



government on the web

a report by the comptroller and auditor general

Ordered by the House of Commons to be
printed 13 December 1999

comparator B

B.1 The Internet and the Web are international phenomena, now used to varying degrees by governments across the world. The experience of government agencies in other countries provides another set of comparators for the UK. We chose three overseas governments to compare along five criteria; Web site strategies within departments; the development of intranets; key policy concerns; political support and commitment; and central strategies for control, co-ordination and guidance. As with our choice of private sector firms, we chose countries where we might expect web development to be advanced, using data provided by the University of Arizona in their 1995 survey of government Web sites across the world (Cyderspace Policy Research Group, University of Arizona <http://www.cyprg.arizona.edu>). The governments we visited were:

Australia rapidly developing an international reputation for electronic service delivery, with more ambitious targets for electronic service delivery than the UK (100 per cent of all appropriate services electronically on the Internet by 2001).

United States generally assumed to be ahead of the UK in technological development, the US government was rated at the top of the Arizona survey for 'interactivity' and 'transparency' of government Web sites.

Germany a European country of comparable size to the UK, which also scored well on the Arizona survey.

B.2 Obviously, the spread of Internet usage across a country's population is going to affect the government's potential to communicate with its citizens electronically. Of the four countries we looked at, the US (with a population of 250 million) has the highest percentage of Internet usage, closely followed by Australia (with a population of 18 million). The UK lags behind, with Germany (population of 80 million) behind the UK, although reputed to be rapidly catching up. A key factor determining access levels is PC ownership, for which the figures are similarly ranked, and the price of connecting to the Internet, which is based on the cost of local telephone calls - Figure 38 suggests a clear link between the cost of local calls and Internet usage.

The Experience of Overseas Governments: Germany, Australia and the United States

38 INTERNET USAGE AND PC OWNERSHIP

	Percentage of population with Internet access	Average connection price per half hour (Summer 1999)
United States of America	38	Free local calls
Australia	36	10 pence (untimed)
United Kingdom	15	£1.18
Germany	13	86 pence

Note: These figures are for broad comparison only: there are many different methods of calculating internet penetration and average connection price which vary across countries.

SOURCE: LSE CENSUS OF WEB SITES

Web site Strategies within Departments

B.3 In all four countries, a majority of government departments and agencies have Web sites, ranging from a 'bare majority' in the UK to virtually 100 per cent in Australia and the US. In the US even by early 1997, virtually all agencies had Web sites. None of the governments control the layout, design or content of departmental Web sites from the centre. In Germany especially, the strong autonomy of federal ministries in Germany, laid down in the constitution and taken extremely seriously by ministries, means that there is no question of the centre dictating web strategies.

B.4 In spite of the absence of central control, different patterns of Web development have emerged across the governments. In the US, there is a proliferation of Web sites, with most divisions within departments and agencies maintaining their own; the DoD has 3,000 Web sites with about 1.5 million pages. Most large Web sites have no common 'look and feel' across their constituent parts. On the Social Security Administration (SSA) site for example, some sites show the 'Social Security On-line' logo at the top and contain links to all SSA relevant documents, while others have no heading and indicate that documents can only be ordered via telephone or mail. SSA have 39 Web managers administering the various sites. Departments which have tried to work against the proliferation of Web sites include DoD, whose new Web site policy makes commanders responsible for the content of their organisations' sites. In Australia, leading departments like the Australian Tax Office (ATO) struggle to maintain one site and control the lower pages; their IT services has brought the site under central control because 'we don't want eight

ATOs. The UK and German governments, with their less ambitious range of Web sites and services, tend to have more centrally controlled sites within departments.

B.5 There is a wide variation across departments and agencies in the four governments in the extent to which Web sites are used for 'brochureware' or for more interactive on-line service delivery. In Australia some of the largest departments are leading the field in Web site development. The Australian Tax Office is offering full electronic filing of taxes from July 1999, while 75 per cent of tax forms are already filed electronically through tax consultants. Sixty per cent of all those forms filed electronically are processed without human intervention, in a 'zero-touch' way. Likewise, in the US, the Internal Revenue Service has offered electronic filing since 1992 and by January 1999 electronic filing runs at about 23 per cent. IRS's goal, stated in the IRS Restructuring and Reform Act, is 80 per cent by 2007. Their Web site received 767 million hits between January and April 1999.

B.6 One Australian government site is especially innovative in on-line service delivery. The most visited and used site in the Australian Federal Government is the Australian Job Search (AJS), maintained by the Department of Employment, Workplace Relations and Small Businesses (DEWRSB), a database of jobs all over Australia with a full search facility. Job details are provided (largely electronically) to DEWRSB from multiple sources including the Government's Job Network, private agencies, employers and some publications. DEWRSB then make their database accessible to job seekers via the Web site and through a network of touch-screen kiosks. The AJS generally falls within the top 25 sites in Australia as a whole, receiving over a million visits and recording 500,000 job searches a day. Of these, 100,000 jobsearches are conducted on the Internet while another 400,000 are performed via the 2,100 kiosks deployed around Australia. A recently developed facility enables users to put up CVs and employers to search for applicants on the Web site.

B.7 In Germany, federal ministries have little involvement in service delivery. Most services (including tax collection) are delivered at State or local government level and their Web sites reflect their role as largely information providing organisations. Most federal government sites are purely descriptive, although users are more likely to be able to download documents, view the full text of laws or order something on-line than in the UK.

A distinctive feature of federal Web sites is that every site has an 'Impressum', which states who is responsible for the site within the ministry (including different names for content, technical issues and design), and also giving the address and details of the main contract company developing the site.

B.8 In contrast to the UK, the social security agencies of Australia, the US and Germany lead rather than trail other agencies in offering on-line services on their Web sites. In Australia the operational arm of social security, Centrelink, provides downloads of most publications on their site, which also promises that Centrelink staff will ring citizens in response to an e-mail request. The site receives 49,000 user sessions per month, with an average length of each session at around 12 minutes. In the US, the Social Security Administration (SSA) site was nominated as a 'best practice' site for federal agencies by *Government Computer News* in April 1999. The site has an excellent range of information in English and Spanish and includes the 'Top 10 services' on a home page list. Citizens can use on-line forms to order a Benefit Statement or claims forms and can estimate their benefits on-line. SSA's site received 2.6 million page views in February 1999 and 103,464 on-line requests for Pensions and Earnings Benefit Statements (PEBES), a personalised statement provided by mail direct from SSA databases (although the site itself does not interact with the mainframe), once key identification details have been provided. As early as 1997, SSA allowed individuals to request and receive their PEBES on-line; however, questions were raised about the privacy of the service and SSA replaced it with the more limited service currently available. In Germany, the Ministry for Labour and Social Affairs has won prizes for the best site in the federal government. The home page of the ministry contains a huge amount of information in English and French as well as German and many publications can be downloaded or ordered online, as can CD-ROMS and discs on pensions, career and work environment, in a zero-touch way. A news scanner gives updated news. The Ministry produces a CD that allows people to estimate their pensions for the current year. The Web site is part of a multi-channel approach to communication (e-mail, a call centre, CD-ROMS, discs and post). When the new '600-mark' law was introduced, the Ministry expected a high level of electronic interest and prepared information on the Web site immediately - which received four million hits within the first week.

B.9 Government agencies who were early to consider communicating with citizens electronically and are experienced in developing pre-Internet information technology have been quick to transfer their experience to new media issues. Centrelink in Australia have 'long had an IT culture'. The Australian Tax Office, for example, focused on electronic service delivery as early as 1989 and completely and successfully redeveloped their business systems during 1989-98, at a cost of A\$500 million. By 1999 75 per cent of tax returns are electronically filed and ATO is fully committed to becoming a 'digital organisation'; eventually, as one official put it, 'ATO will become its Web site'.

B.10 Government Web sites that are innovative and lead the way in linking external sites with legacy systems are expensive. The ATO's Web site cost A\$200,000 to set up in 1996 but now costs about A\$1 million per year to maintain. ATO are expecting around 100,000 citizens to use the electronic lodgement service in the first year, and anticipate the greatest challenge from this development to be technological education and help for people accessing the service from their homes on a bewildering array of machines and applications. They quote a saying that when deploying a new facility on the Internet, you will need one person on a help desk for every 100 people using it. Centrelink realise that even after the Electronic Transactions Bill considered by Parliament in 1999, a big investment would be needed to enable Centrelink to deal with electronic communications in the same way as other channels. Centrelink recently estimated the cost of delivering their six top transactions electronically, at a cost of \$100 million which, in spite of the Australian Government's commitment to electronic service delivery, so far remains unfunded. In Germany, the front-end site for the federal government is a major resource and costs around DM1.4 million to run annually, excluding staff costs and the research effort involved in gathering news (the most substantially funded site we found in Germany). There are three people working on the Web site internally. It is controlled centrally within the Federal Press and Information Office but ten staff have the facility to press releases on the site, through a distributed editing system.

B.11 Various strategies however, illustrate how innovative Web site development can improve usage figures at low cost. In the US, SSA limits colours and keeps images small. The agency places breaking news on its front pages; previously the home page drew little traffic. The German Ministry of Labour and Social Affairs has a strategy of ensuring that in three clicks, users find what they want.

B.12 Strategies to push-up electronic usage are possible within the context of avoiding social exclusion. In Australia, the introduction of a goods and service tax is being used to implement a universal 'Australian Business Number'. Businesses that do not register will not be eligible for GST credits. Registration is available on the Business Entry Point. The Government plans to maximise collection of the new tax. And ATO plans to use electronic lodgement to force tax consultants to communicate with ATO electronically, as tax consultants will not be allowed to lodge taxes on paper; 'those that cannot automate will not stay in business', although ATO know they must keep other channels open for citizens who do not use tax consultants. Dealing with ATO electronically will be compulsory for businesses with an annual turnover of over A\$20 million and optional for businesses with a turnover of under A\$20 million.

B.13 Various 'joined-up' government initiatives via Web sites have been tried across the three countries. Australia leads the field in the development of 'entry points'. The entry point to the Australian Commonwealth Government is held at

www.fed.gov.au and a central system of domain name allocation ensures that departmental sites are reasonably easy to find. The Business Entry Point (at www.business.gov.au) is being heavily promoted as a starting point for any business user of the Internet. The entry point makes 60,000 documents available and includes contributions from over 50 Commonwealth and 100 State and Territory agencies. At State level, several governments are developing government-wide intranets. The Victorian government use a 'Channel' approach to direct citizens to the information they need (via the 'Health Channel', the 'Land Channel', the 'Business Channel' and the 'Education Channel'. There has been some debate within the Premier and Cabinet's Office about the effectiveness of the 'life event' approach - they have carried out research that suggests citizens do not find it helpful. In the US, a 1998 initiative called WebGov to create a front-end for all government sites has not yet materialised and locating federal sites remains a problem. Users remain reliant on private sector sites which use the long-lived and fragmented Government Information Locator Service, a decentralised collection of agency-based databases. In Germany, there are virtually no joined-up sites apart from the main federal government site at www.bundesregierung.de which provides a wide range of information in several languages and links to all ministries. The average number of pageviews for the site during 1999 was 1.2 million; the average number of user sessions were 257, 000.

Development of Intranets

B.14 The countries divide into two with respect to intranet development. In Australia and the US virtually all departments and agencies have been running intranets for more than a year, while in Germany, like the UK, many key departments are at pilot stage. The Australian Tax Office has had an intranet for 4-5 years; now all 17,000 staff have access. Centrelink has an intranet to which all 24,000 staff (2,000 in Canberra, the rest in 401 Centrelink offices across the country) have access; it receives 100,000 staff page requests every day. The most used application is MapStat On-line with a database of Centrelink offices that allows staff to key in a postcode and get details of all local services, which receives 370,000 hits a month. DEWSRB was the first Australian government agency to develop an intranet; 2,200 staff across 70 offices now have access. The Australian Customs' Service has had an intranet for four years, which is now used by all of Customs' 4,000 staff (700 in Canberra and 3,300 dispersed around 80 locations). In the US, the Department of Housing and Urban Development launched an intranet for its 10,000 staff in November 1996. In its first month it received 21,000 log-ins, which by March 1999 had risen to 970,000. In Germany, the Ministry of Labour and Social Affairs has an intranet to which all staff have access; the Ministry for Families, Senior Citizens, Women and Youth have a prototype intranet with three departments using it. There has been some resistance to the intranet from staff, some of whom initially viewed it as a control mechanism, so it is being introduced slowly in a 'snowballing' way.

B.15 Across all countries there is a link between intranet development and electronic service delivery through the external Web site. Those departments at more advanced stages of electronic service delivery had well-established intranets while those at a preliminary stage with electronic delivery (such as the UK Benefits Agency) were also lagging on intranet development. The most advanced users are now narrowing the organisational gap between their intranets and their external sites. The ATO has brought the management of the intranet and the external site into the same team because of the linkages between them. The external site is now a subset of the internal site and the Internet is now being used to enable ATO to open up its internal processes. Since February 1999, ATO's legal database has been mirrored on the external site so that taxpayers can look at the same legal reference points and case law as ATO lawyers; it is updated whenever the internal system is updated.

B.16 In Australia, the US and Germany, a far higher proportion of staff could see their own Web sites through their intranet than in the UK. In Australia and the US, virtually all federal government employees have access to either the Internet or a mirror of government sites via their departmental intranet. In Germany, all staff of the Ministry of Labour and Social Affairs and of the Ministry of Economics and Technology have access to their own site; of the other agencies we visited, only the Ministry for Families, Senior Citizens, Women and Youth had a small percentage of staff with Internet access at the time of our visit.

B.17 Government-wide intranets have been considered in all four countries. Australia experimented with the idea of a government intranet, after December 1997 when the Prime Minister proposed that there could be benefits from a 'whole of government' secure intranet. The Office for Government On-line (OGO) market-tested for potential savings in the provision of a dedicated infrastructure in 1998, but concluded that the cost of suitable dedicated network architectures did not provide a sufficiently strong business case to warrant the government proceeding with this approach. Agencies are currently using a range of existing infrastructures, such as 'secure gateways' (a series of protected networks developed for law enforcement agencies during the 1990s) or are acquiring additional infrastructure through existing whole of government telecommunications arrangements. OGO is now seeking to develop a secure intranet using a virtual private network. Germany, like the UK is developing a technical infrastructure; the IVBB or the Bonn-Berlin Highway. In contrast to the UK, German federal departments are mandated to sign up to the service - but the network is centrally financed and all governmental organisations are automatically entitled to free access, including access to the Internet. The contract is managed by the Co-ordination unit of the Interior Ministry. It was let in January 1998 for ten years and costs about DM40 million per year. Around 65 per cent of federal personnel now have access. As in the UK, there have been question marks

over the quality of service delivered and the level of security. The Interior Ministry promise that early problems will be overcome with an increase in bandwidth, but some officials across departments we visited expressed concern about the speed of response, the search engine and the firewall, which does not allow Java script or zip files to pass through. One central agency uses Compuserve on stand-alone PCs to gain Internet access unimpeded by the firewall.

Key Policy Concerns

B.18 Australia and the US are both federal governments covering dispersed populations across huge geographical areas. Therefore, they have most to benefit from the Internet as a new channel of communication, and have had a longer and more sustained commitment to electronic service delivery. In Germany, the move of the parliament to Berlin, and the planned division of most ministries between Bonn and Berlin have been key driving factors in shaping Web developments.

B.19 The three governments have different approaches to security concerns. In Germany, there is a firewall between the IVBB and the Internet, because the Ministry of Interior believes that it is impossible for all ministries and agencies to develop the necessary security to allow direct access. Therefore ministries do not have to achieve the same level of security accreditation as UK departments need to sign up to the UK GSI. All external e-mails to ministries go first to the Interior ministry and are scanned for pornography or other potentially subversive material, and are then passed on to the relevant ministry via IVBB. In Australia arrangements appear more adhoc. Some interviewees suggested that Department of Defence concerns over the security risk of a government-wide network blocked the development of a government-wide intranet. OGO feel that Australia has a well-defined set of policy and practices guidelines that assist agencies implement on-line service delivery in a secure manner.

Political Support and Commitments

B.20 Key policy concerns have shaped the extent to which political leaderships have committed themselves to electronic service delivery. The Australian Prime Minister set explicit targets for electronic service delivery by the Federal Government, promising in December 1997 that by 2001 'all appropriate services would be delivered electronically'. Similar commitments have also been made in some states; the Victorian Premier, for example, made a commitment to 100 per cent on-line service delivery some years before the Commonwealth Prime Minister. In the US, targets were set early when in the 1994 National Performance Review Al Gore promised to provide all citizens with electronic access to government by 2000, by connecting every classroom, library, hospital and clinic to a national information infrastructure. In Germany there have been no such commitments, although there is a general awareness that web usage is growing rapidly and that there are clear benefits to electronic communication.

B.21 In all countries, legislation for electronic commerce is an important issue for the expansion of electronic service delivery. In Australia, the Attorney General's Department have produced a bill on the legal framework for electronic transactions, as part of their role in servicing an Electronic Commerce Experts Group, set up by the Prime Minister. The bill is aimed at encouraging a greater take-up of e-commerce through creating a secure and predictable legal environment, but applies also to government agencies. As its author points out, it is largely a facilitating bill, which aims to remove impediments to electronic transactions (many of which do not actually exist). They undertook consultation with departments from December 1998. The new law is based on a private sector model law. Their strategy has been to be technology neutral, and businesses will be able to choose which technology they use. The implementation timetable for the bill runs up to 2001, to give departments time to adjust and to make system amendments. Public sector agencies will use OGO's Gatekeeper project, a public key authentication framework for government. It will allow companies to register with a Gatekeeper-accredited certification authority to produce digital certificates to be used by all public sector agencies. The Gatekeeper approach will be mandated for public sector agencies unless they have a very good reason not to use it. In the US, various agencies are using encryption techniques. SSA uses encryption but are testing public key infrastructure before relaunching the PEBES application.

Central Co-ordination

B.22 The key policy concerns above shape central co-ordination and control. In Australia and the USA, strong central concern and key commitments to electronic service delivery reflect the obvious benefits that Internet usage can bring to governments there. None of the countries offers a clear strategy for central co-ordination. In Australia, the advanced stage of electronic service delivery in several key agencies could not be attributed to central agency intervention. However, in all countries there are units with responsibility for central co-ordination:

Country	Central Agencies
US	General Services Administration (GSA) Federal Technology Service (FTS) Office of Management and Budget (OMB) Government Information Technology Services Board (GITS) Chief Information Officers Council (CIOC)
Australia	Department of Communications, Information Technology and the Arts (DCITA) Office for Government On-line (OGO) National Office for an Information Economy (NOIE) The On-line Council

Germany Co-ordination Unit of the Interior Ministry
Federal Press and Information Office

UK CITU, CCTA, COI (see Part 4)

B.23 Different models of central control and co-ordination were evident across the three countries. Australia has devoted the most central resources to electronic service delivery (as opposed to IT in general). However the Australian central agencies have variable reputations and the major electronic players, such as ATO, Centrelink and the Health Insurance Commission (and even innovative State governments such as Victoria) are leading the field, advising central agencies and driving central initiatives. The Department of Communications, Information Technology and the Arts is a central player. The creation of this department has meant that there is, in effect, a Minister for Information Technology (Arts appears to be rather an add-on). The Office for Government On-line (OGO) is a unit within the DCITA, with around 50 staff. The National Office for the Information Economy (NOIE) is also within DCITA. Its 65 staff provide advice, support and co-ordination to other agencies and develop policy advice to the Government on matters which are essentially Internet-specific. NOIE also allocates around A\$1 million in small grants to voluntary organisations or business groupings to encourage Internet usage and the office plays a role in the Federal Government's development of the legal framework for authentication, interoperability and standards and international work with the World Trade Organisation and the Asia-Pacific Economic Conference. In addition to the above, the On-line Council was established in 1997 as a Commonwealth initiative to foster co-operation and consistency on on-line issues between the Commonwealth, States and Territories and local government. Senior Ministers from State, Territory and local governments meet twice a year to discuss policy issues related to the information economy, particularly national strategic approaches to the use of information and communication services. The On-line Council is serviced by NOIE and supported by a committee of senior officials representing all jurisdictions, local government, OGO and other relevant government agencies (the officials meet four times a year). The Council is chaired by the Minister for Communications, Information Technology and the Arts. Although there have been no initiatives in Australia to create 'IT champions', as in the UK and US (see paragraph C20 above), several individuals appear to have emerged as champions and play a key role in pushing electronic service delivery forward: the Minister for Communications and Information Technology, the Assistant Commissioner for Electronic Services Delivery at ATO, the Deputy Commissioner at DEWRBSB, (at State level) the State Treasurer in Victoria and (at local level) the Mayor of Melbourne City Council.

B.24 In the US, a proliferation of central agencies, initiatives and committees play a role in information technology development. The National Performance Review reform programme of 1994 spawned Vice President Gore's Access America initiative to make government services available electronically. It also established the Government Information Technology Services Board (GITS) which branched off in 1996 as a separate office to promote cross-agency service applications. The General Services Administration (GSA) plays a role in encryption and digital security, trying to create a government-wide digital certificate service through the Access Certificates for Electronic Services program. Within GSA, the Federal Technology Service (FTS) offers agencies various services through its 'smart government' and 'connected government' initiatives, such as systems integration support, risk planning, outsourcing advice and various Internet, e-mail and e-commerce services (at a fixed monthly price) through its CINEMA program. The Office of Management and Budget (OMB) (the central agency with the most authority, due to its role in the budgetary process) has mandated agencies to offer all government services electronically within 3.5 years, as part of the Government Paperwork Elimination Act, to be implemented by 2003. OMB drafted a 13-page regulation to guide agencies on how to increase on-line business, including information about using digital signatures and other authentication procedures. The regulation states that 'Agencies should develop and implement plans to use and accept documents in electronic form and engage in electronic transactions. It is administration policy that a decision to not allow the option of electronic filing and record-keeping should be supported by a specific showing that 'there is no reasonably cost-effective combination of technologies and management controls that can minimise the risk of significant harm.' OMB was also responsible for overseeing a Chief Information Officer initiative across the federal government: as part of the 1996 Defense Authorization Act, under which Cabinet agencies were mandated to name Chief Information Officers (CIO) who reported directly to the agency head and had primary responsibility for all IT activities. These CIOs have been brought together in the Chief Information Officers' Council, with six sub-committees (focusing on interoperability, information technology capital planning, IT work force issues, the year 2000 problem and outreach) and a budget allocation, to formulate various aspects of on-line policy, including a strategic plan (1998) and an IT architecture plan (1997) for the federal government.

B.25 In Germany, there is much less input from the centre. The co-ordination unit of the Interior ministry is responsible for technical standards, common software development, common procurement rules and common communications in and between ministries. The unit has no authority and can only recommend or instigate agreements, but has now a major central role in developing the German equivalent of GSI, the Projekt Informationsverbund Berlin-Bonn (IVBB) or the Bonn-Berlin highway. The Federal Press and Information Office (a

large operation of 650 staff) in the Chancellors' Office also has some central responsibility, most notably for maintaining and developing the main federal government site. The Office is becoming more pro-active with the new government and they plan to co-ordinate layouts and 'look-and-feel'.

E.26 In Australia, the Australian National Audit Office (ANAO) is carrying out a survey of agencies' electronic service delivery efforts in 1999. In response to their results, ANAO and the Office for Government On-line (OGO) have developed a four-stage model of government agencies' service delivery via the Internet in 378 initiatives about which they received information. The ANAO has used this model to represent graphically the services that agencies expect to deliver, now or in the future, on the Internet. The model's horizontal axis refers to increases in the sophistication of technology requirements, and the vertical axis refers to increasingly complex service delivery. It is up to each agency to decide at which stage it wishes to position itself to deliver services. Therefore, no single stage is better than another. The four stages are as follows:

- Stage 1** The Agency has a Web site that publishes information about itself and its services. Users have read-only access and can download documents;
- Stage 2** Quite close to 1 - an Agency allows Internet users to access the agency database(s), and to browse, explore and interact with data. Users can access a database anonymously; for example the Australian Bureau of Statistics provides census data on-line.
- Stage 3** A big jump from 2, at which an agency allows users access as in stages 1 and 2 and also permits them to enter secure information and engage in transactions with the agency. The agency has resolved the authentication issue, knows who the user is and can provide user-targeted information.
- Stage 4** Close to 3, at which, in addition to the level of access permitted in stage 3, the agency, with the user's prior approval, shares with other government agencies information provided by the user. Authentication has been resolved and the agency is sharing user information with other agencies, for example, change of address information. The Business Entry Point will be an example.

The ANAO's report on its survey of Australian government agencies was tabled in Parliament in November 1999, and it will be available on ANAO's Web site at <http://www.anao.gov.au>

In the US, the General Accounting Office (GAO) has long taken a strong interest in information technology in general but has not conducted a particular study of electronic service delivery or strategies for Web site development. In Germany central agencies' monitoring roles have not extended to electronic service delivery. The German Audit Office used to be influential in this area; in the 1980s the Federal Commissioner did a study of IT and until two years ago, if a budget claim included an IT proposal, it had to be accompanied by a special recommendation from the Audit Office, but that is no longer the case.