT that has changed the way that society operates, but rather how people have used it. ICT is, therefore, a facilitative rather than determinate technology, an important point when we come to consider the implementation of e-government (Preston, 2001; Feenberg, 1999 and 2002; McLaughlin, 1999).

As a result of these developments, we have moved more fully into what has been termed 'the Information Age' or 'the Information Society',[11] but the Internet is not the only ICT medium to be related to this change. Other communication tools such as mobile phones and text messaging have also been used to create powerful and dynamic networks (Rheingold, 2002). To reiterate the point made earlier, while technology is a driving force in the way society operates, it is the uptake and use that is made of the technology that changes the way society operates and functions, rather than the technology itself. Computing pioneer Alan Kay (1991: 100) used a piano analogy to capture this.

> "Pianists know that music is not in the piano. It begins inside human beings as special urges to communicate feeling.... The piano at its best can only be an amplifier of existing feeling, bringing forth multiple notes in harmony and polyphony that the unaided voice cannot produce. The computer is the greatest 'piano' ever invented, for it is the master carrier of representations of every kind."

In a similar way, computers and telecommunication technologies are not the source of information *per se*. They have simply changed the way that people access information (Feenberg, 1999 and 2002; Rawlins, 1996).

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[10] Such was the interest generated by this event that within weeks tens of thousands of people had downloaded the software. By December 1993, the success of Mosaic was highlighted on the front page of the New York Times Business Section (Reid, 1997)

[11] See David Lyons, (1988) *The Information Society: Issues and Illusions.*

With the introduction of many-to-many communication, the Internet and the World Wide Web have become powerful, dynamic and unequalled information and communication tools that are being used more and more by millions of people around the world (Curran, 2002; Flew, 2002; Scheier, 2001). As computers become a common feature in libraries, offices, the home, universities and so forth, more people become comfortable with using the Internet for all sorts of purposes. Governments have been no exception.

1.3 E-government

As computers have become a common feature of the internal and exterior decors of society,[12] so governments have come to realise that ICT, the Internet and the Web may have potential for the running of government, government departments and the public sector. This has given rise to the term 'e-government'. 'E-government' as a term has been circulating in information technology (IT) and government circles for some time. At the third Annual E-government Conference held in Lisbon in May 2002, the term 'e-government' was used in the following way:

> "E-government is the application of Information and Communication Technology by government and public sector agencies, and is transforming the way governments interact with their citizens. Its use promises to enhance the effectiveness and efficiency of government and radically alter its relationship with the public. Improvements in communication and technology are playing a vital role in raising the living standards and empowering people to understand and gain access to all the initiatives and support systems that are available to them."[13]

Governments increasingly are looking to IT as a possible way of reducing costs, improving communications between government departments and citizens, increasing

[12] By exterior décor, I am referring to the increasing numbers of computers that can be found in urban and rural areas. For example, ATM machines, video surveillance cameras, speed cameras, computerised farming equipment and so forth.

[13] Found at www.acessconferences.com/YM102/YM102.htm accessed on 8/04/03

efficiency within the bureaucratic systems of government and encouraging greater citizen participation in government processes.[14]

From the mid-1980s to the late-1990s, a wide range of local communities around the world have been involved in setting up online citizen networks, and these laid the foundation for e-government initiatives. In the United States, some of the earliest and most successful of these experiments were the Cleveland Freenet, which was supported by the Western Reserve University, and the Public Electronic Network organised by the City of Santa Monica, California (Castells, 2001). In Europe, the Iperbole Programme, which was set up by the City of Bologna, and Amsterdam's Digital City have become major points of reference as examples of citizen networks and the start of e-governance (Coleman and Gøtze, 2003; Riemens and Lovink, 2002; Castells, 2001; Borja *et al*, 1997). The main purpose of these experiments was to give online expression to the concerns, interests, values and voices of citizens, who until then had been isolated and hidden from local governmental institutions. These citizen networks gave people the opportunity to voice their views directly to officials and to each other via ICT. Often these networks would link up with local institutions and local authorities to provide people with a communication medium for discussing and debating issues (Lichterman, 1996).

Castells (2002: 145) states that these citizen networks shared three major characteristics. First, they allowed the sharing of information between local government and a variety of other institutions in the community. Essentially, this meant that the network was an electronically updated bulletin board of community life. Second, the networks were organised in such a way that there was horizontal communication across all the participants in the network, rather than simply vertical communication (often referred to as silo structures) from the local authority or local institutions. This is important since many citizens feel as though their voice is lost within a top-down bureaucratic system of government. Third, the citizen networks enabled people and organisations not connected to the Internet to have access to intra-community communication.

[14] Coleman and Gøtze, 2003; Chadwick, 2003; Cuthorys and Crabtree, 2003; Baron *et al*, 2002; Dawes, 2002; Grönlund, 2002; Kamarck, 2002; Larsen and Rainie, 2002; Lenk and Traunmüller, 2002a and

Citizen networks became the testing grounds for political activists and the community alike, but more importantly they connected people within the community who were uneducated, poor and uninformed as well as those who did not have adequate or affordable access to the Internet, the Bulletin Board services,[15] or the smaller computer networks that were operating (Coleman and Gøtze, 2003; Castells, 2001). The citizen networks that were initially set up before the Internet and the World Wide Web thus provided a rich source of experimental data for those trying to set up any application of e-government.

However, the term 'e-government' is thought to have been first used in the United States during the Clinton Administration in 1993. Under the direction of Vice-President Al Gore, the Clinton administration undertook a major governmental reform effort, which was initially called the National Performance Review (NPR).[16] A key focus of the NPR was to investigate use of the Internet to create a new infrastructure and 'logic' for organising federal government and move the American government further towards the digital age (Fountain, 2001: 18). In addition to this, the NPR was intended to "create a government that works better and costs less" (NPR, 1993; cited in Fountain, 2001: 19). The whole emphasis of the NPR was to look at cutting costs in the public sector while increasing the services offered to citizens. This emphasis is the overriding focus of many e-government projects globally and is one of the main appeals for many governments setting up or investigating any application of ICT for governmental use.

The Europeans were not far behind the Clinton Administration in their embracing of e-government as a concept. Britain, in particular, has been investigating and setting up governmental ICT applications and programmes since 1994 (Riley, 2001b; Campbell, Harrop and Thompson, 1999), with the aim of reducing governmental costs, making access to governmental information easier and improving citizen participation in the political system. The European Union has also been investigating

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2002b; Chadwick and May, 2001; Fountain, 2001; Andersen Consulting, 2000; Bradley *et al*, 2000; Deloitte Research, 2000; Ferguson, 2000; Coleman, 1999; Dawes, 1999.

[15] Bulletin Board services that were used in these early citizen networks were a much simpler version of the World Wide Web. They were text-based only and allowed people to communicate with each other in a similar way as email, but all discussions were public.

how ICT applications could improve financial performance, access and participation in a separate effort to introduce e-government to the European Union. However, among the many challenges faced by both the United States and the European Union in these efforts is the sheer size of the landmasses involved and the cooperation needed between national or federal governments and individual state governments for any uniform e-government programme to emerge. Nations that do not have as many tiers of government or do not have a federal political system are often at an advantage in setting up any ICT applications, since cooperation is easier and the expense involved is usually reduced (W'O Okot-Uma, 2001).

The American, British and European Union e-government initiatives have become a benchmark for other governments around the world interested in setting up e-government systems. The influence is most obvious in relation to the aims and goals that governments hope an application of ICT will have for the nation and for governmental departments. In particular, the focus on reducing costs and increasing citizen access to information and citizen participation, along with the transformation of citizens to "customers" has come specifically from the United States and Britain.[17]

Canada and Singapore have also been instrumental in investigating and setting up applications of e-government, and to date these two countries have some very advanced applications of e-government in place. Other countries such as Australia and New Zealand have also expressed interest in creating and implementing a system of e-government.

Essentially, the basic premise behind the concept of 'e-government' is that people will have better and easier access to government departments, to government itself, and vice versa. By using the Internet as a form of delivery and access, it means that the government is available 24 hours a day, 7 days a week (24/7 in the vernacular), to anyone with an Internet-capable device and a phone connection. For government itself, it means that the output of government and government departments can be made easily accessible in a relatively efficient and cost-effective way since the cost of

[16] In 1998, the NPR was renamed the National Partnership for Reinventing Government.
[17] The implication of this transformation is taken up later in the thesis.

using the Internet is cheaper and is often borne by the user.[18] For the user, it means that not only can they access government services quickly without the bother of lengthy queues and dealing with frontline staff, but also that government is available when the user requires it. However, as we shall see later, e-government is not quite as simple as placing an 'e' in front of government.

As the potential of ICT is realised and as the concepts and ideals of e-government are defined and delineated, it is hoped that the result will be greater participation by citizens in government policy and processes, and that politicians will become more accessible to their constituents. To achieve this, however, an e-government system needs to be user-friendly, relevant, easy to use and accessible to every citizen. Already, government web sites have changed somewhat in response to this. In the earlier days of the Internet and the World Wide Web, government departments would often set up their own web pages with either little or no consultation or collaboration with other governmental departments or agencies far less the public. This often resulted in a confusing mass of web sites being available with no hyperlinks to other sites. As a result of this, few people visited or used these government sites.[19] As the role and acceptance of ICT has increased among the general population, so too has the perception that governments and government departments have of ICT. Now most governments in the developed world (and quite a few in the developing world) have one governmental web portal from which all government departments and agencies

[18] For example, in doing research for this thesis, I contacted the New Zealand E-government Unit for some documents relevant to my research. I was informed that professional printing and binding were a considerable expense and that I would find the majority of the PDF files on their web site, which could be printed if I wanted a hard copy version. This means that the printing costs are placed on the user rather than on the governmental department, which as suggested, is a significant saving to their departmental budgets. While, some argue that this only makes the customer recognise the value of the services that they are making use of, others argue that this is just causing another form of information division between the information rich and the information poor. This tension between citizens and customers/clients is addressed later in the thesis.

[19] Since the revamp of the old New Zealand Government web site, known as NZGO, to the New Zealand government portal, there has been a marked increase in the number of people visiting the site. On November 26, 2002, Brendan Boyle, the then head of the E-government Unit, released a media statement saying that the new portal had passed the million milestone with more than 1.1 million visits to the new site from as far afield as Canada, Hong Kong and France (@your.service newsletter, 26 November 2002). More recent statistics for the government portal show that around 15,000-18,000 visitors use the portal per month, compared to 12,000-15,000 visitors per month for the old NZGO web site (Personal communication, 2003).

are linked and connected (Mellor and Parr, 2002; Ronaghan, 2002).[20] This means that navigating around government web sites for information is much easier and less time consuming than was previously the case.

1.4 The Connection with E-democracy

Many commentators and governments treat e-government and e-democracy as being essentially the same. This mainly occurs because governments often have 'citizen participation' as part of their e-government agenda. This can be misleading since e-democracy is somewhat distinct from e-government. While there are obvious linkages between the two terms, they have very different ideals and aims. The aim of e-government is to allow citizens easier and more extensive access to government information of concern to them (Chadwick, 2003). For government, this means a greater transparency in bureaucratic operations, and because of this, there is a perception that governments and government departments should be more accountable. Along with these benefits of ICT, e-government also provides a way of cutting costs for government, since the expense of transactions, publishing material and running of government is substantially reduced.

Because of the opportunities that ICT provides, governments also envisage that an e-government system will allow greater citizen participation in the political system. However, this is a rather contentious area of e-government. While government would like to increase the amount of citizen participation in terms of submissions made and opinions offered, there are few bureaucrats or politicians who would like to see the public voting on issues of governance based solely on information available through the Internet. Perhaps it is with some caution that the New Zealand E-government Unit is only planning to start investigating e-democracy in 2007, by which stage it is hoped that the majority of the government's ICT system will have been implemented.

[20] A web portal is essentially like a gateway. Through the portal http://www.govt.nz/en/home/, for example, one can carry out numerous activities by following the hyperlinks. An email to the Prime Minister can be composed, or one can search for the latest media release from any of the politicians on any day. All the government departments can be found from this portal as well, making the whole process of finding information and interacting with government and the departments much easier and quicker.

While input by citizens into the decision-making process is something to be encouraged, expertise is still needed in weighing up and appraising all the information available before making an informed decision. E-government would allow the information to be made available to citizens via the Internet and associated web sites, but it does not provide the time, knowledge and ability to read, analyse, review and reflect on the information received (Chadwick, 2003; Coleman and Gøtze, 2003; Grönlund, 2002; Kamarck, 1999; Selnow, 1998; Rash, 1997; Hacker and Todino, 1996; Grossman, 1995). E-government only provides information and services to citizens. In so doing, ICT provides the first step to gaining knowledge, but information is not knowledge in and of itself. Knowledge comes from reading, analysing and reflecting on the information. It is highly debatable whether citizens would want to spend the necessary time to do this or even whether they have the experience and background to do this adequately (Grossman, 1995).

Therefore, while citizen participation is a part of most definitions of e-government, there are limits to the amount of participation that is envisaged by governments. This is where the ideals of e-government and e-democracy differ greatly. E-democracy envisages a system of participatory democracy where every citizen participates equally in the governmental processes. E-democracy is more about trying to replicate the ideal system of classical democracy that was initially set up in Athens (Barney, 2000; Grossman, 1995). In Classical Athens, every citizen participated in the running of the state and government, and every citizen was obliged to participate (Barney, 2000; Heywood, 1997). In this form of democracy, however, citizenship was limited to men and excluded all women and slaves. Therefore, while it is held as an ideal form of democracy, even democracy in Classical Athens had its failings. This led people such as Plato and Aristotle to reject the ideals of democracy, since they believed that only the educated could make informed decisions and run the state (Kymlicka, 2002; Barney, 2000; Heywood, 1997; Grossman, 1995). However, with democracy via the Internet, it is hoped that everyone who wishes to participate in the running of the state and government can and will have the opportunity to do so. This, in itself, raises interesting questions about citizenship, democracy, the running of government, power and politics.

What is clear from this is that there are substantial areas of difference between e-government and e-democracy and that there is a need to separate the two terms. E-government is not e-democracy, although e-government does contain certain affinities with e-democracy (Chadwick, 2003). Similarly, e-democracy is different from e-government although it overlaps with certain elements of e-government and shares some of its ideas (Riley, 2003). Nevertheless, the terms are different in essence and for the purposes of this thesis will be kept separate.

1.5 Themes and Issues

In light of the technological advances that have been made, and with the New Zealand government planning to have a national e-government system in place by 2007, there are several social issues that need to be given consideration in a discussion such as this. These include:

- Aspects of citizen participation and the focus that has been placed within e-government applications on turning citizens into customers.
- The digital divide and how this relates to e-government.
- Lack of social and cultural capital and the implications that this has for e-government.
- Security of private information and what happens to any information that citizens provide to government departments over the Internet as a result of ICT initiatives.
- Citizen trust (or the lack thereof) in both national and local government and the implications that this has for e-government.

One of the New Zealand government's hopes is that e-government will help increase citizen participation. There is little to suggest, however, that this is likely to happen. Technology is a neutral application and has little bearing on the democratic process, apart from the way that the technology is used to enhance this (Murphie, 2003; Anderson, 2002; Grönlund, 2002; Mellor, 2002; Bennet, 2001; Riley, 2001a and

2001b; Silcock, 2001; Fergusion, 2000; Dutton, 1999; Grossman, 1995). Because of this, ICT can either increase citizen participation by making more information available to citizens via the Internet, or it can impede the information flow and decrease the amount of participation by making use of a medium that not all have access to (Chadwick, 2003; Chadwick and May, 2001; Fountain, 2001; Riley, 2001a and 2001b; Grossman, 1995). For some governments, information is equated with power and they are therefore reluctant to share this power (Riley, 2001a and 2001b; Shapiro, 1999; Grossman, 1995).[21] Presently, there is little to suggest that democracy and citizen participation will increase with any applications of ICT in government processes. Rather, it is hoped and thought that by increasing the service options available to citizens, this will increase the number of citizens engaging in government and governmental processes (State Services Commission, 1999; 2000; 2001). However, the digital divide is a major problem in this regard, one that has the potential to reduce the number of citizens able to participate via the Internet.

The digital divide refers to the fact that some people are able to access the World Wide Web and the Internet, while others cannot.[22] The digital divide is a problem that will affect any system of e-government unless it is addressed and somehow resolved. The digital divide is clearly a social inequality of great significance (DiMaggio *et al*, 2001), with groups of people and societies being increasingly divided into the 'information have's and the 'information have nots'. In New Zealand, the digital divide is compounded by the rural nature of the society and by the way in which the telecommunications networks have been set up in certain areas (Statistics New Zealand, 2004; Statistics New Zealand, 2002). In parts of the West Coast of the South Island, the East Coast of the North Island and north of Auckland, the telecommunications networks do not always have the capabilities to allow the majority of the population to use a modem or have access to the Internet (Statistics

[21] Two examples of restricting the information flow available on the Internet can be found in China and Singapore, where the government controls the access available to citizens through a heavy screening process and by having a national intranet system.

[22] For more information about the digital divide see Statistics New Zealand (2004) *The Digital Divide*; Servon (2002) *Bridging the Digital Divide*; Castells (2001) *The Internet Galaxy: Reflections on the Internet, Business and Society*, chapter 9; Compaine (2001) *The Digital Divide: Facing a Crisis or Creating a Myth?*; DiMaggio, P., Hargittai, E., Neuman, R., and Robinson, P, (2001) *Social Implications of the Internet*; Norris, P. (2001) *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*; Loader, (1998) *Cyberspace Divide.*

New Zealand, 2002).[23] Furthermore, social problems such as poverty only intensify the consequences of the digital divide in New Zealand since it takes money to buy computer hardware and to install and maintain Internet connections (Statistics New Zealand, 2004). The challenge of the digital divide in New Zealand and the way that it is addressed has the ability to make or break any e-government initiative due to the sheer size and extent of the digital divide. E-government is effectively useless unless everyone can access it or there are provisions put in place whereby people who cannot afford or do not want a computer can still participate and access governmental services.

The lack of cultural and social capital is another issue of relevance. Some people may feel as though they are excluded from participating in any system of e-government because they have little knowledge of political systems or how to use computers and the Internet (Shapiro, 1999). Others can feel left out because of the lack of social capital that comes from networks and connectedness. Both cultural and social capital are related to the digital divide and will need to be addressed thoroughly if e-government is to have any success in New Zealand. Education programmes need to be put in place and be operating well before e-government is fully implemented to give people a chance to learn how to use any applications of e-government. Other issues such as the culture of the Internet mean that some may feel excluded from any interaction with an e-government system.

For other people, e-government contains the threat of state surveillance and a loss of privacy, which may mean that they are reluctant to engage with the World Wide Web or any system of e-government (Castells, 2001; Galindo, 2002; McDonagh, 2002; Layne and Lee, 2001; Riley, 2001a and 2001b, Shapiro, 1999). Privacy laws in New Zealand need to be strengthened to gain the trust of citizens so that they feel

[23] Both the New Zealand government and the telecommunication companies in New Zealand are aware of the problem and are attempting to solve the network problems. However, due to the lack of population in these areas and the poor condition of the network, it is unlikely that there will be any major changes for some time yet. While these areas do have Internet capable networks, the speed at which data is exchanged is relatively slow when compared to urban areas. For example, in Christchurch, on a 56k modem, the transfer rate varies between 48.9k and 52.0k, while in rural Northland the transfer rate on a 56k modem varies between 29.2k and 35.6k, because of the lack of telecommunication infrastructure.

comfortable using e-government applications on the Internet. Along with this, privacy statements need to be placed on all governmental web sites that explain how personal information will be used and the rights that individuals have over their personal information (Galindo, 2002; McDonagh, 2002; Shapiro, 1999). For others, issues of trust, especially in relation to government, are a key matter. With the passing of time, people seem to invest less trust in governments worldwide and have become more cynical about government (Coleman and Gøtze, 2003; Chadwick, 2003; Layne and Lee, 2001 Shapiro, 1999; Grossman, 1995). For e-government to work properly and for citizens to feel comfortable engaging in government processes, government needs to increase aspects of trust. This is not an easy task and will only come about through being honest about all activities involving e-government and by providing a greater transparency in government. With every new technological initiative, there are social issues that emerge and e-government is no exception.

1.6 Research Focus

In addressing these issues, this thesis will first look at what is happening with e-government on an international scale. This allows a comparative context to be set within which New Zealand initiatives can be understood. Having set the comparative international context, attention will then be focused on the New Zealand Government's initiatives and efforts at implementing their particular version of e-government. This aspect of the project will make use of the international research and look at how New Zealand's e-government applications compare internationally. The main focus of the thesis is to provide a sociological investigation of e-government with a particular emphasis on how e-government is being implemented at various levels in New Zealand.

The focus on local e-government initiatives is instructive because local authorities in New Zealand have been left to design their own web presences. The results have been variable. Some councils have provided ratepayers with very innovative web sites and a partial system of e-government, while others have yet to establish a web presence. The take-up of ICT in local government has been left entirely to the discretion of individual councils and there is no legislation demanding that all local

councils in New Zealand have a web presence. However, with the implementation of the Local Government Act 2002, a greater emphasis has been placed on local authorities consulting more widely with the population within their geographical boundaries. For most local councils this means that a greater emphasis could be placed on their web site as they attempt to comply with the community requirements of the Act. This will inevitably lead to dramatic increases in the operating budgets of councils. One of the early problems that is presently being faced with the Local Government Act, though, is that the details of implementation have yet to be worked out and there is therefore a large degree of uncertainty about what the new responsibilities of local authorities will be.

Some local councils, particularly those in rural areas with small and dispersed populations, have yet to use the Internet as a way of promoting themselves and the local businesses in the surrounding area. Other councils, such as Dunedin City Council and Christchurch City Council, have set up web portals that are often cited in overseas conferences and reports as examples of very good government portals.[24] Dunedin has one of the more innovative local body web sites in New Zealand and ratepayers are able to pay their rates online, register a dog, organise a building consent and so forth, all from the council's web site (Baron *et al*, 2002: 110-112). At the Christchurch web site, one can access the public library search engines, check the value of property and rates and register a dog, among other things. The use of portals makes it much easier for the citizen to find what they are looking for and enables them to enter what is essentially a virtual 'one-stop-local-authority-shop'.

Any application of ICT for governmental use, whether it is local or national, requires large amounts of capital both in terms of hardware required for the actual system requirements and set up, and the personnel necessary to run and operate the Information Technology (IT) system in a competent manner. This is cited as the major reason why some local councils around New Zealand have yet to set up any IT

[24] Reports such as *Local E-government Now: A worldwide view* 2002, rates Dunedin as a shining example of e-government at the local level, and Conferences such as the 3rd Annual E-government Conference (2002), have used Dunedin's IT manager, Mike Hart, as a keynote speaker. Web sites such as http://www.oultwood.com/localgov/newzealand.htm, rate Christchurch's web site as 'well worth a visit'.

system or have a web presence. Rural councils in particular are charged with maintaining large regions with a rather sparse population. Some local authority web sites are fairly basic and only provide a very limited amount of information,[25] while others are much larger and provide much more flair in their design and content.[26] This often reflects the size of the population and the capital resources available to these councils.

1.7 Research Methods and Approaches

A key source of information for the thesis came from document analysis.[27] Because ICT is moving so fast, material becomes outdated very quickly. One of the challenges of doing research on ICT-based applications is therefore to get access to up-to-date information about what is happening now rather than what was happening last month or last year. While standard academic books and journals were used in the course of the research, a lot of material was also gathered from other sources particularly magazines, web sites, both governmental and non-governmental, and Internet news groups. Conducting research using the Internet presents challenges of its own. Because of the sheer volume of information that is available on the Internet, and the relative ease with which it can be found, the amount of material that needs to be read, processed and analysed for a research project is voluminous. While this makes researching easier in the sense that there is a wealth of material available, this is also a double-edged sword insofar as this material needs to be processed and synthesised. A further challenge, of course, is to verify the accuracy of material found on the web. In

[25] Examples of such web sites include the Central Otago District Council http://www.codc.govt.nz, Far North District Council http://www.fndc.govt.nz and the Waitaki District Council http://www.waitaki-dc.govt.nz as accessed on 24/05/03

[26] Examples of such web sites include Christchurch City Council http://www.ccc.govt.nz Dunedin City Council http://www.cityofdunedin.govt.nz; Auckland Region web site (this combines all eight Local Authorities) http://www.aucklandregion.com and Hutt City Council http://www.huttcity.govt.nz as accessed on 24/5/03.

[27] According to McCall and Simmons (1969:63), document analysis is often used in research in a fashion similar to interviewing: "Certain documents such as journalistic accounts, archives, and official statistics and reports may be used like informants to establish facts about events which the researcher was unable to observe directly. Often such documents are superior to informants in that official reports and statistics cover sectors of the organisation beyond the sphere of a particular informant, are based on regularised procedures often under external audit, are more precise than the informant's memory, and may extend farther into the past than any living informant. Typically, of course, the views conveyed by such documents are partisan or merely official views, but these are often important data in themselves, and in any case, these imparted by informants may be no less partisan or official" (McCall and Simmons, 1969: 63).

the present thesis, this did not prove to be too much of a problem since a lot of the web-based material came from government-related sources or research groups.

In addition to using material from electronic and published sources, I also interviewed IT managers and e-government experts within the Christchurch City Council and the national E-government Unit. The purpose in this was to find out what is currently being done in the area of e-government at both national and local levels in New Zealand and what initiatives are working. In addition to this, I exchanged follow-up email messages with the people I had interviewed in order to confirm and amplify on information gathered earlier.

The end result of this process was qualitative research that combined "document analysis" with material gathered from interviews with e-government officials to produce an "analytic description"[28] of how e-government in New Zealand is being implemented at a local level (particularly by four local authorities), strategised at a national level (through the work of the national E-government Unit) and sits within a comparative international context (by comparing New Zealand e-government developments with what has taken place in the United States, the United Kingdom, Canada, Singapore and Australia).[29]

1.8 Thesis Structure

Chapter Two reviews the literature related to e-government. This chapter has been divided into three sections each with a different focus. The first section deals with "popular" literature relating to community networks that were a precursor to e-government. This literature can be found on the Internet, and in magazines, newspapers and so forth. The second section reviews literature that has been produced from within government. In particular, material is drawn from the United

[28] According to McCall and Simmons (1969:3), analytic description: "(1) employs the concepts, propositions, and empirical generalisations of a body of scientific theory as the basic guides in analysis and reporting, (2) employs thorough and systematic collection, classification, and reporting of facts, and (3) generates new empirical generalisations (and perhaps concepts and propositions as well) based on this data." Thus, according to McCall and Simmons, an analytic description is "primarily an empirical application and modification of scientific theory rather than an efficient and powerful test of such a theory since only one case – however complex – is involved in the study" (1969:3).

[29] For further details of the research process, see the Methodological Appendix.

States, United Kingdom, Singapore, Canada, Australia and New Zealand. This literature is primarily focused on what each government is doing to implement e-government and the surrounding policy that has been developed to accompany this. The final section reviews literature from academic sources. This material, while focusing on the technicalities of implementing a system of e-government, also addresses some of the social issues that are associated with e-government – issues such as the digital divide, security and privacy, trust, e-democracy and so forth.

Chapter three concentrates on the E-government Unit and its role in implementing e-government in New Zealand. The connection between e-government and Public Management Reforms is explored and e-government is shown to be an extension of the government reforms that took place in the late 1980s in New Zealand. Along with the links to Public Management Reforms, all of the strategy documents that have been produced by the E-government Unit are looked at and analysed. Theses strategy documents outline the government's view of what is needed in New Zealand for e-government to be introduced. Of particular significance, here is the 'whole-of-government' approach and how this relates to local e-government in New Zealand.

Chapter four carries on with the 'whole-of-government' theme and looks at what is happening with e-government at the level of local authorities within New Zealand. The relevance that the Local Government Act 2002 has had to this is particularly highlighted. Carrying on from this, four councils are used as examples of what is happening at the local level and how each of them is different in their approach to implementing e-government. Each of the four councils faced different sets of circumstances and this has influenced how they have implemented ICT into their respective structures.

Chapter five looks at the social issues associated with e-government both on a national and local level. Because of the number of issues that are relevant to e-government, a selection of issues is discussed within this chapter. These issues are security, privacy, trust, authentication and confidentiality, social capital both in the public service and for citizens, cultural capital and the tension between the roles of client, customer and citizen. These social issues tend to be overlooked as governments and other parties involved in e-government concentrate more on the

technicalities of implementing an ICT system but a consideration of them forms an essential part of any sociological consideration of e-government.

Finally, chapter 6 concludes the thesis by reviewing the main issues highlighted in each chapter. In particular, the links between e-government and Public Management Reforms are reiterated and how these links have helped governments become involved with ICT but to some extent have impeded the implementation of e-government because of the overwhelming emphasis placed on efficiency and cost reduction within the public sector. Along with this, the five main social issues that are associated with e-government are revisited. Finally, two new developments are highlighted, developments that have come to the fore in the final stages of writing the thesis. The first is the new direction that the New Zealand E-government Unit is taking with the appointment of a new head (22 March, 2004), while the second is the increasing emphasis being placed on m-government and how mobile technology, in particular mobile phone, can be used in conjunction with e-government.

CHAPTER 2

Review of the Literature

> "E-government is not a panacea. Although it can facilitate change and create new, more efficient administrative processes, e-government will not solve all problems of inefficiency, nor will it overcome all barriers to civic engagement. Moreover, e-government does not just happen, because government buys more computers and puts up a website. While online service delivery can be more efficient and less costly than other channels, cost savings and service improvements are not automatic" (Lanvin, 2002; 1)

2.1 Introduction

As was indicated in the previous chapter, e-government is a relatively recent phenomenon. As far as governments are concerned, it is, to use Michael Lewis' apt phrase, the latest "new, new thing" (Lewis, 1999). While the volume of relevant research and literature on the topic is increasing as the idea gains momentum, there is presently a dearth of academic literature and research that deals specifically with the array of social issues that are associated with e-government (Grönlund, 2002). There is, however, a range of literature that deals with the concepts of e-government and e-democracy and some hypothetical questions relating to both terms. What one finds are smatterings of commentary in a number of different places. This makes the task of organising a literature review a challenge. Bearing this in mind, the present chapter has been organised into three sections dealing with popular, governmental and academic literature. In an attempt to organise the literature into a manageable form, the three sections have been presented in a chronological order where appropriate. Additionally, there is a country of origin order running through the sections.

2.2 The View from Popular Sources[30]

As mentioned in the previous chapter, the initial idea of e-government stems from the very early use that was made of ICT in the late 1980s to encourage greater citizen participation in local government (Lenk and Traunmüller, 2002a and 2002b). Such initiatives were referred to as "citizen nets" and, aside from encouraging participation in civic issues, their main purpose was to provide citizens with a collective voice in addressing government (Tsagarousianou *et al*, 1998). In many respects, these citizen nets spawned two ideas that feature heavily in the literature and throughout this thesis. The first is the notion of e-democracy and the potential that ICT has for enhancing citizen participation in public decision-making. The second is the potential that e-government holds for providing citizens with opportunities to interact with government via the Internet rather than through other forms of interaction (Tsagarousianou *et al*, 1998).

While citizen nets had some early influence in drawing attention to the potential that ICT might have for promoting e-government, their significance has diminished with time. As governments, academics and policymakers around the world observed citizen nets in action, many initially wondered if such a system could be practicable as a way of organising the public sector and providing citizens with greater access to government (Lenk and Traunmüller, 2002a and 2002b). In addition to this, citizen nets have not corresponded well with government agendas. As is typical with most governments, one of the main attractions for them in such initiatives is the potential savings that can be made by making use of ICT, particularly in financial terms. As will be seen later, economics is a key focus in government and academic literature on the topic. Enhancing or encouraging greater citizen participation in the process of government does not, therefore, feature too prominently in the e-government plans and strategies of most Western governments.

One of the more prolific of the "popular" writers on e-government and e-democracy is Steven Clift (2003, 2002a, 2002b, 2002c, 2000a, 2000b, 2000c, 2000d, 1998, 1997).[31]

[30] The material in this section is drawn from non-academic literature and research such as is found in magazines, on web sites and in a variety of other sources. Because of the varied and often informal nature of this material, I have chosen to refer to it as "popular literature". This literature focuses mainly on citizen nets and their relationship to e-government, but it lacks some of the more substantive content that is often found in governmental or academic sources.

Clift is a technological futurist, online strategist, public speaker and a strong advocate of grassroots, web-based, citizen nets that promote democracy and the ideals of democracy (2002a, 2002b, 2000a). His agenda is to promote e-democracy rather than e-government *per se*, but he seems to have realised that in order to encourage governments to be more receptive to citizen input and to involve citizens in decision-making processes, e-government needs to be promoted as a means to an end (2002a, 2002b, 2002c, 2000a, 2000b, 2000c). Clift is wary of any form of e-government that does not involve e-democracy. He believes that there is, at the moment, little incentive for citizens to become involved in e-government initiatives as long as e-democracy is given secondary emphasis. He insists that if any system of e-government is to work, it needs to contain strong elements of e-democracy (2002a, 2002b, 2002c, 2000a, 2000b, 2000c).

There are two aspects distinguishable in Clift's writings. The first is an encouragement to citizens to become 'e-citizens' by setting up citizen nets and pressurising governments to listen to them and take their views on board (2003, 1998, 1997). The second is an encouragement to politicians and governments to become involved with ICT and e-government, but in such a way that e-democracy is promoted (2002a, 2002b, 2002b, 2000a, 2000b, 2000c, 2000d). We look at these in turn.

Clift believes that citizens should not wait for governments to set up e-democracy or e-government initiatives, but instead should be proactive in taking the lead through establishing citizen nets (2002a, 2002b, 2002c, 2000a, 1998, 1997). He uses the Minnesota Citizen net as an example of what can happen when people take such a proactive approach (2002a, 2000a, 1998, 1997).[32] Clift helped set up the Minnesota

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[31] It should be noted that while Clift is a prolific critic and writer about e-democracy in particular, his views are somewhat basic. He often does not deal with some of the more substantive problems that are of concern with e-government and e-democracy. While he gives an introduction to e-democracy and e-government, it is only recently that he has been cited in other work.

[32] The Minnesota Citizen Net is only one of many different citizen nets available on the Internet. For a much more detailed discussion on citizen nets and citizen participation see Cornfield (2003) *Adding in the Net: Making Citizenship Count in the Digital Age*; Wilhelm (2003) *Civic Participation and Technology Inequality: "The Killer Application" is Education*; Delli Carpini and Keeter (2003) *The Internet and Informed Citizenry*; Berman and Mulligan (2003) *Digital Grass Roots: Issue Advocacy in the Age of the Internet*; Simon (2000) *NetPolicy.Com: Public Agenda for a Digital World*; Davis (1999) *The Web of Politics: The Internet's Impact on the American Political System*; Safdar and Seiger (1999) *Citizen.Action.Org*; Walch (1999) *In the Net: An Internet Guide for Activists*; Tsagarousianou, Tambini and Bryan (1998) *Cyberdemocracy: Technology, cities and civic networks*; Rash (1997)

Citizen net in 1994 when state elections were being held. Since then it has grown in size and popularity and much of Clift's discussions are based around it as an example of a citizen net in action (Clift, 2000a, 1998, 1997). The success of this initiative in turn helped encourage the Minnesota local authority to become involved in both e-government and e-democracy initiatives, having seen some of the success that followed from the formation of the Minnesota Citizen net.

Clift (2003) offers some practical guidelines for forming a citizen net that include:

- Keeping to strict geo-political regions and boundaries i.e. town, area, city, region.
- Having a discussion charter that outlines rules and guidelines.
- Creating a working group of volunteers to help keep the discussions going.
- Setting up two email lists and web archives – one for unmediated discussion and the other for mediated announcements.
- Making certain of a public presence that coincides with the establishment of the net.

Clift believes all five aspects are vitally important for setting up an active e-democracy net and this is echoed by other people involved in citizen nets (e.g. Berman and Mulligan, 2003; Delli Carpini and Keeter, 2003; Wilhelm, 2003; Walch, 1999; Kranz, [n.d]).

The second aspect distinguishable in Clift's writing is his discussion of e-government. While he rarely distinguishes between e-democracy and e-government, there is a distinct emphasis placed on e-government in his more recent work. This partially reflects the growing interest that has occurred in using ICT for governmental purposes. He believes that e-government needs to be built in such a way that it "fundamentally connects with the people and rebuilds the legitimacy of governance" (Clift, 2000c). He thinks that the following practices should be incorporated into e-

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Politics on the Nets: Wiring the Political Process; Leer (1996) *It's a Wired World*; and Schwartz (1996) *NetActivism: How Citizen Use the Internet.*

government as a means of involving citizens in the political processes of government.[33]

- Announce all public meetings online in a systematic and reliable way.
- Put a "Democracy Button" on the e-government's portal page.[34]
- Enable existing representative and advisory processes to be available on the Internet.
- Embrace the two-way nature of the Internet.[35]
- Hold government sponsored online consultations.
- Develop e-democracy legislation.
- Educate elected officials on the use of the Internet in their representative work.
- Create open source democracy online applications.

Strassman (2001) echoes most of what Clift thinks should happen with e-government, but his focus is more on e-government than on e-democracy. Strassman (2001) recommends that an excellent e-government system should be "comprehensive, integrated, ubiquitous, transparent and easy to use, accessible, secure and private, continuously evolving, fun to use, interoperable and finally be linked to Internet voting, smart initiatives and constituent polling systems". All of these aspects from both Clift and Strassman are reflected in other articles on e-government.[36] However, as would be expected from popular literature that is available in magazines and on web sites, such material is often light on detail. For more finely grained analysis, we need to turn to government and academic sources.

[33] Taken directly from Clift (2000c and 2002b).
[34] The "Democracy Button" enables people to enter online discussion groups about various issues.
[35] Clift uses the Japanese Prime Minister (Junichiro Koizumi) as an example of this. The Japanese Prime Minister sends out an email every month to some two million subscribers who wish to be informed about issues that are happening in the Japanese government. It would have to be assumed, although Clift does not explicitly say so, that for this to be a two-way communication process, Japanese citizens also email the Prime Minister in response.
[36] For example, Melitski, [n.d]; Riley, 2003; Jellinek, 2002; McDowall, 2002; Riley, 2002; Economist, 2000: 3; Economist, 2000: 9; Economist, 2000: 17; Economist, 2000: 23; Economist, 2000: 31; Economist, 2000: 33; Pardo, 2000.

2.3 The View from Government Sources

This second section deals with research and literature on e-government that has been produced from within government. The literature reviewed in this section, confirms that most Western governments are grappling with how to make use of ICT and the Internet in a bid to streamline their bureaucratic processes. Most of this literature deals with practical aspects of e-government, mainly the benefits in terms of savings, the usefulness of web portals, page organisation, and set up. Unfortunately, not much of it deals with more substantive social issues such as the digital divide, social and cultural capital, citizen participation, security, privacy and so forth, all of which are very relevant to a sociological consideration of e-government. In a bid to manage the volume of material that is relevant to this section, I will focus mainly on government and consultancy reports published in the United States, the United Kingdom, Singapore, Canada, Australia and New Zealand – some of the key Western nations where governments are making use of ICT.

United States of America

The concept of e-government emerged in 1993 when the government of the United States started to overhaul its bureaucratic processes. This initiative was called the National Performance Review (NPR). The main concern of the NPR was to streamline government and in so doing to reduce the amount of money that was being spent by the Federal government (Kamensky, 2001; Schachter, 1997). From this early start, the idea of using ICT to help reduce bureaucratic inefficiency emerged, but several other changes took place alongside this. Between January 1993 and September 2000, the Federal civilian workforce was reduced in size by 426,200 positions, while thirteen of the fourteen departments within the Federal government were also reduced in size. This was part of the NPR "re-invention of government" (Fountain, 2001; Kamensky, 2001). Further to this, action was taken on more than two-thirds of the NPR recommendations, which has resulted in an estimated saving of more than $136 billion to the American taxpayer (Kamensky, 2001). While the NPR reforms brought sweeping changes to the United States government, some of which

have been heavily criticised,[37] the NPR process did bring the very early beginnings of e-government to the United States.

As the Internet became better known and its popularity increased through the period between 1995-1999, the NPR process led to the implementation of several different ICT projects within government. The NPR was the catalyst for more than a dozen departmental gateway web sites being set up in a bid to serve specific populations of users, such as students with the creation of the students.gov web site, and the accessamerica.gov web site, which provided a gateway to information about the United States government (Kamensky, 2001).[38] There were many problems associated with the NPR process and the way restructuring took place. A major failing of the NPR was that there was no one authority in charge of the implementation of e-government in the United States. Instead, individual departments were expected to take the initiative in streamlining their own activities and making better use of ICT technology in accordance with NPR directives (Fountain, 2001).

Subsequently, while government departments and agencies in the United States were making use of ICT in the form of databases and web sites, the concept of e-government was considered to be a distant possibility (Schachter, 1997). The sheer logistics involved in forming a system of e-government that organised information in a logical and clear order was considered to be daunting. The use of electronic transactions was only just starting to be used in e-commerce (Shapiro, 1999; Tapscott, 1996), and the mere thought of e-democracy was certainly enough to put the idea of e-government on the backburner. However, as technology has progressed and especially with the Internet becoming more commonplace, the idea of e-government has become more achievable and this has been reflected in the increasing number of

[37] There have been a number of concerns about the NPR process and the restructuring that took place as a result of it. One of the main concerns was that the NPR created an environment within government where agency co-operation became almost non-existent as a number of agencies and departments fought for funding which Fountain (2001) *Building the Virtual State* writes about. For further information about the NPR see: Schachter (1997) *Reinventing Government or Reinventing Ourselves: The Role of Citizen Owners in Making a Better Government*; Perritt (1996) *The information highway: On ramps, checkpoints and tollbooths*; Greenfield (1995) *Electronic Government*; and Kettl (1994) *Reinventing government?: Appraising the National Performance Review.*

[38] The accessamerica.gov web site has been decommissioned but can still be found in the cyber cemetery at http://govinfo.library.unt.edu/ along with many of the earlier web sites that were initially set up by the NPR process.

government reports that have been and continue to be produced on the topic (Lenk and Traunmüller, 2002a and 2002b).

One of the more significant achievements of the NPR was the work that was done in helping to create FIRST GOV,[39] as a one-stop web site for government transactions, programme results, and providing email feedback to public officials (Kamensky, 2001).[40] In a move to get e-government up and running in the United States, and to achieve some consolidation in governmental use of ICT, the Federal government launched FIRST GOV in September 2000 (Riley, 2001b). FIRST GOV is a single gateway site that organises information by the "type of service or information that people are seeking rather than by agency" (Statement of Sally Katzen, cited in Riley, 2001b: 17). The FIRST GOV web site describes itself as "your first resource to find any government information on the Internet, with topics ranging from business and economy to money and benefits to science and technology – and everything in between!"

The main advantage of the FIRST GOV web site is that it combines over 27 million Federal government web pages that are searchable through a powerful search engine that can comb over half a billion documents in a very short space of time (Riley, 2001b). What is perhaps more interesting to note is that United States e-government initiatives have been led and partially funded by the private sector. FIRST GOV is the result of a business relationship between the United States General Services Administration and a private non-profit charitable organisation known as the Fed-Search Foundation (Riley, 2001b). While this has reduced the costs of setting up any e-government initiatives, one of the major drawbacks of this is that the United States e-government programme has lagged behind many other countries. This is possibly due to a potential conflict of interests, commercial rivalry, a lack of interoperability between ICT products and systems and the need to collaborate extensively with the private sector that is helping fund the initiatives.

[39] The FIRST GOV web portal can be found at http://www.firstgov.gov/

[40] The NPR team helped with the design of the FIRST GOV web site and the logistics that were involved with the creation of such a gateway, but the NPR was in the process of being dissolved by the time FIRST GOV was launched in September 2000.

In a report to the new Bush Administration in 2000, a group of 140 former and at the time, current government officials critiqued the United States e-government initiatives, especially the lack of progress made from the NPR, and said that "the difference between the State governments and the Federal government is like the difference between night and day" (cited in Riley, 2001b; Matthew, 2000).[41] They went on further to say that by comparison, "even in Bulgaria, you could get a reply from questions that you ask online" and warned of the fact that countries such as New Zealand, Australia and the United Kingdom were all ahead of the United States in e-government (cited in Riley, 2001b; Matthews, 2000). As a consequence of this and further evidence that the NPR was more of a hindrance than help in the creation of e-government, the NPR initiative was shut down in September 2000.

While the United States has made progress in its plans for e-government, the main focus for using any system of ICT in government bureaucracy is entirely centred on the apparently considerable cost savings that can be achieved by using ICT. The focus of any e-government initiative within the United States Federal government has not changed since the start of the NPR. There are several suggestions that while e-government initiatives will have considerable cost benefits in reducing the amount of money spent by the public sector, the benefits are for the long term rather than the short term (Intergovernmental Advisory Board and Federation of Government Information Processing Council, 2003; Kable, 2003). The sole focus on the amount of money that can be saved by the Federal government has been identified as the problem that hinders the United States in its efforts to implement e-government, and this was certainly evident in the era of the NPR.[42]

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[41] This comment suggests that some State governments have progressed further with using ICT and have a better system of e-government. One thing that has to be considered is that the Federal government is much larger (both in terms of the number of employees and the number of people using the system) and due to the size differential more planning and organisation is needed to effectively implement a system of e-government at that level.

[42] The considerable focus by the United States on the saving to the government that can be made by using a system of e-government is an interesting point. The Canadian and Singapore governments have successfully implemented and continue to implement e-government systems. While part of their focus has been on the saving that can be made by using ICT, the primary focus for both of these governments in implementing e-government was for the benefit to citizens. It is questionable if the e-government system that is being implemented by the United States government will be very effective for citizens as their system of e-government is not based on ease of use, access to information, citizen participation, and other such benefits but rather on the amount of money that can be saved by the

One of the biggest problems with e-government initiatives under the direction of the NPR taskforce was the fact that the taskforce's main focus of attention was to streamline and restructure the Federal government. While the NPR was charged with implementing ICT into the Federal government, very little ICT was implemented. For the most part, the taskforce concentrated on restructuring the government by reducing staffing numbers, cutting down on the amount of paper needed, reducing 'red tape' and streamlining the bureaucracy within the Federal government. With this taking place, any e-government initiatives were placed on the backburner as rather dramatic change took place first. Since September 2000, however, an E-government Task Force has been set up to design and implement e-government within the Federal government (Office of Management and Budget, 2002).

With these new developments, e-government initiatives have been placed under the Office of Management and Budget (OMB), and for the most part e-government is being implemented fairly quickly in the United States, with the United States being recognised as a leader in the field. In recent years, documents such as *E-Government Strategy* (2003) produced by the President's Management Agenda, made repeated mention of the fact that a United Nations report "rated the United States as the world leader in e-government on the basis of achievements over the last year" (Executive Office of the President of the United States, 2003).[43] The main objective for ICT use in the United States is to get all government departments and agencies connected and to use ICT in a coordinated way.

United Kingdom

While e-government is largely an American term, this has not stopped other countries such as the United Kingdom, from having their own e-government programmes.[44]

Federal government. At this stage, any system that is implemented will be worked around the idea of cost benefits rather than that of customer service to the citizen.

[43] The United Nations Division for Public Economics and Public Administration (UNDPEPA) Report *Benchmarking E-government: A Global Perspective Assessing the Progress of the UN Member States* (Ronaghan, 2002) is based almost entirely on how much progress a country has made in implementing their e-government strategies. It does not compare other important factors such as ease of use, information searching capabilities, usefulness and so forth, but rather looks at the progress that has occurred since 2001. It needs to be noted that countries such as the United States, Britain, Australia and New Zealand all scored highly in this report since they all released a newly revamped version of their portal window, just prior to assessment.

[44] The British e-government site can be accessed at http://www.e-envoy.gov.uk

The United Kingdom government produced a White paper *Government.Direct* in 1996, and began to build first generation services such as open.gov, which was an information search portal. In 1997, another white paper was produced which argued the need to modernise government and for the United Kingdom to become a leading 'Knowledge Economy' by encouraging all forms of e-commerce and anything else 'e' (Campbell, Harrop and Thompson, 1999). In 1999, the government produced another paper called *Modernising Government*, and this was the first indication that the United Kingdom was serious about building and implementing a system of e-government. This white paper looked at a variety of different aspects from policy making to the potential that ICT could have for the government (Cabinet Office, 1999). As with the United States, a strong emphasis was placed on the financial savings that could be achieved through e-government, but it also recognised that there needed to be a change in the structure of the government bureaucratic system (Campbell, Harrop and Thompson, 1999).

The *Modernising Government* paper set a goal of having all departments and agencies within government online by 2008 and, where there is the demand for public services, to be accessible 24/7 (Cabinet Office, 1999).[45] Further to this, the government outlined how departments would have to work together and share information channels in a bid to cut down the amount of forms and paperwork required of citizens. The three main objectives that were identified in this paper were:

- Ensuring that policy making is joined up and strategic.
- Making sure that public service users, not providers are the focus, by matching services more closely to people's lives and needs.
- Delivering public services that are high quality and more efficient (Cabinet Office, 1999).

This white paper received a certain amount of attention by public servants at the time and there was enough motivation to get involved and start the initial implementation of e-government within the United Kingdom (Curthoys and Crabtree, 2003). However, these efforts were quickly thwarted by a number of technical disasters.

In 1998, there was a major breakdown of the United Kingdom's passport IT system. This was followed by the United Kingdom census web site not being able to handle the number of hits that it received within a couple of weeks of being launched. Further to this, the media attention given to e-government has been particularly scathing with reports suggesting that £1.5 billion has been 'wasted' in British government IT projects since 1997.[46] Curthoys and Crabtree (2003: 6) suggest that because of the critical media coverage of the failure of ICT projects within government the public's perception of e-government is that it is a reflection of the problems within the state, rather than the solution to fixing those problems.[47] They go further to say that e-government is "viewed as a complexity of lucrative consultancy arrangements; an additional layer of centralisation and a minefield littered with exploded and hidden project failures. In other words it is becoming a political and financial drain" for the British government (2003: 6).

To make matters worse for the United Kingdom, there is research that suggests that British e-government sites are hard to find, confusing to navigate and problematic and difficult to use (Curthoys and Crabtree, 2003). What was started with such enthusiasm has almost died in the gutter. While there are success stories that highlight some very creative and innovative design features, these are often forgotten in the midst of a number of very public ICT disasters. With the release of FIRST GOV by the United States in 2000, Tony Blair (not to be outdone) reduced the deadline for the British version of e-government to 2005 in a public speech (Ferguson, 2000). This only increased the pressure to perform and the media have used this as a leverage point as to why e-government should not happen. It is thought that the shortening of the 2008 deadline for the roll out of e-government to 2005 is one of the biggest problems that is present in the United Kingdom with regards to e-government (Curthoys and Crabtree, 2003). The 1999 white paper had a more realistic deadline of 2008, which meant that the British government had eight years to implement and

[45] Since the idea of e-government is that services are available 24/7 anyway, as a matter of course, this is a rather odd comment.
[46] Computing Government IT Survey (2003) see http://www.vnunet.com/news/1139438 accessed 17/07/03.
[47] See Heeks (1999) for a more detailed discussion on the failure of ICT projects within governments.

launch web sites and portals throughout the government structure and enable a well-designed and organised system of e-government to be implemented.

While the United Kingdom is determined to be a world leader in the 'Knowledge Economy' (Cabinet Office, 2002), its efforts to implement a system of e-government are slowly unravelling at the seams. While there are some excellent government portals and web sites on offer, the desire to implement e-government within the timeframe that has been set is a very daunting task and one that is unlikely to be achieved. According to some it would almost seem better to reconfigure and reorganise the e-government efforts in a bid to salvage what can be used, in essence, to go back to the drawing board with e-government (Curthoys and Crabtree, 2003). While the space race of the 1960s has been won and the Cold War has finished, it seems that the competition that exists between Western governments to implement and outdo each other in their use of ICT in government (Curthoys and Crabtree, 2003; Ferguson, 2000), is one of the overriding reasons why the United Kingdom's efforts in e-government have not been entirely successful to date.

Despite their different time lines, it is interesting to note that both the American and the British governments have approached e-government in very similar ways. Rather than concentrating solely on e-government and the use of ICT within government, both countries have engaged in a system of 'reform' or 'reinvention' (United States) and 'modernisation' (United Kingdom) of government. Both countries have engaged in a system of governmental restructuring as an adjunct to introducing ICT into the government system (Hickman and Page, 2000). Other countries, as will be shown shortly, have instead concentrated more on e-government initiatives rather than on restructuring government. While it has to be said that by introducing a system of e-government the public sector will be restructured to accommodate new technologies and ways of interacting with the citizens, it is often a long winded and chaotic approach to e-government. It would appear that countries such as Singapore, Canada, Australia and New Zealand are restructuring more gradually as they implement different parts of e-government. It is contentious to say that one way is better or more effective than another, but it would certainly appear, on the face of things, that the

restructuring process is a highly inefficient and unorganised way of implementing e-government. One of the reasons for this relates to the role of the public sector itself (Chadwick, 2003; Fountain, 2001).

The public sector runs all government services and government cannot operate without the good will of public servants. A government is elected for a term and has to go through an election process to secure a further term, but the public sector endures from one term to the next, making it difficult for governments to introduce radical change such as e-government in the face of public sector opposition. In the face of restructuring processes, there would almost certainly be a culture within the public sector to hold onto jobs and power as much as possible, and a very real reluctance for any of this to be undermined by technology (Chadwick, 2003). Particularly, in the United States and the United Kingdom, there has been strong internal opposition to implementing e-government from the respective public services, which in turn has had a detrimental effect on the operations of government itself (Chadwick, 2003; Fountain, 2001).

Countries that have already engaged in a public sector restructuring programmes are not as likely to have the same problems as those that are engaging in a launch of e-government within a restructuring programme. At the present time, there is little evidence to show which approach is better, but there is considerable evidence to show that the United States and United Kingdom e-government initiatives are disorganised and ineffective compared to others (Curthoys and Crabtree, 2003).

Singapore, Canada and Australia

Singapore,[48] Canada,[49] and Australia[50] have all adopted strategies to implement a system of e-government. While they differ in the exact specifics, the one thing that these countries have in common is their e-government focus. Whereas the United States and Britain have opted for a restructure approach to e-government, Singapore,

[48] The Singapore e-government portal can be accessed at http://www.gov.sg
[49] The Canadian e-government portal can be accessed at http://www.canada.gc.ca

Canada and Australia have opted for a more citizen-centric approach with the aim of having a government 'one-stop-shop'. In these countries, there has been no major concerted effort to restructure the public sector in the same way as in the United States and the United Kingdom. Instead, these countries have started to slowly implement ICT into the public sector and in the process, build up a system of e-government almost by default. Ferguson (2000) put all three of these countries into the 'early leader' category in relation to e-government maturity.

Singapore was one of the first national governments to offer access to public service information through ICT. The initiatives that the Singaporean government has implemented have been, largely, very successful. There are more than 50 different Singaporean government services available online through the main portal called 'eCitizen Centre'. In its implementation of e-government, Singapore has benefited from the fact that its national and local authorities are combined (Ferguson, 2000). Further to this, because of strong involvement in ICT since the early 1980s, Singaporeans are familiar with using computers and the Internet and so there is not the same need to educate the population in using ICT (Ministry of Finance and Government Chief Information Office, 2002). Both of these aspects have given a strong competitive advantage to the Singapore government, which has meant that e-government has been able to be implemented quickly throughout the bureaucracy of the public sector. As a result of this, Singapore is often used as a shining example of how e-government could work when organised and implemented properly (Mellor and Parr, 2002; Ronaghan, 2002).

Canada is another example where the government has quietly gone about implementing a system of e-government. The Canadian government, like the Singaporean government, realised early that ICT was going to have a big impact on society and that it could be harnessed for use in government. Since about 1996, with greater access to the Internet on the part of its citizens, the Canadian government has been working towards implementing a system of e-government. The aim is to have all departments accessible electronically by 2004 and to enable citizen's access to this (Deltor and Finn, 2002).

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[50] The Australian e-government portal can be accessed at http://www.australia.gov.au

Presently, the Canadian government has advanced further than most other Western governments in their efforts and the system that is in place is very much focused around citizens and their needs. However, it needs to be recognised that e-government is an ongoing process. Once the e-government framework is set up and problems have been ironed out, there is a need to be constantly upgrading the web portal, uploading new information and archiving old and outdated information. Without this, any system of e-government will be a failure and a waste of resources. The Canadian government has recognised this and is one of the few to include provisions in its strategic plans to cover these crucial aspects of e-government (Government of Canada, 2000).

Unlike the Singaporean government, with its unitary model of government incorporating local and national government together, Canada has a federal system of government. Consequently, the Canadian system of e-government is well advanced at the national level, but not so advanced at the local level. However, Ronaghan (2002; 20) believes that

> "Canada has perhaps one of the most comprehensive e-government programmes. In addition to offering a bi-lingual portal, it provides citizens with a wide range of services in a highly efficient and user-friendly manner. Content and services reflect the government's unremitting commitment to improvement and to providing the best product to Canadian citizens and international users."[51]

Given the early start that both Singapore and Canada have made with e-government initiatives both countries are clearly well advanced in e-government, and have taken on board the idea and ideals of e-government and have implemented ICT into their government organisation with much success (Riley, 2001b).

The Australian government has lagged behind somewhat in e-government initiatives when compared with Singapore and Canada. However, Australia has recently made good progress. While the Australian Federal government is not quite as advanced as

[51] There is not a lot of information about Canada's e-government strategy, as they have simply got on with the job of implementing a system that works for the government and the citizen. As the quote

the Victorian State government in terms of e-government and ICT use, the Federal government has a single entry web portal from which most information can be found. Some of the more quirky information that is available on the Australian web portal is a map of all of the 130,000 public toilets in Australia,[52] along with different 'windows' for different users such as individuals and citizens, businesses and so forth as a way to organise relevant information. This approach is very similar to the British version of e-government with their use of 'lifestyle' windows.

Australia became involved in e-government around the same time as the United Kingdom in 1997-1998 and while it has an emphasis on being citizen-centric (Magarey, 1999), the Australian e-government strategy follows the lead of the United States and the United Kingdom rather than Canada and Singapore. The main benefits that have been identified by the Australian Federal government for implementing e-government are concentrated more around the financial savings that can be made for the Australian taxpayer rather than solely for the benefit of citizens (National Office for the Information Economy, 2002). However, as seen, this is not an unusual approach to e-government and this approach is often used to justify the expenditure that is required to implement e-government. What is interesting to note is that the majority of government departments and agencies in Australia have web sites that provide information to the Australian public. However, like other nations, Australia is finding that the next step to fulfilling a system of e-government is much harder than just making information available on the Internet.

While Singapore, Canada and Australia have, to varying degrees, implemented systems of e-government, they all have some way to go before they can claim that they have fully functional e-government systems in place. These countries, however, are often cited as being at the forefront of e-government development on the basis of some of the portals and systems that they have in place. In all three countries, citizens can do transactions on the e-government system, which is one of the measures of an

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suggests they seem to be doing it rather well and have for several years enjoyed top spot in e-government rankings.

[52] This map is available at http://www.toiletmap.gov.au/ as accessed 01/09/03

advanced system of e-government (Ronaghan, 2002).[53] As was mentioned earlier, e-government is not just a matter of putting an 'e' in front of government. There are several challenges both technical and social that have to addressed along with this.

New Zealand

In New Zealand,[54] the introduction of an e-government system has been discussed for some time in governmental circles; however, it was not until 2000 that the Labour Government officially set up the E-government Unit, a division of the State Service Commission (SSC), to start looking at e-government and its possible implementation into the New Zealand political system.[55] Prior to this, in September 1999, the SSC had released its first 'e-vision' document. This provided the goals and aims of e-government and outlined government plans for the following six years.[56] When the Labour Party came to power in December 1999, another 'E-Vision' document was released with a slightly revised plan and further 'e-vision' documents have been released since then.[57]

While the e-Vision documents of the Labour government and its National predecessor were very similar, there were significant differences in their perspectives on what the aim of any e-government system should be. The Labour government has focused more heavily on citizen and user participation than did its National predecessor, which saw e-government more as a means of providing citizens with information about government policy and processes. Further differences can be found in the overall aim of what the different governments wanted to do with ICT applications. The National government believed that "e-government will serve citizens better,

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[53] Other measures include web site analysis of content and services, statistical analysis of ICT infrastructure and human capital and interviewing citizens with a standard questionnaire (Mellor and Parr, 2002; Ronaghan, 2002)

[54] The New Zealand portal can be accessed at http://www.govt.nz

[55] In 1998, the SSC recognised that there was a need for policy work to be structured around the governmental initiatives that involved ICT, and a committee was set up to investigate the implications of ICT in New Zealand and e-government. On the 1st of July 2000, the E-government Unit was officially formed as a result of this.

[56] This document titled *Vision Statement – Electronic Government in New Zealand* (September 1999) is no longer available on the New Zealand government's web site because of the introduction of the government web portal, but it can be requested through the E-government Unit.

[57] Most of the 'E-Vision' documents can be found at http://www.e-government.govt.nz/. The content of these E-vision documents will be discussed in Chapter 3.

faster and cheaper in the new Millennium" (State Services Commission, September 1999: 1), and that the main focus of e-government was to provide governmental services at a cheaper cost to the taxpayer. While this would require some capital to create the infrastructure needed for a system of e-government, the overall aim of National's e-government programme was that it would cost the government less overall to provide governmental services to the public of New Zealand in this fashion than with conventional means.

In coming to power in 1999, the Labour government signalled that it wanted to be a world leader in implementing and designing a system of e-government, and that e-government would be a "promoter of New Zealand's interests internationally" (State Services Commission, December 1999: 1). There was little in their vision of wanting to reduce the costs of government or for any system of e-government to just provide information to citizens. Instead, a greater emphasis was placed on e-government as a "customer-centric portal" and having most, if not all, government departments connected to the e-government system by 2005 (State Services Commission, May 2000: 1).

Presently, the New Zealand government intends setting up a system of e-government that will continue this customer-centric focus. In essence, any application of ICT to government in New Zealand will attempt to be a 'one-stop-shop' for citizens (State Services Commission, May 2000: 4). While this, in theory, streamlines the whole process of interacting with government and makes finding governmental information easier, there is some concern by academics that, as a result of such initiatives, New Zealanders will be seen less as citizens and more as customers by their government, a concern to which we will return later in the thesis.[58]

2.3 The View from Academic Sources

In the third and final section of this chapter, the focus is on e-government literature that is academic in nature. Particular focus will be placed on literature that has a

sociological or political science emphasis. The logic for such an approach is two-fold. First, this thesis is a sociological investigation of e-government and therefore needs to contain a strong sociological focus, while still making use of literature from other disciplines. Second, aspects of e-democracy, citizen participation and citizenship have to be included as they relate heavily to e-government and these tend to be the concern of political scientists.

E-government

E-government has been used as a catch-all term for anything to do with ICT in government. However, as stated, the etymology is relatively recent, and mainly American (Curthoys and Crabtree, 2003; Grönlund, 2002; Lenk and Traunmüller, 2002a and 2002b; Fountain, 2001; Riley, 2001a and 2001b; Ferguson, 2000; Grossman, 1995). Originally, e-government was referred to as 'digital government' and it was part of a wider attempt to use technology to improve services within government administrations (Chadwick, 2003; Curthoys and Crabtree, 2003; Dawes, 2002; Grönlund 2002; Chadwick and May, 2001; Fountain, 2001; Layne and Lee, 2001; Silcock, 2001; Coleman, Taylor and van de Donk, 1999; Dawes, 1999; Dutton, 1999). Researchers wanted to analyse the "intersection of the computer and information sciences research communities" and to encourage "research, development and experimental deployment needs of government information service communities" (Dawes, 1999: 8). From here, e-government progressed through a series of academic consultative programmes to the government itself, and coincided with the beginning of attempts to build government web sites (Curthoys and Crabtree, 2003).

Nevertheless, there is still no overarching body of literature that is available relating to e-government (Curthoys and Crabtree, 2003). While there are formative social theorists such as Manuel Castells who are often cited as being influential in this area (see Castells, 2001, 2000, 1999, 1997, 1996), there is as yet, no single framework for making analytic sense of e-government. Instead, a melange of different theories and frameworks has come together as a backdrop to what governments are presently doing (Curthoys and Crabtree, 2003; Grönlund, 2002; Mellor and Parr, 2002; Ronaghan, 2002; Riley, 2001a and 2001b; Deloitte Research, 2000).

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[58] See Chapter 5.

Academics such as Richard Heeks fit e-government into a wider agenda of government reform. Heeks was one of the first to examine the failures in governmental use of ICT, and to point out that the central issue is one of management rather than technology (1999). He outlined several factors, which can contribute to the failure or success of ICT use within government (1999). These can be summarised as follows:

- "Information factors – How good is the content?
- People factors – Education, education, education. Without training who inside of government can use e-government?
- Management factors – Understanding risk and managing the balance between core systems and fringe usage.
- Process factors – Step-by-step adoption of services, leading to a track record of success.
- Cultural factors – Mismatches between services and user patterns.
- Structural factors – Artificial or outdated organisational structures inhibiting use.
- Political factors – Gaining party political support is crucial for the longevity of e-government
- Environmental factors – Matching external factors to internal reforms. Ignoring the 'environmental context' is a major cause of failure."

However, Heeks does not focus solely on e-government. Rather his focus is on the failures of ICT in government, and in this he continues from Osborne and Gaebler's (1992) work relating to reengineering the public sector.

Jane Fountain is another academic who has written about e-government (Fountain, 2001). Rather than forming a framework or theory for e-government, she instead uses the work of Max Weber as a basis for looking at the bureaucracy of e-government and government. She uses several examples of IT projects that the United States Federal government has implemented, some of which have been very successful, others of which have been a dismal failure (2001). Focussing on the NPR reforms that took

place from 1993 to 2000, Fountain states that there are several challenges to e-government that need to be addressed very carefully for e-government to be a success. These challenges derive from the fact that:

- The logics of technical advancement and rationalisation conflict with the logics of bureaucratic politics
- Federal interagency networks will be difficult to build and maintain because of the existing formal institutions that reward agency-centred activities and discourage cross-agency activities.
- Agencies lack resources for learning to use ICT, and this is partly due to the fact that ICT is seen as an expenditure rather than an investment.

Fountain's main concern with e-government is agency and department interoperability or the lack of it (2001). It is clear from Fountain's work that cooperation and collaboration between government agencies and departments is a key point of success for any system of e-government. To show the importance of this, Fountain uses several case study examples that display both the lack of cooperation and the consequential failure of the project and how agency cooperation can make a project a success. However, Fountain is concerned about the apparent fragmentation that has occurred with the implementation of e-government, which only serves to make the introduction of ICT into government harder.

Ake Grönlund (2002) is another academic who is involved in the study of e-government. Grönlund primarily uses European examples of e-government in his work and categorises e-government into three broad 'versions': The Economic Version, The Emancipatory Version and The Service Version (2002: 29). The Economic version of e-government is primarily focused on "better services, greater efficiency and cost savings for taxpayers". The Emancipatory version is about making public administration cheaper, while letting citizens be involved. Grönlund states that the emanicipatory version is what the United States version of e-government is about and points out that this is contrary to the European view of e-

government (2002: 29).[59] The Service version incorporates rationalisation, better services and democratic participation by the citizens. Grönlund summarises and defines e-government according to these categories by saying that "e-government is defined as a restructuring process to achieve better efficiency, better service and more democratic participation."[60] This is essentially his service version of e-government (2002: 29).

It is very common for authors to attempt to categorise e-government and this is one of the only features of the literature that is consistent. Ronaghan (2002: 10) uses the categories 'Emerging', 'Enhanced', 'Interactive', 'Transactional' and 'Seamless' to describe the different stages of e-government, from the most basic being where information is provided but it is limited, basic and static to the total integration of e-functions and services across government. Ferguson (2000) borrows a very basic and generally unhelpful categorisation system from Andersen Consulting (2000), when he looks at 'e-government maturity'. The use of categories in general, stems from an early consultancy report by Deloitte Research (2000: 23-24), which stated that there are six stages of e-government ranging from the 'Information Publishing/Dissemination stage' to the 'Full Integration and Enterprise Transformation stage'. The primary purpose of using a categorisation system is to compare the different stages that government have achieved with their implementation and use of e-government. However, there is as of yet, no standard categorisation system for e-government and so it is difficult to compare and contrast the progress of e-government, thus making the use of such categorisations confusing rather than helpful. Table 2.1 provides more details about the categorisation systems mentioned above.

[59] This is contrary to other views of the United States Federal e-government programme. For the most part, the United States Federal government has initiated a fiscally orientated approach to e-government and while they are trying to incorporate more citizen input, it seems to be very much on the backburner of priorities (Chadwick, 2003).

[60] While most governments are implementing e-government to achieve better efficiency and service, very few have at this stage focused on trying to encourage citizen participation in democratic systems.

Table 2.1 – E-government Conceptualised

Grönlund (2002)
The Economic Version: Focussed on better services to businesses and citizens, greater efficiency of government administration and cost savings for the taxpayer. **The Emancipatory Version**: Focussed on the goals rather than the means, with the aim to make government cheaper to run, while letting citizens be involved. Emancipation is not seen as citizen influence over public decision-making, but rather as a way of making an administration use less tax money. **The Service Version**: Focussed on rationalisation, better services and democratic participation by the citizens.

Ronaghan (2002)
Emerging: An official government online presence is established. **Enhanced**: Government sites increase; information becomes more dynamic. **Interactive**: Users can download forms, email officials and interact through the web. **Transactional**: Users can actually pay for services and other transactions online. **Seamless**: Full integration of e-services across administrative boundaries.

Deloitte Research (2000)
Information Publishing/Dissemination: Individual governmental departments set up their own web sites that provide the public with information and often a range of services. **"Official" Two-Way Transactions**: With the help of legally valid digital signatures and secure web sites, citizens are able to submit personal information and conduct monetary transactions. Issues of security, privacy and trust become prevalent at this stage. **Multi-Purpose Portals**: The point at which customer-centric governments make a big breakthrough in service delivery. Citizens can cut across department boundaries, a portal allows single entry. Government become a one-stop delivery to meet the citizen's needs. **Portal Personalisation**: Governments put even more power into citizen's hands by allowing them to customise portals with their desired feature. Governments will get a more accurate read on citizen's preferences from electronic versus non-electronic service options. **Clustering of Common Services**: As citizens view once-disparate services as a unified package through the portal, their perception of departments as distinct entities will blur. Government will cluster services along common lines to accelerate the delivery of shared services. **Full Integration and Enterprise Transformation**: Old walls defining silos of services have been torn down, and technology is integrated across the new enterprise to bridge shortened gap between the front and back office. Government has become functional e-government.

Despite such categorisation, some academics question the very idea of e-government and the promises that e-government is meant to have. Chadwick (2003: 3) argues that

e-government with its "dominant managerial discourse of cost-cutting, efficiency and 'knowledge management'" provides evidence of the failure of ICT to make a difference to citizenship and democratic politics. The OECD (2001) suggests that one of the fundamental flaws in e-government is that governments do not have the ability or the expertise to manage large IT projects. Lenk and Traunmüller (2002a and 2002b) believe that this will undermine any effort to implement a system of e-government. Meanwhile, Riley (2003) questions whether the term 'e-government' simply causes more confusion for the public and whether putting 'e' onto government services is such a wise idea.

Deloitte Research (2000), along with others (Cornfield *et al*, 2003; Baron *et al*, 2002; Larsen and Rainie, 2002a and 2002b; Mellor and Parr, 2002; Chadwick and May, 2001; Fountain, 2001; Riley, 2001a and 2001b; Coleman and Gøtze, 2000; Ferguson, 2000), have commented on the need for governments to take a more citizen-centric approach to service and see e-government as a way of doing so. They advocate the need for one-stop-shops to be created by governments for citizens, and point out that, unlike the private sector, neither citizen nor government has a choice in who they deal with. By and large, governments have responded positively to such suggestions and most governments have at least incorporated the desire to have a one-stop-shop of information into the structure of e-government.

As mentioned in the previous chapter, there are a number of themes and issues that are of concern with regards to e-government such as citizen participation and citizens becoming customers, the digital divide, the security of private information and the issues surrounding citizen trust. All of these are important concerns that relate to e-government and the literature on each of these will be looked at in turn.

Citizen participation

There is a variety of literature that focuses on citizen participation in e-government and government itself. Macintosh, Davenport, Malina and Whyte (2002) claim that governments at all levels need to work to restore the public's confidence and interest in democratic processes, in particular voter turnout at elections. This is in response to a growing trend that has seen less people taking an interest in elections and

government processes (Chadwick, 2003; Curthoys and Crabtree, 2003; Layne and Lee, 2001; Coleman and Gøtze, 2000). Shapiro and Hacker-Cordon (1999: 1) suggest that "in reality democracy often disappoints" and that this is one of the reasons why voter turnout is low and citizen participation is almost non-existent. However, the importance of developing a creative and participative democracy is being widely acknowledged, particularly with the ongoing emphasis on e-government (Malina, 1999). There are some commentators who offer moral arguments in favour of the existence of democracy and the importance of participating in it, such as Sclove (1995), while others outline practical possibilities for more inclusive democracy (Fotopoulos, 1997), or explain how some democratic practices can give citizens more control over decisions that affect their own lives (Catt, 1999).

Hague and Loader (1999) believe that there is a dialectical relationship between society and ICT and that with the use of ICT, it is hoped that more people will become involved and participate in democratic processes. However, Wilhelm (2000) argues that social and political problems cannot easily be solved by technology alone, and to assume that they can is misguided. Macintosh *et al* (2002: 228) state that with the current proliferation of computerisation and the increased popularity of the Internet and the Web, "there is little doubt that the maturation of new forms of human interaction in multiple electronic public spheres provides new potential for articulating social, cultural, political and economic relations and planning in society". Grossman (1995) warns of the dangers that could occur with the onset of e-democracy, not so much from citizens themselves, but from powerful lobbying groups and suggests that a careful approach needs to be taken.

What is evident from this literature is that there is a variety of different views on citizen participation and ICT, with some commentators embracing the potential of ICT to help encourage citizens to participate, while others believe that ICT will not make a difference at all and that the political structure needs to change to incorporate citizen participation. Whatever view is held, ICT in the form of e-government and e-democracy does hold some hope for involving citizens in government processes (Chadwick, 2003; Coleman and Gøtze, 2000). Just how much involvement is possible is unknown and while ICT and technology cannot encourage citizen participation in itself, the emphasis that is being placed on citizen participation by

governments as they implement systems of e-government does mean that governments are aware of the need to encourage more citizens to participate in the democratic process (Chadwick, 2003; Coleman and Gøtze, 2000).

The Digital Divide

The digital divide is perhaps one of the most serious inequalities that could affect the world in the future. The digital divide is the divide between those that have access to ICT and those that do not. Presently, within the e-government literature there are conflicting ideas on the topic. Some suggest that e-government should go ahead regardless of the digital divide because the inequality is difficult to solve quickly and governments should cater for those who already have access to ICT (Curthoys and Crabtree, 2003; Deakins *et al*, 2001a and 2001b; Fountain, 2001; Layne and Lee, 2001; van Dijk, 2000). Others suggest e-government should only go ahead if there is some means to cater for those people who are disadvantaged by the digital divide (Wilhelm, 2003; Riera, Sanchez, Torras and Foundation, 2002; Alvarez and Nagler, 2000). Both Wilhelm (2003) and van Dijk (2000) believe that education, or the lack of it, is one of the major contributors to the digital divide. Within New Zealand there is clear evidence, which suggests that the higher the education level the more likely it is that a household will own a computer and have access to the Internet (Statistics New Zealand, 2004). Van Dijk (2000) points out that the elderly and the illiterate are most at risk of falling behind and being left behind as a result of the digital divide.[61] Education is needed to help correct this problem. Education is not a quick fix and there is some reluctance by governments to engage in this directly. Often it is left to community groups to provide educational courses on computers and IT. However, literature that focuses solely on the digital divide states that the problem is not going to go away and that there are no easy fixes to it. These authors point out that the digital divide is going to affect every aspect of society as we move further into the information age and come to depend even more on computers and ICT (Servon, 2002;

[61] Ethnic minorities, women, the impoverished and those with slow band access are also identified as being "at risk" here. See Statistics New Zealand (2004) *The Digital Divide - Examining the Main Characteristics that Influence Household Internet Connection in New Zealand*; Servon (2002) *Bridging the Digital Divide*; Castells (2001) *The Internet Galaxy: Reflections on the Internet, Business and Society*, chapter 9; Compaine (2001) *The Digital Divide: Facing a Crisis or Creating a Myth?*; DiMaggio, P., Hargittai, E., Neuman, R., and Robinson, P (2001)*Social Implications of the Internet*;

Castells, 2001; Compaine, 2001; DiMaggio *et al*, 2001; Norris, 2001; Bolt and Crawford, 2000; Slevin, 2000; Dutton, 1999; Shapiro, 1999; Loader, 1998). However, the real problem of the digital divide is based around the issue of whether governments and other organisations should attempt to speed up the introduction of ICT into society by educating or wait for a natural change to occur over time. It is inevitable that ICT will be extremely common in society as the younger generation are taught at school how to use it. This, in essence, would mean that people would eventually have to be involved with ICT. However, this will not occur quickly.

Security and Privacy

The security and privacy of personal information that is held by government is of major concern to many citizens. Because e-government is reliant on the Internet concerns are heightened because of the potential security and privacy risk. There have been numerous media stories of computer hacking and mistakes where confidential and private records have been accessed (Castells, 2001, Shapiro, 1999), making security and privacy one of the most significant issues surrounding e-government (Curthoys and Crabtree, 2003; Galindo, 2002; Layne and Lee, 2001; Bradley *et al*, 2000). Bradley *et al* (2000: 21) argue that improved technology offers a wide array of security measures that provide better security for electronic forms than has ever been available with paper-based forms. However, trying to convince the public of this is a major challenge. They argue further that government and industry must work together to overcome the widespread public perception that electronic information collection is more susceptible to security breaches than paper-based collection (Bradley *et al*, 2000).

Fountain (2001: 205) points outs that "the protection of privacy looms as a set of central and pressing legislative and regulatory problems. The virtual state raises a new set of questions regarding the ownership, control, use and manipulation of what have traditionally been government data." She suggests that security and privacy will become more pressing issues as the emergence of e-government makes it possible for citizens to transfer funds and transmit private information such as tax returns, social

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Norris, P. (2001) *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*; and Loader, (1998) *Cyberspace Divide.*

benefit forms and other information such as medical records (2001). Galindo (2002) reiterates these concerns and looks at the difference between e-commerce and e-government and suggests that 'trust providers' are needed to help show the general public that e-government is safe, protected and secure. However, Galindo points out that the challenge of security and privacy associated with e-government is a very problematic one and that there is a need for strict regulations to be formed in regards to e-government (2001).

Citizen Trust

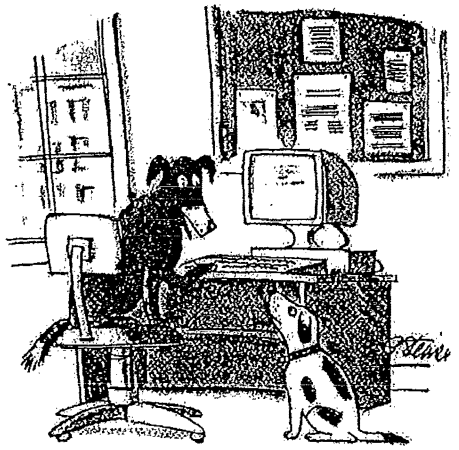
Citizen trust is a problem for any e-government initiative (Chadwick, 2003; Curthoys and Crabtree, 2003; Fountain, 2001; Layne and Lee, 2001, Coleman and Gøtze, 2000). The problem is compounded by several different factors. Some of these factors include the problem of disembodiment of communication over the Internet, the problem of security and confidentiality when communicating over the Internet, and the lack of trust in governments themselves. Galino (2002: 122) sums up these factors well, when he points out:

> "...The attitudes on which trust is based cannot be brought to bear when the Internet is the communication system used. Although the Internet allows us to establish long-distance relationships with other people, the anonymity of the medium, and our ignorance of the nature and lifestyles of our interlocutors, diminishes the trust initially generated by the fact of making instant online contact. This limitation is aggravated by the consideration that neither the Internet communication channels nor the intermediaries involved are secure. Thus, we have no guarantee as to the identity of our interlocutors, the integrity of the messages sent and received over the Internet or the confidentiality and secrecy of communications."

The literature on trust and the Internet is broad and much of it does not specifically relate to e-government, but rather to more general communication on the Internet. Several authors (Waskul, Douglass and Edgley, 2000; Collins, 1999; Dibbell, 1998; Markham, 1998; Turkle, 1997; Mazur, 1994) all write about disembodiment on the Internet and within chat rooms and Internet communication. They claim that because the body is not involved in such interaction any such communication is, of necessity, disembodied and consequently there are limited aspects of trust involved in the interaction between parties. Henslin (1993: 21) argues, "Trust is a fundamental

aspect of everyday life. We deal with trust all the time. It is with us each day as we go about our regular routines, but it is one of those 'taken-for-granted' aspects of 'life-in-society' that we seldom analyse." Camp (1999) states that on the Internet and the Web, there are very limited ways of forming trust and more often than not it is almost entirely based on one's credentials.[62] Consequently, because of the existing lack of trust that citizens hold for government (Frantzich, 1999; Nelson, 1995; Putnam, 1995), any e-government programme is going to have to work hard to improve the trust relationship between government and citizens. Castells (2001: 185) reiterates this saying that "unless governments stop fearing their citizens, and therefore the Internet, society will resort once again to the barricades to defend freedom and this will mark a stunning historical continuity."

On the Internet, Nobody Knows You're a Dog



"On the Internet, nobody knows you're a dog."

In a bid to gain citizen trust, governments are incorporating features into their e-government systems that are designed to allay such fears. The most common way of doing so is to provide identifiers for citizens and to enable digital signatures to be used when filing transactional material on the e-government site. However, there are problems with digital signatures and there is still a need for governments to prove to citizens that digital signatures are secure, private and cannot be forged electronically.

E-democracy

As stated in the previous chapter, confusion often exists as to the relationship between 'e-democracy' and 'e-government'. In many regards, e-democracy has been given more attention in the literature than has e-government perhaps reflecting the fact that democracy is considered a linchpin of western culture (Chadwick, 2003; Coleman and

[62] The cartoon was drawn by Peter Spencer and was printed on page 61 of the July 5, 1993 issue of The New Yorker (vol 69, no. 20).

Gøtze, 2000). The emphasis on e-democracy is intended to allow citizens to have greater access to information, to be able to discuss political issues in an easy-to-use format and be able eventually to vote electronically (Chadwick, 2003; Curthoys and Crabtree, 2003; Gross, 2002; Coleman and Gøtze, 2000). As a result of the literature available on e-democracy, many governments have incorporated aspects of e-democracy into their e-government plans, but it remains to be seen how effective these plans will be when they are finally implemented (Riley, 2003, Gross, 2002). Hacker and van Dijk (2000: 2) argue that many scholars and commentators have made grandiose claims regarding e-democracy and that many of these claims are hyperbolic, game-like or unrealistic, especially as they relate to 'third waves', new forms of Greek agora, 'virtual communities', 'teledemocracy' and a new age of citizen participation. They argue that most of these claims suffer from over-simplistic assumptions about human communication and about democratic political systems.

Rheingold (2002: xiii) in his book *Smart Mobs*,[63] argues that "mobile communications and pervasive ICT, together with social contacts that were never possible before, are already changing the way that people meet, mate, work, fight, buy, sell, govern and create." He states that large numbers of small groups will create emergent effects that will nourish some existing institutions while dissolving others. Rheingold predicts that people will band together and tap into the power of collective action to form anything from "lynch mobs to democracies" (2002: xix). Rheingold uses the example of President Joseph Estranda of the Philippines, to show the vigour of smart mobs. Estranda became the first head of state in history to lose power to a smart mob. Text messages were used in the Philippines in 2001 to coordinate the coming together of more than one million people to demonstrate their discontent with Estranda's regime (2002: 158). While Rheingold is not writing about e-democracy *per se*, he does demonstrate the potential power that smart mobs can have within democracies.[64]

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[63] Rheingold uses the title of his book *Smart Mobs* to highlight a pun. In this book, Rheingold is investigating the use of mobile communications with a particular focus on mobile phones. He highlights evidence that shows how people have organised protests and movements using mobile communication, hence the title Smart Mobs. An everyday example of a smart mob that is becoming a recent event within New Zealand and around the world are 'Flash Mobs', where a group of people are organised to meet at a particular location and do whatever they are told to do via their mobile communications systems such as the mobile phone or email.

[64] Rheingold is, however, touching on the possibility of 'm-government'. M-government is similar to e-government, however, service and information is delivered through a mobile phone rather than through the Internet. The m-government concept has emerged recently and there is particular interest

Macintosh *et al* (2002) state that democratic governments are having to rethink the way that they undertake their business, delivery of services and interactions with citizens at all levels of government. The authors claim that governments need to be able to respond to the needs of the people and to ensure that businesses and communities get the best possible service. In a bid to achieve this, Macintosh *et al* (2002) argue that ICT is commonly seen as a means of enhancing transparency by providing greater access to decision-making processes and promoting involvement in them as people can participate better and more directly in all aspects of democratic decision-making. However, Nixon and Johanssen (1999) contend that there are some concerns with 'e-lobbying'. They suggest that there is an existing practice of interest groups and individuals lobbying elected representatives and that this is often viewed negatively in relation to the principle of an open democratic government, particularly when the influence is unseen and unaccounted for. They argue further that ICT and e-democracy could make the lobbying process either more transparent or cloud it further, depending on how e-democracy is used (1999).

Keane (2000) argues that micro-level democratic communication can have positive effects on a political system. Harrison, Stephen and Falvey (1999) make some interesting observations about how communication scientists have treated the relationship between ICT and democracy and claim that more research is needed in this area. Davis and Owen (1998) argue that citizens can gather documents about politics and government more easily than before and that they can join political discussion groups and work with others to organise political activities. They can follow the legislative process through access to committee transcripts and participate in feedback through forms available online and many other types of citizen involvement. However, Davis and Owen (1998: 127) are concerned about the advocacy dimension of 'teledemocracy' stating that, 'at the touch of a few keystrokes, opinions can be expressed and communicated far and wide. Yet such rapid reactions should not be the lodestone of public policy resolution". This is one of the numerous problems that exist with many-to-many communication techniques such as those found on the Internet and the Web.

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in m-government in developing nations as the infrastructure is cheaper and mobile phones are cheaper

It is evident from the literature that e-democracy contain both promises and problems (Chadwick, 2003; Coleman and Gøtze, 2000). However, while governments are on the surface trying to accommodate the technological means for e-democracy within the design structures of e-government, there are many potential problems with e-democracy. As with e-government, the digital divide and other social issues such as privacy, security, participation and so forth also affect e-democracy. While there are limited forms of e-democracy being practiced in citizen nets, there is as of yet, no true form of e-democracy existing in government through the use of ICT.

2.4 Conclusion

It is evident from the literature that there is a wide range of issues that must be considered in any discussion of e-government. As was stated earlier, there is more to e-government than simply introducing 'electronic' in front of government. The issues are complex and are engaging the minds of several organisations, government departments, academics and individuals as they consider how best to implement e-government systems. These issues range from the structure of e-government itself to e-democracy, from government restructuring to citizen participation and from the digital divide to trust and security, all of which will be recurring themes throughout this thesis. The issues are broad and there are no quick or easy answers. A number of governments around the world are in a position where they are reinventing the way they operate with the help and assistance of ICT. Their intention is to make government more transparent, easier to access, more cost efficient and more responsive to citizen needs when it comes to providing services. Quite how e-government evolves from the planning stages to implementation has yet to be seen in most countries. It is thought that e-government could be the next best thing for governments or one of the biggest IT failures in which the public sector has been involved. The following chapter looks in greater detail at New Zealand's efforts in the area of e-government and expands on some of the issues that have been highlighted in this chapter.

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to buy. This is a theme that will be revisited briefly in the conclusion to the thesis.

CHAPTER 3

E-Govt@National Level

> People should be under no illusion as to the fact that e-government is going to mean dramatic and positive change for them in many ways, no matter which agency they work for, or how well they have done to date. The strategy that we will put into place will build upon the good examples of what can be achieved, and enable every agency in government to be up with the best in the world in terms of results they deliver to the public using ICT (Trevor Mallard, cited in States Services Commission, 2001b: 27).

3.1 Introduction

Along with many other Western nations, New Zealand is embracing e-government as a way of making government more transparent, cheaper to run, more efficient, and more accessible. In a bid to achieve this, the E-government Unit was officially set up in July 2000, and since then the unit has been working towards the goal of having a fully functional system of e-government running and accessible to New Zealand citizens by 2007. This chapter looks at how e-government is being established in New Zealand, what has been achieved to date and some of the issues and obstacles that have been faced along the way and are yet to be overcome. The chapter is divided into three sections. The first section deals primarily with the historical context of the setting up of the E-government Unit and how this was influenced by public management reforms. The second section looks at what has been achieved to date, whether it has been a success and what still needs to be done to reach the goal of full implementation of e-government by 2007.

3.2. Public Management Reforms and E-government[65]

Prior to 1986, the New Zealand public service was considered to be highly inefficient and incredibly disorganised. Since then, however, a system of "new public management" has been introduced.[66] The concepts of e-government are consistent with a new public management framework but have the added advantage of containing provisions to serve citizens better and with greater efficiency (Grönlund, 2002, Tat-Kei Ho, 2002). What I hope to show in this section is that while the two approaches, e-government and public sector reforms, encapsulate different concepts and have different foci, the two are integrally linked.

Public Management Reforms

When the Labour Party came to power in 1984, New Zealand was under considerable fiscal strain. The previous National government had embarked on setting up costly, but crucial infrastructure during the 'Think Big' era. Alongside of this, Britain had joined the European Union in 1973, New Zealand's exports had declined because of this, inflation was increasing along with unemployment and the state was nearing bankruptcy (Kelsey, 1995; 1997). In a bid to remedy this dire situation, the incoming Labour government entered into a programme of change and reform. With Roger Douglas at the helm as Finance Minister and Richard Prebble as Minister of State Services, the government embarked on a programme of public sector reforms (Kelsey,

[65] The material in this section comes from interviews conducted with senior policy advisors in the New Zealand State Services Commission and also from policy literature relating to public management reforms. The interview material has a micro focus on e-government in New Zealand and explores how the government has become committed to incorporating ICT into the public sector. The policy literature, on the other hand, has a more macro focus on reforms that have taken place in the New Zealand public sector since the time that new systems of public management were introduced in 1984. The purpose in combining both sources of material is in acknowledgement of the fact that e-government has stemmed from a paradigm shift as governments have reformed in an attempt to become faster, cheaper and better.

[66] The main ideas of new public management that New Zealand embraced have been concisely summarised by John Williamson who set out what has been termed the 'Washington Consensus' of key elements in a structural adjustment programme (Williamson, 1994: 18). These are: Fiscal discipline, public expenditure priorities, tax reform, deregulation, foreign direct investment, financial liberalisation, exchanges rates, trade liberalisation, privatisation, and property rights. Williamson also stated that within this consensus there was room for difference in some areas and that there was a continuum of positions that government could take. Choosing a point on this continuum would depend on the economic, social, political and cultural conditions of a particular country and the inclinations of those responsible for its economic policy. New Zealand, under the Fourth Labour government, chose to take the 'Washington consensus' to its neo-liberal extreme (Kelsey, 1995: 18-19).

1995; 1997). Huge changes took place in a bid to cut spending by government and the state sector was one of the first to be restructured and reformed.

From 1986, any state activity with a potential commercial function was placed in the hands of government-appointed boards of directors, made to run as a corporation and expected to meet financial and other targets (Kelsey, 1995; 1997). A majority of these State Owned Enterprises (SOEs) were later fully or partly privatized including three state banks, the state insurance company, railways, the national airline, local transport, shipping, telecommunication, electricity distribution, petroleum and natural gas reserves, oil and gas refineries, forests, fisheries, hotels, housing mortgages, computing services and the government printing office (Kelsey, 1995: 3-4). New Zealand entered into an era of reduced state control of the economy with the market being brought more to the fore as a control mechanism. The government freely and fully embraced the thinking of neo-liberalist economics in a bid to raise cash and pull New Zealand into the globalised world market.

Along with the reorganisation of SOEs, state expenditure in the public sector was cut back and the bureaucracy reorganised to increase efficiency and introduce a business-style discipline. Government agencies were separated into operational and policy units, with operational units being run along business lines. As a result of this, work previously done by the state was frequently contracted out to private enterprise (Scott, 2001; Kelsey, 1995; 1997). Operational units were expected to make a profit or at least to break even. Core ministries were put into the hands of chief executives who served on fixed-term performance-based contracts. Managerial autonomy was monitored through input and output measures derived from the State Services Act 1988 and the Public Finance Act 1989 (Scott, 2001; Kelsey, 1995; 1997). Policy work was increasingly contracted out to a burgeoning industry of private consultants and management firms that sprang up around government.

It was the drive for efficiency and fiscal savings that was at the root of the reforms that took place in New Zealand at this time. There have been many critics who have maintained that the state reforms did not go far enough (Scott, 2001). Other critics have said that the reforms were too harsh and that successive government did not anticipate the social consequences that would flow from them (Kelsey, 1995; 1997).

However, this drive for efficiency has generally been hailed as being extremely successful and has served to make New Zealand a 'model' for other industrialised nations to follow. The 'New Zealand Experiment' has indeed been used by the OECD, the World Bank and the International Monetary Fund, among others as an example of a successful way to restructure the public sector (Scott, 2001; Bangura, 2000; Kelsey, 1995; 1997; Boston, 1996; OECD, 1995).

It was within this climate of public sector reforms and restructuring that ICT was embraced by the government (Grönlund, 2002). Because of the potential for ICT to improve efficiency, reduce the amount of paper and provide communication solutions, ICT was thought of as a means by which the New Zealand government could continue to cut expenditure in the public sector. Hence, ICT was embraced by the government and plans were made to incorporate its use into as much of the public sector as possible. However, because the government was still having to be cautious about expenditure, this was done with a "softly, softly approach" which is still a key focus within the E-government Unit today (Personal Communication, 2003a).

In 1991, the State Services Commission set up an informal taskforce of policy analysts to look at how ICT could be incorporated into government and thus help streamline the public sector further. While the idea and concepts of e-government had still to be formulated, this was not an unusual approach among industrialised nations. In many such nations, governments were starting to realise the potential of ICT and had set about looking at possible approaches for making use of it. The New Zealand taskforce set about investigating ways that ICT could be incorporated within the public sector and recommended options to the appropriate Ministries. Few of these recommendations were subsequently acted upon, but New Zealand had nevertheless embarked on the path towards e-government.

Very little, if anything was ever published by this taskforce and it was not until 1998 that the taskforce was granted official status. However, by 1995, the taskforce took on increasing significance because of a series of ICT failures and over-expenditure with government related IT systems. With the Wanganui Police system becoming an IT dinosaur before it was even completed and the teacher payroll system failing in its

first month, the government was suitably embarrassed enough to take steps to ensure that oversight and regulation was put in place. It therefore fell to the IT Policy taskforce to look at all future ICT options before the government and agencies purchased IT equipment or software.

It was also in 1995 that the New Zealand Government Online web site was started. Initially, the web site was set up in a very surreptitious, clandestine and 'just do it' manner, with personal permission from Maurice Williamson, the then Minister of Information Technology, but without the official permission of parliament or government (Personal Communication, 2003b). With access to little in the way of resources, the web site creators built a rather basic web site and negotiated with Victoria University of Wellington to host it on its server (Personal Communication, 2003b). With the web site claiming official status, but with little official content, the creators encouraged other government agencies and ministries to provide them with documents that could be lodged on the site. Many of these ministries and agencies did not realise that these documents would become available worldwide through the Internet. In a bid to substantiate the claim that the web site was actually the official New Zealand government site, a series of official documents were placed on the site, but in the initial stages most of these documents were dummies (Personal Communication, 2003b).

In 1996, the web site was taken over by the Department of Internal Affairs as part of its attempt to create a directory of government agencies. At this time the web site was given a spruce-up with official government logos and crests being added in appropriate places. A small search engine was incorporated to help visitors find their way around the site. However, as the number of documents grew, the web site became very difficult to navigate and use. The search engine became almost redundant and the site ended up being a confusing collection of government documents and telephone directories. In effect the web site became a dumping ground for government documents. In 2001, the web site was decommissioned and a new government portal was put up in its place that was more consistent with the intent

of e-government.[67] However, before this could take place, the E-government Unit had to be formed and made official.

The E-government Unit

The E-government Unit was initially formed from the IT Policy Taskforce in July 2000. However, the core of the unit had already been assembled prior to this. Its first strategic policy document was in fact released just before the national election in 1999. The timing of this document may have reflected either acute political intent on the part of the then IT minister or it may have just happened. Either way the policy framework contained in it was only slightly changed by the incoming Labour government (Personal communication, 2003a). It was from here, after an initial informal start, that the E-government Unit was formed.

The E-government Unit is located within the State Services Commission and has been given the responsibility of organising and implementing a system of e-government into New Zealand's government and state service.[68] However, unlike Canada, Britain, the United States and Singapore, the E-government Unit does not have overarching authority with regards to e-government. The E-government Unit simply advises and provides support for government agencies and encourages them to participate in the e-government programme. Agencies retain their autonomy in the matter (State Services Commission, 2003a). To help ensure that there is some consistency across the different IT systems and to ensure interoperability within the public sector the E-government Unit makes recommendations as to what government agencies should purchase in the way of software and hardware and provides agencies with recommendations so that they can fit in with the nation's e-government agenda. The E-government Unit describe its role as being "a designer and constructor, commissioning the creation of cross-agency components; as a broker and facilitator, ensuring that components meet the business requirements of agencies; and that

[67] The portal can be found at http://www.govt.nz/

[68] The E-government Unit has an operating budget of approximately $10 million per year (State Services Commission, 2003d) and employs around 40 people. However, this does not reflect the real cost of implementing e-government as individual departments are required to update their web service from within their own operating budgets.

agencies have free and unfettered access to the building blocks they require" (State Service Commission, 2003a: 1).

In contrast to this, a slightly different approach has been taken in Canada, Britain, the United States and Singapore. Each of these countries has a single agency that has the responsibility of implementing ICT into governmental structures. These agencies have sole responsibility for designing and implementing e-government with the overall goal of making sure that e-government is implemented in such a way that it works, is on time and is not over budget.

One of the advantages of this sole-agency approach is that the overall view of e-government is controlled by a single agency, rather than allowing agencies to implement their own structures and then hoping that these will somehow be compatible. One of the disadvantages of this approach, however, and one that the E-government Unit is trying to avoid, is that agencies lose their autonomy and in some cases their identity as a government agency, while collaboration and co-operation between departments is lost as departments lose their power in what they can and cannot do. The autonomy and identity of government agencies has been identified as being very important by the State Services Commission and the E-government Unit, which is one of the main reasons why there is such an emphasis within E-government Unit policy documents on agencies implementing an IT system that is compatible with the overall e-government system, but that still represents the agency's work. The amount of autonomy that the individual agency has is limited, however, by the E-government Unit's Service Architecture for e-government and the e-government strategy documents that are usually released on an annual basis. The E-government Unit was praised recently for the quality of its coordinating role by government specialist Michel Brazeau who went on to say that "coordinating bodies can be a valuable link in achieving e-government" (Cited in Bell, 2003a). Evidence of this coordinating approach can be found in the various e-vision and e-government strategy documents that have been released by the E-government Unit.

3.3 The New Zealand E-government Vision and Strategy

The following section moves on from government reforms and restructuring practices and examines e-government strategy and e-vision documents along with other relevant documents that have been released by the E-government Unit. E-vision documents have been released infrequently by the E-government Unit, but by examining them, it is possible to gauge the progress that has been made by the E-government Unit. The e-visions are essentially an idealised statement of direction that the government and the Unit would like to take when implementing a system of e-government into New Zealand. These documents in turn are used by local authorities who are also trying to set up their own system of e-government. Not only do the e-vision documents contain information about what is happening with e-government in New Zealand, but they also give clues to who, internationally, is influencing the E-government Unit's thinking.

The E-vision Documents

The first e-vision document was released in September 1999. Because of the change of government that happened in October that year, another document quickly followed in December 1999. Since 1999, there have been another four e-vision documents released in May 2000, April 2001, December 2001 and June 2003 respectively.[69] Each of these documents presented different aspects that were considered important at the time.

Vision Statement of E-government in New Zealand (September 1999)

The first e-vision document was released in September 1999, a month before the election that saw a change of government. There is some speculation as to whether this release date was a cunning move on the part of then IT Minister Maurice Williamson to draw the new Labour government into continuing with e-government initiatives (Personal Communication, 2003a). It was a rather brief and hastily

[69] A distinction needs to be drawn between the five e-vision documents that served a scoping function and the three e-government strategy documents which were released later and which mapped out the

prepared document, which presented a very rough sketch of the thinking of the National government at the time. In its vision section, the document stated, "E-government will harness people and technology to revolutionise the delivery of government services to New Zealanders. The new services will be tailored, inexpensive, easy to use, personal and friendly" (State Services Commission, 1999a: 1).

Within this document, there was a strong emphasis on the fiscal savings that would result from the implementation of e-government especially resulting from changes to the way government delivered information and service to New Zealand citizens. The document claimed that e-government will meet individual needs, offer a more open government, make it easy for citizens to have their say, be inexpensive to deal with, will protect people's privacy, cost taxpayers less and bring a new kind of equality (State Services Commission, 1999a: 3).

Overall, there was a strong focus in the document on the fiscal saving to taxpayers and reducing compliance costs for business and this was seen by the National government to be the main reasons why e-government should be implemented. The fiscal savings fitted in with National Party policies on e-commerce. In this regard, e-government was seen by National to be an extension of e-commerce. However, as governments have found out around the world, there are many issues that are involved with e-government that are not relevant to e-commerce.

What is interesting to note here, though, is the National government's statement of intent to allow some form of citizen participation within e-government. This intent has continued through all subsequent e-vision and e-government strategy documents, but there was very limited amplification on this until the June 2003 e-government strategy document which identifies e-participation and e-democracy as a "major challenge" that will need further investigation as e-government develops (State Services Commission, 2003c: 25). This is only one of several issues, which are not

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direction that the government and the E-government Unit thought should be taken to implement e-government in New Zealand. These will be dealt separately.

explained very well in this document and are only elaborated on further in the following documents.[70]

Briefing Paper in E-government to the new Labour Government (December 1999)

The next e-vision document to be released by the State Services Commission was a briefing paper in December 1999 for the new Labour government. This paper was made available on the E-government Unit's web site and is often referred to as the first e-vision document by the Labour government. There are not many changes in this document from that released earlier by the National government, but the changes do have some significance as they give evidence of a slight change of direction for the e-government project upon which the government was about to embark. The main point of difference is that there is no mention in this paper of the fiscal savings that e-government could produce, except for a small statement about improving bottom-line effectiveness and efficiency of government. Instead, there is a greater focus on citizen participation and how e-government is about making governmental services and information delivery easier for citizens. This is evident from an early statement, which said, "E-government is about the integration and transformation of service design and delivery and information provision to citizens" (State Service Commission, 1999b: 1-2).

The goals that this paper identifies, referred to as "opportunities", are also slightly different from the previous e-vision document and reflect a greater focus on how e-government can be more helpful to citizens. These goals are identified as:

- Enabling citizen to effectively participate in the knowledge economy/society
- Integrating, streamlining and customising the delivery of services
- Improving the quality of policy and decision-making processes
- Reducing the compliance costs of government

[70] Issues of concern here are citizen participation, trust, privacy, funding, security, fiscal savings, and the overall picture of what may be expected of an e-government system. As noted earlier, the lack of consideration of these issues was most likely due to the haste in which the document was written and the fact that it was only in 1999 that countries such as Britain and the United States were releasing documents on how e-government would change the way government operated.

- Improving the bottom-line effectiveness and efficiency of government
- Providing greater flexibility in the design and management of government
- Enhancing relationships between citizens and the state and strengthening (even revitalising) democratic processes and institutions.
  (State Service Commission, 1999b: 2-3)

As is clear, there are many differences between the goals that these initial two documents identified as being important for e-government design and implementation in New Zealand. This is partly due to differing influences. The first e-vision document used material from the Australian State Government of Victoria's e-government programme and National's e-commerce policy. This e-commerce influence is most obvious in the September 1999 e-vision document and it would thus seem that this document was heavily influenced by ideals of e-commerce rather than e-government. The December 1999 e-vision document, however, while drawing on the first e-vision document revealed influences derived from e-democracy, the knowledge economy/society and from the recently released White Papers by both the British and the United States governments in relation to e-government. It is these influences that get carried through to the next e-vision document released in May 2000, just prior to the E-government Unit being officially set up in July 2000.

E-government – A Vision for New Zealanders (May 2000)

Within the next document there is a noticeable difference in emphasis within the vision statement, which now read, "New Zealanders will be able to gain access to government information and services and participate in our democracy using the Internet, telephone and other technologies as they emerge" (State Services Commission, 2000a: 1). This was the first time that the New Zealand government had stated explicitly that its e-government system would contain elements of democracy and possibly e-democracy. While the government had shown that e-government would contain elements of democracy and citizen participation in the December 1999 Brief, it was not explicitly stated and was somewhat hazy.

The May 2000 paper went on to explain that "e-government [allows] new technologies to provide people with more convenient access to government

information and services, to improve the quality of the services and to provide greater opportunities to participate in our democratic institutions and processes" (State Services Commission, 2000a: 1). Along with this, the paper stated that e-government would improve the running of government in four ways: First, it will be easier for people to have their say in government; second, people will get better services from government organisations; third, people will receive more integrated services because different government organisations will be able to communicate more effectively with each other; and fourth, people will be better informed because they can get up-to-date and comprehensive information about laws, regulations, policies and services (State Services Commission, 2000a: 1-2).

What is interesting to note in this is that there is a strong emphasis on 'people' and how e-government will benefit citizens and people rather than government organisations *per se*. This is a notion that is emphasised within Labour's e-government policies and is a theme, which is reiterated throughout later e-government strategy document to varying degrees. This May 2000 paper started to set a change of direction for e-government in New Zealand, insofar as the government began to address the complexities of e-government in some depth. Previous documents had been essentially scoping documents rather than strategy documents. It needs to be noted, however, that some of this change in focus in the documents more than likely reflected the formation of the E-government Unit itself.

Along with statements about how e-government was going to improve government services and delivery to citizens and provide greater opportunities for them to participate in New Zealand's democratic processes, this document also outlined what the Government's expectations were and the time frame within which it expected to meet them. The document stated that in the next five years (i.e. by 2005) people should be able to do the following:

- Electronically register information with the government – i.e. births, deaths and marriages – at a time and place that suits them.
- Conduct their financial dealings with government organisations electronically

- Complete and send all government forms from one place on the government's Internet site.
- Have their say on a wide range of governmental proposals and policies through the Internet.
- Benefit from high quality health care from a public health service that provides integrated and personalised services from GP to specialist to hospital to pharmacist based on individual patient record management made possible through comprehensive and highly secure information sharing and analysis.
- Have confidence that effective controls backed up by good legislation will safeguard privacy.
- Benefit from the reduced costs and time involved in property transactions because land survey and title information is available electronically and transactions can be registered the same way.
- Notify changes of address, so that one entry on the Internet can ensure multiple government agencies are notified automatically
  (State Services Commission, 2000a: 3-4)

This was the first time that the government had stated what the implementation timeline might be for e-government and what the outcome might be. However, with the release of subsequent e-strategy documents, these expectations have been changed several times.

With the official establishment of the E-government Unit in July 2000, the New Zealand government started to show its commitment to designing and implementing a system of e-government. With an official policy unit steering the process, there has been an increase in the number of documents released about ICT use in the public sector by the government and e-government has become more directed and seen as a cost-effective way of improving government and the public sector in New Zealand.

The E-Strategy Documents

The next e-government document that was released was in April 2001. The most immediate change was in the title of the document. It was no longer called an e-vision document, but instead was called the *Government.nz@your.service: New Zealand E-government Strategy.* For the first time the Minister of State Services wrote the foreword and had some involvement in formulating the strategy.[71] The release of this document seemed to mark a change in direction and focus in the e-government documents, as the papers became more policy-oriented and focused on forming a strategic direction for e-government rather than simply scoping out how e-government might be introduced.

Government.nz@your.service (April 2001)

In the foreword to the April 2001 strategy document, Mallard stated, "All around the world e-government is revolutionising our understanding of how government works and the quality of what it can deliver to people. This is happening because the Internet has changed the way organisations, communities and individuals learn, work and interact. Turning government into e-government is essential if New Zealand's public sector is going to maintain its high performance in the information age." (State Services Commission, 2001a: 3). He went on to say,

> "Creating e-government is a key to our future social well-being through its focus on better understanding and meeting individual New Zealander's needs and creating opportunities for greater public participation in government democratic processes. It is also critical for New Zealand's economic performance. Government is a big part of the economy so it is important that modern technology is harnessed to increase its efficiency and improve its quality, at the same time minimising the costs it imposes." (State Service Commission, 2001a: 3).

Both these statements give evidence of the change in direction that the E-government Unit was undergoing. Gone were the idealistic statements about how New Zealand could benefit from e-government as a result of initiatives that were basic in planning

[71] The Minister of State Services at the time was the Hon Trevor Mallard

and difficult to implement,[72] instead there is more of a focus on what e-government is going to achieve and how. The other difference is that mention is made of the restructuring of the public sector. While this is not explicitly stated until a later date, it is certainly suggested in this quote that government considers that the public sector needs to become more efficient and that e-government will be an effective way of reducing costs.

In this April 2001 document, the government states its vision that New Zealand will be a world leader in e-government. With this vision in mind, the intent that is stated in the strategy document is that "By 2004 the Internet will be the dominant means of enabling ready access to government information, services and processes" (State Services Commission, 2001a: 13). Along with this, there are five 'objectives' that the E-government Unit hopes to achieve with the introduction of e-government.

- Better Service – more convenient and reliable, with lower compliance costs, higher quality and value
- Cost Effectiveness and Efficiency – cheaper, better information and services for customers and better value for taxpayers
- Improved Reputation – building an image of New Zealand as a modern nation, an attractive location for people and businesses
- Greater Participation by People in Government – making it easier for those who wish to contribute
- Leadership – support the knowledge economy through public sector innovation

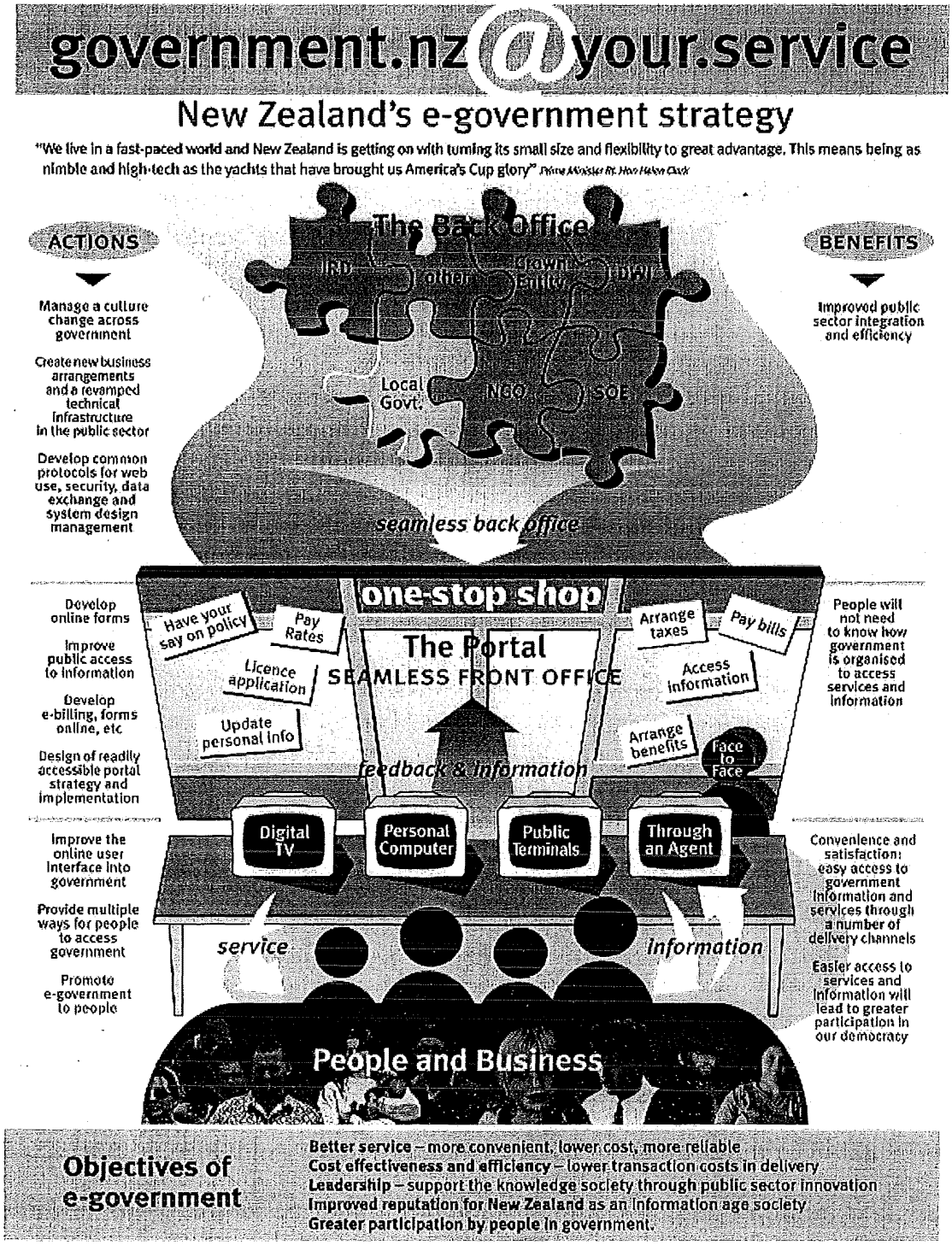
In this document, the E-government Unit also talks about having a seamless integration between the front offices of government and the back offices. This is essentially changing the structure of government. Instead of keeping the existing vertical or 'silo' structure of government with separate agencies only consulting and collaborating with their own people, e-government is supposed to encourage a more horizontal structure of management. Within this horizontal structure, there is a

[72] Initiatives such as having different channels for different users i.e. a citizen channel, a business channel and so forth. Also initiatives such as wanting transactions to be available by 2005, when there

greater emphasis on agencies sharing resources, collaborating with each other and taking a more collective approach to the way that government works. This can be seen in Diagram 3.1, which shows how the document expected e-government to work within New Zealand.

is yet to be an authentication policy written or decided upon. Such examples showed a lack of planning.

Diagram 3.1 - Illustration of E-government in New Zealand



(State Services Commission, 2001a: 8)

It is this change in the way that government operates that is supposed to bring greater efficiency and integration and hence lead to some of the fiscal savings that governments are expecting from e-government. However, it is also this change of structure that can cause the most problems for e-government. Britain and the United

States in particular, have found it is difficult to introduce e-government into the public sector because of resistance on the part of public servants. While the extent of the problem in New Zealand is not as great because of the smaller size of its public sector, it is nevertheless reasonable to expect that e-government in New Zealand will run into similar problems. The E-government Unit believes at the present time that the problems will be ameliorated because New Zealand's public sector is relatively small (about the same size as Britain's Inland Revenue department) and that all the public servants are within stone's throw of each other in Wellington (Personal Communication, 2003a).

While this April 2001 document was the fourth document to come out of the E-government Unit, it is the first of the four documents to take a marked change in direction from scoping e-government initiatives, to formulating policy and plans on how to achieve them. In this regard, because it is the first policy document, it tends to be quite light on specifics and somewhat lofty on possibilities. This can be seen by what the government and the E-government Unit believe e-government will look like. They believe that e-government will have been fully implemented when the following features are manifest: Seamless access; multiple access channels; anywhere, anytime; common infrastructure; integration mechanisms and tools; government processes and systems based on e-technology; easy access to information; easy feedback to government; open and inclusive policy development processes; authentication and privacy (State Services Commission, 2001: 17).

With this in mind, the E-government Unit has been taking a "softly, softly approach to e-government" and it is content to learn from other governments as they progress further into implementing e-government (Personal Communication, 2003a). This approach has an emphasis on getting the foundations of e-government correct as a starting point and then implementing the more sophisticated features at a subsequent stage. Consequently, a lot of the work that the E-government Unit has completed has been policy work that has needed to be completed before a system of e-government is implemented. However, what made this April 2001 document different from the first three e-vision papers was the change in focus from scoping to policy and this focus has continued into the two strategy papers that have followed.

Government.nz@your.service – Update (December 2001)

In December 2001, the E-government Unit released an updated version of the e-government strategy. The major differences from previous documents were that it contained a long-range view of the processes of change that e-government was expected to bring for the public up to and beyond 2004 and it contained a first look at how the E-government Unit thought e-government might operate in 2004. This was the first time that the E-government Unit and the government had started to look beyond their goal of most governmental services being accessed online by 2004. It also contained details of the major projects that the E-government Unit was embarking on and provided a much clearer picture of the steps that government agencies needed to be taking to be accessible online by 2004.

This document also contained for the first time a progression graph, which contained 'phases' of e-government (See Table 3.2 and Diagram 3.3). The phases of e-government were borrowed from the Gartner Group but have been applied to the New Zealand e-government programme by the E-government Unit.[73] The E-government Unit claims that New Zealand's e-government programme is currently within phase two and three, with the overall goal of wanting to transform government into a fully operational e-government (phase four) by 2010. However, progress has been frustratingly slow as the E-government Unit goes about implementing the service architecture and the foundation work for e-government, which are vital for the success of e-government in New Zealand.

[73] The Gartner Group is an International consultancy firm that has specialised in ICT and e-government. For a discussion of other categories and classifications of e-government see chapter 2.

Table 3.2 – Phases of E-government

Phase One

Web Presence – agencies provide a web site to deliver basic information to the public	**E-government Unit's Response:** Most public sector organisations in New Zealand moved beyond this phase some time ago. Many have moved on from publishing their information in a way that reflects their organisational view. They are now publishing it with a particular audience in mind (individuals and businesses)

Phase Two

Interaction – agencies extend the capability of their web site so people who used to visit a government office now have online access to critical information, have forms to download and can contact the agency by email	**E-government Unit's Response:** Again, many government sites in New Zealand already have this capability

Phase Three

Transaction – agencies add self-services to their web sites so that people can complete entire transactions or processes online. The web begins to complement other service delivery channels, providing round-the-clock access and opportunities to develop cross-agency common, shared services. In this, phase agencies also move towards e-procurement, by putting requests for proposals and bidding regulations online.	**E-government Unit's Response:** Some New Zealand agencies are currently in this phase with some of their services. Many of the foundation projects in the e-government programme are designed to help agencies move into this phase

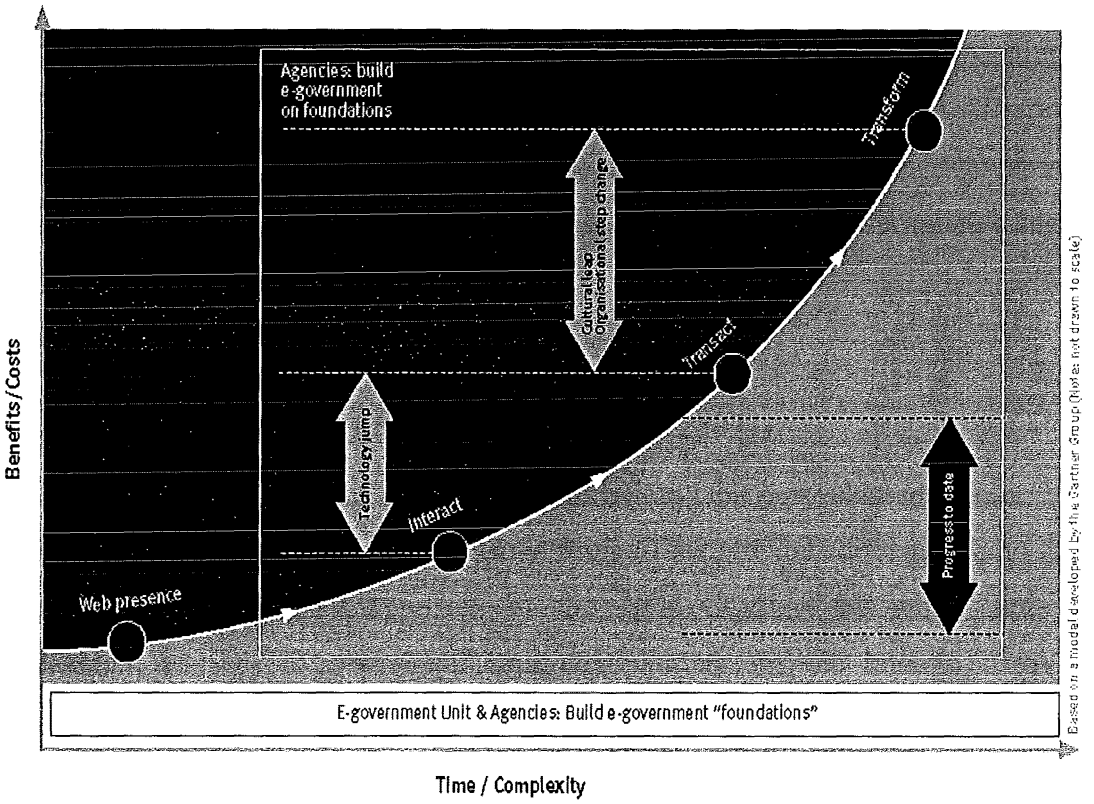
Phase Four

Transformation – the delivery of government services and potentially the operation of government itself is redefined. Information, service delivery and government processes are increasingly integrated across traditional boundary lines between agencies; between central and local government; and between government, the private sector, non-government organisations and individuals. Information and services are increasingly tailored to the particular needs of individuals and businesses. The identity of individual agencies matters less to people as information and services are accessed through single point of contact on the web. E-government reshapes the relationship between agencies, government and individuals, and government and business	**E-government Unit's Response:** This is the long-term goal of New Zealand's e-government strategy – to bring about not only technological change but also widespread changes to the design, operation and culture of the public sector so that it better reflects the demands and direction of the information society. Projects already underway in the e-government programme, such as the web portal that will be in service by July 2002,[74] are a starting point and others will be developed in due course.

(Gartner Group, 2000; cited in State Services Commission, 2001b: 13-14)

[74] The web portal has since been completed and can be found at http://www.govt.nz

Diagram 3.3 – Phases of E-government



(Gartner Group, 2000; cited in States Services Commission, 2001b: 13)

The other point of difference in this December 2001 document was that there is a much more detailed discussion of some of the major challenges that e-government faces. This was an aspect of the e-government programme that had been ignored in previous documents. The five main challenges cited by the E-government Unit in this regard were: Authentication, privacy and security; governance; funding; data quality; and measuring the uptake and effectiveness of e-government.

What is interesting to note is that there is no mention here of the digital divide. One of the reasons for this is that the problem of the digital divide in New Zealand has been left to the Department of Labour to address. What this has meant is that the E-government Unit does not have to consider how the digital divide could affect the uptake and effectiveness of e-government. A senior policy advisor for the E-government Unit who was involved in the discussions as to which agencies would look at the digital divide and its implications stated that "it was made the

responsibility of the Department of Labour to address the digital divide because it was viewed as much as anything else to be about labour market capabilities in the future" (Personal Communication, 2003a). He went on to question whether the digital divide is actually worse than any of the other social inequalities in society and what the best intervention might be, but mentioned that the government is currently approaching the digital divide at the community level (Personal Communication, 2003a). Therefore, while the digital divide can be ignored to some extent within the e-government programme, the digital divide has the potential to become the government's biggest challenge in this area.

Government.nz@your.service - Update (June 2003)

The latest strategy document from the E-government Unit was released in June 2003. This document contained a marked change from all the previous documents, no doubt because of the imminent approach of the 2004 deadline by which time the government and the E-government Unit were aiming for the Internet to be the dominant means of delivery of services and information. Whether this goal is achievable or not remains to be seen, but on present evidence, it is unlikely to be achieved in the manner that was initially planned. This June 2003 document seems to reflect an element of urgency at the fact that there are still some agencies within government who are dragging their feet with e-government. In the foreword, Trevor Mallard states:

> "the [new government] portal shows the benefits of collaboration. So far, nearly 90 central government agencies and 86 local authorities have contributed to the content of the portal. The number of agencies contributing to the portal continues to grow. Collaboration is critical to e-government, especially as agencies now move on to begin integrating services, and share the back office technologies and infrastructures that support that delivery" (State Services Commission, 2003c: 3).

One of the key messages in this document is the need for agencies to collaborate and co-operate with each other for e-government to be a success. This comes out of a State Sector Standards Board report, which stated, "State sector activity is remarkably fragmented and needs to be more strongly orientated to whole-of-government issues"

(State Service Commission, 2003c: 7). The document goes on to say that "the government is concerned that the public sector has become fragmented – a collection of so-called 'silos' that do not work with each other very well, making it hard to deal with government as a whole. E-government enables a more networked style of government, where agencies act more coherently, making government as a whole easier to deal with" (State Service Commission, 2003c: 11). While collaboration and co-operation has become an ongoing emphasis in e-government strategy papers since April 2001, this is the first time that it has featured so strongly. This would suggest that agencies are having difficulties adjusting to the demands of e-government. Similar problems with the reluctance of the public sector to embrace e-government have been well documented in the United States and Britain. Both Fountain (2001) and Chadwick (2003) suggest that the public sector itself is one of the biggest obstacles to e-government as agencies find it difficult to collaborate and share information and resources with each other. While the New Zealand public sector is much smaller in size, there is still a problem of fragmentation.[75]

What is interesting about this June 2003 strategy document is that it openly states that e-government is about revolutionising government and the public sector and that to do this will involve restructuring. It would seem on the surface that the E-government Unit has been influenced to some extent by the e-government programmes that are being implemented in the United States at the federal government level and in the United Kingdom. Both the United States and the United Kingdom have incorporated the implementation of e-government into large public sector restructuring programmes.

The other key change that has occurred in New Zealand's e-government programme is that there is a "Service Delivery Architecture" that is now considered central to the e-government programme. The service delivery architecture sets out a plan for e-government up until 2010 and it is hoped that the architecture will help agencies shape the way in which they develop their ICT environments and use them to deliver services. The E-government Unit states in this document that service delivery

[75] In an independent study conducted by Human Synergistics in 2003, it was found that New Zealand organisations had cultures that tended to be more risk-averse and conservative than their Australian

architectures are becoming increasingly important to governments around the world. Accordingly, the Gartner Group stated in 2001 that "over the next two years, 70 per cent of governments that do not develop an e-government architecture will duplicate their efforts and infrastructure, and will fail to meet constituent's expectation for service delivery, resulting in complaints and wasted public funds" (Kreizman and Fraga, 2001: 1). With this in mind, the E-government Unit believes that the main benefits of adopting the service delivery architecture are: Agencies make better use of taxpayer's funds when delivering services in the future; people and business face lower compliance costs, and experience higher quality and greater consistency when dealing with government; and Ministers are able to evaluate agencies proposals for future e-government initiatives in a context that emphasises and enables the collective use of information and technology (State Services Commission, 2003c: 16).

One of the key aspects of the architecture is that it requires some elements of agencies service delivery to be developed from an all-of-government perspective, which essentially means that it can be developed once and used numerous times in the future. The advantages of having a single architecture mean that all government services are presented in the same way and that the service delivery is electronically enabled, while all agencies are connected to one another and their customers. The E-government Unit's rationale for this is that many aspects of an agencies service provision are generic and therefore can be standardised in some manner. However, this does mean that agencies have limited involvement with the construction of their available services and lose some of their autonomy, a factor that the E-government Unit has previously proclaimed to be incredibly important for agencies to keep. Without an overall architecture for e-government, the risk of further fragmentation in the New Zealand public sector is increased and there is some merit in trying to design an overall plan of what e-government is supposed to achieve for the public sector, citizens and businesses along with what a system of e-government will look like. One of the problems that exist for countries that are building a system of e-government is that there are few examples available of a fully functional e-government system and so it is hard to plan for something that is essentially an idealised concept of what could be achieved.

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counterparts and that the average New Zealand organisation's culture was not constructive and that

With the introduction of the service delivery architecture the E-government Unit has started to plan further for e-government and has released some key dates beyond 2004 for when e-government will be fully functional. It is planned that by June 2007 ICT networks and Internet technologies will be integral to the delivery of government information, services and processes and that by June 2010, the operation of government will have been transformed through its use of ICT to be a fully functional e-government. While the E-government Unit has been careful not to include timelines, it has stated quite boldly in this strategy document what the ambitions for e-government are up until 2010. However, whether these ambitions are achieved depends greatly on the co-operation of other government agencies and other non-governmental authorities such as regional and local authorities.

With this in mind, the June 2003 document has stated that the goals of the e-government strategy apply to the whole public sector including local government. In responding to this, local authorities are developing an 'e-localgovt' strategy. While the greater part of the strategy has yet to be completed, the initial goals that local authorities have in this regard are fourfold:

- Access: To provide easy interactive online access to local government information and services to build relationships that benefits all our people.
- Innovation: To provide innovative products and services to benefit our people.
- Participation: To ensure that our people's participation in local authority democracy will be higher than it is today.
- Leadership: To ensure effective local government leadership of e-business initiatives for the benefit of the whole community.

  (State Service Commission 2003c: 19; Clifford, 2003)

There is a very clear emphasis evident in these goals. There is a more intense focus on people than is present in any of the previous e-government strategy documents, and there is a desire for any local e-government initiative to be of direct benefit to the constituents. The focus on people is partially due to the Local Government Act 2002,

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public sector cultures were even less constructive (New Zealand Press Association, 2003a).

which states that the purpose of local government is to "Enable democratic local decision-making and action by, and on behalf of, communities; and promote the social, economic, environmental, and cultural well-being of communities, in the present and for the future" (Wilson and Salter, 2003: 2).

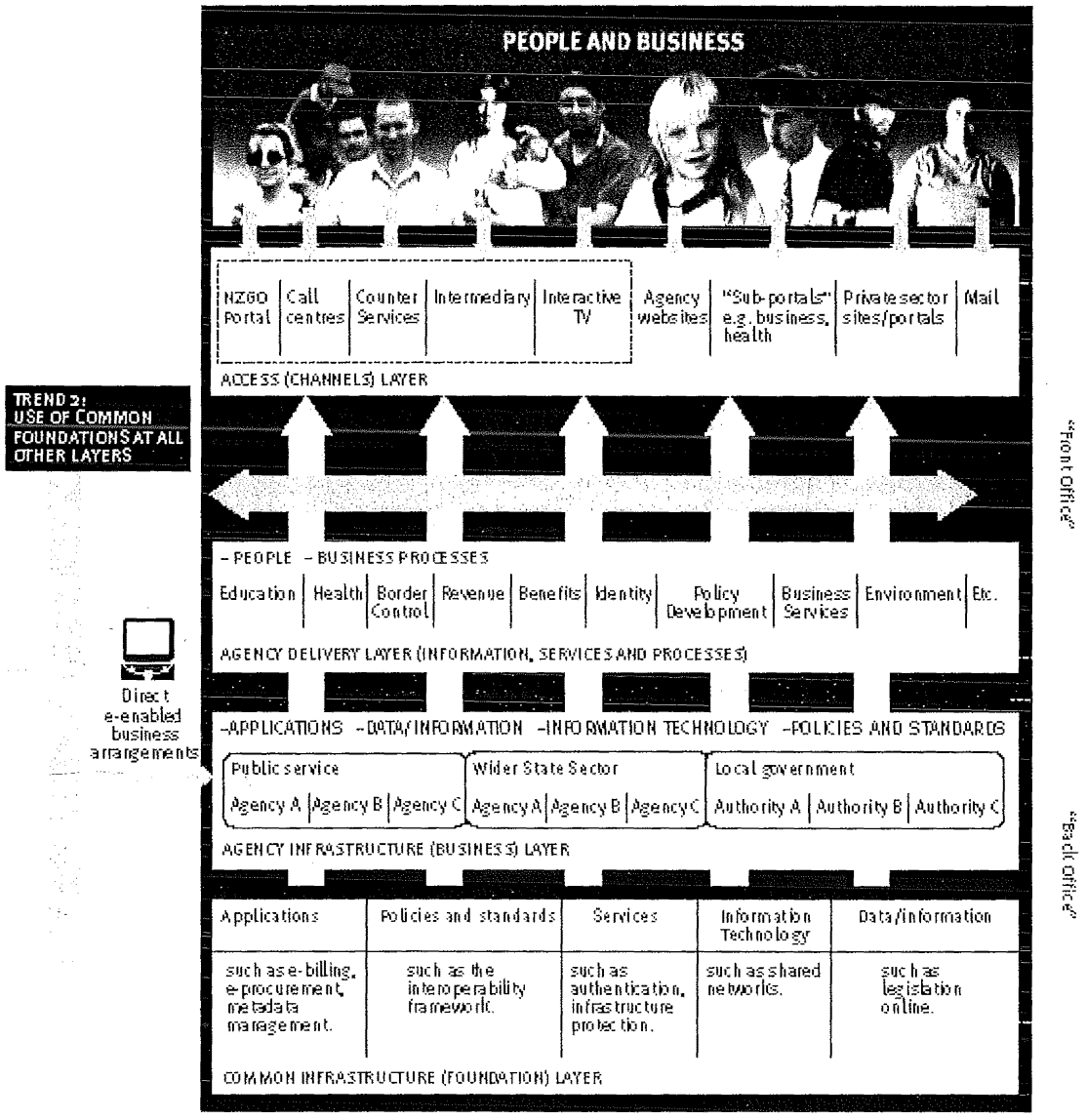
For local authorities, e-government is seen as a way of reducing some costs in the running of government, but more importantly of being a relatively cheap and easy way to fulfil their obligations of encouraging democracy and participation in the community. In this regard, some councils are designing their e-government systems to incorporate not only aspects of e-government but also e-democracy. Where e-democracy and participation have tended to be placed on the backburner by the E-government Unit, e-democracy and participation would seem to be a core focus for local authorities as they have been charged under the Local Government Act 2002 to enable greater participation within the local community and to actively encourage people to participate in government, both local and central.

While the E-government Unit and central government are trying to encourage local authorities to get involved in e-government initiatives, as of yet, the E-government Unit cannot force them to do so. However, the E-government Unit has incorporated local e-government into its overall plan for e-government and the whole-of-government approach that the government wants to take (see diagram 3.4) with the involvement of ICT in government. This diagram is the first attempt to show how a whole-of-government approach will translate into an operational environment supporting the delivery of e-government goals. It is expected that the public sector (including local government) will work like a single, integrated organisation, rather than as a collection of seemingly independent service providers (State Service Commission, 2001b).

Local authorities have an important part to play in e-government within New Zealand. However, some councils face a lack of money and receive little financial help from central government, and it is unlikely that all 86 councils will be able to have a system of e-government. With the exception of the Kaikoura District Council and the Chatham Islands County, all local authorities now have their own web sites from which citizens can find information and write submissions to the councillors and

mayor. This is a marked improvement since May 2003, when five councils had yet to have a web site or Internet presence. It remains to be seen how many councils will be able to afford the IT infrastructure and expertise that is needed to implement a fully functional system of e-government and use this to help with their responsibility for promoting democracy and participation. Local authorities provide an aspect of e-government that the E-government Unit is going to have to seriously look at if their goal of having a whole-of-government approach is to work as ideally as the diagram suggests.

Diagram 3.4 – The Whole of Government Approach



(State Services Commission, 2001b: 15)

While the various e-vision and strategy documents have provided clues about what and how the E-government Unit is implementing in the way of e-government within New Zealand, there is little mention of the social issues that accompany e-government. The E-government Unit to date have done a very good job of avoiding such considerations and has painted a very rosy picture of the potential that e-government has for New Zealand and New Zealanders. While e-government does hold a great deal of promise, there are several challenging aspects to it that also need to be considered. These will be taken up in greater detail later in the thesis

3.5 Conclusion

Within New Zealand, there has been an almost constant focus on the inefficiency of the public sector and a continuing drive to make it more efficient. The first of these moves was in the 1980s where the public sector went through a series of public management reforms in a bid to raise capital and increase efficiency. These continued throughout the 1990s and through into the 21st Century with a new focus on transforming government into e-government. In a bid to look at what is happening with the e-government programme, I have examined in some detail the e-vision and e-strategy documents that have been released by the E-government Unit. These documents provide an interesting timeline of the development of e-government in New Zealand and how the e-government programme is planning to introduce ICT into government. The overall goal of the programme is to transform government into a fully functional e-government, and these documents attempt to outline the 'how' of the programme. It is through these document that one is able to gauge the progress being made by the E-government Unit and what future directions the Unit is taking. These documents are important because they are what other government and non-government agencies will be using to guide their own initiatives. This includes local authorities. While there is, as yet, no guidelines provided to local authorities in how they should go about implementing e-government within their own structures, the E-government Unit has provided a service delivery architecture that include important aspects that relate to both central and local authorities. However, the e-vision and strategy document do contain flaws as they generally ignore most of the social issues that accompany of e-government. It is to the implication of the service delivery

architecture for local authorities and the social issues that are associated with the use of ICT within government that we turn to in the next two chapters.

CHAPTER 4

E-Govt@Local Level

> "The Web has forever changed the way governments at all levels interact with one another and with the citizens they serve. Widespread Internet access is expected to completely alter people's ability to tap into government resources and make government work more effectively" (Verton, 2000: 1).

4.1 Introduction

Within New Zealand, there has been a recent surge in the use of ICT at all levels of government. Part of this reflects the direction that central government has taken with its plans to implement a system of e-government by 2007, and part is the increasing emphasis that all tiers of the public sector have placed on efficiency and the need to curtail costs while improving outputs. In this regard, it is not only central government that is looking at e-government. Local authorities (at regional and local level) are also increasingly appreciating the benefits of using ICT. While the previous chapter focused solely on central government, its use of ICT and the direction that this is taking within New Zealand, this chapter focuses primarily on local authorities and how they are using ICT to implement their particular vision of e-government. In particular, the chapter focuses on four cities in New Zealand and their local councils;[76] Auckland region,[77] Hutt City, Dunedin and Christchurch. Each council has had different reasons for setting up a web portal and each web portal has particular strengths. These will be highlighted in the chapter. Interestingly, all four

[76] The original intention was to look at Wellington City Council, however, Hutt City had a better web site at the time of research and so the decision was made to include Hutt City and not Wellington.

[77] The councils in Auckland (Auckland City, Auckland Regional Council, Franklin District, Manukau City, North Shore City, Papakura District, Rodney District and Waitakere City) have combined resources and have created a web portal that contains information and links to the various different councils. I use Auckland to refer to all the cities that make up Auckland rather than simply Auckland City.

web portals have been cited in a number of global research reports and have been recognised internationally for their excellence in different areas.[78]

4.2 Local Government in New Zealand

The structure of government in New Zealand is divided into two main tiers – central and local – each with its own jurisdiction and responsibilities. As part of public sector reforms, local authorities were divided in 1989 into two distinct tiers – 12 regional councils and 74 city or district councils. The main role of the 12 regional councils is to promote sustainable management of natural and physical resources at the regional level in accordance with the Resource Management Act 1991 and the Local Government Act 2002.[79] Along with this, regional councils are responsible for matters that have more than just local significance. More specifically, a regional council's purpose "is to achieve a sustainable environment, protect from disasters and natural hazards and ensure safe and efficient movement of people and goods for the benefit of people, communities and future generations, at a reasonable level of monetary and personal cost" (Environment Canterbury Web site, 2004). Funding for regional councils is generated from rates, government grants and from charges paid by users of the regional council's services.

Local councils, on the other hand, are charged with the day-to-day management and running of services within their boundaries in accordance with the Local Government Act 2002 and the RMA 1991. Along with management of the council's boundaries, the local council is also responsible for the community's well-being and cohesion, encouraging economic development within the area and contributing to the environmental sustainability of its boundaries. Within New Zealand, there are 74 city or district councils each with their boundaries of jurisdiction and responsibility.[80]

Not surprisingly, regional councils are looking at e-government and ICT in a different light to central government and local councils. Because regional councils are not

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[78] See Baron *et al* (2002) *Local Government Now : A Worldwide View*; London; Greenwood (2002) UK Official Eye NZ Local E-government; Deakins, E., & Dillon, S. (2001) *E-government in New Zealand Local Authorities: The Policymaker's Perspective*; Oultwood web site <http://www.oultwood.com/localgov/newzealand.htm>

[79] For a list of the 12 Regional councils refer to http://www.lgnz.co.nz/localgovt/councils/

involved with the day-to-day running and management of cities or towns, they are able to concentrate primarily on sustaining the environment and reducing hazards. Since they are not required to run any services *per se*, regional council needs in relation to ICT use differs from those of local councils. Presently, regional councils have concentrated more on providing a web presence that will allow citizens to lodge submissions and voice opinions on various issues on which the council requires comment and consultation. The form of e-government that is being implemented in regional councils is a much more basic version that at central and local government levels and is therefore somewhat easier to design and maintain. There is little need for the same expanse of e-government service that central government and local authorities are requiring because the majority of such services are not pertinent to regional councils. Because of this, the regional council version of e-government is almost bordering on a limited system of e-democracy, where people provide submissions and comment on various things that are relevant to their interests.

The system of e-government that is being implemented by regional councils is a consultative form of government, and is more about providing information, having a web presence and gaining feedback than providing a full transactional form of e-government with secure services. This is likely to change, however, as citizens begin to expect a more comprehensive e-government system. In this sense, creating a form of e-government at regional level is a somewhat easier task because there are far less multifaceted and intricate issues with which to deal. By having a consultative form of e-government, issues such as privacy, trust and to some extent security are lessened and therefore it is somewhat easier to set up a web portal because of this. Such a web presence also requires fewer resources, and so there is not the same need to have an extensive IT team or the same ICT infrastructure to support the web portal.

In contrast to this, local councils are involved with the day-to-day management of the cities and towns of New Zealand and therefore have to provide a greater range of services for ratepayers. The focus of e-government initiatives at the local council level is therefore much more extensive than at regional council level. Because of this, local councils have collectively developed an e-local government strategy to help the

[80] For a list of the 74 City and District councils refer to http://www.lgnz.co.nz/localgovt/councils/

74 councils implement a system of e-government that is compatible with the central government's ICT strategy (Clifford, 2003). In order to help individual councils cope with the complexity of e-government and deal with implementation issues, the local councils have formed a company called Local Government New Zealand (LGNZ), which is owned by local authorities and provides collaborative low cost web sites and fora for local government employees as well as a resource library (Bell, 2003d; Clifford, 2003; Deakins and Dillon, 2001).[81] However, because of the complexity of e-government and the challenges involved in incorporating ICT into government, councils are using the E-government Unit's e-government strategy as a starting point (Personal Communication, 2004b). The advantage of this is that a whole-of-government approach can be taken and all tiers of government can be compatible with each other (State Service Commission, 2003c). Councils have also been heavily influenced by what is happening with ICT at a local government level in the United Kingdom (Personal Communication, 2004b).[82] With cross-pollination of ideas from the E-government Unit and local government in the United Kingdom, some of the New Zealand council web sites are becoming increasingly complex and innovative in ways that suit their individual needs and the needs of ratepayers. Another factor of influence though has been the Local Government Act 2002.

Local Government Act 2002

The Local Government Act 2002 is fundamental to the operation of regional and local councils in New Zealand. The Local Government Act represented a legislative change of some significance within New Zealand insofar as it revamped and tidied up a whole series of Acts that related to local authorities (Mitchell and Salter, 2003; Mitchell *et al*, 2003a; Reid, 2003; Wilson and Salter, 2003). However, one of the main changes that the Local Government Act 2002 has brought about is that at the local government level, councils now have a direct responsibility to help increase and

[81] All councils, local and regional, can have access to the resources provided by Local Government New Zealand.

[82] The United Kingdom is trying to implement a whole-of-government approach to implementing e-government (Office of the Deputy Prime Minister, 2003). Local governments are heavily involved with the creation and implementation of e-government, however, the system of e-government that local authorities are looking to implement is far more extensive than in New Zealand as they are involved in health, education, crime and so forth. Because of this local government in New Zealand is looking at what is happening in the United Kingdom as a possible model of how to set up its systems of e-

promote democracy within their jurisdiction (Mitchell and Salter, 2003; Mitchell *et al*, 2003a; Wilson and Salter, 2003). Basically, the Act states that the purpose of local government is to "enable democratic local decision-making and action by, and on behalf of, communities; and promote the social, economic, environmental, and cultural well being of communities, in the present and for the future" (Wilson, Salter 2003: 2; Mitchell, *et al* 2003a: 5). Before 2002, councils were not required by law to promote or encourage the local community to participate in local or national democratic processes; they were really only concerned about participation when local government elections were being held. This has since changed and it can be argued that this is one of the main reasons why councils are now looking at e-government and e-democracy with increasing interest (Scholtz, 2002).

Councils are now required by law to promote and encourage participation in the democratic process and to seek citizens opinions wherever relevant. In this sense, they are being required to take on a more consultative role in relation to the community and to provide central government with mandatory feedback as and when required. However, the precise role of councils in this regard is unclear under the Act and has been left open to interpretation (Mitchell and Salter, 2003; Mitchell *et al*, 2003a; Wilson and Salter, 2003). Because of this, councils, especially local councils, are looking to e-government as a means of fulfilling their roles in the areas of service provision (client), transaction (customer) and consultation (citizen).[83] Beyond this, local councils are wanting to combine aspects of e-government with e-democracy to a much greater extent than central government is at this stage. While the scale of local government is obviously not on the same level as that of central government, involvement in any form of e-government programme is complex and tends to be quite costly. Whether all local councils will be able to develop an e-government presence has yet to be seen. It is highly likely that many of the smaller councils will not have the funding or resources required to implement a fully functional e-government system. As with most ICT initiatives, one needs to weigh up the cost against the benefit and it would not be surprising if some councils decide that the cost of a full e-government system outweighs the benefit at this point in time.

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government. However, the social well-being responsibilities of local authorities in New Zealand are not as comprehensive as their United Kingdom counterparts (Personal Communication, 2004b).

[83] Aspects of the tension between these roles will be addressed in the next chapter.

What is interesting to note here though, is that local councils in the United Kingdom have similar responsibilities with regard to democracy. In this regards though, they are required by central government to implement forms of e-government within their boroughs. This is in contrast to New Zealand where councils are not required to embrace e-government or ICT *per se*, and central government is giving very little if any funding to councils to encourage them to think about e-government and the potential benefits that it might bring. It does need to be borne in mind though, that a number of councils within New Zealand have little in the way of spare resources to devote to ICT and without government funding, either directly or through grants, it is likely that not all local councils will be able to take advantage of the benefits that ICT has to offer.

In order to assess how e-government is being implemented at the local level we now consider what is happening in the four metropolitan areas of Auckland, Hutt City, Dunedin and Christchurch. As will be seen each is going about implementing e-government in slightly different ways. As such, they provide contrasting examples of how e-government can be implemented at a local level. As commented earlier, though, there are presently no guideline or strategies in place to help local councils create a system of e-government. As a result of this, councils have gone about creating their portals in an *ad hoc* and idiosyncratic fashion.

4.3 Council Web Portals

In a 2002 submission to both the E-government Unit and the e-local government strategy working party the Library and Information Association of New Zealand Aotearoa,[84] stated that collaboration between councils is vital if e-government initiatives are to be implemented and have any success in local government (Library and Information Association of New Zealand Aotearoa, 2002). The Association suggested that local authorities should consider setting up two e-government networks – one for South Island councils and one for North Island councils, as a way of saving on some of the costs involved with implementing ICT. It suggested that through such

[84] The e-Local Government Strategy Working Party was set up to help design the e-local government strategy. It consisted of representatives from different councils.

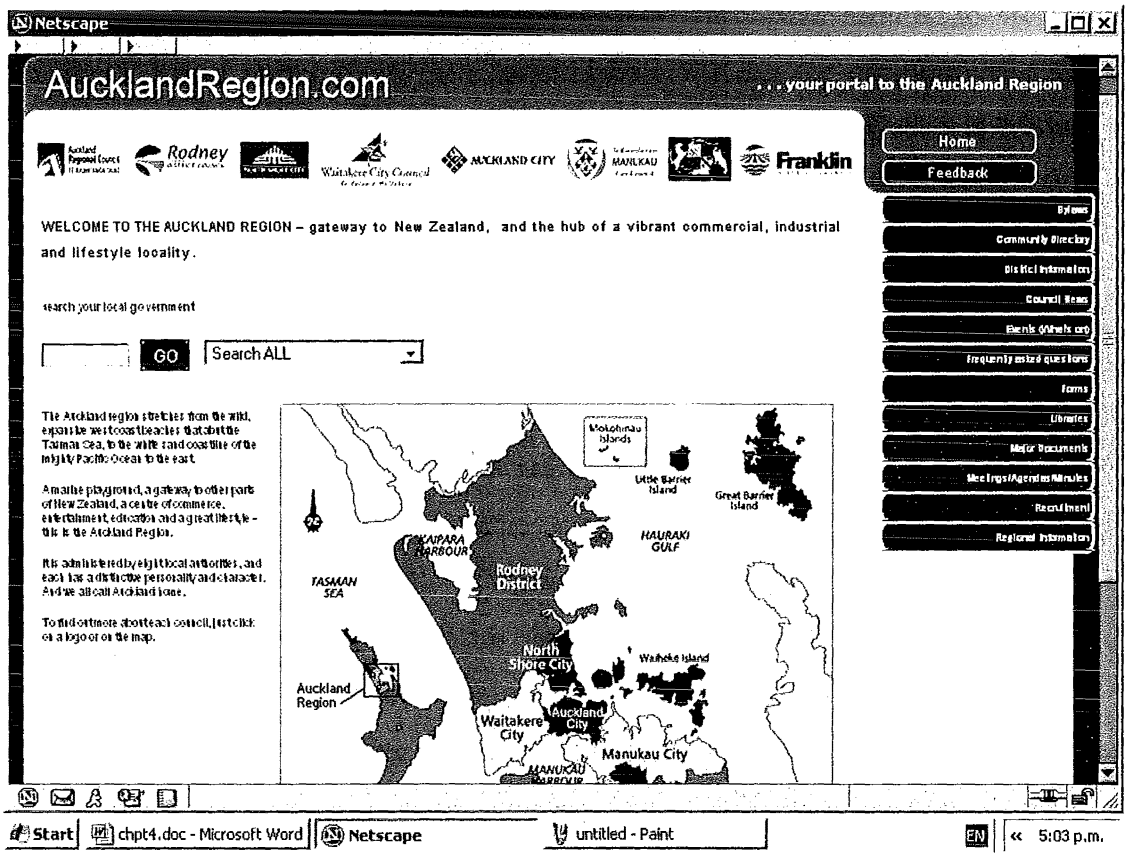
collaboration local authorities would be able to save money in the transition to e-government. Since all councils offer similar services, it would seem to make sense to combine resources. The Association also suggested that without government funding local e-government initiatives will not be able to take place and there will be a divide between those councils that can afford the required ICT infrastructure and resources and therefore have a form of e-government and those that cannot (Library and Information Association of New Zealand Aotearoa, 2002). Scholtz (2002) has a very similar view about collaboration between local councils but does not suggest that two e-government systems need to be set up. However, as will be seen from the following examples little collaboration has taken place between councils when it comes to web development (apart from what has happened within the Auckland Region) and there are no national strategies or guidelines that require or facilitate such collaboration.

Auckland Region Web Portal

The Auckland region is made up of four cities (Auckland, North Shore, Waitakere and Manukau) and three districts (Franklin, Rodney and Papakura). With a combined population of more than 1.1 million (26 per cent of the national population), the region is the most densely and highly populated area in New Zealand. In conjunction with the Auckland Regional Council these seven authorities have been investigating the possible benefits that can be gained from entering into formal partnership for certain services. This programme has been called 'Shared Services – councils of the Auckland Region' and one of the benefits of this partnership has been a shared web portal that provides a one-stop-shop web site that contains information about the Auckland Region as well as links to each council's web site (see overleaf).[85] The web portal itself has been designed with a consultative framework in mind, and serves as an easy way to find additional information about the various individual councils that are linked to the portal. At this stage, the portal is quite basic although there are plans to revamp the entire site (Bell, 2003b).

[85] The web portal can be found at http://www.aucklandregion.com

Illustration 4.1 – Auckland Regional Web Portal



Several factors have been identified as contributing in the Auckland region to the need for a common web portal. Some of these include constraints on finance and the need to achieve more with fewer resources; community demands and the need to respond to these demands; reducing duplication of costs; creating opportunities for cost savings; significant changes in technology that have improved opportunities for a collective approach and 'shared entry' price arrangements; increasing collaboration between local authorities in the Auckland region; and greater cooperation with central government. All of these factors led to the various councils in Auckland recognising that there was a need to combine their resources and out of this emerged a web portal in 2000 for all the councils involved (Bell, 2003b; Baron et al, 2002; Greenwood, 2002).

While the above factors helped with the creation of the Shared Service programme, the need for the programme arose from several major issues that are highly relevant to Auckland such as roading, water, sewerage and waste disposal. Because these issues affect the whole of Auckland, the CEOs of the eight councils formed the Shared

Service programme and creating a web site was one of the easiest ways for everyone to know what was happening and when. From this it was decided to create the Auckland region portal (www.AucklandRegion.com) and for the portal to contain links to all the councils involved and provide both council employees and the public with information relevant to the Auckland region.

The web portal links all eight councils together and features 20 content areas that are relevant to the Auckland region. It also allows access to information on a large range of council matters such as rates, minutes, reports, regulations and agendas. All the councils that contribute to the portal see it as a crucial part of the Shared Service programme and there are plans for the portal to be the main way that citizens will interact with their local councils. While, the web portal is still a minor part of the Shared Services programme, there are plans to extend it further with the possibility of using it to provide a system of e-government in the future (Personal Communication, 2004a). The portal is only three years old, is still undergoing development and thus lacks some basic services such as a 'have your say' facility. However, most of the eight councils do provide this service on their own web sites.

One of the reasons why this portal has been cited as an example of good practice by Baron *et al* (2002) as well as Greenwood (2002) is primarily due to the collaboration between the eight councils involved. Local government, like central government, is highly political and often political agendas and ambition can lead to a lack of collaboration between councils as they focus on their differences rather than on the common good. Chadwick (2003), Curthoys and Crabtree (2003) and Fountain (2001) highlight the lack of collaboration and sharing resources between government agencies as one of the major hindrances to e-government on a national level. The same could be expected in local government especially when eight different councils are combining together. While councils in New Zealand are not required to share resources, it certainly makes sense for them to do so in Auckland where there are a number of councils operating, and where there is such a high concentration of population.

Ultimately, the goal for the Auckland region web portal is for it to be a true one-stop-shop for all the councils in Auckland (Personal Communication, 2004a). Instead of

citizens having to go to their own council web site to pay rates and registrations it is planned that the Auckland region portal will provide the means whereby citizens will only have to visit one site and be able to do anything that one would expect from a local e-government site. The advantage of this is the sharing of resources and the minimising of risks that e-government presents.[86] However, one of the disadvantages is that smaller councils, particularly the district councils, could lose their autonomy and identity especially as they tend to be on the fringes of the Auckland region. This is a problem that has yet to emerge.

What the Auckland region web portal shows is an example of eight different councils working together for a common cause. While the make up, political agenda and a geopolitical boundary of each council is different, the councils have seen that it makes sense to set up an e-government system for the entire region rather than have eight separate systems. The Auckland region portal is in its early stages and there is much room for improvement and development. However, it would certainly seem that the Auckland web portal is a good example of councils working towards a common goal of creating a shared system of e-government.

Hutt City's Community Web Portal

The Hutt City Council has developed a community web portal as part of its ICT programme in accordance with a larger e-business strategy of delivering services and information online. It plans to be an 'e-council' by 2004. The Hutt portal went live in 2001 and the City Council is one of the few councils in New Zealand to develop an Information Management Strategy relating to both its commitment to implementing online service as well as its intention to transform the council into a system that incorporates e-government. This strategy is fully integrated with the council's long term strategic plan (Hutt City Council, 2003). While the origins of this strategy derive from principles of e-commerce, the strategy also takes into account the council's responsibility for social well-being by addressing issues such as the digital

[86] There are a number of risks that are involved with e-government. For a more detailed discussion of these, see Heeks (1999). *Reinventing Government in the Information Age: International practice in IT-enabled public sector reform*; and States Service Commission (2003c) *Government.nz@your.service : e-government www.e-government.govt.nz.*

divide.[87] The council is trying to reduce the effects of the digital divide through initiatives such as having publicly accessible computers in libraries and in council service areas.

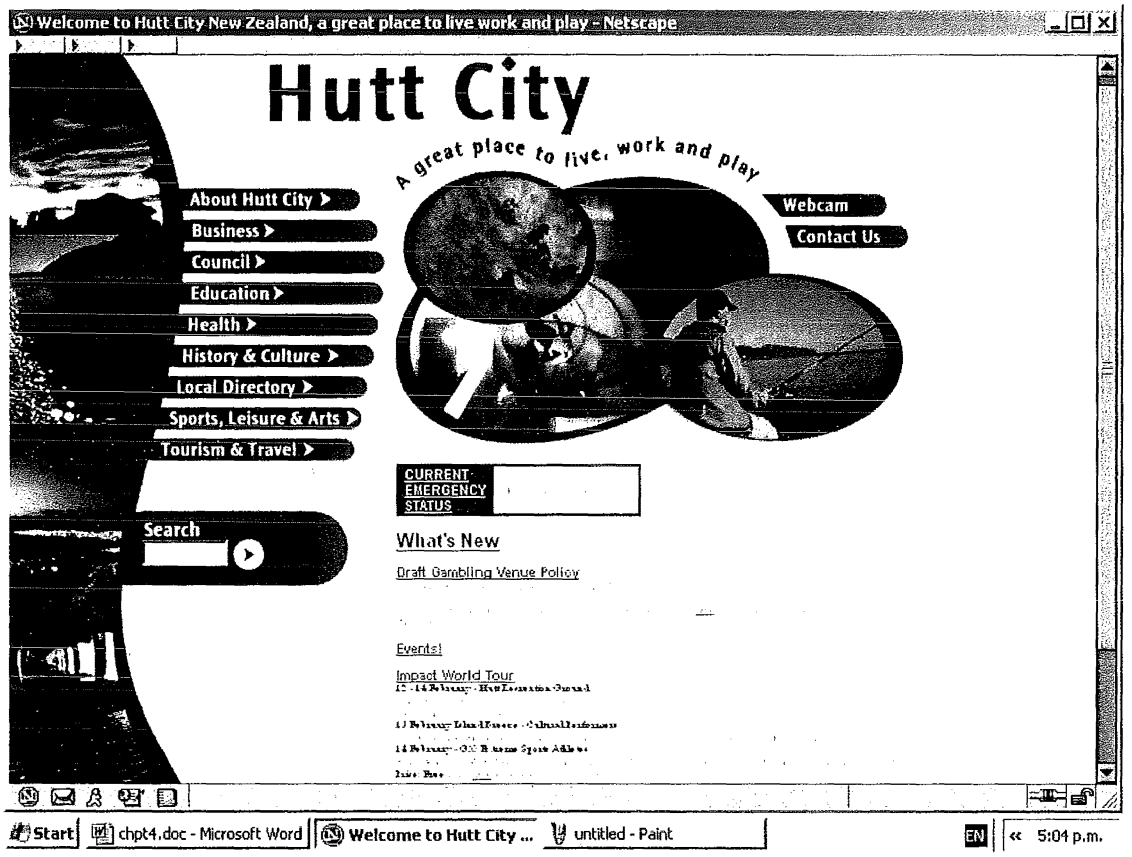
In this regard, the council has developed four interlinked delivery strategies for the implementation of their information management strategy. These four delivery strategies are: an e-business strategy; an application strategy; a document and record management strategy; and an infrastructure strategy (Baron *et al*, 2002). These four strategies feed directly into the general council annual plan as well as the annual business plan, setting the scene for a very strong emphasis on the implementation of e-government (Hutt City Council, 2003). This is reinforced by the fact that e-government is seen to be a crucial part of the overall council planning structure and vision (Baron *et al*, 2002).

As part of its transformation into local e-government, one of the Hutt City's early initiatives was the development of a community portal that was launched in 2001 (see overleaf).[88] Whereas most council web sites provide information on council activities and services, the Hutt City has developed a citywide portal, which is increasing the council's organisational role within the community as well as advancing its own e-government initiatives. The portal emerged out of consultation with focus groups and community workshops, meetings with businesses, community groups and council staff. This consultation was held to ensure user requirements for the portal were properly understood prior to construction of the portal. The result has been that the portal is used by all groups of the community for their various needs.

[87] The Hutt City Council has adopted the following social goals: "To provide convenience for customers by enabling access to council information and service through a medium of their choice; to continuously develop an information infrastructure that enables both public and businesses to communicate and transact easily with the council; to continuously seek IT opportunities to enable dissemination of information and participation of the community in the democratic process" (Hutt City Council, 2003: 8)

[88] The web portal can be found at http://www.huttcity.govt.nz

Illustration 4.2 – The Hutt City Council Web Portal



By involving the community in the development of the portal, the Hutt City Council has managed to some extent to demystify aspects of the Internet and use of ICT, i.e., that the Internet is hard to use and has little value for the average citizen. However, more importantly, because of the heavy community involvement in its development, the portal is often used as a starting point to locate information and through the use of the portal people are able to have a better understanding of what is happening within their local area (Bell, 2003c).

To encourage the use of the portal and the e-government system, the Hutt City Council has been proactive in helping to reduce the digital divide in the local area. Aside from offering free access to the portal in all libraries and public council buildings, the council has also recently contributed $250,000 to help set up a telecommunication company, Smartlinx3, which will help address the digital divide by providing cheaper broadband access to residents, businesses and other members of

the community (Pullar-Stecker, 2004).[89] With initiatives such as these, the Hutt City Council is able to provide a system of e-government without needing a large marketing campaign to encourage ICT use.

The other aspect that is of benefit to the council is that the community portal has an e-democracy focus where the council actively encourages and seeks people's opinions through the 'have your say' forum. The idea behind the 'have your say' forum is that people can comment and express their opinions on matters that effect them and the community. This means that the council is better informed and is able to consult the community in a relatively easy and cheap manner. This forum also encourages some of the younger generation to be involved and express their opinions thus, allowing access to a broader range of opinions than councils may have had access to previously.

The Hutt City web portal has used innovation, creativity and consultation with the local community to create a web portal that works not only for the council but also for citizens. With forward planning by the council and a determination to make use of ICT to build a system of e-government, the council has shown the way for many other city and district councils interested in the idea and concept of e-government. In addition, by consulting with the community and providing means to ensure that all those who want to can access the web portal, the council has created a system of e-government that is community-focused and that has been designed to serve community needs.

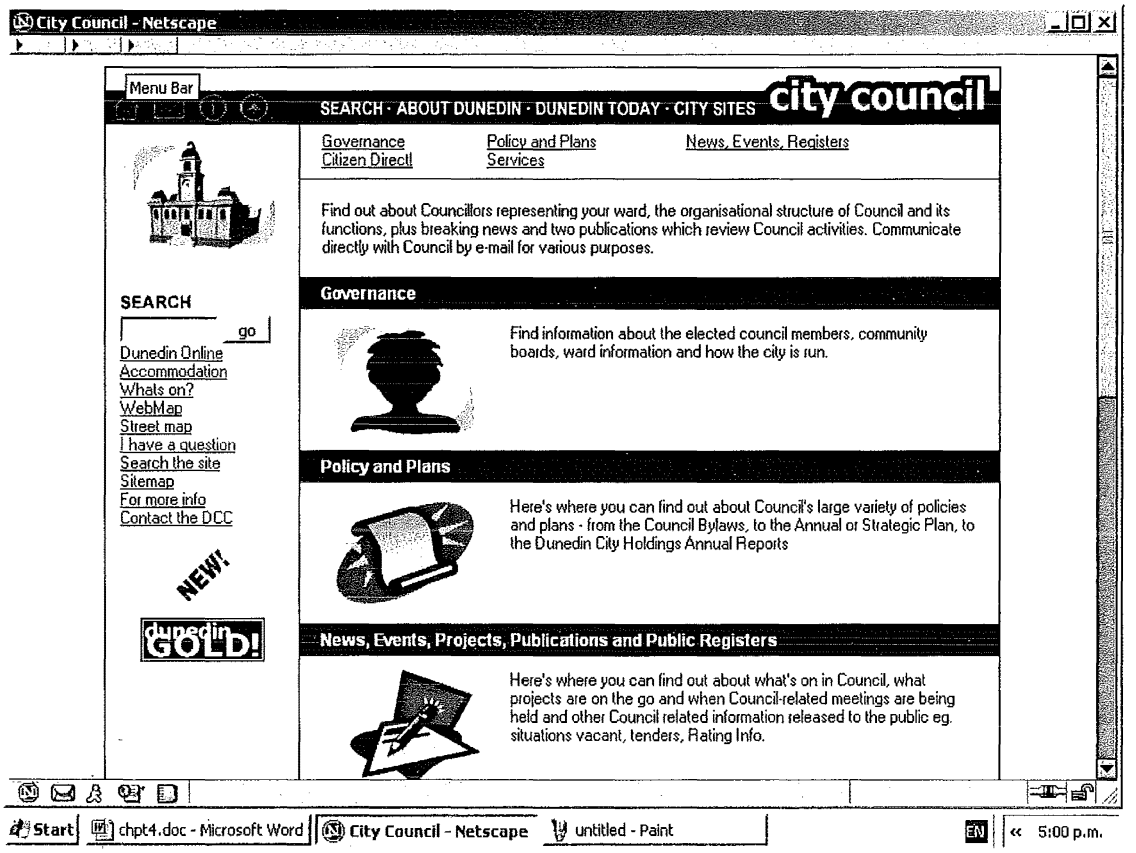
Dunedin City Council

In 1998, the chief executive of Dunedin City Council brought together a team of individuals who met for eight hours each week over a period of 18 months (Baron *et al*, 2002; Harland, 2002). Their role was to share ideas and scope a project with a ten-year timeframe including strategies, business plans, costing and budgets, which would allow them to frame an e-council vision. This project was called 'Citizen Direct', and

[89] This has been done in conjunction with Upper Hutt and Porirua City councils.

it incorporated a customer focus that looked at creating an integrated approach to meeting customer needs (Harland, 2002). The council then spent $200,000 in setup costs to put the ideas into practice (Harland, 2002). The portal was eventually launched in 1999 (see below).[90] The portal has an easy-to-use layout that is uncluttered and is neatly organised. The search function and quick index are easily found. It is features like these that make the Dunedin City Council portal stand out among other local authority web sites.

Illustration 4.3 – The Dunedin City Council Web Portal



The emphasis for the council has been on trying to combine community and council interests and come up with an end product that works for all. This is reflected in the Citizen Direct vision statement: "Dunedin City Council makes it possible for its citizens to achieve what they need, when they need it and in the manner that best suits this need. Barriers of time and place are removed to let the customer decide how they will do business with the council so that their needs are met. ...The customer is

[90] The web portal can be found at http://www.cityofdunedin.com

enabled to be successful in achieving their goals. In other words, Citizen Direct is about empowering customers and citizens" (Dunedin City Council, 1999).[91]

Since its launch in 1999, the portal has been added to quite extensively. In 2000, the council updated the portal to include the public library catalogue system and added information such as local business information, cluster groups for people to join and discuss ideas, a trade's database and a film database. All of this adds to the content of the web portal but also makes it easier for citizens to find local businesses and other relevant information easily. Further to this, in 2001 the council again updated the portal so that the October 2001 election results were available online. The council also updated the Geographical Information System (GIS) street map and created a situation vacant site.[92]

The most recent addition was in 2002, when the portal was updated to include public consultation documents and the means for citizens to be consulted on local and district issues online rather than in paper form. The direct result of all of these initiatives has been that Dunedin has one of the most secure and easy-to-use local government ICT systems in New Zealand.

In the near future the council is planning discussion boards for local citizens, a means of finding land information and applying for resource and building consents online, a means to register dogs and pay rates and other council fees, a means to locate detailed information on sewerage, water services and residential, industrial and commercial properties and eventually a means whereby people can vote online. It is these future plans that have the capability to transform the Citizen Direct portal into a functioning system of local e-government where "customers" can carry out transactions and "citizens" can be consulted.

Because of the commitment that the council has to providing resources and changing the way the council operates to incorporate the use of ICT and e-government principles, the Dunedin City Council's portal is often used as a guide for other

[91] Note the distinction that is drawn here between customers and citizen. This is a distinction that will be explored in the next chapter

councils wanting to integrate ICT into their mode of operation. What the Dunedin City Council portal and e-government programme does show is that there is a need for extensive planning to take place before a portal is created and launched. During the 18 months that the Citizen Direct team met, 12 of these months were dedicated to planning and discussing what was required, what was needed and what was expected of the portal and how that was to be created. In contrast, only six months were used to actually design and create the portal. This is in line with international and local experience that has shown that for ICT to be incorporated into any form of government there need to be an extensive planning and discussion process before the portal and web services are created.[93]

The Dunedin City Council web portal is a good example of how planning can aid the incorporation of ICT into existing government structures. Instead of working in an *ad hoc* fashion the council first developed a strategy and engaged in consultation with the community before designing the web portal. The end result is a portal that is easy to use and that caters for most sectors of the community. By having a plan and strategy in advance the council has been able to incrementally change the way that it operates so that everyone can adapt to the new technology. Because of this, the council is well advanced in its goal of having a local e-government system in place in the near future.

Christchurch City Council

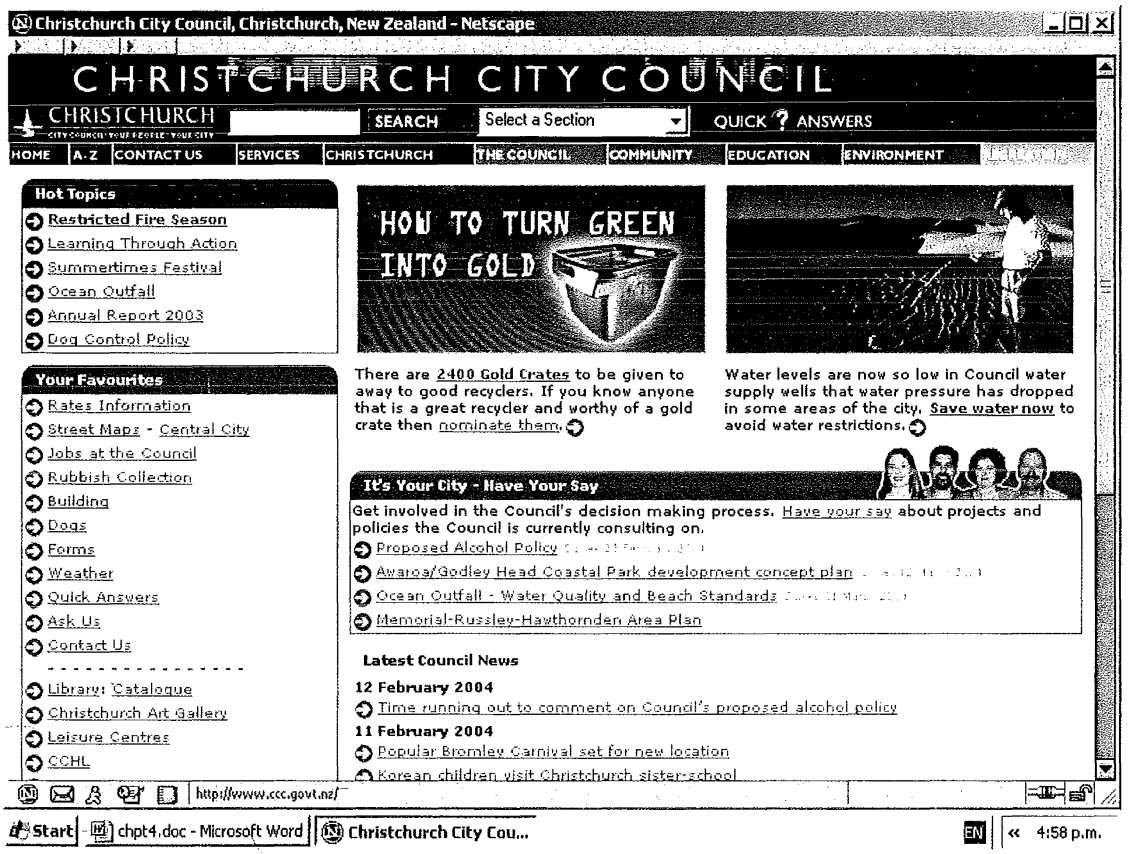
The Christchurch City Council web portal grew out of an early city library web site and has been developed from there into the present web portal. The original library site was set up in 1997/98 and was heavy on content. Because of this, it did not attract a lot of attention or use. However, in December 2001, the council formed an e-council team that was given the responsibility of maintaining the portal site and keeping it up to date. This team currently comprises seven people, four of whom maintain the content of the site, two who look after the information databases that lie behind the portal's content, and one who acts as manager. While the portal has not

[92] GIS is a way to visualise, manipulate, analyse and display spatial data. For further information about GIS see http://www.gis.com

[93] By way of contrast, the Victoria state government in Australia provides a negative example in this regard. There was limited planning before its web portal was designed and launched and the

been changed dramatically since 1998, there has been some reorganisation and a few revamps such that the site is easier to navigate and information is easier to find. Part of this reorganisation has included quick menu hyperlinks such as 'hot topic's, the mayor's web page, and 'your favourite's, which makes it easier for citizens to find information about key or current issues requiring consultative input (see below). One feature that the original library web site had and that the newer web portal has kept is the ability for any citizen to send an email to the mayor. This has been a feature that is increasingly being incorporated into other council web portals and is proving to be quite popular with many citizens.[94]

Illustration 4.4 – The Christchurch City Council Web Portal



One of the major projects that the e-council team is about to undertake is to re-launch the web portal and give it more of a customer focus. The council initially saw the web site as a way for different council departments to store information such that all council staff could have access to documents via an intranet. The intention here was

consequence of this was that there are many features that are not utilised because they are not needed or useful to citizens. Thus, with some planning and citizen input, resources could have been saved.

[94] The web portal can be found at http://www.ccc.govt.nz

to save time and money. Since the formation of the e-council team, however, this focus has changed. The council has since organised focus group discussions to find out what citizens would like from the web portal and what they think should be included. As part of this re-launch process, the council is also planning to update its search facilities and create a standard Meta database so that citizens and council staff can find documents more easily and more quickly.

With this in mind the e-council team's initial goals for the web portal are to make access to services and information better, create a portal that has a customer focus and is easy to navigate and to eventually have a system of e-government operating whereby citizens can have access to information and services and be able to easily participate in the council's democratic processes (Personal Communication, 2003c). In essence, the Christchurch City Council is planning to create a one-stop-shop for citizens, whereby they can access information and pay any transactions with little or no help from council staff. However, this is some way off from being achieved and the council is fully aware that it needs to encourage public participation in and use of the existing web portal before it completely embraces the concept and principles of e-government.

The Christchurch City Council has yet to formulate an e-government strategy. The web site and portal have evolved and grown in an *ad hoc* fashion. While the advantage of doing things this way means that there is less short-term capital invested to producing a portal, there are several disadvantages.[95] By having an e-government strategy, the council and the e-council team could bring firmer direction to the process. In the long run this would mean there would be less wastage of resource and less likelihood that the entire portal would need to be overhauled and revamped in due course. However, it has only been recently that a New Zealand based national e-local government strategy has been discussed and many councils have been waiting for this strategy to be completed before they commit themselves entirely to e-government. This certainly seems to be the case with the Christchurch City Council. In the

[95] As mentioned in the previous chapter, the Gartner Group stated that "over the next two years 70 per cent of governments that do not develop an e-government architecture/strategy will duplicate efforts and infrastructure, and will fail to meet constituent's expectations for service delivery, resulting in complaints and wasted public funds" (Kreizman and Fraga 2001: 1). These are among the potential disadvantages faced by New Zealand councils.

meantime, however, the council has embarked on other initiatives that are helping with the introduction of e-government.

The City Council has begun to look at how the digital divide may affect local citizens and impede their ability to use the system. To help overcome this problem, the council has been involved with a number of initiatives in an attempt to reduce this inequality. The council has placed over 200 computer terminals with free access to the council portal in all libraries (Personal Communication, 2003c). Computer training programmes are run through the libraries and funding has been provided to the Addington Citizen net and also the St Albans net.[96] Further funding is being made available to other citizen nets in the city, particularly in lower soci-economic areas. The council also has indirect involvement with a local computer recycling business that takes donated computers from businesses in the city and upgrades them so that they are Internet capable and can be resold cheaply (Personal Communication, 2003c).

While initiatives such as these are not part of the e-council's agenda, the Christchurch City Council is aware of how the digital divide can adversely affect any efforts to introduce a system of e-government. For the council, helping reduce the digital divide makes financial sense. Part of the ideal of e-government is that it will save money since services will be provided more cheaply and will be accessed 24/7 via the Internet. If, however, there are segments of the population who cannot access the Internet for any reasons, councils will have to spend more money providing a duplicate service via call centres or drop-in centres. By helping reduce the divide by providing public terminals, training and cheap recycled computers the council is working to save money in the long term, while helping people become more familiar with using computers and in the process exposing them to a system of e-government.

The Christchurch City Council web portal has evolved and grown from an early and existing library web site. Initially the site was very heavy on content and difficult to find and search for information. Since 2001, when the e-council team was formed, the web site has been improved and content has been sorted to make it easier to search

for information. Several main items have been placed in quick menus that make it easy to access and find, and a new search engine has been incorporated to help both council staff and the public search and find relevant information. While the council's web portal is not entirely perfect, there is a lot of forward vision that has been given to e-government with a particular emphasis on helping reduce the digital divide. While the portal can be easily changed and improved, the council has had the foresight to start helping to reduce the problems associated with the digital divide through a number of different initiatives. Because of this, the council is almost taking a very different approach to e-government to other councils. In Christchurch the priority seems be on encouraging people to use the existing web site and provide access for those that do not have it, whereas in other areas priority has been placed on spending resources to improve the web portal and make it capable of delivering e-government services.

4.4 E-Local government

Because e-government is still essentially a design concept there is no standard way to implement a system of e-government and this has given authorities much greater freedom to create a system that works for them. However, the majority of councils within New Zealand have not planned what they are wanting from e-government and how they are going to implement an ICT system. Instead, most councils have created a web site on an *ad hoc* basis and expanded on this web presence to create something that looks like e-government. This is so with two notable exceptions. Both Hutt City and Dunedin councils have created a strategy and have planned how they are going to incorporate e-government into council structures in a manner that works for them and this is one of the aspects that has set them apart from other councils that have been examined.

As Table 4.1 overleaf shows, each council has started implementing an e-government system in different ways to achieve similar results.

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[96] For more information about ICT projects in St Alban see Ashton (2002) *Finding Local Ground between Determinate Modern Rationality and a Global Age of Speed*, chapter six.

Table 4.1 – Distinctive Features of the Web Portals

Council	Distinctive Features of Web Portal
Auckland Region	Collaboration between seven councils
Hutt City	Innovation and creativity Consultation with the local community Strategic planning Community focus to web portal
Dunedin	Extensive Planning to design web portal Consultation with the local community Combining community and council needs
Christchurch	Addressing the digital divide at a local level Incorporation of a Mayor's web page

The Auckland Region web portal provides a very good example on how seven different authorities can combine and share resources for a common goal. The collaboration between authorities is one of the key aspects of e-government and it is often an aspect of ICT that is thought to be crucial to the success of e-government. The Hutt City Council has started to implement e-government in a very different way. A strategy to implement e-government was developed and with the extensive community consultation that accompanied this, a web portal has been created that has an excellent community focus. By involving the community, the Hutt City Council has been able to promote the use of the web portal without the need for an extensive marketing programme. Dunedin City Council started to design a strategy before the web portal was created. This has meant that there is less duplication of services and therefore greater efficiency in the implementation of ICT, while still involving members of the community in the implementation of an e-government system. Christchurch City Council has gone about the implementation of e-government in a very different way. Instead of completely inventing a new system of ICT, the Christchurch City Council has revamped an old library web site and turned it into a web portal that serves the needs of the community. Beyond this, the Christchurch City Council is very focused on trying to address some of the social issues that accompany e-government, especially the digital divide.

As previously stated, one of the interesting things about local e-government in New Zealand is the diversity of the systems that are being implemented by the various councils. While there is some commonality in the systems that are being implemented, councils are trying to cater for their needs and the needs of their communities in their own particular way. Some councils have progressed further with the implementation of e-government than others, but generally most councils in New Zealand are beginning to realise the value and potential that e-government has and are looking to implement such a system.

Table 4.2 summarises how far each of the four councils has progressed in their effort to implement e-government.

Table 4.2 – Phases of Local E-government in New Zealand

Phase of E-government[97]	**Councils**
Emerging: An official government online presence is established.	Auckland Region Hutt City Christchurch Dunedin
Enhanced: Government sites increase; information becomes more dynamic.	Hutt City Christchurch Dunedin
Interactive: Users can download forms, email officials and interact through the web.	Hutt City Christchurch Dunedin
Seamless: Full integration of e-services across administrative boundaries.	Not applicable to any council so far

The categorisation system used in this table is the same as that used by the United Nations. Bear in mind that a web portal such as that provided by Auckland Region is relatively new and has not been around as long as the other three web portals. This is

[97] These phases of e-government have been taken from Ronaghan (2002). The New Zealand E-government Unit uses the criteria from the Gartner Consulting Group for assessing the progress of e-government. However, for the purposes of this table it was considered to be a bit basic. See chapter three for details of the Gartner Consulting Group's E-government criteria.

the reason why the Auckland portal only appears in the "emerging" category. As the table shows, not one of the four councils has reached the Seamless stage where there is full integration of e-government and where the operations of the administration have been transformed into a fully functional e-government system where citizens can access all government information and services via ICT. The other aspect that needs to be taken into account with the content of this table is that there are only four different categories and while Hutt City, Christchurch and Dunedin's web portals are all within the category of 'Interactive' they are only partially fulfilling the criteria needed. There is some way to go for all three council web portals before they can progress into the next stage. However, the table shows to some extent how far each council has progressed with the implementation of e-government and how far they have to go to reach a fully functional system of e-government.

The examples that have been used highlight the fact that many councils within New Zealand do not having a robust e-government strategy. The concern with this is that councils will implement an ICT system in an *ad hoc* manner that is only capable of giving them a web presence rather than a system of e-government. While having a web presence is becoming increasingly important for councils, a web presence by itself does not constitute e-government. One of the crucial differences between the two is that e-government enables two-way communication between government and citizens whereas a mere web presence no matter how sophisticated does not. E-government is about providing governmental services and information online where citizens can access documents and services, fill in forms, voice their opinions and participate in the democratic system if they so wish. A web presence does not achieve this; instead, it only provides information for those citizens who want to be informed. According to the UN, what makes e-government different is that it "...improves citizen access to government information, services and expertise to ensure citizen participation in, and satisfaction with the governing process" (Ronaghan, 2002: 4).

With this in mind, local councils within New Zealand are some way off creating a system that provides what this definition takes to be the crux of e-government. However, the efforts that councils have gone to in order to improve their ICT systems and enable citizens to access information and some limited services online is a step in the right direction. If nothing else, having a web presence enables citizens to have

access to information and services in a way that is convenient and accessible to them whenever they wish.

4.5 Conclusion

This chapter has looked at local e-government and some of the issues that are particularly relevant at the local level. One of the reasons why local authorities within New Zealand are looking at e-government and ICT is due to requirements within the Local Government Act 2002. The Act has increased the amount of responsibility that local authorities have, and has increased the emphasis that is placed on democratic participation at the local level. As a possible solution to help increase citizen participation and provide better and more efficient council services and information, local authorities are exploring the idea of e-government. To illustrate this, details were provided on four different councils and how they are introducing ICT into their operations with the eventual aim of having a system of functional e-government. Each of these four councils has approached ICT use and e-government in different ways, each emphasising different aspects that they see as being important. Some of the innovation achieved by these councils has been quite remarkable and internationally New Zealand is increasingly being seen as a country to watch because of its e-government practices and systems. However, for all the progress that has been made in introducing ICT and e-government at the local level, as yet very few councils have created an e-government strategy to help them guide their efforts. Rather they have relied heavily on the E-government Unit's strategy documents as well as material from the United Kingdom's national e-local government strategy. While this has created a system of *ad hoc* and often unplanned systems there is as yet no evidence to suggest that New Zealand local government is going about using ICT in the wrong way. As yet no council has run into any major problems. This may yet change, however, and councils may be forced to allocate more resources to e-government implementation than initially planned because their existing systems are not compatible with any other system or do not have the capability to do what is planned. Building on the discussion to date, the next chapter will now look at some of the social issues that accompany the implementation of an e-government system.

CHAPTER 5

E-government and Associated Social Issues

> "The concept of e-government revolves around the citizen. E-government is not just a cost cutting or efficiency initiative, but rather it is directed at bettering the lives of ordinary people. In order to develop this citizen-focused vision, policymakers must keep the ordinary citizen in mind when designing systems." (Lanvin, 2002: 9).

5.1 Introduction

Governments intent on implementing an e-government system must realise that their efforts will result in failure if citizens do not know about it, cannot use it, do not have access to it, or do not want to use the system because of a real and perceived lack of privacy or security. In spite of this, though, the literature on e-government focuses overwhelmingly on the technicalities involved in setting up an ICT system. As a result, many of the social issues that are associated with e-government are often ignored or not given adequate coverage.[98] The present chapter seeks to redress this imbalance. Because of the scope of the problem, a selection of five issues will be discussed: security, privacy, trust, the digital divide, the lack of social and cultural capital and the tensions between the roles of client, customers and citizen within this emerging e-context. We start with the issue of security.

[98] Within New Zealand, for example, the E-government Unit barely pays lip service to social issues in its e-government strategy documents and fails to address many social aspects that will have an effect on the way citizens use an e-government system. Instead, the New Zealand government, like most other governments, has ignored the issues and has focused instead on how an e-government system will be implemented. It could be argued by government of course that it is prudent to get an e-government system up and running before addressing the social issues that flow from this. However, being aware of these issues while implementing e-government means that issues can be addressed and resolved before they become a major problem and hindrance to the acceptance and use of an e-government system.

5.2 Security

Governments around the world are alert to the fact that with the implementation of e-government sophisticated security systems need to be put in place because of the sensitive nature of the information that governments collect from citizens. However, while the technicalities of designing such security systems are overwhelming, persuading the public that the government has the best possible security measures in place is perhaps an even more daunting although equally important task. There have been numerous instances where a public agency has lost data, had its computer system hacked into by intruders, or had serious security breaches where unauthorised personnel have accessed information. One example of such a security breach occurred in New Zealand during 2003 when Inland Revenue staff were found to be accessing the tax details of citizens and sharing this information with others in the public arena (NZPA, 2003b). Information released under the Official Information Act shows that in recent years 1.2 per cent (59) of Inland Revenue staff have been investigated for improperly accessing taxpayer information and as yet only 23 have been dismissed while the other 34 have been given warnings (Bell, 2004). Other cases are more extreme than this, but any breach of security is a serious matter for all concerned and strict measures need to be put in place to ensure that the public can have confidence in any e-government system.

Part of the problem here is that people generally are suspicious about any precautionary measures that are put in place within ICT systems. Because security measures are not patently obvious, many citizens do not understand how they work and hence lack confidence in the system. Research has shown that 54 per cent of citizens in Canada would use an e-government system if there were proper security measures in place, but that these same people remain particularly sceptical about transmitting their bank account, credit card and social security numbers over the Internet in order to use the transactional facilities of e-government services (Riley, 2002).

For this reason, governments have to be able to show that the public can have confidence in the security measures that are put in place when a system of e-government is introduced. While this sounds as if it could be a daunting task, one

only has to look at the number of people who use the Internet to pay for goods, type their credit card number into a secure shopping site, or control their finances through their personal computer at home to realise that it is not impossible. Both services (e-commerce and e-government) have potential risks involved with them. However, while for the most part an increasing number of people are quite prepared to trust the security measures that are in place when using e-commerce services, governments have yet to generate similar levels of confidence in their systems.

There has been little sustained effort in New Zealand to promote or encourage the idea of e-government and most people still have little idea what e-government is or what it entails. However, one of the biggest concerns that people do have in relation to e-government is with the security of the systems that are in place (Curthoys and Crabtree, 2003; Galindo, 2002; Layne and Lee, 2001; Bradley *et al*, 2000). Banks offer a guarantee with their Internet banking services as a way of promoting confidence and use, but as yet governments have offered no similar promises and the media have been very quick to report when security measures have been breached.

In defence of governments initiating ICT projects, it is not often that security systems themselves fail. Rather, the root of the problem often lies with human factors. For all the security that has been designed to protect government systems from hackers and attacks, it is often an internal human factor that provides the greatest risk to security (Personal Communication, 2003a). In most cases, apparently, the greatest risk to ICT and e-government systems comes not from inadequacies in the system but from government employees. However, whatever the risk, it is the negative perception of the public that needs to be overcome and this can only happen when there is a strict regime of security in place and where security breaches are dealt with swiftly (Bradley *et al*, 2000). Security of any e-government system, regardless of whether it is central or local needs to be maintained and systems need to be kept secure if citizens are to have any confidence in ICT initiatives. This is especially so since the information that citizens are required to share is often of a personal and sensitive nature (Galindo, 2002). In this regard, there are two crucial parts to any security system. The first is to provide security for the ICT system against attacks and hackers, while the second is to maintain stringent controls against fraudulent use by employees who have access to private information supplied by citizens using the

system. The issue of security obviously has close links with other issues such as privacy and trust.

5.3 Privacy

Privacy is an important concern that could inhibit citizen's use of e-government since citizens will refuse to use or engage with any e-government system if there is the possibility that the information provided could be compromised. The major concern that many citizens have in this regard is the sharing of information between government departments and a lack of privacy with reference to their personal information (Crabtree and Curthoys, 2003; Galindo, 2002; Layne and Lee, 2001).

Presently, in New Zealand few government departments can share personal information with any other department, but there are a few exceptions. The Inland Revenue Department and the Ministry of Social Development are allowed to share information with other government departments in their efforts to minimise fraud, but for the most part government agencies are not allowed to share personal information with each other.[99] The government is trying to encourage some information sharing between departments as they try to increase efficiency with a whole-of-government approach, but this poses problems for citizens who object to their personal information being distributed across government departments. Essentially, information has become a commodity, especially as the Internet has made information collection easier and this has caused great concern for many (Castells, 2001; Selvin, 2000; Shapiro, 1999). It is the ease with which one can now gather information that is the concern, and anything involving the Internet is tainted by this perception. This includes e-government (Brown and Isakovic, 2003).

Many of the concerns surrounding the privacy of personal information can be addressed and mitigated by means of legislation (Galindo, 2002; Fountain, 2001). In New Zealand and Europe there are quite specific laws relating to personal information that cover what can and cannot be shared (Shapiro, 1999). However, in the United

[99] The IRD is allowed under legislation to share information with the following government agencies: Work and Income, Department of Courts, Labour Department, Accident Compensation Corporation, Education Ministry and Statistics New Zealand

States there are very weak privacy laws and as such there are very few safeguards to protect against the selling and sharing of information (Brown and Isakovic, 2003; Shapiro, 1999). Generally, most individuals think of their personal information as private, but often fail to take measures to ensure that they do not release this personal information to others (Shapiro, 1999). Few people will take the trouble to look at privacy clauses on web sites and will often fill in the information categories as required without checking to make sure the information is not to be shared or sold to other parties (Shapiro, 1999). Unfortunately, for governments, because of the association with the Internet and the nature of the information that is often required, such as income, taxes and so forth, many people are reluctant to share this freely with others and are not so willing to provide the information required. Because of this governments need to ensure that any e-government system protects the information that is gathered from citizens (Curthoys and Crabtree, 2003; State Services Commission, 2003c; Galindo, 2002; Layne and Lee, 2001; Bradley et al 2000). To ensure this, governments need to have strong privacy legislation in place that specifies clearly what personal information can be collected and shared between government departments and what cannot (State Services Commission, 2003c). Unless this happens, it is likely that most citizens will be unwilling to trust any system of e-government.

5.4 Trust

Trust is an important consideration that needs to be addressed in the implementation of any system of e-government. Because of the lack of face-to-face interaction on the Internet, it is difficult to establish a basis for trust and e-government is no exception in this regard. However, trust is also an aspect of everyday life, which is often taken for granted and because of this trust relates to any interaction with another person (Henslin, 1993). People form impressions of each other based upon a variety of signs and symbols, such as dress, body language, tone of voice, the words that are said and so forth. All of this is part of the interaction that takes place and from this people form an opinion as to whether a person can be trusted or not (Henslin, 1993). However, with the Internet interaction takes place in cyberspace where there is no direct face-to-face interaction. Most ICT communication is entirely based on text or image (Galindo, 2002). Because of this, it can be difficult to generate trust when

there are few cues that can be relied upon. In relation to e-government, there are two aspects here that need to be addressed. The first relates to governments and how they can trust citizens to be who they are claiming to be (the problem of authentication), while the second relates to citizens and the security of their personal information that is being entrusted to an ICT system (the problem of confidentiality) (Galindo, 2002).

The Problem of Authentication

For governments to be able to deal with citizens, they have to be able to identify who it is that they are dealing with. There are a number of areas where this is important. For citizens to be able to travel internationally, they are required to have a valid passport from their birth country or country of citizenship. To be able to get a passport, a citizen is required to show other forms of identification such as a driver's license, a birth certificate and so forth before the process can be finalised. The government generates each form of identification and with it, there is another number that is attached to that citizen's record. It is through these numbers and identifiers that the government is able to authenticate identity. However, the problem with this system is that individual government departments and agencies tend to generate their own identification systems along with their own databases to manage the data, consequently there is little collaboration and sharing of information. This can lead to a problem of duplication and authentication when it comes to e-government.

For e-government to be effective it is essential that a whole-of-government approach is taken and that departmental silos are broken down (Curthoys and Crabtree, 2003; Chadwick, 2003; Grönlund, 2002; Fountain, 2001). To enable this to happen, departments have to have a standard authentication process that operates across all departments (State Services Commission, 2003c). At present, this has not happened to any great extent and governments are having to work out authentication policies to be used with the implementation of e-government (State Services Commission, 2003c). In this regard, the British government is trialling the use of smart cards in some areas (Offices of e-Envoy, 2003). Smart cards contain a microchip that enables information to be stored on them. At the moment, the use of smart cards is not problematic, but there are a number of concerns about their potential use in the near future. Such smart cards have the ability to store a lot of personal information on

them and there is some concern that if one wants to make use of public health, education, welfare and other provisions, the government will require that all this information be stored on the smart card. Citizen right groups argue that this is invasive and undermines citizen rights to retain the privacy of personal information (Brown and Isakovic, 2003). However, this objection to the use of smart cards and authentication methods stems from a wider problem that government around the world face; citizens since the 1960s have lost trust in governments (Denton, 1999, Inglehart, 1999).

In New Zealand, the E-government Unit has been given the task of designing and eventually implementing an authentication policy that will enable e-government to work (State Services Commission, 2003c). What is of some concern though, is that to date there has been almost no consultation with the New Zealand public about what an authentication policy would entail. While consulting with the public is generally a time consuming activity that does require some expenditure to arrange, there are a number of benefits to this process. First, the government is likely to be able to reach a solution that takes into account the concerns of the public. Second, the public is more likely to trust the authentication measures that eventuate and therefore make use of whatever system is put in place.

For governments this is important because e-government will be non-operational without a standardised system of authentication that all government departments are able to use. Without a standardised system, each government department would be required to have their own method of being able to identify citizens using their services. This would increase bureaucracy and the resources required to implement e-government. However, governments have to tread a very fine line between implementing a standardised system of authentication so that e-government can be used to its fullest potential and implementing a system that infringes on the right of citizens to protect their privacy and personal information. Brown and Isakovic (2003) suggest that because technology has altered the balance between transparency and confidentiality, governments therefore need to adjust the legal definition of privacy to take account of this change. By doing this, it would also mean that governments can involve citizen rights groups and interested parties in the decision making process and

thus ease some of the misperceptions that are held about government authentication under any proposed system.

For e-government to work with any success, government needs to be able to implement an authentication system that meets the needs of each government department and agency, but at the same time ensures citizens can use it without fearing the perceived consequences of government surveillance and the loss of associated privacy. If governments can guarantee this, then it is likely that citizens will feel more comfortable using a system of e-government to apply for social benefits, complete their taxes and access all other services that the government can put online.

The Problem of Confidentiality

For citizens to be comfortable using e-government services or systems, they have to know where their personal information is going, what that information will be used for, and that its confidentiality will be respected. Essentially, citizens have to be able to have some trust in government and by extension, citizens have to have trust in e-government. Trust is important because people will not use e-government services if they do not have complete confidence that it works and that the ICT used is also secure. However, governments will have to work hard to build the trust because as Denton (1999) and Inglehart (1999) suggest, citizens have lost trust in governments and the way that government deals with citizens. This is, therefore, a problem not only for governments, but also for citizens.

For citizens to be comfortable using a system of e-government they have to be able to trust the security of the ICT systems that are put in place. As discussed, the Internet is perceived to be a risky medium to use because of the lack of security on some e-commerce sites and the number of well-publicised scams that have taken place through the Internet.[100] Because e-government is based almost entirely on the use of

[100] One recent scam has involved online banking services where a group of fraudsters sent emails to a bank's customers asking for their user codes and passwords. Some customers sent emails back with this information and from this, the fraudsters have been able to transfer the majority of the customer's money to another account (NZPA, 2004). This has occurred four times in the last seven months for

the Internet, e-government will suffer from the same negative perceptions as any other e-commerce site on the Internet. However, because of the position that governments are in whereby citizens do not have a choice as to who they deal with, governments need to ensure that there is some certainty that the security that is put in place with any e-government service is rigorous and is constantly updated and improved. This is mainly because of the personal information that citizens have to provide to government.[101] Another important factor though, is that citizens do not have much choice on whether they deal with a government department or not, whereas there is a lot of choice when it comes to e-commerce providers.

For e-government to be successful and to be used by citizens, governments will have to try to rebuild citizen's trust in government services and show that their systems are secure and private. To do this, the government in New Zealand needs to start informing people about e-government and the potential benefits that it can offer to citizens. Presently, very few people outside of government and the E-government Unit know that New Zealand is embarking on a large ICT project to transform the way that government operates and interacts with citizens. This problem is not just limited to New Zealand. As Curthoys and Crabtree (2003) report, there are very few citizens in Britain making use of the e-government services that are already online. This is despite the fact that the British government has run large marketing campaigns about e-government and the systems that have been introduced in a bid to encourage citizens to make use of the investment in e-government.

5.5 The Digital Divide

The digital divide has been a recurring issue throughout the thesis because it is related to many of the social issues that are relevant to e-government. The digital divide is relevant to ICT in general, not just e-government. However, because of the relationship between government and citizens, the digital divide is particularly relevant to e-government. Government services and information need to be accessible

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one bank, all of which reduces consumer's confidence in e-commerce services, but also in the Internet as a whole.

[101] Information such as IRD numbers, bank account numbers, benefit numbers, passport numbers, tax information, health information, addresses and phone numbers, date of birth, and a variety of other personal and detailed information.

to all citizens, not just those who have computers, and this is essentially the problem that governments face when implementing e-government. While e-government does not rely on the Internet, at present most governments are using the Internet as a key delivery medium. This creates problems because not every citizen has a computer with an Internet connection. While this situation is likely to improve over time, it is not likely to happen soon. The question that governments need to look at is whether it is worth speeding up this process with extra funding.

For some governments, the digital divide is posing enough of a problem that intervention has proved to be necessary.[102] The United Kingdom is spending 400 million pounds trying to reduce the digital divide (Moores, 2003).[103] This money is being used to fund 6000 UK Online centres which will help reduce the divide by subsidising computers for citizens and to train interested people in how to use a computer (Moores, 2003). The hope is that by providing a substantial amount of funding, the problem of the digital divide will be reduced through more people having a computer and being able to access the Internet, but also knowing how to use computers and their applications.[104] Further to this, in order to make e-government accessible to all citizens, the British government has provided computer terminals in kiosks in public places throughout the country. Both initiatives are enabling more people to have access to the Internet and to e-government and yet the use of the government's online services has still not been great.

In contrast to this, the New Zealand government to date has been reluctant to directly fund initiatives that might help reduce the digital divide, other than helping to supply broadband access to some rural districts. As yet, the government has not made any efforts to provide computer kiosks in public places, or help subsidise the purchase of Internet capable computer equipment. While there is some suggestion that computers are a luxury item and therefore the state should not be subsidising the purchase of

[102] For example, India plans to spend $2.7 billion over the next four years to bridge the digital divide there (Ribeiro, 2003).
[103] While the British government has stated that it will spend 400 million pounds to solve this problem, it has not stated the time frame within which this will be done.
[104] There has also been a lot of criticism about the way the British government is trying to reduce the digital divide. See for example Moores (2003) *The Great Digital Deficit*; Pullan (2001) *Pandora's Box*; and Jacobs, (2001) *Beyond the Spin : Labour's Manifesto for IT*

such equipment, there is a potential problem here insofar as e-government is reliant on people having access to computers and the Internet if it is to be used by all citizens.

The problem that the digital divide poses for e-government is that e-government is based around the concepts of service and information delivery by electronic means. While current research shows that New Zealand has an Internet penetration rate of 75 per cent, this still means that 25 per cent of New Zealanders do not have ready access to the Web and the Internet (Dextor and Parr, 2003).

There are many different ideas on how the problem of the digital divide might be addressed and there is much debate about the value of these ideas and whether government, both central and local, should intervene and help reduce the problems of the digital divide. To confuse matters further, there are many different facets to the digital divide. There are divisions that occur between young and old, male and female, ethnic groups, rural and urban locations, educated and uneducated, access to broadband and so forth. These divisions have been highlighted in a recent Statistics New Zealand report on the digital divide (2004). Using data from the 2001 Census with supporting data from the 2000/2001 Household Economic Survey, Statistics New Zealand has for the first time been able to look at the digital divide in some detail.

The main findings of the report show that level of education is a very important variable in determining whether a household is connected to the Internet. 68 per cent of households where at least one person is 15 or older or has a university qualification are connected to the Internet while households where no one has a qualification have a connection level of 12 per cent (Statistics New Zealand, 2004). Along with education, age is also an important factor. 55 per cent of households consisting of a couple and children are likely to be connected to the Internet, while households with one person (16 per cent), or one parent and dependent children (30 per cent) are less likely than all other household types to have access to the Internet. The number of children in a household also influences connectivity levels with half of all households that have two children under 15 being connected to the Internet, compared with a third of households with no children (Statistics New Zealand, 2004).

Income is the single biggest variable affecting whether or not a household will have a computer and be connected to the Internet. The proportion of households with computers increased with income as did Internet expenditure (Statistics New Zealand, 2004). Age was another important variable in determining access to the Internet. Access levels declined significantly in the older age groups. There is a noticeable declining trend from 50 years of age onwards with less than 10 per cent of people aged 80 and over having a personal computer or access to the Internet (Statistics New Zealand, 2004). In contrast, 56 per cent of households with a youngest occupant between the ages of 10-14 were most likely to have access to the Internet.

The other trend that is noticeable in these data is that households with at least one person who is identified as Asian were more likely to have a personal computer and access to the Internet than all other households analysed by ethnicity (58 per cent). By way of contrast 38 per cent of European households have Internet access compared with, 26 per cent of Maori households and only 23 per cent of Pacific households (Statistics New Zealand, 2004).

What is particularly evident is that the digital divide has implications that extend across society. It is not just one particular group of people that is affected by the digital divide but rather a number of different social groups. The implications of this divide in New Zealand means that people who are unable to access information technologies or who are without the skills to use computers run the risk of being excluded from possible social, educational, cultural and economic benefits. This has adverse implications for e-government since government information and services need to be accessible to every citizen not just a selected majority. However, New Zealand does have one of the highest rates of Internet access in the world. In 2002, New Zealand was ranked eighth in the OECD for number of Internet users and fifteenth for the number of personal computers owned per head of population (International Telecommunication Union, 2003; OECD, 2003). While this is encouraging it does also show that New Zealand does have digital divide issues that need to be resolved in the near future.

Digital Divide Initiatives

As mentioned earlier, the New Zealand government has committed itself to trying to solve the rural-urban divide by tendering contracts for broadband access in rural areas. This is being done under Project PROBE. Several contracts have recently been confirmed in conjunction with this project but these have yet to be implemented. The government has set aside an undisclosed amount of money for Project PROBE and the goals are to enable all rural schools and communities broadband access to the Web and the Internet.[105] One of the main advantages with broadband is that it is accessible 24/7 and operates on a separate network to the telephone lines, which are only capable of 56 kilobytes per second (kbit/s). Broadband allows downloading from the Web at a much faster rate.[106] Further to this, because of the breadth of the band being used, videos and large files can be downloaded and viewed easily and quickly. However, while central government is committed to reducing the digital divide in rural areas, there is a lack of interest in helping reduce the divide in other areas of society. This has been left to community groups and local authorities.

Under the direction of the Department of Labour and the Community Employment Group, communities can apply for funding and advice on helping to reduce the digital divide. Most of these projects are based around supplying a limited number of computers for the local community to use and some funding for educating the community in how to use computers and the Internet. Consequently, these projects are often very small in scale, have a focus on including employment and not all are successful.

Local authorities on the other hand, are better able to provide computers and the resources to use them through public libraries, which are funded by the local authorities themselves. However, some councils do not place a high priority on funding libraries and education programmes and so the results of this initiative is somewhat dependent and limited. In some of the larger metropolitan areas, computers are freely accessible and can be used for a nominal fee or free depending on what the

[105] The amount of money that has been set aside by the government for Project PROBE is undisclosed because of apparent commercial sensitivity.

[106] In New Zealand there are several broadband Internet Provides with the majority providing users between 128kbit/s to 256kbit/s for households. At the upper end of the market, there is talk of providing 512k/bit/s up to 100mbit/s for businesses.

user wants to do. For example, in Christchurch, there are public computer terminals that are available to all library users and can be used to surf the web at a nominal charge. However, for the digital divide to be reduced significantly, people need to have further access to computers especially when e-government becomes the norm and the government and local authorities cut back on face-to-face delivery of services and information.

While there are some initiatives overseas that place computer terminals in prominent public spaces and have them permanently linked to government web pages, this had yet to occur in New Zealand. It is highly likely that local authorities will provide these terminals and trial them as central government seems for the moment to be uninterested in supplying computers for the general populace. Local authorities have more of a vested interest in helping reduce the problems of the digital divide than central government because they are looking at introducing e-voting by 2007 and are at the moment investigating the feasibility of such an initiative. They are also required by law to help increase the level of participation in New Zealand's local and national elections and therefore have to look at ways to help reduce the digital divide.

Paradoxically, one consideration that is of concern is that the digital divide adversely impacts on citizen groups who could potentially benefit the most from an e-government system but who are least well placed to engage with such a system, groups such as beneficiaries, senior citizens, Maori and so forth. While it is not unreasonable to expect these groups to use computers in public places such as libraries, this is not an ideal situation and is one that the government should be trying to solve. However, there are other aspects of the digital divide that also effect the whole of society. Two of these are worth mentioning here. The first is social capital and how the digital divide relates to this, while the second is cultural capital and why this is important in terms of the digital divide. The lack of both social and cultural capital could have an adverse impact on the effectiveness of e-government and as a result could curb the ability of citizens to access government information and services and to participate more fully in democratic processes.

5.6 Social Capital

One of the ideals of e-government is that it will encourage citizens to become more involved in local and national democratic processes and as a result become more connected to others. In essence, e-government is about increasing social capital and integration among citizens by enabling them to engage with central and local government through the use of ICT. Robert Putnam (2000: 19) refers to social capital as "the collective value of all "social networks" [who people know] and the inclinations that arise from these networks to do things for each other ["norms of reciprocity"]." He goes on to explain that social capital includes a wide variety of quite specific benefits that flow from the trust, reciprocity, information and cooperation associated with social networks. Social capital creates value for the people who are connected and, at least sometimes, for bystanders as well (Putnam, 2000, 1995).[107] For governments introducing ICT into their existing systems there are a number of different levels at which social capital can affect the acceptance of e-government particularly within the public service itself and among citizens who are expected to use the systems. We will look at each level in turn.

The Public Service and Social Capital

Governments make laws and dictate national policies, but it is the public service that implements these policies. As explained previously, governments in democratic countries are elected and removed by elections. Unlike governments, however, the public service is not elected and it is more difficult to change the way that it operates because of bureaucratic inertia and the protection of entrenched interests. The public service is an institution in its own right and government requires its cooperation to help introduce major changes such as e-government. Social capital needs to be maintained within the public service for such changes to take place and be implemented.

[107] While Putnam is widely credited for bringing the term 'social capital' into vogue, there are many who are critical of his efforts. For further information see Ladd (1999) *The Ladd Report*; Edwards and Foley (1998) *Civil Society and Social Capital Beyond Putnam*; Portes (1998) *Social Capital: Its origins and Applications*; Lehmann, (1996) *Kicking in Groups*; Tarrow Cobb, C *et al* (1995) *If the GNP Is Up, Why is America Down?* A book that has a good summary of Putnam's work and that of his critics is McLean *et al* (2002) *Social Capital : Critical Perspectives on Community and "Bowling Alone"*

A number of authors have expressed the view that social capital and the acceptance of the idea of e-government within the public service is one of the critical factors for the success of e-government (Chadwick, 2003; Curthoys and Crabtree, 2003; Ronaghan, 2002; Fountain 2001). All of these authors suggest that unless governments can decrease the amount of fragmentation within the public service and enhance cooperation and collaboration between different departments (in essence social capital) e-government will have failed before it is even fully implemented since the public service will not accept an e-government system.

Fragmentation and the lack of acceptance by the public service are big concerns for governments initiating e-government. Generally speaking, some governments have made progress in starting to move towards e-government but the change has been slow. There is much frustration on the part of administrators and departments that are charged with the implementation of e-government because of other government departments dragging their feet in resistance (Curthoys and Crabtree, 2003; Ronaghan, 2002; Fountain, 2001). Part of the problem is the nature of the change itself. E-government works on the principle that individual government departments will work together and share resources where possible. However, there is a sense among some within the public service that government departments will lose their power, funding, autonomy and favour with government if they collaborate and share with each other (Fountain, 2001).[108] It is this attitude that works against the development of social capital and creates a difficult environment within which to introduce e-government.

Some of these problems with the lack of social capital within the public service can be solved with appropriate ICT training and information programmes being offered to the public servants. While training programmes are needed for public servants to be able to make use of the ICT being introduced and used, information about e-government is also required. One of the problems with e-government is that there is a fear among public servants that they will no longer be needed since it is assumed that ICT will streamline and eventually transform government. While some staff will lose their jobs in the process, e-government still requires people to do policy and analysis

work and to provide problem-solving services to both the government and citizens. Computers and ICT use are not infallible and e-government is not about to make all public servants redundant.

Another aspect of this problem is that many governments have introduced the concepts and ideas of e-government alongside public service reforms. In the United States, e-government was initially associated, and is partly still associated with public service reforms and in particular the National Performance Review (NPR) process which drastically reduced the number of government departments and public service personnel (Fountain, 2001).[109] The same thing applied in the United Kingdom, where e-government was seen to be a part of the restructuring of government disguised as modernising government (Chadwick, 2003; Curthoys and Crabtree, 2003). However, this association between e-government and public service reforms is not just limited to the Untied States and the United Kingdom. In New Zealand, the E-government Unit quite explicitly states that restructuring is part of e-government (State Service Commission, 2003c). This association does not help the implementation of e-government since it induces a climate of fear and suspicion among public servants. It need to recognised, however, that while e-government is about making government systems better and more efficient through the use of ICT, it is not necessarily about restructuring the public service.

The lack of social capital within the public service is of concern to the implementation and running of e-government. Presently, governments are only just beginning to appreciate that problems exist within the public service as they try to bring about revolutionary and institutional change such as e-government (Mattelart, 2000). For e-government to be successful and help to transform the way that government operates, governments will have to start addressing the lack of social capital within the government bureaucracy itself or face the risk of implementing a costly ICT system that is not used to its full potential because public servants fear to use it, have no desire to use it or actively resist it.

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[108] Fountain is writing about the US Federal government, however, the research is applicable to other contexts.

[109] Refer to chapter two for information about the National Performance Review.

Citizens and Social Capital

The lack of social capital among citizens is a matter that is complex and not as easily solved. Many of these problems are related to the digital divide, but are often not expressed as such. A lack of computer literacy is a problem since it impacts negatively on the ability of people to connect to the surrounding community through ICT. While it is only a relatively minor problem at present, it does have the potential to become a major issue as ICT becomes more commonplace in the everyday world (Lenhart *et al*, 2003; Larsen and Rainie 2002; Levin and Arafeh, 2002; Horrigan, 2001; Horrigan, Raine and Fox, 2001). A key aspect of social capital is being able to connect with one's surrounding community and to have a network of people with whom one can discuss and share knowledge, ideas, problems and so forth (Putnam, 2000, 1995).

As society has become more individualistic and the pace of life has increased, ICT is being used more and more as a convenience tool. An example of this is the increasing prevalence of Internet Banking services, whereby individuals can control their finances entirely from their computer and very rarely ever have to visit a branch bank. However, there will inevitably be people who are denied access to such services because of the digital divide. In terms of social capital, this could lead to a gradual undermining of community, as people who are adversely affected by the digital divide will find it increasingly difficult to participate in communities and local networks. This will become an even greater problem as more government services are offered online through the Internet, since it will be increasingly difficult to be able to access government services through traditional means such as a face-to-face encounter. All of this erodes the basis of citizenship, community ideals and social capital. This has the potential to lead to the emergence of a separate stratification system that is not based solely upon upbringing, wealth and status but rather on the ownership of a computer and access to the Internet.

While governments are hoping that the use of ICT and e-government will help increase the amount of participation in the democratic process among citizens, at present this is unlikely to occur. Instead, it is more likely that society and local communities could become more fragmented and isolated from each other as some

people are connected and have access to information available on the Internet while others are not. Social capital is incredibly valuable for the well-being of communities and society itself. The same applies to cultural capital

5.7 Cultural Capital

There is some concern that citizens will not have the required knowledge to engage with governmental services that are available online. In some groups within society there is a lack of ICT knowledge and there is speculation that these people will not be able to engage with e-government. There are two aspects to this problem, the first being that some individuals need education and training so that they can make use of government services that are available online, and the second is that government services need to be fairly basic so that everyone within society can access and use them in a proficient manner.

There is a required level of cultural capital that is needed before people can make use of the Internet efficiently. For the majority of people who use computers and ICT this is not so much a problem. However, there is some skill needed to be able to find information on the Internet without becoming lost, disorientated and frustrated. These are skills that many take for granted, nevertheless they are important skills that have been learnt and are often applied every time one uses the Internet.[110] The skills that are required are a form of cultural capital and they are vital to the proficient use of the Internet. Because governments need to be accessible through whatever means, cultural capital or the lack of it is an important issue for e-government

As with the digital divide, so too the lack of cultural capital among some groups within society needs to be addressed if e-government is to become the dominant means by which citizens will engage with government. It needs to be borne in mind that the lack of cultural capital in relation to ICT is partly a generational issue, and that with time the lack of cultural capital will become less of a problem. However, particularly for the present older generation and those who have limited education, the lack of cultural capital is a concern. For the most part, training and education

[110] According to recent marketing surveys, approximately 75 per cent of New Zealanders have access to the Internet whether it be through work, home or by other means (Dextor and Parr, 2003)

programmes that teach people how to use the Internet and e-government can solve this.[111] Presently, the New Zealand government is quite happy to leave these training programmes and initiatives to community groups and only provides limited direct funding to support such activities. As such, the government has tended to ignore the problem and to claim that it will become a non-issue as people increasingly learn about ICT and how to use the Internet.[112]

The second aspect of cultural capital is related to the need for government services to be basic so that services are useable. There are some services that are available online, one of these is the Student Allowance application forms. On paper these forms are, at best, often difficult to fill out and time consuming as there are a number of personal details that are needed such as bank account number, income and pay slips, IRD numbers and so forth. In a bid to make it easier and to reduce the turn-around time for approval at the beginning of each year, the Ministry of Social Development has made it possible to fill out the application form online. However, a number of problems have arisen. The address fields are very limited and do not enable a rural delivery option to be entered. For people who live in rural areas, this means that any correspondence via mail will not be able to be received. Other problems include the following: the system is hard and complicated to use; at times when there are a number of people using the site it is slow to upload;[113] there is only basic authentication required based on an IRD number and the Ministry's client number and there is only a very limited privacy and security statement. Generally, the system is not user friendly. While, this new system enables people to fill out forms via the Internet, as stated there are a number of problems that need to be fixed. It is clear from this that the lack of cultural capital and expertise in using web forms does need to be catered for by web designers particularly if they are designing a government site which is supposed to be accessible to all citizens.

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[111] There is currently some concern about the funding of community training courses. In a recent case the Christchurch Polytechnic enrolled 18,500 students in a computer training course and handed all students a CD-Rom to use, despite receiving 15 million dollars to train the students. This sort of education is not the answer to helping solve the digital divide (Association of University Staff, 2004).

[112] However, it would seem that the government does have some responsibility to provide funding for the right training programmes, particularly when e-government services become the dominant means for interacting with government departments.

[113] This is a problem that has occurred on a number of government web sites particularly those that deal with education and welfare services.

If the system of e-government that is being implemented is too complicated for the average person to use, then the ideals of e-government have not been achieved and the government needs to continue to improve the services offered. Because governments need to tailor their service to all citizens, there needs to be some appreciation of the lowest skill level and any governmental service needs to be focused at this level, particularly when there is a present lack of cultural capital within society.

5.8 Client, Customer or Citizen?

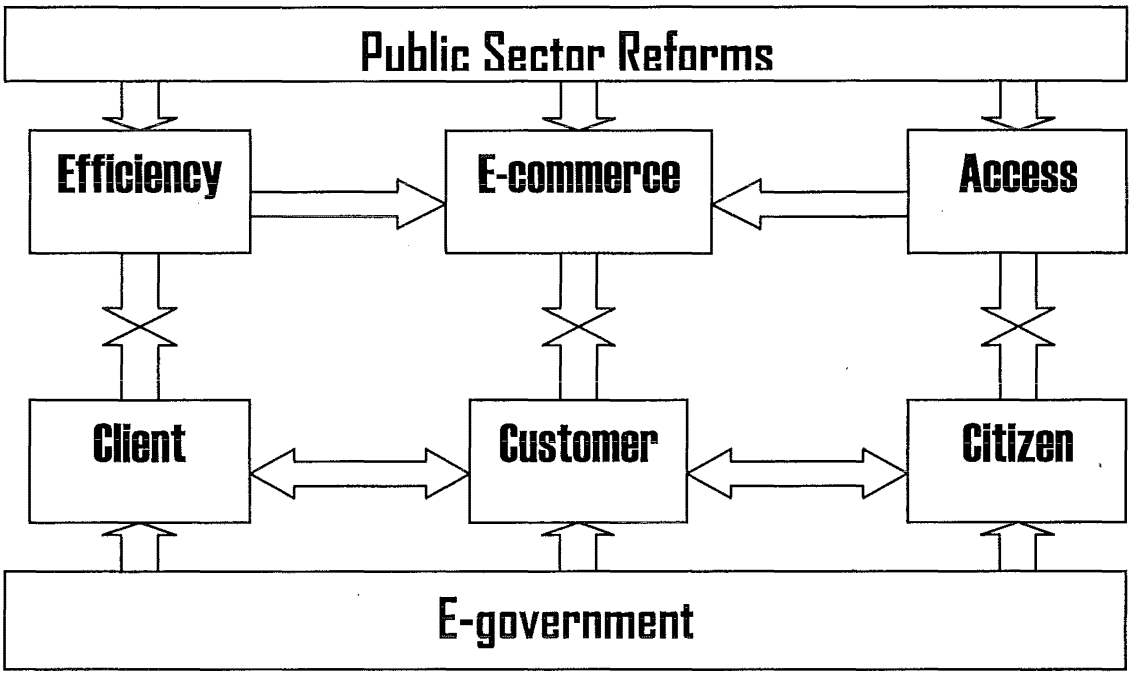
E-government is still a design concept that has emerged from the innovation and success of e-commerce, as well as from the new public management paradigms. E-government has been based on three main ideas; the need to make government bureaucracy more efficient and, in the process, reduce costs; principles taken from e-commerce; and the degree of accessibility for citizens of governmental services and information. In this regard, e-government has taken the ideas of e-commerce and applied them to government services and information with the aim of providing citizens with better access to governmental information and services.

However, there are a number of differences between e-government and e-commerce. As governments have become more involved with ICT and e-government, there has been a shift in the way that government relates to citizens. Whereas governments have had a reputation for poor service provision in the past, more and more governments and departments are realising that they need to improve their customer service. E-government is in some regards part of this new focus on customer service.

It needs to be borne in mind that e-government also fits into the public management reforms where new practices of managing the public service have been put in place, and e-government is seen to be an extension of this. Because of this, there is some tension between the way government deals with citizens and how it recasts them as customers (See Diagram overleaf). New public management with a focus solely on efficiency would treat citizens as clients where the client makes use of a government service and can be declined or accepted as that department sees fit. This relationship is different to that of both customer and citizen. E-commerce would see a citizen as a

potential customer where the citizen would have to buy a service or product from the government.

Diagram 5.1 The tension between Clients, Customers and Citizens



However, neither the client nor the customer has the same legal rights as that of a citizen. As a citizen, one has the right to vote, the right to basic health care, the right to social welfare, the right to freedom of speech, and so forth. Citizenship of a country gives the individual a certain amount of entitlements and legal protection of these rights. The challenge then for governments implementing e-government is to find a way whereby the use of ICT can balance the need for governments to increase bureaucratic efficiency by combining new public management systems and e-commerce principles while still treating citizens as citizens and not simply as clients or customers (Cornfield, 2003; Delli Carpini, 2003; Riley, C, 2003; Deltor and Finn, 2002; Vandenberg, 2000; Frantzich, 1999; Fullinwider, 1999).

Presently, it would seem this is not happening. Where government departments have in the past sent hard copies of forms and other documents without charging the recipients, now departments are telling individuals requesting information to

download and print the information from the department's web site.[114] Not only are government departments treating citizens as customers, but they are also creating a user pays system. Part of the aim of e-government is that government becomes more transparent and that citizens can have greater access to government documents. However, by referring citizens to a web site to print such documents, the government has introduced a system of user pays, which in some cases can widen the gap further between those that can have access to information and those that cannot for whatever reason. In this regard, the government is treating a citizen as a customer, which is a cause for some concern.

This problem occurs because e-government derives many of its underlying principles from e-commerce and new public management. However, a business involved in e-commerce does not have the same social and legal responsibilities as a government because they are dealing with customers rather than citizens. As a business, there is little need to ensure that every single citizen can have equal access to the e-commerce services that are being offered. Governments on the other hand do have a social and legal responsibility to ensure that every citizen can have access to governmental services and information whether they are involved with new public management principles or not (Cornfield, 2003; Delli Carpini, 2003; Riley, C, 2003; Deltor and Finn, 2002; Larsen and Rainie, 2002; Boggs, 2000; Vandenberg, 2000; Frantzich, 1999; Safdar and Seiger 1999).

How governments view citizens who make use of e-government services is an important consideration in how governments will view the social issues related to the use of ICT. If governments view citizens as clients or customers then there is little need or incentive for governments to address social concerns associated with e-government. However, if governments see e-government to be the main, and possibly only means by which citizens will interact with government in the future, then the social issues that have been identified do pose a problem for governments and will

[114] In my experience as a student eligible for student benefits I have be told that I have to either fill in the required forms on the Internet or if I want to have a hard copy and post them, then I have to print the forms out. In my capacity as a research student writing about e-government, I have requested information from several different government departments and have been referred to the web where I can print out the required information if I wish.

need serious consideration because all citizens have a right to be able to access government services and information.

The tension between clients, customers and citizens is an important consideration as more governments become involved in e-government. How government deals with this tension needs to be addressed before government is transformed into a fully functional e-government system. While change can be made when an e-government system is fully implemented, it would make more sense to address this tension before it comes into play.

5.9 Conclusion

The social issues that are relevant to e-government have often been down graded as governments have concentrated on the implementation of ICT. However, these social issues need to be considered before a system of e-government is implemented in order for the system to be utilised fully by citizens and public servants. The social issues that have been discussed in this chapter are only a limited selection but they are important. There is a lack of information and research into these social issues. This has come about because governments and those involved with e-government have been mainly concerned with the technicalities of implementing an e-government system. However, there is some concern that unless the social issues are looked at and solutions found where applicable, it is doubtful whether e-government would be able to transform government to be more efficient and cost effective while still being accessible and providing all citizens with information and services. Part of the problem is that there is not a fully functional system of e-government in existence and because of this governments are having to adapt as quickly as possible. The end result has been that many of the social issues that are associated with e-government have been ignored in this haste. The relevance and significance of these issues needs to be recognised and addressed if e-government is to achieve its true potential for governments as well as for the public-at-large.

CHAPTER 6
Conclusion

6.1 Introduction

E-government is an idea that emerged from the ICT revolution. It is a concept that has gained momentum in recent years with most western governments now investigating the use of ICT and the possibilities it presents for improving the way governments operate and interact with citizens. However, as yet, no government has fully implemented a complete and functional system of e-government and so there is a large amount of uncertainty about the actual potential that ICT could have in this area. This uncertainty poses a problem for governments since there is a considerable investment that is required to set up an ICT system. Nevertheless, many governments have started to move down this path to improve efficiency, reduce the cost of running government and increase levels of citizen participation in the process of government.

The use of ICT in relation to e-government has been a focus of attention since the early 1990s. The term had its origins in the United States before being quickly picked up by other countries particularly in the western world. However, e-government has only occurred because of the advances that have been made with the Internet and the World Wide Web. The Internet was initially developed in the United States in 1969 as a means of aiding communication in the event of a nuclear war. It was based within four research institutions but then expanded throughout the United States to incorporate other research centres. This system eventually became known as the Internet and was made available for public use in 1983. In its initial stages, the Internet was in a rudimentary form and was expensive and difficult to use. Business interest in the Internet was minimal at this time as it was considered to be an extremely risky venture. Thus, because the Internet was initially based within research institutions and has been relatively free of commercial control no single body controls or owns the Internet. This is seen to be one of the many advantages of the Internet, but it has a down side insofar as it means that there is little regulation and government control over the Internet.

It is important to bear in mind, though, that neither the Internet nor ICT are determinate technologies. Rather they are facilitative. While technology does help shape the way society operates, it is the take-up and use of the technology that helps shape society rather than the technology itself. This point is important as it relates to how governments implement e-government. E-government will not be completely effective unless citizens use it and governments need to consider this in designing their ICT systems. Such systems need to be user-friendly as well as informative and facilitative. Without this, e-government has the potential to become ineffective and to be a very costly experiment and governments around the world would do well to bear this in mind.

One of the confusions surrounding e-government is the relationship between it and e-democracy. Both of these terms are often used in conjunction with one another and with little distinction being drawn between them. For the purposes of this thesis, e-democracy has been separated out from e-government and is only considered in a tangential way. The rationale for this relates to the vast amount of literature that would have to be covered to do justice to both concepts. In addition, e-government is being primarily driven by government desire to use ICT in order to implement a more efficient and cost-effective bureaucracy. Because of this e-democracy is not high on the agenda of most governments at this stage.

6.2 The Literature

There is a wide range of literature (popular, governmental and academic) that deals with the concept and potential of e-government. Some of it is available in published form but most of it is only available electronically via the Internet.

The popular literature that has been reviewed concentrates mainly on the link between citizen nets and e-government. Citizen nets were initially set up in the mid 19980s as a way of allowing citizens to become involved with their local community to and provide a means whereby they could participate at a local level in decision-making. One advocate of citizen nets is Steven Clift, who believes that citizen nets provide a very good opportunity for citizens to voice their opinions and participate in decision-

making. He criticises governments that do not implement a system of e-democracy alongside e-government initiatives and believes that for e-government to be useful to citizens, an emphasis on e-democracy is vitally important. He provides a number of possible ideas as to how one could go about setting up a system of e-government. However, as might be expected the material that is found within the popular literature, written by Clift and others, tends to be light and does not contain the same substance as that found in other sources.

As well as reviewing popular literature, literature produced by governments was also reviewed. A particular emphasis was placed on literature from the United States, the United Kingdom, Singapore, Canada, Australia and New Zealand since these countries are to the forefront with their e-government initiatives. The United States and the United Kingdom in particular have started to introduce e-government in conjunction with restructuring their public sectors. This has made the development of e-government problematic in these countries since there is some resistance that has been generated by public servants. In contrast to this, Singapore and Canada embarked on implementing e-government systems without having a major restructuring programme in mind and to some extent have had a better rate of success with their initiatives. While the Untied States, the United Kingdom, Singapore and Canada have taken different approaches to the implementation of e-government, there is little to indicate which method is better than the other. The Australian government has begun to implement an e-government system that is similar to that of the United States and the United Kingdom, but influences from Singapore and Canada can also be traced in the Australian system. The New Zealand government, for its part, has been in a position where it is not leading the field in e-government initiatives and so it has been able to observe what other governments are doing and to learn from their experiences and mistakes. One of the interesting things about all six countries is that they are often ranked by other agencies, such as the United Nations, as being in the top twenty systems of e-government.

While the popular and governmental literatures are valuable in and of themselves, neither contain much about the wider social issues that are associated with the use of ICT within government. In this regard, the literature that has come from academia is of greater use. Nevertheless, there is presently no overarching body of literature that

is available relating to e-government. While there are formative social theorists such as Manuel Castells (2001, 2000, 1999, 1997, 1996), who have offered informed commentary and analysis on the topic, there is as yet no single framework for making analytical sense of e-government. Instead, there are fragments of different theories and frameworks that come together as a backdrop to what governments are doing in relation to ICT.

However, while there is little in the way of sustained academic research that relates specifically to e-government, there are a number of authors who have commented on the social issues that are associated with ICT and e-government. This literature has been reviewed and the issues that relate to e-government such as citizen participation, the digital divide, security, privacy and trust have been identified and discussed. All of these issues are of concern to the implementation of e-government. While it is not clear from the literature how these issues will be resolved, they are issues that governments will have to address if their efforts in relation to e-government are to be successful.

6.3 E-government and Public Sector Reform

A connection can be drawn between the implementation of e-government and the restructuring of the public sector. This connection is most obvious when looking at how the United States and the United Kingdom have gone about the application of ICT within their respective public sectors. However, this connection is also visible in other e-government systems too.

The New Zealand government, for example, engaged with New Public Management paradigms in the late 1980s and as a result of this there was a radical shift in the way that the New Zealand public sector operated. State owned Enterprises were sold off or made to operate as a commercial entity. State expenditure in the public sector was severely reduced and the government bureaucracy was reorganised to increase efficiency and introduce a business-style discipline. Neo-liberalism fuelled such developments and set the scene for the emergence of e-government as a concept. Most governments are looking at implementing e-government because of the potential it has for increasing efficiency and reducing costs, while still maintaining a level of

service to citizens. This is despite the fact that doubts exist as to whether ICT and specifically e-government can achieve this.[115]

The emphasis that has been placed on e-government's potential to reduce costs and increase efficiency has been cited as one of the reasons why governments are finding it more of a challenge to implement ICT into their operations than initially expected. Chadwick (2003) and Fountain (2001) argue that the emphasis on restructuring is detrimental to the application of e-government because of the fear among public servants that ICT will reduce the number of jobs within the public sector. Fountain is also concerned with the fragmentation that is present within the public sector, particularly in the United States. She argues that e-government is about changing government bureaucracy from a vertical departmental silo structure to a horizontal integrated structure so that a whole-of-government focus can be achieved (Fountain, 2001). The restructuring that has taken place in the United States as a result of the National Performance Review has induced the fragmentation that occurs with the public sector there. However, this is not just isolated to that country alone. It is a concern for most governments trying to implement a system of ICT. In New Zealand's case, the government has set up the E-government Unit and has charged it with the task, among other things, of trying to reduce the fragmentation within government, particularly as a system of e-government is implemented.

6.4 The E-government Unit

In New Zealand, the E-government Unit was set up within the State Service Commission in July 2000, and was given the responsibility of coordinating the implementation of e-government. The Unit has produced a number of documents that have been designed to help individual government departments implement their own ICT systems in such a way that a standardised approach can be taken to implementing e-government across all levels of government. As part of this thesis project, the E-government Unit's strategy documents were reviewed and analysed. These documents provide a timeline of how the E-government Unit has progressed with ICT and how the ideas have developed in response to different influences. As the idea of

[115] The main reasons for doubt are due entirely to the considerable costs that are involved with ICT and whether governments are capable of managing such a complex project as e-government.

e-government has developed and the complexity of it has become apparent, the strategy documents produced by the E-government Unit have become more focused and in tune with what is actually being implemented rather than simply reflecting the potential that e-government might be considered to contain. The main purpose of these documents is to provide some coordinated direction for individual departments as they go about implementing their own ICT system such that they will be compatible with a whole-of-government approach.

In this regard, the E-government Unit is not actually implementing all the parts required for an e-government system but rather is managing a number of smaller ICT projects that together when combined will eventually create a system of e-government for New Zealand. Because of the way that the government is approaching the task, reviewing the E-government Unit's strategy document is possibly the best way of understanding how the government is planning to implement ICT and what it is hoping to achieve by doing so.

In order to project manage the implementation of e-government, the E-government Unit has designed and is presently implementing a service delivery architecture. This will enable government departments to design their own ICT systems to suit their customer's and their own needs while still being compatible with the overall plan of creating an e-government system. It is almost solely through this architecture that the New Zealand government is implementing ICT into the existing structures of government. However, there is some concern that because individual departments and agencies are creating their own ICT systems, with guidance from the E-government Unit, the overall system that is created will not be compatible and each department will be further fragmented from other departments. Whether this service delivery architecture approach to e-government is effective is unknown but it would certainly seem on the face of it that it does have some merits.

In reviewing the strategy documents, it was found that there is a lack of consideration of a range of social issues that have the potential to cause problems for the New Zealand government once an ICT system has been implemented. In particular, it was found that the digital divide issue has delegated to the Department of Labour for attention. As a consequence of this very little concentrated attention has been given

within government to the potential impact that this issue may have on e-government. What was interesting to note was that the E-government Unit failed to mention the digital divide as one of the main challenges to be faced in implementing e-government. Instead, the E-government Unit lists the five main challenges as being authentication, privacy and security, governance, funding, data quality and measuring the uptake and effectiveness of e-government. While there is some justification for the Department of Labour to have the responsibility of managing the digital divide, it is of concern that the E-government Unit does not acknowledge the potential problems that this presents. However, it was also found that most governments and other agencies involved with e-government internationally are more interested in the technicalities of e-government implementation than in the social issues that accompany it. New Zealand is therefore not alone in this regard.

6.5 Local E-government

While the New Zealand government is starting to implement e-government, it is also trying to encourage local authorities to start implementing their own but within a system of e-government that connects central and local government. This whole-of-government approach has been a major emphasis in the e-government strategy documents. However, it has been left to local authorities themselves to decide how and if they will implement their own e-government systems. In this regard, it was considered important to review what local authorities are doing to implement e-government, particularly since the Local Government Act 2002 requires local authorities to promote democracy and community participation. Four local authority web sites were examined as case examples. It was found that all of these councils were implementing ICT in very different ways according to the council's needs and the needs of their local communities.

The Auckland region web portal was looked at because of the collaborative effort that had taken place between the seven different local authorities involved. For citizens wanting more detail, the portal contains web links to each individual council's web site. This site was one of the more basic sites reviewed, but this is mainly because this web portal is a relatively new development and there is a still a lot of to be done

on it. However, it was one of the best examples of collaboration within the government's whole-of-government approach.

The Hutt City Council has introduced e-government in a different way. Before ICT was integrated into existing structures, council staff spent time creating a strategy plan for initiating e-government and consulting with the local community to find out what it was expecting and what it was likely to use. Because of this approach, the Hutt City's web portal is very well organised and creative, while still conveying a community feel. The council realised early that it would be local people who would be the main users of the web portal and because of this, there was an effort to try and include input from them in the design of the portal as much as possible.

Dunedin has gone about implementing e-government in much the same way as the Hutt City Council. However, Dunedin City Council was one of the first local authorities to become involved with designing and implementing a system of e-government. Through an eighteen-month period beginning in 1998, a strategy for ICT was produced and since then the council has gone about implementing and improving their ICT system. The end result of this is that Dunedin has one of the best local e-government web sites in New Zealand and is often cited favourably at local e-government conferences and in publications.

The Christchurch City Council has used an old library web site as the basis for its web site, and through considerable upgrades, has formed a web portal that is the basis for their e-government system. However, the Christchurch City Council has placed a large emphasis on addressing social issues associated with the use of ICT. In particular, the council is trying to address the problems of the digital divide and has provided funding for several initiatives to address this. Further to this, the council has included a number of interactive facilities within its web site whereby citizens can voice concerns and receive feedback via email.

While all of these examples show the creative and innovative approach that local authorities in New Zealand have taken to the introduction of ICT it is nevertheless the case that a mere web presence does not itself constitute e-government. The local authorities that have been cited are therefore still some way off from having fully

functional e-government systems. Nevertheless, their use of ICT is encouraging. Part of the problem that local authorities face is that no external funding is provided to help offset the considerable costs involved in setting up an e-government system. While the Local Government Act 2002 requires councils to become more involved with the local community and with encouraging participation in the democratic process, it does not provide resources to help achieve this. As a result, there is some concern on the part of smaller councils, particularly those with large boundaries but sparse populations that they may be left out of a whole-of government approach to e-government and that, they and their ratepayers may be disadvantaged because of this.

6.6 The Associated Social Issues

There are a number of social issues associated with the implementation of e-government that have been considered in this thesis. Six social issues in particular were analysed and reviewed - security, privacy, trust, the digital divide, the lack of social and cultural capital and the tensions between the roles of client, customer and citizens. All of these issues have been identified as being important for the successful implementation of e-government. Because of their significance as technical aspects of the ICT systems being implemented, security, privacy and trust are issues, which most governments are aware of and in some cases are working to address and resolve. However, other issues such as the digital divide, the lack of social and cultural capital and the tensions between the roles of client, customer and citizen are more social than technical in nature and so tend to be accorded little attention by government.

Most governments involved in implementing e-government systems are designing privacy and authentication policies, which mean that concerns related to security, privacy and trust may eventually be eliminated. Research has shown that most citizens do not trust government. This lack of trust is further compounded by the fact that the Internet is seen to contain security risks and anything that uses the Internet as a delivery medium suffers from the same perception. Any privacy and authentication policies that are eventually implemented by governments will need to be robust to help quell the concerns that citizens have about e-government. The policies will also need to be transparent and allow for the community to have some input into their

design. This is an important factor to bear in mind since e-government is designed to make government information and services more accessible for citizens.

The digital divide has serious implications for any system of e-government. It may be the case that the inequalities inherent in the digital divide resolve themselves in due course without the need for government intervention. However, at present the digital divide is an issue that governments need to start acknowledging and addressing. To this end, the New Zealand government's Project PROBE initiative is intended to enable broadband Internet access to rural areas first by connecting rural schools and later, depending on funds, key urban areas. This is only one of several initiatives that are being implemented to try and reduce the impact of the digital divide. Several local authorities in New Zealand are also looking at how they can help provide access to the Internet through local libraries and schools. All of these initiatives will become even more significant with the introduction of ICT into more and more areas of society.

The issues that surround a lack of social and cultural capital may prove to be equally difficult to resolve. Both are related to the digital divide. Social capital is concerned with integration and connectedness within local communities and the advent of e-government has the potential to increase this. Alongside this, though, there is also a concern that the introduction of e-government may increase the social gaps that already exist within society primarily due to the digital divide. There are two aspects to the lack of social capital that are of interest. The first is the lack of integration within the public sector. In New Zealand, e-government has been designed around a whole-of-government approach and fragmentation and a lack of collaboration and cooperation between government departments threaten this. The lack of social capital within the public sector therefore presents a challenge for the New Zealand government and one to which it would be well advised to pay attention.

The second aspect is the lack of social capital within local communities. A key feature of social capital is being able to connect with one's surrounding community and to have a network of people with whom one can share knowledge and information. However, with the introduction of ICT and other technology, there is concern that connectedness and community networks will be undermined due to the

fast pace of life and the fact that there is little time available for community interaction. Again, this also relates to the digital divide, as there are some groups within the community who would be unable to participate in their local community without the use of ICT. This is of some concern particularly when e-government is fully functional as there will be some people who will be effected by the digital divide and will not be able to access government services and information. This is particularly relevant when local authorities start to implement a form of e-government and community groups become involved in this.

The last issue that was analysed was the tension between the roles of client, customer and citizen. E-government is a design concept that is partly based on e-commerce and new public management paradigms. While this has led to an emphasis on efficiency, governments are also trying to make it easier for citizens to access information and services. However, the tendency for governments to view people as clients or customers causes some tension with relating to them as citizens. By virtue of citizenship, citizens have more rights than do customers or clients. A citizen has the right to vote, collect a benefit if eligible, have a passport and a number of other privileges that go with being a citizen. A customer or client does not have these rights, yet many governments are moving to view people more as customers and clients rather than as citizens *per se*.

While some of these social issues can be ignored for the time being, there is some concern that unless these issues are resolved before any ICT system is fully implemented e-government will not be as successful as hoped and will not live up to the many expectations that have been placed on it. One of the compounding problems with e-government is that there is a lack of research on the social issues that are associated with ICT. While there is a lot of research being carried out by think tanks, government departments and scholars in relation to e-government, most of this has concentrated on the technical issues relating to the setting up and implementation of e-government systems. One of the key arguments presented in this thesis is that there is a need for social research to be conducted that will look into these issues. When implemented, e-government has the potential to be used by every citizen. This is why these social issues are particularly important and need to be addressed. For

governments to be able to successfully address these issues, however, more research is required.

6.7 Postscript - New Developments

Information and communication technology is constantly changing. Governments around the world have developed an interest in the area of e-government and because of this, new reports relevant to e-government are being produced on a frequent basis and new developments are taking place. One of these developments in New Zealand has been that a new head of the E-government Unit was appointed just as this thesis project was nearing completion. Because of this, there are a few changes in the focus of the E-government Unit that are worth mentioning.

In Chapter Three, the E-government Unit's strategy documents were reviewed and analysed since they provide a timeline for the implementation of e-government. In the majority of these documents, the focus has been on cost reduction and improving bureaucratic efficiency throughout government by the use of ICT. With the appointment of a new E-government Unit head, however, this focus has changed to include a stronger customer focus. Laurence Millar, the new head, believes that any system of e-government that is implemented needs to concentrate on the requirements of the customer and needs to include a customer relationship management system. Millar stated in an interview in April 2004 that the next major challenge for e-government in New Zealand is to switch from a "supply-driven" system, which tends to focus on the needs of government agencies, to a "demand-driven" system which concentrates on the needs of the customer (Millar, cited in Bell, S., 2004). Millar went on to say, "When you do business with one department of a company, it is no longer a surprise to you if you get a relevant communication from another part of the same company" (2004). For government, this approach means that departments share citizen information smoothly and that the individual departments and agencies are able to coordinate with other relevant departments to help the citizen where required. While this is part of the whole-of-government approach, it represents an interesting and significant shift in emphasis.

The other aspect that Millar talks about is the possibility of creating an m-government system in New Zealand. M-government is for the most part exactly like e-government except that instead of using the Internet as an enabling medium, m-government uses mobile technology such as mobile phones to relay information to citizens and to enable citizens to access information. As the use of mobile technology has increased, the potential for m-government has become more of a reality rather than simply a distant possibility. Millar believes that m-government is an increasing possibility and one that the E-government Unit will be investigating (Bell, S., 2004). This again is an interesting and significant development.

Like New Zealand, a number of other governments are looking at the feasibility of creating an m-government system that would operate alongside an e-government system. However, since m-government is a fairly recent development, it is not clear whether it will replace "classical" e-government, whether it is just a new access channel or whether m-government will completely change the way that information and communication is handled within and by governments (Roggenkamp, 2004).

Howard Rheingold in his book *Smart Mob* (2002) advocates the use of mobile technology and is one of the first social commentators on the implications of this development. He argues that "mobile communication and pervasive ICT, together with social contracts that were never possible before, are already changing the way that people meet, mate, work, fight, buy, sell, govern and create" (Rheingold, 2002; xix). He states that large numbers of small groups will create emergent effects that will nourish some existing institutions while dissolving others. Rheingold predicts that people will band together and tap into the power of collective action to form anything from "lynch mobs to democracies" (2002; xix).

Mobile communication technologies offer a very powerful tool and m-government is an application of this technology. Already, mobile phones have changed the way that we communicate through the use of text messages and short forms of interaction. Worldwide the number of mobile phones is increasing exponentially and has already surpassed the number of households with Internet access. This in turn has created the potential for government to have greater access to all citizens rather than simply those with access to the Internet. Because of this, being able to offer e-government services

via mobile phone technology is gaining in popularity with governments around the world.

The potential for government to be able to supply information and services to increasing numbers of citizen through mobile phone technology is very promising. Recent statistics show that globally there are over 1.32 billion mobile phone users, including 34.6 million users in Africa alone.[116] Because mobile technology is relatively cheap and simple to use, a number of developing countries are investigating the potential that m-government might have. In addition to this, because telecommunication companies often supply the mobile communication infrastructure, the necessary resources to enable a system of m-government to be put in place is far less complex and expensive than that of e-government. This makes it a very attractive option for a number of governments, particularly in developing countries.

Because mobile phones are relatively cheap to purchase and use, more people have a mobile phone than a computer and therefore the digital divide does not have the same impact when it comes to mobile technology. This is one of the advantages of m-government. As the statistics above show, there are more people worldwide with a mobile phone than with Internet connections and this is increasing rapidly. The advantage that this provides for government is that more citizens can have access to the information and services that are being offered. While an issue such as the digital divide is still pertinent to m-government, it is not as significant as it might be with e-government.

Furthermore, with recent developments such as being able to pay for services via mobile phone, the potential for m-government is not limited to information. The same technology could provide a means for citizens to pay taxes, collect benefits and other social services, along with relevant information about other government services for which citizens might be eligible. There would need to be a similar authentication process involved with using such methods, but a lot of the complexity of e-government is not present with mobile technology. Most mobile phones already contain an identifying computer chip (often referred to as a SIM card) so that each

[116] Statistics found at http://www.cellular.co.za/stats/stats-main.htm

individual has a different phone number. If m-government was to be implemented a SIM card could be used as a way of authenticating different citizens according to the personal identifiers that are already contained on the SIM card, cutting down on costs and limiting the problem of government inference by introducing authentication processes needed to use e-government.

Like e-government, m-government has a lot of potential for governments and citizens. However, regardless of the potential that m-government has, there are a number of issues that still need to be addressed. The potential of any system of ICT that is implemented by government can only be reached if the social issues are resolved. The major problem that governments have is that citizens need to have complete access to government services and information and anything that impedes this access is a limitation. While the use of ICT has a number of advantages for both citizens and government, governments need to bear in mind that while ICT will create more efficient systems of bureaucracy, the main advantage of ICT is providing citizens with better services.

6.8 Concluding Comments

> "True organisational change requires cultural acceptance of the new structures, and e-government has a long way to travel before it is both culturally accepted and actively supported. In fact, to achieve permanence, e-government practically needs to disappear. It needs to be everyday, an accepted feature of office life and departmental styles in the same way as making a conference call, surfing the Internet and booking paper supplies is today" (Curthoys and Crabtree, 2003: 50).

E-government represents a daunting challenge to all governments looking to implement ICT. However, it is not an impossible challenge. E-government has the potential to not only transform government but also the way that government and citizens interact. A number of unknowns still remain, however. While governments have become involved with the implementation of e-government, this has not been without hesitation. E-government is expensive to implement and it does require a considerable amount of resources to build and maintain such a system. While there

are a number of benefits that accompany it, there are also a number of challenges that will need to be addressed if e-government is to transform the way governments operate. Like most things that involve ICT and "new new" technologies, there is a lot of potential for it to change the way society uses technology, but the potential might not necessarily translate into actuality. It is for reasons such as this that e-government will remain a fruitful area of sociological investigation for some time to come. This thesis represents an initial attempt to lay down some of the ground work for what is happen with e-government at the various levels in New Zealand and for further sociological investigations into ICT and in particular e-government.

METHODOLOGICAL APPENDIX

The focus of this thesis is a sociological investigation of e-government with a particular emphasis on how e-government is being implemented at various levels in New Zealand. The project was begun in early 2003 and is part of a larger research programme that is investigating the social and economic impacts of ICT.[117]

The beginning point for the research the topic was to look first at e-government as a concept. Because e-government and e-democracy are similar but very distinct, it was decided early on that the thesis would focus quite explicitly on e-government rather than try to analyse both terms in the same project.

In order to investigate e-government, of course, it was necessary to first look at the history and development of the Internet and the implications that this had for e-government. The relationship between the Internet and government is a fascinating one. No one owns the Internet, there are very few regulations to govern its operation, and governments have tended to ignore it for the most part, despite the fact that the United States government was highly involved in its initial creation.

Having researched the history of the Internet, the parameters of the thesis needed to be decided upon. To set a context for what was happening with ICT and government in New Zealand, I first looked at how the United States, the United Kingdom, Singapore, Canada and Australia were implementing e-government in their own particular situations. This provided an interesting insight into some of the problems that these countries have faced with the implementation of e-government as well as some of the strategies and solutions that they have adopted. This review provided a

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[117] The research programme is based in the Management Department of the University of Waikato with involvement by two researchers at the University of Canterbury – Professor Les Oxley of the Department of Economics and Professor David Thorns of the School of Sociology and Anthropology. This research programme aims to increase the ability of public and private sector agencies to evaluate and respond to some of the socio-economic consequences of advances in the use of ICTs. The main research focus is to identify and explain the major economic, strategic and structural consequences of ICTs and their future growth, such as changes in earnings and income distributions, and generation of employment opportunities; and to identify and explain the major social-cultural consequences of ICTs, particularly in relation to the empowerment of relatively disadvantaged groups: women, Mäori, new immigrants and Pacific Islanders. The programme is funded by the Foundation for Research Science and Technology Grant UOWX0016.

lot of useful background information on e-government and set the scene for taking a closer and more detailed look at e-government developments in New Zealand.

It was at this point that a rather crucial decision was made regarding to the direction of the thesis. There are a number of social issues that are particularly relevant to e-government that had been identified and researched. Because of this, there was a choice between looking at one issues in an indepth manner and see how it links to e-government and provide all the analysis needed for one issues, or to identify a number of social issues and look at some in lesser detail but provide the background work needed for research to continue from this start. Consequently, I decided to look at a number issues rather than limit the thesis to one major issue. Naturally there are disadvantages and advantages with each approach and the author is ver aware of them.

In order to flesh out some of the detail on the New Zealand situation, a number of people were interviewed during 2003. The logical place to start interviews was with the E-government Unit based in the State Services Commission in Wellington. In this connection, I interviewed two policy analysts in July 2003. The first was Russell Craig, who provided a lot of the detail about how the E-government Unit is beginning to construct the parts required for e-government and the whole-of-government approach that is necessary for e-government to work successfully. The second was Colin Jackson who provided insight into how the New Zealand government initially set up its web site and the E-government Unit itself. Both interviews proved to be useful in fleshing out the information provided in the E-strategy documents produced by the Unit.

To complete the picture, further interviews, conducted in person or via email, took place with Simone Pearson, head of the Christchurch City Council E-council team; Ursula Matthews, an IT advisor with the Rodney District Council; and Jan Rivers a Policy advisor from Local Government New Zealand, along with a number of other people that provide information. The material from these interviews provided useful background on the implementation of e-government at local level government. This background information was needed since the information available on how local authorities are implementing e-government is quite limited.

To provide a more complete view of the e-government implementation process in New Zealand a number of key documents were located and analysed (See entire Bibliography for documentmentation analysed). These were the vision and strategy documents produced by the E-Government Unit between 1999 and 2003. The documents were then combined with the information gained from the interviews to help complete the picture. While the interviews helped update the information, provide extra material, and provide explanation to the published documents, the documents that were reviewed provided a timeline of what was being done with e-government and the rationale for these developments. It would be difficult to research e-government without combining interviews with document analysis.

The end result of this process was qualitative research that combined document analysis with material gathered from interviews to produce an analytic description of how e-government in New Zealand is being implemented at a local level (particularly by four local authorities), strategised at a national level (through the work of the national E-government Unit) and sits within a comparative international context (by comparing New Zealand e-government developments with what has taken place in the United States, the United Kingdom, Canada, Singapore and Australia).

Most of the documents that have been used throughout this thesis have been published on the Internet. While the amount of information available on the Internet is large, some care does need to be taken when using such information (Hewson, 2003). Unlike with a published journal or book, there is little if any peer review of material that is made available on the Internet (Hewson, 2003), instead one relies heavily on the credibility both of the material itself and of the web site from which the material is sourced. For the most part, it was relatively easy within this project to decide which material was valid and credible and which was not. The majority of the information used has come from research groups, institutes, consultancy companies and governments and has also been published in hard copy. However, even the material from these more credible sites has been reviewed carefully and comparisons have been made with published documents that have gone through the process of being peer reviewed.

Thus, through a combination of material such as academic publications, government reports, interviews, research material derived from the Internet, newspaper and magazine articles along with opinions found on the Internet and in published form I have attempted to develop a sociological analysis of e-government both in a comparative international context and also in the local context of how e-government is being implemented locally and nationally in New Zealand. Hopefully, this will lay a durable foundation upon which future research work can be developed.

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