

E-GOVERNMENT BENEFITS STUDY



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Disclaimer

The scope of this study did not include auditing or validating the estimated costs and benefits and DMR Consulting is unable to give any undertaking regarding their accuracy. Benefit/cost ratio calculations are based entirely on estimates provided by agencies and are based on midpoint financial expectations of benefits and costs over a period of 5 years. Given the difficulty agencies had in providing these estimates, DMR Consulting advises caution when using or interpreting the results.



FOREWORD

AN OVERVIEW OF THE E-GOVERNMENT BENEFITS STUDY

Australia is a recognised world leader in the application of Information Communication Technologies (ICT) to the government sector consistently being ranked as amongst the top global performers by a variety of independent experts including the United Nations and the Economist Intelligence Unit.

The Commonwealth's use of the Internet to deliver government services has revolutionised the speed and effectiveness of government service delivery and administration in Australia. The Commonwealth's online presence has expanded from two websites in 1996 to a situation where all appropriate services (at last count more than 1600) are available online. It has also moved from the presentation of static information to an era of truly transactional services offering great benefit to Australians – and the best is still to come.

This *E-government Benefits Study* charts the progress of this transformation, identifying past and future levels of demand for online services. It reports on the benefits that have already been realised and the potential for future benefits. These include faster and better quality service delivery and reduced costs. It also identifies the return on the Government's investment through implementation of online service delivery from the perspective of both customers and agencies.

These positive effects have flowed from the Commonwealth's e-government strategies, beginning with the *Government Online Strategy* in 2000, and continuing through the current *Better Services, Better Government* strategy released in November 2002. The study confirms that the current high demand for, and take-up of, online services by people and business will continue into the future.

Data on the benefits to people and business and how much they value e-government services has been scarce and often underestimated by agencies. This study is a first step towards measuring those benefits. The introduction of enhanced measurement across agencies will further help Australia to be an intelligent user of ICT, focusing on customer value and ensuring that agencies' business cases for services are robust and offer sustainable benefits.

Senator The Hon Richard Alston

Minister for Communications, Information Technology and the Arts



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PREFACE

E-GOVERNMENT BENEFITS STUDY

The government's *Online Reporting Framework* tells part of the e-government story – quantitative measures of the provision of government services. It is equally important to measure levels of demand for, and assess consumer benefits from, online service delivery. This will ensure that online services remain cost effective and provide a good benefit to cost ratio.

As the next phase of e-government begins, government agencies need new mechanisms for estimating and measuring demand and value to ensure their investment in e-government satisfies real needs, stimulates further uptake of online services and delivers benefit to all stakeholders.

In July 2002, the National Office for the Information Economy (NOIE) asked DMR Consulting to review the demand for and benefits of e-government to provide input to future evidence-based policy formulation.

The review was undertaken in three phases:

- **Phase 1: Demand for e-government** involved a whole-of-government assessment (see Appendix 1).
- **Phase 2: Measuring the benefits of e-government** was an examination of the benefits realised, to date, and how best to measure benefits in the future – for citizens, business and government (see Appendix 2).
- **Phase 3: Determining the return on investment for government** involved an assessment of the benefit/cost ratio in government online services to date and a determination of a benchmark benefit/cost ratio (or other suitable form of measurement) to be used as a guide to help agencies plan future services (see Appendix 3).

The key research elements used in the study were:

- an analysis of baseline historical data on trends in household and business/government use of computers, the Internet and e-government;
- brief survey responses from 41 Commonwealth government agencies covering 174 e-government programs, with 169 of these being included in the statistical analysis;
- detailed survey responses from 39 Commonwealth government agencies covering e-government programs in greater depth – 38 were included in the statistical analysis;
- information and analysis of experience generated from seven agency case studies; and
- an analysis of the findings of citizen and business surveys (for both users and non-users of e-government services).

A set of demand and value methodologies for use by Commonwealth agencies is being developed. The methodologies are currently being piloted in a number of agencies.

See Appendix 4 for details of the study approach and methodology used; Appendix 5 for a list of participating agencies; and the companion booklet, *E-government benefits study – agency case studies*, for details of the agency case studies.



SUMMARY

E-GOVERNMENT BENEFITS STUDY

This study is in response to the National Office for the Information Economy's (NOIE) request for a review of the demand for and benefits of e-government. It is intended to be used to provide input to future evidence-based policy formulation, to determine the benefit/cost ratio for e-government programs and to develop demand and evaluation methods for use by agencies.

A *Framework for E-government Strategy Assessment*, as devised by Gartner, defines e-government as 'the transformation of public-sector internal and external relationships through Internet-enabled operations and information and communication technologies to optimise government services delivery, constituency participation and internal government processes'.

Demand for e-government

Australians have a history of early adoption of new technologies. Forty-six per cent of people and over 57 per cent of businesses now make use of e-government services, and demand is expected to grow by more than 30 per cent per annum.

For Internet users, e-government is the preferred form of access to government services, with penetration across existing Internet users close to 80 per cent. Typically, these users gather background information via e-government channels, then use face-to-face channels for more complex transactions although this is expected to change as people become more familiar with Internet transactions.

Agencies surveyed were aware of their audiences and sought to target services appropriately. The majority of services provided to date have, however, tended to be relatively simple (immature) and as such have tended to be characterised by information provision and downloadable forms rather than complex interactions; and agency-oriented views rather than citizen-centric views. In the past, provision of e-government services has been based on the government's online strategy, rather than business or customer service.

People not making use of e-government services have expressed an interest in health, taxation, and community support services online. Of those using the Internet, 67 per cent of users would like access to more downloadable forms, 43 per cent would like more integration between agencies, and 21 per cent would like to be able to perform more complex transactions online.

The greatest challenge to broader based adoption of e-government services is addressing the barriers to higher take-up rates. The study indicated key barriers as; concerns about the useability of websites – navigation, incomplete information; visibility and discoverability – finding government services, poor search capability; and online security and privacy.

Benefits of e-government

The most obvious benefit of e-government is improving the service to people. Each of the 38 programs studied for the report cited improved service delivery and social welfare of citizens as key objectives. Survey respondents rated the improvement in service even higher than agencies, with 80 per cent saying e-government had been of moderate or significant social benefit to them.

E-government also saves customers money in the form of faster, easier and more convenient service, better quality and reduced turnaround times, and in some cases a reduction in the direct cost for the service. At least 45 per cent of those studied said they had saved money by using e-government. Ten per cent of people, and 23 per cent of businesses and intermediaries said they had saved more than \$25 per transaction. Estimates indicate the 169 identified programs, across 38 agencies, saved at least \$1.1 billion in 2002. There are also many social benefits valued by citizens including increased community skill and knowledge, and new business and work opportunities.

Not all the benefits of e-government are to the users. It can also deliver cost savings to agencies in the form of speedier transactions and lower staff costs. The extrapolated saving to government of the programs studied is estimated at around \$450 million.

Benefit to cost ratio for government

Determining the benefit/cost ratio for e-government is not straightforward, as the outcomes and benefits are not just financial. A particular problem for agencies is in identifying and measuring social value. Sixty-seven per cent of agencies surveyed expected some financial benefit to the agency, but this was not the primary objective. Across the programs (24) expecting a financial benefit the aggregate benefit/cost ratio was 92.5 per cent. The aggregate benefit across all programs (38), including those for which fiscal savings were not the primary consideration, was 61 per cent.

People have indicated an improved usefulness of e-government as it moves from basic supply of information to online transactions and then to more complex multi-agency transactions and data integration. In order to improve benefit/cost ratio, e-government needs increased product and service maturity. People expect to interact with government in a way that makes agency boundaries transparent and integrated, with cross-agency data more readily available. They also expect their privacy and security to be protected.

Maximum value can be attained from citizen-centric e-government systems that follow life events, rather than being limited by agency boundaries. For citizen-centric e-government, multi-agency cooperation must extend across all tiers of government, as well as some private partners.

Managing e-government

In order to develop broader and more integrated e-government services, agencies must better understand how ICT capability can support their business outcomes. Current management tools and practices need to be updated to support this integration. This study identified measurement as one of the key areas of management that needs to be better developed. It can be difficult to estimate the financial benefits, let alone the social benefits and the lack of appropriate measurement tools provide challenges for agencies.

In many cases agencies have not been able to quantify current program costs and benefits before new approaches are initiated, making it difficult to establish a baseline for later comparisons. This can be further complicated by a failure to track changes during development and implementation, and by the dispersed nature of both benefits and costs. Frequently benefits and costs are not limited to the initiating agency and accrue across a number of programs and agencies. It can also be difficult to monitor performance of programs once they are established making it harder to assess their contribution to total business outcomes.

It is however, important to establish a consistent approach and methodology for assessing e-government programs. Even once such a set of management tools is established, it will take some years of study to fully understand the social impact of e-government. NOIE asked DMR Consulting to develop demand and value assessment methodologies to assist this process. These are currently being piloted in a number of Commonwealth agencies.

Lessons learned from case studies

The case studies undertaken as part of this study also provided valuable qualitative and anecdotal evidence. It was found that agency e-government programs are more likely to be successful when:

- executive-level support has been obtained from the chief executive officer and senior agency staff;
- agency staff are committed to the broader concepts of e-government;
- it is recognised that people wish to deal with government through a variety of channels, and service delivery strategies are tailored accordingly;
- potential awareness is heightened by promoting the availability of online programs to people;
- legislation and authentication issues have been resolved to increase the availability of transactions as part of integrated government service delivery strategies – the full implications of online authentication are not always understood and, in some cases, existing legislative requirements in relation to digital signatures are inhibiting development of online initiatives;
- confidence has been raised in the *Electronic Transactions Act 1999*, which complements agency enabling legislation requiring a signature for lodgement of documents;
- models for effective inter-agency collaboration have been built and proven; and
- momentum is maintained through better integration of enterprise, work, information, application and technology architectures with and among agencies.

Examination of the themes emerging from the case studies is provided in a companion booklet, *E-government benefits study – agency case studies*.



KEY FINDINGS

E-GOVERNMENT BENEFITS STUDY

Demand and Take-up

- Over 80% of Internet users are also users of e-government services.
- Demand is expected to increase by up to 30% in next 12 months.
- 46% of people and 57% of businesses make use of e-government services.
- Internet users expressed a desire for the supply of additional government services in the following areas;
 - 75% - greater provision of information;
 - 67% - more downloadable forms;
 - 43% - more integration between agencies; and
 - 21% - access to more complex transactions.
- Future demand for e-government services is most likely to occur in the areas of health, taxation and community support services.

Survey respondents indicate **demand inhibitors** to further take-up of e-government services are:

- Useability of websites
 - navigation, incomplete information;
- Visibility/Discoverability
 - finding government services, poor search capability; and
- Security and Privacy.

Benefits

The study identified the following key benefits:

- **Improved service delivery** – 80% of e-government users rate the improvement in service delivery of significant or moderate social benefit to them;
- **Reduced consumer costs** – 45% of survey respondents stated they had saved money by using e-government services. 10% of people and 23% of intermediaries reported they saved more than \$25 per transaction; and
- **Social benefits** – 86% of users felt that the overall benefits of e-government services was either significant (36%) or moderate (50%).

User benefits

People accessing e-government services reported:

- 80% – a significant improvement in the ease of finding information;
- 75% – improvements in service quality;
- 75% – they are better equipped to make better decisions;
- 68% – considered their access to public records had improved; and
- 52% – improvement in business or work opportunities.

Agency benefits

- Financial benefits are expected to accrue to government with a reduction in costs. Lower cost of delivery channels and resource efficiencies are reported to be the main contributing factors.
- Cost reductions are expected to come from:
 - 67% - improved business processes;
 - 64% - reducing costs of servicing – advertising, printed material, staff costs; and
 - 17% - cross agency collaboration.

Return on Investment

- Across the agencies (24) expecting a financial benefit the aggregate benefit/cost ratio was 92.5%. The aggregate benefit/cost ratio across all programs (38) including those for which fiscal savings were not the primary consideration, was 61%.
- Benefits to users of e-government services are estimated to be \$1.1 billion in 2002.

Conclusions

The key findings of the study raise the need for:

- consistent methods of demand and value assessment and an approach that responds to the whole-of-government perspective flowing from cross agency service provision;
- consistent mechanisms for tracking e-government service delivery;
- consistent methods for assessing agency value and return on investment;
- consistent mechanisms of tracking the creation of value for citizens;
- whole-of-government e-services architecture;
- mechanisms for cross agency cooperation;
- consideration of funding mechanisms that respond to both the social value being created and cross agency cooperation; and
- coordination of the whole-of-government, e-government agenda.



INTRODUCTION

E-GOVERNMENT BENEFITS STUDY

The current e-government initiatives provide a strong foundation for meeting the government's objectives of increased reach and impact of e-government. Achieving the next step will require increased demand for and maturity of e-government, supported by improved management practices.

Australians are well known for early technology adoption. At the time of the survey, over 46 per cent of Australian citizens and 57 per cent of businesses (Mellor, Parr & Hood 2000) were interacting with the Commonwealth government via the Internet and indicated a desire to increase their use of this channel.

This study identifies many examples of significant benefit to citizens, businesses and intermediaries through the government's adoption of online delivery of services. Evidence from the study demonstrates that the *Government Online Strategy* has:

- delivered enhanced service availability and quality;
- reduced the cost of interacting with government;
- established a greater level of transparency and access to public records; and
- contributed to improving professional and community development opportunities.

The *Government Online Strategy* also delivered both economic and social benefits to government.

E-government is the transformation of public-sector internal and external relationships through Internet-enabled operations and information and communication technologies to optimise government services delivery, constituency participation and internal government processes.

– Source: Di Maio et al 2002, p. 7.

Table 1: E-government ranking – top 10 selected countries – 2001

Country	% points against assessment criteria*
United States	57.2
Taiwan	52.2
Australia	50.7
Canada	49.6
United Kingdom	47.1
Ireland	46.9
Israel	46.2
Singapore	44.0
Germany	40.6
Finland	40.2
France	40.1

Source: World Markets Research Centre 2001, <www.worldmarketsanalysis.com>. p. 7.

* Assessment criteria were: phone contact information, addresses, publications, databases, links to other sites, audio clips, video clips, foreign language access, not having advertisements, not having user fees, disability access, having privacy policies, security policies, an index, having online services, having a portal connection, allowing digital signatures on transactions, an option to pay via credit card, email contact information, search capabilities, areas to post comments, broadcasts of events, and option for email updates.

Australia's move towards providing effective, integrated services has placed it as a leading e-government nation. Increasingly, governments around the world are moving away from a supply-side focus for government electronic service delivery towards greater attention to user-centred (citizen-centric) design. The Australian government – like other governments in the industrialised world – is increasingly using electronic channels to deliver services.

The *Government Online Strategy* has proved its effectiveness and delivered on its intent – Australia has a strong international e-government position. A World Market Research Centre analysis (2001) of government web site content positioned Australia third behind the United States and Taiwan (see Table 1 previous page). In November 2002, Booz Allen Hamilton, benchmarking the United Kingdom against leading nations, assessed Australia as a leading e-government nation. Australia typically rated second or third across a range of measures of e-government maturity, readiness, take-up and impact.



DEMAND FOR E-GOVERNMENT

E-GOVERNMENT BENEFITS STUDY

Australians can engage with government through a number of distribution channels such as one-stop shops, call centres and online services. Over time, provision of government services is being transformed from traditional over-the-counter services to fully interactive online services where customers can engage (or do business) with government via the Internet, at any time, from any place. This transformation is being driven by a need to improve business processes, to engage citizens, and to provide services to yield better outcomes for government and citizens. Complimentary business processes and information technology systems generally support the evolution of these service delivery channels.

Increasingly Australians are demanding easier access to government – people and businesses are demanding better time-saving services. The Internet provides the channel to meet these needs.

In the four years from 1997–98 to 2001–02, agency client service strategies and supply-push initiatives, as a result of the *Government Online Strategy*, appear to have provided the major stimulus for agencies to offer online services to citizens, businesses and intermediaries.

At the time of the agency survey (September–October 2002), about 60 per cent of the surveyed program outputs were available online. Indications from agencies were that, while they expect some increase in demand and take-up between 2002 and 2004, the rapid growth in the number of program outputs available online over the past two years¹ will not be repeated. The focus groups indicated that past drivers for citizens, businesses and intermediaries to use these online services included:

- increased convenience and reduced time for services;
- easier access to information provided by and about government at all levels; and
- increased accessibility and availability (24-hours-per-day seven-days-a-week).

While agencies surveyed seemed to be aware of their audiences and sought to target services appropriately, the services provided to date have tended to be relatively simple (immature) and as such have tended to be characterised by:

- information provision and downloadable forms rather than complex interactions; and
- agency-oriented views rather than citizen-centric views.

Analysis also indicated that there has been some progress beyond the typical first level of service (static information supply) towards the second and third levels of maturity with more complex forms of service delivery. User surveys indicated a strong demand for more information to be available online and for this to be presented in a way that supports more complex interactions with government.

The agency survey showed that 35 per cent of programs targeted businesses, professionals and trade groups as their primary audience. Analysis of adoption of e-government by size of business showed that 54 per cent

'Access over the past two years has improved dramatically. I prefer to source the information on the web site and interpret it myself'

- Capital city resident

'The government's got to be congratulated for how much information is provided!'

- Melbourne small business person

¹ The number of programs where electronic delivery of services was significant (<40%) increased from 47 to 92 between 2000 and 2002 – an increase of almost 100 per cent.

of small businesses (<4 staff) accessed government services via the Internet and 86 per cent of large businesses (>100 staff) used this channel (see Figure A1.3).²

The adoption rate equates to about 80 per cent of the audience who are equipped or can access and are using the Internet. Existing e-government users indicated a strong preference for using the Internet to access government services and indicated an expected increase in usage of around 30 per cent per annum. Users of the Internet who currently do not use e-government also indicated a preference for e-government for every activity other than when seeking advice from an agency.

According to the survey results, the most popular and well-used sites across the Commonwealth government are: Jobsearch, Centrelink, australia.gov.au, and e-tax (for people); and Australian Taxation Office, Australian Securities and Investment Commission, Australian Bureau of Statistics, and Business Entry Point (for businesses). However, agencies' principal focus for service delivery of their online programs is still information provision (see Figure A1.7).

Extending demand

The study found that a weighted average increase in demand for online government services of about 30 per cent might be expected between 2002 and 2004. This is a strong growth in demand and a useful benchmark for agency business managers planning to introduce or expand future programs. Figure A1.18 shows the additional services which would be sought, by survey respondents, in the future.

The survey has shown there is a clear citizen expectation that information from government will be provided in an integrated way and structured for consumption rather than according to convenience of service supply within agency boundaries. For example, 75 per cent of survey respondents indicated they wanted more information; 67 per cent wanted more downloadable forms; 43 per cent, greater integration of services between agencies; and 21 per cent, more complex transactions. Satisfying these needs has fundamental implications for agencies.

In future, considerable effort will be needed by agencies at a whole-of-government level, to meet customer expectations and demand. Business managers at all levels of government with service delivery responsibilities will need to place the citizen at the centre of multi-agency, multi-jurisdictional interactions regardless of whether the interaction is achieved through that agency, another agency, an intermediary or even another jurisdiction.

Agencies need to ensure demand assessment tools and analysis are in line with what people want. Soliciting information on demand in a form that is constrained by agency demarcation will hide people's true requirements. Demand analysis needs to take an holistic view of user needs so the full need is visible.

Where agencies have established a need and a desire to respond to citizen-centric views that involve cross-agency data and processes, they will need to structure their systems, data and programs to be able to deliver on this objective.

Failure to respond to market demand, expressed in terms of citizen-centricity, represents lost opportunities for agencies and may incur unacceptable levels of business risk if people perceive the developed services as irrelevant.

Stimulating demand and fostering greater citizen-centricity in e-government programs has a number of implications for individual agencies as well as government, including:

- **whole-of-government promotion** – the rate of adoption of e-government programs by citizens and businesses is likely to increase if online channel access is actively promoted on a whole-of-government basis;
- **coordinating specific promotion** – the need for individual program managers within agencies to achieve greater market penetration through enhanced promotion and removal of outdated legislative or policy barriers to change;

² Figures with a 'A' prefix are in an appendix – hence Figure A1.3 is the third figure in Appendix 1.

- **sharing online information and infrastructure** – program managers need to collaborate with each other across business lines, and with program and business managers in other agencies to service the needs of a common constituency; and
- **increasing the capacity of online services** – the rate of increase in technology take-up by citizens and businesses could place pressures on existing information, communications and technology and supporting staff within agencies and across government.

Demand management and measurement

Adopting and fostering a demand management culture will be essential if agencies are to provide more effective e-government. Key factors for agency consideration include:

- identifying and quantifying target audience and market segment demand, and developing an integrated service delivery strategy;
- undertaking appropriate market research to estimate the markets for information, downloadable forms and transaction services;
- being responsive in addressing customers' needs; and
- continuing to measure and monitor demand, adoption and take-up of e-government within the agency service delivery strategy.

'Too many pretty pictures!'
– participant in the Toowoomba focus group.

Agencies need to improve their understanding of the target market segments and their size. They need to better measure adoption and take-up so corrective action can be taken where needed. The survey found that many agencies had difficulty quantifying and providing reliable estimates of demand, as they had not specifically collected demand measurement data.

Demand measurement is a key issue for agency business managers planning to include government online channels as part of future service delivery strategies.³ Measuring demand and adoption will continue to be difficult for most agencies and represents a very different model to the supply-driven push approach that has characterised e-government to date.

Inhibitors and barriers to use

There are a number of inhibitors and barriers to use of online services. Some inhibitors and barriers survey respondents raised were:

- **useability** – too many pictures making pages slow to load, ineffective search tools, poor information structure, complexity of site structure, unfriendly terminology and inappropriate service grouping;
- **technology** – such as computers freezing (browser incompatibility, loading problems) or the need to download tools, such as Adobe Acrobat, to access services;
- **discoverability/visibility** – including general lack of visibility and need for promotion of availability of government services online;
- **skills and/or culture** – the 'fear factor', lack of understanding of what's available, complexity of finding information, uncertainty about the cost of using services (either direct or indirect), and loss of control associated with not understanding how to find information or use the technology;
- **security and privacy** – fear that government is 'spying on them', fear of 'spam' from providing email address, insecurity around passwords, not wishing to have history retained, unsubscribing is too hard, and too many passwords needed;
- **for regional users** – slow or unreliable connection, the cost of computers, libraries only being able to provide limited access; and
- **for the indigenous community** – computers not being located where people need them.

³ In the absence of other mechanisms, agency business managers resorted to collecting web statistics as a measure of demand.

Specifically, users of e-government indicated that the most common barriers to using e-government services were:

- poor search capabilities (28%);
- inappropriate or incomplete information (28%);
- difficulty navigating (27%);
- difficulty finding the service (22%); and
- concerns about security and/or privacy (17%).

Respondents to the survey indicated that, if barriers were removed, they would increase their use of e-government services by:

- more than 100 per cent (4%);
- between 26 per cent and 100 per cent (42%); and
- up to 25 per cent (38%).

Overall, 42 per cent of non e-government users considered the barriers to them using e-government services were:

- attitudinal issues;
- web site useability; and
- content/service adequacy.

If the barriers were removed, 38 per cent to 58 per cent of respondents indicated they would have a greater willingness to use e-government.

Overall, there were only small differences in responses between citizens and community, business and professional, capital city, regional city and towns and rural respondents.



BENEFITS OF E-GOVERNMENT

E-GOVERNMENT BENEFITS STUDY

The consensus from those surveyed is that the *Government Online Strategy* has substantially achieved its objectives and delivered significant financial benefits to people, agencies and society; and has made a contribution to the broader government objectives. This study measured the benefits of e-government in terms of agency benefits, consumer financial benefits, social benefits and contribution to broader government objectives.

Agency benefits

Clearly agencies have responded to the government online initiative and have responded in a way that has received community endorsement. Every program surveyed included an expectation of improved service delivery to users and 87 per cent of programs expected to generate some financial benefit to people.

Twenty-four of the 38 government online programs surveyed are achieving **cost reductions** through a combination of direct savings, lower cost of delivery, and improved internal or business processes. Participating agencies were expecting reductions in costs of about \$100 million from 24 e-government programs.

The aggregate cost of these programs is about \$108 million and:

- 67 per cent expect to reduce costs significantly due to improved business processes;
- 64 per cent expect to reduce costs significantly by directly reducing costs of servicing – that is, direct cost reductions, such as advertising, printed material, staff costs and client management costs; and
- 17 per cent expect to reduce costs significantly by working with another agency to deliver some services – included use of existing call centre and Internet channels.

With the creation and use of an e-government capability, agencies now have:

- **lower cost channels of communication with citizens and businesses** – e-business channels have offered an additional way of communicating with people which often costs far less, per inquiry, than other forms of service delivery; and
- **increased resource efficiency** – one of the earliest benefits for agencies has been their ability to share information with other agencies via electronic means. Electronic mail and the ability to send attachments has been a great boon for agencies, cutting back the cost of sending paper-based information by courier and reducing the time to transfer information.

Commonwealth government use of multi-agency channels is still relatively uncommon but there is strong evidence that, where programs are delivered this way, there are significant benefits for citizens and for government. Examples of multi-organisation service delivery already exist in the health and business sectors where multiple channels and a combination of agencies are cooperating to deliver services and benefits to customers.

A small number of surveyed agencies also indicated an **increase in revenue** from new and increased use of existing, chargeable services.

Consumer financial benefits

E-government users surveyed reported cost savings from increased access and convenience. Some are also achieving a reduction in the direct cost of the service and the benefits from enhanced service levels represented by improved service quality, reduced turnaround times, improved access to services and availability of new services.

The study found that:

- at least 45 per cent of respondents estimated some level of actual cost savings per interaction using e-government compared to traditional channels, with an average value per transaction across all users of \$14.62;
- businesses and intermediaries estimated slightly more positive savings benefits than citizens – 23 per cent of business respondents and 10 per cent of citizens claimed more than \$25 saving per interaction;
- 52 per cent saw some (36%) or significant (16%) improvement in business or work opportunities because of e-government programs generated by such agencies as Austrade and the Department of Employment and Workplace Relations (Jobsearch); and
- over 65 per cent saw some (49%) or significant (17%) improvement in the way they run their businesses.

User financial benefits are delivered as a result of:

- **faster turn-around of information requests** – instead of lodging forms to ask for information to be sent via 'snailmail', or attending government offices to ask for information over the counter, businesses can now access information directly from agencies' web sites or lodge an electronic request for information; and
- **faster access to documents and forms** – the old adage that 'time is money' has become increasingly relevant for people so the capability of online service delivery channels speeding up turnaround of documents and forms is seen as extremely beneficial.

The survey found that, when comparing the view of people with that of agencies, it seems likely that agencies underestimate the financial benefits to people from government online initiatives. This gap in perception suggests there is greater underlying demand for online government services than agencies realise.

Social benefits

Social benefits included more professional development opportunities obtained through using online forums and sharing information and bulletin boards within professional and trade groups. They also included awareness of Commonwealth social programs and benefits. Specific areas of benefit citizens valued included increased community skills and knowledge and new business and work opportunities.

Australians often lead busy lives and are often 'time poor'. Private sector organisations, such as banks, insurance companies, retailers and utilities, have recognised this and are using online services to save customers time and effort in getting information and effecting transactions.

People are now able to receive similar levels of convenience and access when interacting with government. Governments have recognised the Internet as an effective service delivery channel because it provides access to government information and services anywhere, anytime, for anyone with access to a computer and a telephone line.

As a result of using government online services Australians now enjoy:

- **Faster turnaround of service delivery** – inclusion of online service delivery channels as a key component of an agency's service delivery strategy provides greater capacity to handle routine inquiries, thus freeing up counter and telephone staff to deal with more complex issues. People can access information directly from the Internet without having to visit the agency, thus improving service levels significantly.
- **24-hour service delivery** – people are able to seek information outside of business hours. For example, many people are taking advantage of the ability to lodge taxation returns out-of-hours.

- **More self-service** – people can now access information on a self-serve basis, making the information available at the right time for decision making. This delivers a strong benefit expressed in terms of greater knowledge and enhanced decision-making capacity.
- **Improved ability to find information** – for some people, the ability to find information has been the greatest benefit. It has enabled them to understand more about their government and to find the support program that meets their specific needs.
- **Wider reach of information to the community** – people are generally demanding increased access to electronically published information, supported by email and electronic transactions. The penetration of information and transaction-based capability is increasing the reach of government to citizens and business and from the community to government.
- **Better communication with rural and remote communities** – in past years people from rural and remote communities were relatively, with regard to access, disadvantaged in comparison to their metropolitan counterparts. Broadband infrastructure improves the possibility for regional and rural communities to have the same levels of access to information and government transactions, and their service expectations are aligned with the enhanced capability of the technology.

While social benefit is less tangible and non-financial in nature than the other benefits and therefore potentially more difficult to measure (particularly in financial terms), more than 85 per cent of surveyed citizens, businesses and intermediaries said the overall benefit to them, of using e-government, was either significant (36%) or moderate (50%).

Social benefit was measured in terms of service improvements, community skills and knowledge, and new business or work opportunities.

Over 90 per cent of citizen respondents indicated an improvement in overall service delivery as a result of using e-government; almost 75 per cent indicated significant (30%) or some (46%) improvement in service quality; and over 80 per cent of business and professional respondents reported significant (36%) or some (47%) improvement in services. Rural and regional respondents provided similar feedback to their city counterparts.

Agencies surveyed believed that over 82 per cent of programs delivered significant or moderate improvements in service levels in terms of service quality, service cycle times and customer access to government services

Participants indicated that online availability of government information equips them to make better decisions about their business and social activities:

- 75 per cent of all respondents saw either some (24%) or significant (51%) improvement in their ability to make better decisions; and
- over 80 per cent of business respondents and nearly 90 per cent of government employees saw either some or significant improvements in the quality of their decision-making.

The survey and focus groups highlighted the important role intermediaries play in dissemination information and helping people access government services. Examples from the focus groups included:

- family support – providing research for students and non-computer-literate people;
- matching clients to funding opportunities and grants;
- performing research for a small business owner; and
- working as a volunteer in a community support area.

Focus group participants indicated a strong desire for more information, greater interaction with government agencies and active participation in development of future community-focused e-government initiatives.

Users believed that government online services are delivering improvements in the way they run their businesses and contribute to creation of new work opportunities:

'I did my tax return online – fantastic! I won't be doing it on paper again – I got my cheque in 5 days.'

– Toowoomba focus group participant

'I was planning my honeymoon in Vietnam and the Foreign Affairs updated information available after September 11 was fantastic for organising travel!'

– Melbourne resident

- over 50 per cent of survey respondents saw some (36%) or significant (16%) improvement in business or work opportunities because of government online programs; and
- over 65 per cent saw some (49%) or significant (17%) improvement in the way they run their business, or improved their quality of life because of government online programs.

Contribution to broader government objectives

Individuals, businesses and intermediaries' views on **reduced complexity** when dealing with government and ease of finding information online do not appear to be consistent with those of the agencies surveyed:

- 42 per cent of users found it either easy (31%) or very easy (11%) to find information;
- 43 per cent found it acceptable; and
- 14 per cent found it either difficult (11%) or very difficult (3%).

Regional town and/or city users were slightly more positive (48 per cent indicated it was easy or very easy) but, among the business and professional people, only 36 per cent found it so.

Whereas, of the 38 agencies participating in the survey:

- 69 per cent claimed they made a significant contribution to making information easy to find; and
- 25 per cent claimed a moderate contribution.

As well, 61 per cent believe their programs make a significant contribution to the ease with which people can navigate and interact when using the program.

Survey respondents agreed that the Government Online Strategy has 'opened up' government and made government policy, information (including some socially valuable archival and historical information) and services more available. There was, however, some divergence of opinion, between surveyed users and agencies, about the significance of the online contribution to making government **more transparent**.

While close to 70 per cent of people saw either significant (18%) or some (50%) improvement in the access to information and government transparency, the agency view was that only 32 per cent of government online programs had made a significant contribution to more transparent government and a further 26 per cent had made a moderate contribution.

The agencies surveyed seemed to underestimate the value of publishing public records and information online, particularly for regional and rural people.

In 2002 the Allen Consulting Group identified **wider economic benefit** as the result of increased involvement of Australian business in the information economy. The study found that, of the 14 per cent of programs claiming moderate (11%) or significant (3%) contributions to wider economic benefits, the nature of the contribution was in the areas of:

- increased labour market efficiencies;
- more efficient supply chain management;
- reduced cost of overall program delivery; and
- increased efficiencies in taking products to market.

On average, people surveyed valued each interaction at just under \$15 per session.

The agency survey included an estimation of program outputs for services across all 169 programs for four individual years between 1998 and 2004. Using the agency-supplied outputs and the government online user-provided valuation per interaction, an estimate of the perceived user economic benefit from the group of 169 programs can be derived as being around \$1.1 billion for 2002.⁴

'... its online service is the greatest thing the Commonwealth government has ever done... [but] they need to improve it and make it easier to use.'

- Toowoomba rural resident

'Access over the past two years has improved dramatically. I prefer to source the information on the web site and interpret it myself.'

- Capital city resident

Factors affecting benefit realisation

Fully realising the planned benefits and achieving further benefits from the next phase of e-government will require a continued focus to address factors that will potentially negatively affect benefit realisation. These factors include:

- **measuring and managing benefits** – without a formal regime that includes measurable outcomes, metrics, baselines and accountabilities, some of the planned benefits from implementing the *Government Online Strategy* may be at risk;
- **articulating clear and achievable benefits** – as agencies start implementing the next phase of e-government, their ability to clearly articulate and communicate the target benefits to intra-agency, inter-agency and cross-jurisdictional stakeholders – and include them in business cases – will become increasingly important to ensure benefits are fully understood and realised;
- **managing online complexity and user access** – evidence collected suggests there is potential for a reduction in benefits to agencies and users because of perceptions about access to and useability of government online programs – factors highlighted included access to Internet technology and useability of services and access to computers; and
- **public trust in government online services** – people indicated that, overall, their level of confidence in the security offered by government web sites is high or very high. Whilst this is a good result, there were some specific ongoing concerns about security, fear of spam from providing email addresses, and government retention of transaction or interaction history.

Most agencies surveyed (74%) acknowledged that public trust and security were relevant to the successful delivery of benefits for their government online services and have or are developing plans to address these issues.

The future

Overall, people believe the current government online services are 'a significant leap forward ... but they still have a long way to go' (summary of focus group sessions, September 2002). The study found that citizens, businesses and intermediaries perceive further benefits from features such as:

- **one window to government** that provides more information, structured so it is easy to discover and does not require an understanding of how government works;
- **personalisation** of content and the level of information delivered;
- **improved search and navigation** facilities; and
- **further integration and clustering** of services across agencies at all levels of government.

'Sometimes when agencies or departments change names its hard to find things and then they do not change or update links at the same time ... there needs to be some form of consistency in the process of discovery and structure.'

– Sydney small business person

'I've looked at parks and environment, some sites are hard to use, we need easy access, language needs to be easier and the jargon is difficult, expecting too high level of knowledge.'

– Indigenous artist Toowoomba

'I do 70 per cent of my research on the Internet, a lot using government sites, much of it accessing data... but I find you have to plod along until you've used it a bit before you can find what you want.'

– Brisbane university student

'I want to get a consistent response with current information for related inquiries.'

– Focus group participant

4 This derivation assumes: the 169 programs represent the total of agency activity; the agency-supplied outputs are accurate; and at least one in four interactions have value, as defined by government online users. These assumptions have not been validated and should be used with caution. No audit of outputs has been performed. While users have placed a valuation on transactions, it is unclear what their success rate is in reaching the specific government service that meets their need.



RETURN ON INVESTMENT FOR GOVERNMENT

E-GOVERNMENT BENEFITS STUDY

E-government programs have a breadth of impact that extends far beyond the agency concerned and where benefits often flow out-of-sight of the agency owning the program.

When attempting to measure benefit/cost ratio in government, it must be recognised that private sector approaches do not translate well to the public sector for a number of reasons including:

- outcomes and benefits from government programs are not always measured in financial terms – many government programs primarily focus on social outcomes;
- even where a government program is intended to produce cost efficiencies, those efficiencies may not accrue or be limited to the agency that sponsors and finances the program; and
- government agencies have to work within specific legislative and regulatory guidelines (see Appendix 6) that may prevent them from taking certain courses of action that may deliver a more cost effective outcome.

Governments must serve all constituents and it is not always appropriate to take a market-driven approach to service delivery where services are delivered only to cost-effective sectors or market niches. Financial management processes and systems are not always capable of supporting rigorous program costing, and agencies therefore have had considerable difficulty providing reliable estimates of program costs or financial benefits.

Benchmark benefit to cost ratio

The study considered the economic, financial and social benefit/cost ratio for 38 e-government programs. Overall, the benefit/cost ratio achieved by the 38 surveyed programs is outstanding.

While the study found little evidence of consistent frameworks being used to measure benefit/cost ratio, from a social benefit perspective, feedback from citizen and business surveys and focus groups strongly suggested that e-government programs are delivering a social benefit and that citizens and businesses want this to continue.

Of the 38 programs surveyed, 24 expected a financial benefit to the agency but many did not regard it as the primary objective, and it is therefore in addition to the expected overall social benefit. From an estimated investment of \$108 million across these 24 programs, the total agency benefit/cost ratio was 92.5 per cent. Across surveyed programs, including those that had no expectation of generating an agency financial benefit, the aggregated benefit/cost ratio was 61.1 per cent.

These figures represent the benefits from only a sample of programs under way or planned by Commonwealth government agencies in 2002.

An e-government benefits framework for the future

Many agencies are not measuring benefit/cost ratio adequately. Currently, agencies are tracking program costs and there is some evidence of tracking of agency financial benefits. However, fully identifying and assessing the primary sources of value of government online programs, including their social value, will require significant effort.

Table 2: The components of financial, economic and social benefits flowing from e-government and government online programs

Govt. Focus	Benefit category	Government online measurement	Quantification	Interim measure of economic impact	Indicators of economic input	Adjusted economic impact
Economic	Agency Value	Agency Costs Agency Efficiency Agency Revenue	Cost Reductions + Revenues increased – Costs of development	Benefit to cost ratio (Benefits/costs)	Savings less costs	Net Economic Impact
	Consumer financial value	User Costs User Efficiency User Revenue	Consumer Cost Saving + Consumer revenues increased – consumer costs deployment	Net user benefit to cost ratio (User benefits /user costs)	((Wealth generated – consumer costs incurred) x (1-Avg. tax rate)) – agency costs incurred	Net Economic Impact
	Social economic value	Increased user economic participation Increased access to govt. programs Decreased govt. benefit payments	Consumer Income – consumer costs deployment	Net government benefit (govt. inflows – govt. outflows)	((Wealth generated – user costs incurred) x (1-avg. tax rate)) – net govt. benefit	Net economic impact
Social	Social worth	Increased educational, health, employment outcomes		Reach x impact	Social capital created	Net economic impact
Whole-of-govt.	Governance worth	Increased transparency, accountability and participation of govt.		Reach x impact		

Monitoring agencies' progress, in terms of meeting the broad e-government agenda, requires regular review mechanisms for accessing progress on key performance indicators across the Commonwealth government sector. Investing in e-government should deliver tangible returns, whether in the form of real cost reductions, or increased efficiency and productivity, or of improved services to business and the broader community.

As a first step to measuring benefit/cost ratio in the future, demand and value assessment methodologies have been developed. Demand and value assessment methodologies can provide:

- a consistent framework for measuring the social and financial benefit/cost ratio, and alignment with broader government and agency objectives for existing and proposed government online programs; and
- an approach for business managers to initially determine and then to assess, on an ongoing basis, the intrinsic worth of online and government online programs provided as integral components of their overall service delivery strategies.

The benefits of using the demand and value assessment methodologies would include:

- a better understanding of the drivers of benefit/cost ratio;
- a basis for comparing programs within and between agencies;
- establishment of auditable figures for transparency;
- clear statements for volume, value and risk including all subjective data for establishing a business case;
- promotion of best practice; and
- a positive contribution to evaluating the efficiency and effectiveness of e-government programs.

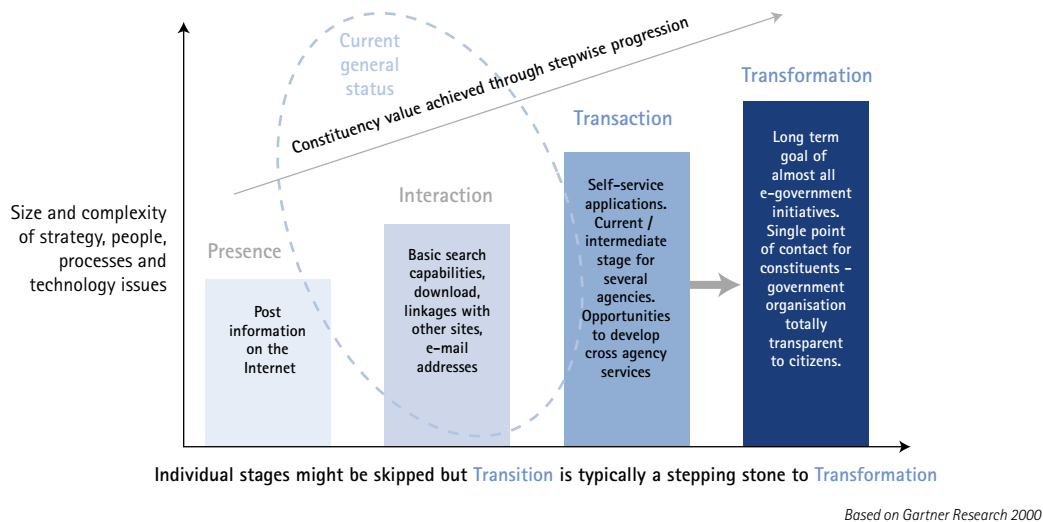
NOIE intends to separately release these methodologies after refinement through pilot studies in cooperation with selected agencies. The components of financial, economic and social benefits flowing from e-government services are outlined in the demand and value assessment framework.

E-government maturity

Both government and users acknowledge the desirability of a seamless, responsive and citizen-centric government that delivers efficient services' (Rimmer 12 June 2002). Achieving this level of maturity will require a steady progression of collective learning and experience. Evolution of e-government capability can be represented in four distinct but complementary stages, known as an e-government maturity model (see Figure 1). The basis for the maturity model are key concepts relating to:

- transaction processing;
- extending the degree of fulfilment that can take place online;
- integration and collaborative processing;
- citizen-centricity; and
- whole-of-government delivery architecture developed with the user in mind and driving integration, as seen by citizens rather than from the traditional view of the agency.

Figure 1: E-government maturity model⁵



The stages of e-government maturity reflect the increasing capability of e-government solutions. Progression through the stages will deliver more value to users but also comes with increased complexity and development costs. As well, at each stage of the e-government maturity model, user reaction, comfort and inhibitors will differ, resulting in different adoption rates and demand curves.

Progression through the stages represents increasing maturity in a number of dimensions:

- static content to dynamic content;
- publishing to interaction;
- generic dialogue to individualised dialogue;
- simple transactions to complex transactions;
- inclusion of authenticated transactions;
- partly automated processes to fully automated online processes;
- agency-aligned delivery to citizen-centric delivery; and
- agency-aligned services to cross-agency services.

⁵ Developed by DMR Consulting, drawing on research from a range of sources including the Gartner Group.

The agency-aligned view

E-government is a key mechanism for transforming development, implementation and delivery of policy objectives through an electronic channel of delivery. If agency objectives do not need the complexity of later maturity stages the agency should not be drawn into complex delivery for the sake of apparent sophistication. Agencies should ask: 'What is fit for our purpose?'

The citizen-oriented view

An increasingly large segment of the community is seeking government service delivery in a way that provides all needed information and services in one place through one mechanism and in a manner that is sensitive to the individual's context of interaction. This view argues for increasing agency collaboration and development of services that are not aligned to agency boundaries, so as to better serve the citizen.

This view should align with the objectives of government but, in this case, the scope and context needs to be based on cross-agency or whole-of-government views. The 'want' is not sufficient unless, in addressing it, government is also delivering on its broader policies and objectives.



MANAGING E-GOVERNMENT

E-GOVERNMENT BENEFITS STUDY

AN understanding of the broader intent of government policy within a context that delivers on the outcomes of individual agencies will require increased coordination and interaction across government.

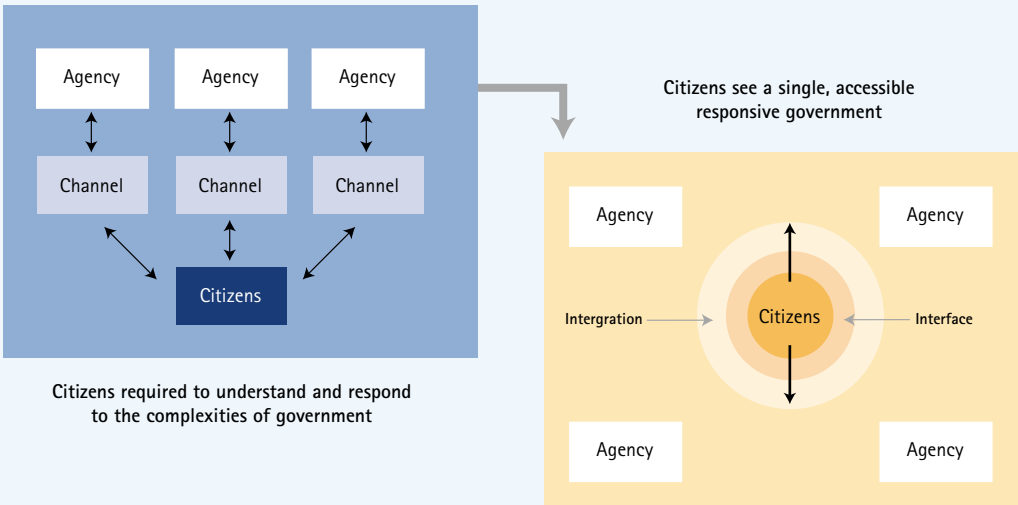
Citizen-centricity

Governments worldwide are recognising that delivery of citizen-centric services is the key to the successful evolution of e-government. Instead of requiring citizens to understand and interact with complex relationships between government agencies, a citizen-centric model is emerging. A citizen-centric model puts citizens at the centre and provides a single interface for citizens to access all (or a range of) government services (see Figure 2).

To better manage transaction frequencies and volumes, some agencies are choosing to do business with citizens through intermediaries and community organisations. To minimise costs and perceptions about authentication, some agencies are attempting to make maximum use of existing investments in virtual infrastructure, such as natural business systems and networks in use by citizens and in the business community.

The **Business Entry Point**, for example, is a business-centric program delivered across agencies, portfolios and jurisdictions. This program focuses on all stages of the business life cycle and is a portal for business.

Figure 2: Transition to a citizen-centric model



It began in 1998 with provision of online information and has progressed to its current stage of providing transaction functionality for businesses dealing with the three levels of government.

A citizen-centric view requires an indepth understanding of the context within which the citizen is operating as they approach the e-government experience. The structuring of services around agency boundaries is no longer seen as valuable or helpful but it is not yet clear what perspective will add most value.

E-government services will need to be presented within a cohesive structure that is oriented towards the citizen and fits into the life events of the community. Citizen-centricity should be expected to tie together the services citizens need to respond to business or life events. Such integrated services can be expected to answer such questions as:

- How do I incorporate a business entity?
- How do I deal with a death in the family?
- Can I relocate to improve my prospects of employment?
- What support payments do I qualify for?

The transition from agency-oriented to citizen-centric e-government may be difficult and time consuming and will require leadership and coordination as agencies work towards a common and agreed architecture. Determining the value and justification of such a shift may be problematic, and individual agencies may need to adjust their normal program priorities and e-government spending to move towards this increasing integration.

The Commonwealth Department of Health and Ageing's proposed e-government program, **HealthConnect**, for example, is an initiative with wide population reach and significant economic and social benefit. **HealthConnect** would allow health information to be collected in a standard format at the point of care, safely stored and (with the individual health consumer's permission and in accordance with legislative safeguards) exchanged with those health care providers authorised to access it. It would require high levels of cooperation between Commonwealth and state and territory agencies.

Combining the agendas of responsiveness and integration will require that some agencies take a lead in these developments and that experience is monitored and used to refine and adjust towards an agreed goal

Extending the concept to cover life events that have many interactions with many parties introduces yet more complexity. For example, the concept of developing electronic health records, such as is proposed by **HealthConnect** recognises the value of sharing patient information at each point of clinical care. The citizen-centric view would thus extend to include a range of service providers who are trusted with, or have a need to know, information that may be private and secure from others. Such concepts, around a variety of community need areas, would allow a more complete understanding of community needs.

The mechanisms of delivering value for people at the front end have to be such that the expected efficiencies of e-government are realised. Thus the development must be pragmatic and careful. Citizen-centricity will be an evolving and maturing design discipline over many years.

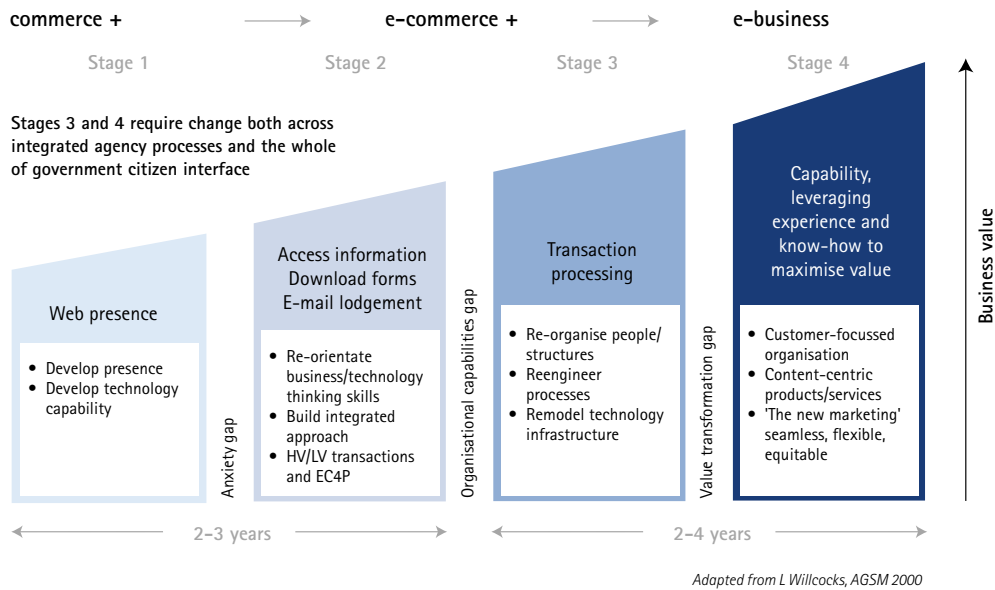
Organisational readiness for e-government

An extension of the e-government maturity model⁶ (see Figure 3) illustrates the stages in organisational learning that an agency needs to go through to develop the organisational maturity needed to consistently deliver quality e-business services.

The **anxiety gap** represents agencies' fears about conducting their business more openly and about developing the capability to deal with the security and skill issues inherent in an Internet-based online presence. Most agencies have crossed the anxiety gap and are using their web pages to reliably provide information and some transactions.

⁶ The extended e-government maturity model is based on research by Leslie Willcocks, Warwick Business School and the Australian Graduate School of Management, University of New South Wales.

Figure 3: Extending the e-government maturity model



Early-adopter agencies are well advanced in crossing the **organisational capabilities gap**. They are re-orienting their business and technology skills to introduce business processes that reach back to the workers who provide and maintain the information that is provided online. This organisational learning is enabling early-adopter agency staff to work together to introduce some electronic transactions.

These early-adopter agencies now need to focus on how to cross the **value transformation gap**. Crossing this gap requires attention to:

- understanding value to ensure all development addresses defined and accountable outcomes;
- understanding the challenges of becoming a citizen-centric organisation;
- developing a framework of usage around life events and natural systems;
- developing means for cross-agency and cross-government cooperation, data sharing and delivery;
- developing cross-agency governance and accountability mechanisms; and
- addressing the legislative and ethical issues arising from shared delivery models.

Coordination

Understanding the e-government maturity model (Figure 1) is fundamental to understanding the areas of coordination needed to better direct and support e-government. Developing e-government that is citizen-centric, cross-agency or across tiers of government requires a significant level of whole-of-government coordination.

The response to the coordination challenge should be based on emerging experience and be centred on models that are seen to deliver results rather than on those requiring heavy mandatory compliance. While Better Services, Better Government has already identified some whole-of-government requirements that bind a number of agencies and some that agencies can decide on an individual basis, there needs to be some level of oversight and scrutiny, particularly over the whole e-government agenda. Specific areas which need oversight and scrutiny include:

- consistent methods for demand assessment and a demand assessment approach that will respond to the whole-of-government perspective;
- consistent mechanisms for tracking all government service delivery so adoption of e-government can be placed in perspective;

- consistent methods for assessing value and determining which projects have an acceptable benefit/cost ratio and should proceed;
- consistent mechanisms for tracking creation of value for citizens so the investment is accountable;
- a whole-of-government e-service architecture that focuses on the user and the interface to the user that will honour the intent of citizen-centric and cross-agency expectations;
- a mechanism for cross-agency cooperation that allows agencies to take the lead as well as deliver services on each other's behalf; and
- a funding mechanism that responds to the social value being created and supports e-government initiatives that reflect cross-agency cooperation and citizen-centric development.

The demand and value assessment methodologies, developed as part of this study, provide a first step in responding to some of these challenges.

Governance

Governance is critical to the e-government environment as government increasingly focuses more on the life and business events of its citizens. Governance frameworks for the 'shared' elements of systems may span a range of matters, including ownership of business systems, information ownership, infrastructure, and standards.

The government has established the Information Management Strategy Committee, supported by the Chief Information Officer Committee, as key mechanisms for achieving cooperation across Commonwealth agencies. Secretaries, Chief Executive Officers and Chief Information Officers will also need to establish appropriate governance arrangements around their future e-government programs within their own agencies. The Commonwealth's Management Advisory Committee has recently published *Australian Government Use of Information and Communications Technology – A new governance and investment framework*, which details the principles of information and communications technology governance to optimise outcomes within a federated system of e-government (Management Advisory Committee 2002).

Developing the benefit/cost ratio framework, which includes measuring economic and social impact and value from e-government, will help establish better business cases for e-government.

Whole-of-government service architecture

The move towards citizen-centricity will present challenges for agency Chief Executive Officers and Chief Information Officers. While business change, information and communications technology are the enablers of e-government; outcomes-focused public sector accountability models, to underpin citizen-centricity, will need to be developed. Unless it is clear what outcomes are being pursued by whole-of-government initiatives, there will be no way to assess what investment is warranted.

Agencies will need to understand how to build and structure a citizen-centric architecture which is based on business and user views. It is likely that cross agency e-government programs will evolve faster than a shared architecture, so there will need to be careful coordination to ensure agency outcomes and user views are not lost. Commercial experience suggests that government and community processes need to influence the architecture but should not dominate it.

Sharing enabling software has not, until now, been a feature of e-government programs but will be increasingly so as component-based technical architectures become more the norm in government agencies.

Agencies need to build flexible, component-based systems with interfaces to legacy systems and the capacity to adapt and accommodate ongoing government policy changes. A change architecture needs to be incorporated into all levels of management philosophy and business operations.

As software engineering evolves to more component-based designs, such as web services, business applications may comprise components that are spread across several government agencies. Architectural and interoperability concerns will then be vital. A common approach to technology standards, privacy concerns, and user interface design will be imperative.

Better Services, Better Government prescribes the main objectives of a shared architecture. These are:

- interoperability between dissimilar systems;
- integration of services;
- application, data and infrastructure connectivity among and between new and legacy systems;
- flexibility and the ability to respond to change; and
- re-use rather than re-invention (NOIE 2002, p. 19).

Many agencies are already working together to develop policies that cut across the traditional portfolio boundaries of ownership, shared business systems and adoption of appropriate standards. Further collaboration on information and communication technology procurement, by using the government's collective buying power and by increasingly re-using valuable Public Service intellectual property, is vital.

Funding e-government

Early government experience on cross-agency funding has largely revolved around the role of leading agencies in accepting the leadership role as well as managing funding and risk issues. The approach to funding cross-agency e-government requires that:

- each program complies with accountability processes;
- shared planning and infrastructure is allocated the funding needed to be effective from a whole-of-government perspective;
- shared investment operates under due accountability requirements;
- shared infrastructure is allocated funding to maintain it for the life of all programs; and
- each program shares the cost of shared infrastructure.

This approach also requires governance mechanisms that overlap agency boundaries. The resultant complexity may see a variety of business programs that are interdependent in delivery terms. This interdependence needs to be coordinated within a whole-of-government framework, leaving the individual business programs to operate within their own funding and governance models.

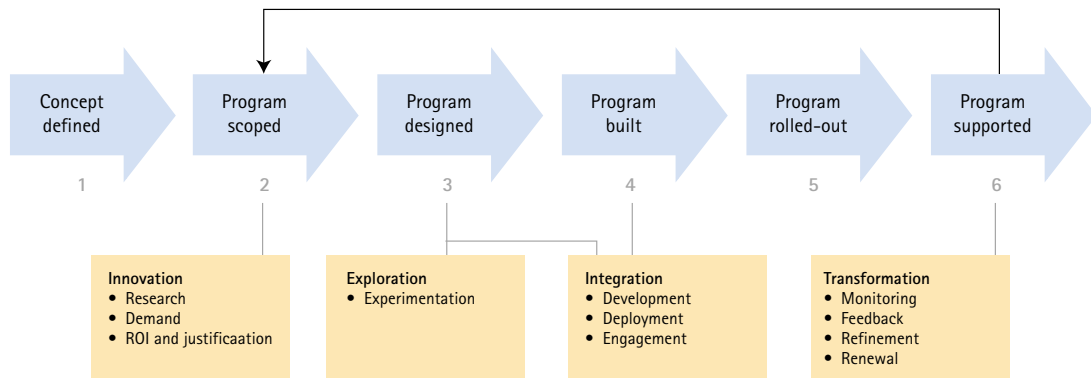
An e-government lifecycle

An e-government lifecycle (see Figure 4) has the following unique elements:

- when a program is being scoped, it is a time of innovation when increased research into:
 - demand and impact and the mechanisms that will deliver against these objectives is needed; and
 - the justification and understanding of benefit/cost ratio will be needed so social value can be understood;
- as a program is being designed and built there will be a need for exploration and experimentation to discover the best ways to:
 - direct design and deployment of the program;
 - ensure the service engages target users;
 - integrate the program, especially cross-agency; and
 - deliver citizen-centric solutions.
- after a program is rolled-out it will need to be supported through a transformation agenda of:
 - ongoing monitoring of usage and acceptance levels;
 - feedback to understand the changed perceptions that will emerge as to the positioning and suitability of the program content and delivery mechanisms; and
 - iterative learning and experience by agencies, government and users – a cycle of refinement and renewal.

These elements combine to provide a way to move up the maturity curve while progressively delivering value to the community and to the government.

Figure 4: The e-government life-cycle



Reach and impact

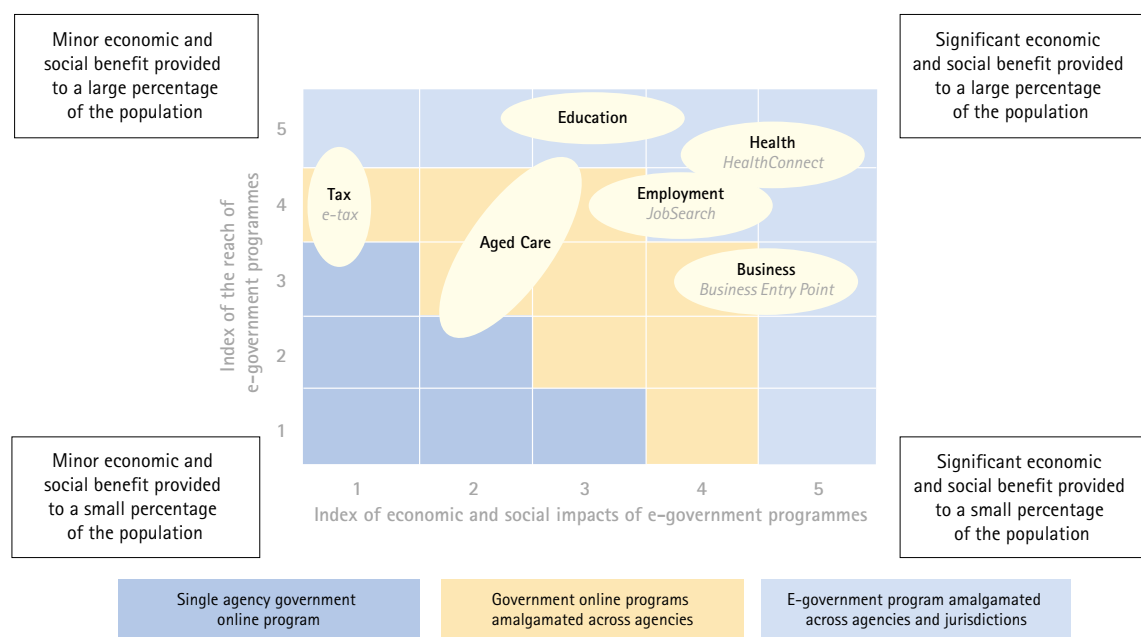
The concepts of 'reach' and 'impact' provide a mechanism for assessing the relative value of e-government programs. A reach and impact framework considers the reach of e-government programs in terms of:

- the number of consumers who have access to, and use, the services (vertical axis);
- the scale of the financial, economic and social impact of programs (horizontal axis),
- the breadth of programs, be they single agency, portfolio or cross agency/cross jurisdiction (three shaded areas).

Figure 5 shows a reach and impact framework with e-government programs positioned to show their potential reach into the community and impact on citizens (positioning is illustrative only).

Application of these concepts, through the demand and value assessment methodologies, provides a way to promote the evolution of management practice and aid effective allocation of funding.

Figure 5: Reach and impact for specific e-government programs



Reach and impact directly relate to the outcomes of e-government programs and thereby become mechanisms for assessing value, approving programs and allocating funding. Developing the concepts of reach and impact, and the tools to support measurement, provide a way to standardise measurements across the ultimate contributions of e-government to society, notably:

- increased openness and accountability of government;
- increased social value;
- increased economic value;
- increased social justice and social equity; and
- net positive economic benefit from the information economy.

There is a strong relationship and cross connection between: reach and demand; take-up and impact; maturity; and citizen-centricity.



APPENDIX 1

DEMAND FOR E-GOVERNMENT (PHASE 1)

Readiness for e-government

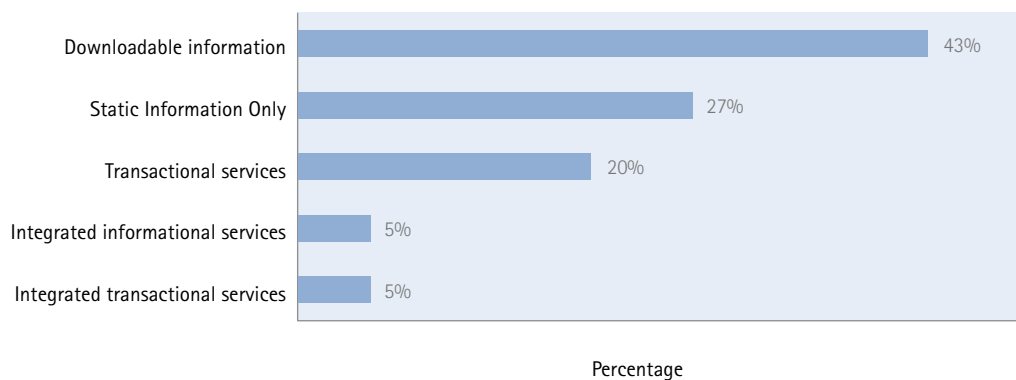
Governments have recognised the potential of using the Internet as a service delivery channel to meet the needs of people and businesses. As well, a growing number of citizens and businesses have developed the skills to effectively interact online at times convenient to them, from home, at work, while travelling. Such experiences raise the expectations of people, who want the same type and level of service from government as they receive from the private sector, virtually on demand (Barrett 2002).

Government services provided online

Many Commonwealth government services are provided to citizens and businesses in cooperation with state and territory and local government agencies, including through non-government organisations and third parties. Many services are provided through static web sites with basic search capabilities and information download functionality.

The distribution of Commonwealth government services offered online across broad levels of sophistication is illustrated in Figure A1.1.

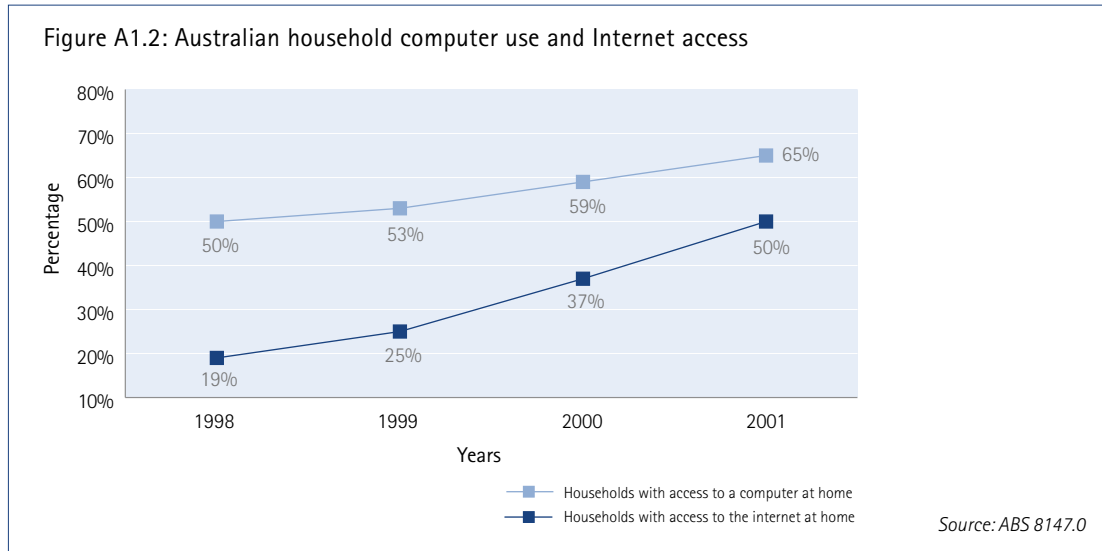
Figure A1.1: Commonwealth government services offered online



Source: NOIE 2001

Trends in uptake

The trend in uptake of household use of the Internet is an indicator of increasing potential demand for government online services (see Figure A1.2).



Australian Bureau of Statistics (ABS) Internet adoption statistics provide broad indicators of Australian Internet use. Government agency business managers need to consider such statistics when developing future service delivery strategies involving government online. The statistics indicate that:

- in the 12 months to November 2000, 12 per cent of adults accessed the Internet to use government services (ABS 8147.0);⁷
- 10.96 million people (58%) of all Australians counted on census night August 2001, do not use the Internet (ABS 2015, p. 102);⁸
- 6.97 million people (37%) of all Australians counted on Census night August 2001, use the Internet (ABS 2015, p. 102) (the balance, 5%, included 203,000 overseas visitors and 838,596 people who did not declare their Internet usage);⁹ and
- as at March 2002, there were 4.2 million active Internet subscribers in Australia comprising 3.7 million household Internet subscribers and 505,000 business and government Internet subscribers (ABS 8153.0 p.9).¹⁰

According to the ABS, as at June 2001, 84 per cent of businesses were using a computer, an increase from 76 per cent in June 2000. Approximately 69 per cent had Internet access and 22 per cent had a web presence (see Figure A1.3).¹¹

7 Based on ABS Population Survey Monitor of 3200 private households.

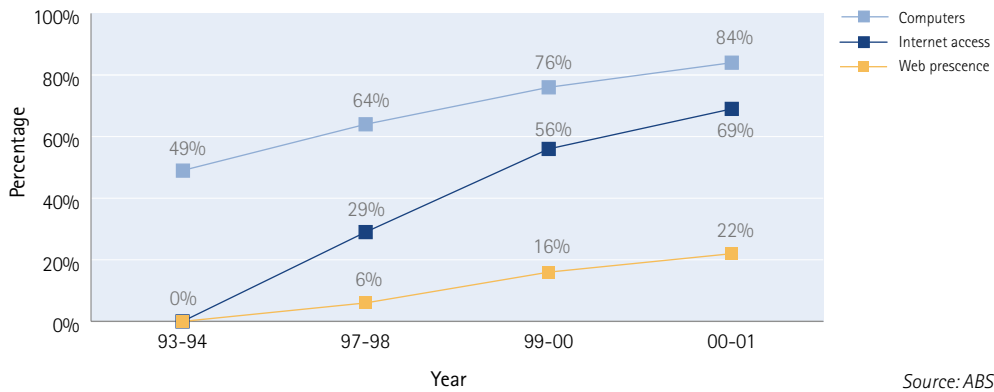
8 Based on information obtained on Census Night, 7 August 2001.

9 This figure is not directly comparable to the figure of 64% Internet usage published by NOIE in *Current State of Play, Australia's Scorecard, April 2002*, which was based on Nielsen/NetRatings data which used responses from people 16 years and older.

10 The primary source of the census population frame is the Telecommunications Industry Ombudsman with which Internet service providers must register. Active subscribers are defined as customers having accounts with Internet service providers who have accessed the Internet or paid for access to the Internet during the 90-day reference period.

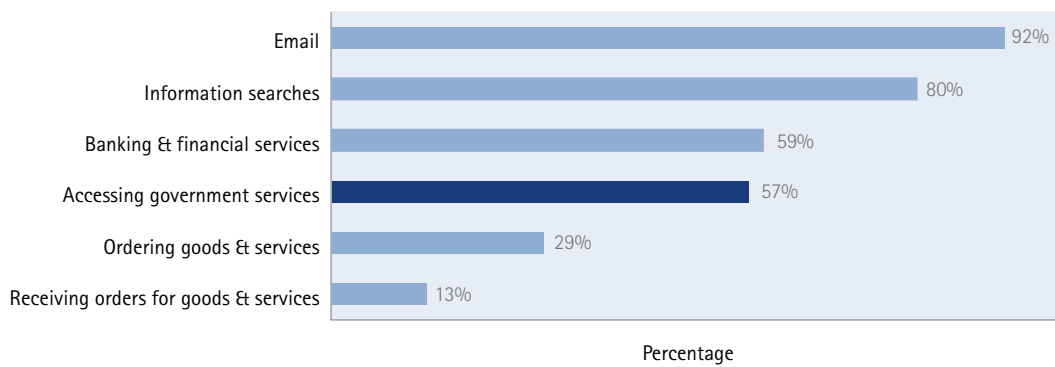
11 ABS explanatory notes indicate that a stratified random sample of approximately 14 900 businesses was drawn from the ABS Business Register. A response rate of 94% was achieved.

Figure A1.3: Business use of information technology 1993-94 to 2000-01



Businesses are increasingly using the Internet to access a full range of services (see Figure A1.4). As at June 2001, 57 per cent of businesses used the Internet to access government services online.

Figure A1.4: Australian business use of the Internet

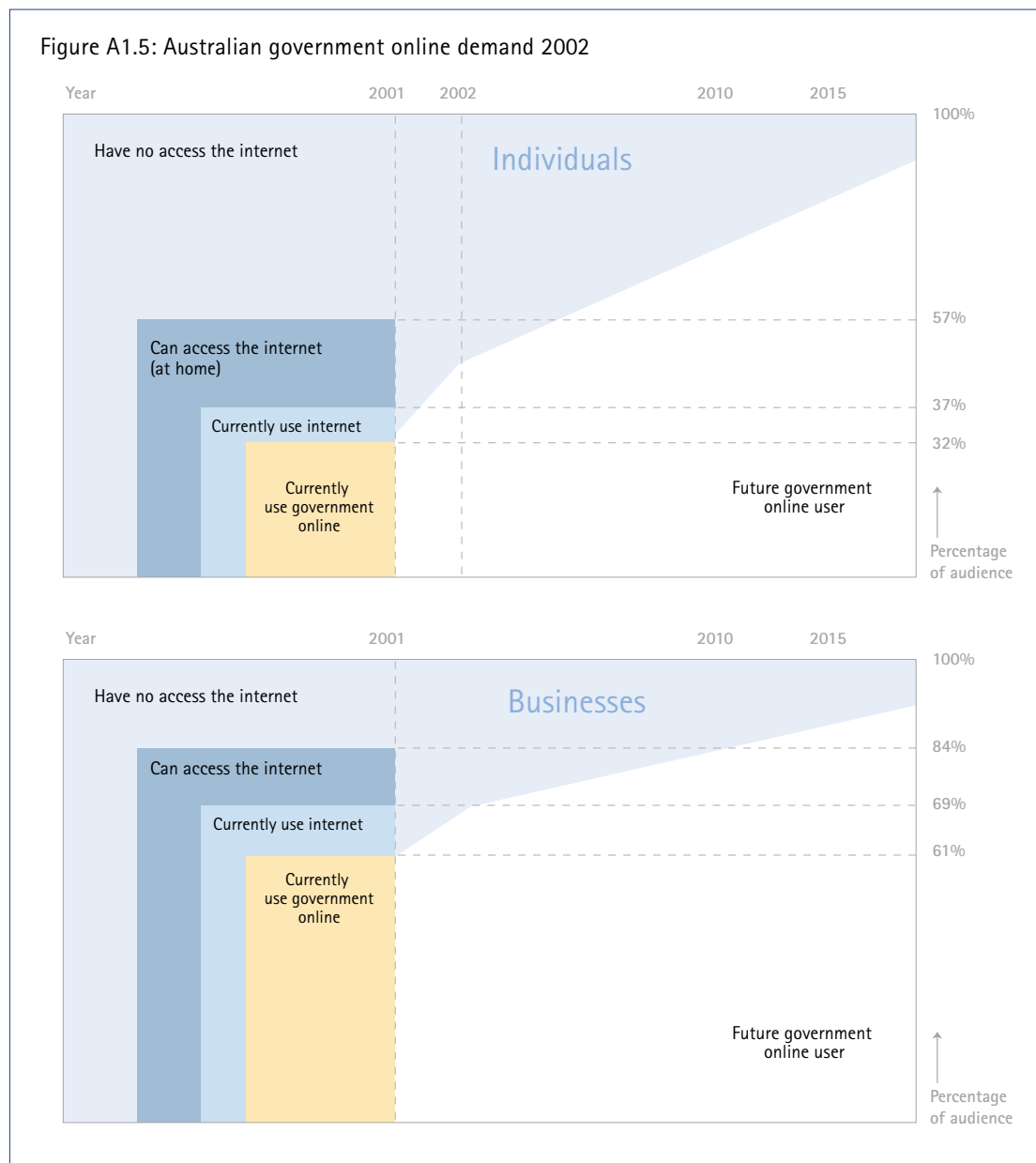


The relationship between Internet usage, potential demand for, and adoption of government online services for individuals and businesses is illustrated in Figure A1.5. The diagram contains data points from different sources and is thus illustrative only.

In 2002, existing e-government usage by individuals is currently around 32 per cent. Overall Internet usage by individuals is 37 per cent. This indicates that adoption of e-government represents a penetration of over 80 per cent of those people pre-disposed to use the technology.¹²

2001–02 data for business users similarly indicates over 80 per cent penetration level for e-government use by businesses that already use the Internet (see Figure A1.5).

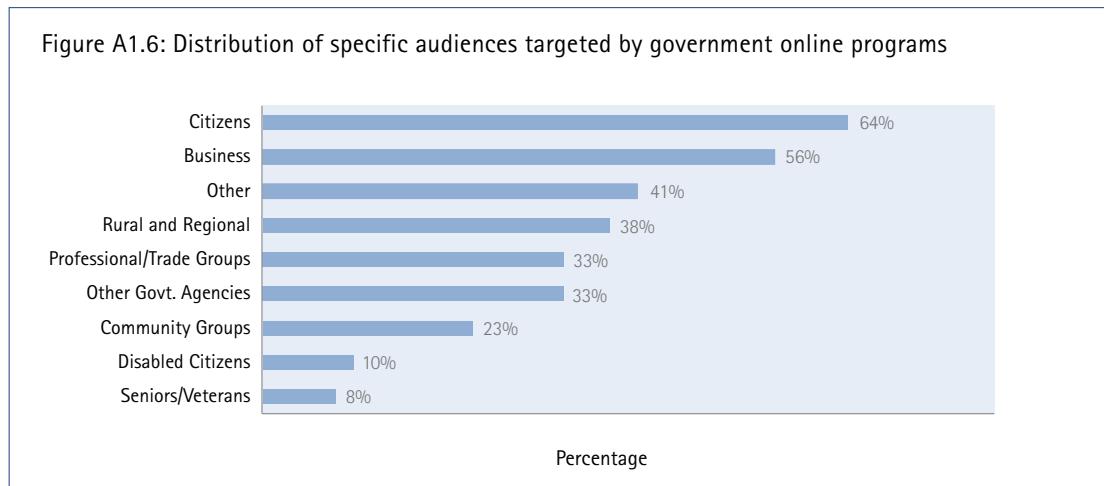
Increased adoption of e-government will require specific encouragement to people and businesses who currently do not use the Internet at all or who currently do not have access to the Internet.



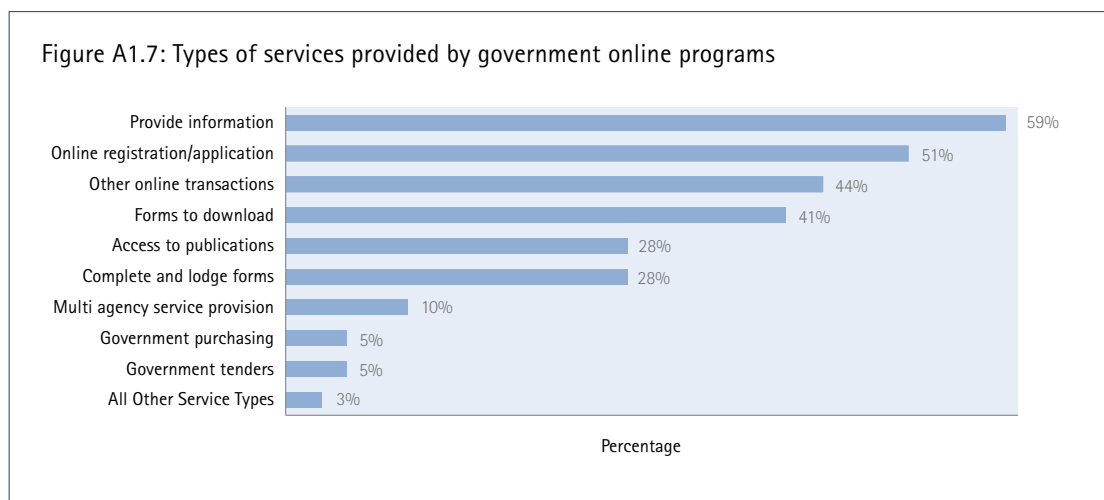
¹² Subsequent studies indicate usage has already increased. ('Government Online – an international perspective', November, 2002 Annual Report, Taylor Nelson Sofres).

Audience targeting and service delivery by Agencies

The agency survey asked respondents to indicate whether a nominated service, within their overall online program, was focused on a particular audience. Respondents could indicate that a program was targeted at multiple audiences. Figure A1.6 illustrates target audiences for those online services.



For services included in this study, information provision continues to be agencies' principal focus for delivery of their government online programs. Figure A1.7 illustrates the spread of services provided online. Some agency online programs provided multiple services.



Agencies were asked to:

- state the service the program primarily delivers, that is, the primary program output. Primary program outputs include downloadable forms, application lodgement/processing, lodgement or filing of a tax return, or other required document and provision of information; and
- provide demand measurement data for the service nominated in each self-selected program reported on.

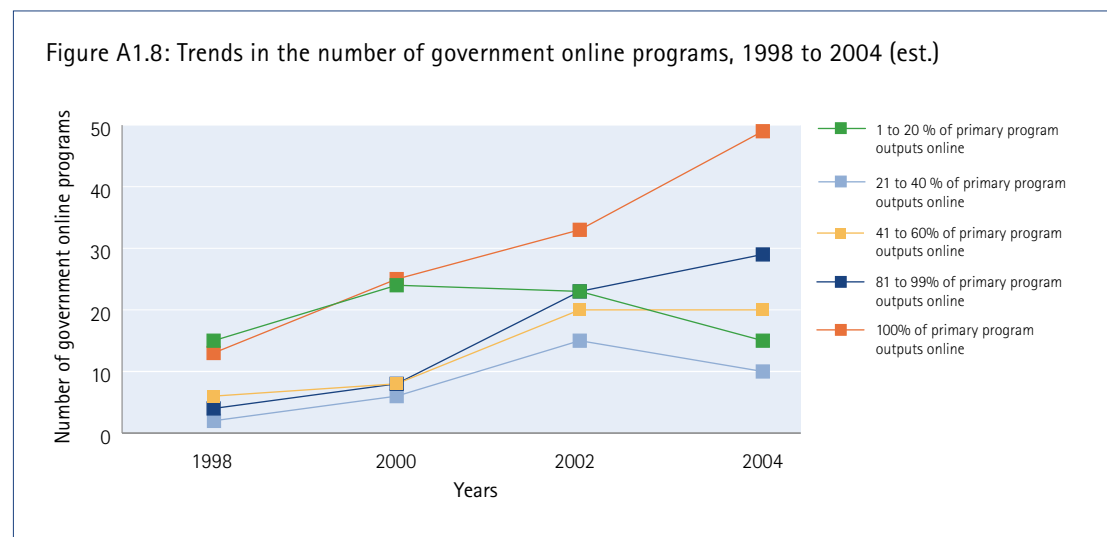
Table A1.1 shows the percentage of online delivery of primary program outputs for the 169 agency programs covering the period 1998 to 2004.¹³

Table A1.1: Trends in numbers of government online programs, 1998 to 2004

No. of programs with percentage of PPO online	1998	2000	2002	2004
1 to 20% PPO online	15	23	23	15
21 to 40% of PPO online	2	6	15	10
41 to 60% of PPO online	4	8	20	20
61 to 80% of PPO online	6	7	17	22
81 to 99% of PPO online	3	8	23	29
100% of PPO online	13	24	33	49

PPO = primary program outputs

Figure A1.8 illustrates the trend in the numbers of programs delivered online by the 39 agencies surveyed in respect of all 169 programs.¹⁴



¹³ Data recorded in the surveys as 0% or data unavailable has been excluded.

¹⁴ A government online program may comprise a number of individual projects that provide services to citizens, businesses and other government agencies.

Consolidating supply of government online programs

While agencies expected some improvement in supply of online services between 2002 and 2004, the rate of change is expected to be lower than the relatively high incidences experienced between 1998 and 2002.

Agency respondents indicated that:

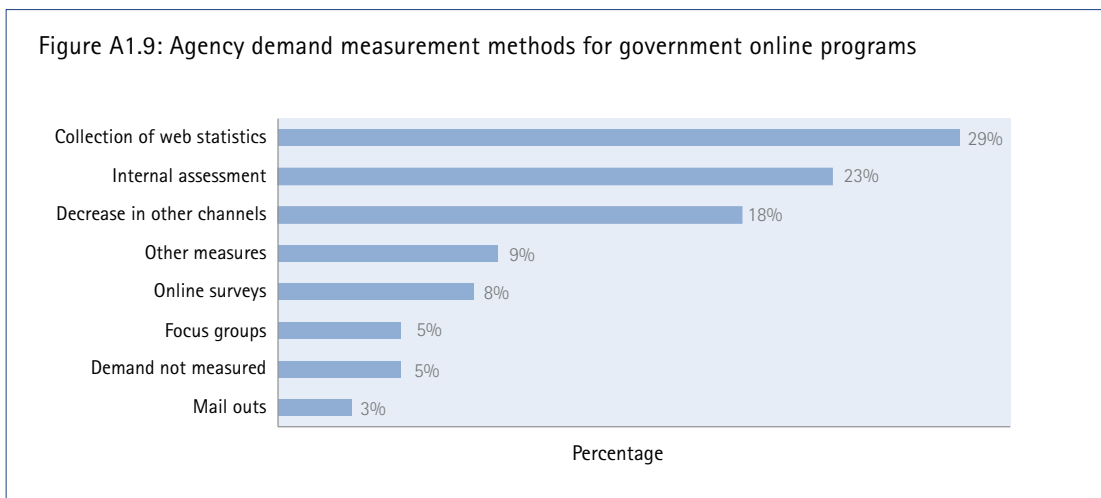
- in 2000, 76 programs (45%) recorded that some percentage of primary program outputs were delivered online;
- in 2002, 131 (78%) programs recorded that some percentage of primary program outputs were delivered online; and
- in 2004, 145 (88%) programs estimated that some percentage of primary program outputs is expected to be delivered online.

Reasons for this slowing in the rate of supply include:

- increased effort and investment will be required by government agencies to identify, quantify and satisfy customer demand; and
- the next steps to take web sites from information provision to functionality of trusted transactions and integration with other agencies requires significant investment in business process change, redesign of front-end and back-end business systems and enhanced cross-agency governance arrangements.

Agency demand measurement methods

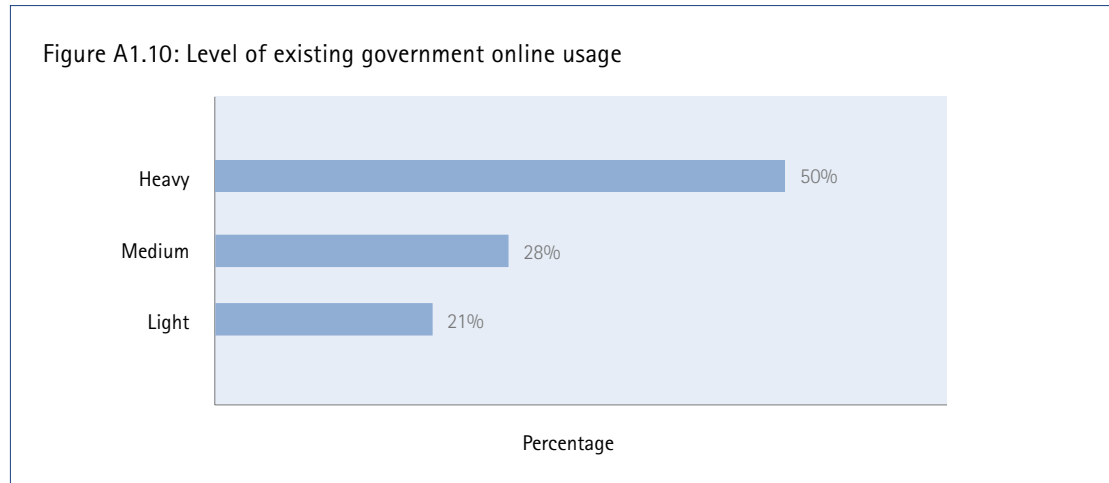
Agencies were asked to identify one or more of the demand measurement methods, listed below, for each of the main type of service provided. Figure A1.9 shows the range of measurement activities agencies undertook.



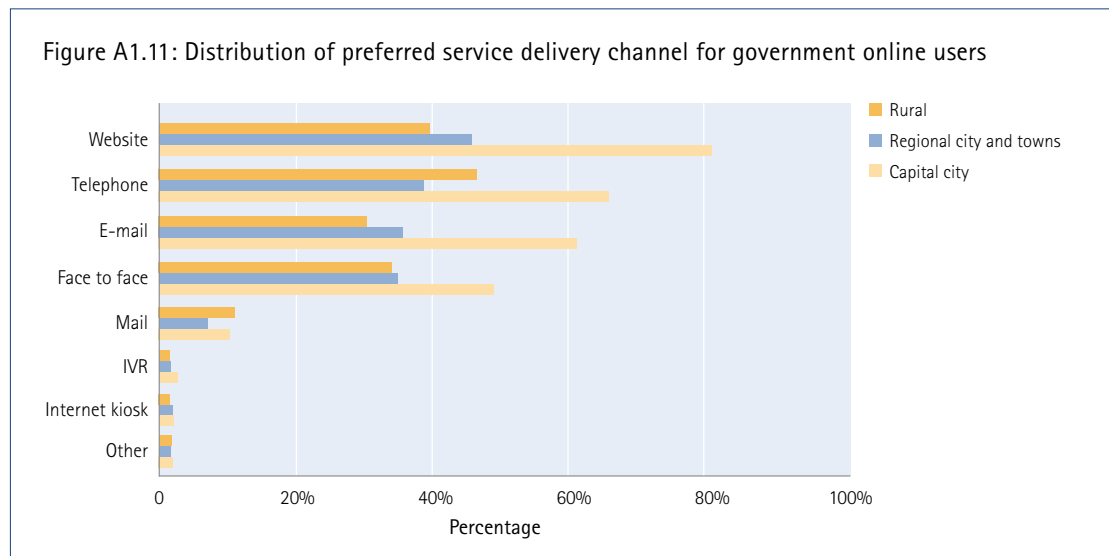
Individual demand

This section addresses the responses reported by existing Internet users who are currently using government online services (existing users), and Internet users not currently using government online services (non-government online users).

Of existing users surveyed, seventy-eight per cent indicated they were medium or heavy users of government online programs. This indicates that these users recognise the benefits of using the online medium compared to other channels (see Figure A1.10).

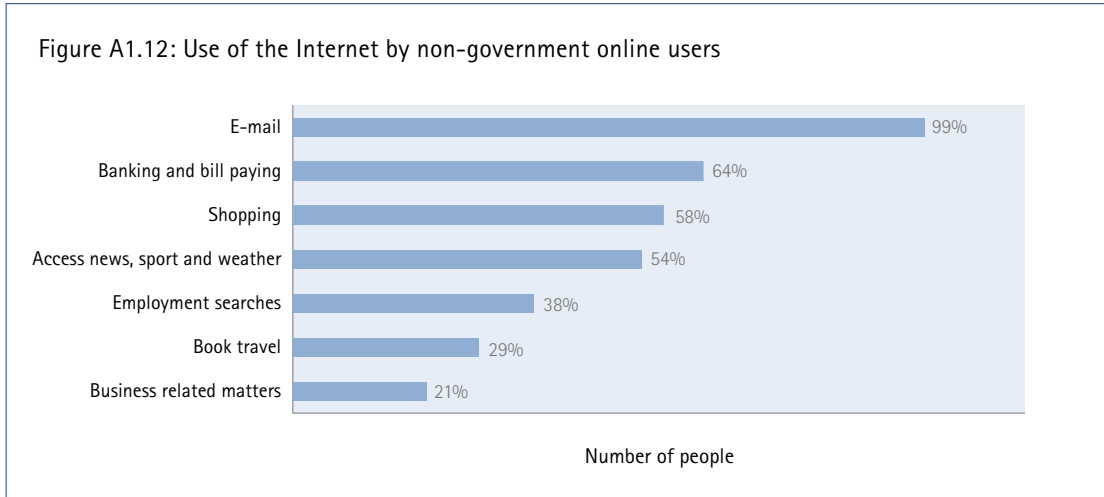


Existing government online users were asked to rate their preferred methods for dealing with the Commonwealth government (see Figure A1.11).



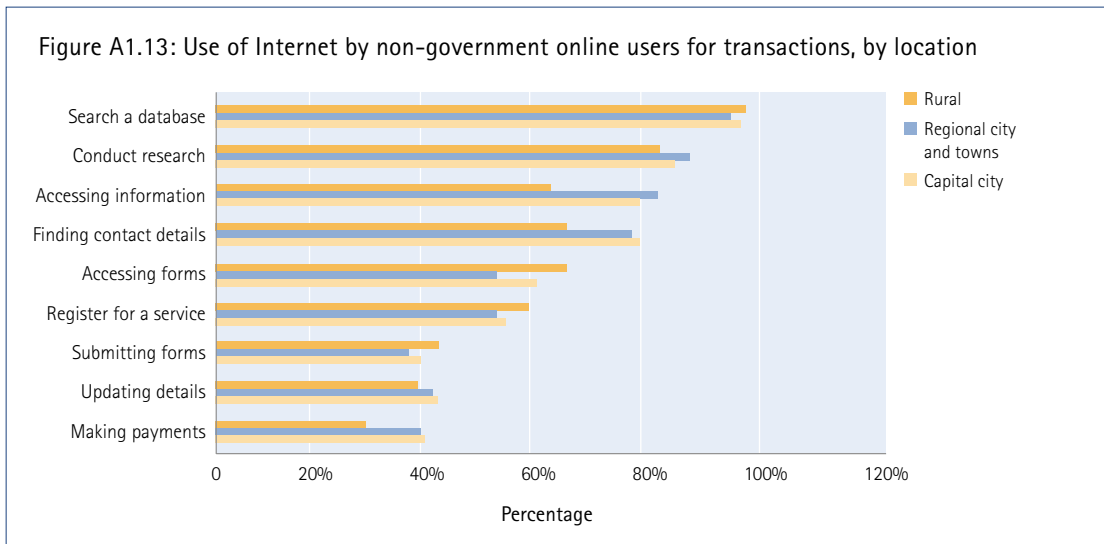
Eighty per cent of government online users surveyed said the Internet is their preferred channel for accessing information. Rural respondents had a lower Internet preference at 64 per cent which translated into a higher telephone preference than other users.

Non-government online users indicated a strong preference for using the Internet to support a variety of business and personal needs (see Figure A1.12). These included email, banking and bill paying, shopping, access to news, sport and weather information, to search for employment and, to a lesser extent, business related matters such as taxation and superannuation.



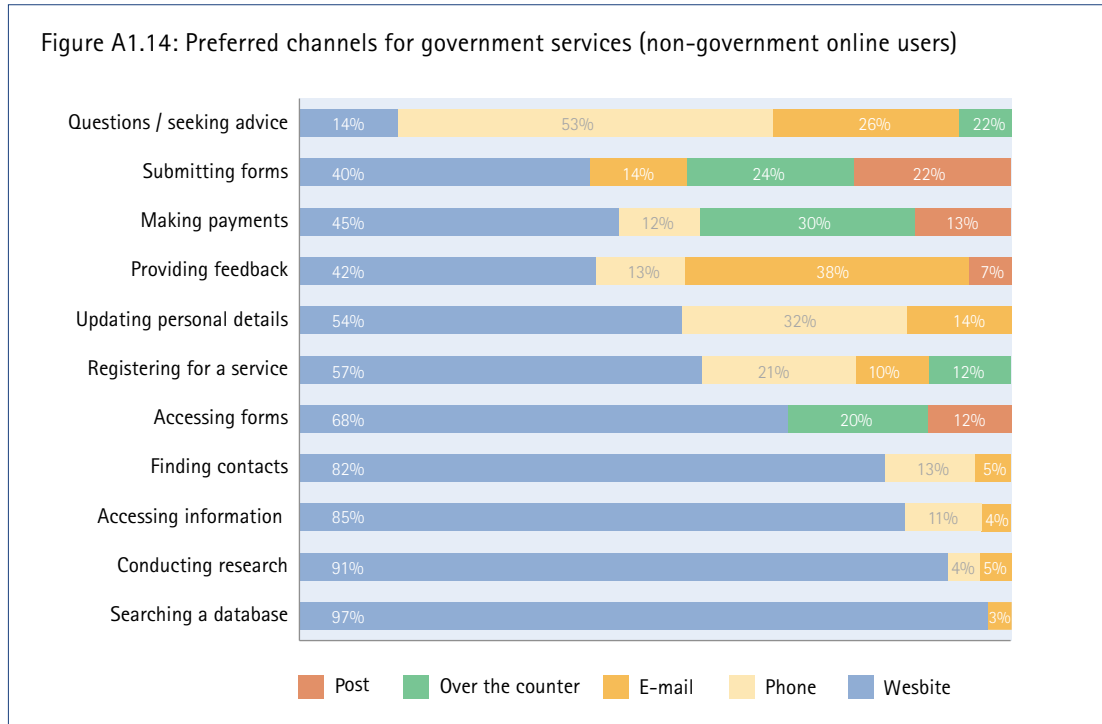
There is clear evidence that non-government online users are conducting Internet transactions for various business and private reasons that agency business managers might capitalise upon when extending and broadening the scope of government online programs.

Figure A1.13 indicates that user preference for transactions conducted through an Internet web site is largely independent of geographic location of the user.



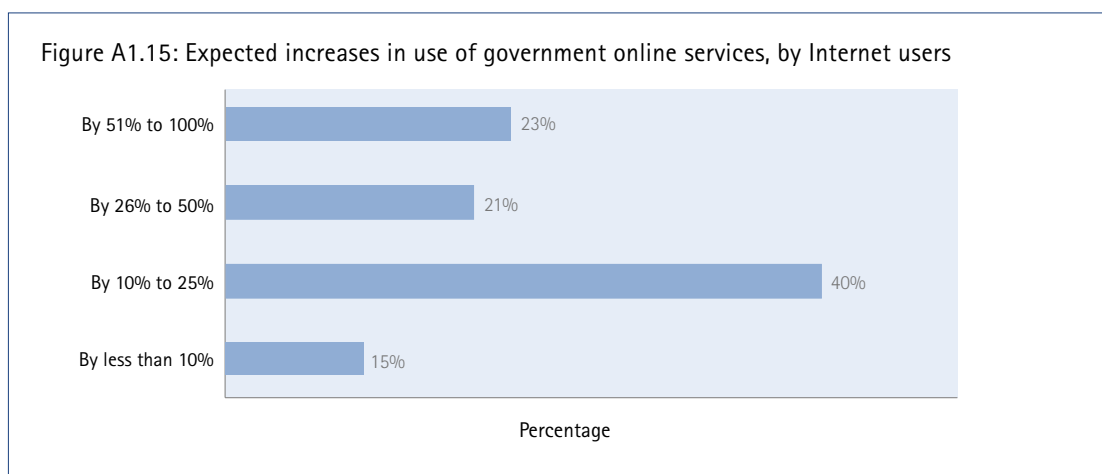
Future expectations of use by individuals

In seven of the 11 service categories a majority indicated that a web site would be their preferred method (see Figure A1.14). Internet users, not currently using government online services indicated they would make limited use of online government information services over the next 12 months. They also indicated their preferred channels for Commonwealth government services.



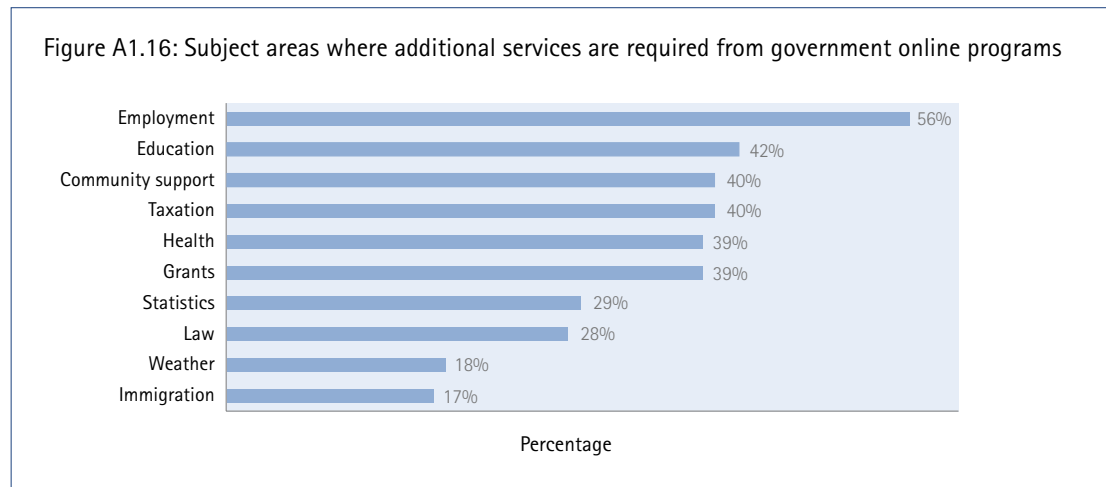
Existing Internet users using government online services indicated that they expected to increase their use of services over the next two years (see Figure A1.15).

The study found that a weighted average increase¹⁵ in demand for online government services of approximately 30 per cent might be expected in the period 2002–04.



¹⁵ To establish an overall increase in demand, a weighted average was calculated using the midpoints of the percentage increase bands underlying the citizen, business/business intermediary survey data.

Respondents to the government online user survey were also asked to indicate subject areas where they would like to obtain additional services in the future (see Figure A1.16). Respondents could make multiple choices.



For existing government online users, demand is expected to be most prominent in the areas of employment, education, community support and taxation. Table A1.2 outlines the key demand areas of existing users over the next 12 months, by various demographic categories.

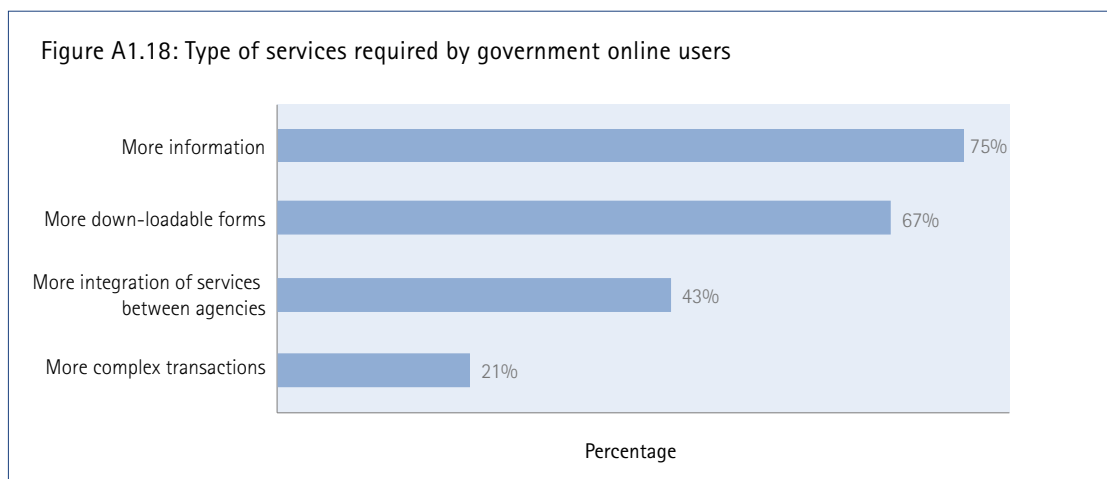
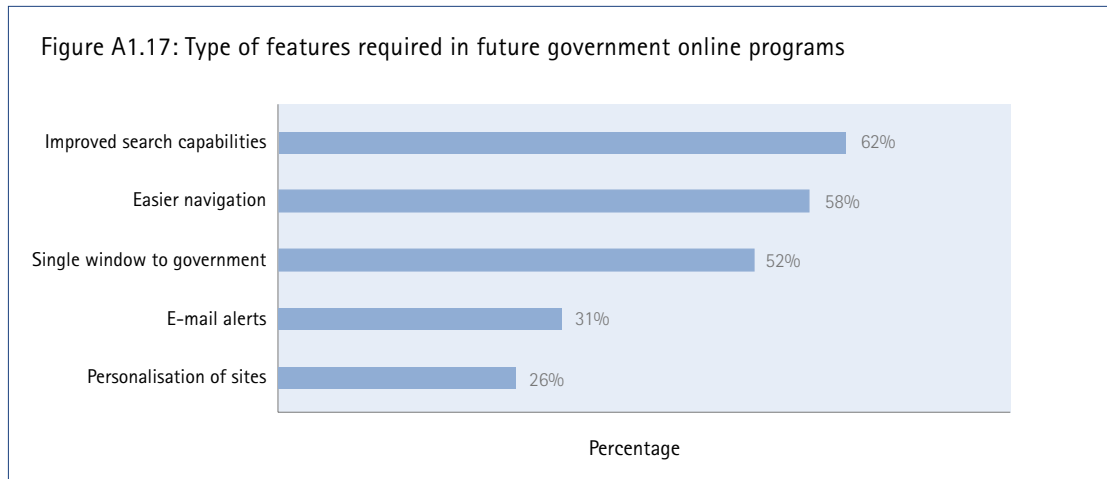
Table A1.2: Areas of further demand from existing government online users

Citizens and community	Government	Business and professionals	City	Regional towns cities	Rural
Employment (66%)	Employment (43%)	Taxation (53%)	Employment (51%)	Employment (65%)	Employment (68%)
Education (46%)	Statistics (43%)	Law (38%)	Taxation (43%)	Education (45%)	Community support (57%)
Community support (42%)	Health (41%)	Employment (35%)	Education (40%)	Community support (40%)	Education (49%)
Health (41%)	Community support (39%)	Statistics (35%)	Health (39%)	Taxation (36%)	Health (55%)
Taxation (36%)	Education and taxation (38%)	Community support (35%)	Community support (38%)	Health (35%)	Taxation (33%)

Preferred features

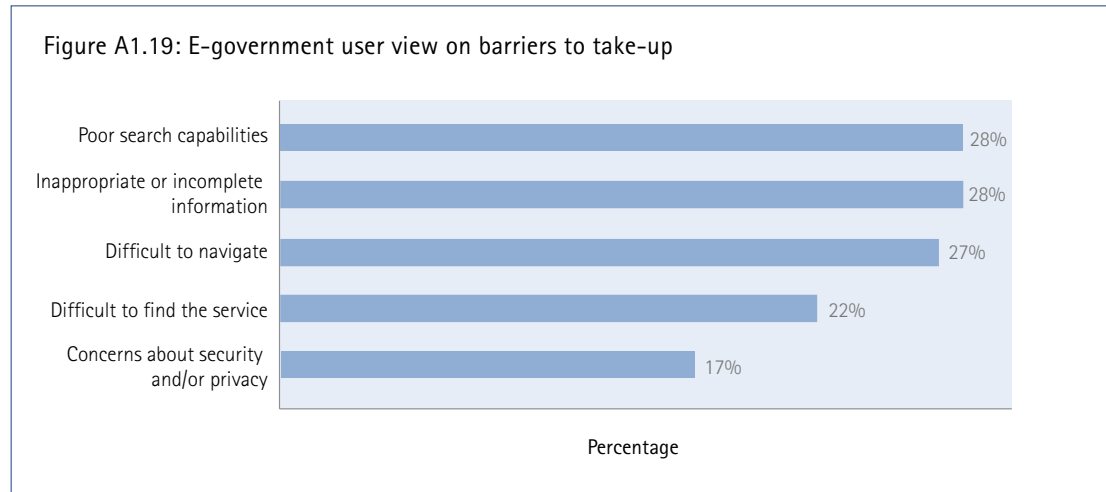
Existing users of government online services indicated additional services and features they would like to see when dealing with government in the future.

These services and features are indicated in the following charts (see Figures A1.17 and A1.18).



Barriers to take-up

Existing government online users were asked to indicate barriers to greater use of e-government services. Inhibitors or barriers for existing users fell into categories relating to security and privacy, difficulty finding the service, difficulty navigating, inappropriate or incomplete information and poor search capabilities (see Figure A1.19).





APPENDIX 2

BENEFITS OF E-GOVERNMENT (PHASE 2)

Classes of benefits

Benefits analysed in this report have been grouped into the categories of agency benefits, consumer financial benefits, social benefits and contribution to broader government objectives.

Agency benefits consist of cost reductions; increased revenues; improved price to output performance (efficiency); improved effectiveness (changing the demand profile for outputs); and improved service or cycle times.

Consumer financial benefits are time savings for users; cost savings delivered to citizens; cost savings delivered to businesses; cost savings delivered to intermediaries; revenue generation opportunities for intermediaries, citizens or business; and financial benefits obtained from leveraging improvements in government service levels, integration and effectiveness.

Social benefits consist of contributions made by government online services to the quality of life of citizens, businesses and intermediaries that are not easily measured in financial terms; triggers to take action which would not otherwise be made as a result of information that is easier to find and use; information to help in decision making by people, community groups or businesses; and integration of public sector and private sector delivery to increase new business or work opportunities.

Contribution to broader government objectives is greater take-up of information and communications technology in the information economy including macro-level improvements in economic, social and technological development; improvements in information availability and more open government; and improvements that support a more democratic government.

Measuring the benefits

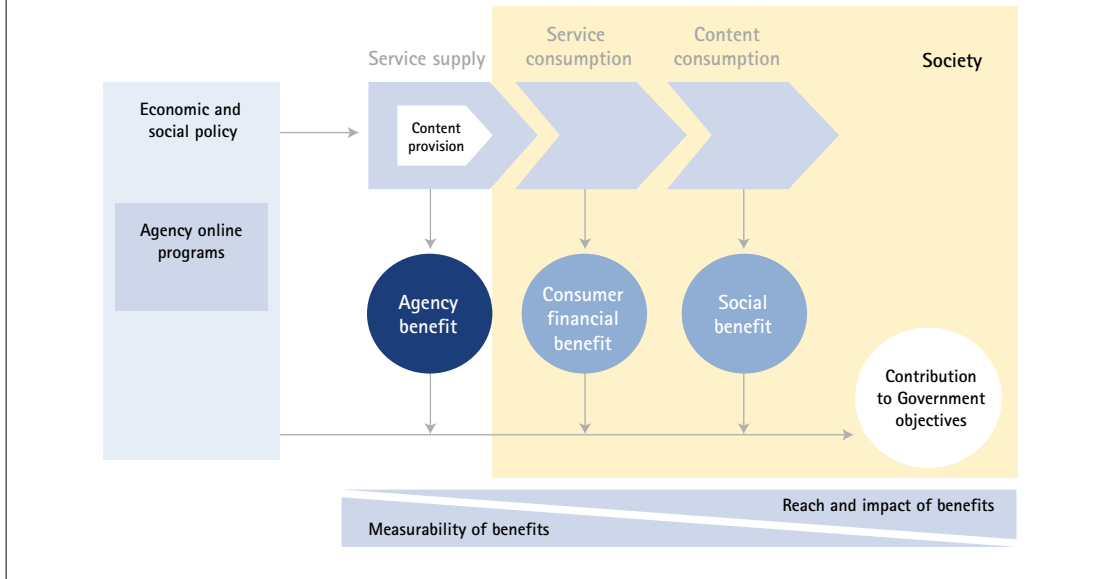
Collecting hard data on any benefit requires that the benefit can be measured on a repeatable and rigorous scale; there is a baseline for the measure defining a starting state; and there is a target or achieved measurement defining the impact achieved. These measures can be related to the factors that define the economic, financial, social and environmental context within which the government online or e-government program is situated.

Financial measures provide a simple and effective means of measuring but some of the other hard measures, such as improvements in service time, have no such rigour. Neither agencies nor users measured these consistently enough to be able to define the specific turnaround improvements, nor to be able to convert them into financial benefits.

Surveys thus asked agencies and people to assess the impact of improvements in benefits on a 1-to-5 scale of subjectively-assessed impact.

The grouping and causal relationships of the benefit classes is not, however, always as clear as Figure A2.1 suggests. By and large, the benefits closer to the left are more financial and therefore easier to measure. The survey suggests, however, that benefits to the right are more significant and have higher or broader impact than those on the left.

Figure A2.1: Relationship of benefits classes to service delivery elements



The financial benefit from e-government flows from the choice of the electronic delivery vehicle (for service consumption) as against an alternative, slower or less accessible channel, while the society benefit flows from use of the information or triggers that are provided across the electronic channel (for content consumption).

The government is a major beneficiary from the *Government Online Strategy*. Benefits are primarily derived from the operating efficiencies created by providing services online, and from transacting business electronically.

Figure A2.2: Program contribution to benefits – agency view

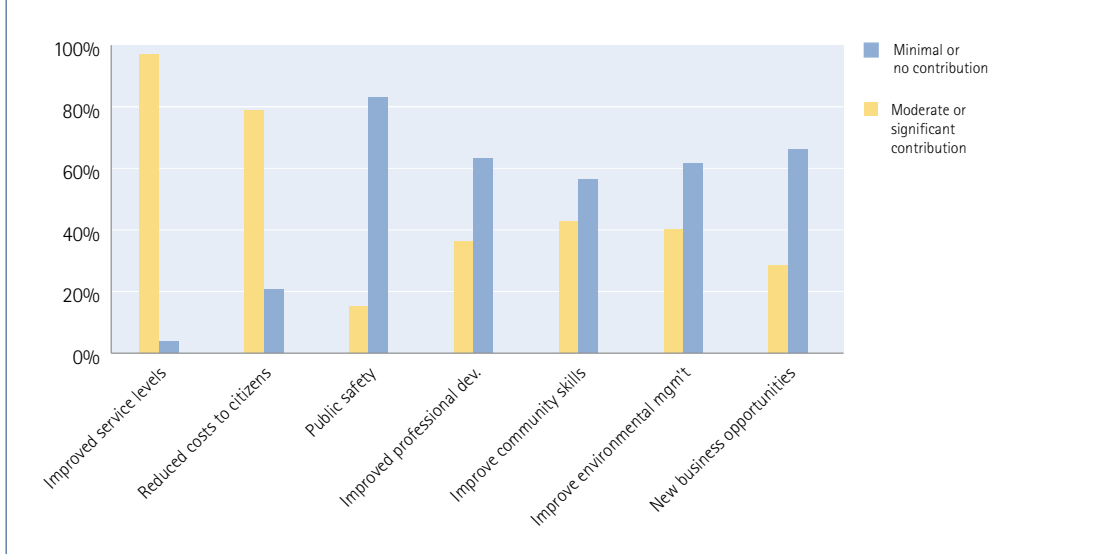


Figure A2.2 shows that most agencies surveyed did not have responsibility for public safety.¹⁶ As a consequence, respondents indicated that their government online programs made minimal or no contribution to public safety.

Agency benefits

While the primary objective of the *Government Online Strategy* was to increase the number and quality of services online, it was also noted that there would be benefits to agencies in terms of **reduced costs** and in some cases, **increased revenues**, through delivering services online.

Thirty-eight programs (one selected program per agency) were surveyed and, of these, 64 per cent provided information about specific benefits to the agency. Twenty-four programs claimed cost reductions while one had no cost reduction but expected an increase in revenue.

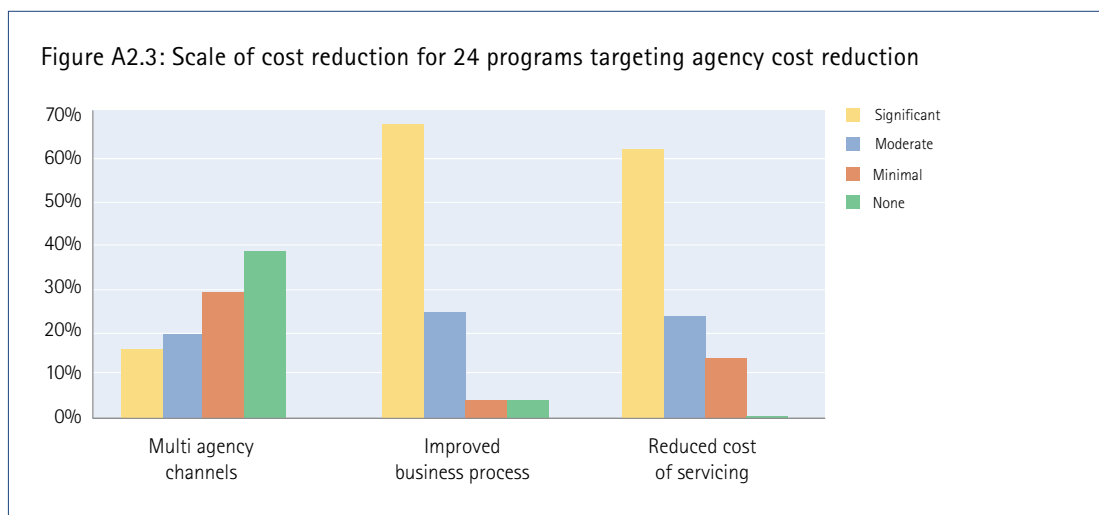
Agencies were asked to provide estimates, for the period 1999–2000 to 2003–04 inclusive, of changes in costs and revenues.

Reduced costs

Reductions in operating costs were defined as direct costs, such as occupancy, printing and staff hiring; and increased productivity savings generating reductions in employment costs.

The agency survey results showed that 24 of the 38 government online programs are, or are expected to, achieve cost savings through a combination of direct savings and improved internal processes (see Figure A2.3).

Of the 38 programs surveyed, 24 were able to estimate potential reductions in costs to the agency. Table A2.1 shows the current expectation on cost reductions based on midpoint calculations.¹⁷



¹⁶ While implementation of public safety is considered a state and territory responsibility in Australia, there are a number of Commonwealth agencies which have explicit public safety policy responsibilities. These include Australian Quarantine Inspection Service, Australian New Zealand Food Authority, National Registration Authority, Air Services Australia, Australian Maritime Safety Authority, Australian Government Analytical Laboratories, Department of Health and Ageing, Therapeutic Goods Administration.

¹⁷ The agency survey covered programs that were already implemented or planned to be implemented. Due to the expected difficulty of providing actual costs and revenues, agencies were asked to either provide an estimate or select from a range. The ranges provided were broad. Using the range method, the estimated overall level of benefit was taken to be the midpoint of the selected range.

Table A2.1: Summary of estimated cost savings per program over 5 years

Range of savings	Midpoint value (A\$)	No. of programs	Surveyed programs%*	Estimated reduction in costs over 5 years (A\$)
Less than \$50 000	25 000	5	13	125 000
\$50 000 – \$99 999	75 000	2	5.3	150 000
\$100 000 – \$249 999	175 000	1	2.6	175 000
\$250 000 – \$499 999	375 000	2	5.3	750 000
\$500 000 – \$749 999	625 000	2	5.3	1 250 000
\$750 000 – \$999 999	875 000	0	0.0	0
\$1 000 000 – \$1 999 999	1 500 000	2	5.3	3 000 000
\$2 000 000 – \$4 999 999	3 500 000	3	7.9	10 500 000
\$5 million – \$7.5 million	6 250 000	1	2.6	6 250 000
\$7.5 million – \$10 million	8 750 000	2	5.3	17 500 000
More than \$10 million	15 000 000	4	10.5	60 000 000
Total		24	63.2	99 700 000

* About 37 per cent of surveyed programs (38 responses in total) did not provide details or estimates of cost reductions.

Agencies were also asked to indicate the approximate size of the expected cost reductions in percentage terms, relative to the current cost of providing the respective service through traditional channels (see Figure A2.4). Of the 24 programs that were able to estimate potential reductions in costs, 22 agencies were able to provide an estimate of the relative size.

This data can be extrapolated to develop estimates of costs and savings across all 169 programs: using the 38 programs as a representative sample, the total spend across all 169 programs is in the order of \$750 million. A similar extrapolation estimates the total agency cost reduction from these programs in the order of \$450 million.

In addition to estimates of total value of financial benefits, agencies were also asked to indicate how these benefits had been achieved, or were expected to be achieved, over time. The survey asked agencies to provide the estimated percentage of total benefits for each financial year – 2000 to 2004 (see Figure A2.5).

Figure A2.5 shows that approximately \$31 million (31%) has been achieved to date, with approximately a further \$69 million still to be achieved.

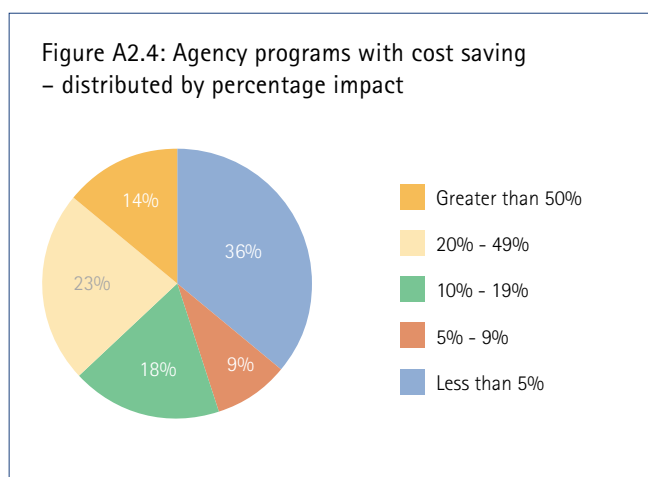
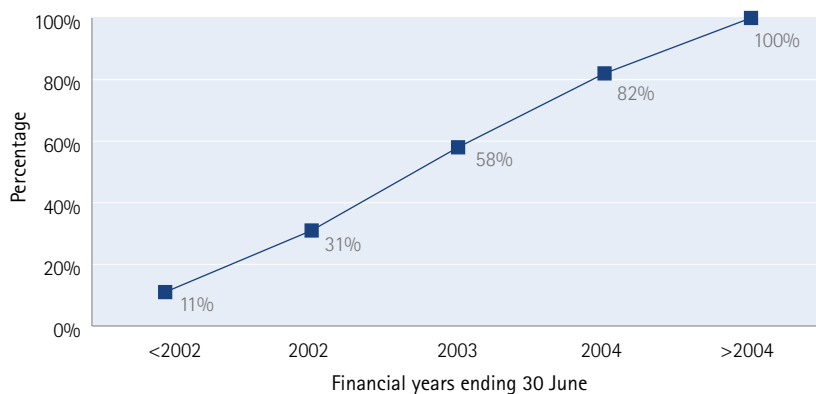


Figure A2.5: Trend in accrual of financial benefits from implementing government online programs



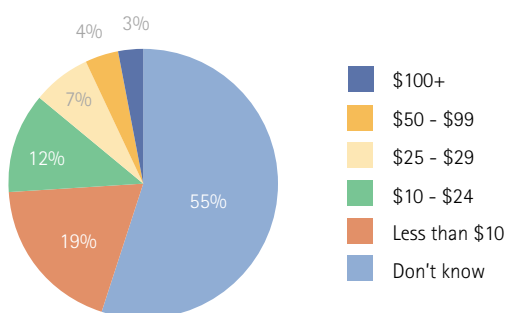
Increased revenues

In total, the financial benefits to government for these 24 programs over the 5 years (2000–04) based on the data provided, is estimated to be around \$100 million (\$99 million in cost reductions plus \$475K in additional revenue). The cost of these programs is about \$108 million, a benefit to cost ratio of 92 per cent.

Consumer financial benefits

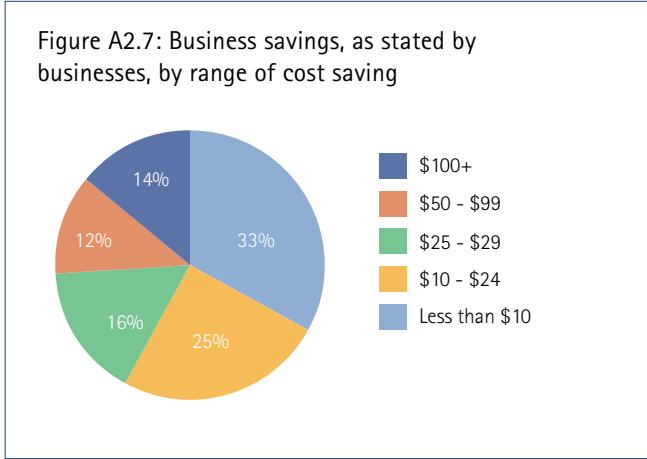
Existing government online users indicated that they are achieving real cost savings from online delivery of government services (see Figure A2.6).

Figure A2.6: User cost savings, as stated by users, by range of cost saving



Business users generally were better able to quantify their savings, resulting in estimated cost savings per interaction of:

- 19 per cent less than \$10;
- 14 per cent between \$10 and \$24;
- 9 per cent between \$25 and \$49;
- 7 per cent between \$50 and \$99; and
- 8 per cent over \$100 (see Figure A2.7).



Agency estimates on consumer financial benefits

Eight of the 38 agencies who responded to the survey did not expect their government online programs to reduce costs to citizens. Of the agencies that did, 19 were unable to estimate the savings at the single interaction level. The remaining 11 programs estimated savings per interaction of:

- 11 per cent less than \$10;
- 11 per cent \$10 to \$24; and
- 8 per cent \$25 to \$50.

Agencies were also asked to comment on reductions in the cost of dealing with government (first order effects only). Of the programs able to estimate this benefit, the majority of agencies expected significant savings in time, effort and convenience.

The survey also identified eight programs (24%) that are expected to provide significant or moderate savings to citizens and/or business, due to lower service price. This reflects the fact that the Commonwealth government generally does not charge for its information services.

Social benefits

The government online user and agency surveys sought evidence of the benefits delivered by government online services in the areas of service improvements, increased community skills and knowledge, and new business and work opportunities.

Service improvements

Over 90 per cent of citizen respondents indicated an improvement in overall service delivery as a result of using e-government; almost 75 per cent indicated significant (30%) or some (46%) improvement in service quality; and over 80 per cent of business and professional respondents reported significant (36%) or some (47%) improvement in services. Rural and regional respondents provided similar feedback to their city counterparts.

The agency survey generally supported the government online user view although the issues surveyed were not put in exactly the same terms as in the agency survey. Agencies believed that over 82 per cent of programs delivered significant or moderate improvements in service levels, viewed in terms of service quality, cycle times and access (see Figure A2.8).

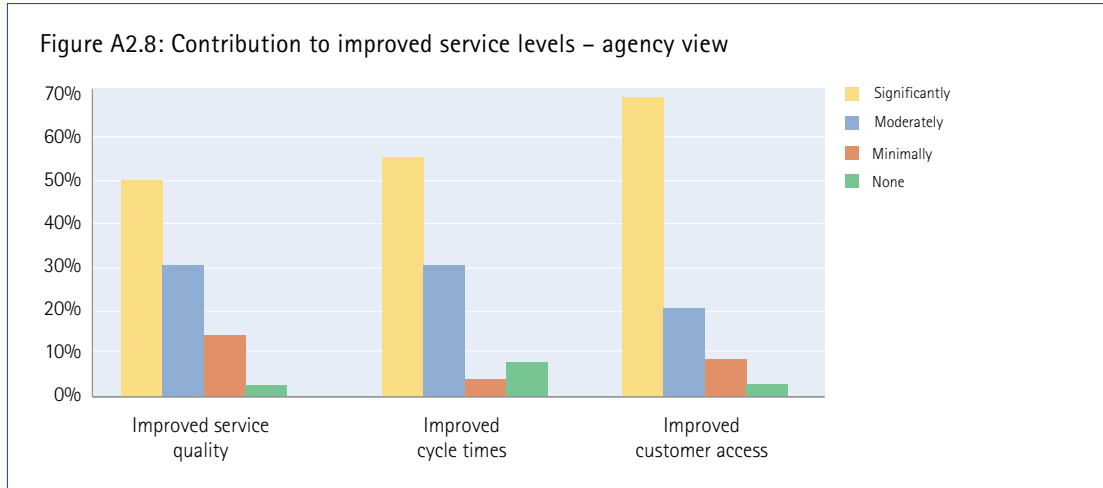


Table A2.2 shows the different aspects of how government online programs improve government service delivery. For example, 58 per cent of agencies claimed that, by delivering services 24x7, there is a significant improvement in service; 61 per cent reported that, by providing seamless access to information and services, they significantly improved overall service delivery.

Table A2.2: Improving government service delivery – agency view

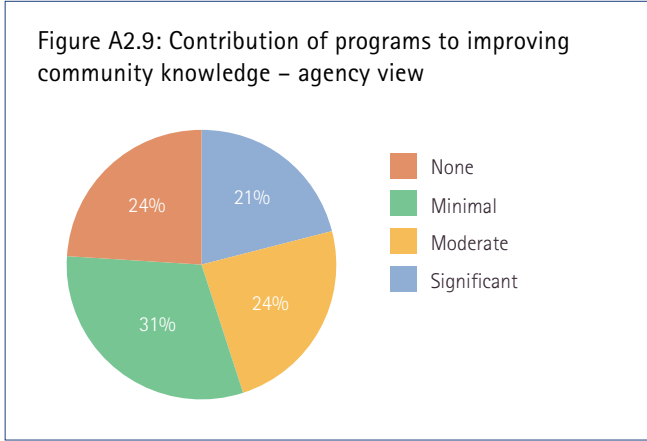
Degree of improvement	Available 24x7	Seamless access	Equitable access	Flexible access
Significant	58%	61%	42%	43%
Moderate	37%	24%	34%	26%
Minimal	5%	15%	21%	13%
None	0%	0%	3%	18%
Total	100%	100%	100%	100%

Increased community skills and knowledge

Government online users were asked whether dealing with government online improved their ability to make better decisions. Seventy-five per cent of all respondents saw either some (24%) or significant (51%) improvement in their ability to make better decisions and over 80 per cent of business respondents and nearly 90 per cent of government employees saw either some or significant improvements in the quality of their decision making.

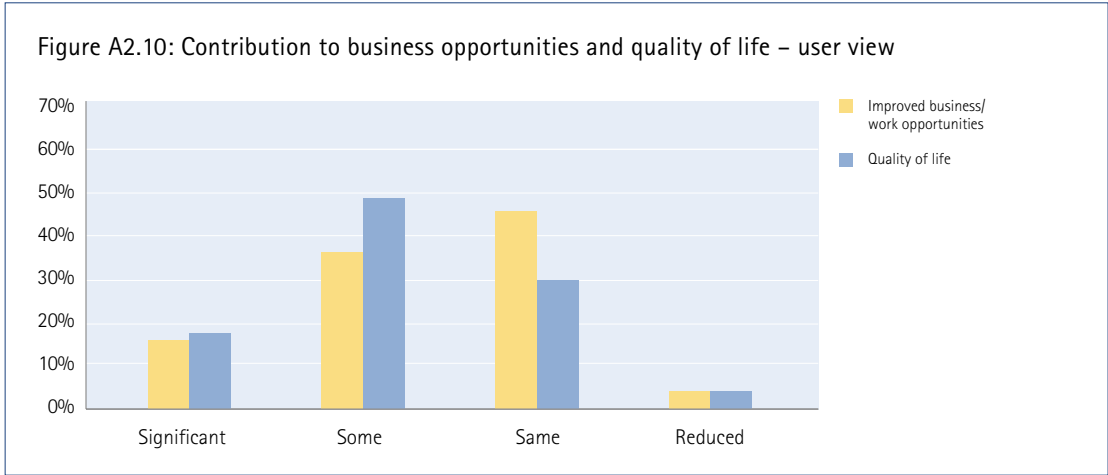
Agencies were asked to rate the degree to which their government online programs contributed to improved community skills and knowledge (see Figure A2.9).

The agency view appears to have underestimated the benefits users have realised from increased access and availability of information online. Focus group participants indicated a strong desire for more information, greater interaction with government agencies and active participation in development of future community-focused e-government initiatives.

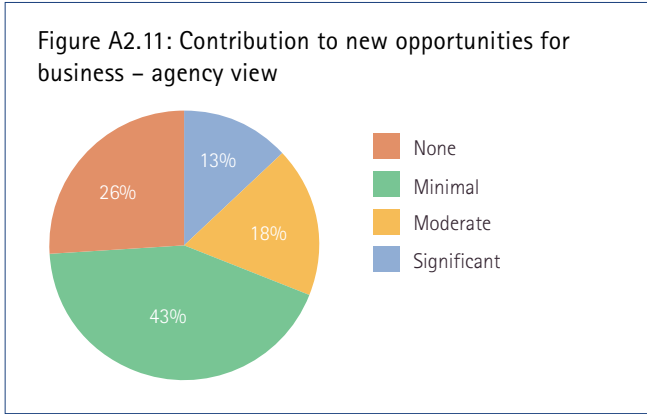


New business and work opportunities

Existing government online users believe that government online services are delivering improvements in the way they run their businesses and contribute to creation of new work opportunities (see Figure A2.10).



Agencies were asked the degree to which government online programs contributed to improved opportunities for business (see Figure A2.11). The relatively high number of programs with no, or minimal, contribution to this measure reflects the fact that many programs (17) did not target business as their primary audience.



While the government is certainly realistic in estimating the contribution to creating new business and work opportunities it seems to be under-valuing the benefits as perceived by existing government online users.

Contribution to broader government objectives

This section examines the contribution government online programs have made to: more open government, in terms of reducing complexity in dealing with government; transparency; the public record; and the wider economic benefits.

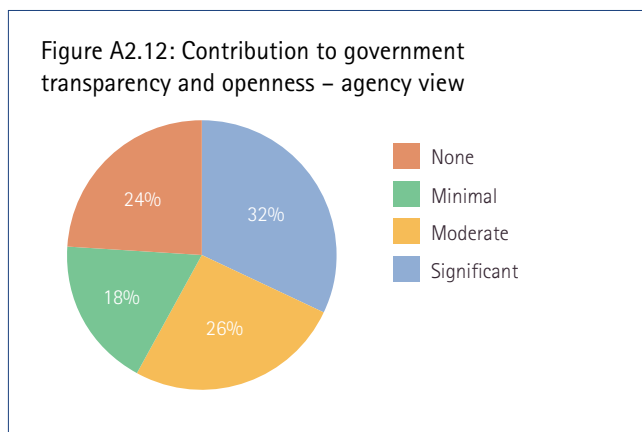
When government online users were asked to rate government online services in terms of the ease of finding information, 42 per cent found it either easy (31%) or very easy (11%) to find information; 43 per cent found it acceptable, and 14 per cent found it either difficult (11%) or very difficult (3%). Regional users were slightly more positive: 48 per cent indicated easy or very easy, whereas business and professional users were lower at 36 per cent.

Of the 38 programs surveyed, 32 were expected, by agencies, to reduce the complexity of dealing with government. Sixty-nine per cent of the 38 surveyed agencies claimed to have made a significant contribution to making information easier to find, while a further 25 per cent claimed a moderate contribution. Sixty-one per cent of agencies also believed their online programs make a significant contribution to the ease with which people use the program.

The agencies' perceptions contrasts with that of the citizens, businesses and intermediaries and more work may be needed with some of the services to make them easier to use.

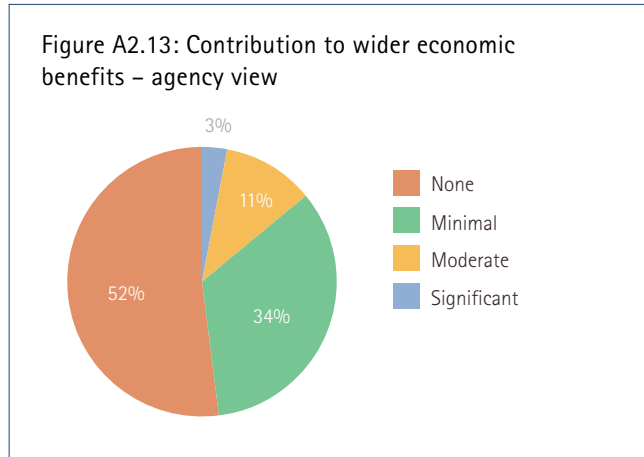
Close to 70 per cent of all government online users saw either significant or some improvement in government transparency. Whereas the agencies' perceptions were that only 32 per cent of government online programs made a significant contribution to more transparent government, with a further 26 per cent making a moderate contribution (see Figure A2.12).

The agency view potentially underestimates the value delivered by publishing public records and information online, particularly for regional and rural people.



Economic benefits

Agencies were asked to indicate the contribution of the programs surveyed, to wider economic benefits. Of the programs claiming moderate (11%) or significant (3%) contributions to economic benefits the nature of contribution was in the areas of: increased labour market efficiencies; more efficient supply chain management; reduced cost of overall program delivery; and increased efficiencies in taking products to market (see Figure A2.13).¹⁸



The government online users were asked to place a value on each interaction with government against a list of possible values. On average they valued each interaction at just under \$15 per session. While only a small percentage of agencies offered an opinion as to the user value of their services, the agency response indicated a valuation per interaction, less than that indicated by users.

¹⁸ Due to the broad nature of the questions asked in the survey, conclusions have not been drawn on this finding.



APPENDIX 3

DETERMINING THE RETURN ON INVESTMENT FOR GOVERNMENT (PHASE 3)

Program costs

For the selected survey programs, agencies were asked to provide estimates of the total cost of their government online program, including initial implementation costs and the costs of maintaining the program until 2004. Agencies were also asked to provide estimates of the percentage of the total cost applicable to each of the years.

Apart from the qualitative benefits, such as improvements in service quality and availability, agencies were asked to estimate the extent to which the government online program would reduce costs to citizens and business and if so, by how much. Based on their current level of knowledge, agencies were also asked to forecast when the program benefits were to be achieved.

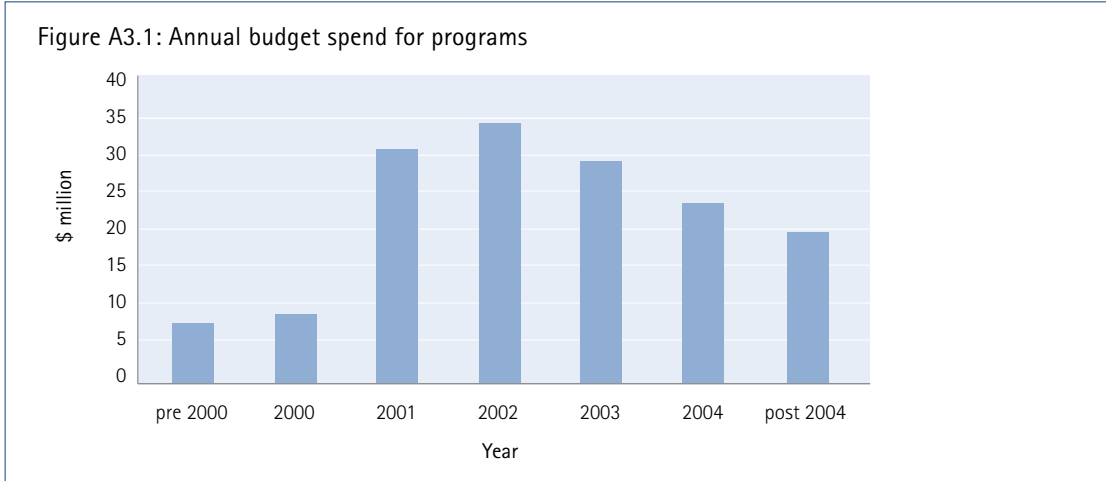
Cost estimates were collected using the range method (using the range midpoint as shown in Table A3.1). For programs having a cost in excess of \$10 million, \$15 million was used as the mid-point of the range. Of the 38 agencies completing the benefits part of the survey, 37 provided responses in relation to costs.

Agencies provided estimates of the percentage of the total program cost that was expected to be incurred relative to 2000 and 2004. Based on the responses, it is estimated that the \$164 million has been or will be incurred, as shown in Figure A3.1.

Table A3.1: Government online program costs

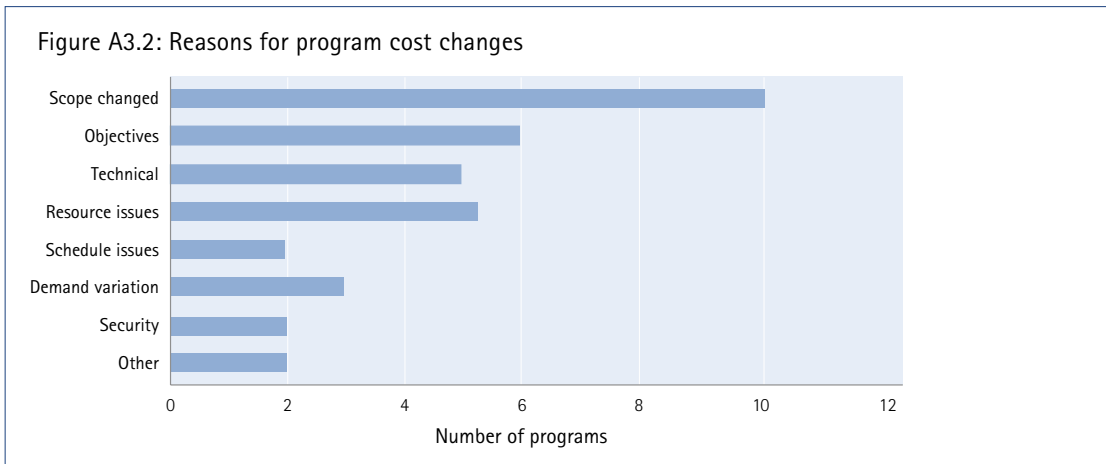
Program budget size	Midpoint value (A\$)	No. of programs	Est. program cost (A\$)
Less than \$100 000	50 000	7	350 000
\$100 000 – \$249 999	175 000	4	700 000
\$250 000 – \$499 999	375 000	3	1 125 000
\$500 000 – \$999 999	750 000	4	3 000 000
\$1 000 000 – \$1 999 999	1 500 000	4	6 000 000
\$2 Million – \$4.99 Million	3 500 000	5	17 500 000
\$5 Million – \$ 10 Million	7 500 000	2	15 000 000
More than \$10 Million	15 000 000	8	120 000 000
Total		37	163 675 000

Figure A3.1 shows that the majority of expenditure will be made from 2001 onwards for the 37 programs. The initial large injection in 2001 is consistent with agencies drive to put all appropriate services online by 2001. The planned expenditure in future years represents a significant investment in future e-government activity and as these services are implemented, there is expected to be significant benefits to the community and to government.



Agencies were also asked to provide indications of whether the program budget had changed significantly since the original plans were developed. Where budget estimates had changed significantly, agencies were asked to indicate the key reasons for the change. Reasons included changes in scope, objectives, technical issues, resourcing, scheduling issues and variation in demand for the service. Agencies were further asked to indicate (where applicable) whether the program would result in revenue increases.

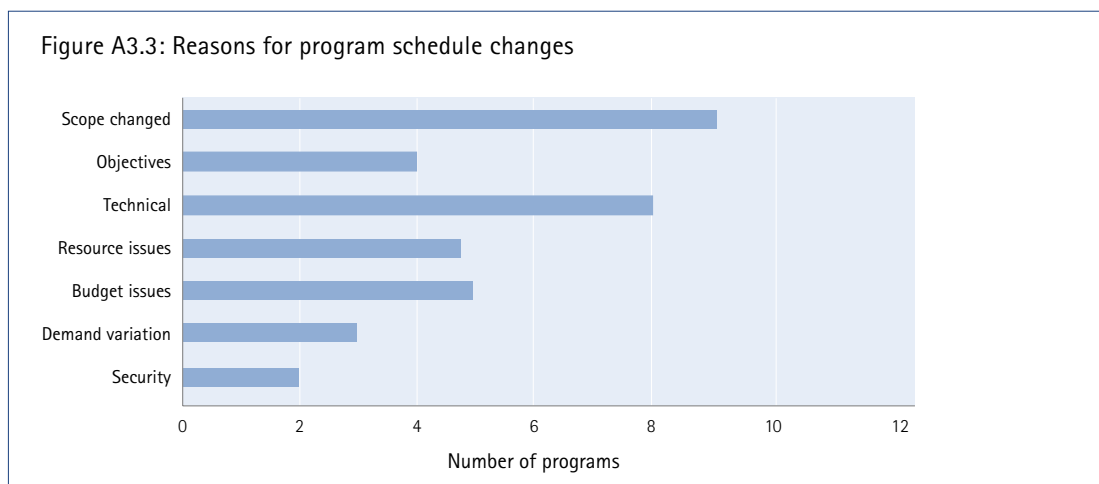
Of the 37 programs for which cost information was provided, 32 per cent reported that actual costs had varied to a material degree, from the original budget estimates. Figure A3.2 shows the reasons for variations to budget for those 12 programs. Agencies were able to select more than one reason for a variation.



Implementation schedules

Agencies were asked to indicate whether their program was complete. For this purpose, a complete program was defined as one where the service had been deployed and was complete in terms of the original program plan. A program was incomplete where the originally planned functionality was still being delivered, or where significant enhancements were still being developed.

Agencies reported that 17 programs were complete – 12 were on schedule and in five cases the schedule had changed. Twenty-one were incomplete, of which it is expected that 12 will be completed in accordance with the original schedule and 9 will not. The reasons for the schedule changes are detailed in Figure A3.3.



Aggregate agency benefit to cost ratio

The survey sought estimates of the spread of agency revenues (if any) and benefits for pre-2002; to post-2004.

Inclusion of pre-2002 and post-2004 data reflects agency survey data that shows government online programs were well underway in the period 1997–98 to 2001–02 while others were planned to deliver benefits in the years beyond 2003–04.

These benefits are estimated to be approximately \$100 million, that is, \$99.7 million reduction in costs and \$0.5 million increase in revenues (see Table A2.1).

Estimated program costs and financial benefits, as reported in agency surveys, are summarised in Table A3.2.

Table A3.2: Overall cost to benefit summary (A\$m)

Details	Pre 2002	2002	2003	2004	Post 2004	Totals
Annual costs and benefits						
Costs	57.7	34.3	29.4	23.2	19.1	163.7
Agency financial benefits	10.8	20.3	27.1	24.0	17.9	100.1
<i>Benefits/cost ratio</i>	<i>18.7%</i>	<i>59.1%</i>	<i>92.2%</i>	<i>103.4%</i>	<i>93.7%</i>	<i>61.1%</i>
Cumulative costs and benefits						
Costs	57.7	92.0	121.4	144.6	163.7	163.7
Agency financial benefits	10.8	31.1	58.2	82.2	100.1	100.1
<i>Benefits/cost ratio</i>	<i>18.7%</i>	<i>33.8%</i>	<i>47.9%</i>	<i>56.8%</i>	<i>61.1%</i>	<i>61.1%</i>

Note: This benefit to cost ratio has been calculated based on the financial impact to the agency only – social aspects to value have been excluded.

These aggregate results indicate that, overall, the Commonwealth government has obtained, or is expected to obtain, approximately a 61 per cent benefit to cost ratio.

Table A3.3 provides a different perspective on cost/benefit by examining only those 24 programs for which agency financial benefits were claimed (revenue increases or cost reductions). In this case, exclusion of those programs which did not have agency financial objectives¹⁹ as a primary focus results in a benefit to cost ratio of 92.5 per cent.

Table A3.3: Benefit to cost ratio for programs with expected agency financial benefits (A\$m)

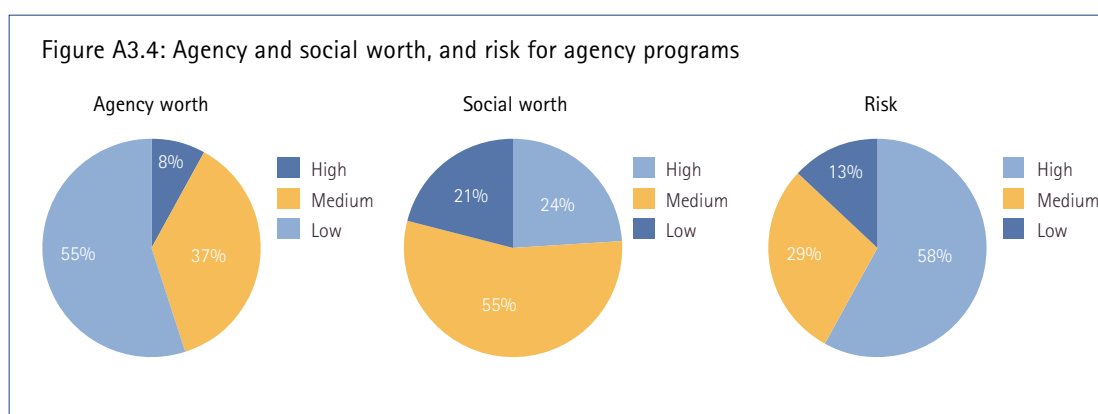
Details	Pre 2002	2002	2003	2004	Post 2004	Totals
Annual costs and benefits						
Costs	38.7	22.9	19.5	14.4	12.6	108.1
Agency financial benefits	10.8	20.2	27.1	24.0	17.9	100.0
<i>Benefits/cost ratio</i>	<i>27.9</i>	<i>88.2</i>	<i>139.0</i>	<i>166.7</i>	<i>142.1</i>	<i>92.5</i>
Cumulative costs and benefits						
Costs	38.7	61.6	81.1	95.5	108.1	108.1
Agency financial benefits	10.8	31.0	58.1	82.1	100.0	100.0
<i>Benefits/cost ratio</i>	<i>27.9</i>	<i>50.3</i>	<i>71.6</i>	<i>86.0</i>	<i>92.5</i>	<i>92.5</i>

Total benefit to cost ratio

The survey results also provide some broad qualitative indication of the nature of investment returns from the 38 programs over three dimensions:

- agency benefits – predominantly financial benefits;
- social benefits – to citizens, businesses and intermediaries; and
- risk – including delivery risk and risk of achieving benefits.

The survey data was scored and weighted to derive aggregate scores for each program for each dimension. The aggregate scores were categorised within a range as high, medium or low contribution to benefits or risk. Figure A3.4 shows the results of this analysis for each dimension.



¹⁹ The 14 programs excluded were 13 that claimed no financial returns to the agency and one for which no cost data was supplied. Inclusion or exclusion of the later program does not materially affect the overall cost benefit ratio – the actual impact is a 0.1% variation in the ratio.

This analysis shows a significant percentage of programs scored as delivering either high (24%) or medium (55%) social benefits. When considered in relation to the overall benefit/cost ratio, the high level of social benefits targeted strengthens the benefit/cost ratio analysis.

While all 38 programs expected to generate improved service levels for users, some 87 per cent expected to deliver cost savings to users. Only 11 agencies were able to estimate the value in cost savings to people, even within broad ranges. The average of these estimates of consumer financial value was close to \$15 which was also the average consumer financial value reported by e-government users in the government online survey for each interaction.

Using the agency-supplied output list and the user-provided valuation per output, an estimate of the social value from all 169 programs can be derived as being around \$1.1 billion for 2002. Applying a similar process to the 38 programs, the social value for 2002 can be estimated as being \$156 million. This represents a **consumer benefit to government cost ratio of 95 per cent** applying just one year's consumer value against the cost of the programs over several years.



APPENDIX 4

STUDY APPROACH AND METHODOLOGY

Framework

The framework developed for the study was designed to capture evidence on past, current and future expectations of demand and benefits from three major stakeholder groups:

- citizens, businesses and intermediaries (consumers) who are current users of government online services – GOL users;
- citizens, businesses and intermediaries who are not users of government online services but may be users of the Internet – non-GOL users; and
- Commonwealth government agency representatives supplying government online services – agencies.

A consumer survey was undertaken, to gather opinion and feedback on benefits from the citizen perspective. Three separate groups of citizens were surveyed:

- 1586 consumers completed the government online survey – (GOL users are those that currently use e-government services);
- 305 people completed the non-government online survey (non-GOL users that have never used e-government services); and
- a broad cross section of about 60 people attended one of six focus groups (conducted in Adelaide, Brisbane, Melbourne, Shepparton, Sydney and Toowoomba) which sought qualitative anecdotal evidence and information on future intentions and inhibitors to greater adoption of government online service provision by citizens and business.

Concurrent with the survey of consumers, NOIE invited 41 Commonwealth government agencies to participate in the agency survey – 39 agencies responded. Of those, seven also participated in the case study component. Each agency provided quantitative data on past and projected take-up of a selection of their online services; they also provided data on costs and benefits for one selected program. Thirty-eight agencies completed the survey on costs and benefits.

The mechanisms used to capture data consisted of online surveys, focus groups and interviews supplemented by external research and agency documentation (see Table A4.1).

Table A4.1: Types of data capture – by stakeholder group

Stakeholder group	Data capture mechanism		
	Online survey	Focus groups	Interviews
GOL users	✓	✓	
Non-GOL users	✓	✓	
Agencies	✓		✓

Survey sample

Government online survey sample

The citizen/business/intermediary survey developed for government online was accessed by 8243 visitors to Commonwealth web sites over a three-week period, ending on 30 September 2002. Of these, 1586 respondents completed the survey after being redirected from one of 30 'buttons' placed on agency web sites. The buttons referred respondents to an externally-hosted survey web site and supporting database.

The composition across broad population sectors of the survey sample respondents was:

- general public (61%);
- business/professionals (26%);
- government (8%); and
- community organisations (5%).

The geographic distribution of the survey sample respondents was:

- capital cities (61%);
- regional cities or towns (32%); and
- rural communities (7%).

Most survey respondents (99%) indicated they were frequent or regular users of the Internet (more than once a week). Of the respondents:

- 50 per cent were heavy government online users (at least once a week);
- 28 per cent were moderate government online users (monthly); and
- 21 per cent were light government online users (less than once a month)

Non-government online survey sample

The survey framework made provision for demand information to be captured from pre-qualified people who were 'captive' Internet users and had self-identified as not being users of government online services. This non-government online sample consisted of 305 respondents.^{20, 21} Of these:

- 96 per cent were frequent users of the Internet;
- 71 per cent were female;²²
- 75 per cent were members of the general public;²³
- 56 per cent were located in capital cities;
- 20 per cent were located in regional cities;
- 15 per cent were located in regional towns; and
- 8 per cent were located in rural communities.

20 Some representatives of the non-GOL sample also participated in the focus groups held as a part of the e-government demand survey.

21 The non-GOL survey provided a control group to assess the nature of services demanded by citizens and businesses who were not yet users of government online services.

22 The frame from which the sample was selected had a female bias but the survey response data is not considered to be gender-dependent.

23 The balance of the sample represents business users.

Agency survey

An agency survey was developed and conducted with 41 Commonwealth government agencies invited to participate. After briefing workshops and follow-up sessions, 39 agencies completed the survey over a three-week period.

Of the 39 agencies, seven also participated in the case study component of the study. In total, information was obtained on 169 government online programs. Appendix 5 contains a list of participating agencies.

From each agency the survey instrument sought information on:

- the government online programs being undertaken in the agency, covering:
 - program details – primary outputs and estimates of the percentage of primary outputs delivered or expected to be delivered online between 1998 and 2002; and
 - services not currently online with potential for online delivery.
- a specific government online program covering:
 - services and how the agency was measuring demand;
 - target audience;
 - schedule and budget;
 - alignment with government online strategic objectives;
 - benefits measured in terms of internal and external worth; and
 - risk of not achieving the benefits.

The agency survey also gathered information on 'supply-push' programs provided in response to the *Government Online Strategy* of April 2000 or in response to agency output price reviews. The agency survey was deployed and hosted on a secure web server only accessible by password. A Lotus Notes database underpinned the agency survey.

Case studies

The study approach included case studies that captured qualitative and quantitative information on specific programs undertaken by seven Commonwealth government agencies. The case studies were representative of a wide range of interactions/transactions that occur between citizens and/or businesses and Commonwealth government agencies.

The case studies sought to identify learning for subsequent use by other organisations by identifying the application of information and communication technology that provides better service to customers and results in resource efficiencies. The case studies included:

- e-tax (Australian Taxation Office)
- Customer Services Online – Family Income Estimate Tool (Centrelink)
- JobSearch (Department of Employment and Workplace Relations)
- eVisa (Department of Immigration and Multicultural and Indigenous Affairs)
- Business Entry Point (Department of Industry Tourism and Resources)
- eFiling (Commonwealth Court of Australia)
- Commonwealth Electronic Tendering System (NOIE)

Specific methodologies used for each phase of the study

Phase 1 – Demand for e-government

Specific elements of the study methodology and approach used to support Phase 1 findings were:

- an analysis of baseline historical data on trends in household and business/government use of computers, the Internet and government online services;
- survey responses from 39 Commonwealth government agencies identifying 169 online programs and surveying 38 programs in detail; and
- an analysis of the findings of citizen and business surveys (for both users and non-users of services) derived from:
 - 1586 responses to the government online user survey (in this report government online (GOL) users are those users that currently use government online services);
 - 305 responses to the non-government online user survey (Internet users that have never used government online services);
 - qualitative evidence of future intentions and inhibitors to greater use of government online services collected from approximately 60 focus group participants; and
 - demand assessment measurement information from case studies.

Phase 2 – Benefits of e-government

Specific elements of the study methodology and approach used to support Phase 2 findings are:

- survey responses from 39 Commonwealth government agencies in respect of 169 government online programs and costs and benefits for only one selected program. Only 38 agencies completed this part of the survey; and
- an analysis of the findings of citizen and business surveys (for both users and non-users of services) derived from:
 - 1586 responses to the government online user survey (government online users are those users that currently use government online services);
 - 305 responses to the non-government online user survey (Internet users that have never used government online services);
 - qualitative evidence of benefits from use of government online services collected from approximately 60 focus group participants; and
 - benefits information from case studies.

Phase 3 – Determining the benefit to cost ratio for government

Specific elements of the study methodology and approach used to support Phase 3 were:

- an analysis of the financial data submitted by 39 agencies in respect to 38 government online programs surveyed in more depth;
- an assessment of benchmarks appropriate to government financial and social online programs;
- an analysis of the benefit/cost ratio information obtained in the case studies; and
- development of a demand and value assessment methodology.

The research questions addressed in this phase covered the extent to which:

- government online programs are achieving a benefit/cost ratio for the Commonwealth;
- benchmarks of value are appropriate to government financial and social online programs;
- demand and value assessment methodologies might be developed from the findings of the e-government benefits study for use by agencies on an ongoing basis; and
- implementation strategies that NOIE might adopt to help agencies adopt a consistent approach to assessing demand and value for their proposed government online programs.



APPENDIX 5

AGENCIES PARTICIPATING IN THE SURVEY

Aboriginal and Torres Strait Islander Commission	Department of Education Science and Training
Attorney-General's Department	Department of Employment and Workplace Relations
AusAid	Department of Family and Community Services
Austrade	Department of Finance and Administration
Australian Bureau of Statistics	Department of Foreign Affairs
Australian Customs Services	Department of Health and Ageing
Australian Electoral Commission	Department of Immigration and Multicultural and Indigenous Affairs
Australian Federal Police	Department of Industry, Tourism and Resources
Australian Prudential Regulation Authority	Department of the Prime Minister and Cabinet
Australian Securities and Investment Commission	Department of Veterans' Affairs
Australian Taxation Office	Environment Australia
Centrelink	Family Court of Australia
Child Support Agency	Federal Court of Australia
Civil Aviation Safety Authority	Geoscience Australia
Commonwealth Rehabilitation Service Australia	Health Insurance Commission
Comsuper	IP Australia
Commonwealth Scientific and Industrial Research Organisation	National Library of Australia
Department of Agriculture Fisheries and Forestry – Australia	National Office for the Information Economy
Department of Communications, Information Technology and the Arts	Treasury
Department of Defence	



APPENDIX 6

LEGISLATIVE AND POLICY CONTEXT

Legislative context

Commonwealth agencies operate under an administrative and legislative framework, key elements of which impact, to a greater or lesser extent, on government online and e-government. Such legislation includes:

- *Commonwealth of Australia Constitution Act 1900*
- *Privacy Act 1988*
- *Public Service Act 1999*
- *Financial Management and Accountability Act 1997*
- *Financial Management and Accountability Regulations 1997*
- *Commonwealth Authorities and Companies Act 1997*
- *Electronic Transactions Act 1999*
- *A New Tax System (Australian Business Number) Act 1999*
- *appropriation and agency-specific enabling legislation*

Outcomes, outputs and principles

Under the Commonwealth's accrual-based outcomes and outputs framework, every agency manages through outcomes and outputs to acquit their responsibilities to government, the Parliament, their clients and the wider community (Department of Finance and Administration 2002). Service delivery strategies for clients and the wider community form part of agency outputs. Agencies provide to citizens and businesses government services that are:

- appropriate to the level of government;
- responsive to need and customer demand;
- efficient and effective in the delivery of financial and social outcomes; and
- accountable and transparent.

Investment in government service delivery in general and government online in particular needs to:

- accord with the policies of the Commonwealth;
- respond to the needs of stakeholders – the Minister, client agencies and customers including members of the general public, businesses and business intermediaries;

- be efficient and effective – Commonwealth officials approving expenditure proposals must satisfy themselves that any proposed expenditure on government service delivery including government online programs will make efficient, effective and ethical use of public money by providing an optimum combination or mix of electronic and physical channels appropriate to existing and future needs of stakeholder groups; and
- be accountable and transparent by supporting agencies' business and performance management objectives through visibility of government operations and transactions (*Financial Management and Accountability Act 1997* and *Financial Management and Accountability Regulations 1997*).

Policy context

Investing for growth

The Prime Minister's December 1997 policy statement *Investing for Growth* outlined the importance of the information age for national prosperity, and the ways in which the government is promoting and supporting the take-up of the online environment through:

- strong leadership;
- encouraging business and consumer confidence;
- getting key Australian sectors online; and
- fostering development of information industries.

Integral to the government's role in providing people with confidence in and understanding of the online environment is how well the government itself makes the online transition.

Government online

The *Government Online Strategy*, released in April 2000, provided the strategic framework to help agencies meet key online commitments to better services and improve its own business practices. The Commonwealth government's strategic objectives for the government online program were to:

- increase access to services by providing government services online 24-hours-a-day seven-days-a-week while keeping traditional delivery methods;
- provide a full range of high quality low cost services;
- provide easy-to-use tailored services – natural interaction, easy to locate, intuitive; and
- encourage closer interaction between government and citizens

In conjunction with the *Government Online Strategy*, the government released the *Commonwealth Electronic Procurement Implementation Strategy*, which set out specific initiatives in this area. Under this strategy, the government committed to moving all appropriate common and routine business processes of agencies either online or to other electronic mechanisms, to maximise the efficiency of these processes for government and for those dealing with government. Government electronic procurement will reinforce the trend towards simplified electronic systems, and will perform an exemplar role. Specifically, the government committed to build, in conjunction with agencies, the foundations for online transactions in common government business operations, such as procurement and payments, grants and tender processes.

In February 2002, the Prime Minister announced that the 1997 commitment for all appropriate Commonwealth government services to be online by 2001 had been achieved. As at September 2001 there were in excess of 1600 Commonwealth government services and information sources available online. Of the 1600 Commonwealth government services online approximately one-quarter offer sophisticated transaction services, with the remainder being simply information-based.

E-government

The first phase of the *Government Online Strategy* has been successfully completed. The Commonwealth is now in the next phase of electronic services – that of e-government. E-government is the use of new technologies to transform government administration, information provision and service delivery. E-government offers tremendous opportunities for government to respond to the increasing demands that are placed upon it (Rimmer 18 September 2002).

In November 2002, the Minister for Communications, Information Technology and the Arts, Senator the Hon. Richard Alston, released the Commonwealth government's e-government strategy, *Better Services, Better Government*.

Better Services, Better Government, maps out the next phase of the Commonwealth government's drive to move from placing government information and services online to more comprehensive and integrated application of new technologies to government information, service delivery and administration. (Alston 2002).

Better Services, Better Government has six key objectives:

- achieve greater efficiency and a benefit/cost ratio
- ensure convenient access to government services and information
- deliver services that are responsive to the needs of individual Australian households, business and civic organisations
- integrate related services
- build experience, user trust and confidence in the use of new technologies
- enhance closer citizen engagement in policy formulation and processes

E-government is the term that describes the use of available and emerging technologies to create seamless, responsive and citizen-focused government for the benefit of all Australians. The quality and efficiency of government services and information will improve to create broader and faster access to integrated, flexible and more customised services. In this way, e-government contributes to Australia's future national prosperity.

E-government involves a fundamental re-thinking of how technology can improve the very process of government. It will transform the design and delivery of government services and the relationship with citizens. Agencies will be able to embrace new approaches, which will allow greater flexibility to respond to government priorities and demands for new services.

E-government also involves departments and agencies focusing on the use of new information and communications technologies to deliver programs and services to 'customers' online ... e-government creates the means to put the needs of customers, stakeholders and citizens in the foreground, as the delivery of online services is shaped by their requirements. It represents government that is citizen-friendly, transparent and responsive (NOIE 2002, p. 1).



GLOSSARY

ABS	Australian Bureau of Statistics
channel	a method of delivery of services, for example, over-the-counter, telephone, mail, home/office-based service delivery and the Internet.
e-government	the transformation of public-sector internal and external relationships through Internet-enabled operations and information and communication technologies to optimise government service delivery, constituency participation and internal government processes.
GOL	government online
governance	the people, policies and processes that provide the framework within which managers make decisions and take actions to optimise outcomes related to their spheres of responsibility.
government online program	An initiative or cluster of related initiatives that, together, provide an online service delivery capability intended to deliver an identifiable outcome or benefit to one or more audiences/stakeholder groups. A service is delivered online whenever it is provided electronically using the Internet or other network-based approaches. These outlets complement traditional channels including over-the-counter, telephone, mail and home/office-based service delivery.
ICT	information and communications technologies
intermediary	A person or people who play an important role in disseminating information and helping people access government services. Examples include: family support (providing research for students and non-computer literate people); matching clients to funding opportunities and grants; performing research for a small business owner; and working as a volunteer in a community support area.
NOIE	National Office for the Information Economy



REFERENCES

- Allen Consulting Group 2002, *Australia's Information Economy: The Big Picture*, Allen Consulting Group, Canberra.
- Australian Bureau of Statistics 16 February 2001, *Use of the Internet by householders*, Australia, Catalogue 8147.0, Canberra.
- 20 March 2002, *Business Use of Information Technology 2000–01*, Catalogue 8129, Canberra.
- 17 June 2002, *Selected Social and Housing Characteristics, Australia 2001*, Catalogue 2015, Canberra.
- 18 September 2002, *Subscriber characteristics, Internet Activity – March Quarter 2002*, Catalogue 8153.0, Canberra.
- Barrett, P 2002, 'E-government and joined-up government', presentation by Auditor General for Australia, Global Working Group, Wellington, New Zealand.
- Department of Finance and Administration 2002, *Financial Management and Accountability Framework*, Department of Finance and Administration, Canberra.
- Di Maio A, Baum C, Keller B, Kreizman G, Pretali M & Seabrook D 2002, *Framework for E-government Strategy Assessment*, Gartner, Stamford, Connecticut, USA.
- Management Advisory Committee 2002, *A New Governance and Investment Framework, Australian Government Use of Information and Communications Technology*, Management Advisory Committee, Canberra.
- Mellor W, Parr V, Hood M 2002, 'Government Online – an international perspective', November, 2002 Annual Report, Taylor Nelson Sofres, Sydney, Australia.
- NOIE 2002, *Better Services Better Government*, National Office for the Information Economy, Canberra.
- NOIE 2001, *Government On-line Survey – Round 4*, National Office for the Information Economy, Canberra.
- OECD, 'OECD Information Technology Outlook – ICTs and the Information Economy' Paris 2002 cited in *Built for Business II, Beyond Basic Connectivity, The Internet and Australian Business in 2002*, Allen Consulting Group, October 2002. <www.allenconsult.com.au>.
- Rimmer, J 12 June 2002, 'The future of e-government: delivering real benefits', address to the Australian Information Industry Association, Canberra Business Managers' Forum, Canberra.
- Rimmer, J 18 September 2002, 'E-government Better Government', speech by Chief Executive Officer of the National Office for the Information Economy, Executive Breakfast Briefing, Canberra.
- World Market Research Centre 2001, *Global e-government Survey*, Professor DM West, Brown University, Rhode Island, WMRC, <www.worldmarketsanalysis.com>.

