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2005**

Measuring the Efficiency and Effectiveness of E-Government



The Auditor-General
Audit Report No.26 2004–05
Performance Audit

Measuring the Efficiency and Effectiveness of E-Government

Australian National Audit Office

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of Australia 2004

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Canberra ACT
10 February 2005

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit across agencies in accordance with the authority contained in the *Auditor-General Act 1997*. I present the report of this audit and the accompanying brochure to the Parliament. The report is titled *Measuring the Efficiency and Effectiveness of E-Government*.

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—<http://www.anao.gov.au>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'P. J. Barrett', is positioned above the printed name.

P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

For further information contact:

The Publications Manager
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

Telephone: (02) 6203 7505

Fax: (02) 6203 7519

Email: webmaster@anao.gov.au

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<http://www.anao.gov.au>

Audit Team

Dr Paul Nicoll
Judi Robinson
Brendan O'Hanlon

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Abbreviations

ABS	Australian Bureau of Statistics
AGIMO	Australian Government Information Management Office
ANAO	Australian National Audit Office
Austrade	Australian Trade Commission
CSA	Child Support Agency
DCITA	Department of Communications, Information Technology and the Arts
DVA	Department of Veterans' Affairs
EMDG	Export Market Development Grants
FaCS	Department of Family and Community Services
Finance	Department of Finance and Administration
Health and Ageing	Department of Health and Ageing
IPAA	Institute of Public Administration Australia
IT	Information Technology
National Archives	National Archives of Australia
NOIE	National Office for the Information Economy
UFIES	Update Family Income Estimate Service
UK	United Kingdom
WW2	World War Two

Glossary

In this audit ‘Internet services’ or ‘online services’ refer to the general activity of providing any service or program through the medium of the Internet, including websites and portals. For purposes of clarity, a distinction is made between the agency websites and the online services in each agency.

Accessibility	The extent to which the design, layout and display on web pages takes account of people with a range of disabilities.
Agency website	An information and communication facility designed and managed by a government agency, which uses the medium of the Internet and the World Wide Web. The website provides access to information for a variety of client groups, as well as service transactions and the opportunity to contribute information and comment. Agency websites may provide access to additional websites within the agency and link to websites beyond the agency.
E-business	The conduct of government business featuring communication, information sharing and provision of transactions and services between government agencies and their clients, using electronic and Internet technology.
E-government	The use of information and communication technologies, and particularly the Internet, to deliver government services.
Evaluation	Evaluation is concerned with asking questions about performance (effectiveness, efficiency and appropriateness), so as to provide answers that assist those responsible to better manage and improve service delivery.
Internet-delivered service or program	Any agency service or program provided through the Internet. It may describe one part of a broader agency service or program that is provided through the Internet, or a service that is provided almost entirely online. In the latter case, the Internet service is likely to have a clear identity, including a particular name and logo or design that differentiates it from other Internet services. As with websites, one Internet-delivered service may incorporate other Internet services.

Metadata	Metadata is structured information that describes and allows users to find, manage, control and understand other information. In a website it helps government search engines to accurately and efficiently identify and retrieve web-based resources in response to search requests ¹ .
Monitoring	Monitoring refers to the systematic collection of information to provide indications of how a program or service is performing.
Navigation	The format and features of a website that are designed to show users where they are located in the site and which provide direction to further information and possible transactions.
Usability	The effectiveness, efficiency, and satisfaction with which users can achieve tasks in a particular environment of a product.
Web traffic	The measurement of the number of users that visit a website.

¹ National Office for the Information Economy, *Interoperability Technical Framework for the Federal Government*, NOIE, June 2003, available at <www.agimo.gov.au/publications/2003/08/framework>.

Summary and Recommendations

Summary

Background

1. Australian Government policy is that agencies use the Internet to deliver all appropriate programs and services. This has led to considerable agency investment in Internet-based service delivery. ANAO, in this audit, examines whether agencies are measuring the efficiency and effectiveness of the services and programs they deliver through the Internet.
2. The Australian Government's *Better Services, Better Government* strategy² outlined the broad directions and priorities for the future of e-government in Australia, and sought to maintain the momentum of agencies' actions under the Government's earlier policy *Government Online*³. One of the key objectives of the *Better Services, Better Government* strategy was for agencies to achieve greater efficiency in providing services and a return on their investments in Internet-based service delivery. It also stated that investing in e-government should deliver tangible returns, whether they take the form of cost reductions, increased efficiency and productivity, or improved services to business and the broader community.
3. Australians use of the Internet has increased over recent years making online service delivery an important form of service delivery, particularly for government agencies. Australian Bureau of Statistics (ABS) surveys⁴ showed that 53 per cent of Australian households had Internet access at home in June 2003, compared to 16 per cent in 1998; while 71 per cent of businesses had Internet access.
4. The potential audience for government websites and online services is restricted to those who have access to, and the skills to use, the Internet. While over 80 per cent of people aged 16 years and over currently have access to the Internet from any location⁵, Internet access is lower for some groups, particularly older people, who comprise a large proportion of the clients of

² National Office for the Information Economy, *Better Services, Better Government-The Federal Government's E-government Strategy*, NOIE, Canberra, November 2002, available at <www.agimo.gov.au/publications/2002/11/bsbg>.

³ Department of Communications, Information Technology and the Arts, *Government Online-The Commonwealth Government's Strategy*, DCITA, Canberra, April 2000, available at <www.agimo.gov.au/publications/2000/04/govonline>.

⁴ Australian Bureau of Statistics, *Household Use of Information Technology, Australia, 2002 and 2003*, cat. no. 8146.0, ABS, Canberra, September 2004, and *Business Use of Information Technology Australia 2002-03*, cat no. 8129.0, ABS, Canberra, March 2004, available at <www.abs.gov.au/Ausstats>.

⁵ Department of Communications, Information Technology and the Arts, *Australia Online*, 1st Quarter 2004 Statistics (sourced from ABS surveys and Nielsen//NetRatings), available at <www2.dcita.gov.au/ie/framework/benchmarking>.

government agencies. Some people and businesses have only limited or reduced Internet access, as they use older computer technology or a modem/single telephone line, or live in an area with less coverage.

5. In this regard, it is important for agencies to improve their understanding of their target audiences' information and service needs, and to measure and provide reliable estimates of likely demand. These steps require agencies to measure Internet adoption and take-up, equipping them to develop more efficient and effective approaches to online service delivery.

6. In 2001, the ANAO developed a Better Practice Guide, *Internet Delivery Decisions*⁶, which set out broad guidelines to assist program managers to use the Internet more efficiently and effectively when delivering programs and services. ANAO also uses the Better Practice Guide as a framework and context for audits that review agencies' Internet services.

7. In 2002–03, ANAO conducted an audit⁷ that examined the adequacy of agencies' approaches to monitoring and evaluation of Internet-delivered services. This current audit complements the previous audit and builds on its findings.

The audit approach

8. This audit was designed to identify the methods used by selected agencies to measure the efficiency and effectiveness of their delivery of services through the Internet, and to evaluate the adequacy of these methods. ANAO also identified better practices, lessons learned and opportunities for improvements.

9. The audit included the following six agencies:

- the Australian Trade Commission (Austrade);
- Centrelink;
- the Child Support Agency (CSA);
- the Department of Health and Ageing (Health and Ageing);
- the Department of Veterans' Affairs (DVA); and
- the National Archives of Australia (National Archives).

⁶ ANAO Better Practice Guide—*Internet Delivery Decisions: A Government Program Manager's Guide*, April 2001, available at <www.anao.gov.au>.

⁷ ANAO Audit Report No.30 2003–04 *Quality Internet Services for Government Clients—Monitoring and Evaluation by Government Agencies*, available at <www.anao.gov.au>.

10. Given its special interest in the topic, a copy of the proposed report was provided to the Department of Finance and Administration (Finance) for comment by the Australian Government Information Management Office (AGIMO).

11. The audit team examined both the agency website and one service delivered on the Internet by each of the selected agencies. The six online services selected for the audit were:

- Austrade's Export Market Development Grant (EMDG) online eligibility questionnaire, which allows clients to provide information about their business and receive a response about their eligibility to apply for a grant based on that information;
- Centrelink's Update Families Income Estimate Service (UFIES), which allows families to advise Centrelink of their estimated annual income;
- CSA's 'When Parents Change Address' form that allows parents to change their address and contact details online;
- Health and Ageing's *HealthInsite* that provides Australians with access to reliable, high quality health information;
- DVA's World War Two (WW2) Nominal Roll, which offers online access to a database containing the details of service men and women who served in WW2; and
- National Archives' eShop, which permits Internet users to purchase National Archives' publications.

12. This report does not comment specifically on the performance of individual agencies. Rather, it presents the general findings across the agencies examined. As a result, readers should not assume that a general finding necessarily applies to a particular agency examined. The report, however, includes examples of better practice found in the particular agencies audited, and outlines opportunities for improvement for the benefit of other public sector organisations.

Key Findings

Managing e-government (Chapter 2)

13. All audited agencies had a strategy for their websites that set out the management, responsibility and approach for use of the Internet. Agencies had more coherent management arrangements for their websites and online services. ANAO considers that this raised the likelihood that agencies were operating their websites more efficiently.

14. All of the selected agencies had developed guidelines and policies for developing websites, website management, and internal website design standards for use by staff. ANAO suggests that other agencies ensure that their policies and guidelines on websites are widely disseminated and used.

15. Overall, most agencies had developed criteria to determine if a service was appropriate for online delivery. Agencies were consulting users and stakeholders about their needs prior to developing new online services. Most of the agencies were striving to offer users more online services that allowed a two-way flow of information between the agencies and users.

16. All agencies followed the Government's *Online Information Service Obligations*, and had addressed the standards and guidelines for Metadata, accessibility, usability, privacy and security. ANAO considered that all the audited agencies addressed these standards and guidelines, increasing the likelihood that agency websites were accessible and user friendly. Users could easily access agencies' statements on protection of website users' privacy and security of information.

17. All audited agencies designed their Internet services so that users who had either older computers or newer technology could access them. This approach to designing Internet services increased the potential number of customers. Agencies were also aware that some of their users were reliant on older technology and balanced this against the potential for increased services that result from use of newer technology.

Planning efficient and effective Internet services (Chapter 3)

18. All agencies selected in the audit had developed planning documents that directed their websites' most recent redevelopments or major redesigns. ANAO noted an improvement on the findings of the previous audit in that agencies had clear objectives for their websites, and had outlined the potential benefits to the agency and to clients. However, rather than consulting users

before commencing a website redesign or redevelopment, agencies tended to involve users in testing the new design.

19. ANAO found that agencies generally did better in measuring the efficiency and effectiveness of the specific online services and programs selected than they did with their websites. Agencies had developed business cases or Budget proposals that specified the objectives of the online service and the expected benefits to the agency and potential users. Most agencies consulted these users to determine whether the services were feasible and how they should operate.

20. All agencies had prepared broad cost estimates for the development of their online services, and these were generally sufficient to gain program approval for the services. Most were able to provide the recurrent cost of maintaining the service. Two agencies could not provide the maintenance cost of the service, as they included this with the cost of usual website maintenance activities.

21. While agencies were able to provide estimates of the recurrent costs of their websites, they used different methods to calculate these costs and included a range of different items. Agencies had not conducted activity based costing of their websites. This made it difficult to compare the costs of websites against each other. The major item in most agencies' recurrent costs of their websites was salaries for the staff responsible for managing the website. IT cost information was limited, and, where such costs were provided, most were relatively small.

22. Websites in agencies at similar stages of Internet service delivery displayed wide variations in costs. However, it was not apparent whether these differences were related to the stage of website development and/or the size of the agency, or to other factors not identified. Further, there was insufficient comparable data to determine whether cost differences were related to degrees of website efficiency and effectiveness.

23. Only one agency had conducted a cost-benefit analysis to determine whether the Internet was the most effective form of delivery for their online service. No agency had calculated an expected return on investment for providing the service. Despite having information on both costs and benefits, and having outlined this as one of the principles to be used in determining whether a particular service should be provided online, other agencies did not include a cost-benefit analysis in their business cases. ANAO considers that, where agencies can identify tangible benefits for the proposed service, they should be undertaking cost-benefit analyses to inform their planning for Internet service delivery.

Measuring the performance of Internet services (Chapter 4)

24. While performance measures have been widely used for assessing traditional forms of government service delivery, ANAO found that agencies generally have been slower in developing performance measures to assess the delivery of services through the Internet.

25. All agencies included in this audit used various methods to collect a range of data for monitoring the performance of their websites and online services. Many, however, relied on this monitoring data to determine areas for improvement of their Internet service delivery. Only two agencies had developed specific performance indicators for their websites that measured performance against their website's objectives.

26. Three agencies had developed performance indicators for their online services. This meant that half of the agencies had not identified how the success of the program would be measured, such as by meeting estimated targets or achieving reduced costs. As well, while agencies included information on various e-government activities related to a number of their programs in their annual reports, few had reported externally on any specific performance indicators for their websites or online services.

27. ANAO considered that some agencies would have difficulty in determining appropriate performance indicators for their websites, because some of the websites' objectives or aims were very general or not clearly specified. ANAO noted, however, that agencies were already collecting much of the information required to develop adequate indicators to assess performance.

28. Despite including evaluation plans in their business cases, most agencies had not evaluated their website redevelopments or new online services, although most planned to. Further, agencies did not generally have an integrated monitoring and evaluation policy for their Internet service delivery.

Overall audit conclusion

29. The ANAO found that all of the selected agencies had developed a strategy that allocated responsibility for the management of agency websites and online services, and set out the agency's approach for their use of the Internet. ANAO considered that agencies' arrangements for more coherent website management were moving them towards more efficient operation of their websites.

30. ANAO found that agencies' monitoring of the effectiveness of their websites was adequate. They used a number of methods to collect information and used this data to continuously improve their websites and online services. However, agencies had difficulty in obtaining sound activity or management costing of their websites, and the costs provided varied for similar services. Few had used cost-benefit analysis nor determined productivity gains or returns on investment. Agencies were unable to report any efficiency savings through use of the Internet, as they had not evaluated their services. ANAO concluded therefore, that most agencies had not developed adequate measures to determine whether the website is an efficient form of service delivery.

31. ANAO found that, in general, agencies did better in measuring the efficiency and effectiveness of the selected online services than they did with their websites. All agencies had used a range of methods to collect performance data and a number of agencies had determined some performance indicators for their online services. However, very few had collected information that enabled comparison of the efficiency of online service delivery against other service delivery channels.

32. ANAO noted that agencies could demonstrate their achievements against the Government's aims for e-government by providing improved services to their clients, business and the broader community. However, they were generally unable to determine whether their investments in e-government were delivering tangible returns, such as cost reductions or increased efficiency and productivity.

33. Overall, the ANAO concluded that agencies' methods were inadequate to assess whether their delivery of government services and programs through the Internet was efficient and effective. However, there was evidence that agencies included in the audit were making considerable efforts to improve, and there had been significant progress made in the past year.

Opportunities for improvement

34. ANAO suggests that to improve their management of e-government, and their measurement of the efficiency and effectiveness of Internet service delivery, agencies:

- establish coherent arrangements for management of their websites to further their more efficient use;
- develop internal policies and guidelines for the Internet and encourage agency staff to use them;
- quantify the benefits and costs of their websites;

- consider using AGIMO's Demand and Value Assessment Methodology to assess websites and online service delivery;
- identify the audience for their website and online services, and consult potential users about their needs;
- assess demand for the delivery of services via the Internet, and specify targets for achievements against objectives; and
- compare the performance of their websites with that of other agencies or sites, to assist in assessing whether the website is efficient and effective.

Agency responses

35. ANAO provided the draft audit report to the agencies audited and to Finance for comment. The following are the agencies' full responses.

Austrade

36. Austrade agrees with the key recommendations made by ANAO in this report and believes that implementation of these recommendations will assist in the progressive improvement of online services and their alignment with agencies' corporate directions.

37. While strongly supporting the integration of website measurement into the overall measurement of effectiveness of service delivery, Austrade sees benefit in continuing to measure the performance of websites in their own right, as channels for delivery of information and services and as a distinct business activity.

Centrelink

38. Centrelink agrees with the recommendations made in the report.

CSA

39. CSA agrees with the recommendations and the opportunities for improvement identified in the report. CSA believes that the recommendations support the improved planning, implementation and evaluation of CSA's online service channel and promote consistency between the Internet service and other service delivery channels.

40. The major areas of focus for CSA will be to formalise existing arrangements, such as evaluation of online services and developing more focused objectives and performance indicators, to ensure greater transparency and accountability.

DVA

41. DVA agrees with the overall findings of this report. DVA is further developing its framework for the evaluation and measurement of efficiency and effectiveness of the main DVA website.

Health and Ageing

42. Health and Ageing supports the recommendations made in the audit. Both the Department's website and *HealthInsite* have recently been upgraded, based on the results of extensive evaluation and analysis of a range of performance indicators. Future development of the Health and Ageing website and *HealthInsite* will continue to be based on evaluations of the needs of users, performance indicators, costs and, where possible, comparisons with similar indicators for other service delivery channels.

National Archives

43. National Archives agrees with the recommendations made in the report.

Finance

44. The Australian Government investment in Internet-delivered services and information continues to rise. These investments are expected to promote efficiency and effectiveness in government processes and service delivery, deliver social and financial benefits and provide investment value to government and the citizens, on whose behalf these investments are made. Consequently, it is increasingly important that proposals for these services are supported by robust business cases that provide departments and agencies with the ability to establish a baseline from which to assess the efficiency and effectiveness of their government services.

45. Operational excellence comes from a continuing focus on value for money, productivity, results obtained from effort and on measuring value. Measuring e-government initiatives against standardised criteria enables progress towards specified goals and targets to be evaluated; achievements and potential barriers to be identified; and a better understanding of the impacts and benefits. Sharing these results facilitates learning, development of best practice and opportunities for benchmarking.

46. Evaluation is a key component of the strategic management of any initiative and e-government is no exception. The ANAO report reinforces the importance of the management of e-government, commencing at the planning of which services are appropriate through to the evaluation and measurement of what constitutes effective and efficient services for citizens and government.

Recommendations

Recommendation No.1
Para 3.72 ANAO recommends that, in planning and developing proposed online services, agencies support proposals with suitable cost-benefit analyses.

All agencies audited and consulted agreed.

Recommendation No.2
Para 4.40 ANAO recommends that agencies periodically evaluate their websites and Internet services to confirm that they meet the needs of both the agency and the clients.

All agencies audited and consulted agreed.

Recommendation No.3
Para 4.65 ANAO recommends that agencies integrate measurement of their website's performance with overall measurement of service delivery, and

- (a) develop indicators, including data on costs, for the performance of their online service delivery; and
- (b) compare these with similar indicators for other service delivery channels.

All agencies audited and consulted agreed.

Audit Findings and Conclusions

1. Background

This Chapter provides a brief background to the audit, including an outline of Internet use, and a discussion of the different levels of Internet service delivery. It also sets out the audit objectives, scope and methodology, and the structure of the report.

Introduction

1.1 Since the Australian Government first recognised the potential of online technology to improve service delivery in its 1997 *Investing for Growth*⁸ statement, it has articulated its policies and strategies for e-government in a number of papers. E-government involves government agencies delivering better programs and services online through the use of new information and communication technologies. The papers included *Government Online-The Commonwealth's Strategy*⁹, launched in April 2000, and a new framework for e-government, *Better Services, Better Government*¹⁰, launched in November 2002. Most recently, the Government released *Australia's Strategic Framework for the Information Economy*¹¹ in July 2004¹².

1.2 The *Better Services, Better Government* strategy outlined the broad directions and priorities for the future of e-government in Australia, and sought to maintain the momentum of agencies' actions under *Government Online*. One of its key objectives was for agencies to achieve greater efficiency in providing services and a return on their investments in Internet-based service delivery. It also stated that investing in e-government should deliver tangible returns, whether they take the form of cost reductions, increased efficiency and productivity, or improved services to business and the broader community.

1.3 Implementation of the Government policy—that agencies use the Internet to deliver all appropriate programs and services—has led to

⁸ Commonwealth of Australia, *Investing for Growth*, Canberra, 1997, available at <www.dist.gov.au/assets/documents/itrinternet/investforgrowth>.

⁹ Department of Communications, Information Technology and the Arts, *Government Online-The Commonwealth Government's Strategy*, DCITA, Canberra, April 2000, available at <www.agimo.gov.au/publications/2000/04/govonline>.

¹⁰ National Office for the Information Economy, *Better Services, Better Government-The Federal Government's E-government Strategy*, NOIE, Canberra, November 2002, available at <www.agimo.gov.au/publications/2002/11/bsbg>.

¹¹ Department of Communications, Information Technology and the Arts, *Australia's Strategic Framework for the Information Economy 2004–06: Opportunities and Challenges for the Information Age*, DCITA, Canberra, July 2004, available at <www.dcita.gov.au/ie/framework>.

¹² Appendix 1 provides a more detailed outline of the development of e-government policies and strategies in Australia.

considerable agency investment in Internet-based service delivery. However, government policy also requires managers to ensure that program and service delivery is efficient and effective. Efficient and effective use of the Internet has the potential to improve service delivery and to make financial savings.

1.4 In 2001, the ANAO developed a Better Practice Guide¹³ that sets out broad guidelines to assist program managers to use the Internet more efficiently and effectively when delivering programs and services.

1.5 The Auditor-General's introduction to the Better Practice Guide stated that it would also be used by the ANAO as a basis for establishing audit criteria in reviewing agency performance in Internet service delivery. A number of performance audits were foreshadowed. The audits conducted so far are outlined in Appendix 2.

1.6 In 2002–03, ANAO conducted an audit that examined the adequacy of agencies' approaches to monitoring and evaluation of Internet-delivered programs and services¹⁴. The current audit was designed to address Internet service delivery as outlined in the Better Practice Guide.

1.7 This audit identified the methods used by selected agencies to measure the efficiency and effectiveness of their delivery of services through the Internet, and assessed the adequacy of these methods. It therefore complemented the previous audit, and built on its findings. It also provided the opportunity to examine progress made by government agencies in monitoring and evaluating Internet service delivery since the previous audit was published.

Internet usage

1.8 Australian Government agencies have made considerable progress towards effective e-government. In 2003, Australia was ranked fifth overall of the twelve countries included in the National Office for the Information Economy's (NOIE¹⁵) *Information Economy Index*¹⁶, but gained the second highest ranking on the 'penetration of online government services indicator'.

¹³ ANAO Better Practice Guide—*Internet Delivery Decisions: A Government Program Manager's Guide*, April 2001, available at <www.anao.gov.au>.

¹⁴ ANAO Audit Report No.30 2003–04 *Quality Internet Services for Government Clients—Monitoring and Evaluation by Government Agencies*, available at <www.anao.gov.au>.

¹⁵ The Australian Government Information Management Office (AGIMO) replaced the National Office for the Information Economy (NOIE) on 8 April 2004. Some functions of NOIE relating to broader policy, research and programs were transferred to the Office for the Information Economy located in DCITA. In this report, AGIMO is used when referring to the current entity, while NOIE is used when referring to the previous agency. On 22 October 2004, following the Federal Election, the Prime Minister announced that AGIMO would be incorporated within the Department of Finance and Administration.

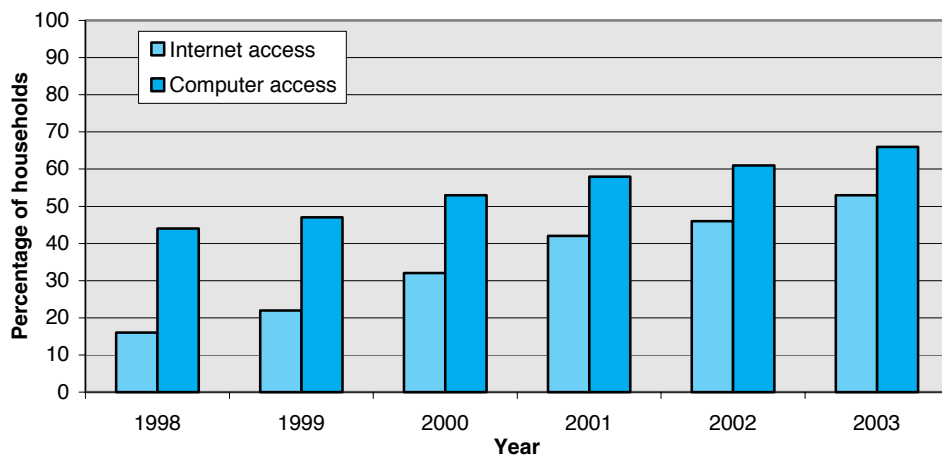
¹⁶ National Office for the Information Economy, *Information Economy Index*, NOIE, Canberra, 2003, available at <www2.dcita.gov.au/ie/publications/2003/08/index>.

1.9 Data available from the Australian Bureau of Statistics (ABS)¹⁷, and the Department of Communications, Information Technology and the Arts (DCITA)¹⁸, show increasing access to the Internet and to online government services in Australia in recent years, as follows:

- 53 per cent of Australian households had Internet access at home in June 2003, up from 16 per cent in 1998, as shown in Figure 1.1;
- 84 per cent of persons aged 16 years and over in Australia had Internet access (from any location) in the March quarter 2004, an increase from 72 per cent in September 2001;
- Internet access (from any location) decreased with age, ranging from 94 per cent of 16 to 24 year olds to only 49 per cent of persons aged 65 years in March 2004; and
- 37 per cent of home Internet users in Australia accessed government websites in the March quarter 2004 (up from 27 per cent in April 2002).

Figure 1.1

Household computer and Internet access—1998 to 2003



Source: ABS, *Household Use of Information Technology, Australia, 2002 and 2003* (cat. no.8146.0).

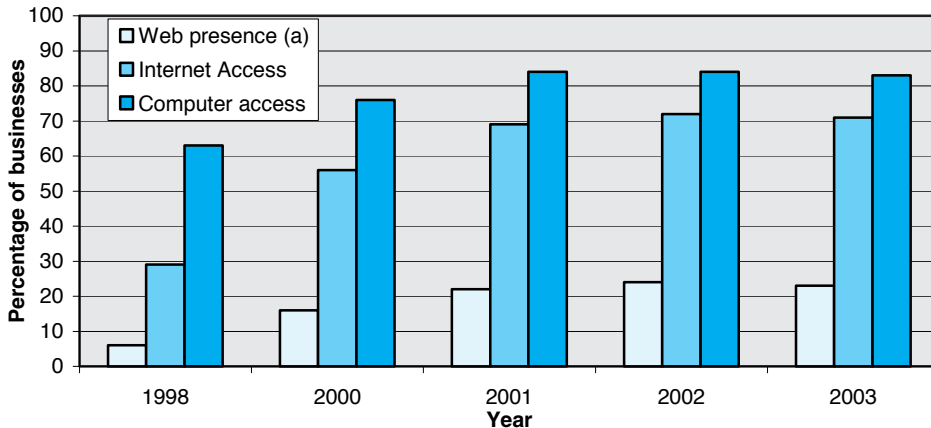
¹⁷ Australian Bureau of Statistics, *Household Use of Information Technology, Australia, 2002 and 2003*, cat. no.8146.0, ABS, Canberra, September 2004, and *Business Use of Information Technology Australia 2002–03*, cat no. 8129.0, ABS, Canberra, March 2004, available at <www.abs.gov.au/Ausstats>.

¹⁸ Department of Communications, Information Technology and the Arts, *Australia Online, 1st Quarter 2004 Statistics* (sourced from ABS surveys and Nielsen/NetRatings), DCITA, Canberra, 2004, available at <www2.dcita.gov.au/ie/framework/benchmarking>.

1.10 Around 71 per cent of businesses had Internet access in June 2003 (up from 29 per cent in June 1998), as shown in Figure 1.2. Some 71 per cent of these were accessing government services online, compared with only 44 per cent in June 2000.

Figure 1.2

Australian businesses using IT—1998 to 2003



(a) A business has a web presence when it has its own website or home page, or a presence on another entity's website.

Source: ABS, *Business Use of Information Technology, Australia, 2002–03*, (cat no.8129.0).

Other relevant studies

1.11 As well as developing frameworks, guidelines and methodologies to assist agencies with their online service delivery, NOIE and the Australian Government Information Management Office (AGIMO), within the Department of Finance and Administration (Finance), have reviewed agencies' use of e-government. These reports are outlined in Appendix 3.

1.12 A number of UK and other international studies that focus on e-government and the performance of governments in delivering Internet services to clients and the public, have been conducted over the past few years. Some of the more recent studies are summarised in Appendix 4.

Levels of Internet service delivery

1.13 Agencies deliver government services, programs and information to those who use them in a number of ways. The four main ways are over the counter in an office or shopfront, on the phone through a call centre, by mail, and online through the Internet. These are sometimes described as service delivery channels.

1.14 As outlined in the ANAO's Better Practice Guide, the ANAO developed a model¹⁹ to describe the levels of Government agencies' service delivery via the Internet. In the preliminary investigation for this audit, ANAO found that agencies appeared to be at either of two main stages in their online service delivery. These were: where information was provided to anyone who required it on demand, or where verification of a person's identity was required before exchanging secure information.

1.15 These can be further disaggregated into the four stages outlined in the ANAO's model, as follows:

- Stage 1—the agency had a website that published information about the agency and its services to all Internet users;
- Stage 2—the agency allowed Internet users to access the agency's database(s), and to browse, explore and interact with that data;
- Stage 3—the agency allowed Internet users access as in Stages 1 and 2, and also permitted them to enter information on the website, exchanging or transacting secure information with the agency; and
- Stage 4—is the same access as in Stage 3, but in addition the agency, with the user's prior approval, shared that user's information with other government agencies.

1.16 When ANAO developed this model, it was not expected that all, or even most, agencies would proceed beyond the early stages within the foreseeable future. The ANAO considered then that agency functions would be a key factor in determining the stage at which the agency should be providing effective forms of Internet service delivery. For example, where an agency had no public databases and simply provided information and publications to the public, Stage 1 would remain the appropriate level. In all cases, agency management, for business reasons, would make decisions about which stage of Internet service delivery was most appropriate.

Selection of agencies

1.17 Where possible, ANAO took the following range of factors into account when selecting the agencies for the audit:

- the desirability of including agencies of varying size with different types of online services that were not previously included in the other ANAO Internet audits, or the studies done by NOIE and AGIMO (as outlined in Appendices 2 and 3);

¹⁹ The model is also outlined in more detail in ANAO Report No.18 1999–2000 *Electronic Service Delivery, including Internet Use, by Federal Government Agencies*, pp. 35–37, available at <www.anao.gov.au>.

- ensuring a focus on online services that were established or redeveloped more recently, and where the development was finalised;
- obtaining a mixture of agency websites at the different stages of Internet service delivery; and
- covering a range of online services with different types of clients (for example, citizens, businesses, government).

1.18 In late 2003, ANAO reviewed information available in the ‘A-Z of Government websites’ listing in the Australian Government Entry Point portal—www.fed.gov.au (now www.australia.gov.au)—which listed over 700 sites.

1.19 From this listing, it appeared that all Australian Government agencies were at least at Stage 1 according to ANAO’s model of Internet service delivery, having a website presence and providing basic information and publications to users. Those with public databases were at Stage 2, where users could enter database queries online. While most of these agencies could be expected to remain at such levels, some would be increasing the level of interaction with clients made possible by their websites and thus would be moving to Stage 3. As also expected, however, we found that fewer agencies were at Stage 3 or Stage 4.

1.20 ANAO then contacted a number of agencies to discuss possible websites for inclusion in the audit, and extracted relevant information from these websites. This included Online Action Plans and e-business or similar strategies, where these were available.

1.21 The agencies and services selected for the audit are listed in Table 1.1. Brief descriptions of the agencies, their websites and the online services selected are included in Appendix 5.

Table 1.1**Selected agencies and online services**

Agency	Online Service	Agency Size	Client Groups
Centrelink	Update Family Income Estimate Service (UFIES) online	Large	Citizens and families
Department of Health and Ageing	Health/Insite portal	Large	Citizens and professionals
Department of Veterans' Affairs	World War Two (WW2) Nominal Roll website	Medium	Citizens
Child Support Agency	Parents Change of Address online service	Medium	Separated parents and professionals
Austrade	Export Market Development Grants (EMDG) ²⁰ online eligibility questionnaire	Small	Businesses
National Archives of Australia	eShop services	Small	Government and citizens

Source: ANAO.

Comparison of levels of Internet service delivery

1.22 ANAO also assessed the features of services available through the websites of the selected agencies. This assessment determined their stage of development against the ANAO's model of Internet service delivery. ANAO grouped the agencies according to their highest stage of Internet service delivery. Therefore, some agencies may be listed as Stage 3, although some of their services were at Stage 2.

1.23 ANAO's assessment is outlined in Table 1.2. The websites of two agencies selected were assessed to be at Stage 1–2, two were at Stage 2–3, and two were at Stage 3. ANAO noted that agencies at similar website levels generally had similar types of online services. ANAO also noted that while no agency had reached Stage 4 in Internet development as described in ANAO's model²¹, all agencies were moving towards offering more online services that allowed a two-way flow of information between the agencies and users.

²⁰ The EMDG scheme is designed to encourage and assist small to medium sized Australian businesses to seek and develop export markets by reimbursing up to 50 per cent of their expenses (above the first \$15 000) on eligible export promotional activities. To access the scheme for the first time, businesses need to have spent \$15 000 over two years on eligible export marketing expenses.

²¹ There was no Stage 4 agency selected for the audit, mainly because there are very few agencies at this level, and the major one, the Australian Taxation Office, had been included in two other ANAO audits as well as in the NOIE *E-Government Benefits Study—Agency Case Studies*.

Table 1.2**Stages of agencies' website development and features**

Website Stage	Agency	Website Features
1–2	Health and Ageing and CSA	Both of these agencies' websites included a comprehensive range of information on their services and policies, which were targeted to their users and stakeholders. These websites also guided users to other agency subsites, which contained information on particular issues. While both the agencies at this stage of Internet service delivery had similar services, one agency also offered some online services to its client groups and stakeholders, including a number of self-help tools. These online services and self-help features provided access to information held on the agency's database, but clients did not have any direct interaction with that database.
2–3	DVA and Austrade	<p>These agencies had a similar range of online services to the agencies discussed above but they had also started to progress towards Stage 3. These agencies' clients had access to the agency's database(s), and were able to browse, explore and provide information. However, users could not enter data into the database(s).</p> <p>DVA's website contained almost all of the information provided to clients, as well as a number of interactive tools and services. These services included fact sheets, forms and secure services. The secure services were applications that allowed the exchange of personal or other sensitive information in a secure environment. However, the majority of DVA's website clients did not need to use the secure services.</p> <p>Austrade provided around 40 major services of which 10 were currently available completely or mostly online. Some other services were delivered partly online. The website contained an Export Services Directory that listed the range of export services available online, with direct links to those services. Austrade's website and online services offered limited exchange and transaction of secure information through online events registration and online payments. Austrade's website also provided access to a number of separate client and customer websites.</p>
3	Centrelink and National Archives	<p>National Archives and Centrelink were both judged to have progressed to Stage 3. These agencies' websites published information about the agency and its services to all Internet users. Users could access their database(s), and were able to browse, explore and interact with that data. As well, users could enter information on the website and exchange secure information with the agencies. These agencies also had a similar basic range of online services as the other four agencies. However, they offered more services where users could enter data into the agencies' databases.</p> <p>The services provided through the National Archives' website included record keeping, the Australian Government Locator Service Metadata, PhotoSearch, RecordSearch, employment and tenders, and corporate forms. The agency had also developed eShop as a secure e-commerce facility that enabled users to purchase National Archives' publications online using a credit card.</p> <p>Centrelink's website permitted clients to view their details (for example, their reporting dates, employment income, working credit balance, and contact details), to revise personal information (for example, their family income estimate and their email address), and to request services or information (for example, a family tax benefit advance payment or mail).</p>

Source: Selected agencies.

1.24 In summary, ANAO selected a cross section of Australian Government agencies for the audit, which delivered services at various levels through the Internet to a range of different individuals, groups and businesses. This ensured that the audit findings were more likely to be relevant to a larger number of agencies.

Audit approach

Audit objectives and criteria

1.25 The audit objectives were to:

- identify and evaluate the adequacy of the methods used by selected agencies to assess whether their delivery of Government programs and services through the Internet was efficient and effective; and
- identify opportunities for improvement.

1.26 In this audit, we have defined 'efficiency' to mean the use of financial, human, physical and information resources such that output is maximised for any given set of resource inputs, or input is minimised for any given quantity and quality of output. Similarly, 'effectiveness' means the achievement of the objectives or other intended effects of activities²². A program can be considered to be effective if it accomplishes the objectives the program set out to achieve.

1.27 The audit assessed Internet service delivery against a number of criteria. The principal criteria, expressed as questions, were:

- are agencies measuring the efficiency of their online delivery of programs and services?
- are agencies measuring the effectiveness of their online delivery of programs and services?
- are these measurements and the information collected adequate? and
- are agencies using this information to improve their online service delivery?

1.28 In determining how agencies were measuring the efficiency and effectiveness of their websites and online service delivery, the ANAO looked at whether they had prepared business cases that set objectives and performance targets, identified and tracked the costs and benefits, and were monitoring and evaluating their performance against them.

²² Certified Practising Accountants Australia, *Members Handbook December 2002*, AUS806, Performance Auditing.

1.29 Where applicable, ANAO has referred to relevant findings of the previous audit relating to monitoring and evaluation, mentioned earlier, rather than reiterating findings that were similar in the areas where investigation necessarily overlapped. Instead, emphasis was placed on articulating the differences or improvements found since the previous audit.

1.30 Parliamentary Committees²³ also proposed that the ANAO consider the costs of agency websites in its audit program. Therefore, ANAO has included in this audit an assessment of whether the selected agencies could identify the current costs of their websites.

Audit scope

1.31 The audit examined the arrangements made by six agencies for the delivery of a specific service online. However, it did not assess the efficiency and effectiveness of the online service itself. Rather, it determined whether the agencies were measuring the efficiency and effectiveness of the online service and whether these measures were adequate.

1.32 In conducting the audit, we examined the selected agencies' approaches to the assessment of efficiency and effectiveness of Internet-delivered services, and identified themes common to the management of all types of online services. ANAO recognised that, within these general themes, an agency needed to adopt an approach that was consistent with its core functions and objectives, and appropriate to agency circumstances. The audit did not aim to advocate a single solution for all online services or agency circumstances.

Audit methodology

1.33 The audit involved:

- an examination and review of Government policies, strategies, guidelines, audit and research reports, and better practice guides relating to Internet service delivery;
- an examination of agency operational documents, online service delivery policies and practices, and administrative systems;
- interviews with program or service managers and staff responsible for agencies' websites and online services;

²³ The Environment, Communications, Information Technology and the Arts Legislation/Reference Committees.

- reviews and analyses of documented information used in the agencies to measure efficiency and effectiveness, including business cases, cost/savings and benefit data, and client comments;
- interviews with relevant personnel from State audit offices, AGIMO and the Australian Public Service Commission;
- attendance at relevant seminars and conferences, including the Business e-Volution of Government Conference held in Canberra in May 2004; and
- conducting a forum for representatives of agencies included in this study to discuss the audit's preliminary findings.

1.34 ANAO carried out the fieldwork for the audit during December 2003 and over the period February to May 2004 in Canberra and Sydney.

1.35 The audit was conducted in accordance with ANAO Auditing Standards at a cost of \$444 000.

1.36 Given its special interest in the topic, a copy of the proposed report was provided to Finance for comment by AGIMO.

Structure of this report

1.37 The remainder of this report is structured as follows:

- Chapter 2 examines agency management of e-government, including a review of the extent to which audited agencies use online service delivery, the use of website policy and procedural documents by agencies and their staff, and agency compliance with website standards and government obligations;
- Chapter 3 examines whether agencies planned for their Internet-delivered services and their websites by preparing business cases that included information on objectives, costs and benefits. It also outlines measures of efficiency and effectiveness; and
- Chapter 4 examines the methods used by agencies to measure the performance of their websites and Internet-delivered services, and how they used this to improve and report on the efficiency and effectiveness of their Internet services.

2. Managing E-Government

This Chapter examines agency management of e-government, including a review of the extent to which audited agencies use online service delivery, the use of website policy and procedural documents by agencies and their staff, and agency compliance with website standards and government obligations.

Introduction

2.1 The purpose of Government agencies establishing websites and providing online services is to give their clients and customers access to information and services with the optimal use of public resources. The Government's policies and strategies committed agencies to delivering all appropriate services online by the end of 2001. They also required agencies to prepare an Online Action Plan by September 2000, in order to determine what should be delivered online, and to set a timetable for delivery of their services online. These policies also outlined what kinds of information agencies must include on their websites.

2.2 ANAO reviewed the arrangements agencies made for managing their websites and selected Internet-delivered services, the processes used for determining what services were provided online, and how agencies met the Government's website standards. ANAO addresses the financial aspects of management in Chapters 3 and 4.

Management of websites and online services

2.3 The previous ANAO audit found that agencies had diverse arrangements for managing their websites, and to a large extent this diversity reflected each agency's preferred approach to website management. ANAO also found that agencies moved responsibility for the management of websites from area to area. This current audit found that agencies had more coherent management arrangements for their websites than observed previously.

2.4 As noted above, the Government required each agency to develop an Online Action Plan that outlined its approach to placing information and services online. These Plans were also to address legislative issues, costs and benefits of Internet service delivery, and risk control strategies for Internet and other electronic service delivery. ANAO found that audited agencies' Online Action Plans generally outlined the services the agency would provide online and the agency's future direction for management of websites and online service delivery.

2.5 Three of the six agencies included in this audit had replaced their original Online Action Plans with another strategy or framework document. These included an *E-Government Framework*, an *E-business Strategy* and an *E-Commerce Strategy*, all of which set future strategies for e-government and its management. The other three agencies continued to base their online service agenda and activities on what was contained in their most recent Online Action Plan. ANAO noted that only one of these three agencies had revised its Plan in the last two years.

2.6 One agency outlined in its *E-Government Framework* that it placed responsibility for its e-government program with the Secretary, supported by the Chief Information Officer and the head of the branch responsible for its website. It also established an Information Management Steering Committee to govern its e-business strategy.

2.7 Another agency developed an Electronic Service Delivery Strategy that outlined the way it would approach the delivery of services through electronic means, including online and telephony. This agency had set up committees to advise on and manage the website. An executive committee was responsible for internal governance arrangements for its Electronic Service Delivery program, and an Information and Communications Technology steering committee developed and managed this strategy and reported to the executive committee.

2.8 Other agencies had committees or groups responsible for advising on management of their websites. Branches or sections within those agencies supported these committees and groups.

2.9 In this audit, ANAO found that agencies had generally placed responsibility for their websites with an area other than the Information Technology (IT) branch or section. For example, one agency had placed ownership for its website with the National Manager of the Communications, Media and Marketing Branch. Another agency gave responsibility for its website to the E-Commerce Manager in its Corporate Services Branch.

2.10 As expected, all of the agencies included in the audit had IT support for their websites. While some agencies only relied on their IT sections to provide technical support, others shared responsibility for the website between their IT section and the section responsible for the design, development and maintenance of the website.

2.11 Because of the continuing need to review and redevelop websites, ANAO considered that it was beneficial for agencies to have a team with overall responsibility for management of the agency website. This allocation of responsibility appeared to assist more efficient delivery of Internet services.

2.12 ANAO found that agencies had clearly identified the business owner(s) of the website and the lines of authority which allowed agencies to run a more efficient website. The units with responsibility for the websites were also given sufficient authority to manage and evaluate them.

2.13 ANAO noted that the agencies with better measurement of their website's efficiency and effectiveness, were those with clearly established authority for the website. These were also the agencies where the unit with responsibility for the website and the IT area had strong relationships, often based on collocation.

2.14 Arrangements for management of the specific online services also varied. They ranged from responsibility resting with the unit responsible for the website, to responsibility resting with the branch responsible for delivery of the service. For example, one agency had placed responsibility for the selected online service in the same section as its website, but had a team within this section responsible for the day-to-day management of the service. Another agency had left responsibility with the relevant business National Manager and with the National Manager for New Solutions Development, who looked after technical matters.

2.15 Generally, the agencies had placed responsibility for their online service in the branch responsible for the delivery of the service; while responsibility for the technical aspects of the online service was placed with the group responsible for the technical aspects of the website.

2.16 ANAO found that the arrangements made by agencies for the organisational placement, ownership and responsibility for management of the website can provide efficiencies. As such, ANAO considers that it is important that agencies clearly establish the management arrangements for their websites, and allocate sufficient authority to managers.

Agencies' website policies for staff

2.17 ANAO considers that it is good practice for agencies to have internal policies and guidance to assist staff responsible for the management of, or the development of content for, websites or online services. As such, ANAO examined the guidance agencies provided to their staff.

2.18 ANAO found that most agencies had developed a range of policies and guidance documents for their websites, including website management and content policies and guidelines, and internal agency website design standards.

2.19 The following example of better practice was found in CSA.

CSA's Website Policies and Guidelines

CSA had developed a number of policies and guidelines for staff relating to development and usage of its website. These included:

Website policy—setting out the design and content guidelines, and procedures for putting documents onto the site;

Standard for Web Design—setting out the rules for types of documents allowed on the site and for design features (e.g. frames, hyperlinks);

Writing for the Web—containing tips and suggestions for preparing web text;

Designing Successful Websites—containing information and tips on usability;

Checkpoints—better practice lists for forms, navigation, user testing, cookies, archiving, Metadata and content management;

Electronic Publishing Standards; and

Publishing information on the Internet site—a form that had to be completed before documents could be published or altered on the website.

Source: CSA.

2.20 ANAO also noted that Health and Ageing had developed a repository of information on its Intranet called the 'Webmasters Lair'. This provided information that was easily accessible to staff on the agency's guidelines for websites, resources, hints, templates, website statistics, and best practice examples for authors and webmasters.

2.21 ANAO concluded that all agencies had appropriate internal policies and guidelines for the Internet and that their staff applied these policies.

Services provided online

2.22 As part of the *Government Online Strategy*, the Government developed the *Online Information Service Obligations*, which required agencies to include minimum sets of information on their websites²⁴. Under the Government's *Better Services, Better Government* framework, these obligations remained relevant.

2.23 ANAO found that all the agencies included in the audit provided a broadly similar range of information on their websites. This included information about the agency's role, functions and responsibilities, electronic copies of publications including annual reports and plans, information about

²⁴ The categories of information the Government requires to be on agencies' websites are available at <<http://www.agimo.gov.au/information/oiso>>.

services, links to online services including online forms, and links to other portfolio websites.

2.24 ANAO concluded that all the agencies examined had adequately addressed the Government's information requirements.

How agencies determined what services were provided online

2.25 The *Government Online* strategy stated that decisions about which programs should be first to go online, how this would be done, and which applications might not be appropriate to go online, were best taken by each agency.

2.26 ANAO found that five of the six agencies included in the audit had developed criteria, principles or questions that they used to determine whether a service was appropriate for providing online²⁵. These were articulated in their Online Action Plan or equivalent documents.

2.27 The sixth agency stated that it followed AGIMO's criteria for providing a service online, or, if it were appropriate, gave a brief explanation in its Online Action Plan of why a service should or should not be delivered online.

2.28 ANAO also found that, while agencies initially placed services online to meet government obligations, they were now using these criteria in assessing new services for online service delivery. However, only one agency carried out a cost-benefit analysis. ANAO considers that it is essential for agencies to conduct a formal cost-benefit analysis when deciding if a service should be placed online. As discussed in Chapter 3, ANAO noted that the agencies could have conducted a cost-benefit analysis when assessing the service's suitability for online delivery, as all had estimated the costs, and outlined the benefits, of developing the new service at some stage.

2.29 In contrast to the findings of the previous audit, ANAO found that most agencies were now identifying and consulting the likely users of the service (their clients, stakeholders or the public) in deciding whether to provide the service online. Indeed, two agencies commenced the new online services because of requests from clients and stakeholders for simpler means of accessing services, or a particular service they required. ANAO noted, however, that agencies had not generally included a criterion relating to

²⁵ ANAO found that the criteria had very common themes, which covered the following questions:

- Is the service consistent with the agencies' strategic objectives?
- Will online delivery provide a better service?
- Will online delivery improve internal processes?
- Is providing the service online technically feasible?
- Does it satisfy cost-benefit analysis? and
- Is the service required to meet government requirements?

consulting users and stakeholders about their needs or requirements prior to developing a new online service.

2.30 ANAO also noted that two of the services, the WW2 Nominal Roll website and the HealthInsite portal, could not have been offered to the public had the Internet-delivered option not been available. The agencies advised that they could not have provided such services in any other format, such as a publication, due to the large amounts of information and the costs involved in revising or amending the information, and linked information being owned by a large number of non-Commonwealth organisations.

Meeting website standards

2.31 An essential part of the *Government Online* strategy was the implementation of the Government's minimum website standards, and these standards remained relevant under *Better Services, Better Government*. The standards were for minimum information provision, electronic publishing, Metadata²⁶, record-keeping and archiving, accessibility, security, and privacy. A number of agencies and organisations developed the guidelines and standards which formed the Government's minimum website standards²⁷. These standards were designed to help ensure that online government services were provided to a consistently high standard, in order to increase user confidence in these services, and encourage further use of services.

2.32 In conducting this audit, ANAO assessed whether agencies had implemented the Metadata and accessibility requirements for their websites. ANAO also examined the agency websites to ascertain whether they addressed the *Guidelines for Federal and ACT Government World Wide Websites* that related to informing users about privacy and security of information. In addition, ANAO examined how agencies were testing and improving the usability of their websites and online services.

Metadata

2.33 The *Government Online* strategy mandated the use of the Australian Government Locator Service Metadata standard to describe services so that users can find them on the Internet. Agencies use of the Australian Government Locator Service Metadata standard has facilitated better access to relevant information and services by consumers and agencies.

²⁶ Metadata is structured information that describes and allows users to find, manage, control and understand other information. In a website it helps government search engines to accurately and efficiently identify and retrieve web-based resources in response to search requests. (National Office for the Information Economy, *Interoperability Technical Framework for the Federal Government*, NOIE, June 2003, available at <www.agimo.gov.au/publications/2003/08/framework>.)

²⁷ A full listing of the Government's minimum website standards is available at <www.agimo.gov.au/__data/assets/file/21189/MWSStandards.pdf>.

2.34 ANAO used two major search engines²⁸ to search Australian sites for key words that would be expected to return the agency websites and the particular Internet-delivered services selected in the audit. In all cases, the search resulted in the website or the online service being listed within the first 10 results, which meant that users could find it relatively easily on the first screen showing the search results.

Accessibility

2.35 Another important standard for government websites is accessibility. Agencies have made significant strides towards ensuring that their websites' content is accessible to all members of the community who use the Internet. The aim has been to make sure that no one is disadvantaged by the format in which websites are displayed.

2.36 The NOIE *Guide to Minimum Website Standards*²⁹ states that the relevant standard for web content accessibility is the *Web Content Accessibility Guidelines*. These Guidelines explain how to make web content accessible to people with disabilities. They also make content more available to all users, regardless of the hardware and software they use to access the Internet.

2.37 The Guidelines provide a series of checkpoints that can be used to ensure that websites are accessible. All government websites must at least comply with the basic requirements. ANAO found that all the agency websites followed the *Web Content Accessibility Guidelines* and complied with the basic requirements. Some agencies had progressed further than others in meeting the Guidelines' more demanding non-binding recommendations, but none of the selected agencies met them all.

2.38 ANAO also found that some agencies had contracted consultants to test how accessible were their websites. These consultants conducted a technical review using accessibility testing and specialist software, with manual verification and cross testing of results. They then evaluated the site using website testing software to provide general advice on ease of use. Finally, they employed users with disabilities to test how accessible were web documents via the keyboard and other aids.

2.39 ANAO also examined which Internet browsers the agencies recommended to users to enable best access to their online services. ANAO noted that the agencies used website usage statistics to determine which Internet browsers their clients used. Most agencies recommended users view

²⁸ A search engine is a program that searches documents for specified keywords and returns a list of the documents where the keywords were found. The term is often used to describe systems like Google or Yahoo! that enable users to search for documents on the World Wide Web. (www.webopedia.com)

²⁹ National Office for the Information Economy; *Guide to Minimum Website Standards*; NOIE, Canberra, April 2003, available at <www.agimo.gov.au/practice/mws>.

their websites with one of the later versions of either Netscape or Internet Explorer. However, ANAO found that agencies designed their websites to be able to be viewed using a minimum of Internet Explorer 4 and 5 as well as Netscape Navigator 4. These browsers will operate in Windows 95, which allows users with older computers/technology to access agencies' websites.

2.40 ANAO found the following example of better practice in DVA. ANAO considers DVA's focus on ease of access was important, as its clients are predominately older Australians who, in general, are less experienced in accessing websites and online services.

DVA's Accessibility Policy and Practices

DVA developed and implemented an Accessibility Policy for its websites to ensure they met the accessibility guidelines. While DVA acknowledged in its policy the need to cater for users who relied on older technology, it also balanced this need with ensuring it offered efficient services through the use of new technology.

DVA also appointed a Website Accessibility Manager to its Web Services Team to oversee its Policy. This officer provides advice, training and support to web authors and local site administrators, including those in DVA's State offices, on all aspects of website accessibility.

Source: DVA.

Usability

2.41 ANAO found that all the selected agencies were conducting usability testing on their websites and online services, and were doing so in a range of ways. Some agencies conducted surveys of users' views of the content and functionality of websites, while others monitored user comments and complaints. A few agencies also directly involved users or staff of the agency in the development stages to test the website or online service.

2.42 ANAO noted the following examples of better practice in usability testing. Health and Ageing used eye tracking to evaluate usability of its website, and Centrelink regularly conducted testing in usability laboratories³⁰.

Health and Ageing's Usability Testing

Health and Ageing had conducted an eye tracking evaluation of its website. This involved recording and analysing user eye movements and responses to determine the extent to which user requirements and business objectives will be met by website designs for the target audience. The eye tracking evaluation also identified any usability issues with the website design and recommended improvements where appropriate.

Source: Health and Ageing.

³⁰ The Usability Laboratory is a facility for detailed observation, measurement, recording and evaluation of websites and online services. It can be used to evaluate the use of, and typical user reactions to, products at all stages of development. These products may include, but are not limited to, technology, forms, training, processes and procedures.

Centrelink's Usability Testing

Centrelink has conducted regular usability testing of its website and online services. This testing takes place both before and after implementation of the online service. Generally, the objectives are to test the navigation and structure of the website for usability and readability of the website's content and to recommend changes to improve the website and/or online services.

Centrelink also conducts usability laboratory work. This directly involves users in the development and redesign of Centrelink's processes and products. During audit fieldwork, ANAO attended Centrelink's usability testing of its online services page and some of the services offered on this page.

Source: Centrelink.

Privacy

2.43 The Government's *Guidelines for Federal and ACT Government World Wide Websites* required agency websites that are used to collect personal information, to contain a privacy statement. The privacy statement must advise users of the purpose and the legal authority for collection. ANAO examined the agency websites to see if they had privacy statements, and whether these were placed clearly.

2.44 The Privacy Commissioner conducted a survey of agencies in 2001³¹ that found that 68 per cent of Australian Government websites displayed privacy statements. In this audit, ANAO found that all six agencies had privacy statements. Five of the six agencies had links to their privacy statements from their home page. The other agency had a link to 'About this site' on the home page as well as a link to the privacy statement from that page.

Security

2.45 ANAO also examined agency websites for a statement that advised users about the security of information provided to the agency. ANAO found that all six agencies had security statements. However, one agency included only limited advice on its website about the security of information provided by users. ANAO considers that agencies should inform users of security for the information they provide, increasing user confidence in accessing the website or online service.

2.46 Another agency's security statement was only available once users went to the particular online service that collected information about the user.

³¹ Office of the Federal Privacy Commissioner, *Privacy Compliance Audit: Commonwealth Government Websites 2001*, available at <www.privacy.gov.au/publications>.

This agency required users to enter personal information in an electronic form in order to purchase publications. ANAO considers that the security statement should be accessible from the home page, so that users can view it before continuing with the online service.

Opportunities for improvement

2.47 ANAO suggests that to improve their management of e-government, agencies:

- establish coherent arrangements for management of their websites to further their more efficient use; and
- develop internal policies and guidelines for the Internet and encourage agency staff to use them.

3. Planning Efficient and Effective Internet Services

This Chapter examines whether agencies planned for their Internet-delivered services and their websites by preparing business cases that included information on objectives, costs and benefits. It also outlines measures of efficiency and effectiveness. Better practice examples and opportunities for improvement are identified.

Introduction

3.1 In the first stages of providing government services online, agencies set up their websites and migrated online their existing information services, such as publications and forms. They then identified services and programs appropriate to delivery through the Internet, and have moved to providing these online as required by government policy.

3.2 However, revising and enhancing government websites, and the services provided through them, is a continuous process, mainly because the Internet itself does not remain static. As ANAO expected, all agencies included in the audit had redeveloped or redesigned their original websites since 2001. They had also developed additional websites and portals that were linked to the main agency website. These activities increased the amounts and types of information and services available online, and permitted more transactions between agencies and their clients and other stakeholders, and other agencies.

3.3 As well, ANAO found that the selected agencies had recently reviewed or revised their websites, as a result of the Government's requirement that all agencies adopt what the Government described as common branding on all products, including rebranding of their websites before June 2004³². ANAO also noted that many of the agencies had already planned further major redevelopments or redesigns of their website for 2004–05.

Measuring efficiency and effectiveness

3.4 In determining how selected agencies were measuring the efficiency and effectiveness of their online service delivery, ANAO looked at whether agencies had prepared business cases for their new online service developments, and set objectives and performance targets for their websites and online services. ANAO also assessed whether agencies identified and

³² In June 2003, the Australian Government decided that common branding would apply to all Australian Government departments and agencies. The adoption of the Australian Government Design was mandatory in both online and offline activities, except in cases where the Department of Prime Minister and Cabinet approved an exemption. The intention is to ensure that users know when they are at an Australian Government website.

tracked the costs and assessed the benefits of developing and maintaining the services and websites, and were monitoring and evaluating performance. Further, ANAO determined whether agencies had consulted their clients and stakeholders about their requirements for information and services.

3.5 There was a number of methods that agencies could use to assess efficiency. These included comparisons of costs and benefits, particularly for the different channels used for service delivery, and assessments of productivity, (such as the amount of time saved or reduced cost per transaction), or return on investment. To adopt an approach that realised efficiency gains, agencies needed adequate performance targets and indicators, and to have used these to measure and/or assess whether objectives were being met.

3.6 Agencies could use a broad range of possible methods to collect information that allowed them to measure the effectiveness of their websites and online services. These included, but were not limited to, the collection and analysis of web traffic³³ patterns, site visitor behaviour and site performance data; assessments of accessibility, usability and information accuracy; staff and client surveys that assessed satisfaction, usefulness and adequacy of information; and measures of timeliness.

3.7 As outlined in Chapter 1, the previous audit also assessed the adequacy of agencies' collection of information about their Internet services. Where relevant, ANAO has referred to findings of the previous audit on monitoring, evaluation and performance information. This audit focuses on differences or improvements in areas of common coverage, since the previous audit.

Business Case

3.8 Developing a business case should be the agency's first step in considering delivery options for any service, as it underpins the decision and any cost-benefit analysis, and it can be the focus for later evaluations and audits. Once the service is implemented, agencies can revisit their business case to consider whether the service delivered as intended, and whether it did so efficiently and effectively. This applies whether the service is provided through the Internet or through other service delivery channels.

Website redevelopments

3.9 ANAO found that all agencies selected in the audit developed a project plan or strategy document that directed the most recent redevelopment or major redesign of their website, even though they had not, in all cases, specifically called it a business case. These documents covered a varying

³³ Web traffic is the measurement of the number of users that visit a website.

number of the elements we expected to find in a business case, although none had thoroughly addressed all of the issues.

3.10 During the audit, ANAO noted that some agencies also considered continuous enhancements of their Internet presence as maintenance or 'business as usual', rather than as specific projects. These agencies indicated that they did not see a need to develop complete business cases for these enhancements, often because they were part of the normal day-to-day work of the website team or section and did not receive additional funding.

Online services

3.11 All agencies also developed an adequate business case for the online service selected. Two of these were the Budget proposals prepared to obtain Cabinet approval and funding for the service. ANAO noted that these were the larger, more costly projects, *HealthInsite* and the WW2 Nominal Roll, which involved developing a portal or a separate website and database.

3.12 Depending on the size of the project, and prior to making the decision, or developing budget proposals to obtain funding, some agencies conducted feasibility or project definition studies to determine whether it was feasible to deliver the service online. Many agencies developed implementation strategies for the project that included more detailed analyses of the development.

Consulting users

3.13 To provide effective services, given the investment required for websites and online service delivery, agencies needed to ascertain what information and services citizens and businesses wanted, and what they would actually use, before determining solutions and committing funds to these. This raised a number of issues for agencies, such as the type of site that best suited agencies' business needs as well as the needs of their users; how adaptable was the site; and what attention agencies should give it.

3.14 As noted in Chapter 2, most agencies identified and consulted the likely users of the proposed online services to determine whether they were what the users required. Two agencies developed the online services because users requested simpler means of accessing services, or required a particular service. This contrasted with the previous audit, which found that fewer than half of the agencies conducted user research in planning their online services.

3.15 However, a number of agencies had not consulted their clients before commencing the redesign or redevelopment of their websites to ensure that they would be providing what the clients required. ANAO noted that agencies were more likely to obtain clients' views after the development, by involving users in testing the design or by obtaining their comments after the launch of the new site.

3.16 National Archives was an example where clients were consulted before the website redesign commenced.

National Archives Consultation with Users

National Archives conducted an off-site user study to identify the types and levels of service that would best assist customers, before redesigning its website. The study included mail out and online questionnaires and a follow-up phone survey of a sample of the questionnaire respondents. Customers suggested possible improvements that could be made to aspects of the website, including the customer service sections.

Source: National Archives.

Objectives

3.17 ANAO's previous audit reported that none of the agencies selected in that audit defined clear objectives and associated performance indicators for their existing websites. In contrast, ANAO found that all agencies included in this audit specified objectives for their websites in their business cases. These were usually linked to the agency's outputs and outcomes framework. ANAO also found that all agencies outlined objectives for the online service in their business cases, but these were different to the objectives of the websites.

Objectives of websites

3.18 ANAO found that the aims and objectives set for the website itself were mostly aligned with the agency's role and functions, especially in relation to service delivery. As well, a number of agencies linked the website's objectives to the corporate directions and objectives set out in their corporate plan, business plans and/or IT strategic plan. The following good example of this was, again, National Archives.

National Archives Portfolio Budget Statements 2004–05

Outcome: A national archival collection, preserved and accessible for all Australians; and the creation and management of Commonwealth records that support accountable government.

Output 1.2: Develop, manage and promote a visible, known and accessible national collection that engages and informs the community; and foster appreciation of the role of archives in society.

Corporate Plan 2004 to 2006

Objective: Serving our public, by enhancing awareness of the national Archives, its role and collection, and increasing public engagement with the National Archives.

Strategic priority: Increase the capacity of IT systems, notably RecordSearch and our websites, to provide self-service to the public.

Online Action Plan

Website objective: Provide as many services as appropriate to the public and government agencies, including access to records, through the website without requiring prior contact by other means.

Source: National Archives.

3.19 ANAO found that agencies specified similar objectives for their websites. These were mostly structured around the two common themes of: providing information and services to the public and other government agencies, and assisting the agency's staff and supporting its business objectives. In order to reduce agency administrative costs, ANAO noted that some agencies also had an objective related to promoting the public's or client's self-reliance in searching electronically for information.

3.20 In contrast, ANAO noted that the objectives of the most recent website redevelopments were mainly related to issues affecting the website's usability and functionality. These issues included meeting common branding or other government requirements and standards, and improving accessibility as a result of testing the site or from clients' comments.

3.21 A number of agencies stated that their website redesign was aimed at improving its effectiveness by making it more relevant to users' current needs. Some also indicated that the redesign improved the efficiency of the website, by ensuring it could quickly and easily reflect changes in the agency's business directions without major rewriting, or restructuring, of the content.

3.22 One agency also considered that its redevelopment would provide management information on use and service preferences to enable more informed decisions on future redevelopments. Another aimed to provide ways for more cost-effective client service, by encouraging clients to use online services rather than contacting the agency by telephone or in person.

Objectives of online services

3.23 Agencies specified different objectives for their online services. These included: providing simpler processes for clients to inform the agency of changes to information required for entitlements or to purchase items securely; improving the accuracy of information obtained by agencies; and enabling wider access to information held by agencies. A number also indicated that an objective of the online service was to provide efficiencies within the agency.

3.24 All agencies stated that providing the particular services online made them more accessible for rural and regional communities. Some agencies' objectives also included meeting government requirements, minimum website standards, and better practice guidelines for online service delivery.

3.25 The following Centrelink example shows where an online service was developed with a number of objectives.

Centrelink's Objectives for the Update Family Income Estimate Service

Centrelink established a number of aims for its Update Family Income Estimate Service (UFIES). The main objectives of UFIES were to provide an additional way for families to revise their family income estimate so that they were less likely to face debts at the end of the year, and to reduce some of the existing demand on Centrelink's call centres. However, it also designed the service in a way that allowed the agency to test the technology required to provide such online services to customers, before developing further services. In addition, Centrelink aimed to explore customer behaviour on the Internet by introducing this service to a limited number of customers at first, before making it available to all customers. In this way, the agency used its investment in developing UFIES to meet a number of objectives.

Source: Centrelink.

Benefits to the agency and to clients

3.26 ANAO found that agencies identified the benefits of their websites and online services, both to the agency and to users. Some also consulted clients and stakeholders to determine what they considered to be the benefits. The potential benefits of online service delivery were, as expected, closely aligned with the objectives set for websites and online services outlined earlier.

Benefits to the agency

3.27 Agencies saw the potential benefits of their websites as reduced costs, particularly in having a lower cost means of communication, and the more efficient and cost-effective delivery of timely and relevant information and services to clients and stakeholders. Benefits to agencies' staff included many of the same benefits as external users, particularly the wider availability of government information. One agency indicated that having a website enabled agency managers to take advantage of the latest and best communications technology and electronic facilities, which enabled them to improve services.

3.28 The expected benefits of online services also included savings in administrative time and costs. These included: reductions in raising invoices and remedying inefficiencies that caused incorrect payments; time spent on the phone to change customer details; time taken to assess claims likely to be ineligible or rejected (which led to cost savings in application preparation time, checking or appraising); and error rates in applications. They also included anticipated lower costs of transactions and reduced demand on call centres.

3.29 Generally, agencies defined the potential value to government of online service delivery as being able to assist more clients within the current budget; provide improved services to a wider audience; and reduce the cost of service provision.

Benefits to clients

3.30 ANAO found agencies considered that the main benefits to the clients who used agencies' websites were that it gave them increased, easier and more efficient access to large volumes of government information, including information about the agency and its services. The website was available to clients 24 hours a day, 7 days a week and it could provide reductions in the time and costs involved in communicating with agencies.

3.31 Websites and online services also enabled access to information and services that would not previously have been available, or would not have been cost effective or efficient to provide through any means other than the Internet. One example was the WW2 Nominal Roll. The major benefit of this service was that it made information about each individual who served in WW2 accessible to all family members and to the population as a whole, for a range of different needs.

3.32 Some agencies also stated that there would be intangible benefits of providing online services. Such benefits included increased client satisfaction with the agency, and decreased indirect costs to clients who used the online service. However, they also stated users' cost savings were difficult to determine.

3.33 ANAO found that a number of agencies researched and surveyed their clients and stakeholders, to ascertain how they would benefit from the website and online services. Clients generally saw the main benefits to themselves as having more choice, and greater control over, how and when they communicated with the agency, and access to a much greater range of information than was previously readily available.

Benefits of the website redevelopment

3.34 ANAO found that agencies identified the potential benefits of their most recent website redevelopments, and that these were well aligned with their objectives. They mostly related to making the website more accessible to users and more efficient for agency staff, by improving flexibility and performance, and reducing the work required to keep the website up-to-date.

Costs

Website redevelopment or redesign costs

3.35 ANAO found that all agencies estimated the cost of their most recent website redevelopment or redesign, mainly to obtain their executive's approval and funding for the project. Most also tracked and reported the costs throughout the term of the project.

3.36 ANAO noted that these costs varied greatly across agencies. The variations were due to the projects being at different times over the past four

years, the quite different magnitudes of the design changes involved, and the inclusion of a range of different items by agencies. These meant that the costs were not comparable, and data were insufficient to assess whether cost differences were related to website maturity and/or agency size.

3.37 For example, one small agency's redesign and rebuilding of its website, which included a new front page and templates, cost \$16 000 in 2000. In comparison, a much larger agency's website redevelopment had a project budget of \$1.1 million in 2000–01. However, this project provided a new format for delivering content and navigating the website, and supporting structures and processes to meet *Government Online* requirements and to enable secure identification and authentication of users.

3.38 In another large agency, the more recent redesign of the website proceeded in two stages. The first stage was completed by June 2004 at a cost of \$35 000. This involved a redesign of the website's appearance, including common branding. The second stage, which commenced in July 2004, entailed a review of the content and structure, and was estimated to cost \$186 000.

3.39 ANAO also noted that one agency drew on the experience of other departments that had redeveloped websites, to estimate the cost of its 2003–04 website redevelopment strategy. Using the information obtained from these departments, it estimated that the usual cost of such a redevelopment in agencies of a similar size delivering similar services was in the range \$400 000 to \$550 000. The agency then estimated that its own redevelopment project would cost around \$460 000, as outlined in Table 3.1.

Table 3.1

Indicative estimate for the cost of a website redevelopment

Elements	Estimated Cost \$
Information system hardware and/or software	60 000
Develop requirements and conduct research to guide website design	60 000
Develop graphical design for website and produce a test model	50 000
Further research to finalise website design and content	70 000
Useability testing	80 000
Evaluation	40 000
IT branch involvement	50 000
Other costs in implementing changes (external editors, authors and webmasters)	50 000
Total	460 000

Source: Selected agency.

3.40 While this cost estimate was useful to the agency concerned, ANAO noted that it probably would not have universal application. ANAO also observed that this estimate was not necessarily representative of the costs of all website redevelopments, as costs will obviously vary depending on the scale of the project. For example, the estimate did not include the capital cost of purchasing a new content management system, nor the salaries of the staff in the area responsible for management of the website. In addition, the cost of new hardware and software purchases were not included, as they are not usually required for website redevelopments where the infrastructure is already established.

Development costs of the online service

3.41 ANAO found that all agencies estimated development costs in business cases or Budget proposals for online service projects. Some recognised the difficulty of obtaining accurate cost estimates, and whether additional funds would be available if required. Some also indicated that they incurred unforeseen costs, which were identified during implementation of the projects.

3.42 ANAO noted that amounts and types of development costs included by agencies in their business cases varied, as expected, according to the types and sizes of projects. Most original budgets included estimated costs for:

- data collection and research to inform the development;
- purchase of infrastructure (hardware and software);
- design and development of the online service;
- IT consultants used in the design and development, and
- salaries of the agency development team staff (drawn from the website team, business area and IT area) and administration.

3.43 Some agencies also included costs for prototype testing or for evaluation using consultants, user assurance testing, or marketing.

3.44 The difficulty of obtaining accurate cost estimates was recognised in one agency. In this case, the agency provided for additional funds to be made available if needed. The budget increased due to variations in project scope and because of technical issues.

3.45 One agency also had some additional costs that were not included in its estimates. These included the costs for testing the service in a different IT environment, additional IT support needed for the increased availability of the service, and an external legal review. ANAO considers that agencies can learn from this experience the need to make provision for unanticipated development costs, such as changes in customer support needs, and conducting extensive testing.

Funding for the online service

3.46 Two agencies submitted budget proposals to obtain funding for their new online services. Two other projects were funded following provision of their business cases to senior management and executive levels. In the other two agencies, the business area developing the service was restricted to using its current budget.

Recurrent costs of the website

3.47 In its Better Practice Guide, ANAO indicated a range of costs that were typically associated with Internet service delivery. Along with the specific IT and other costs associated with the Internet, these included the costs for staff, such as salaries and staff overheads, office services, administration, desktop and communications, and property.

3.48 Fully costing a service or product involves identifying all activities and the associated resource costs in each main process and in its supporting activities and tasks. Generally, it is only necessary to cost service delivery to activity level, as this is normally the lowest level where resource use is reasonably measured, either through workload data or by recording staff effort.

3.49 ANAO noted that agencies had not conducted activity based costing of their websites, and their approaches to costing varied widely. Agencies indicated that they had difficulties in estimating the total costs of maintaining the website, because time spent by staff, other than those with direct responsibility for the website (such as content managers), was not monitored.

3.50 Initially, some agencies were able to provide quite detailed cost estimates, while others could only provide basic estimates. While ANAO did not access each agency's databases to confirm or check the costs provided or the methods used to determine the costs, ANAO subsequently worked with the agencies in attempting to obtain comparable cost estimates overall.

3.51 The major item in most agencies' recurrent costs of their websites is salaries. All agencies included in their estimates the salaries and related costs of staff working in the area directly responsible for management of the websites. However, few agencies could provide estimates for the salaries and related costs for staff in other business areas who provided content for the website, or for IT staff. Consequently, these costs were excluded.

3.52 ANAO noted that DVA was one of the few agencies that included in their estimates of website recurrent costs, the costs for time spent by staff in other business areas to provide content for, or to modify, the website. This was obtained by the internal auditor using a survey of all staff when conducting a recent review of the costs of DVA's Internet and Intranet.

3.53 Agencies' estimates of the current annual costs for their websites are shown in Table 3.2.

Table 3.2

Estimated recurrent annual costs of agency websites

Agency	A	B	C	D	E	F
	Stage 1–2	Stage 1–2	Stage 2–3	Stage 2–3	Stage 3	Stage 3
	\$	\$	\$	\$	\$	\$
Salaries (a)	113 100	327 500	534 000	482 000	250 700	171 300
Administration (b)	27 500	14 700	110 000	n.a.	64 700	14 900
IT support and maintenance (c)	72 600	106 800	270 000	636 600	273 000	8 000
Total	213 200	449 000	914 000	1 118 600	588 400	194 200

Source: Selected agencies. Costs are rounded to the nearest \$100.

n.a. not available

Notes:

- a. These figures include salaries and related costs for staff in the area managing the website. Salaries and related costs for staff in other business areas who provided content for the website, and IT staff, are excluded, as not all agencies could provide this information.
- b. Administration costs include the costs of web statistics reporting, staff training, office services, travel and incidentals.
- c. These figures include the costs of the support and maintenance of hardware and software that supported websites, and in some cases, are the costs of website hosting (which included IT maintenance and support). Website redevelopment or redesign costs were excluded, as were the costs of hardware and software purchases required to maintain the website.

3.54 The direct Internet costs are those related to the purchase, operation and maintenance of the IT equipment and the support provided by the agency's IT area. Agencies provided only limited information on IT costs, particularly the costs of hardware and software for the operation of the website, and, where these costs were provided, most were relatively small. Only one agency included in its estimate the capital costs of the purchase of hardware and software required to maintain the website. These costs were excluded from the estimate to enable comparison across agencies.

3.55 ANAO noted that websites in agencies at similar stages of Internet service delivery displayed wide variations in costs. There were noticeable differences in the magnitudes of costs across all areas (salaries, administration, IT support and maintenance). However, it was not apparent whether these differences were related to the stage of website development and/or the size of the agency, or to other factors not identified. As well, there was insufficient comparable data to determine whether cost differences were related to varying degrees of website efficiency and effectiveness.

3.56 The two small agencies reported the lowest overall cost estimates, with one being assessed to be at Stage 1–2 of website development, and the other at Stage 3. However, the highest costs were reported by the two agencies that ANAO assessed as moving from Stage 2 to Stage 3 of Internet service delivery. These were both medium-sized agencies. The latter agencies both reported high salary costs and high IT costs. Their total recurrent costs were also higher than the costs of the websites in the two large agencies, one of which was already at Stage 3.

3.57 ANAO noted that AGIMO developed a Demand and Value Assessment Methodology to assist agencies to determine the value and demand for online services. This included advice and guidance on costing online service delivery. ANAO considers that agencies would find this methodology useful for estimating the costs of their websites. ANAO has included in Chapter 4 a recommendation that agencies include costs in developing performance indicators for their websites.

Recurrent costs of online services

3.58 The recurrent costs of the online services selected in the audit, where available, varied with the size and type of service. They also varied according to the items agencies included as ongoing costs.

3.59 Agencies with estimates of recurrent costs included the costs of support and maintenance for the service, such as the salary and administration costs for staff providing assistance to users and processing amendments, and support provided by the IT area. Others also included the cost of regular revisions of the service.

3.60 The two services that involved the maintenance of separate websites, one of which included updating a database, had the highest recurrent costs. HealthInsite's budget allocation for each of the financial years 2002–03 to 2005–06 was more than \$1.4 million. The ongoing costs for maintaining the WW2 Nominal Roll website and database were estimated by DVA as approximately \$600 000 per annum.

3.61 ANAO noted that two agencies could not provide estimates of the recurrent costs for the support and maintenance of their online service. One stated it did not differentiate any work done on the service from its usual website maintenance work. The other indicated that it did not estimate the costs of maintaining and enhancing its online service because such work was part of usual activities, and costs would be small.

Cost-benefit analysis

3.62 Cost-benefit analysis is used to measure the relative costs and benefits of many programs and applications, including those delivered through the Internet. The methodology involves estimating the costs for each individual

application, then estimating who benefits from the application and how much that benefit is worth. While this methodology will only measure one aspect—the relative comparison of cost to benefits, or cost effectiveness—it is useful and should be a priority for agencies developing proposals to deliver services online.

3.63 In the early years of online service development, there were both methodological and practical difficulties for agencies in estimating and achieving positive returns on investments in the Internet. Initially, agencies had high capital, software and application development costs. One difficulty was that many agencies did not keep records on the costs of each service but, instead, had these costs aggregated across services.

3.64 The use of cost-benefit analysis raises the issue of the discount rate and the time necessary for a return on investments. For cost-benefit analysis, agencies need information on the total costs, not only the transaction costs.

3.65 In addition, the cost per transaction for an online service is dependent on the adoption rate, which is the number of individuals within a target population who use the service. In the early years of online services, adoption rates were typically low but they have increased since then. This leads to the expectation that costs will outweigh benefits in the beginning but, as the numbers of Internet users increase, benefits will begin to outweigh costs³⁴.

3.66 ANAO noted that a broad estimate of the expected costs and benefits was generally sufficient to gain program approval for the services selected. The more costly the service, as in the case of both the WW2 Nominal Roll and *HealthInsite*, the greater the rigour that agencies applied to estimating costs. However, in these cases, a cost-benefit analysis was not completed.

3.67 This raises the question of the timing of a cost-benefit analysis. Such analyses for websites are difficult as many of the benefits of providing a website are intangible and hard to measure. In addition, such websites are often developed as a result of government decisions to provide particular services to citizens on the basis of being a public good rather than as cost savings measures.

3.68 For example, Health and Ageing indicated that the main benefit of *HealthInsite* was providing the public with a single Internet entry point to reliable and accurate health information. This reduced the likelihood of people using the Internet and finding information of questionable quality that may cause them harm. Such benefits are difficult to assess.

³⁴ Genie N L Stowers, *Measuring the Performance of E-Government*, IBM Centre for the Business of Government, March 2004, p. 33.

3.69 ANAO considers that a cost-benefit analysis is more important when the website is one of a number of methods of delivery of the particular service, and where the service is designed to provide quantifiable benefits, such as reductions in administrative costs to the agency, and/or reduced costs to clients. ANAO noted that some audited agencies could have completed cost-benefit analyses for their online services, since they had estimated both the costs of providing the service and the benefits to be attained and, in some cases, had estimated the value of these benefits.

3.70 In summary, ANAO considers there are occasions when conducting a cost-benefit analysis is necessary, but also others where it is desirable but difficult. However, even in these cases, the costs should be estimated and measured.

3.71 ANAO found that only one agency, Centrelink, had undertaken a cost-benefit analysis, based on anticipated levels of service adoption and reduced call centre demand, as part of the development proposal for the Update Family Income Estimate Service.

Centrelink's Cost-benefit Analysis

Centrelink considered four scenarios when completing the cost-benefit analysis for the development of UFIES, using an annual volume of 1.65 million family income estimate transactions. Scenario one was not to establish an online service. Scenario two was based on low use of the service, Scenario three was medium use and Scenario four was high use of the service. The worst-case scenario showed an expected break-even point on the program investment over two years. Centrelink's analysis showed that the costs under all scenarios were lower than Scenario one.

Source: Centrelink.

Recommendation No.1

3.72 ANAO recommends that, in planning and developing proposed online services, agencies support proposals with suitable cost-benefit analyses.

Austrade response

3.73 Austrade agrees that in planning and developing proposals for online services, agencies should support proposals with suitable cost-benefit analyses. The extent of such analyses should be adapted to suit the scale of the project under consideration. For example, in the case of Austrade's EMDG online eligibility questionnaire a comprehensive cost-benefit analysis was not considered cost-effective due to the straightforward function and very low cost of the service.

Centrelink response

3.74 Agreed.

CSA response

3.75 Agreed. CSA is piloting its first interactive online application this year. The selection of the specific applications was based on a full cost-benefit analysis of the options. In addition, CSA is integrating the enhancement of online applications with its normal system development release cycle.

DVA response

3.76 Agreed.

Health and Ageing response

3.77 Agreed.

National Archives response

3.78 Agreed. National Archives notes the difficulties in conducting cost-benefit analyses. While it is possible to measure the costs of providing online services, the demand for those services can be difficult to estimate accurately.

Finance response

3.79 Agreed. As noted in the ANAO report, AGIMO released a Demand and Value Assessment Methodology in 2004 to assist agencies develop a robust cost-benefit analysis. The methodology was benchmarked against other known methodologies and was tested with agencies prior to its release. Core components of the methodology address the costs, benefits (both social and financial) and return on investment aspects of value for e-government services.

3.80 The cost and benefit portion of the methodology is supported by an Excel or Lotus Spreadsheet which draws on international best practice and is compatible with Finance budget estimate processes.

Opportunities for improvement

3.81 ANAO suggests that to improve their measurement of the efficiency and effectiveness of websites and online services, agencies:

- quantify the benefits and costs of their websites; and
- consider using AGIMO's Demand and Value Assessment Methodology to assess websites and online service delivery.

4. Measuring the Performance of Internet Services

This Chapter examines the methods used by agencies to measure the performance of their websites and Internet-delivered services, and how they used their measurement to improve and report on the efficiency and effectiveness of their Internet services. Better practice examples and opportunities for improvement are identified.

Introduction

4.1 Measurement of the performance of Internet services depends on agencies collecting a range of data through monitoring and evaluation. Once agencies have the data, they can use it to:

- calculate the cost per unit of service or other productivity measures;
- compare budgeted/planned performance to actual performance;
- compare performance over time;
- compare performance to agency or established standards, if they exist;
- measure whether they are achieving targets; or
- identify areas needing improvement.

4.2 As noted earlier, the ANAO's previous audit concentrated on assessing how agencies were monitoring and evaluating the performance of their websites and online service delivery. That audit found that performance information about the website was largely confined to web usage statistics and ad hoc user comments or feedback on the site's technical performance or content accuracy. A number of agencies also conducted some customer satisfaction surveys, external consultations and other market research.

4.3 In this audit, ANAO also sought evidence that the selected agencies monitored the performance of websites and online services against their overall objectives, and we evaluated the methods they used to do this. ANAO also assessed whether the agencies monitored and evaluated their most recent website redevelopments to determine whether they achieved their objectives and any performance targets.

Performance measurement

4.4 ANAO considered that to measure whether websites and online services were meeting their objectives and performing effectively, agencies needed to identify, among other things, their audience, estimate the likely demand for services, and specify targets for achievement.

4.5 Clearly, the potential audience for government websites and online services is restricted to those who have access to and the skills to use the Internet. As noted in Chapter 1, over 80 per cent of people aged 16 years and over currently have access to the Internet from any location. However, Internet access is lower for some groups, particularly older people, who comprise a large proportion of the clients of government agencies. Some people and businesses have only limited or reduced Internet access, as they use older computer technology or a modem/single telephone line, or live in an area with less coverage.

4.6 Therefore, it is important for agencies to improve their understanding of their target audiences' information and service needs, and to measure and provide reliable estimates of likely demand. These steps require agencies to measure Internet adoption and take-up, equipping them to develop more efficient and effective approaches to online service delivery.

Targets

Websites

4.7 Agencies mostly indicated that their websites' main target audiences consisted of current or prospective clients or customers, and other stakeholders, along with staff from other government agencies.

4.8 Some of the agencies defined a more diverse general audience for the website, such as service providers, community groups, employers, and users of other sites with links to the agency's website. For example, National Archives, which had a wider client group due to the nature of its functions, specified the general public among its primary audience. A number of agencies also included specific groups among their website audience, such as people living in remote and regional areas, people from non-English speaking backgrounds, older people, and those with disabilities.

4.9 In other words, and as expected, agencies defined their website's target audience in relation to the agency's role. ANAO noted that a number of agencies had considered their clients' needs by stating that they would use online services to supplement other channels for service delivery, rather than replace them with the Internet.

4.10 ANAO found that most agencies had not set performance targets for their websites, which made developing measures for reporting on performance achievements difficult. Only two agencies set targets for their main website, while a third agency set targets for a website that users selected to access an online service.

4.11 One agency set targets for the quantity and quality of website usage that enabled it to determine whether the website was meeting the agency's

objectives. To determine whether it was meeting the objective of increasing the numbers of clients using the website, Austrade set a target of achieving over 1.4 million website user sessions in 2003–04. To enable measurement of the objective that its clients were satisfied with the agency's services, including those provided through the website, the quality target was to achieve a 90 per cent satisfaction level.

4.12 Another agency set targets for its website's availability, which specified that the website would be available 98 per cent of the time and that the agency would notify the public of any planned downtime one day in advance. While ANAO considered that these targets were commendable, it noted that they were not directly related to the agency's current website objectives. In this case, ANAO suggested that the agency develop objectives for its website.

Online services

4.13 ANAO found that agencies identified their online service's target audience. Some agencies specified the target groups and likely users but had not estimated likely demand, while others had calculated the likely demand but had not set targets.

4.14 Three of the online services, eShop, Health*Insite* and the WW2 Nominal Roll, were designed to be available for any member of the Australian population. However, the services were focused especially on particular groups such as veterans, teachers and students, family and local historians, academic researchers, writers and publishers, staff of government agencies, record keepers and archivists, health professionals, health service consumers and service providers.

4.15 The other three services were designed for particular current or prospective client groups of the agencies, and as such, the likely audience was more restricted.

Demand and take-up

Websites

4.16 ANAO found that, while the agencies could identify the total audiences for their websites and Internet-delivered services, few had quantified the likely demand for these services. This meant that agencies could not use their statistics on actual usage of the website and specific services to determine take-up rates among the target audiences.

4.17 Those agencies that obtained some indication of take-up had surveyed samples of their total clients. For example, through a survey conducted in 2002, National Archives found that about one third of its off-site customers had used the Internet to find out about its services. DVA and Centrelink used their client satisfaction surveys to estimate the proportion of clients that had access to, or

used, the Internet. These found that while client Internet use varied depending on age, overall usage rates were low.

Online services

4.18 As was the case with agency websites generally, most agencies could not assess whether take-up of online services met their expectations of the demand for these services. A summary of agency assessments of audiences for their online services, and their estimates of the likely demand and proposed targets, are shown in Table 4.1.

Table 4.1

Agency assessments of demand for the selected online services

Agency and Service	Audience	Likely Demand	Target
National Archives–eShop	General public	Not quantified	Not quantified
DVA - WW2 Nominal Roll	General public	300 000 enquiries annually	Not quantified
Health and Ageing–Health <i>Insite</i>	General public	Not quantified ³⁵	Over 4000 users per day in 2003–04
CSA–Parents change of address form	CSA clients	Not quantified - although agency had data on numbers of clients	Not quantified
Centrelink–Update Family Income Estimate Service	Centrelink family benefit clients	Not quantified - although agency had data on numbers of clients	Around 30 per cent of customers
Austrade–EMDG questionnaire	Small to medium sized businesses	Based on EMDG scheme applicants, approximately 4000 in 2002–03	Around 40 per cent of applicants

Source: Selected agencies.

4.19 If an online service is to be effective in reaching its target audience, it must be marketed to relevant clients and community or business groups. The level of demand depends on whether the agency publicised the program. For example, Health and Ageing and National Archives informed the community about the availability of Health*Insite* and eShop respectively, and both included publicity funding in their business cases to promote the programs. Centrelink initially intended to advertise the availability of its online service, but it then deferred this until it was convinced that the system could support the level of expected usage. While initial demand for the service was less than expected, Centrelink found that usage increased following limited promotion of the service, for example, in customer letters.

³⁵ Health and Ageing indicated that successive ACNielsen studies of Australian online health use were used to help determine likely demand for Health*Insite*.

4.20 ANAO suggests that agencies identify the audiences for their online services, assess the likely demand and include estimates of proposed targets for service delivery. This would assist agencies to develop performance indicators and evaluate whether the services are meeting their requirements.

Monitoring methods

4.21 In general, all agencies selected in this audit used a broader range of methods to collect information for monitoring the performance and effectiveness of their websites and online services than those included in the previous audit, conducted one year earlier.

Web usage statistics and user feedback

4.22 Agencies extracted, regularly analysed and used, a greater range of web statistics to monitor usage and effectiveness of their websites than found previously. They all collected client comments and feedback from emails and online surveys, focus groups and satisfaction surveys. ANAO noted that one agency also regularly surveyed staff to collect information on how often they used the website, the sections they accessed most, what other services could be offered, and what could be improved.

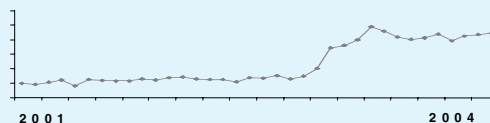
4.23 Agencies used this information to monitor trends and report on performance, and identify problems or difficulties that users had with the website. Users' comments were particularly helpful in assessing the accessibility and usability of the site, and pinpointing areas that required improvements. Some agencies also monitored responsiveness and timeliness of the service provided by the website.

4.24 Examples of monitoring and trend analysis of website statistics were found in all agencies. CSA was one example.

CSA's Monitoring of Website Visits

CSA monitored the use of its website from monthly web statistics reports. These provided a range of information, such as the number of visits and page views, the amount of time spent at the site, the most downloaded files, and where users entered and exited the site.

CSA retained these statistics in a spreadsheet and regularly graphed and analysed them to determine trends in website usage. Analysis of the trend data showed a sharp increase in the number of visits after June 2003. This indicated to CSA that a promotion of its products, including those available online, sent to its clients in mid-2003, had stimulated use of its website.



Source: CSA.

4.25 In contrast to the previous audit, ANAO found that some agencies recorded user comments in a special database. This enabled the agency to monitor trends over time, and to provide statistics for reporting on the numbers of compliments and complaints about the website received by the agency. Trends in user views were also used as an indicator for reviewing particular sections of content on the website.

4.26 ANAO noted that information obtained from monitoring and research provided the basis for the most recent redesign or redevelopment of the website in a number of agencies, but mainly for increased usability and accessibility. Two agencies also obtained information on the cost per client contact for the different channels of service delivery used, which assisted in monitoring the efficiency of the website.

Surveys

4.27 Each agency surveyed its clients annually to determine their satisfaction with its services. Some agencies kept a questionnaire on their website for users to provide regular comments. Others conducted occasional online surveys to develop an understanding of their clients' needs and preferences for communication with the agency, or to measure user attitudes, difficulties and expectations when accessing and using the website. While online surveys obtained the views of website users who were willing to respond, they collected data from only a proportion of users. Nevertheless, these surveys can assist agencies to identify problems or difficulties users have with the website.

4.28 While respondents to these surveys provided many suggestions for improvements, they were generally satisfied overall with the websites. Agencies' survey results also generally found that online services were perceived to be easy to use and accessible by all target groups, with some exceptions, such as users with little experience of the Internet. Agencies used survey results to fix problems and to improve the appearance and content of their services, to make them more usable and accessible for their clients.

Client charters

4.29 ANAO found that most of the agencies had a client charter available on their website, which generally outlined the service that the agency's clients could expect when dealing with the agency, including service values and timeliness standards. Most charters also listed the ways that clients could contact the agency to make enquiries or complaints about the service, including through the website, and how they could provide their views, through calling, writing or sending an e-mail.

Benchmarking

4.30 ANAO found the following two examples where agencies had compared the performance of their websites with that of other agencies or other comparable sites. These were Austrade and Health and Ageing.

Austrade's Competitive Site Review

In July 2002, Austrade staff compared Austrade's website with eight other competitive sites in Australia and overseas.

The review was designed to evaluate and identify the website's strengths, as well as areas requiring further development. It assessed the website as informative and relevant. Key areas highlighted for improvement were implementing sites targeted at particular customers, enhancing the appearance of the website, and identifying online tools and interactive services that were aligned with Austrade's business objectives.

Source: Austrade.

Health and Ageing's Benchmarking Exercise

Health and Ageing benchmarked *HealthInsite* in 1999. This compared the level of resourcing of *HealthInsite* with that of four government sites in other countries. These included the Canadian Health Network, Medline Plus and Healthfinder in the United States of America, and National Health Service Direct Online in the UK.

While Health and Ageing had not repeated this comparison more recently, the 1999 benchmarking exercise showed that the *HealthInsite* website was less costly and more efficient for what it provided in comparison to other health Internet gateways at that time. Health and Ageing stated that the time and costs associated with the development of *HealthInsite* compared very favourably with other national health portal initiatives. The website was ready for launch in approximately 70 per cent of the time needed to set up either Canada's or the UK's equivalent site, and it cost 15 per cent less than either of these sites.

Source: Health and Ageing.

4.31 ANAO noted that agencies used a variety of methods and tools to measure website usage. This made it difficult to accurately compare the performance of one government website to another. In addition, the types of government programs or services agencies provided varied widely, and they varied even within a single agency. However, ANAO supports agencies' attempts to compare their websites' efficiency and effectiveness, provided what is being assessed, or measured, is sufficiently similar to be confident about its usefulness.

Evaluations

4.32 While all agencies monitored their websites and online services, most were not generally conducting regular or periodic evaluations. Many agencies had an evaluation strategy for their most recent website redevelopment or redesign, but few had conducted an evaluation by the time of fieldwork for the audit, although most planned to in the future.

4.33 ANAO also found that few agencies included an evaluation plan in the business case for the online service. Some stated that an evaluation of the service's effectiveness was scheduled after its implementation. One agency indicated to ANAO that it decided not to conduct an evaluation of the online service due to the cost, which was more than the cost of developing the service.

4.34 This mirrors ANAO's previous audit findings, and remains a concern because the absence of agency requirements for evaluations of their websites and online services limits information about the success of agencies' investments in Internet services.

4.35 ANAO found that most agencies still did not have an integrated monitoring and evaluation policy framework to ensure a consistent approach. However, a number of these stated that they were currently developing evaluation policies.

4.36 One agency developed its *Websites Monitoring and Evaluation Policy* following the release of ANAO's previous report. This policy set out the roles and responsibilities of the website team and the sponsoring business units for monitoring and evaluation of the website and the services delivered online. It also outlined the types of information to be collected for monitoring, and the timing and process for periodic evaluations.

4.37 The few website evaluations found were focused on assessing their usability and accessibility, rather than evaluating the websites against set objectives. As noted earlier, agencies defined objectives for their websites, but the absence of evaluation meant that they did not have evidence that enabled them to determine whether the website was effective as a means of communication or service delivery.

4.38 ANAO noted some improvement, however, in that two agencies had evaluated service prototypes before they were put online, using consultants, internal staff and/or representatives of the target audience.

4.39 ANAO considers that agencies' online service delivery should be subject to the same rigorous review and evaluation as any other program or service delivery mechanism. This should cover both the content of information and services provided, and the means that are used to communicate them.

Recommendation No.2

4.40 ANAO recommends that agencies periodically evaluate their websites and Internet services to confirm that they meet the needs of both the agency and the clients.

Austrade response

4.41 Agreed. For example, Austrade has used its annual EMDG client satisfaction survey to identify the needs of its target audience (small and medium Australian exporters and emerging export businesses) including their satisfaction with the EMDG website. The information gathered from the survey influences website design and change.

Centrelink response

4.42 Agreed.

CSA response

4.43 Agreed. CSA has website monitoring systems in place and is currently formalising the data obtained from these systems to ensure appropriate performance and reporting is provided to the organisation. In the development of future online service applications, the evaluation of an online service is part of CSA's approach to cost-benefit analysis.

DVA response

4.44 Agreed.

Health and Ageing response

4.45 Agreed.

National Archives response

4.46 Agreed.

Finance response

4.47 Agreed. Improving government services for citizens is a core government priority. Government and citizens' expectations of government services are constantly changing. Assessing the various components of demand enables agencies to view a service from the perspective of citizens, business and community groups. Agencies need to offer a range of choices in service delivery channels but this creates new management challenges for agencies in delivering cost-effective, client focused services. Demand, take-up and their various influences are key to ensuring the delivery of efficient and effective programs and services. The impact and benefit of an Information and Communications Technology enabled service occurs only when it is used by the intended clients.

4.48 The Demand and Value Assessment Methodology is well placed to assist agencies in making those assessments. The demand assessment prompts the explanation of the business need and makes transparent the assumptions that underlie the rationale for the business case. The process involves assessment of the various components of demand, including: establishing the sources of demand; placing the demand in context with regard to the client; preferences for the proposed delivery mechanisms; and identification of any alternatives and impediments. The demand assessment concludes with a measurement of demand, forecasts and extrapolations based on existing usage and a determination of the intrinsic value of the service. Assessments can then be made as to whether the forecasted demand can be satisfied by the proposed program.

Using performance information

4.49 The previous audit found little evidence that agencies were systematically considering or using performance information collected through monitoring or evaluation of their websites, to improve online service delivery. In this audit, however, ANAO found that agencies were generally using the performance information collected about the website to improve the efficiency and effectiveness of their online service delivery.

4.50 As outlined in Chapter 3, agencies expected that the online services would provide better services to citizens or clients, and enable the more effective use of government information resources. Agencies also aimed to achieve greater accuracy and internal efficiency, as well as reduced transaction costs, through their online services. However, a number of agencies had not conducted any post implementation analysis of the actual benefits realised.

4.51 Most agencies had established a good understanding of their users' needs and whether these were being met by the online services. The following example of this approach was in DVA.

DVA's Monitoring of the WW2 Nominal Roll

DVA found that most user comments on the WW2 Nominal Roll related to the accuracy of information, such as missing records or errors in records like the wrong date of birth. Only around ten per cent of users who contacted DVA offered suggestions for improvements to the site. DVA staff checked the information, addressed errors where they could be verified, and personally contacted users to inform them of the results.

When website usage reports showed few users were taking advantage of the ability to print the veterans' service certificates from the WW2 Nominal Roll, DVA moved the print option from the bottom to the top of the page. This resulted in more Internet users printing veterans' service certificates.

Source: DVA.

4.52 In some agencies, improvements in agency operational efficiency included replacing labour intensive manual processes with electronic systems. Examples included providing services electronically, such as receiving and vetting eligibility for financial assistance online, with only the more complex cases dealt with manually, or converting support activities to electronic processing, such as purchasing publications through eShop. In one agency, the internal auditor carried out a review that indicated the agency was achieving significant efficiencies as a result of implementation of its online services.

4.53 ANAO noted that an agency's online services, primarily developed to assist its clients, also benefited staff within that agency as well as those of other agencies. For example, staff in one agency's call centres had better access to information so that they can communicate with members of the public more efficiently and more helpfully. eShop allowed information on recordkeeping procedures required by other agencies to be purchased more easily. Some agencies also relied on the web usage statistics about the online service to determine staff allocations. This enabled the more efficient allocation of resources in the agency during peak demand.

4.54 Even within the small number of online services selected, ANAO noted that agencies were moving to achieving more joined-up service provision, which benefits agencies as well as citizens. For example, the WW2 Nominal Roll developed by DVA also provided benefits for National Archives, in that the process enabled the records to be safely stored and more easily available for future reference. Health*Insite* brought health information available from a large number of other institutions in the health sector to a broader audience, including medical practitioners and health support groups, as well as to citizens.

Performance reporting

4.55 ANAO considers that an effective performance monitoring and reporting system is a key aspect of a well-governed agency. This system should be aligned with the agency's outputs and outcomes framework, and generate information for both internal and external performance management needs and external reporting requirements, such as for the annual report.

4.56 A sound approach to performance reporting involves clear, precise and well-chosen indicators. It contains a balanced set of measures, addressing all key aspects of agency performance, with accurate and reliable systems, methods and bases for reference or comparison of performance³⁶.

³⁶ ANAO Better Practice Guide—*Better Practice in Annual Performance Reporting*, 2004, p. 1, p. 7, available at <www.anao.gov.au>.

Performance indicators

4.57 Performance indicators establish a base against which to measure efficiency gains and take remedial action if progress is less than planned. Only two agencies developed specific indicators that measured performance against their website's objectives. These were Austrade and National Archives.

4.58 ANAO observed the following example of good practice in developing goals and performance indicators with targets linked to website objectives in Austrade.

Austrade had developed six goals for what its website provided in line with its objectives, and had identified the online products used to support these goals. It had also developed performance indicators to measure achievements. One example was:

Website objective: Providing a targeted entry and distribution channel for Austrade's key audiences.

Goal: Capturing customer leads and sales.

Support product: Online customer sites.

Performance measure: At least six overseas post sites operational by end June 2004.

Source: Austrade.

4.59 ANAO considered, however, that some agencies would have difficulty in determining appropriate indicators to measure website performance, because objectives currently specified for their websites were very general.

4.60 Three agencies had performance indicators for the online services selected in the audit. ANAO noted that the agencies with performance indicators for their online services were those with targets. One example was Health and Ageing, where indicators for *HealthInsite* related to the number of items available through *HealthInsite*, the number of users per day, the hit rate per day, and *HealthInsite*'s placement in the top ten health websites (by user count).

4.61 In general, this meant that three agencies had not identified how the success of the program would be measured, such as by meeting estimated targets, where these were set, or achieving reduced costs.

4.62 ANAO considers that, because the agencies selected had varied roles and offered different types of services to a range of users, they required different performance measures for their websites. For example, agencies whose clients relied on the services for obtaining entitlements, such as DVA and Centrelink, would need more sophisticated measures that incorporated different aspects, to agencies that offered more generalised services to a broader population, such as the National Archives. How they are expected to

measure their efficiency and effectiveness is directly related to their role, and to the specific segments of the population that make up their current and possible future customers.

4.63 ANAO suggests, however, that one alternative single, measurable objective for any government agency website could be:

- that clients or users are able to easily access information that is accurate, up-to-date, comprehensive, and compliant with privacy requirements, and as a result, clients have improved access to information at a lesser cost than with other service delivery channels.

4.64 Performance measures for effectiveness could include levels of website usage, accuracy of information and client satisfaction with the site, while efficiency measures would be cost per client interaction.

Recommendation No.3

4.65 ANAO recommends that agencies integrate measurement of their website's performance with overall measurement of service delivery, and:

- (a) develop indicators, including data on costs, for the performance of their online service delivery; and
- (b) compare these with similar indicators for other service delivery channels.

Austrade response

4.66 Agreed. This will ensure alignment with overall corporate objectives and outcomes required.

4.67 We would however see a difference between the measurement of the actual performance of the website (technical reliability and availability, number of visits, ease of navigation, compliance with standards, etc) and performance of online services delivered via the website. We see a benefit in measuring the performance of websites in their own right, as the channels for delivery of information and services and as a distinct business activity.

4.68 We agree on the need for development of relevant indicators, including cost data, and ongoing comparison between online and other delivery channels. In essence, the means of delivery should make no difference to the ability or obligation of the agency to evaluate performance and cost-effectiveness of services. Services delivered online should be subject to the same (or comparable) evaluation criteria as services delivered via other channels and should be equally expected to perform efficiently and effectively. In this case, the fact that the service is delivered online is only one element of the overall effectiveness of the service.

Centrelink response

4.69 Agreed.

CSA response

4.70 Agreed. CSA is currently developing a more formal set of objectives for its website. This will be supported by formalising the current range of existing performance indicators including client satisfaction, website usage and trends and ease of access.

4.71 CSA currently reports against the range of service delivery channels it provides and is integrating the web channel into this arrangement.

DVA response

4.72 Agreed.

Health and Ageing response

4.73 Agreed, where comparison with other service delivery channels is relevant.

National Archives response

4.74 Agreed. The National Archives notes, however, that its websites deliver a wide range of services and provide large amounts of information to diverse target audiences. Developing indicators and measuring performance for this range of services is challenging and requires considerable resources. The National Archives will continue to strive to improve the measurement of the performance of its e-government initiatives.

Finance response

4.75 Agreed. Adoption of the Demand and Value Assessment Methodology can assist departments and agencies to establish baseline figures for demand, benefits, costs and value and help to form the basis for later evaluations or audits. Establishing a baseline provides a basis from which efficiency and effectiveness can be measured. Regular reviews against targets will assist in measuring the success of programs in the short, medium and long terms.

4.76 The methodology provides for a consistent approach for Australian Government agencies to develop transparent and auditable propositions for assessment of demand and value. A consistent approach will also provide a better understanding of the progress of e-government implementations across the Australian Government sector.

Reporting

4.77 In most agencies, the area responsible for managing the website provided regular reports on the website to senior management and executive levels. These often contained:

- an analysis of the website usage statistics for the current month;
- trend statistics for the current year;
- commentary about website management activities, issues and achievements; and
- the results of any other monitoring, such as surveys.

4.78 ANAO noted that agencies with performance indicators and measures generally reported on their achievements in annual reports to Parliament. For example, Health and Ageing stated achievements against the performance indicators for *HealthInsite* in the Department's annual report.

4.79 Those that did not have specific indicators for the website tended to report on overall performance for all service delivery channels, or to include statistics on increases in total website usage as an indicator of effectiveness.

4.80 Increases in usage, based on analyses of web statistics, were also often reported as achievements for the online services. However, agencies often could not assess whether this meant the program was achieving its targeted or expected demand, because they had not set specific targets for the service. Also, agencies were unable to determine if the online service was more or less effective than the same service provided by phone or in person.

4.81 For example, Centrelink reported in its 2002–03 Annual Report that more than 86 000 family income estimates had been updated through UFIES since the service commenced. However, at the time of the audit fieldwork, ANAO noted that Centrelink had not identified the proportion of eligible customers that used the online service to amend their family income estimate. Also, it had not determined whether online users were more likely to make errors in their income estimates, thereby incurring an over- or under-payment, than those using other channels to update their income details. Centrelink stated that it intended to assess these aspects when it evaluated UFIES in 2004–05, and in response to the draft report, Centrelink advised that:

Centrelink's evaluation strategy includes a focus on family assistance payment outcomes. Centrelink will be checking to see whether or not customers using the UFIES have Family Tax Benefit reconciliation results which vary materially from those of customers using other channels to update their family income estimate.

4.82 Two agencies reported the successful implementation of the service as an achievement that met the initial objectives of their projects. DVA stated in its 2002–03 annual report that the launch of the Nominal Roll in November 2002 was an achievement. National Archives stated that ‘e-commerce successfully implemented’ was an objective that was met by eShop.

Opportunities for improvement

4.83 ANAO suggests that, to improve their measurement of the performance of their delivery of services via the Internet, agencies:

- identify the audience for their website and online services, and consult potential users about their needs;
 - assess demand for the delivery of services via the Internet, and specify targets for achievements against objectives; and
 - compare the performance of their websites with that of other agencies or sites, to assist in assessing whether the website is efficient and effective.
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Canberra ACT
10 February 2005

P. J. Barrett
Auditor-General

Appendices

Appendix 1: Australian E-Government Policies and Strategies

1. The Australian Government recognised the potential of online technology to improve service delivery in its 1997 *Investing for Growth* statement³⁷, which announced an Information Industries Action Agenda to foster development of information technology industries. This included a plan to establish the Commonwealth as a leading-edge user of technology by committing to deliver all appropriate services online by the end of 2001.
2. *Government Online—The Commonwealth Government's Strategy* was launched in April 2000, in pursuit of this commitment³⁸. The strategy highlighted some of the benefits to be gained by greater use of the Internet, such as enabling improved service delivery options to rural and regional communities. Under this strategy, all agencies were required to prepare an Online Action Plan by September 2000, stating what would be delivered online, and to set a timetable for delivery.
3. *Government Online* made clear that government online services were to provide information about agencies and their programs, and to permit transactions between Government agencies and members of the public or businesses. Internet services were to complement—not replace—existing written, telephone, fax and counter services, as well as to improve the quality, availability, responsiveness and consistency of those services.
4. At the same time, the Government assigned the key role of promoting and supporting government, business and community use of the online environment to NOIE.
5. By December 2000, over 90 per cent of Australian Government departments had established an Internet presence³⁹. In his opening address to the World Congress on Information Technology in February 2002, the Prime Minister confirmed that the 2001 target had been met. The Government's initiatives resulted in the recognition in 2002⁴⁰ that

³⁷ Commonwealth of Australia, *Investing for Growth*, Canberra, 1997, available at <www.dist.gov.au/assets/documents/itrinternet/investforgrowth>.

³⁸ Department of Communications, Information Technology and the Arts, *Government Online—The Commonwealth Government's Strategy*, DCITA, Canberra, April 2000, available at <www.agimo.gov.au/publications/2000/04/govonline>.

³⁹ National Office for the Information Economy, *Commonwealth Government Online—Progress Report*, NOIE, Canberra, December 2000, available at <www.noie.gov.au>.

⁴⁰ Booz Allen Hamilton, *The World's Most Effective Policies for the e-Economy*, London, November 2002, available at <www.e-envoy.gov.uk>.

Australia was one of the four leading nations in the western world in its use of e-business to provide Government services.

6. In its 2002 report on Australian Government use of information and technology, the Management Advisory Committee found that there was a growing demand for government to provide more integrated and interactive information and services⁴¹. In October 2002, in response to the Management Advisory Committee's recommendations, the Government established the Information Management Strategy Committee to provide shared leadership of cross-agency technology issues. The Government launched a new framework for e-government, *Better Services, Better Government*⁴², in November 2002.
7. The *Better Services, Better Government* strategy outlined the broad directions and priorities for the future of e-government in Australia, and sought to maintain the momentum of the achievements under *Government Online*. One of its key objectives was to achieve greater efficiency and a return on investment. It also stated that investing in e-government should deliver tangible returns, whether they take the form of cost reductions, of increased efficiency and productivity, or of improved services to business and the broader community.
8. These objectives signalled an emphasis on the benefits of government Internet services for the public and users, rather than earlier concerns with the provision of the technologies and services. They also flagged a more strategic approach to the business cases for developing services. With this shift came a greater responsibility for agencies and for program managers to clarify the purposes of programs and to think more strategically about the use of online services as part of program delivery⁴³.
9. In this regard, *Better Services, Better Government* stated that it was important for agencies to establish business cases for investments in changes to their operational and business processes enabled by the online environment, and to assess how they are progressing in terms of meeting the broad e-government agenda. This required regular reviews of progress against key performance indicators.

⁴¹ Management Advisory Committee Report No.2, *Australian Government Use of Information and Communication Technology*, October 2002, available at <www.apsc.gov.au/mac>.

⁴² National Office for the Information Economy, *Better Services, Better Government-The Federal Government's E-government Strategy*, NOIE, Canberra, November 2002, available at <www.agimo.gov.au/publications/2002/11/bsbg>.

⁴³ ANAO Audit Report No.30 2003–04 *Quality Internet Services for Government Clients-Monitoring and Evaluation by Government Agencies*, available at <www.anao.gov.au>.

10. The Australian Public Service Commissioner stated in 2003 that improvements in public sector service delivery over the past decade have been driven by a better informed, better educated and more demanding public, and improvements in technology, which increased the capacity of Commonwealth agencies to provide more immediate and responsive services. He stated further that the current environment is characterised by continued pressure for greater efficiency and effectiveness, rising community expectations for more convenient and sophisticated services, and issues that increasingly transcend agency boundaries⁴⁴.
11. Most recently, in July 2004, the Government released *Australia's Strategic Framework for the Information Economy*⁴⁵. This new strategic framework is designed to build e-government, ensuring the electronic delivery of public sector services and information across all tiers of government.

⁴⁴ Australian Public Service Commission, *State of the Service 2002–03*, APSC, Canberra, 2003, pp. 62–63, available at <www.apsc.gov.au/stateoftheservice/0203>.

⁴⁵ Department of Communications, Information Technology and the Arts, *Australia's Strategic Framework for the Information Economy 2004–06: Opportunities and Challenges for the Information Age*, DCITA, Canberra, July 2004, available at <www.dcita.gov.au/ie/framework>.

Appendix 2: ANAO Audit Reports on Internet Service Delivery

1. In 1999–2000, the ANAO conducted a cross-portfolio review of how government agencies were implementing Commonwealth policy on Internet use⁴⁶. This report affirmed the importance of promoting good practice in service delivery, whether through electronic or more traditional means. It also developed a model that categorised government online service delivery into four distinct stages, depending on the sophistication of the technology and the complexity of the service delivery. The stages are described in Chapter 1.
2. The ANAO developed its Better Practice Guide⁴⁷ based on the findings of this audit, so that program managers had information to assist them use the Internet more efficiently and effectively when delivering programs and services. A major catalyst for the ANAO's involvement in developing the Better Practice Guide was its intended use as a basis for establishing audit criteria in reviewing agencies' performance in Internet service delivery.
3. One section of the Guide was concerned with the development of a business case and cost-benefit analysis to assist with decisions on using the Internet and with determining whether the online program achieved what it set out to deliver efficiently and effectively. A further section related to the costing of Internet service delivery as a tool fundamental to good government program management. This set out broad guidelines for program managers to use in determining efficiency and effectiveness.
4. In 2001–02, the ANAO conducted an audit on Internet security⁴⁸, which found that security levels across the audited agencies varied significantly from very good to very poor. For the majority of agency websites in the audit, the current level of Internet security was insufficient, given the threat environment and vulnerabilities identified with a number of agency sites. Further, while some agencies had produced good threat and risk assessments and documentation generally, these were not always effectively administered. Overall, the audit considered that a number of agencies could improve performance

⁴⁶ ANAO Audit Report No.18 1999–2000 *Electronic Service Delivery, including Internet Use*, by Commonwealth Government Agencies, available at <www.anao.gov.au>.

⁴⁷ ANAO Better Practice Guide—*Internet Delivery Decisions: A Government Program Manager's Guide*, April 2001, available at <www.anao.gov.au>.

⁴⁸ ANAO Audit Report No.13 2001–02 *Internet Security within Commonwealth Government Agencies*, available at <www.anao.gov.au>.

in some key areas and all agencies could improve performance in one or more aspects of managing Internet security. The ANAO noted that most agencies had adopted a risk management approach to the management of Internet security and that, in most cases, this integrated well with agencies' top-level risk management activities.

5. The 2002–03 audit of management of e-business in the Department of Education, Science and Training⁴⁹ identified the need for business cases for e-business proposals to include measures and targets by which the success of projects can be assessed. In addition, it considered that post-implementation reviews of major enhancements or changes should include formal and consistent analysis of actual costs and realisation of actual benefits.
6. More recently, the 2003–04 audit report on monitoring and evaluation of Internet services⁵⁰ found that while performance information on websites and portals collected by agencies was limited because of a lack of clear objectives and agreed performance indicators, most agencies had objectives for their Internet-delivered services and were monitoring a core set of information that showed achievement against these objectives. However, no agency in the audit had planned or conducted an overall evaluation of the effectiveness of Internet-delivered services. In addition, no evaluation of the overall effectiveness of agency websites and their contribution to agency outcomes had occurred or was planned.
7. Another recent audit considered the governance and management of Internet portals in the Family and Community Services (FaCS) portfolio⁵¹. As part of its objective, this audit included an assessment of whether FaCS measured the efficiency and effectiveness of the Internet portals. This audit found that efficiency and effectiveness were not being measured by the agency. While FaCS did eventually obtain and provide to ANAO some information on costs, this was not being regularly monitored by the agency or used to assess efficiency. Effectiveness was being measured in respect of only one of the portals (the Source) by monitoring usage of the portal and assessing user 'feedback'.

⁴⁹ ANAO Audit Report No.33 2002–03 *Management of e-Business in the Department of Education, Science and Training*, available at <www.anao.gov.au>.

⁵⁰ ANAO Audit Report No.30 2003–04 *Quality Internet Services for Government Clients—Monitoring and Evaluation by Government Agencies*, available at <www.anao.gov.au>.

⁵¹ ANAO Audit Report No.27 2003–04 *Management of Internet Portals at the Department of Family and Community Services*, available at <www.anao.gov.au>.

Appendix 3: NOIE/AGIMO Reports on E-Government

1. AGIMO stated that its role was to provide a framework for, and coordinate, whole of government approaches to support Australian Government agency efforts in the use of new technologies for information provision and service delivery. It supported the *Better Services, Better Government* policy by providing advice on e-government in the information economy and with initiatives to foster greater skills within the Australian Public Service in areas such as monitoring and evaluation, user research, and business strategies for Internet services.
2. AGIMO also developed frameworks and guidelines to assist agencies. For example, in early 2004 it revised and expanded a number of better practice checklists as part of an E-Government Better Practice Program. Topics covered included providing forms online, online sales, user testing, use of Metadata, navigation and website usage monitoring and evaluation.
3. NOIE has published two editions of an annual *Information Economy Index*, which measures readiness to participate in the information economy, and intensity of this participation, across a number of countries. This index draws on 23 indicators, including two that are particularly relevant to government service delivery: the penetration of online government services and e-government rankings (which are based on the levels of demand for e-government and the level of government preparedness to supply services online)⁵². In 2003, Australia was ranked fifth overall of the twelve countries included, but gained the second highest ranking on the penetration of online government services indicator.
4. In April 2003, NOIE released the findings from an *E-government Benefits Study*⁵³. The study included a review of the demand for e-government, an examination of its benefits and an assessment of the cost/benefit ratio in government online services. It obtained information through survey responses from 41 government agencies covering 174 e-government programs, more detailed survey responses from 39 agencies covering their programs in greater depth, and data from citizen and business surveys for users and non-users of e-government services. The study identified measurement as one of the key areas of e-government management that needs to be developed, as many

⁵² National Office for the Information Economy, *Information Economy Index*, NOIE, Canberra, 2003, available at <www2.dcit.gov.au/ie/publications/2003/08/index>.

⁵³ National Office for the Information Economy, *E-government Benefits Study*, NOIE, Canberra, April 2003, and *E-government Benefits Study—Agency Case Studies*, NOIE, Canberra, May 2003, available at <www.agimo.gov.au/government/benefits_study>.

agencies could not quantify the costs of online service delivery and found it difficult to estimate the financial benefits, let alone the social benefits.

5. The findings from this study showed that the most obvious benefit of e-government is improving service to citizens. They also indicated that the greatest challenge to broader adoption of e-government services is addressing the barriers to higher take-up rates. The study described how such barriers included concerns about the useability of websites, problems finding government services, poor search capability and the adequacy of online security and privacy.
6. As a result of this study, AGIMO developed the Demand and Value Assessment Methodology⁵⁴ to assist government agencies to assess their online programs. The methodology provides a standardised system that can be used to forecast and articulate demand and value in any proposed e-government service. AGIMO tested this methodology in one agency and has developed training materials to promote it to other agencies.
7. In May 2004, the Institute of Public Administration Australia (IPAA), in conjunction with AGIMO, presented the Business e-Volution of Government Conference to stimulate debate on e-government issues across all levels of Government, the IPAA and academia. Research papers that informed this conference were published in *The Future Challenges for E-Government*.⁵⁵

⁵⁴ Australian Government Information Management Office, *Demand and Value Assessment Methodology*, AGIMO, May 2004, available at <www.agimo.gov.au/government/damvam>.

⁵⁵ Australian Government Information Management Office, *Future Challenges for E-Government*, AGIMO and IPAA, May 2004, available at <www.agimo.gov.au/resources/events/2004/e-volution>.

Appendix 4: International Reports on E-Government

1. A major report commissioned by the Auditor General and the e-Envoy⁵⁶ in the UK⁵⁷, examined progress in improving the management of IT projects across the public sector and the potential gains to be made from electronic service delivery. The report emphasised the importance of adopting an approach to IT-enabled change which realises efficiency gains, including developing better business cases, setting clear targets at the outset for achieving efficiency improvements, and measuring the benefits achieved. The report also observed that more reliable assessments of costs and benefits were required at the departmental level, stating that 'generally, departments lack baseline data against which to monitor and measure improvements and efficiency made possible by IT'.
2. A more extensive UK report, *Government on the Web II*,⁵⁸ focused on how government organisations have changed the way that they plan and provide Internet-based services. It made two recommendations for central policy-making that relate to information about uses of online services. The first was that agencies be required to 'grow the usage of their websites and the take-up of their electronic services over time' and the second was that an information regime be put in place to 'identify the value-added achieved'. The information 'should focus on actual usage and take-up of electronic services' across government and at an agency level.
3. A third report measured the e-commerce progress of the G7 countries⁵⁹ plus Australia and Sweden⁶⁰. Overall leaders were judged to be Sweden, the United States of America, Canada and Australia, with Australia considered to be especially strong in its supportive legislation for e-commerce. Although service delivery was emphasised as a feature of advanced practices, a closer reading of the report reveals the inadequacy of systematic information in this area. For example, though Sweden and Australia were world leaders in uses of online technology by government itself, the impact on costs and efficiency was listed as

⁵⁶ The e-Envoy was appointed within the UK Cabinet Office in 2000, with the role of ensuring that all government services were available electronically by 2005.

⁵⁷ Report by the Comptroller and Auditor General, *Better Public Services through e-government*, 4 April 2002, p. 2, available at <www.nao.gov.uk/publications/nao_reports/01-02>.

⁵⁸ P Dunleavy, et al., *Government on the Web II*, 25 April 2002, p. 4, available at <www.nao.gov.uk/pn/01-02>.

⁵⁹ G7 refers to the governments of the seven major industrial democracies that meet annually to deal with economic and political issues. These are France, USA, Britain, Germany, Japan, Italy and Canada.

⁶⁰ Booz/Allen/Hamilton, *The World's Most Effective Policies for the e-Economy*, London, November 2002, available at <www.boozallen.com>.

‘not known’⁶¹. The lack of systematic information or performance data about improvements in the standard and availability of public services attributable to the e-economy was noted across all governments. Actual examples of efficiency savings were rare⁶².

4. More recently, a 2003 United Nations World Public Sector Report⁶³ looked at the question of ‘What makes e-government application meaningful?’ The report was a response to a request from United Nations Member States for advice and technical expertise concerning the application of Information and Communications Technology in their government operations. It also looked into the decision-making process applied to choosing e-government applications and allocating resources to their development. It found that there is no one model for e-government development, few countries worldwide are utilising the full potential of e-government as a tool, and citizen participation remains patchy and uneven in all countries. It also noted that, despite the current focus on e-government, online information and services tend to reach only the privileged few in other than just a small number of industrialised countries.
5. Additionally, the fifth annual Accenture report of 2004 on international e-government performance⁶⁴, finds five clear patterns emerging from their quantitative assessment of the quality and maturity of e-government services for citizens and businesses available through 22 national governments. These are:
 - while e-government maturity has risen dramatically since 2000, with the most rapid advances occurring during the early years of their e-government programs, progress has now slowed in most countries and advances are diminishing;
 - while the initial objectives of online programs were to provide service improvements and alternate channels of delivery, the focus of many governments is now specifically on the cost savings potential of e-government, and the leaders are reaping tangible savings;

⁶¹ Booz/Allen/Hamilton, op. cit., p. 135.

⁶² Booz/Allen/Hamilton, op. cit., pp 156–159.

⁶³ United Nations, World Public Sector Report, *E-Government at the Crossroads*, New York, 2003, available at <www.un.org>.

⁶⁴ Accenture, *eGovernment Leadership: High Performance, Maximum Value*, 2004, available at <www.accenture.com>.

- the full benefits of e-government will be realised only if citizens and businesses use it, but most governments are still facing the challenge of low usage and the need for innovative methods to drive take-up;
- the integration challenge is changing from horizontal (across agencies at the same level of government) to vertical (through layers of government at national, state and local levels) in order to increase the value of e-government programs; and
- some evidence of personalisation, or tailoring what the government provides to the individual user's characteristics, needs and preferences, was found in governments' approaches to online service, but implementation appears to be in its infancy.

Appendix 5: Description of Agencies, Websites and Online Services

Centrelink

1. Centrelink is part of the Department of Human Services. It is responsible for the delivery of the Government's social policy agenda, mainly through the payment of pensions, benefits and allowances under its Business Alliance Agreement with FaCS. It also provides many other services and, in 2003–04, delivered more than 140 products and services on behalf of 25 Commonwealth and State client agencies.
2. Centrelink operates under the *Commonwealth Services Delivery Act 1997*. Its departmental budget for 2004–05 is \$2.2 billion, and its total annual expenditure is approximately \$62 billion made up of social security payments on behalf of client agencies. Centrelink delivers its services through a network of 15 Area Support Offices, 321 Customer Service Centres and 26 Call Centres located across Australia. It had 25 448 staff at June 2004.

Website (www.centrelink.gov.au)

3. Centrelink's website was launched in 1997. The only major redevelopment of the website was completed in November 2000. The main motivation for this redevelopment was the availability of new technology. However, it also incorporated Centrelink's 'Life Events' model. This allows Centrelink customers to match their changing life circumstances to relevant Centrelink information, payments and services on the website. Since the redevelopment, Centrelink has continuously revised and maintained its website.

Online service

4. Centrelink's website offers a range of online services developed for its customers. These have been introduced progressively. The online service selected in the audit was the Update Family Income Estimate Service (UFIES), which was implemented in July 2001. UFIES allows customers to revise their family income estimate online through either the Centrelink or Family Assistance Office websites, to avoid an overpayment or underpayment of their family assistance if they receive Family Tax Benefit fortnightly and/or Child Care Benefit.

Department of Health and Ageing

5. Health and Ageing has a diverse set of responsibilities, which include promoting good health, ensuring all Australians have access to key health resources and promoting quality aged care services. The services

provided by Health and Ageing are delivered through nine outcomes set by the Government. Three of these, Population Health and Safety, Access to Medicare, and Enhanced Quality of Life for Older Australians, reflect the core business of the portfolio. The other six outcomes reflect key priorities for which dedicated resources are provided.

6. The total budgeted appropriation for Health and Ageing in 2004–05 is \$408.5 million for its departmental expenses and approximately \$35.8 billion for its administered expenses. Health and Ageing employed 3600 staff at June 2004.

Website (www.health.gov.au)

7. Health and Ageing's website was established in 1995. Since then, Health and Ageing has added new sub-sites and a broader range of corporate information.
8. The present design and structure of the website was implemented in 2003. This included a revised home page design and corporate level pages. The website also contains links to a number of other portfolio websites, programs and campaigns, including *HealthInsite*, *HealthConnect*, *seniors.gov.au*, *Immunise Australia* and *Strengthening Medicare*.

Online service (www.healthinsite.gov.au)

9. *HealthInsite* was funded in 1998–99 as 'an investment in preventative health measures'. Health and Ageing then carried out the design, technical development and consumer consultation required to produce an Internet gateway system to reputable health sites.
10. *HealthInsite* was launched in April 2000, providing well-referenced access to more than 3000 pages of information provided by partner sites that met the *HealthInsite* Editorial Board's requirements. At May 2003, *HealthInsite* contained links to 63 other health websites.

The Department of Veterans' Affairs

11. DVA supports the Repatriation Commission, which is responsible for the administration of the *Veterans' Entitlements Act 1986*, including the granting of pensions, allowances and other benefits to veterans, their dependants and other eligible persons, and the Military Rehabilitation and Compensation Commission. DVA provides advice, carries out Government policy and implements programs to fulfil Australia's obligations to war veterans and their dependants as well as to serving and former members of the Australian Defence Force. As well, the

Department administers the Saluting Their Service commemorations program and the *Defence Service Homes Act 1918*.

12. The total appropriation for DVA in the 2004–05 Budget is \$10.6 billion, with \$10.3 billion of this being for administered appropriations. The National office of DVA is located in Canberra, with State offices in each major capital city and Veterans' Affairs Network offices in other major regional centres. At June 2004, DVA employed 2574 staff.

Website (www.dva.gov.au)

13. In May 1996, DVA established its first Internet site for publishing information electronically. DVA redesigned this site in 1999, greatly increasing the amount of information available and installing a search facility to provide easier access for the public. DVA set up its current website in May 2000. The new-look site was designed to provide a basis for the future delivery of additional electronic services. Since then, DVA has continued to improve and enhance its website with the addition of further online services and information.

Online service (www.ww2roll.gov.au)

14. DVA launched the WW2 Nominal Roll website on 6 November 2002 at the National Archives. The website contains a snapshot of the service records for some one million men and women who served in Australia's defence forces or merchant navy during WW2. Users can search on the website for individual records by name, service number, honours and place. They can also produce a certificate for each record on the site, or use the site to request a full service record from National Archives.

The Child Support Agency

15. CSA is part of the Department of Human Services. CSA is responsible for administering the Child Support Scheme, under the *Child Support (Registration and Collection) Act 1988* and the *Child Support (Assessment) Act 1989*. CSA registers cases, assesses the level of child support payable, collects payments when requested, enforces child support liabilities when parents do not meet their obligations and provides information on child support matters. It also provides access to community organisations that offer a wider range of services to assist parents with family-related issues.
16. The total departmental appropriation for CSA in 2004–05 is \$274.7 million. At June 2004, CSA had 3061 staff within Australia, located in a National office in Canberra, 16 metropolitan and regional

offices, and 21 regional service centres (20 in Centrelink offices and one in an ATO office).

Website (www.csa.gov.au)

17. CSA's website commenced in January 1999. In 2002, CSA launched a new-look website with improved navigation and a more user-friendly design.
18. The new site placed greater emphasis on CSA clients—separated parents—and was designed to deliver CSA's goal of providing clients with tools and support to increase their self-reliance in searching for or providing information electronically. Since then, CSA has continued to improve and enhance its website with the addition of further online services and information.

Online service

19. CSA has progressively introduced to its website a range of online services developed for its clients. CSA makes all of its forms available through its website, and most can be submitted electronically. There are currently some 30 forms online.
20. The online service selected for the audit was the 'When Parents Change Address' online form. Parents can use this form to tell CSA about any change in their address or to revise their contact details (phone numbers or email address).

Austrade

21. Austrade is a statutory authority, which is responsible to the Minister for Trade and the Australian Government under the *Australian Trade Commission Act 1985*, the *Commonwealth Authorities and Companies Act 1997* and the *Export Market Development Grants Act 1997*. Austrade's role is to help Australian businesses reduce the time, cost and risks involved in entering and expanding commerce in overseas markets, and it administers the EMDG scheme⁶⁵.
22. The total appropriation for Austrade in the 2004–05 Budget is \$308.3 million, which includes a current administered appropriation of \$150.4 million for the EMDG scheme. At June 2004, Austrade employed 1008 people—420 in Australia and 588 overseas.

⁶⁵ The EMDG scheme is designed to encourage and assist small to medium sized Australian businesses to seek and develop export markets by reimbursing up to 50 per cent of their expenses (above the first \$15 000) on eligible export promotional activities. To access the scheme for the first time, businesses need to have spent \$15 000 over two years on eligible export marketing expenses.

Website (www.austrade.gov.au)

23. Austrade established a website in early 1996. That initial website was later rebuilt to implement a content management system. Austrade fully redeveloped its website during 2001–02.
24. The new site was launched in February 2002. It had a better appearance and improved content, was easier to navigate; and offered greater interactivity, new services and portal features. Since then, Austrade has included other new services, and improved the website's content and functionality.

Online service

25. The home page of Austrade's website contains a link to the 'For Australian Exporters' website, which includes the 'Export Grants' program. The website contains information and online services about the EMDG scheme.
26. The service selected for the audit was the online eligibility questionnaire. Businesses can complete this questionnaire to check their eligibility to apply for an EMDG and submit it to Austrade to obtain advice before applying for the grant.

National Archives of Australia

27. National Archives is an Executive Agency within DCITA. Under the *Archives Act 1983*, National Archives provides public access to official records, and develops policy and provides advice to the Government and its agencies on the creation, management, preservation and disposal of Commonwealth records. It also develops exhibitions and tours them around Australia, delivers educational programs, and publishes books and guides to the collection, some of which are for sale.
28. National Archives' collection is dispersed between its head office in Canberra and its offices in each State capital and Darwin. At June 2004, National Archives had 461 staff. The total appropriation for the National Archives in the 2004–05 Budget is \$65.3 million.

Website (www.naa.gov.au)

29. National Archives' website was first launched in January 1995. The website was later reviewed and rebuilt in early 1998. The present design and structure of the website was implemented in March 2000, following redevelopment in 1999–2000. The main motivation for the redevelopment was the need to present National Archives' recordkeeping policies, standards, guidelines and procedures to

government agencies in an easy to use, integrated and comprehensive way.

Online service (<https://shop.naa.gov.au>)

30. The National Archives website offered a number of ways for clients to order its products online. National Archives developed eShop to provide a more efficient, flexible and secure service. It was launched in April 2003.
31. The eShop displays items that are for sale, which can be purchased online using a credit card, or available freely by downloading. The eShop also permits the payment of invoices for other services, such as photocopying, photographic reproduction and war service records.

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