



**Centre for International Research on
Communication and Information Technologies**

**The User Perspective in Government
Electronic Service Delivery (ESD)**

Supporting Material

**by Ross Kelso, Alistair Tegart, Annette Ryan,
Supriya Singh, Terry Laidler and John Burke**

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The Centre for International Research on Communication and Information Technologies is a research centre at the Royal Melbourne Institute of Technology.

CIRCIT was set up in 1989 to provide independent research and education on information and communication services. The aim is to create new knowledge that is relevant to the community, industry and government so as to increase the social and economic wellbeing of people in Australia and other parts of the world.

The CIRCIT research program is structured around three main themes:

1. Use and Users of Information and Communication Services

The research focuses on the use of information and communication services by residential users, small businesses, corporations and government. It covers the broad area of communication in activities such as payments and finance, work, health, education, entertainment and government services.

2. Policy and Regulation of Information and Communication Services

Policy and Regulation of Information and Communication Services focuses on national strategies and objectives, competition, and issues of access and equity.

3. Information and Communications Industries

Information and Communications Industries research deals with developments in information technologies and services, industry policy and infrastructure issues.

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Enquiries regarding details of the research agenda and sponsorship opportunities should be directed to:

Director, CIRCIT at RMIT, GPO Box 2476V Melbourne 3001, Australia Tel: +61-3 9925 2829; Fax: +61-3 9925 3122 Email: circit@rmit.edu.au

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Section 1: Current Approaches to Government Electronic Service Delivery

Section 2: Summary of User Surveys Concerning the Delivery of Government Services by Electronic Means

Section 3: The User Perspective in Online Government Services: A Qualitative Study

Understanding the User Perspective in Government Electronic Service Delivery (ESD)

The project *Understanding the User Perspective in Government Electronic Service Delivery* was conducted by CIRCIT from July 1999 to November 2000. It was jointly funded by the Department of Communications, Information Technology and the Arts, Nortel Australia and Multimedia Victoria.

The study sought to answer the questions:

- (i) How do citizens currently carry out the activities to which Government electronic service delivery (ESD) approaches are directed? What are the channels that are used and what influences the choice of particular channels?
- (ii) What are the implications of this use for the provision of online services in a way that benefits users?
- (iii) How are current approaches to Government ESD taking into account these issues?
- (iv) How can the development of Government ESD better take into account the user perspective?

The study was conducted in two phases of initial research and analysis and subsequent application of these conclusions to a practical case study proposing new strategies for Victorian Government electronic services.

Report of project

The final report of this project is available as CIRCIT Research Report No. 29

Supplementary material

This supplementary material consists of three reports produced in the research phase, conducted between July 1999 and February 2000. (Some important material which has subsequently become available has been identified but not fully integrated into these reports.)

Section 1

Current Approaches to Government Electronic Service Delivery

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1. Introduction

In the first phase of the study we reviewed the current approaches to electronic service delivery by governments. Whilst the main focus is on Australian state and commonwealth agencies, reference is also made to representative studies from the United Kingdom, the United States of America and Canada.

2. Service categories for Going Online

There are a number of ways to categorize service delivery, whether effected online or via conventional channels. One basic distinction could be between ‘access’ which implies a passive relationship between the customer and service provider, and a ‘transaction’ which implies a degree of interaction between the two parties.

In reality, the different service categories are more complex than that and exhibit characteristics that confuse such a distinction. A more expansive categorization of services could be:

- Information access, receipt;
- Information submission;
- Information transaction;
- Financial transaction.

although these then need to be further modified to reflect any requirement for security, such as information authentication, customer authentication and/or privacy.

2.1 Information access, receipt

Information access:

Common examples	Characteristics
<ul style="list-style-type: none">• <i>Public transport timetable</i>• <i>Conditions for a permit</i>	The customer anonymously seeks information that is freely available in the public domain.

Information receipt:

Common examples	Characteristics
<ul style="list-style-type: none">• <i>Notification of a change in policy</i>• <i>Provision of an invoice</i>	The service provider sends information to an identified customer or groups of customers. It further becomes a transaction if there is a need to verify receipt of the information or if the information is in response to a prior request.

Variations to the above arise when a degree of security becomes necessary. For example, a tender document or birth certificate may have to be certified as being authentic upon receipt by the customer. Furthermore, a birth certificate may require payment before delivery in which case it must be preceded by a financial transaction.

2.2 Information submission

Common examples	Characteristics
<ul style="list-style-type: none"><i>Lodgement of a complaint or opinion</i>	The customer, usually identified, sends information to the service provider. Such information would typically be unsolicited, however a reply or other form of interaction may eventuate.

2.3 Information transaction

Common examples	Characteristics
<ul style="list-style-type: none"><i>Making a request, eg. for a new rubbish bin, notification of change of address, making an appointment</i>	The customer, usually identified, requests a provider to take some action, eg. to provide a service or send some information. Such a request may also call for some form of receipt to facilitate any audit trail. A reply or other form of interaction would typically be expected.
<ul style="list-style-type: none"><i>Submission of a proforma, eg. submission of a tax return, application for a permit</i>	The customer accesses a proforma, fills it in and then returns it to a service provider either by postal mail, facsimile or even electronically. Such an action may also call for some form of receipt to facilitate any audit trail. The identity of the customer would typically need to be assured through some form of authentication. There may also be a need for a payment to accompany the form.

2.4 Financial transaction

Common examples	Characteristics
<i>Payment of a bill, fine or licence</i> <i>Payment for a service</i>	The customer, usually identified, is required to execute financial authentication, followed by obtaining a receipt to facilitate any audit trail. A paid service may also constitute information sent to the customer, or acceptance of a completed proforma.

3. Approaches Adopted by Governments

3.1 Philosophy of Service Delivery

When electronic means are introduced along with conventional service delivery, the pervasive philosophy is one of presenting the totality of services with a ‘whole-of-government’ perspective. Due to market surveys results indicating that the customers of government do not wish to make the distinction between various government departments or agencies, or between the different levels of government (viz. federal, state, local), increasing attention is also being given to a ‘whole-of-governments’ approach. However, no significant examples have been found where such an integrated approach has yet been fully implemented.

An interesting variation is between a ‘whole-of-(state) government’ versus a ‘whole-of-state’ representation of at least the access to information. *Access Washington* provides users with easy access to non-government Web links and *BC Online* also provides access to non-government information products. The UK government has developed plans for government services to be delivered through third parties who will be allowed, subject to certain controls, to package those services with non-government ones. *South Australia Central* also serves as a gateway to both government and non-government Internet sites. The imputed advantage of these approaches is the increased ease for customers to undertake their business, but brings along with it the potential disadvantage of mis-branding, misrepresentation or unfair exploitation of government services.

Synonymous with a ‘whole-of-government’ philosophy is the desire for customers of government to experience services that:

- Present a ‘single face’ of government, a ‘seamless interface’ between various departments or agencies;
- Offer a ‘one-stop shop’ experience, implying that the one interface or channel will provide access to the services of multiple departments or agencies;
- Are available, as much as possible, 24 hours a day and 7 days a week.

Not uncommonly, the above rhetoric has often been unmatched by reality. Implementation targets have been boldly declared in public statements without a full realisation of the massive impact on business processes to be re-engineered between departments and agencies and the corresponding resources to be expended. Unrealistic assessments were initially made of short-term savings that now appear to be unachievable. In many instances, this mismatch between rhetoric and reality has led to a subsequent re-statement of targets that are more achievable, delays in availability of online services and delays in presentation of services in an integrated manner across various delivery channels. The inevitable result has been confusion in the eyes of customers and slower acceptance of online service delivery than was originally foreshadowed. Many governments are now establishing benchmarks or indicators of progress towards the end targets, and detailed strategies for inter-agency cooperation through common plans and processes.

British Columbia provides a good example where the government has worked closely with the dominant telecommunications carrier to ensure that the required infrastructure would be widely available at an affordable cost to facilitate online access. Other governments have also recognised the need for policies requiring universality of telecommunications services, affordability and bandwidth availability – although they may not be in a position to bring about these outcomes.

A significant differentiator has been the willingness or otherwise of governments to shoulder the financial risk of introducing electronic service delivery. A number of variations have been observed:

- The developmental and/or operational risk may be fully or partly shifted to a non-government party under contract. In these instances, the cost of service delivery will need to be recovered earlier than otherwise and more so in a 'user-pays' manner, either directly from the customer or from the agency as service provider. Texas has outsourced its AccessTexas Information Center and the British Columbia BC Online operation has been privatised. A possible disadvantage of these arrangements, depending upon the particulars of the contract, can be a slower uptake of online services and/or a preference for service provision involving financial transactions;
- One or more third parties can be contracted to co-channel government services along with their own. Such parties can be supermarkets, banks or local governments. The UK government plans to adopt this approach as an adjunct to their own channels but with appropriate controls to protect the government 'brand' and intellectual property;
- In-house development of electronic services implies the acceptance of the financial risk within government, in return for greater control of outcomes and hopefully increased uptake of online services. Governments can also move to favour their own agencies in the interest of perhaps enhancing local employment prospects and/or ensuring an outcome that market forces would not otherwise address. Two examples come to mind: Washington has announced that its agency responsible for ESD planning would also become a digital Certificate Authority, and Queensland has left open the possibility for their state-owned CITEC to become a whole-of-government service provider.

3.2 Delivery Channels and Technology

It is usual for governments to espouse the principle of exploiting all possible delivery channels in a technological sense. These commonly include over-the-counter, telephony, kiosks and the Internet. In practice, adoption of all such channels has been a mixed situation. A major task has been the complexity arising from the need to integrate services in a seamless fashion from all agencies across as many of these channels as is practicable.

- New Brunswick and Tasmania are good examples of where the 'shop front' or over-the-counter channel has been deliberately designed as the pre-eminent means of delivery. Queensland's Government Agents and New South Wales' Government Access Centres address the need 'one-stop shop' presentation of agency services to rural customers.
- The provision of call centres has posed the greatest difficulty due to the cost and complexity of operation, as well as the need for databases that are integrated across all agencies and other channels. It is, however, rare for governments to adopt a single number for telephone access. Of particular interest is the US example, developing in Texas and other states, of a national telephone number for anyone in that country to access information and assistance on a specific category, such as health and human services. QDIAL in Queensland provides a single free call number for rural customers to access services from agencies headquartered in Brisbane, in addition to a separate scheme for providing advice from travelling field officers.
- Kiosks are widely spoken about but not commonly implemented. First developed in the US pre-Internet days, they have suffered from excessively high expectations and inadequate design. However, Australian pioneers such as the ACT government and the Brisbane City Council have successfully deployed kiosks and recently updated them to

Internet operation so that they are more integrated with the other delivery channels. Kiosks, in that they operate in the same manner as ATMs, have the particular advantage of being able to handle financial transactions.

- The Internet has been universally exploited, albeit with early home pages of governments suffering from inadequate design. The almost universal absence of an ability to handle financial transactions, or at least to do so in a user-friendly manner, continues to restrict the Internet to predominantly information access services. However, information submission and information transactions are now being increasingly deployed, subject to policy and technology limitations related to the need for authentication.

3.3 User Focus of Services

With some governments, early adoption of ESD would appear to have been driven more by the desire to make policy announcements in the interest of achieving certain political ends. Subsequent reality has generally caused the undertaking of customer-focussed surveys in order to determine delivery channels, design and other arrangements more suited to the needs of the service users. Some of the attempts to embrace a user focus on government service delivery, and particularly ESD, have been notable:

- New Brunswick undertook detailed analysis of user needs and monitored satisfaction both before and after implementation of ESD;
- The United Kingdom has gone public with its 'View from the Queue' market research which is now driving the implementation of its future policies and plans. The public availability of such research results is rare amongst governments.

The desire for customers to be able to access government services outside of normal working hours has been well demonstrated through the Internet and kiosks as delivery channels. The Internet has also proved itself particularly useful in making available proforma for downloading onto personal computers and printing out in the home or work place. Due to the present unavailability of user authentication, electronic lodgement of such proforma has been a rare occurrence and observed to date only in limited circumstances in Texas. Online bill payment, commonly via kiosks but to date rarely via the Internet, presents itself as another service that will satisfy pent-up user needs, particularly outside of normal working hours.

The packaging of services into easy to access groups, variously called 'clusters', 'life events' or 'channels', has proved a particularly successful innovation, although there is no one standard pattern. The New South Wales government is involving customers in detailed focus group studies, the results of which are producing superior designs of their state Internet site. A focus on providing information and enabling transactions about land-related matters has been an early characteristic of the development of ESD in British Columbia, New Brunswick and Tasmania.

British Columbia and Tasmania also illustrate two examples where a service transacted online is charged at a few dollars less than the rate applicable for over-the-counter delivery. These instances are believed to be framed so as to encourage online service take-up rather than necessarily reflect the reality that online delivery is currently cheaper than the physical alternative.

4. Initiatives in Four Regions

The following review of ESD policy and implementation developments around the world is limited to a modest but hopefully representative sample of countries, mainly focussing at the state government level.

4.1 United States of America

Almost every state in the US could provide an illuminating case study. Washington State was chosen here because it ranked as the No. 1 'Digital State' in both 1998 and 1997. This annual study¹ scores 50 states in eight basic areas, including education, business regulation, revenue and taxation, social services and law enforcement. Washington's overall score was an 82 out of a possible 100 points. Although Texas ranked only 40th (1998) and 35th (1997), it was chosen here because it has only just undertaken a comprehensive policy review whose implementation should enable that state to 'pull itself up by it's bootstraps'. Greater detail of the 'Digital State' study is provided in Appendix 1.

4.1.1 Washington

Access Washington, launched in November 1998, is the state's 'next generation' public access system, fully integrating the mediums of the Web, kiosks, interactive television and telephone IVR systems to bring together the majority of Washington's existing separate services.² Links are offered to 180,000 state and local government Web pages, documents and agency contacts.

The objectives of *Access Washington* are stated as:

To meet the needs of citizens and businesses

- Through better organisation, coordination and enhancement of government information and services
- By providing easy access to online processing of taxes, licenses and forms

To improve the Washington state economy

- Through development of an Internet-based infrastructure which makes business and government interactions more efficient
- Promote the awareness of the State of Washington as a progressive and great place to live and work

To improve state government

- By creating economic and managerial incentives for state agencies to deliver information and services electronically
- Through the implementation of government-wide infrastructures to support electronic delivery of information and services

¹ *The Digital State 1998: How State Governments are using Digital Technology*, The Progress & Freedom Foundation, September 1998; refer to <http://www.pff.org> (accessed 6 July 1999).

² About Access Washington; refer to <http://access.wa.gov/siteinfo/about.asp> (accessed 6 July 1999). Nevertheless, detail about the application of kiosks and interactive television could not be found.

Said to be more than a typical government Web site, *Access Washington* includes digital 'postcards' of Washington scenes, links to Just for Kids, the WA WIZ QUIZ, a link to the state's public affairs television network, the state's Lottery's winning game numbers and daily state government news stories. Popular online services are Employment Security's WORK Job Search, the Department of Revenue's Unclaimed Property, the Department of Labor and Industries' Contractor Registration Inquiry and Online Permits. Many forms and questionnaires can also be filed online, as well as tax payments using prior arrangements for electronic funds transfer debit. Users can readily find out the location of all points of public access to the Internet, such as those at local libraries. For the first quarter of 1999, there were 2.5 million page views made of *Access Washington*.

The state's Department of Information Services (DIS) Interactive Technologies unit offers the internal government service that provides not just *Access Washington*, but also the state Intranet service *Inside Washington*, electronic commerce solutions to various agencies, satellite communications for both internal video-conferencing and broadcasting and Web development. DIS declares that it will adopt electronic commerce in such a manner that *Access Washington* will become 'the Amazon.com of public service'.³

In May 1999, the legislature amended the state's 1997 digital signature law by broadening the Secretary of State's rulemaking authority and establishing conditions for issuing digital signature certificates of authority. Interestingly, the amendment allowed the state's own DIS to become a certified signature authority. The DIS is currently the only government agency participating along with 37 companies in the TransPoint pilot program that will allow customers to both receive and pay bills securely and conveniently over the Internet.⁴ In March 1999, Washington claimed to become the first state in the US to deliver a bill and then receive payment online, however the exercise was initially a simulation.

4.1.2 Texas

Although the state of Texas contrasts poorly against the ESD initiatives of Washington State, its current practice in selected areas and evolving plans for across-the-board improvement do offer some lessons of note.

Illustrative of its current bias involving ESD, the Texas State 'Window on State Government' Web page is delivered per courtesy of the Comptroller of Public Accounts.⁵ Not surprisingly, there is a strong emphasis on taxation, economic and performance matters rather than more general service delivery.

Most Western countries already allow forms to be downloaded via the Internet, for subsequent physical lodgement via postal mail. In Texas, sales tax returns can also be filed online in those cases where no tax is owed (and hence no funds transfer is involved).

Texas does stand out from many US states in that it offers a statewide and toll-free Electronic Information and Referral Telephone Service, also supported by a Web page⁶,

³ Slide 35; refer to <http://www.wa.gov/dis/interactive/ecommerce/slideshow.htm> (accessed 6 July 1999).

⁴ Washington is first state to deliver a bill and receive payment over the Internet; refer to <http://www.wa.gov/dis/techcentral/feature78.htm> (accessed 6 July 1999).

⁵ *Window on State Government*; refer to <http://www.cpa.state.tx.us/>

⁶ *Texas Information and Referral Network*; refer to <http://www.hhsc.texas.gov/tirn/tirnhome.htm> (accessed 6 July 1999).

providing local and state access points for health and human services information. More importantly, Texas is collaborating with certain other states via the '211 Initiative' to set aside the 211 dialling code⁷ as a national phone number for anyone in the US to access community resources is reserved for emergencies.⁸

In March 1999, the Texas Comptroller of Public Accounts released a report from the Texas Performance Review that was directed towards creating a 'smaller, smarter government'.⁹ Of the 86 initiatives identified, the following two make specific reference to government ESD, viz.

RR5 – Provide Better On-Line Access to Regulatory Information

The report noted that many taxpayers have asked to make payments and file applications and other forms electronically. They also want to obtain access to rules and information on state regulations through agencies' websites. Although the existing Texas Records and Information Locator (TRAIL) currently offered access to administrative rules and statutes, it lacked a search mechanism. In addition, agency Internet sites were typically not linked together with the result that a business seeking assistance had to initiate separate interactions with several agencies. The Texas Department of Transportation was quoted as one of the few agencies that currently allows permit applications to be lodged electronically, although only in cases where there is no confidential information.

It was recommended that:

- A. State law should be amended to require cooperation between state agencies in developing electronic links between agency websites to ensure that citizens can obtain related information about their inquiries more easily. Agencies should begin establishing these links in the next biennium.
- B. State law should be amended to require state agencies to provide electronic access to explanatory information related to rules, including interpretations, opinions, and letters that explain rules and regulations.
- C. State law should direct state agencies to include in their strategic plans a timeline for implementing electronic submission of forms and payments.

CG3 – Improve Access to Government Through a Single State Information Number

The report further noted that the current approach by agencies to answering calls from the public was piecemeal and uncoordinated and that directory assistance for Texas state government was not easy to find. Callers should receive consistent, knowledgeable responses with a minimum of transfers. Toll-free one-number access, supported by fully computerized databases, was clearly an essential facility to be established across all agencies. The Texas Information and Referral Telephone Service was already a good example within the public and private health and human services sector.

⁷ This national number would be accessed in a not dissimilar way to '911' for emergencies (in Australia, '000') and '411' for telephone directory assistance.

⁸ *The 211 Initiative*, Alliance of Information & Referral Systems: refer to <http://www.airs.org/211/> (accessed 6 July 1999).

⁹ *Challenging the Status Quo: Toward Smaller, Smarter Government*, Texas Performance Review, March 1999; refer to <http://www.cpa.state.tx.us/tpr/tpr5/index.html> (accessed 6 July 1999).

It was recommended that:

- A. State law should establish the AccessTexas Information Center to provide assistance to citizens searching for state information and services through telecommunications.
- B. The Council on Competitive Government should solicit bids to outsource the AccessTexas Information Center.
- C. State law should require the AccessTexas Information Center to develop a standard and detailed electronic database and an Internet site.
- D. State law should establish the AccessTexas Information Center in phases.

4.2 Canada

The Canadian Governments On-Line (CGOL) intergovernmental team maintains a Website (called the 'Intergovernmental On-Line Information Kiosk'¹⁰) which provides considerable amount of information about the information technology initiatives currently employed within Canadian federal, provincial, territorial and municipal governments and their agencies. Greater detail of a key CGOL study is provided in Appendix 2.

The Documents Library within the Canadian Governments On-Line Website identified six of the 12 provincial and territorial governments as having relevant plans and/or key agencies relevant to government ESD¹¹. Two of these six are examined here in further detail, on the basis that these provinces demonstrate interesting and perhaps unique perspectives.

4.2.1 British Columbia

BC Online provides electronic access, on a commercial basis, to information stored in a variety of government databases, such as land titles and assessments.¹² The provincial government started the service in July 1989 to provide the public with government information more quickly and inexpensively than through paper-based distribution. Law firms, title search and land development companies make up the majority of the present total of 6,700 subscribers to *BC Online*. In just a few instances, the price for accessing a piece of information online is set at a dollar or so less than the price for seeking the same information directly from staff at the relevant government office. Payment for any *BC Online* service is made via previously arranged electronic funds transfer.

Telephone access to provincial government ministries, Crown corporations and public agencies has been provided by the *Enquiry BC* call centre since July 1991. It operates only between 8am and 5pm, Monday to Friday, and handles almost 2 million calls each year. The role of the centre is to provide:

- Basic provincial government information;

¹⁰ *Index to Intergovernmental On-Line Information Kiosk*; refer to <http://www.intergov.gc.ca/index.html> (accessed 6 July 1999).. Despite the name, it is actually a Website not a kiosk.

¹¹ *Documents Library*; refer to <http://www.intergov.gc.ca/docs/index.html> (accessed 6 July 1999)..

¹² *About BC Online*; refer to http://www.bconline.gov.bc.ca/htdocs/about_bconline.html (accessed 6 July 1999).

- Assistance in identifying the program or person the caller needs to speak to;
- The government program or contact details for the relevant government employee;
- Assistance in identifying the level of government responsible for a program or services; and
- Toll-free transfer for callers.

In addition, the public can access certain information directly from individual government ministry and agency web sites. Further public assistance is provided through the searchable Web-based *BC Government Directory* that is a central database of provincial government organizational information, including the Premier's office, ministries, crown corporations, public agencies and their employees.¹³

British Columbia's Information, Science and Technology Agency (ISTA) has oversighted establishment and advancement of the *Electronic Highway Accord* since 1995.¹⁴ Representing the collective efforts of community groups, industry, labour and government, the Accord sets out a vision, principles to guide action, and then a number of specific objectives. The vision of the future is one in which:

All British Columbians have affordable electronic access to networks and services enabling them to communicate, learn, be entertained, work, and prosper in an information-based society.

The following three objectives were said to be essential to the success of the *Electronic Highway Accord*:

Objective 1 Universal, affordable access to communications networks and information services for individuals, communities and initiatives.

Objective 2 Increase and enhance B.C.'s information technology industry.

Objective 3 Increase effectiveness and efficiency of public services.

The targeted outcomes of each objective are presented in Appendix 3.

An additional aspect of the Accord is that of the 'third party connect' policy through which private sector firms (eg. banks, pharmacies, systems development companies) are permitted to connect to the province-wide data network that serves government ministries, crown corporations and agencies. By this means, private sector firms can offer more services directly to government.¹⁵

In April 1999, *BC Online* was sold to a private operator who, under a 10-year agreement, will pay the province C\$55 million for the right to use and market BC Online technology and distribute specific government information electronically and commercially. The privatised *BC Online*, which still operates within the government Internet domain, is expected to be a major catalyst for electronic commerce within British Columbia.¹⁶ The province will also receive royalties and other fees on related but non-government information products delivered through *BC Online*.

¹³ *BC Government Directory*; refer to <http://www.dir.gov.bc.ca/cgi-bin/gtds> (accessed 6 July 1999).

¹⁴ The *Electronic Highway Accord*; refer to <http://www.ista.gov.bc.ca/Publications/accord.htm> (accessed 6 July 1999).

¹⁵ *Advancing the Electronic Highway Accord*; refer to <http://www.ista.gov.bc.ca/Publications/advaccord.htm> (accessed 6 July 1999).

¹⁶ B.C. gets \$55 Million for Public-private partnership Creating 2,000 Jobs; refer to http://www.ista.gov.bc.ca/news/1999/99_16anr.htm (accessed 6 July 1999).

4.2.2 New Brunswick

New Brunswick is a province in Canada which has been able to transform itself from a depressed rural back water into a more prosperous and innovative economy in less than a decade. A key factor in this success has been the strong partnership between the provincial government and the local telephone company, NBTel.

Over the last decade NBTel has introduced a series of innovations which have helped to provide a strong basis for other innovations and new industries. They introduced 7 day/24 hour service and maintenance provision, became very customer focused, introduced a fully digital network which allows universal, modern services to be introduced throughout the province, offered low or zero cost telecommunications for key government initiatives (e.g. telemedicine and education networks); are able to offer network capacity on demand and have been able to reduce long distance and 800 rates by up to 60 per cent.

The provincial government decided that information technology represented the best opportunity to create new jobs and economic opportunities and set out a series of actions to transform the economy. The government itself decided to become a model user of new technology. A concerted effort has been made to increase awareness of the population as a whole about IT; the IT industry in the province has been rapidly expanded and traditional industries encouraged to embrace information technology in their traditional work practices.

In 1990/91 a study from the customer perspective found that there were 700 points of customer service within the province and that the services being offered were neither user friendly nor efficient. For example, a customer wishing to establish a general store with liquor supply required thirteen separate licences/permits from the province alone, and some licences/permits were dependent on other licences/permits (but they were not even sure which permit had to come first). A customer was required to go to numerous different locations to obtain these permits. Points of customer service also varied in accepting payment - some took cash, some credit cards, some cheques. Such detailed analysis of government service delivery from the customer perspective highlighted ample opportunities for improvement.

Service New Brunswick (SNB) is a crown corporation formed to provide the single point of contact with the provincial government. Almost a pioneer in the field, it's modus operandi has since been copied by other governments around the world.¹⁷

By establishing 'one-stop shops' (SNB Centres) not only did customer service improve but operating costs were reduced through the elimination of redundancy. A survey of customer satisfaction in 1992 found that 55 per cent were happy with government service. This rose to 90 per cent with the establishment of the Centres.

As time passed, the government has continued to introduce more services. The opportunity for service packaging (i.e. new opportunities for revenue by providing packaged and new services based on customer needs) was exploited. For example it is now possible to get a single "packaged" license permit to establish a convenience store.

¹⁷ Marina Cavill and Greg Cavill, *Report on New Brunswick and NBTel Visit*, Report to CIRCIT Ltd, July 1997.

The lines of business reflect SNB's origin:

- Provision of land and personal property information services;
- Assessment of properties and operation of the associated taxation system;
- Maintenance of the province's survey control network and topographic mapping system;
- Provision of a gateway to more than 120 government services; operation of the government inquiry call centre.

These services are delivered by a variety of channels, viz.

- Telephonically via call centres, which currently handle close to 120,000 calls each month, through a single number (for English);
- Electronically via the Web plus online databases;
- Physically via at least 35 Service New Brunswick Centres.

First established in 1990 as the New Brunswick Geographic Information Corporation, it later changed its name to *Service New Brunswick* upon the addition of also delivering basic government services. The land and property business provides SNB a commercial basis in its own right¹⁸, whereas the information delivery function sees it as merely a 'front end' to individual government agencies (although, on a commercial basis with those agencies).

Despite the Internet, the key channel for delivery is over the counter through the physical presence of the SNB Centres that are geographically spread throughout the province. These centres are open Monday to Friday 8.30am to 10pm and Saturday 10am to 5pm. Customers queue to be served by a bank of operators, each of whom has a computer terminal that can access all government department computer systems. Categories of services covered are:

Category	Examples
Provide Information	Farm Land Identification, Property Tax Assessment, Small claims, Liquor Licensing, Tourism brochures
Schedule Appointments	Agricultural specialists, Driver examiners, Tax assessors
Provide/Take Applications	Student loan applications, Birth, death & marriage certificates, Business Name registration
Collect Revenue	Property tax payments, NBTel payments, Limited motor vehicle fines
Sell Licences and Permits	Vehicle registration, Drivers licenses, Hunting licenses, Marriage licenses, Dog licenses
Sell Products/Services	Bicycle maps, Canoe maps, Hydrography charts, Driver's handbook
General Services	Affidavits, Government job advertisements, Postal mail box, Legislative library catalogue

¹⁸ An example is that of PLANET (Provincial Land Information Network), replacing the traditional paper registry, maintained on a county basis, with one, province-wide system for property assessment, mapping and registration; refer to http://www.gnb.ca/snb/e/1000/1006_5e.htm (accessed 6 July 1999).. The Real Property Registry is a service whereby legal documents related to ownership of real property can be registered and made available for public scrutiny (eg. deeds, mortgages, wills, subdivision plans).

4.3 United Kingdom

Although having a central system of government (at least prior to the creation of the Scottish Parliament and Welsh Assembly), the United Kingdom presents a case study of interest due to the breadth and depth of its policies, plans and market analyses.

The main focus of UK policy development for electronic delivery of government services commenced with the Green Paper *government.direct* initiative of November 1996 issued by the then Conservative Government.¹⁹ Being a Green Paper, it was initially open for comments from the public. Implementation of this initiative rested with the Cabinet Office's Central IT Unit (CITU). A principal output of *government.direct* was a series of pilot projects to demonstrate the underlying technologies, investigate public and business response, and stimulate experimentation in new uses of information and communication technology (ICT) for delivering services, viz.

- Public access terminals giving information about Inland Revenue, Customs and Excise duties, and national Insurance contributions;
- An Internet service (Direct Access Government), providing access to government forms and leaflets relevant to businesses;
- A demonstrator of a comprehensive land and property information service for Scotland;
- A 'Geodata' project making available geographical and geological data from six different departments and agencies;
- An 'intelligent form' (notification of self employment) completed securely on the Internet, and automatically forwarded to three departments;
- A Charter Unit/BT Touchpoint pilot to make Citizen's Charter information available;
- Benefits information in a kiosk in a rural sub-post office.

The following year, this initiative was broadened to become known as *better government*, with the incoming Prime Minister espousing the target of: "within five years, one-quarter of dealings with government can be done by a member of the public electronically, through their TV, telephone or computer".²⁰

In February 1998, a report by the Parliamentary Office of Science and Technology (POST) concluded that, despite the 1996 Green Paper, the deployment of ICT in the UK public sector illustrated little coherent strategy between different departments or tiers of government and there had been only limited attention given to defining what people actually want (or would accept) from a 're-engineered' government.²¹ A clearer vision was needed for 'electronic government'.

¹⁹ *government.direct: Green paper on the Electronic Delivery of Government Services*, UK Cabinet Office Central IT Unit, November 1996; refer to <http://www.citu.gov.uk/greenpaper.htm>. (Accessed 6 July 1999)

²⁰ This '25% target' was first announced by PM Tony Blair in October 1997, and subsequently extended via the 1999 White Paper to embody 50% and 100% targets.

²¹ *Electronic Government - information technologies and the citizen*, Parliamentary Office of Science and Technology, February 1998; refer to <http://www.parliament.uk/post/egov.htm>. (Accessed 6 July 1999).

The POST report reviewed the overall use of ICT in government, the ways in which government and citizens use information and the ways in which it can be communicated, and the possible technical means of increasing electronic transactions. The latter included:

- Telephone call centres;
- The ability to submit forms and other information online;
- Digital interactive television services in the home;
- ‘One stop shops’ in government offices; and
- Integrating government functions with infrastructure of other businesses, eg. bank ATMs, supermarket checkouts, lottery terminals.

It further recommended that consideration should be given to re-organising government services along process lines (receipt of revenue, etc.) or re-packaging such services in relation to a citizen’s life events. The report also identified the existence of several fundamental issues regardless of which vision of electronic government was followed. Key ‘building blocks’ included:

- A secure intranet extending to departments and agencies of not just central government, but also at the regional and local levels;
- Effective design and application of data storage and processing;
- External access to government information systems, not just limited to Internet access;
- Issues of electronic identification and authorisation, perhaps utilizing digital signatures on smart cards.

Central departments were required to report, from 1998 onwards, their progress against the ‘25 per cent target’ as well as the government’s overall modernisation program. Such reports are being made public. 1998 also saw the UK government commission significant market research into the propensity of the public to use electronic means of interaction. Involving a mix of desk research, the experience of large businesses in developing electronic interaction with their customers, qualitative and quantitative research amongst the general public and surveys of small businesses and accountancy practices in particular, this market research was also made public.²² It’s catchy title *the view from the queue* arose from a key finding that users will not accept changes that succeed only in ‘moving the queue from the counter to a kiosk’.

These and other policy, planning and technology developments were incorporated in the White Paper *Modernising government* presented to Parliament on 30 March 1999.²³ The UK government said it would implement the reforms of:

- A commitment to ensure that public services are available 24 hours a day, seven days a week where there is demand (for example, by the end of 2000 everyone being able to phone NHS Direct at any time for healthcare advice);

²² *Electronic Government: the view from the queue - Comprehensive research into potential customer take-up of on-line government services*, UK Cabinet Office Central IT Unit, October 1998; refer to <http://www.citu.gov.uk/research/viewqueue/index.htm>. (Accessed 6 July 1999)

²³ *Modernising government*, White Paper, UK Cabinet Office Central IT Unit, March 1999; refer to <http://www.citu.gov.uk/moderngov.htm>. (Accessed 6 July 1999)

- Joined-up government in action, including a clear commitment for people to be able to notify different parts of government of details such as a change of address simply and electronically in one transaction;
- A new drive to remove unnecessary regulation;
- A new target of 50 per cent of dealings with government being deliverable electronically by 2005, with all dealings deliverable by 2008.
- New 'Learning labs' to encourage new ways of front-line working;
- Taking a more creative approach to financial and other incentives for public service staff;
- Within Whitehall, a new focus on delivery of government services.

These reforms covered more than just electronic service delivery by the government. Ongoing market research is being supplemented the creation of a People's Panel: a 5,000-strong nationally representative group to tell the government what people really think about their public services and attempts to make them better.

A hallmark of *Modernising government* is its emphasis on establishing alternative channels for delivering future governments services. In launching the White Paper, the Public Service Minister Peter Kilfoyle said that:

Government does not expect to modernise services all by itself. We will work in partnership with all sorts of public, private and voluntary organisations that are expert in dealing with the public.

We want to allow people to access our services in the course of their everyday lives. That means they should be able to submit government forms, make payments to government, speak to advisers about jobs, education, health or benefits and find out information about services from a supermarket, library, council office, Post Office, bank or high street outlet.

The traditional ways of interaction with government - paper forms, letters and interviews at government offices - will be supplemented by new and easier methods - for example through a third party adviser trained to deliver a service, by video-conferencing facilities, by electronic forms available through kiosks, or through a call centre, home PC or digital TV.

We call these new ways of accessing government services channels. Channels are services that carry transactions.

Channels policy is all about how citizens can access government services. Government will always be at the end of the transaction, and all the normal rules of data protection, security and accountability will apply.

Such channels deliberately include third-party agents such as post offices, local governments, banks, supermarkets, etc. Their operations would be subject to stringent control over aspects such as: customer service management and codes of practice, intellectual property, branding, data protection and privacy.²⁴ Further detail is provided in Appendix 4.

4.4 Australia

For the purpose of this project, ESD policy and implementation developments in all Australian states and territories were assessed. Only the information on Victoria has yet to

²⁴ *Channel Implementation Policies: A commercial and policy framework for the third party delivery of government services*, UK Cabinet Office Central IT Unit, March 1999; refer to <http://www.citu.gov.uk/moderngov/cppolicy.doc>. (Accessed 6 July 1999).

be written up. With one exception, all governments are proceeding at their own pace, without inter-governmental coordination.

Five of the states and territories (Queensland, Tasmania, Western Australia, the ACT, and the Northern Territory) plus the Brisbane City Council, have combined on a steering committee to request tender information for an operating platform for multiple application smartcards.²⁵ Responses closed on 17 August 1999. If an agreed selection proceeds and implementation is effected, such a smartcard system could find application in the following areas:

- Proof of identity and authentication;
- Storage medium for secure certificates and other security mechanisms;
- E-cash and other forms of electronic payment.

Centrelink (federal government) is also keenly interested in exploiting the advantages of a common operating platform. Centrelink and the ACT Government are planning to conduct a concession smartcard trial on public transport in the ACT. Based on the community reaction to this trial, the application could potentially be extended to other applications and states and territories over the next few years.

4.4.1 Australian Capital Territory

The ACT occupies possibly a unique position with electronic service delivery in Australia through its early work with kiosks located in public places. Initial project research commenced in 1991, with a pilot scheme of what became known as AUSTOUCH conducted from November 1994 to April 1995.

A survey of 500 Canberra households was taken in 1992 to determine the type and frequency of current information requests made of government. It found that nearly 65 percent of contacts were for simple questions or transactions, 27 percent were for discussions about a particular issue or problem, while 8 percent were devoted to detailed personal matters. AUSTOUCH was subsequently designed to cater for the more routine information requests and transactions, the rationale being that shopfront agency staff would be better able to address more complex public inquiries.

Upon completion of the pilot, a request for tender was issued in 1995 calling for the provision of an improved kiosk system that would incorporate transaction, printing and ticketing capabilities. North Communications Australia was contracted to provide the new AUSTOUCH services, which include payment of ACTEW accounts, rates, land tax and even parking fines, as well as information. Users are assisted in navigating through the various screen presentations by a moving picture of a person providing step-by-step instructions. A telephone handset also permits users to call from the kiosk to a government agency at no cost. By April 1999, the kiosks became Web-enabled. Barcode scanners are also now provided. There are now 18 kiosk locations, which are operational 24 hours a day, seven days a week, except where restricted by the opening hours of certain public venues. The ACT government retains full control of service delivery through AUSTOUCH, as compared to the 'maxi' system in Victoria that is controlled by a private operator.

²⁵ *Request for Information from the Steering Committee for an Operating Platform for Multiple Application Smartcards*, RFI No. 1/1999/SMCD; refer to <http://www.act.gov.au/smartcard/> (Accessed 21 July 1999).

Since 1996, service delivery to ACT ratepayers has been further expanded by development of an AUSTOUCH Web site²⁶ which offers greater informational detail than is possible through the kiosks, but currently is not enabled for financial transactions. In addition to access over the Internet from individual homes or offices, all ACT government libraries also provide free public access.

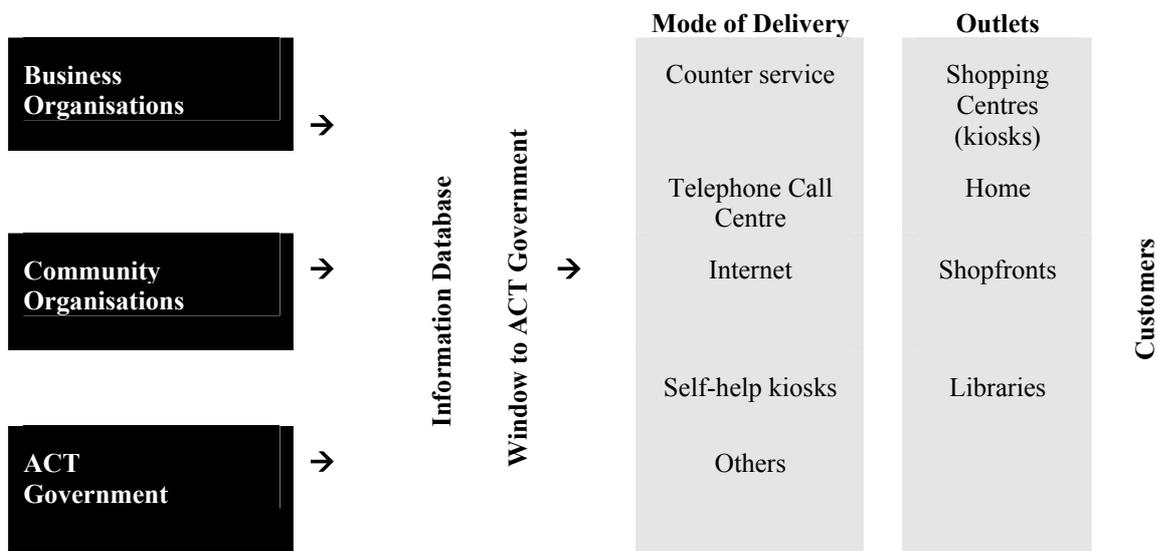
The year 1996 also saw the release for public comment of *Canberra Wired: A Community Information Strategy for the ACT*²⁷ which was aimed at making the best possible use of IT to satisfy the needs of Canberra residents over coming years. Through the strategy's initiatives, residents could expect:

- The content of government information services relevant to their needs;
- To be able to access information in the manner of choice;
- Easy access to information at various locations;
- Access to information at the lowest possible cost.

The vision of *Canberra Wired* is:

The ACT government will encourage an information rich environment in the ACT that enhances the quality of life for all Canberrans, and will be a leader in the provision and delivery of public information services.

It is to be implemented in the following manner:



By August 1998, an Office of Information Technology and Multimedia was established to provide a strategic and integrated focus for communications management, information technology and multimedia at a whole-of-government level within the ACT. It is responsible for:

²⁶ AUSTOUCH on the Internet is located at <http://www.act.gov.au/austouch> (accessed 6 July 1999).

²⁷ *Canberra Wired: A Community Information Strategy for the ACT*, ACT Government Ministry for Urban Services, June 1997; refer to <http://www.act.gov.au/services/information/libraries/canbwired/index.html> (Accessed 1 August 1999)

- Setting policy and standards for IT across the government, including those for security;
- Setting the standard operating environment;
- Facilitating the purchase role for whole-of-government applications;
- Monitoring agency programs for Y2K, modernisation and achieving online transactions by 2001; and
- Commenting on agency business cases for IT and multimedia before approval.

4.4.2 New South Wales

The Office of Information Technology (OIT) is the NSW government agency responsible for developing and driving whole-of-government strategies for the use of information technology, including electronic service delivery. Residing within the Department of Information Technology and Management, it is also responsible for IT developments in NSW between government, industry and the community.

Across the whole spectra of IT activities, the NSW government's strategy was first espoused in the February 1997 *Information Management & Technology Blueprint for NSW*.²⁸ The Blueprint lists nine strategies to implement the Government's vision for the use of information technology to improve overall government service delivery. Each strategy is expanded by Memoranda or Strategic Plans and supporting Guidelines that provide agencies with the necessary "how to" tools to enable them to use, manage and plan information technology in a manner consistent with whole-of-government directions. The policy framework in Appendix 5 explains this relationship.

The Blueprint places an emphasis on client services, both agency-focussed and public sector-wide, within a framework that would make it easier for the general public to access multiple government services through the concept of 'single points of service' and computer-based transactions. It also defines ways to make it easier for the private sector to transact business with the government to enhance the economic development of NSW and attract investment to the State. The following key initiatives, derived from the Blueprint, are central to the exploitation of electronic service delivery (ESD) in NSW, viz. the *connect.nsw strategy* and subsequent *connect.nsw implementation framework*, and *ServiceNSW*.

In December 1997, the NSW Cabinet endorsed *connect.nsw* as its Internet strategy aimed at positioning the State to take full advantage of the service delivery, commercial opportunities and scope to improve quality of life that could be enabled by on-line technologies. Following studies by inter-agency reference groups and consultants, as well as research into community requirements, Cabinet endorsed an Implementation Framework for *connect.nsw* in August 1998.²⁹ This document identified the following initiatives necessary to implement the *connect.nsw* strategies.

²⁸ *Information Management & Technology Blueprint for NSW: A Well-Connected Future*, Office of Information Technology, NSW Department of Information Technology & Management, February 1997; refer to <http://www.nsw.gov.au/blueprint/index.htm> (Accessed 6 July 1999)

²⁹ *connect.nsw Implementation Framework*, Office of Information Technology, NSW Department of Information Technology & Management, August 1998; refer to <http://www.nsw.gov.au/connect.nsw/>. (Accessed 10 June 1999)

Strategies	Initiatives
Integrated Government	<ul style="list-style-type: none"> • Implement the Government Network Service Intranet as the principal technology platform to facilitate <i>connect.nsw</i> roll-out • Develop and implement standards across government • Increase access points and delivery mechanisms, building upon the existing NSW.Net (State Library and local councils), SchoolNet (education) and Government Access Centres (Premier's Department) • Build directories of information and other resources, such as the Australian Spatial Data Directory (Natural Resources) and Health Information Resources Directory (Health) • Establish a public sector electronic community • Develop strategic alliances
Electronic Service Delivery	<ul style="list-style-type: none"> • Extend range of services available on ServiceNSW • Develop designated service sectors within ServiceNSW • Deliver all government publications and forms on-line • Establish performance standards for customer service • Integrate services of other governments into ServiceNSW, in accordance with agreements reached at the Online Council
Electronic Commerce	<ul style="list-style-type: none"> • Promote awareness and use of electronic commerce • Government adopts electronic commerce in its dealings with business • Establish legal and regulatory frameworks to provide trust in electronic commerce, following arrangements of the Federal government
Networked Communities	<ul style="list-style-type: none"> • Ensure community needs and service requirements are incorporated into ServiceNSW • Improve regional and remote equity of access, including State initiatives such as Country On-line and NSW.Net, and Federal initiatives arising from RTIF funding • Establish regional electronic communities utilising relevant homepages
Management Initiatives	<ul style="list-style-type: none"> • Prepare a <i>connect.nsw</i> program plan • Develop and implement a risk management plan • Develop and implement a communication plan • Develop and implement a quality management plan • Support change management • Ensure adequate funding

ServiceNSW was launched in January 1998 as the common on-line entry point to government information and services in New South Wales, initially just via the Web.³⁰ It contains more than 600 links to information and services offered on about 135 NSW government agency Web sites. These links have been clustered into the following 15 service sectors of *ServiceNSW* and are continuing to evolve:

Business	Community	Culture & Recreation	Education	Emergency Services
Employment	Environment	Government	Health	Housing
Law & Order	Rural	Transport	Utilities	Youth

Such agency clusters are now being encouraged to maintain centralised data sets that can be shared with other clusters across the nascent Government Network Service communications network. Services planned or implemented range from publications, on-line forms for download, on-line bookings, on-line service requests, on-line information enquiry, data dissemination, on-line procurement, through to on-line payment of utility bills and fines.

In July 1999, the Minister for Information Technology committed the government to ensuring that all ‘appropriate’ government services would be available on-line by the end of 2001. To assist in the achievement of this objective, an amount of ‘catalytic’ funding was set aside in the 1999/2000 NSW budget to fund or assist in funding selected agency electronic service delivery initiatives.³¹ These may involve a pilot process to demonstrate concept viability, transaction modules that are an extension of existing business systems or complete online projects. Approximately \$4 million is currently available for allocation in this round, with further funding in subsequent years to be dependent on the success of the 1999/2000 program.

From the outset, the philosophy of *ServiceNSW* as an Internet delivery channel has been to represent to the public an integration of government services regardless of the underlying agencies. However in a report to OIT, NBTel of Canada indicated that whilst the strategies of *connect.nsw* were centred on the Internet, additional strategies were required to deal with the telephone as an alternative delivery channel. Accordingly, a strategy has been developed during 1999 to establish whole-of-government call centres likewise based upon an integrated service delivery philosophy.³² These centres will incorporate multiple access channels such as Interactive Voice Response (IVR) systems, e-mail, Web, voice over Internet and fax-back services. Existing call centres will be dovetailed into the agency cluster framework of *ServiceNSW*.

Demand projections have forecast a migration of customer traffic away from the traditional channel types and towards Call Centres and the Internet. The following figures also reveal

³⁰ Home Page for NSW Government and also Service NSW; refer to <http://www.nsw.gov.au> (Accessed 30 July 1999)

³¹ Funding Assistance for Agency Projects, Office of Information Technology, NSW Department of Information Technology & Management, July 1999; refer to <http://www.oit.nsw.gov.au/funding.asp>. (Accessed 30 July 1999)

³² *ServiceNSW* Whole-of-Government Call Centre Strategy, Office of Information Technology, NSW Department of Information Technology & Management, November 1998.

the impact of anticipated suppressed demand.

Channel Type	Demand Projections for Year 2001 (millions of customer contacts)	
	Status quo Scenario: no Call Centre strategy	Scenario arising from Call Centre strategy
Over-the-Counter	9.6	8.3
Telephone calls direct to Agencies	57.5	42.3
Call Centres	34.3	54.8
Web/Internet	15.4	30.1
TOTAL	116.8	135.5

Concerning other technology channels for delivery of services to the public, the NSW Minister for Information Technology is reported to have said that multimedia kiosks, for example, had largely been made redundant by the widespread availability of personal computers with Internet access and that “one could almost argue that the period of kiosks has already gone”.³³

In an attempt to enhance service delivery in rural and remote areas, Government Access Centres (GACs) are also being trialled in 7 initial locations³⁴ to improve the availability of over-the-counter government services, but in a manner that is integrated across agencies. Their future still under review, these centres are also providing feedback to the government on the service needs of rural communities and are an adjunct to *ServiceNSW*.

4.4.3 Northern Territory

Established in July 1997, the Department of Communications and Advanced Technology (DCAT) manages the strategic directions, business systems, infrastructure services and other specialist projects relating to all voice, data and IT facilities that service government and agencies in the Northern Territory.

In November 1997, a Request for Proposal (RFP) was issued to seek responses to a whole-of-government requirement to implement electronic service delivery.³⁵ The stated vision was to implement ESD on behalf of the territory government, local government and private agencies in an electronic manner such that convenient ‘one stop’, ‘single face of government’ services for transactions and information could complement existing customer services delivery channels. The new delivery channels envisaged included: multimedia kiosks, the Internet, interactive voice responses systems (IVR), intelligent phones and interactive television. The RFP is understood to have been substantially based upon similar specifications that were developed for the state of Victoria.

³³ *Information chief's a natural for the job*, Australian Financial Review, 22 June 1999, p 46.

³⁴ Contact Details for Government Access Centres, NSW Premier's Department; refer to <http://www.premiers.nsw.gov.au/about/gaclist.htm> (Accessed 1 August 1999)

³⁵ *Request for Proposal for Electronic Service Delivery*, NT Department of Communications and Advanced Technology, Version 1.1, November 1997. Closing date 30 January 1998.

The objectives of the ESD initiative were to:

- Improve customer service;
- Transform the way government business is conducted;
- Improve the accessibility of government services;
- Lower the cost of doing business; and
- Develop local industry and the NT economy generally.

The RFP also noted certain aspects of the design philosophy that the government would expect to be incorporated in any offer. A number of 'life event' transactions³⁶ were identified and these and other transactions would need to be presented through a consistent interface.

Aspect of Importance	Objective or Issue
Financial transactions	Payment of government charges, licence fees and taxes, etc would be an important service to be carried; information and non-financial transactions would also be delivered.
Ease-of-use	ESD applications would be designed for maximum ease of use.
Consistency	Applications should look and function consistently across all delivery channels, thereby enhancing the 'whole-of-government' approach.
Accessibility	ESD services should provide 24 hour, 7 days a week operation and be at locations accessible to a substantial proportion of the customer base.
Reliability	Proven reliability at an early stage of ESD implementation would be likely to have a significant positive impact on the success of the initiative.
Security	Suitable mechanisms would be required to ensure that the security of transactions would not be breached and the privacy of customers using the ESD service would be preserved.
Scope	The ultimate ESD service would support all government, agency and private sector content providers; the initial phase would focus on a small number of content providers whose transactions are well suited to electronic delivery.
Ownership	The NT government would not anticipate purchasing any major infrastructure for the operation of the ESD service. (The implication therefore is for delivery on a fee-for-service basis regarding both content providers and customers.)
Scalability	The ESD service must be able to provide a large variety and volume of transactions and information without redesign

It was further foreshadowed that a Call Centre could be separately established as another delivery channel.

The NT government considered responses to the RFP and, for now, has decided not to proceed. A strategy document is expected by end 1999 that could herald a new direction. However, once the government does decide to adopt ESD it is expected that

³⁶ Examples of a 'life event' transactions include: applying for public housing, bill payment, buying a car, community involvement, court appearance, getting a licence, moving house, seeking legal advice, starting a business, visiting a location.

implementation will be relatively trouble free as problems (such as inter-agency rivalries, and incompatible legacy systems) should be fewer due to existing centralised IT service provision. The July 1999 government announcement to outsource all future IT services should have minimal impact on any future ESD deployment in the territory.

4.4.4 Queensland

Recognising the important role that technology is playing in the future of the State, the new labour government formed the Queensland Department of Communication and Information, Local Government and Planning in 1998 to bring together a range of previously dispersed state government communication and information functions. Within the Department, the Communication and Information Policy & Planning Division is responsible for, among other things, developing and implementing (within the context of the government's communication and information policy objectives) a whole-of-state communications and information strategic plan, and operational framework, to deliver world-standard information and communication services to all Queenslanders.

Planning and implementation of state-wide communication and information services are being developed in the following stages:

- Dissemination of the Queensland Communication and Information Policy Statement,³⁷
- Dissemination of Towards a Communication and Information Strategic Plan: Discussion Paper³⁸, released for public comment on 24 February 1999; and
- Development of a final State Communication and Information Strategic Plan, expected before end-1999.

Some of the initiatives announced in the Policy Statement were:

“All departments and agencies will be required to actively participate in the coordinated delivery of Government services and public transactions online. The implementation of a single, seamless electronic interface to Government is to be accelerated.”

“The Government will review the ‘Queensland Online’ project with a view to implementing appropriate changes that will result (in) a more ambitious schedule of work.”

The Discussion Paper recognised that the emerging ‘information economy’ would be a major driver for the development of the state’s communication and information resources over the next five years. Attainment of the goals expressed therein would directly address the government priorities of: more jobs for Queenslanders; building Queensland’s regions; skilling Queensland; ensuring safer and more supportive communities; ensuring a better quality of life; valuing the environment and providing strong government leadership.

The strategies of relevance to ESD include:

- Strategy 2.3.1 - Establish online service delivery requirements which support the whole-of-government service delivery framework;

³⁷ *Queensland Communication and Information Policy Statement*, Queensland Department of Communication and Information, Local Government and Planning, issue date unknown, but last updated 17 February 1999; refer to http://www.dcilgp.qld.gov.au/comminfo/menu_policy.html (Accessed 10 August 1999)

³⁸ *Towards a Communication and Information Strategic Plan: Discussion Plan*, Queensland Department of Communication and Information, Local Government and Planning, February 1999; refer to http://www.dcilgp.qld.gov.au/index_comminfo.html?paper (Accessed 1 July 1999)

- Strategy 2.3.2 - Establish and maintain the necessary enabling infrastructure for an integrated, consistent approach to service delivery;
- Strategy 2.3.3 - Establish and maintain applications and arrangements that will continue to enhance service delivery;
- Strategy 2.4.1 - Enhance the ability of agencies to exchange information electronically;
- Strategy 2.4.2 - Enhance the capacity of agencies to communicate more effectively;
- Strategy 2.12.2 - CITEC may be designated as whole-of-Government service provider where this is deemed to be in the interests of government under either or both of the following criteria:

The actions deriving from these strategies are detailed in Appendix 6. When implemented, online service delivery will be known as *Access Queensland*. A whole-of-government Call Centre strategy is also under consideration.

Pending the availability of government services online, Queensland's rural and remote areas currently have access to government services via two specific initiatives:³⁹

- Queensland Government Agents, with some 28 offices from Weipa in the north to Texas in the south, are 'one-stop' shops that represent all state government departments with over the counter service;
- Queensland Government Departments Information Link (QDIAL) offers travelling displays with information and on-the-spot answers from field officers; in addition a Freecall™ number allows anyone outside Brisbane to telephone operators during normal business hours at no charge.

Eventually, these initiatives will be incorporated into the generic *Access Queensland* program.

4.4.5 South Australia

Both the Information Economy Policy Office (IEPO) and the Government Information and Communication Services Unit (Government ICS) reside within the SA Department for Administrative and Information Services. The principal aims of the IEPO are to promote and maximise information economy opportunities to stimulate economic development through the strategic positioning of South Australian information industries and to maximise the efficient take up of advanced technology. Government ICS is responsible for implementing and operating the official state Internet portal site (*South Australia Central*), the S.A. government's telephone and over-the-counter information service (*Information SA*), the whole-of-government intranet site (*IntraSA*), advising government agencies how to develop online services (*Web Works*) and providing seed-funding to actually assist agencies deliver their services online.

In December 1993, Cabinet commissioned the Information Technology Industry Development Task Force to

“.. provide strategic advice on all significant information technology issues affecting the Government and the economic development of South Australia.”

³⁹ *Bringing State Government services to the bush*, Qld Department of Primary Industries, Document Agdex 000, 1997; refer to <http://www.dpi.qpd.gov.au/dpinotes/general/drd97015.pdf> (Accessed 10 August 1999)

The report of that Task Force, known as *IT2000* and completed in June 1994, formed the basis for subsequent IT planning and developments that culminated in the *Government Information Framework (GIF)* of 1998.⁴⁰ The guiding principles of the Framework are:

- Be built on a whole-of-government approach;
- Contribute to achievement and redevelopment of the IT2000 vision;
- Provide opportunities for the local information industry;
- Embrace current technology but be adaptable to future trends;
- Be bold but achievable (not reckless);
- Be developed in consultation with key stakeholders;
- Be articulated clearly and promoted widely.

It envisioned how IT-enabled government services would be provided in South Australia in the year 2002, from both the customer and government perspective. This vision or 'portrait' is presented as Appendix 7. The framework recommended a process of concurrent but staged progress, with key results areas (KRAs) grouped into logical stages or 'plateaus'. The goals more pertinent to ESD are shown below:

Plateau 1: Getting 'our house' in order

- Goals
- Establish a whole-of-government ICS governance model
 - Develop procurement and funding models
 - Establish integrated data communications across government
 - Develop a government-wide culture that recognises ICS as a business enhancer
 - Develop innovative electronic services

Target date July 1999

Plateau 2: Effective interaction between the community and government

- Goals
- Develop a whole-of-government approach to best practice management of ICS
 - Establish information access standards for security and privacy
 - Develop an information access strategy supporting government priorities for youth, regional development and equity
 - Develop key service access points and a corporate approach to electronic delivery
 - Develop an electronic commerce system to enable new government procurement processes

Target date July 2000

⁴⁰ *Government Information Framework*, Government ICS, DAIS, 1998; refer to http://www.ics.sa.gov.au/gif/_DAIS003C.pdf (Accessed 1 August 1999)

Plateau 3: Efficient, customer focused, electronic government

- Goals
- Government-wide integrated networks for voice and data
 - Electronic transactions processed via home or office computer terminals, public access points, and over the telephone
 - One-stop/non-stop service
 - Single entry point to government services
 - Boundary-less agencies
 - Single government branding
 - Effective electronic commerce

Target date 2002

South Australia Central, the official state Internet portal site, serves as a gateway to all South Australian Web sites and on line information and services, whether they concern business, Government or the community, in addition to national and international sites of interest to South Australians.⁴¹ Now two years old, it catalogues and indexes 3,000 external sites and receives 110,000 visits a month to its 600+ pages of information. A major aim is to make it easy for users of the site to find information and do business with the Government without needing to understand its structure or know which agency to deal with.

The SA Government has already provided seed-funding over the last two years to help government agencies develop Web sites to deliver their services on line. The third and current phase includes \$3 million of additional funding for projects of strategic importance as well as targeted, smaller projects.

A business case for government call centres, probably to be known as *Gateway SA*, has yet to be submitted for budget approval.

4.4.6 Tasmania

Since 1993, the responsibility for centralised management of information resources and technology within the Tasmanian government has resided in the Department of Premier and Cabinet, firstly with the Information Strategy Unit and subsequently with the E-Services Group.

The Information Strategy Unit was established following the Information Resource Management Task Force whose report⁴² in August 1993, among other things, recommended:

That alternative means be considered for the delivery of “retail” services, to take advantage of the idea of a “one-stop shop front”, and of the possibilities of modern electronic data interchange (EDI) technology.

⁴¹ Such an omnibus role for *SA Central* would be equivalent to two Internet sites in Victoria, viz. the official Victorian government home page and *maxi* entry points, plus *Vicnet* for community and small business access.

⁴² *Strategic Information Management*, report of the Information Resource Management Task Force, Tasmanian Government, August 1993.

It proposed that services would have to be integrated across government agencies, providing a single access point and a single “look and feel” to adequately service clients. However, before business and the community could receive better service delivery, it would be critical for intra and inter-agency business processes to be thoroughly re-engineered. That point is emphasised here because of the long lead-time involved before any large organisation, such as a government, is able to deliver improved services in a so-called “one-stop shop” manner.

The next significant public document was presented by the then state Premier Tony Rundle in April 1997 as a series of Directions Statements⁴³ covering the fields of education, electricity and energy, quality assurance and export products, plus a comprehensive treatment of matters relating to information technology and advanced communications. A summary of the strategies and foreshadowed actions is given as Appendix 8.

Following prior discussions with Nortel Australia, parallels were observed between Tasmania and New Brunswick (Canada) in terms of size, rural composition, economic development and telecommunications infrastructure. There was persuasive evidence that the use of advanced telecommunications and information technologies could transform a regional economy. Tasmania could more or less emulate the experience of New Brunswick and act as a showcase for the potential of the new technologies in regional areas, within Australia and elsewhere in the southern hemisphere. The Tasmanian government announced that it would work closely with Nortel Australia and also Telstra Corporation.

Service delivery to businesses and the community at large, particularly for people in rural and remote areas, is now effected through *Service Tasmania* in accordance with the actions arising from the 1997 Directions Statement. The overwhelming majority of transactions that currently occur between the state government and its customers are considered to fall within the following seven generic service types:

- Pay government bills;
- Purchase government products;
- Obtain government information;
- Apply for government licences, permit grants and assistance;
- Make bookings and appointments;
- Notify address changes to a number of government agencies;
- Provide feedback comment and seek help.

Service Tasmania is constantly improving its service offerings, which currently extend to over 150 government services within these service types and utilise up to three different delivery channels:⁴⁴

⁴³ *Directions Statement*, Premier of Tasmania, Department of Premier and Cabinet, 10 April 1997; including background papers on: Directions for Information Technology and Advanced Communications, The New Brunswick Experience, Nortel Australia 1997, and Networking Tasmania project.

⁴⁴ Refer to <http://www.servicetasmania.tas.gov.au> (accessed 6 July 1999) for the Internet channel.

- Over-the-counter at *Service* Tasmania Shops for all services⁴⁵, in 24 locations;
- Over-the-phone, via a common *Service* Tasmania number, as well as nine agency numbers for payment of accounts using Interactive Voice Response (IVR); and
- Over-the-Internet, generally for information plus one opportunity for online payments (of rates to the Sorrell Council).

In addition, *Service* Tasmania is developing various service packages that bring together government online services and information for particular groups of customers.

The benefits for customers from *Service* Tasmania are considered to be:

- **Choice:** Whilst the emphasis is on over-the-counter services in rural areas, either of the two electronic options can also be chosen; in addition, in some cases the latter may even involve lower charges to the customer;⁴⁶
- **Convenience:** Customers can participate in most of the services via at least one of the three delivery channels on a 7 days a week, 24 hour a day basis;
- **Improved Access:** Over-the-counter services are available at least during normal 9-5 business hours, telephone services are available statewide for the cost of a local call and the Internet is accessible either at home, at work, at school, in libraries or via an access centre of the Tasmania Communities Online⁴⁷ network;
- **New and Improved Services:** Plans are being developed for video conferencing, electronic access to some agency databases, easier access and possible interactive operation.

⁴⁵ In addition, as at August 1999, a proposal was under consideration for one of the Shops to also provide banking services on behalf of Westpac.

⁴⁶ For example, renewal of motor or boat registration via *Service* Tasmania's phone or Internet channel saves the customer \$5; refer to <http://www.servicetasmania.tas.gov.au/stabout/stbroc.htm> (Accessed 10 August 1999)

⁴⁷ Refer to <http://www.tco.asn.au> for an index of individual centres (accessed 6 July 1999).

4.4.7 Western Australia

The Office of Information and Communications (OIC) in the Department of Commerce and Trade has the role to lead, facilitate, coordinate and work in partnership with agencies, businesses, universities and communities, in order to maximise WA's transformation to the Information Age. Such a role extends well beyond just electronic service delivery for government.

In March 1998, State Cabinet approved the OIC document *Priorities, Strategies and Outcomes*⁴⁸ that included an Online Services Strategy, an excerpt of which is as follows:

Online Services involve electronic business transactions (electronic commerce) and electronic provision of information (electronic service delivery). There are numerous delivery methods and access methods, including libraries, kiosks, Smartcards, personal computers and networks.

The key principles are that:

- Online Services will improve quality and convenience of service to customers;
- Planning and implementation of Online Services will be customer focussed and business driven, based upon a single point of access wherever possible;
- A co-ordinated approach is essential with input from business, agencies and communities.

The Benefits:

- Superior and simpler customer service;
- Significant cost benefits to Government as a result of a co-ordinated approach;
- Reduced transactional costs and greater productivity;
- Services available seven days a week, 24 hours a day;
- One Stop Shop – a single point of entry to a comprehensive range of services;
- Opportunities for fundamental reform of how government and agencies communicate and work with business and the community;
- Opportunities for local people to grow and compete.

Although at first glance, this definition of ESD appears to make an uncommon distinction between undertaking financial transactions and the provision of information, in reality the distinction is more between customers being consumers versus businesses that are suppliers to government:

⁴⁸ *Priorities, Strategies and Outcomes*, Office of Information and Communications, Department of Commerce and Trade, February 1998; refer to http://www.commerce.wa.gov.au/technology/oic/pdfs/online_services_plan.pdf (Accessed 10 June 1999)

	Electronic Services Delivery (ESD)	Electronic Commerce (EC)
Target customers	Consumers	Suppliers
Access methods	Telephone handsets PCs/Internet Kiosks	PCs and mainframes connected to the Internet or private telecommunication networks
Transaction types	<ul style="list-style-type: none"> • Vehicle Licences • Drivers Licences • Water Bills • Land Rates • Electricity Bills • Gas Bills • Publications • Fines • Transport Information • Forms • Public Information, etc. 	<ul style="list-style-type: none"> • Supplier catalogues • Requisitions • Online quotations/tenders • Electronic Purchase Orders • Goods Receipt Notification • Receive invoice • Invoice/Delivery Matching • Approval • Electronic Invoice • Payment (EFT) • Purchasing Statistics, etc.

ESD implementation consequent of the Online Services Strategy is detailed in the *Electronic Services Delivery Plan*⁴⁹ published in November 1998. It proposed that customers utilising the Internet or perhaps kiosks as means of access should be able to select from government services that are grouped on the basis of common activities or life events described as ‘channels’:

Channel Type	Service/Activity
Business Channel	To register a new business, obtain advice, look for tender opportunities, etc.
Community Channel	Locating childcare facilities, library services, community forums, recreation facilities, seniors, the environment, etc.
Life Event Channel	Pay water bills, renew drivers licence, order garbage bins, register road hazards, etc.
Health Channel	Health and safety in the home, vaccinations, health services, hospital information, etc.

⁴⁹ *Electronic Services Delivery Plan*, AOT Consulting and Office of Information and Communications, Department of Commerce and Trade, November 1998; refer to: <http://www.commerce.wa.gov.au/technology/oic/pdfs/esdplan.pdf> (Accessed 10 June 1999)

Channel Type	Service/Activity
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Education Channel Parents guide to schools, pre-school, secondary school and high school information, higher education institutions, online courses, etc.

Furthermore, such services can be distinguished according to their different types:

Type of ESD Information	Service
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Static information dissemination Online publication/advertising/marketing through mechanisms such as the WWW.

Interactive, non-financial information Online community networks (ie. Seniors), bus timetables, directory services, State budget, land titles, etc.

Financial transactions Information processing which is based on financial transactions such as payments and updating of community database records.

Incorporating electronic commerce/trading Information processing which is based on business to business, government to business and business to government transactions, particularly focused on supply chain processes.

The implementation process is to commence with creation of an immediate Internet-based ‘single window of government’ (initially presenting static information dissemination and interactive, non-financial information services), supported by awareness raising amongst customers, reform of associated agency processes, and availability of the necessary access infrastructure.

A RFT for the design, development and implementation of phase 1 of the ‘single window of government’, known as *OnlineWA*, closed on 30 October 1998.⁵⁰ The first trial is expected by September 1999 and will involve customers of WA’s Telecentres. Whilst it is proposed that *OnlineWA* may also be accessible through means other than the Internet, for example, via kiosks, call centres, there are presently no plans to do so.

⁵⁰ *RFT103898: Provision of services for the design, development and implementation of Online WA the single window phase 1*, WA Department of Contract and Management Services, closing date 30 October 1998.

Appendix 1 – The US Digital State annual survey⁵¹

The Progress & Freedom Foundation, in conjunction with *Government Technology* magazine, examines on a yearly basis the extent to which 50 state governments in the United States of America are applying digital technologies to improve their operations, reduce costs, integrate operations and facilitate communication with citizens.

The inaugural 1997 study aimed at establishing a benchmark for understanding the extent to which the US states were utilizing digital technologies. It had four specific research objectives, viz.

- To analyse overall progress by the states;
- To identify major opportunities for digital technology implementation;
- To identify and assess “best practices”;
- To identify strengths and weaknesses in each state’s efforts;

The 1998 study added three additional goals:

- To analyse the overall rate of progress in the utilisation of digital technologies;
- To recognise specific improvements made by each state during the past year;
- To provide additional information on topics of special interest.

The efforts of each state were analysed in the following eight categories:

1. **Digital Democracy:** The application of digital technology, largely via the Internet, to permit timely and extensive citizen access to laws, legislators and the democratic process.
2. **Higher Education:** Utilisation of digital technologies to facilitate learning and communication, as well as for administrative functions such as applications and student loans.
3. **Elementary and Secondary Education:** Utilisation of digital technologies to enhance learning opportunities in grades K-12, including availability of computers and on-line access to the Internet.
4. **Business Regulation:** Availability of regulations, forms, on-line assistance and/or the ability to submit required “paperwork” using the Internet or in digital form.
5. **Taxation:** Use of digital technologies to store and retrieve taxpayer information, and/or the ability for taxpayers to obtain information, submit returns or correspond with revenue authorities on-line.
6. **Social Services:** Application of technologies such as electronic benefit transfer and “smart cards” for benefits delivery, and/or the availability of on-line information regarding program eligibility, application, etc.
7. **Law Enforcement and the Courts:** Utilisation of digital technologies by the judicial system, including on-line access to court opinions, use of digital communications by

⁵¹ *The Digital State 1998: How State Governments are using Digital Technology*, The Progress & Freedom Foundation, September 1998; refer to <http://www.pff.org>.

police agencies and the presence or absence of “digital signature” capability for contracts and filings.

8. **Other Initiatives:** Ongoing efforts in state government to proactively plan for developments in information technology and to encourage state employees to get connected.

In each of the above areas, some 44 indicators of progress were assigned. For each indicator, a set of benchmark criteria was established and progress ranked on a scale of zero to three. Judgements were both qualitative and quantitative and data was captured directly from the states or via researchers utilising the Internet.

Appendix 2 – The Canadian Governments On-Line Study and Initiatives

Considered to be unique within Canada, the Canadian Governments On-Line Study is possibly also the only whole-of-country study of its type in the world:⁵²

- It catalogues, for the first time, some of the innovation that is already taking place across Canada;
- It encourages cooperative development and application of electronic on-line and related information technologies in four areas in service delivery to Canadians:
 - Government Assistance (also called ‘A Voice in the Wilderness’);
 - Government Knowledge (also called ‘Distance Education and Dissemination of Knowledge’);
 - Government Information (also called ‘Brave New World’);
 - Government Service Delivery (also called ‘Transforming Government Service Delivery’).
- It raises some issues and challenges; and
- It proposes specific joint actions by governments.

More specifically, the objectives of the study included:

- Identifying on-line services that work well and could be of benefit to other governments and ultimately to all Canadians;
- Creating an interactive catalogue of on-line services, accessible by governments, business and Canadians through the Internet from anywhere in Canada; and
- Recommending further joint actions to improve services to Canadians by adopting a cooperative approach in the use of on-line technologies by Canadian governments at all levels.

The study was made possible through the pooled resources of the federal, provincial, territorial and municipal governments across Canada. It noted that, to governments, electronic on-line technologies and other developments on the information highway are often pursued initially to save money. With the proper attention to client needs, the successful initiatives can result in better and different services than had existed in the “old” world of paper. In turn, these projects can represent a first important step in re-engineering the new ways that services and benefits flow to Canadians. The study report noted:

In simple terms, on-line services, if properly designed and maintained, can help Canadians overcome many of their frustrations in dealing with governments, especially if governments work together to identify and apply the solutions that work best.

⁵² *Intergovernmental On-Line Information Kiosk: Executive Summary*, 1996; refer to <http://www.intergov.gc.ca/docs/cgol/execu96/exece.html> (accessed 6 July 1999).

Appendix 3 – The Electronic Highway Accord of British Columbia: Objectives and Targeted Outcomes⁵³

Objective 1 Universal, affordable access to communication networks and information services for individuals, communities and institutions

Targeted Outcomes:

1. Access - Capacity

- Province-wide, individual line service standard, by 1997-98;
- Extension of basic telephone service to all communities currently not served, by 1997-99;
- Maintaining the affordability of universal, basic service, on an on-going basis;
- Extension of affordable access to the Internet and other information services throughout the province;
- Aggressive implementation of province-wide, public sector electronic initiatives related to education, health care and government administration, through open, competitive tendering, beginning immediately;
- Deployment of interactive broadband facilities and services to link individuals, businesses and institutions in more than 170 communities within an agreed to time frame, to begin immediately with substantial completion by 1999;

2. Access – Empowering individuals and communities

- Enable libraries within communities to become public points of access for individual entry onto the electronic highway, beginning immediately and on an on-going basis;
- Encourage, promote and support the development of Freenets or community networks. This will provide a focus for the development of local content and provide training and hands on assistance as a community resource;
- Encourage other community and public centres (such as museums and science centres) to develop local electronic content and services, beginning immediately and on an on-going basis;
- Support the development of increased computer literacy, comfort and information usage skills, particularly for those groups that for a variety of reasons require assistance;
- Ensure community input into the development of public information services to take into account the needs of particular areas and groups;

⁵³ The *Electronic Highway Accord*; refer to <http://www.ista.gov.bc.ca/Publications/accord.htm> (accessed 6 July 1999).

Objective 2 Increase and enhance B.C.'s information technology industry

Targeted Outcomes:

- Provide the private sector industry with greater access to public sector demand, beginning immediately and on an ongoing basis;
- Encouraging the development of partnership initiatives that advance and showcase innovative B.C. product and service development and expand markets for distribution;
- Provide for opportunities for local industry in hardware, software and R&D to access the demand by cable and telecommunications carriers operating in B.C.;
- Substantially increase the number of businesses and jobs in the information technology and information management industry in B.C.

Objective 3 Increase the effectiveness and efficiency of public services

Targeted Outcomes:

- Establish a Chief Information Office (CIO) function in government to manage public sector information, information technology and telecommunications resources in a strategic and cost-effective manner;
- Establish a broader mandate and a more active role for the Purchasing Commission in the acquisition of IT/Telecom resources through the development of criteria for and the management of an open tendering process;
- Revise the role and mandate of BC Systems Corporation to redirect and limit its activities in a manner consistent with the desired outcomes of the Initiative;
- Rationalize the use and management of public commercial information technology and telecommunications assets.

Appendix 4 - Highlights of the UK Framework for Third Party Delivery of Government Services⁵⁴

Government's Ambition

The use of commercial third party channels will provide the citizen with enhanced customer service and will exploit the commercial sectors' delivery skills and understanding of their markets. The channels will adapt Government services to meet the needs of their markets.

The use of the commercial sector's infrastructure of shops, offices, kiosk services, Interactive TV services, call centre based services etc. will take government services to the citizen at a time and a place that is convenient to them.

The commercial sector will provide additional elements of service to complement the government interactions. This allows the creation and delivery of an interaction with the citizen which is complete from the citizen's perspective and which is focused on the specific needs of the market segment being targeted by the channel provider.

The channel provider may also integrate elements of service from its own portfolio (and from the portfolios of other third party service providers) to enhance and adapt the episode to better meet the needs of the citizen (for example, the three pilots mentioned above).

Channel Taxonomy

There are three major components to the channel:

- Shared commercially provided services such as funds transfer and authentication;
- Direct channels such as a managed kiosk service or an interactive TV service. These direct channels are typified by the limited ability for the channel provider to add much product related value to the transaction (there should be opportunities to add service related value);
- Indirect channels where there is opportunity to add substantial value. This added value would be provided by elements of personal contact and physical presence. Examples might be your local authority "One-stop shop", the Post Office, your accountant, bank manager, DTI sponsored tele-cottage, supermarket checkout, etc.

A range of channel partnerships will evolve. These will be structured by market segment and sector and will target different groups in society and different transaction types.

An elaboration of this basic model was suggested by consultation with industry. The study drew attention to the difficulties of building and managing the complexities of a "many to many" market model and suggested the potential for a "Hub Service Provider" to manage the creation and operation of the "many to many" relationships required by the basic channel proposition. The "Hub Service Providers" would understand the interactions between their target market and government, and would broker the mutually beneficial relationship between the parties.

⁵⁴ *Channel Implementation Policies: A commercial and policy framework for the third party delivery of government services*, UK Cabinet Office Central IT Unit, March 1999; refer to <http://www.citu.gov.uk/moderngov/cppolicy.doc>. (Accessed 6 July 1999).

Channel Role

The role of the channel is to:

- Take the raw elements of the services provided by local authorities and departments and integrate them into citizen focused episodes;
- Add value from their own portfolio of products and services (delivery, service or product) to create a differentiated offering focused on a specific target market;
- Integrate shared commercially provided third party services such as funds transfer, authentication;
- Deliver the integrated product to the target market (with all the normal focus on segmentation);
- Provide feedback to guide the evolution of the detail of the interface to government and the other services provided.

Government's Role

To assist in the development and efficient operation of the channel, government will:

- Create the environment to encourage the channels to develop in a citizen focused and cost effective way. The environment at a macro level is the framework of legislative enablers, commercial principles and the building of a market in government services;
- Provide some concrete enabling services such as: the online libraries of government forms (Direct Access Government and its enhancements, etc.), the parsing and help information to allow forms to be accurately completed, the databases of people (electronic electoral roll), and register of commercial buildings and geo-spatial services;
- Act as a channel provider in its own right (One-stop shops, etc.). In these cases a citizen rather than a departmental focus is critical. A distinction will be maintained in organisational and accounting terms between the delivery organisation (channel service provider) and the units responsible for an aspect of policy or processing a single transaction.

Channel Principles

A policy and commercial framework is required to create and maintain a thriving market in the delivery of government services. This requires a robust financial framework to maintain the mature market and should allow some compromises to facilitate the earlier stages of market development. The market research program has confirmed that the channel strategy is dependent on developing a range of competitive behaviours:

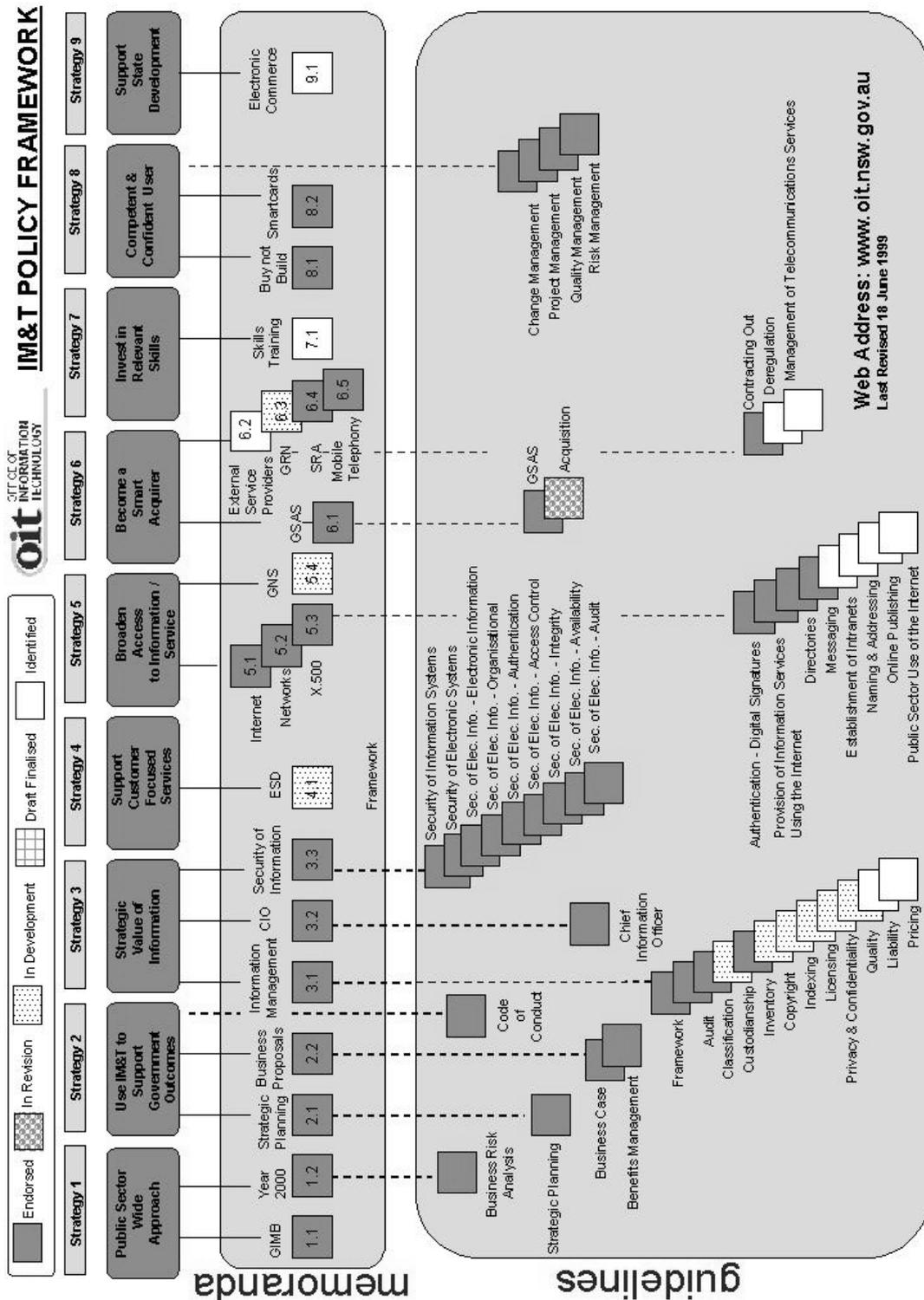
- Ideally the channels will compete within their own market places, viz. Internet against managed kiosk service and one kiosk service provider against another;
- To encourage competition the channels will be as free as possible (within the confines of a contract) to package elements of departmental transactions into citizen focused episodes (or life events);
- Episodes may well include elements of service provided by the channel provider and of no direct relevance to government, such as a re-mortgage package bundled with a house purchase or setting up in business;
- Elements of service from third party providers may also be incorporated into episodes to better serve the citizen.

To be sustainable, the framework must ensure that the participants in the market receive a reasonable return for their endeavours. (NB. This does not imply that government will be simply procuring such services; nor does it suggest a process that will lead to a contract with a single party.) The reward to the channel provider could take the form of:

- Direct funding from government on a transaction fee basis;
- Direct funding from the citizen on a subscription, transaction, or other basis;
- Direct funding by the channel provider (or other commercial third party) on the basis that the government transaction is commercially attractive in its own right or adds value to, or differentiates, a commercial offering.

The reality will be a range of options drawn from these alternatives and indeed involving combinations of them.

Appendix 5 – Framework Map supporting the NSW Government IT Blueprint⁵⁵



⁵⁵ Adapted from *Information Management & Technology Blueprint for NSW: A Well-Connected Future*, Office of Information Technology, NSW Department of Information Technology & Management, February 1997; refer to <http://www.nsw.gov.au/blueprint/index.htm> (Accessed 6 July 1999)

Appendix 6 - Queensland Strategic Plan: Government Service Delivery⁵⁶

Facilitation of Service Delivery

Goal 2.3 - Improved access to Government information and services.

Strategy 2.3.1 - Establish online service delivery requirements which support the whole-of-Government service delivery framework.

Action(s):

- a) Work collaboratively with the Office of Public Service to establish a Queensland Government framework for effective service delivery.*
- b) Recommend business structures and processes for online services.*
- c) Assist agencies to develop and implement their online service delivery plans.*
- d) Require agencies to offer clients access to core services, and undertake related transactions online as soon as practical. (Specific timetables will be determined as part of agency online service delivery plans.)*
- e) Coordinate planning and the adoption of Online Service delivery standards with other jurisdictions, including the Commonwealth Government.*
- f) Establish model transaction services to enable customers to securely and privately transact business with Government.*
- g) Undertake detailed needs analyses to determine the effectiveness of current Government services and the optimum access methods for major customer and stakeholder groups.*
- h) Evaluate the business and social benefits to be obtained from the availability of services across multiple delivery channels.*
- i) Determine and deploy the most appropriate mechanisms to support online service delivery by Government.*
- j) Ensure on-line access mechanisms complement traditional service delivery mechanisms, allowing clients optimum choice while ensuring that no individual is disenfranchised.*
- k) Ensure access mechanisms support the technical models and requirements specified in the whole-of-Government information architecture.*

⁵⁶ Extracted from *Towards a Communication and Information Strategic Plan: Discussion Plan*, Queensland Department of Communication and Information, Local Government and Planning, February 1999; refer to http://www.dcilgp.qld.gov.au/index_comminfo.html?paper (Accessed 1 July 1999)

Strategy 2.3.2 - Establish and maintain the necessary enabling infrastructure for an integrated, consistent approach to service delivery.

Action(s):

- a) Develop a whole-of-Government information architecture, with supporting standards, to support the transition by agencies toward seamless access to Government services, in particular the range of access methodologies required to deliver transaction services.*
- b) Identify, develop and implement appropriate standards and guidelines within the context of the information architecture to ensure that Queensland Government information can be easily referenced and retrieved online.*
- c) Establish an integrated, customer-driven entry point to Government information and services online.*
- d) Establish a complete online register of all Government services.*
- e) Implement an electronic service locator facility to enable customers and staff to identify and connect easily and directly in a single encounter with any required Government service.*
- f) Work with departments to ensure that agency information architectures and information management processes support online access to Government information.*
- g) Implement a consistent, whole-of-Government approach to pricing and access to information between agencies.*
- h) Maintain an integrated whole-of-Government telephone network.*

Strategy 2.3.3 - Establish and maintain applications and arrangements that will continue to enhance service delivery.

Action(s):

- a) Establish an integrated, distributed whole-of-Government Call Centre facility able to respond to client enquiries across the full range of Government services.*
- b) Develop an appropriate business structure for the establishment and ongoing management of the call centre facility, embodying appropriate collaborative relationships with one or more selected private sector organisations.*
- c) Work collaboratively with agencies to develop and deliver integrated relevant and innovative services on an ongoing basis.*

Cross-Agency Communication and Sharing

Goal 2.4 - Enhanced cross-agency communication and information exchange.

Strategy 2.4.1 - Enhance the ability of agencies to exchange information electronically.

Action(s):

- a) Construct a whole-of-Government Intranet.*
- b) Establish a simplified electronic messaging service and electronic directory service across government to improve communication between agencies.*
- c) Establish core services for publishing, distribution, transaction handling, video transmission, news services and searching.*
- d) Leverage the mature Intranet infrastructure to facilitate ongoing business process improvements.*
- e) Examine the licensing issues involved in distributing journals electronically to Government over the Intranet.*
- f) Encourage agencies to publish their journals electronically.*
- g) Establish inventories and definitions, and identify data custodians for strategic data elements in agency databases so that there is a common understanding of Government information and who is responsible for maintaining that information.*

Strategy 2.4.2 - Enhance the capacity of agencies to communicate more effectively.

Action(s):

- a) Investigate the use of collaborative computing environments within Government.*
- b) Encourage networking opportunities for agency service delivery managers to identify synergies and potential overlaps.*
- c) Investigate the establishment of forums for the exchange of agency expertise and to increase collaboration.*

CITEC

Goal 2.12 - CITEC operations support the business of government, consistent with government policies.

Strategy 2.12.1 - CITEC will develop commercially viable, Queensland-based, national centres of service excellence which:

- i. Support whole-of-Government strategies in service delivery and Communication and Information infrastructure management; and
- ii. Support individual client strategies in:
 - IT&T outsourcing and management services; and
 - Electronic commerce outsourcing and management services.

Action(s):

CITEC will:

- a) Contribute to the development of communication and information employment and skills in Queensland through a business expansion program and a continuing graduate recruitment program.*
- b) Act as a catalyst for development of the communication and information sector in Queensland by involving local businesses in CITEC's business operations, both as bid partners and suppliers.*
- c) Further develop on-line capacity to enhance the coordinated delivery of Government services across Queensland.*
- d) Establish a separate data centre to support Queensland Government clients in recovering information in the event of breakdown of their systems.*
- e) Provide an appropriate emphasis on communication and information research and innovation in Queensland by undertaking or directly funding local research and development activities.*

Strategy 2.12.2 - CITEC may be designated as whole-of-Government service provider where this is deemed to be in the interests of government under either or both of the following criteria:

- i. The service has significant security implications which require retention of service delivery in government ownership;*
- ii. The government has a long-term interest in retaining that particular service expertise in government ownership.*

Action(s):

a) Establish a clear definition of roles between the provider (CITEC) and the purchaser functions.

b) The purchaser will develop:

The criteria on which the designation of CITEC as service provider is based;

The whole-of-Government business case on which the designation is based;

In conjunction with CITEC, the commercial arrangements under which CITEC will deliver the service.

c) The purchaser will seek Cabinet approval for the designation

Appendix 7 – “Portrait” of IT enabled government service provision, in South Australia, in 2002 ⁵⁷

The vision presented here is in a scenario format from the perspective of a customer using services provided by the SA Public Sector in an idealised but achievable manner 5 years from now. It's intent is to express the aspirations of SA Public Sector customers about how they would ideally like to be able to interact with Government Agencies. Included within this scenario are statements about how the (projected) needs of the Government are incorporated into this new way of doing business.

Thus the overall purpose of the vision is a statement of need or requirements from both the customer's and Government's perspective.

We envision a future in which South Australian Government services are accessible to all South Australians from a convenient single point of entry, through electronic means, either in the home, office or at convenient public locations, 24 hours a day, 7 days a week. This provision of services, which may cross the boundaries of Government Agencies, will be seamless and transparent to the customer. This seamlessness would eventually apply to the services and information provided by all three tiers of Government; Federal, State and Local as the systems of these different levels of Government are linked.

Bill paying for electricity and water rates, driver's licence applications, applications for Government permits etc. will all be processed electronically from the home or office, or through kiosks located in public places, or by simple transactions conducted over the phone. We can envisage customers receiving consolidated accounts for services provided by Government Agencies, water and sewage, electricity, rates etc., rather than separate bills for each service used. The customer will only be aware of the one 'shop front' and be unaware that behind the scenes there may be transactions occurring between the computer systems of any number of Agencies.

In time, technology will allow us to move away from the menu approach to service provision and tailor services and information to suit the unique and specific needs of the individual customer. These could be combinations of services or information from a variety of Government sources and provided on either a one-off/'ad-hoc' or regular basis as required, and at a time to suit the customer. Customers performing transactions of a complicated nature would be guided by voice and video interaction with a remotely located assistant or by the 'artificial intelligence' built into the interface mechanism. An individual starting up a business for instance would utilise this form of assistance to navigate their way through the various Agencies and regulations affecting businesses, to identify which areas apply and those which do not. Direct benefits will therefore flow to South Australian businesses, both large and small, as they find this new method of service provision both convenient and inexpensive.

Government Agencies would themselves utilise these facilities in their normal dealings with the other arms of Government in order to improve the efficiency of their operations.

⁵⁷ Adapted from *Environmental Scan, as pre-requisite to Developing a Whole of Government Information and Communication Services (ICS) Strategic Framework*, Working Paper 2, IDS, DAIS, 14 November 1997; refer to http://www.ics.sa.gov.au/background/working_paper_02.html (Accessed 1 August 1999)

As the systems of the various Agencies are linked to facilitate interaction with the community, the means of speedier inter-Agency interaction is provided. While Agencies will still require their own IT facilities to provide their respective services, these will be linked into a standard Whole-of-Government communications interface with a common 'look and feel' to the community.

The service recipient would be oblivious to the nature or location of the service provider, which in an increasingly outsourced business environment, could be a Government Agency or a commercial organisation contracted to the Government. As the Government becomes more of a funder/purchaser of services and less of an owner/provider the Whole-of-Government network becomes the 'binding' for bringing together the disparate organisational units, public and private, which provide the services. Further, the physical location of these organisations and the individuals that comprise them will be irrelevant. Government staff will perform their duties via the 'electronic workplace' which may be located in a normal office environment, at home or on the road and potentially occur out of normal office hours. Time and location will no longer be a barrier to either service provision or receipt.

Appendix 8 – Tasmanian government’s directions for information technology and advanced telecommunications⁵⁸

SUMMARY OF ACTIONS TO IMPLEMENT STRATEGIES, AS RELATING TO ELECTRONIC SERVICE DELIVERY

1. Transforming Regional Communities
 - *Enter into a strategic partnership with Nortel Australia*
 - *Adopt an “all band” approach to delivery channels (ranging from narrow band to broad band applications)*
2. Transforming how we work
 - *Establish an electronic commerce centre in conjunction with the University of Tasmania (TECC)*
 - *Develop micro-businesses supported by community access centres*
 - *Develop of a fully integrated land information system (LIST)*
 - *Establish a call centre strategy; Nortel to establish a Call Centre of Excellence*
3. Transforming how we live
 - *Implement a single coordinated approach to both physical and electronic ‘windows’ to government transactions*
 - *Create physical shopfronts which provide services integrated across agencies*
 - *Introduce delivery channels using telecommunications and information technology, particularly in rural areas and for others with access difficulty; provide additional choice for all customers*
 - *Introduce differential pricing, such that electronic transactions are of lower price*
 - *Implement a 7/24 (7 days a week/ 24 hours a day) service benchmark for electronic services*
4. Transforming how we learn
 - *Through RTIF monies, develop a network of community access centres, providing equity of access, etc.*
 - *Provide schools with modern information technology and telecommunications*
5. Infrastructure and services
 - *Realise the Networking Tasmania Project involving a single outsourced wide area data network for agencies and possibly government business enterprises*

⁵⁸ Adapted from *Directions Statement*, Premier of Tasmania, Department of Premier and Cabinet, 10 April 1997.

Section 2

Summary of User Surveys concerning the Delivery of Government Services by Electronic Means

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1. Introduction

- This report reviews the quantitative data available in the public domain plus information specifically made available to us. Within Australia, relevant information was first sought from:
 - the six State governments;
 - the governments of the Northern Territory and Australian Capital Territory;
 - certain Federal agencies and initiatives known to have deployed illustrative examples of electronic service delivery, viz. the Commonwealth Information Centre, the Business Entry Point and the Australian Taxation Office; and
 - the Brisbane City Council, in recognition of its significant scale of municipal operations.
- Overseas information has been limited to what is known to be readily available and was sourced from only the United Kingdom and Canada.
- This report details a summary of the information that parties were willing to provide.

2. Summary of information about user needs and preferences for modes of delivery of government services

State Data

2.1 AUSTOUCH, Australian Capital Territory

Source

- Management reports obtained directly from the Department of Urban Services. They have requested that use of this information be first approved during the draft report stage.

Context

The AUSTOUCH information service, delivered via kiosks and the Internet, grew out of extensive community consultation commencing 1992. Three types of information are available concerning usage of the kiosk mode of delivery:

- generic system data;
- user-initiated response forms;
- public feedback arising from face-to-face surveys conducted in 1997 and 1998.

Summary reports present results compiled from the system and face-to-face surveys.

AUSTOUCH kiosks provide both bill payment services and information on government and community services. AUSTOUCH accepts payments for:

- rates;
- land tax;
- parking fines;
- traffic fines;
- ACT Housing accounts (including loans, rent, and rental maintenance);
- ACTEW Corporation electricity accounts; and
- ACTEW Corporation water and sewerage accounts.

Information on AUSTOUCH is presented under broad subject headings, such as 'What to See and Do' or 'Public Transport'. This helps customers find the information they need using familiar words, rather than the name of the government department responsible for providing the service. Information on AUSTOUCH is designed to help customers find basic information on services and identify the appropriate agency responsible.

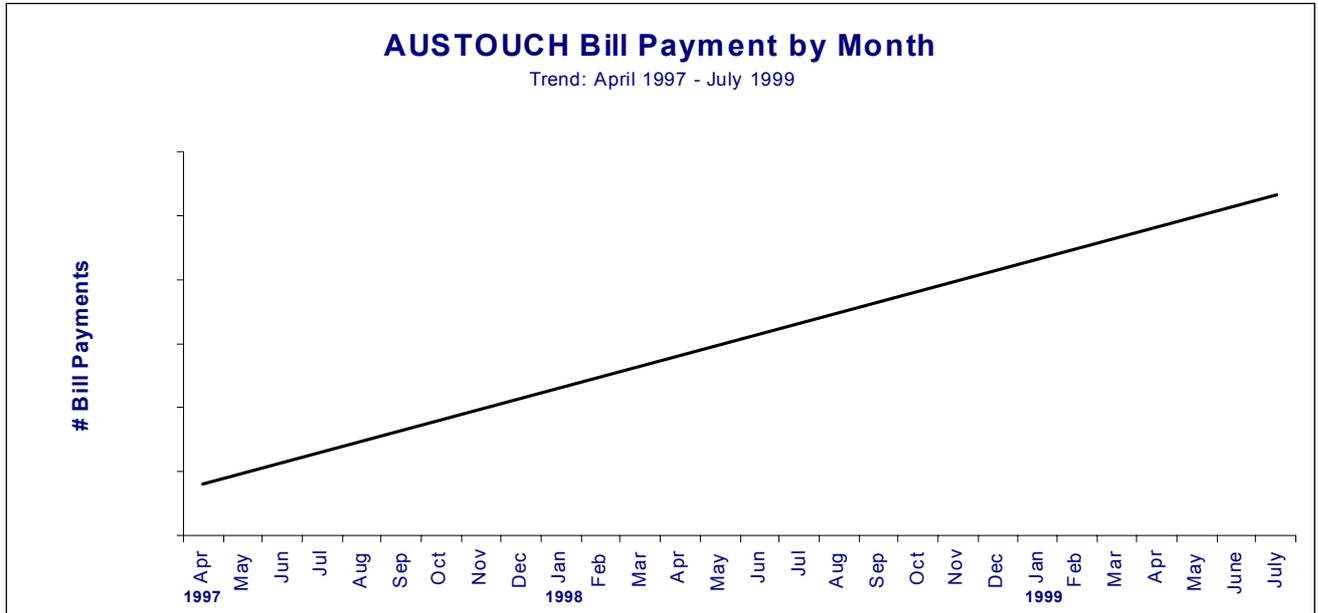
Data

System Statistics on Usage: Bill Payment, No. of Customers, No. of Screens Accessed

Bill Payment

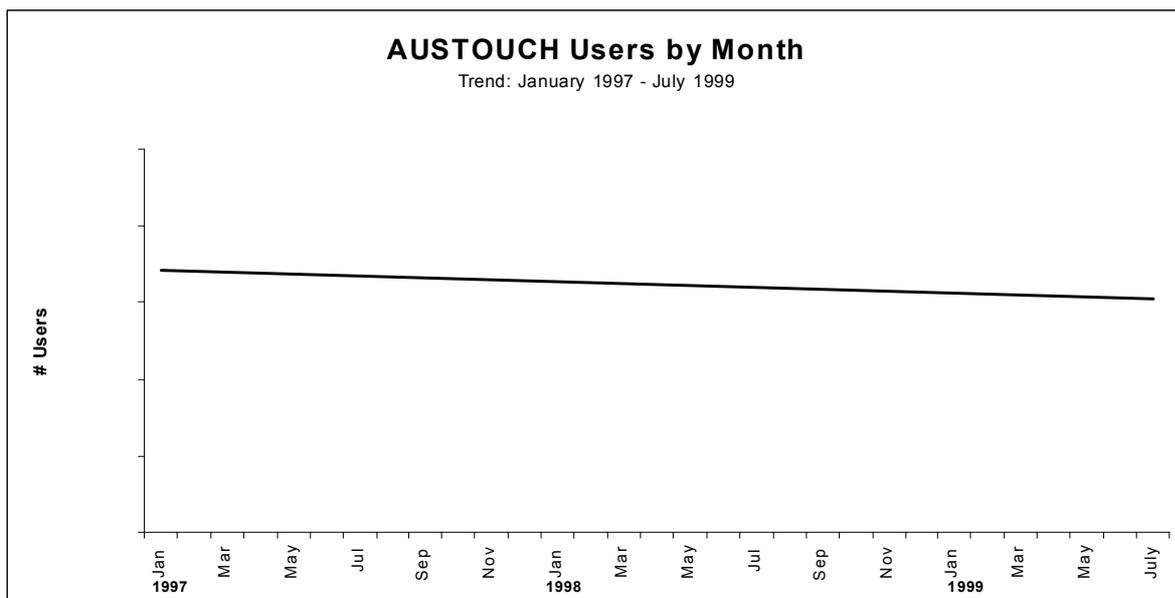
Since the launch of bill payment facilities in April 1997, AUSTOUCH has processed more than 10,000 transactions worth in excess of \$1.3million. The take-up of payment facilities has been slower than expected, but continues to grow at an average rate of 6 per cent per

month. Use of bill payment facilities has been found to peak on Thursday's and Friday's (particularly during public service pay week) and around the 15th day of each month when rates and land tax assessment notices fall due. A total of 25 per cent of all payments at AUSTOUCH are completed outside regular business hours.

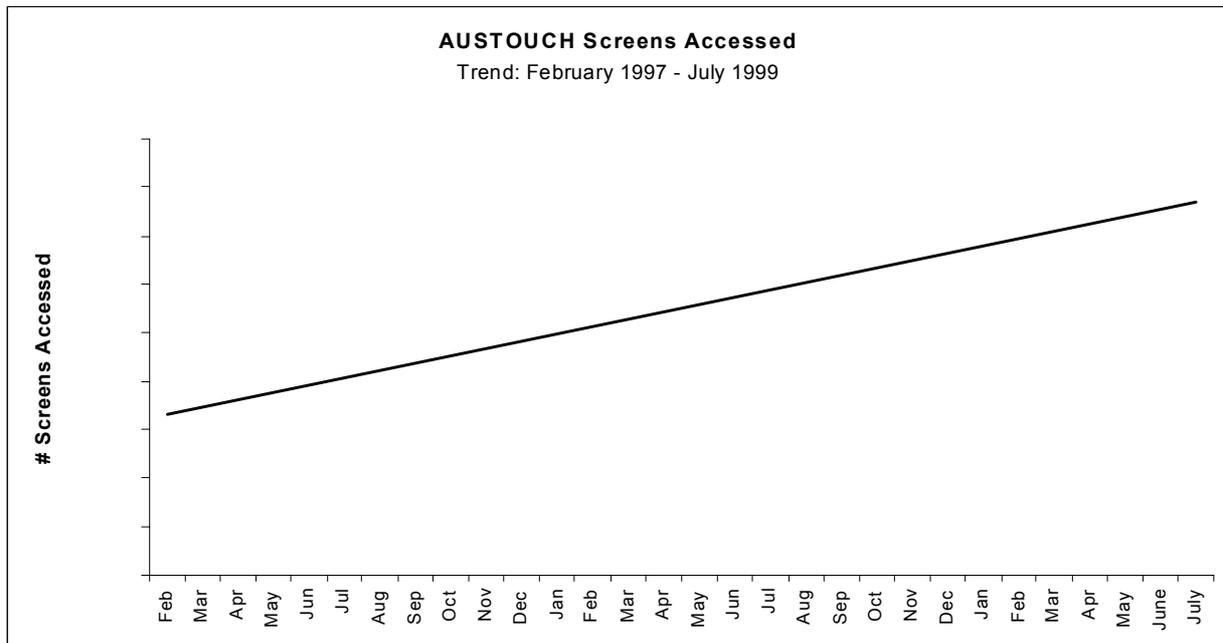


Customers

The AUSTOUCH system records each break to the kiosk “screen-saver” as an individual customer. AUSTOUCH currently serves an average of 570 people each day across the 18 kiosk locations in Canberra. Usage has been found to decline during school holidays, and is highest on weekends and during the lunch time period of each day.



Screens Accessed



The AUSTOUCH system records each time an individual screen of information is accessed by a customer. By far, the most popular topic on the AUSTOUCH network is the ACTION timetables, which in total account for approximately 15 per cent of total kiosk use. “What to see and do”, “Sport and Leisure”, “Parks and Environment” and

What’s New features also receive high levels of use. Each customer will access as average of 3.51 screens.

Feedback gained from Customer Survey

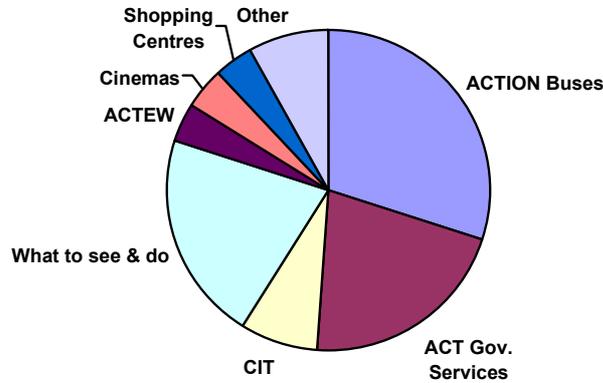
In April 1998 a survey of AUSTOUCH customers was conducted to determine the level of satisfaction with the service and to gather information on the characteristics of kiosk customers.

User Demographics: The survey revealed that there is equal usage of AUSTOUCH by men and women but that younger people are more likely to be kiosk users than those in older age groups. There was a high proportion of first time users amongst the survey participants, and most of the respondents had discovered AUSTOUCH in passing.

Young people tended to be looking for specific information, people in the middle age groups were more likely to be paying a bill and older people were usually just browsing.

Services Accessed: The paying of an ACT Government bill was the most common reason for using the kiosk on the day of interview and this feature was more likely to have been used by women.

Those seeking specific information were generally looking for ACTION bus timetables/routes, recreation information or Government service information. The information sought by customers from AUSTOUCH is shown below.



Useability, Convenience: The AUSTOUCH kiosks were perceived as having a number of advantages including being quick and easy to use, being available outside normal office hours and providing relevant or useful information. Location of the kiosks is an important factor in the decision to use AUSTOUCH; their closeness to work or home or being situated where using the kiosk can be combined with other activities such as shopping or banking are regarded as attractions of the facility.

Future Intentions: While care must be taken in the interpretation of the survey findings because of the small size of many of the sub-groups of respondents, they provide a useful basis for the planning of an enhanced service to customers. The survey indicated a high level of intended future use by respondents (as shown in the figure below), which indicates satisfaction with the facility and provides impetus for identifying ways in which the service to customers can be further improved.

2.2 Customer Service Evaluation, Service Tasmania

Source

“Customer Service Evaluation” was prepared by Enterprise Marketing and Research Services, Hobart, to provide a customer satisfaction assessment for the Service Tasmania shopfronts, telephone service and Internet services in December 1998.

Context

Service Tasmania shops provide customers with one stop access to over the counter government transactions, services and information in a single location, including renewing driver’s licences, purchasing fishing licences, paying bills and taxes, buying maps, buying National Parks entry passes, applying for various licences and permits, and obtaining current Tasmanian Government information. Service Tasmania also offers integrated address changes, where people can fill in a form that will automatically change their address for the following services: Driver’s Licence, Motor Vehicle Registration, Student Bus passes, Tasmanian Electoral Roll, Housing, Seniors Card, and Library Card. Using IVR, customers can pay their Motor Vehicle Registration, Boat Registration, HEC accounts, Land Tax (where this is under \$450) and Traffic and Court fines by telephone.

There were two main components to the survey – an exit interview completed by 163 people using the Service Tasmania shopfronts, and a telephone survey of 202 people who had previously used the telephone bill payment system.

The study identified differences between the two One Stop Shop services at Hobart and Smithton, primarily based on marketing and convenience of location. It appeared that the Smithton service had been better promoted and was in a more easily accessible location than in Hobart. Respondents also had better knowledge of services available than at the Hobart shopfront.

The interactive voice response (IVR) telephone bill payment service was used by 15 per cent of respondents from the Hobart service centre, 4 per cent of the Smithton sample, and all of the 202 respondents surveyed by phone. Of the latter group, 83 per cent had used the IVR service more than once, and 21 per cent had also used the shopfront service. Those respondents who had used the shopfront services had used the shopfront service for (top four services used in descending order):

- Paying a bill
- Vehicle registration
- Drivers licence/learners permit issue or renewal
- Making an inquiry

The IVR service was rated highly by 95 per cent of the respondents who had used it, 98 per cent who had used it would use it again for bill payments. Of the respondents interviewed at the shopfronts, 78 per cent stated that it was unlikely that they would use the phone service. It was not stated what proportion of this group did not have credit cards, although 6 per cent of the shopfront respondents said that they may use the phone service if they had a credit card.

Tasmanian Government Internet services have been used by only 4 per cent of both the shopfront and telephone respondents. However, 25 per cent of the telephone sample and 17

per cent of the shopfront sample indicated that they would be likely users in the future. The major issues in use of government service on the Internet in the future were (top four responses in descending order):

- Access to computers
- Security issues
- Lack of knowledge/skills
- Convenience

Involvement with Centrelink

The Service Tasmania shopfront in Shipton has been involved in a co-operative partnership with Centrelink, the Commonwealth service delivery agency, since 1997, along with service shops in other (primarily rural) locations.

The Review of the Centrelink/*Service* Tasmania Partnership published in September 1999 highlighted current service delivery issues including privacy and confidentiality, concerns with joint service provision, marketing of the partnership, the issue of information security and individual systems, staff training and support, expansion of Centrelink services provided by *Service* Tasmania and formal reporting structures. All these issues will be addressed as a result of this review and will be taken into account in all future partnership developments.

Other factors identified as important in the future are the rapid development of electronic service delivery options, opportunities for growth and competition factors. Centrelink and Service Tasmania will trial electronic service delivery initiatives and will collaborate on the development of IT initiatives such as smart card applications. Particular emphasis will be given to joint systems development where they provide 'common window' access to services or appear as a single transaction from the customer point of view.

Interaction between the existing initiatives and partnership and the new Trials of Innovative Government Electronic Regional Services (TIGERS) initiative managed by the Office for Government Online announced as part of the Telstra social bonus package. The TIGERS service is an extension of the Government Information Centre project, first announced by the Commonwealth Government in the Investing for Growth industry statement of December 1997, now operating in Tasmania as a pilot under the branding ACCESS 136247 (referenced below).

Commonwealth agency Data

2.3 Research on the Commonwealth Information Centre, Centrelink

Source

“Research on the Commonwealth Information Centre” was commissioned from Chant Link and Associates by Centrelink and the Office for Government Online to assess customer needs and potential levels of demand and usage in May 1998.

Context

The Commonwealth Information Centre was announced as a government initiative in December 1997, to provide a single point of contact for government customers seeking information. The CIC was envisaged as a call centre with advanced information search capabilities to be able to provide referrals to other agencies at local, State and Commonwealth government levels. It covered a quantitative sample of 1210 individual respondents, and 804 small business operators. This was supplemented by 23 group discussions, with consumer and small business users, and special needs (aboriginal and multicultural) groups, and in-depth interviews with call centre managers.

Data

Telephone was the preferred mode of access.

Of the 1092 consumer respondents who stated that they would use the basic CIC referral service, 89 per cent selected the telephone as a preferred mode of access to the CIC. Four percent selected the Internet as a preferred mode, and 2 per cent of respondents selected each of fax, mail and e-mail. Those interested in interacting via the Internet and e-mail were primarily students and professionals.

Of the 660 small business respondents who stated that they would use the basic CIC referral service, 93 per cent selected the telephone as a preferred mode of access to the CIC. Six percent selected the Internet as their preferred mode, and 17 per cent of respondents selected fax, 5 per cent mail and 7 per cent e-mail, indicating a higher level of interest in newer technologies by small businesses than consumers.

The level of Internet usage would likely to be higher if the study was repeated, as access levels have increased markedly over the last two years generally.

About two-thirds of both small business and consumers are potential users.

The proposed CIC service, for simple referrals and provision of contact numbers, was seen to be a valuable resource by two thirds of the consumer respondents. Of this group, just under half estimated that the availability of the service would be likely to increase their amount of contact with government agencies. Interest in usage of the service was greater in younger population groups, particularly the 18-25 year old bracket, and dropped off with increasing age groups, and was much lower in the 65 plus age group.

Similar to consumers, about two thirds of small businesses stated that they were potential users of a CIC style service. Again, potential demand was significantly higher in the 18-25 age bracket. Just under half estimated that the availability of the service would be likely to increase their amount of contact with government agencies.

Previous behaviour as an indicator of potential demand

The content of consumer respondents' inquiries to government agencies over the last year was taken to be an indicator of potential future demand. The greatest number of queries was for information about benefits payments, followed by requests for information about telecommunications, utilities, health and tax. 21 per cent had made no contacts over this time, 40 per cent between one and three, and 8 per cent more than ten. Previous search attempts where the government agency responsible was not known were conducted by using the phone book (47 per cent), asking someone else (24 per cent), asking another government agency (18 per cent) and directory assistance (17 per cent). Only 2 per cent of previous searches had been made using the Internet.

The likelihood of making successful contact (discovering the answers to questions where the correct agency was not known) was not overly influenced by most modes of attempt (office visit, mail, fax, Internet, e-mail) although there was a slightly higher success rate with phone queries, and less chance of success using 'other' methods.

Using a decision tree analysing previous successes, access to information and difficulty of query, the study concluded that based on the 3209 attempted contacts recorded, there would be potential demand for use of a CIC referral service in 13 per cent of these cases. Estimates prepared by topic area showed that a number of query types may have over 25 per cent of calls going through a CIC service, based on the same factors. The queries that may place the highest demand on a CIC service were found to be:

- Equal opportunity (potential demand for use of referral service in 28 per cent of all related queries)
- The arts, media or censorship (28 per cent)
- Government legislation (27 per cent)
- Immigration (26 per cent)
- Consumer affairs, consumer protection, privacy matters and the Ombudsman (26 per cent)
- Science, conservation and the environment (25 per cent)

Other matters which ranked highly in these estimates were legal aid and other legal issues, overseas travel and housing. Pensions, benefits and allowances, while although the service in greatest demand, was estimated to have a 12 per cent potential demand rate. This reflects the familiarity users have with existing points of contact and service. However, the volume of these calls contributed to this type of query being estimated as the most likely to come through this type of service. The other topics with higher levels of potential demand listed above were ranked much lower in terms of total potential volume.

Small business' interests and demand levels are similar to consumers'.

The topics of interest to small business were generally similar to those expressed by consumers, with the exception of registration and licensing. This was rated as the number one topic of queries by small business (where consumers' was welfare payments). The issues of tax, telecommunications and utilities were ranked highly in both the consumer and small business surveys. The profile of number of contacts was similar to consumers (18 per cent had made no contacts over this time, 38 per cent between one and three, and 9 per

cent more than ten). The average number of contacts was found to be higher for younger, rural, small business) as opposed to single owner/operator) and male respondents.

Previous search attempts where the government agency responsible was not known were conducted by using the phone book (40 per cent), asking someone else (20 per cent), asking another government agency (26 per cent) and directory assistance (23 per cent). Only 3 per cent of previous searches had been made using the Internet. As with the consumer sample, the mode of contact was not related to the degree of success in resolving queries. The level of telephone usage by businesses was higher, and the level of personal office contact was less.

The decision analysis approach indicated that, similar to consumers, 14 per cent of queries were potential CIC calls. Topics rated highest in terms of potential demand were:

- Customs, importing and exporting (potential demand for use of referral service of 26 per cent of all related queries)
- Consumer affairs, consumer protection, privacy matters and the Ombudsman (23 per cent)
- Industrial matters (including WorkCare and awards) (21 per cent)
- Government legislation (21 per cent)
- Statistics and census data (20 per cent)

The greatest potential volume of calls was estimated be in the areas of industrial relations/WorkCare, licensing and registrations, telecommunications, utilities and tax.

Problems and issues

The greatest perceived problems by both consumer and small business respondents in previously attempting to find answers to queries of government were:

- Being passed around within an agency
- Inability to find which agency to contact
- Being passed around between agencies
- Inability to find which area within agency to contact
- Phone queues.

Issues that were seen with the CIC concept included:

- Need to cover more than one level of government
- Waiting times
- Difficulty in constructing government wide database of contacts
- Difficulty in maintaining government wide database of contacts
- Importance of publicising limitations of service so as not to disappoint.

Particular issues within the multicultural and aboriginal groups were:

- Language difficulties, with English, and particularly over the phone
- Unfamiliarity with technology
- Expectation of dealing with 'official' matters in person and particular lack of knowledge about operation and responsibilities of Australian government.

2.4 Customer Acceptance of Technological Innovations, Commonwealth Service Delivery Agency (Centrelink)

Source

“Customer Acceptance of Technological Innovations” was conducted by Frank Small and Associates on behalf of Centrelink in August 1997.

Context

The Customer Acceptance of Technological Innovations study was commissioned to identify information and services that Department of Social Security (as it existed in 1997) customers would like to use via different technological innovations at that time and in the future. The study also investigated satisfaction with current service, access to technology and the preferred locations and times for the use of selected technologies.

The technologies investigated were enhanced voice based teleservices, electronic kiosks, smart cards, and the Internet.

The research program consisted of four initial focus groups, in-depth interviews with sixteen customers, eight concept evaluation focus groups and a quantitative study of 853 customers and 130 customer intermediaries.

Data

Current modes of service delivery are seen to be flawed by customers, and could be changed through the adoption of new technologies, particularly enhanced telephone service.

The major needs of surveyed customers were reliability of service, convenience and avoiding lengthy delays in DSS offices. Other concerns were to avoiding the stigma of being on welfare, choice of service delivery options and flexibility. In particular the youth group displayed dissatisfaction with current service, with 49 per cent describing it as variable.

The most important factors from a customer point of view in dealing with DSS were:

- Reliability of payment, particularly receiving payments on time
- Ease of dealing with the agency, including being treated as an individual, avoiding queuing, and filling in forms once only
- Opportunity to interact with DSS from a distance, avoiding going into the office, travelling, and public stigmatisation as a welfare dependent
- Consistency of service and information

Customers saw a range of potential solutions to these problems, in general, by having:

- A particular contact to deal with
- A way to deal with issues without having to go into an office
- A way to update personal details without going into an office
- A way to check on their details, payments etc.
- A way to seek general information
- A way to lodge forms remotely

There was clear preference for the telephone as a solution to provide access to information, and to interact with DSS. Over half the sample responded that the telephone would be their major preference for providing the above solutions to the range of problems identified.

Different customer groups will adopt technologies at different rates

Respondents selected their preferred mode of service delivery from office, telephone and kiosk in response to a variety of scenarios, and were classified according to the total score across all scenarios, the higher end of the scale represented by willingness to use kiosks for all scenarios, the lower end characterised by wanting to go to a DSS office to deal with the organisation. The four bands of classification, and the distribution across the entire sample, were:

- Early Adopters 12 per cent
- Early Majority 27 per cent
- Late Majority 52 per cent
- Laggards 9 per cent

The early adopters and early majority were more likely to be younger, located in urban areas, particularly Brisbane and Melbourne, to have had negative or variable experiences with DSS in the past, and more likely to have access to modern technology, particularly the Internet.

The late majority and laggards were more likely to be aged or sick/disabled, from rural areas, to have had positive past experience with DSS and more likely to have no experience with modern technologies.

Previous experience with technology is differentiated by age and has a direct effect on adoption of new technologies.

The study found that people's previous experience with technology had a direct relationship with propensity to adopt new modes of service delivery. Of the seven target groups (unemployed, sick or disabled, aged, families, students, intermediaries, youth⁵⁹) the groups that responded most favourably to the adoption of new technologies were intermediaries, students, the unemployed and families. Across these groups the similarities were the relatively young age and greater access to and familiarity with technology.

The sample generally had high access to computers, with 93 per cent of students, 91 per cent of the youth group, 69 per cent of all unemployed and 78 per cent of families having access. In contrast, of the aged group, only 29 per cent reported access to a computer, and 49 per cent of the sick and disabled.

This differentiation was clearly passed through to Internet access, with only 2 per cent of the aged group and 13 per cent of the sick and disabled having access to use the Internet, while 70 per cent of students and 64 per cent of the youth group had access.

⁵⁹ The youth group was composed of respondents across all other groups aged under 25. There was significant overlap between the student group and the youth group, with most of the remainder of the youth classification unemployed.

2.5 Evaluation of the Commonwealth Information Centre (Access) Pilot, Office for Government Online

Source

“Evaluation of the Commonwealth Information Centre (Access) Pilot”

Prepared by Taylor Nelson Sofres Australia (formerly Frank Small and Associates) for Arthur Andersen on behalf of the Office for Government Online (OGO) and Centrelink.

Context

This study was commissioned by the Department of Communications, Information Technology, and the Arts (OGO) in late 1998 to provide an evaluation of the first stage of the Commonwealth Information Centre (CIC) pilot, branded as ‘*access*’. The study investigates the CIC marketing strategy through an assessment of general awareness of the service and brand, and usage intention among the general population. The study was conducted in three stages:

- Stage 1: Community Awareness Study - total of 309 interviews were conducted by phone in Tasmania (December 1998).
- Stage 2: Users Study – 100 previous users of the CIC interviewed by phone (December 1998 – January 1999)
- Stage 3: Qualitative Stage

Stage 1:

The initial part of the study focused on the marketing campaign and general awareness of the service. Only 39 per cent of the sample had heard of the CIC or *access*, and a large proportion of these respondents were unable to correctly identify the services provided or the levels of government it provided referrals for.

Of the sample, 34 per cent indicated that they would be likely or very likely to use the service in the future. Eighty-three per cent of those who indicated that they were unlikely or very unlikely to use it indicated that they would have no need to use it. Thirty-five per cent of the sample said that the availability of the service would encourage them to initiate greater contact with government agencies.

Less than 40 per cent of the respondents agreed with the following statements:

- It’s easy to access government services.
- Government demonstrates leadership in the information economy.
- Government has improved its own business practices.

Higher levels of agreement were obtained for the more negative statements:

- Finding the right departments/agencies to contact for information is difficult (57 per cent)
- I don’t know where to go to find information from government agencies (46 per cent).

The respondents that had previously heard of the ‘*access*’ service were more positive in their responses to these statements than the general group.

Stage 2:

All members of the second phase of the study had previously used the ‘*access*’ service. The majority were female (57 per cent), lived outside of Hobart (82 per cent), were aged over 45 (65 per cent), were not engaged in paid work (54 per cent) and all spoke English at home (100 per cent). Cross tabulations of these characteristics against responses were not available.

Of the total sample, 75 per cent were one time users, and only 5 per cent had used the service four or more times. A large majority (84 per cent) stated that they were likely to use the service again, and over half said that it would encourage them to contact government agencies more readily.

Overall, the perception of the service was good with 91 per cent of users being satisfied or very satisfied, although only 65 per cent could accurately describe the nature of the service. The quality of service was rated highly, with over 90 per cent rating the waiting times and operators highly, including their friendliness and knowledge. A similar proportion agreed that they would recommend the service to others.

Seventy-seven per cent of the sample had found that the operator had been able to refer them to an appropriate government agency to answer their query immediately. From this group, 91 per cent followed up their call to the CIC with a call to the agency referred to, and 86 per cent of this group were able to resolve their query after contacting the number given.

Desire for enhanced services

Half the sample would prefer that the CIC was able to provide a direct connection rather than a referral service, with 56 per cent of those being willing to pay a connection fee.

Of the group surveyed, 68 per cent did not have access to the Internet either at home or at work. Of these people, 18 per cent believed that they would have access in the next year. Of those who currently had Internet access or were likely to in the near future, 59 per cent indicated a willingness to use the Internet to make use of ‘*access*’ services.

Perception of government

The users surveyed in stage 2 generally had a very similar response to the prompted questions about perceptions of government as though interviewed in the first stage, although there was a slightly higher proportion that believed it was easy to use government services, and a much greater proportion (69 per cent in Stage 2, compared to 57 per cent in Stage 1) who agreed it was difficult to find the right departments or agencies.

Stage 3:

The qualitative phase was a short in depth study of ten users and one group of operators.

The user component was generally very positive towards previous use of the service, with expectations being exceeded. Suggested enhancements included longer opening hours (currently 8am-6pm service) and greater integration with all levels of government (service does not cover local government at this stage). Important concerns were that the service did not degrade current expected levels of service (queuing) and that the process was not overly automated (IVR), and that operators remained interested in queries.

The CIC is underpinned at the operator level by advanced database and Internet search capabilities. Operators concerns focused on the speed of Internet access, consistency and updatability of the database. Other concerns acknowledged the future of the service, with an anticipation that current high service standards could be eroded if call volume increased and if the service is provided at a national level, and that 'holes' could appear in the database over time.

Commonwealth-wide Data

2.6 Electronic Service Delivery, including Internet Use, by Commonwealth Government Agencies, ANAO

Source

“Electronic Service Delivery, including Internet Use, by Commonwealth Government Agencies”, Audit Report No. 18 1999-2000 was conducted by the Australian National Audit Office during 1999. The report was tabled in Parliament on 15 November 1999.

Context

As part of monitoring the Government commitment to providing all appropriate government services online in ‘Investing for Growth’ in December 1997, the ANAO in conjunction with the Office for Government Online conducted a survey of agencies’ current usage and provision of online services.

Data

Although this report does not strictly provide a representation of the user perspective of government electronic service delivery, it provides a useful point of reference of Commonwealth agencies’ activities in this area.

Appendix 3 provides a clear definition of what is included as electronic service delivery.

Of particular interest is the four stage model at Appendix 5 devised by the ANAO to represent particular stages of development in Government ESD.

Conflicting with the user perspective and preference for telephone delivery found through examination of other, user centred surveys, developments in government electronic service delivery are focused on use of the Internet for information and service provision. The majority of initiatives being developed are for the use of individuals or particular groups of individuals, although there are a large number designed for the use and information of other government agencies.

Australia-wide Data

2.7 Household Use of Information Technology/Use of the Internet by Householders, Australian Bureau of Statistics

Source

- Two ABS reports are available, viz.
- “Household Use of Information Technology”, ABS No. 8146.0, 1998.
- “Use of the Internet by Householders”, ABS No. 8147.0, February 1999.

Context

During 1998, the Australian Bureau of Statistics surveyed approximately 13,000 households to gauge their use of, and interest in using, information technology in the home environment. The parameters covered included:

- Usage of bill payment via electronic kiosks, the Internet and telephone (where such bills would include those for both government and non-government services); and
- Interest in accessing online government information services or form lodgement services from home.

Subsequent surveys during 1999 extended the data gathered on actual usage.

Data

Householders/consumers - potential usage of online government services

A 1998 survey found that 44 per cent of adult Australians expressed interest in accessing online government information services or online form lodgement services from their homes. This compared favourably to the following figures for interest in online access to related activities from home:

Online education services	49%
Online banking	37%
Online shopping	28%
Online gambling	4%

(8146.0; pp.57 & 58)

Actual usage of various technologies/service delivery modes for electronic commerce/bill paying (1998/1999)

Although government services are not identified here, they may be assumed to comprise a component of bills paid via a kiosk or telephone, particularly regarding government-owned utilities.

Paid bills/transferred funds via:

	1998	1999
An electronic kiosk	0.5%	2.4%
The Internet	0.3%	1.6%
Telephone	29%	39%
EFTPOS	58%	64%
ATM	66%	71%

(8146.0 - pp.56 & 57; 8147.0 - pp.9 & 16)

Actual usage of electronic information booths in various locations for the purpose of electronic commerce/bill paying or information access (1998)

Where the electronic information booth is located in:

Public library	4%
Government agency/department/shopfront	4%
Shopping mall	8%
Museums/exhibitions/tourist attractions	5%

(8146.0; p.51)

2.8 Small Business and Electronic Commerce, CIRCIT

Source

CIRCIT Research Report No. 22, October 1998.

Context

In 1998, CIRCIT undertook a postal survey of 675 small businesses across Australia, focussing on the way they use online services to communicate and do business with customers, other businesses and government.

Section 10 of Research Report No. 22 presents results relating to:

- the communication channels currently used in dealing with government, and
- the expected use in the future of small businesses of online services according to the type of activity.

Data

Communication Channels Used with Government

Small business people were asked what communication channels they currently use when interacting with government across a range of activities. Table 1 illustrates the findings.

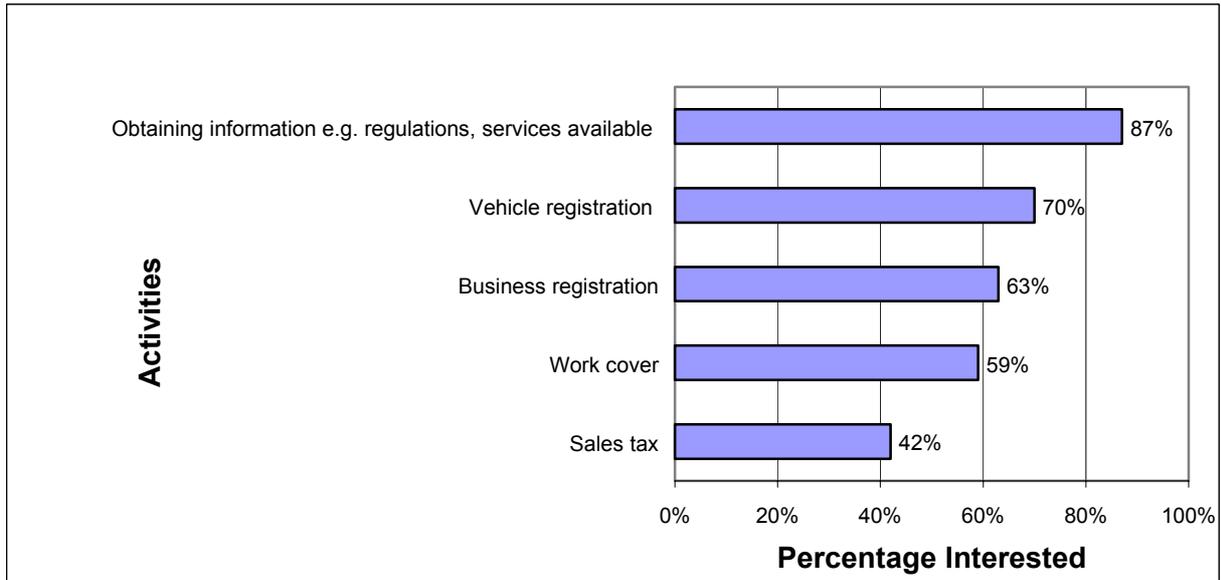
Mail is the predominant communication channel used by small businesses when they deal with the government. The phone, fax and the Internet are important for gaining government information. At present 13 per cent use online services for government information. However 87 per cent of small businesses would like to use the Internet for government information if possible and 70 per cent would like to do Internet vehicle registrations.

When conducting income tax returns post is used by 58 per cent of small business people but electronic lodgement/email is also favoured by 25 per cent.

Future Use of Online Services for Government Related Activities

The majority of small businesses surveyed would be willing to use a wide range of services for interacting with government if it were possible. Of these activities, most (87 per cent) would like to get government information online (e.g. services, regulations) and conduct vehicle registration (70 per cent).

Figure 1: Future use of online services with government activities



N = 421

Table 1: Communication channels used with government

Business registration	Post (70%)	Face to face (18%)	Phone (12.4%)	Fax (11%)	Email/WWW/electronic lodgement (2.7%)
Vehicle registration	Post (58%)	Face to face (38%)	Phone (5%)	Fax (2.4%)	Email/WWW/electronic lodgement (0.7%)
WorkCover	Post (78%)	Phone (10.7%)	Fax (7%)	Face to face (6%)	Email/WWW/electronic lodgement (0.9%)
Income tax	Post (58%)	Email/WWW/electronic lodgement (25%)	Face to face (17%)	Phone (8%)	Fax (7%)
Sales tax	Post (44%)	Face to face (7.3%)	Phone (6.4%)	Fax (5.5%)	Email/WWW/electronic lodgement (2.1%)
Obtaining information e.g. regulations, services available	Post (58%)	Phone (41%)	Fax (23%)	Email/WWW/electronic lodgement (12.7%)	Face to face (10%)

International Data

2.9 View from the Queue, United Kingdom

Source

A summary report of an extensive customer survey titled “View from the Queue” has been accessed via the Web at <http://www.citu.gov.uk/research/viewqueue/index.htm>.

Context

In October 1998, the IT Unit of the Cabinet Office published results of market research involving a mix of desk-top study, interviews with both small and larger businesses, and general public surveys. The report maps out the factors likely to influence take-up of electronic government services and indicates how such services are viewed by different parts of the population. It also identifies obstacles likely to undermine the propensity to adopt new methods.

A. The general public:

Propensity to adopt new ways of interacting with government (individuals are not a homogeneous lot)

1. Individuals can be broadly divided into one of three categories.

- The first, accounting for about two-fifths of adults, are favourably inclined to adopt new approaches based to a large extent on their general use and acceptance of technology in their work, education or leisure;
- A further two-fifths could be persuaded, although about half of this group would require incentives or active support and encouragement;
- The final group, making up just under a fifth of the population, have had little experience of, and tend to avoid being exposed to, new methods and are antagonistic towards them.

2. Broadly speaking, propensity increases with social grade and falls with age. Those on Income Support are over-represented in the lower propensity groups. Nevertheless, over half are amenable in principle to the idea of electronic government: lone parents are most and pensioners least positive within this group. However, electronic interaction is rarely their preferred approach.

3. New generations are likely to be increasingly accepting of, or perhaps even demanding for new technology, but, with a rapidly rising number of people aged 50 or more in the population, a substantial proportion of the population are likely to remain suspicious of adopting new methods.

The rate of adoption (of new ways to interact with government) is highly dependent on how well user needs are understood and internalised within the design, implementation and support for new methods.

4. There are key messages in the research which address these issues:
 - It is essential to offer extra benefit by improving or enhancing existing services. Users will not accept changes that succeed only in “moving the queue from the counter to a kiosk”;
 - Change must be based on evaluating the benefits to users and solutions found which are cost-effective for users as well as for government.
5. The main improvements sought are:
 - simplifying procedures and documentation;
 - reducing time taken queuing or waiting;
 - minimising referrals between officials;
 - eliminating interactions which fail to yield outcomes;
 - extending contact opportunities beyond office hours;
 - improving relationships with the public.
6. Electronic government services are seen as having a potential role in improving four key areas:
 - speed of carrying out transactions;
 - convenience/access;
 - flexibility in options and hours of service;
 - empowerment (bring services closer to the public and allowing them to choose how/when to carry out transactions).
7. It is essential to allay concerns of potential users about technology and how it will be used by government by:
 - ensuring ‘confidentiality’ or privacy in interacting with government;
 - providing safeguards against fraud or computer hacking;
 - providing guarantees about government’s use of information;
 - providing assistance and support to users.
8. There is considerable scepticism about government’s ability to deliver benefits or to provide reliable assurances about electronic government.

Service types preferred for electronic delivery.

9. There is a prevailing belief that fairly simple interactions, such as paying for a licence or obtaining a passport, should be a priority.

10. There is also a view that, initially, using technology to provide information would help people become accustomed to the technology before introducing more complex services.

11. Interactions that are perceived as being genuinely complex (as opposed to being unnecessarily bureaucratically complex) are not considered to be a priority.

Mode/method of service delivery; technical interface

12. There is no consensus about the best method of interacting electronically with government. Whilst PC users favour keyboards, non-users reject them. Touchscreens, touchtone phones and interactive TV all receive a significant preference vote. However, nearly a third are either unwilling to state a preference or do not wish to use any of these.

13. Opinions are polarised over smart cards. There are more people in favour of using them to confirm identity than to make or receive payments; but there is a significant hardcore unwilling to use them at all.

B. Small businesses; independent accountants:

Propensity to adopt new ways of interacting with government

1. A major difference between the general public and those running small businesses is that the latter cannot envisage interacting with government from a public place.

2. This ties in propensity to adopt new methods with use of technology within the workplace, and particularly the use of computers and email.

3. Those not using these methods show much lower interest in electronic government. They are not prepared to acquire technology in order to deal with government and half of them consider electronic government to be irrelevant. Most of these are very small businesses and sub-contract their accounting to an accountant (see 6. below for the views of accountants).

4. At present, 43 per cent of small businesses claim to use computers and 15 per cent use email. Email users exhibit the most potential to adopt electronic interaction. Just under two-thirds of those operating computers but not using email are interested.

5. Many small businesses say the amount of interaction they have with government does not justify them making changes.

6. Independent accountants, who are involved in running the accounts of many small businesses as well as some of the bigger ones, tend to be computer orientated and more likely to use email. Overall, three-quarters are interested in electronic government and over 60 per cent are interested in interacting with government using email.

Design/implementation aspects

7. When it comes to implementation, there are concerns about:

- security and confidentiality;
- costs of adopting;
- a lack of personal contact;
- firms not having appropriate skills;
- dealing with situations requiring a signature;
- a mistrust and scepticism about government's ability to deliver

2.10 Citizens First, Canada

Source

“Citizens First”, prepared for the Citizen-Centred Service Network and the Canadian Centre for Management Development, October 1998.

Refer to <http://www.ccmd-ccg.gc.ca/whatsnewMain.html>

Context

In 1998, a random selection of 2,900 Canadians were interviewed, being representative of the population with respect to age, gender and region. They were queried as to their perception of the services provided by their governments: federal, provincial and municipal. Service delivery was treated quite generically, with online modes being identified only casually and then mainly in the form of e-mail and telephone contact. The purpose of the survey was to obtain accurate benchmarks of the performance of specific government services from the citizen’s perspective and then to identify what managers need to do in order to improve the services.

Data

General

All survey findings are expressed in terms of the service expectations and needs of Canadians ‘citizens’, as distinct from ‘customers’ or ‘clients’ who were seen to be a more appropriate description of those served by private companies. The latter could, if desired, discriminate between certain groups of customers for marketing/business reasons whereas governments must be even-handed and fair. Governments had to protect the public interest as well as meet the needs of citizens.

Delivery Modes

Four modes of service delivery were considered:

- Over the counter;
- By postal mail;
- By telephone; and
- By e-mail.⁶⁰

No conclusions were drawn indicating any preference for a particular mode.

⁶⁰ The reason for no mention being made of Web-based delivery is not clear. Perhaps it has more to do with the slow adoption of the Web by both governments and citizens as at 1998, although presumably such a situation would also apply to e-mail?

Service Quality

Of more than 30 aspects of service delivery assessed, the *Citizens First* survey concluded that five were key drivers of service quality:

DRIVERS OF SERVICE QUALITY	
Driver	Survey measure
Timeliness	“How satisfied were you with the time it took to get service?”
Knowledge, competence	“Staff were knowledgeable and competent”
Courtesy, comfort	“Staff were courteous and made me feel comfortable”
Fair treatment	“I was treated fairly”
Outcome	“In the end, did you get what you needed?”

‘Timely service’ was found to be the single strongest determinant of service quality across all services and across the three levels of government. Further analysis of the findings produced the following standards for timely service delivery:

SERVICE STANDARDS FOR ROUTINE TRANSACTIONS
1. Telephone 97 percent of people find a 30-second wait for a government representative to be acceptable. 85 percent find it acceptable to deal with no more than two people. If you leave a telephone message at 10.00 am, 75 percent find a four-hour wait for a return call as being acceptable.
2. Counter Service 68 percent find it acceptable to wait in any line for five minutes. 82 percent find it acceptable to deal with no more than two people.
3. Postal Mail 87 percent find it acceptable to wait for two weeks for a mailed reply.
4. E-mail If you e-mail a government office by 10.00 am, 90 percent find a four-hour wait for a reply as being acceptable.

Access to service

As many government services are used infrequently, the typical citizen seeking service is faced with a new or hazily remembered process on each occasion. Citizens may not know which level of government provides the service they are after and so do not know where to start looking. With reorganisation of governments being an ongoing process, the names of services, agencies and departments can change, making it difficult to find the service in the phone book.

Not surprisingly, access begins with knowing where to go to get the government service, but *Citizens First* revealed that knowing where to go greatly assists in reducing the number of subsequent problems arising. For example:

- Of the 75 percent who knew where to get the required service:
 - 45 percent reported no problems at all; and
 - Another 24 percent identified just one problem.
- But on the other hand, of the 25 percent who did not know where to access the service:
 - Just 12 percent had no problems; and
 - 14 percent encountered only one problem.

Hence there is a correlation between those with poor awareness of where to get government services and subsequent difficulties with the service. Telephone problems, representing the most common barrier to access, included busy phone lines, trouble with voice mail or automatic answering systems, and being unable to find the service in the phone book.

Multiple-Contact Services

Citizens First concluded that most citizens have not needed to contact more than one government office around a single service over the past two years. However, where multiple-contact experiences did arise, the leading trigger was the need for a certificate, licence or other type of personal paperwork.

Furthermore, in situations where multiple-contact services are required, up to two-thirds of respondents considered that each of the following options would help them in realising such services:

- A “one-stop” centre that offers all the services needed in one location;
- The ability to do all or most tasks by mail, phone, Internet, etc., without visiting government offices;
- One person to guide them through the system and assist with any problem.

In contrast, up to one quarter considered each option to be unhelpful in their specific situation.

The three options were seen as complementary. A single-window centre can be accessed by phone or Internet, and can assign one person to assist the citizen with different phases of the service request.

Section 3

The User Perspective in Online Government Services: A Qualitative Study

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1 SUMMARY

We examine consumer activities which are relevant to the delivery of online government services. From the perspective of service users, we consider various features of the different modes of electronic service delivery (ESD). We investigate these matters through open-ended interviews with 25 respondents who have Internet access. The respondents reside in several Australian states: 10 in Victoria; 7 in Tasmania; 6 in the ACT; 1 in South Australia; and 1 in NSW.

1.1 Information services

- A number of our respondents compared the information channels of the Internet and telephone services, and expressed a strong dislike of telephone services such as call centres and IVR, and a preference for the Internet.
- Information services are more satisfactory on the Internet than through other media when the type of information sought is in documentary form; or when the information is in the form of answers to specific questions; and/or when the user is skilled at searching the Internet.
- Searching the Internet is difficult. Well developed searching skills are needed to use the Internet successfully for obtaining information.
- The Internet tends to be a less satisfactory source of information than personal contact either face-to-face or on the phone when the enquirer requires information to resolve a problem instead of needing answers to specific questions; or when the information needs arise from a 'life situation'; or when the user does not have well developed searching skills.
- Users find that mailing lists and news groups are good sources of up-to-date information on specific topics. Mailing lists are more popular, perhaps because they are an extension of e-mail, which is the most used of the Internet facilities.

1.2 Financial transactions

- Electronic services are perceived to be more convenient than the traditional modes of service provision. Convenience is a key feature in the take-up of electronic services.
- Payment for services such as utilities is generally considered to be more convenient by telephone than through the Internet. The same preference was not expressed for banking.
- There is widespread, expressed reluctance to pay for goods or services online because of concern about the security of credit card numbers. However, once the barrier of first-time use has been overcome, people's fears about security tend to diminish significantly.
- Without abandoning all their concerns about security, people are more inclined to trust online government services than commercial services – with the exception of a few well-known commercial services such as Amazon.com and Microsoft.com, and non-government services such as the ABC.

1.3 Electronic kiosks

- Electronic kiosks appear to be an intermediate technology between offline transactions and Internet transactions. Their roles in providing community information and facilities for electronic transactions seem to be becoming superseded by the increasing

availability of Internet services. Their role in providing tourist information in appropriate locations seems to be valuable.

1.4 Internet use

- The attractive features of shopping on the Internet are the amount of product information, the range of goods, the lower prices and the convenience of the process. These features should be transferable to other electronic transactions.
- People will not persist with a medium which does not provide the expected results efficiently and effectively and they will not persist with services that are difficult to use. Many Internet services are difficult to use because of design faults that can be remedied rather than because of the intrinsic nature of the medium.
- Internet services which include interactive features and/or provide a back-up service of personal contact through e-mail or telephone are seen to be the most user-friendly services.

2 INTRODUCTION

2.1 The Study

This study is the second stage of the CIRCIT project, Understanding the User Perspective of Government ESD.

We examine consumer activities which are relevant to the delivery of online government services. From the perspective of service users, we consider various features of the different modes of electronic service delivery (ESD). We investigate these matters through open-ended interviews with 25 respondents who have Internet access. The respondents reside in several Australian states: 10 in Victoria; 7 in Tasmania; 6 in the ACT ; 1 in South Australia; and 1 in NSW.

In the next stage of the project we will compare the findings of this study with the survey data and other information obtained from government service providers. That work will lead to the development of frameworks for interpreting user requirements and relating them to the development issues of government ESD.

2.2 Aims

The general questions addressed by the CIRCIT project are:

- How do consumers currently carry out the activities to which Government ESD approaches are directed? What channels are used and what influences the choice of particular channels?
- How do current practices relate to the effective provision of online services?
- How do current approaches to Government ESD deal with these issues?

The focus of this study is on the first question. The specific issues examined in the study are described in section 2.4.

2.3 Definitions

The terms ‘electronic services’ and ‘online services’ appear to be used interchangeably in most of the literature and are so used in this study. Online (electronic) services include the Internet, electronic kiosks such as Maxi in Victoria and Austouch in the ACT, and telephone services.

2.4 Scope of the Study

Section 3 Internet use

Current use of the personal computer and the range of Internet services can provide indications of productive directions for the development of online services. The study therefore examines respondents’ use of all the services available through an Internet Service Provider: e-mail, World Wide Web, mailing lists, electronic newsletters, chat rooms, news (discussion) groups and online games. We also examine the use of the Internet for shopping (selecting and/or ordering and/or paying for goods).

3 INTERNET USE

3.1 Accessibility can be a problem

People are moving relatively easily from offline consumer services to the online services provided through the telephone. However, making the transition to the Internet on a computer (and, to a lesser extent, the electronic kiosk) is a greater challenge.

The move to telephone services has been easy because of users' familiarity with the medium, even though it is being used for new processes. It is similar to the process where people's gradual acceptance of ATMs some years ago facilitated the transition from cash payments to EFTPOS at the supermarket check-out. However, the Internet is not familiar technology.

In country Australia, the Internet is not part of everyday life. Gerard, the Co-ordinator of an Online Access Centre in a country town in Tasmania, says,

The Internet is almost mainstream in the city. It's there, you know you see 'www' everywhere. But I think it's fair to say that in [place name] and in other rural areas of Tasmania it's not mainstream. It's not that it's nerdy. You're not a nerd but it's still mysterious. It's still more mysterious than it would be to a Mebournite, I'd say.

Mary, who works at a centre for older people, considers that the main barrier is not the difficulty of learning something new, but lack of confidence.

Usually confidence is the important thing. At first, most people think that when they hit a button the whole thing might explode.

Even for experienced Internet users living in a city there are considerations of convenience and cost which reduce their use of the Internet. Edith, a researcher living in Melbourne, says,

You've got to go upstairs, switch on your modem, you've got to phone the number, all right, well it's automated for you, it's all automated with icons, you have to connect, and you know at the back of your mind that somewhere, something is ticking off the minutes.

3.2 Experience leads to expanded use

People are using the Internet increasingly for communication, work and leisure interests. The more experienced they become, the more likely they are to explore activities such as shopping and financial transactions.

The most common uses of the Internet are for 'e-mail and looking up things'. E-mail is an important communication channel for all the people we interviewed and has become an essential tool for some people. Leonard, who was involved in setting up an e-mail system for a government department in Tasmania, says that he would feel cut off from the world without e-mail.

The Web is a fascinating source of information for work and leisure interests. Dorothy, a Melbourne researcher, says,

But that's what I find is fun, when I can look for something that I'm interested in and find it. That's really interesting. I was looking for plants for the garden. I did a search and I was looking for a picture of a Moreton Bay fig tree... and even dance steps, I've looked for them on the Internet I remember, when I first started to dance. So it can be useful and fun.

Chat rooms are an important source of companionship and fun for users of the Online Access Centres in Tasmania. In other contexts, they seem to be used more by Internet beginners than experienced users. Cynthia, an experienced Internet user, says,

It's one of those things that I've drawn away from.

However, Bertram, a teacher in Melbourne, compares chat rooms favourably with telephone conferencing. He believes they will be increasingly used for that function. He says,

A message appears, people can read it faster and they can actually respond at the same time.

Twelve of the people we interviewed told us that when they started using the Internet they played around with it, exploring its functions. As they become more experienced, their use becomes more instrumental. The third stage of use is when users seek more interactivity. Peter says,

I have made this shift I guess towards just looking at it [the Internet] for resourcing information to actually much more interactively now where I'm looking at engaging it. I know at home I started using the Internet now for home banking. I've been chaffing at the bit for the last two years for the National Bank to hurry up and get something up and running so I can actually start to use it in what I feel is a real meaningful way, interactive and practical.

3.3 Internet shopping has transferable features

The attractive features of shopping on the Internet are the amount of product information, the range of goods, the lower prices and the convenience of the process. These features should be transferable to other electronic transactions.

Fourteen of the 24 people we interviewed have selected, ordered and paid for goods through the Internet. Five more have used the Internet for product information without actually buying. Quentin says,

We can find out more information sometimes online. Doing searches means often different bits of information you can pull up. For vitamins she might look at particular ailments and she's able to look at the way different herbal remedies can remedy them. For books, there's a second-hand book company that I buy books from. I may do searches for particular topics and particular reviews. I've been really happy with the results, not just because of the novelty aspect. It meant that I was able to actually look up information horizontally, ask questions and browse through the catalogue. I haven't actually bought anything but I'm fascinated by buying books online.

The most popular products for online purchases are books, CDs and software. The advantages mentioned are greater choice and lower cost, providing that more than one book is purchased, to reduce the freight charge per book. Delivery times seem to be satisfactory.

One respondent commented that the shopping cart system is rather laborious, but most people are happy with it.

Shopping in person is far more popular than any kind of distance shopping. The most frequently mentioned reason for that is wanting to examine the goods. We asked our respondents about three forms of distance shopping – by mail order, by telephone and through the Internet. Rather surprisingly, fewer of our respondents shop by mail order or telephone than use the Internet – three compared with 14 Internet shoppers – and only one Internet shopper had transferred from mail order, although that would appear to be an obvious progression.

When personal presence or personal interaction is not an important part of an activity, the convenience of online transactions is very attractive. Several respondents are looking forward to the further development of online supermarket shopping.

I like going to the market, that's different, there are so many people and it's fun. But shopping in the supermarket is a bore, so if I could do supermarket shopping [online], then OK, I could tick off the items, then that would be fun.

4 ACTIVITIES RELATED TO ONLINE GOVERNMENT SERVICES

4.1 Seeking information

4.1.1 The Internet is preferred to telephone services

A number of our respondents compared the information channels of the Internet and telephone services, and expressed a strong preference for the Internet. The following comments represent opinions that were frequently expressed about call centres and IVR services. In response to a question about his experience of seeking government information through the Internet, Bertram said,

Through Internet's fine. Telephone service systems where I used to ring up are particularly horrendous. I really hate being on hold with government departments. I know organisations are really hard pressed to answer phones, but gee, I hate being put on hold. Why government departments? They're always doing that electronically to me where they're not providing me with information. They're making me fluff around.

Gerard described similar experiences,

You know they say something like, 'This call is really important to us'. Therefore they make you wait 30 minutes. It's just so insincere and not right. So people hate that stuff....
'Welcome to the Commonwealth Bank Customer Help Line.' They're better than they were twelve months ago, but the amount of tripe you've got to listen to – . When they first started, you had to listen to the whole menu before you could press a button. Now at least you can press the button at any time.

Julia said,

Centrelink, that's another one.... it's understaffed and so are the Centrelink offices. They're saving some direct costs on staffing but their indirect costs are increasing, because they still have to provide the same services. Well, the last time I tried was about a year ago and I've never phoned them since. And it was, you would be on the phone, like take your lunch with you when you get on the phone, oh, half an hour or more. Those people must get so abused because they get crabby waiting. I don't know what it's like now, it might be better, but the way it used to be, you've got to have a coffee before you start.

Information services are more satisfactory on the Internet than through other media when the type of information sought is in documentary form; or when the information is in the form of answers to specific questions; and/or when the user is skilled at searching the Internet. Several people, including Hortense, mentioned the ATO's Web site as an example.

... the Taxation Department site quite a few times. I find that easy to get around. I download publications, again for my husband's business, provisional tax, prescribed payments, business tax details and stuff like that. Instead of ringing them up and getting them to send publications out, because

they never send them when they say they're going to.
Interviewer: So the phone service is not very reliable?

Hortense: I find it's not. There are times I've waited for two or three months for things and I've just rung up and said, 'Can you please send it, it hasn't arrived'. So now I get on the Internet and download the publication, print it out on my printer and it's there. And I've got it straight away.

4.1.2 There is a need for personal services

Searching the Internet is difficult. Well-developed searching skills are needed to use the Internet successfully for obtaining information. The Internet tends to be a less satisfactory source of information than personal contact either face-to-face or on the phone when the enquirer requires information to resolve a problem instead of needing answers to specific questions; or when the information needs arise from a 'life situation'; or when the user does not have well developed searching skills. Gerard spoke about the importance of personal services.

In Tassie, people like people. People like personal service. They like to have personal contact just so they can talk.

Interviewer: Do you think that's a country town thing?

Gerard: Oh yeah, it's an Aussie thing. I mean, I'm from New South Wales and it's certainly the same there. We just like to talk about life and do something on the way through, buy a pie.

As an extension of e-mail use, mailing lists are used by many people for special interests and constitute an important source of information. News groups have a similar function although they are not used so widely.

4.1.3 A successful combination of e-mail and telephone

A Centrelink information service that people appreciate is being able to e-mail a query and get a telephone response with specific information within a couple of days. This process seems to use the combination of these two media to the advantage of both the client and the service provider. The client is glad to have generated a documentary record of their situation or problem and not to have to wait first for the phone connection and then for the information.

4.1.4 Submitting a well-designed form is faster and cheaper online than offline

Most people find it faster and cheaper to submit forms online than offline. Albert said,

Well, I would rather do that [submitting a form] on the Internet than sit down and do it on paper. It's infinitely quicker and then you press the Send button. I don't keep a copy, unless I choose to save something, which I usually don't. It's cheaper, it's quicker, it's more efficient, and that's the name of the game. If the form is well designed, you can work through it very quickly. It's usually just a question of clicking the mouse. It's more efficient in the sense that once you've finished it, it goes straight to the person who's looking for it. From my point of view that's far more satisfactory because I know that the

person who's looking for it has got it. It hasn't gone through a series of clerks.

The disadvantages of online forms are:

- Many of them still need to be printed, filled in and posted.
- Printing causes problems when a form does not fit an A4 page neatly.
- Sometimes special software is required.

Dorian said,

To fill in the form that was required I had to download some software. I've forgotten which it was. I don't think it was Shock Wave. It might have been. Anyway it took, I think, about two hours to download. When I then went back to the form it didn't recognise that I'd downloaded the software, so I had to repeat it.

In respect to the personal information which is requested, Cynthia said,

Forms are one of those things that have privacy implications because a lot of people put up forms without thinking what they want to do with the information and why they need it, what they're going to do with it. Any kind of assertion to the person who's filling it in, how it's going to be used, all that stuff needs to be exposed and then followed and then adhered to. If you say you're not going to use it for something, then don't use it for that and again, back to security and trust and all that.

People often feel that too much personal information is sought.

Why do they need to know how old you are? It's just for their marketing. I fill in anything, make it up, make up a name. They don't know.

Forms need to be adapted to be relevant to the locality. Several respondents expressed their resentment at the North American focus of most forms (e.g. the number of character spaces left for the zip code).

I hate the forms when they always start with America at the top under the President. The rest of the world, it doesn't really matter, you'll be underneath. Or where Australia probably won't even be listed. It'll be in 'rest of world'. Anyway that's a different issue. Could go on for hours about it. It just really is the pushing of Western or American sort of values on everybody else. You're living in a culture and you can't escape it, you're a part of it. ... the forms are preformatted for America. They spout about, you know, customise your Netscape page to, it's called Net Centre. I put in "sport" and you get choices of baseball, basketball, gridiron or whatever they call it, and you think, I don't really care what the games are and who they play.

4.2 Financial transactions

4.2.1 Electronic kiosks are not popular

For our respondents, electronic kiosks were not a popular medium for transactions.

Two respondents used Austouch in the ACT and found it satisfactory. In both cases they used the kiosk before they had the Internet at home.

Four Victorians used a Maxi kiosk and only one found it satisfactory. In the other three cases, the system failed in various ways. Dorothy said,

I tried the security once – ‘Press this for security’ – and the whole thing jammed.

Cynthia entered her change of address in a Maxi kiosk for Vic Roads to change it on her car registration and her driver’s licence. She received a receipt saying that the transaction had been processed, but a month later she found that the change of address had not been implemented.

Dorian’s experience was:

I filled in the form but Maxi refused to accept it. So I thought that that was fairly highly unsatisfactory.

The respondent who was satisfied with the transaction process on the Maxi kiosk was critical of the gaps in service provision. Four other people also mentioned that problem. If utilities are included, all of them should be represented. If local government authorities are included, it should be all of them and not just a few.

Edgar made another point:

Every government department that is on Maxi, they’re also with other options. You can walk up to a bank branch or pay through Australia Post. The question is what advantage does Maxi provide over other options?

4.2.2 Security concerns about Internet payments

The greatest disincentive to making payments through the Internet for goods and services is a concern about the security of account numbers. Although people are becoming increasingly used to paying by credit card or EFTPOS, there is widespread expressed concern about account security. However, in practice, a more significant barrier seems to be that of first-time use. After shopping and paying bills through the Internet, people’s fears about security tend to diminish.

Six respondents had used the Internet to pay accounts – for utilities, car registration and, in one instance, university fees. Felicity, who lives in Devonport, Tasmania, said,

Once you’ve done it a few times, hey, what was I ever worried about, you know, I can do this. Like using the ATM machine, you know, I remember the first time I went, I had my piece of paper that says, ‘Don’t ever carry this with you’, with your PIN number. But I’ve got it there on a Sunday when there’s nobody going to be behind me, thinking okay, what do I do next, sort

of thing. And I think it's probably the same with anything like that, you know. After a while you think, 'Oh, a piece of cake. I can do this.'

Three people commented that after being worried about security before trying Internet shopping, they had no real concerns after the experience. It is interesting that none of the Internet shoppers who continued to worry about the security of their credit card intend to stop shopping over the Internet.

Several people said that they gave their credit card only to reputable sites. The commercial sites mentioned in this context were Amazon.com and Microsoft.com. People are inclined to trust government departments. Hortense said,

I think if you were dealing with a government department they would set up a secure connection for credit cards and things like that.

Sylvia, who had not yet made any payments over the Internet, felt uneasy about all transactions.

You just worry about finding that you've got this huge bill on your credit card when it comes in and not be able to get out of it.

4.2.3 The phone is the preferred medium for paying accounts

People perceive fewer advantages in paying bills online than they do in shopping online. Shopping online has advantages of range, product comparison and cost. None of these advantages applies to paying bills online. The main common factor is that both types of transaction can be done at any time, to suit the consumer's convenience. But as Peter, a bureaucrat who works in Canberra, points out, paying by phone has the same advantages as paying through the Internet and, in addition, it is more convenient.

4.2.4 Banking by phone and Internet are both convenient

Seven respondents use Internet banking to some degree. Three of those say they are 'on the computer anyway'. Eleven respondents do at least some banking by phone and cannot see any advantage in moving to Internet banking, since the features are similar.

Peter thinks the only disadvantage of online banking is the lack of access to cash. That also applies to telephone banking, of course.

It's limited. They brag about how brilliant it is, but you still can't pull any money out of a floppy drive, you know. All you can really do is, you can only just transfer money between accounts, but that helps, because you can pay your bills by transferring. And it's just good to know where you're up to without having to wait a month to do a reconciliation all the time.

However, no-one else mentioned this disadvantage, possibly because they regularly withdraw cash with EFTPOS transactions.

People appreciate being able to do banking at their own convenience. Ingrid and her husband Ian prefer on-line banking on the whole.

It's convenient, you can do it anywhere. I can do it at home or at work. Not so much with the National but certainly with Westpac it's almost universal, you can go anywhere and do it. Saves all the hassle. But then on the other

hand there are occasions when you need personal interaction and none of that stuff substitutes for personal interaction.

Ingrid and Ian mention two of the factors that our respondents alluded to in respect to all online transactions: convenience is highly valued and a personal back-up service is necessary for the occasions when interaction with a computer is inadequate.

5 DESIGN FEATURES

5.1 Processes

5.1.1 Accessibility is a problem with many Web sites

Many Web sites are difficult to use – slow to load, cumbersome to navigate and frustrating to search. Most of these difficulties are design faults that can be remedied.

Sybil described her experience of one government Web site,

The information might be there, but there is so much information you have to plough through to get the one thing you want. I had a look and I never went back.

People will not persist with a medium which does not provide the expected results efficiently and effectively.

Speed is important. People don't like waiting and tend not to return to a site they find too slow.

A useful criterion for assessing user-friendliness seems to be the number of clicks required to reach the information sought. Well designed navigation is the key. Titania suggests,

I think it's just really important that on every page you have a way to get back to the beginning and a way to get back to an index of some sort quite easily, easy for people to understand how to do that. And never to have any dead ends or you'll get stuck.

Users find dead-end links particularly frustrating.

Part of the problem is moving things because you want to restructure, but you don't have a way to update your links properly so they often don't go to the right place. Also you don't know who's pointing to you. So you get out of alignment, and that's where a lot of the stuff comes apart.

5.1.2 Searching is difficult

Searching the Internet is difficult. It requires a high level of skill. Users need a range of aids. Albert said,

They say that all the kids who leave school now, they've all got Internet experience, and that's true enough but they don't necessarily know how to look around a site, or even which information to look for.

An index and a site map are suggested as required features of all sizeable Internet sites. An index overcomes the tendency of government sites to be organised according to departments, an arrangement which is more likely to baffle users than to help them.

Indexes are important because otherwise you play guessing games. Vocabulary is very different as to whether you're the professional user or an outsider trying to use it. People talk in very different ways. Even within the same organisation, they talk very differently. So indexes at least let you scan through a list of words. (Cynthia)

A list of Frequently Asked Questions (FAQs) can act as a kind of users manual. A site map performs a similar function diagrammatically. For really big sites, an internal search engine is required. However, having a search engine doesn't guarantee that users will find the information they seek, since search engines are not always easy to use, particularly if people are uncertain about the sort of information they require. The most effective approach seems to be first to organise the information well and secondly to have several different ways of approaching information: a site map, a search engine (if the site is big enough) and an index.

5.1.3 Personal back-up services are needed

Internet services which include interactive features and/or provide a back-up service of personal contact through e-mail or telephone are seen to be the most user-friendly services.

Internet users appreciate the opportunity for providing feedback on a site but, further than that, they are looking for fully interactive processes.

There's an e-mail link back. So I get a first-time message, it says, 'We've received your question, it's being processed'. Then within the week I'll often get an answer or 'Thank you for your query, personal message, and we're following it up'. Then later on a more comprehensive approach. It's more than just a Web page or just a number. (Rosemary)

If you can't find the information on the Web site, being able to submit an on-line form and having an immediate response is very satisfying for me. (Bertram)

A back-up information service is not considered satisfactory if there is just a general e-mail address or a general phone number. Users prefer to have the names of staff with specific responsibilities and want at least to have both e-mail addresses and phone numbers for enquiries about specific topics.

5.1.4 Security processes must be explained

In respect to giving credit card details over the Internet, most of our respondents are concerned about both the security of the transmission of the data and what happens when it reaches the other end – how it is used, how it is processed. Features suggested by Edith are,

Good security warnings and perhaps an explanation in simple terms of which security they are using, you know, what its, to use an art term, what its provenance is, where it comes from, who else uses it. I think it's important that they have some simple explanation, what it is and how it works, but simple. There's no point in going into the cryptography of it and how many, you know, you've got 72 pairs of binary series or something, I mean, you've lost people. But I think that would be of use, telling people just what they're tapping into.

5.2 Presentation

5.2.1 Key features of good design

The features which make Web sites difficult to use can usually be remedied by attention to design.

Some respondents enjoy all the ‘lights and whistles’ that the technology can provide, but they suggest that such features may not be appropriate for all Web sites. Albert said,

Sometimes the sites are too fancy. You’re not there for entertainment, you’re there to get information, so keep it bland, keep it simple.

Most respondents made similar suggestions. Mary said,

Low graphics, good contrast, not too many fonts on a screen.

Communication needs to be simple and plain. Nancy said,

Language and hierarchy I think are both important variables to get right. You can’t test within your own environment. You need to test with people who are outside your environment so that you understand if it communicates or not, and actually set them a task and see if they can get more from the opening page.

5.2.2 The presentation of the home page is particularly important

Particular attention should be paid to the way information is organised on the home page. Titania said,

I think government services are too focused onto themselves rather than on the people who are looking for information. The sites tend to be based on departmental structure and their premises.

This was a common perception. As Peter put it,

I think government sites often fall for the trap of thinking, well, starting with our opening page, what departments do we have? Let’s have a click into those departments and let them deal with it. Now that’s a cop out if there ever was one. When really, they should be asking themselves what business are we in – transport, health?

Bertram suggested why this approach makes such a site hard to use.

Government entry points make the assumption which department you want. There’s an inherent assumption that I know what your department’s boundaries are.

It has multiple choices on the front page, no irritating useless non-functional graphics and video which just increase the download time. (Dorian)

I really found Maxi fairly poor. As a front page as I recall it comes up with ‘Maxi ‘and more or less nothing much else, which is just sort of a waste of time from the user’s point of view. And I have a 28.8 Kb modem. Someone with a slower speed modem would even be more disadvantaged. (Edith)

Ingrid suggests that if people get lost,

They should be able to go back to the home page and sort of go through the main categories. Try to have no more than say five or six major categories for people to look up.

5.3 Content

5.3.1 The advantage of up-to-date information

One of the biggest advantages of the Internet is that the contents can really be up to date. However, often the dates of specific items of information are not stated, so it could be today, it could be last year.

Some people feel it's almost impossible for a Web site to get it right. Bertram says,

Some of them have too much material, some of them have out-of-date material, some of them have no material and that's even more frustrating.

Sometimes information that people expect to find on a Web site is not there. It would be desirable for government departments to have stated policies on what kind of things they will and will not have on their Web site. The policies should include how long material will be available on the site and what the archiving procedure is.

If you know that this may not be here forever, one could take a copy of it. (Cynthia)

Quentin mentioned the confusion about the copyright situation. Statements about copyright need to be overt. Disclaimers in terms of legal responsibility also need to be overt.

The features of Web sites which alienate users can be remedied by attention to design.

5.3.2 Some features alienate users

A number of respondents mentioned their annoyance at finding political messages on non-political sites. Finding promotional material instead of information is even more common.

They often do more to trumpet their own successes than engage in dialogue about what the issues are. (Ulrick)

Some sites are like browsing your way through glossy annual reports rather than something that's sensible, meaningful and doesn't insult my intelligence.

They need to get off the kick that it's a public relations exercise and think about it as a functional support to the community. (Cynthia)

Table 1: Demographic characteristics

GENDER	Male	10
	Female	15
AGE RANGE	Under 25	---
	25 to 39	9
	40 to 54	12
	55 plus	4
RESIDENCE	City	16
	Country	9
STATE	Vic.	10
	Tas.	7
	ACT	6
	NSW	1
	SA	1
EDUCATION LEVEL	Secondary school	3
	TAFE diploma	3
	University degree	19
OCCUPATION	Teacher	3
	Bureaucrat	5
	Co-ordinator of OAC	5
	Other occupation	4
	Retired	3
EMPLOYMENT STATUS	Full time	12
	Part time	6
	Self-employed	4
	Not in the workforce	3
USER GROUP REPRESENTED	Users of Online Access Centres	5
	Farmers	2
	Older People	1
	School students	1

Table 2: Internet Use

Case	Length of use	Connection time	Web page	Shopping	Bill payments	Banking	Kiosk use
ALBERT	5 years	More than 15 hrs/wk	For an organisation	Yes, books and/or CDs	No	No	No
BERTRAM	8 years	8 hrs/wk at home, more at work	Own Web page	Yes, quite a lot	Yes	Yes, NAB	Yes, Maxi for payments
CYNTHIA	9 years	20 hrs/wk	Own Web page	Yes, software	No	No	Yes, Maxi, tried and failed
DORIAN	4 years	Twice a day	For an organisation	Yes, books and/or CDs	No	No	Yes, Maxi, tried and failed
DOROTHY	4 years	Mainly at work	No	No	Yes	No	No
EDGAR	6 years	Twice a day	?	No	No	Yes	No
EDITH	5 years	8 hrs/wk at home, more at work	For an organisation	No	No	No	Yes, Maxi, tried and failed
FELICITY	1 year at home	12 hrs/wk at home	For an organisation	Yes, plants	No	Yes, for payroll	NA
GERARD	4 years	Twice a day at home	For an organisation	No	No	Yes, Westpac	NA
HORTENSE	1 year at home	20 hrs/wk	Own 2 Web pages	No	No	No	NA
INGRID	5 years	Mainly at work	For an organisation	Yes, software	Yes	Yes, NAB and Westpac	NA
ISOBEL	3 years	8 hrs/wk at home, more at work	No	Yes, vitamins & household goods	No	No	NA
JULIA	3 years	Mainly at work	For an organisation	No	No	No	NA
KEVIN	2 years	More than 15 hrs/wk	No	No	Yes	No	NA
LEONARD	6 years	Mainly at work	For an organisation	Yes, books and/or CDs	Yes	Yes, CBA	NA
MARY	5 years	2 hrs/wk	For an organisation	No	No	No	No
NANCY	5 years	Mainly at work	For an organisation	Yes, books and/or CDs	No	No	No
NORAH	?	Frequent	For an organisation	No	No	No	NA
ODETTE	3 years	4 hrs/wk at home	No	Yes, ABC shop and other bookshops	No	No	NA
PETER	2 years	4 hrs/wk at home, more at work	Own page and for an organisation	Yes, a computer	No	No	No
QUENTIN	?	5 hrs/wk at home	No	Yes	Yes	Yes, CBA	No
ROSEMARY	2 years	4 hrs/wk at home	No	Yes, quite a lot	No	No	Yes, Austouch
SYBIL	6 months	Only at work	No	No	No	No	Yes, Austouch
TITANIA	6 years	More than 15 hrs/wk	No	Yes, books and/or CDs	No	No	No
ULRICK	?	4 hrs/wk at home	No	No	No	No	No

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