

**E-GOVERNMENT AND POLICY INNOVATION  
IN SEVEN LIBERAL DEMOCRACIES**

**PATRICK DUNLEAVY (LSE)**  
**HELEN MARGETTS (UCL)**  
**SIMON BASTOW (LSE/UCL)**  
**JANE TINKLER (UCL)**

London School of Economics and Political Science  
and  
School of Public Policy, University College, London

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## E-GOVERNMENT AND POLICY INNOVATION IN SEVEN LIBERAL DEMOCRACIES

This paper explores the extent and character of electronic government initiatives in seven countries: Japan, the UK, the US, Canada, Australia, New Zealand and the Netherlands. In this complex sector there are no 'perfect' cases, no typical representatives of a wider population. The point of our comparative work is to introduce a requisite degree of diagnostic diversity to help explore the variety of causation patterns operating to differentiate national government characteristics from one another. The primary research methodology used has been detailed Web research and systematic documentation analysis across the three governments, extensive interviewing with over 110 officials and IT industry personnel across our countries (mainly focusing on central governments), and some in depth unobtrusive measures censuses and survey work within the UK carried out by the authors for the UK National Audit Office during 1999 and 2001 (see Dunleavy and Margetts, 1999; 2002).<sup>i</sup> The paper refers to the numerous 'e-government' reports and rankings produced by global consultancy firms eager for government-related work, but treat these cautiously, due to the great variation in methodology and purpose of such reports.

The paper is in three parts. First, we explore the potential relationship between development of e-government and the divergence or convergence of public administration systems. In the next section, we compare e-governments across two key dimensions: central 'push' factors towards e-government, and departmental experience of actually producing e-government. For each country, in tables 1-4 below and a summary table at the end we provide some international benchmarking evidence of progress in developing e-government. In the final section, we investigate the extent to which e-governments are 'converging' or 'diverging' and the factors which differentiate them.

**Table 1. Taylor Nelson Sofres assessment by country of  
What is the level of government online use in 2002?**

	% total population
Canada	48
Australia	46
USA	43
Netherlands	41
New Zealand	40
Japan	13
Great Britain	13

*Source: Taylor Nelson Sofres  
(Brand Strategy, 2<sup>nd</sup> January, 2003)*

**Table 2. Accenture Rankings of Innovation in e-government, 2001 and 2002**

	<b>2002</b>	<b>2001</b>
Canada	1	1
USA	3	3
Australia	4	5
Great Britain	6	8
Netherlands	11	7
New Zealand	14	9
Japan	17	17

*Source: Accenture, 2001 and 2002*

**Table 3. Economist Intelligence Unit reporting on e-readiness of business environment for conduciveness to Internet-based opportunities, rankings of 60 countries**

	<b>2002</b>	<b>2001</b>
USA	1	1
Netherlands	2	10
Great Britain	3	3
Australia	6	2
Canada	9	4
New Zealand	18	20
Japan	25	18

*Source: Economist Intelligence Unit, 2002*

**Table 4. World Markets Research Centre, Global E-Government Survey Rankings, 2001**

**(0-100 point e-government index applied to web sites)**

	<b>2001</b>
US	52.7
Australia	50.7
Canada	49.6
UK	47.1
New Zealand	36,8
Japan	34.9
Netherlands	32.6

*Source: World Markets Research Centre 2001*

### **E-government and policy development**

Policy development in liberal democracies is increasingly shaped by the extent to which governments can develop an electronic element and become 'e-governments'. The authors have shown elsewhere how governments' capability to wield the tools of government policy are increasingly defined and constrained by the distinctive characteristics of their ICT

systems (see Margetts, 1998, 1999; Dunleavy et al, 2001). All the NATO<sup>2</sup> 'tools of government' delineated by Hood (1983) depend essentially on the development and possession of particular kinds of systems: especially 'treasure' (T) systems for requisitioning taxes and paying out transfers; and 'authority' (A) systems for not only making complex law but marshalling the coerced information databases and risk-analysis-based compliance activities which chiefly sustain the effectiveness of modern regulatory apparatuses. 'Basic organization' (O<sup>1</sup>) tools, the existence of a bureaucratic file-keeping capability to register government instructions and organized personnel structures to see them through to implementation, have been re-shaped by back-office re-engineering and the transition to more automated processes. In addition, the introduction of ICTs means that governments need 'specialized organization' (O<sup>2</sup>) tools, the technocratic development and structuring of highly professionalized bodies of expertise. And with the advent of the Internet and the Web, there has been an especially radical and still on-going transformation in the operations and salience of perhaps government's most important tool - which Hood terms 'nodality' (N). Hood used this label to denote the central location of government in society's information and communications networks, such that people extensively deliver information to state agencies for free or in a quasi-voluntary compliance mode, and also pay special attention in turn to government's targeted messages and broadcasts.

ICTs also play a key role in both facilitating and challenging policy innovation (Margetts et al, 2003). On the one hand, ICTs can reduce the transaction costs of organisational exchanges essential to innovation. Thus policy innovation can occur as a by-product of technological development carried out for administrative purposes – for example, police computer systems and DNA databases can bring a shift to pre-emptive policing. E-government can also 'force' innovation on government, as new kinds of data such as genetic data produce a policy response and electronic developments outside government – in the private sector or by pressure groups and protesters – can mean that governments must change the way they deal with citizens. Conversely, new transaction costs can be introduced through the management of 'organised expertise', as contract relationships play an increasingly important role in delivering government ICTs. In particular, the task of aligning the incentives of government agencies and computer services providers can cause new agency costs (Margetts et al, 2003), creating new rigidities of loyalty and reciprocity which work against innovation (Nooteboom, 1999).

So what shapes a government's capability to develop e-government and reduce the transaction costs of innovation and flexible policy-making? Conventional ('new') institutional approaches stress the importance and distinctiveness of established political, administrative, and professional institutions (March and Olsen, 1976; Cohen et al, 1983).

They celebrate the capacity of human institutions to respond to and absorb what might seem standardizing pressures in a wide variety of functionally equivalent ways. Hence they focus on path dependencies, and on the ability of established organizational cultures to filter, fragment or divert developments. Comparative studies of public administration (see Pollitt and Boukhaert, 2001) suggest that national diversity has held up against the onslaught of public management reforms in some countries for the last 20 years. Previous work on IT systems in government has strongly suggested the inadequacy of technological determinist approaches (Margetts, 1999), which forecast that in and of themselves the advance of computers and automation would produce pre-determined and common organizational responses. Institutionalist authors both forecast and detect a continued history of differentiated government policies in their uses of IT and in the ways in which technological and organizational changes around information acquisition and processing will interact with existing patterns of political, administrative, ideological and cultural power.

By contrast approaches influenced by Weberian sociology and mainstream economics identify greater commonalities of response, and much more limited options for institutional patterning of common trends to produce highly differentiated outcomes. The long swing of processes fostering the rationalization and bureaucratization of society which lead to the growth of government and corporate hierarchies have not gone away. The logics of efficiency, the relentless pressures for least cost solutions and for enhanced functionality, operate strongly in governmental as much as in private sector contexts. The ecological linkage of one public sector activity with all others via the budget and centralized allocational institutions (like parliaments or Congress) creates pressures for competition within and between governments which are different in kind from those in the private sector but not a priori less real or effective in their impacts (Breton, 1998). The greater difficulties in developing and evaluating efficiency- or effectiveness-enhancing solutions in many public sector contexts, and the 'inorganic' generalization of public sector management changes produced by political influences can make these processes more complex or dialectical than in the private sector. But the underlying logic remains one of the rationalization of society in which we should expect to see similar if not uniform paths being taken by advanced liberal democracies. The Niklaus Luhman 'autopoiesis' variant of this view adds a stress on the differentiation of society into more specialist sub-systems with their own autonomous logics, which articulate with but are not controllable by outside sub-systems, even those still making overarching claims like the political sub-system. This whole line of argument suggests a much more limited potential for distinctive national institutional arrangements to produce a differentiation of policy, and perhaps not for long, with an underlying ratcheting through of combined socio-economic-technological changes in relatively standard ways. In IT policy

terms this viewpoint predicts strong policy learning and transfer processes, perhaps mediated extensively by companies, and the evolution of only a limited range of common approaches.

The radical Weberian approach takes this diagnosis somewhat further, detecting a 'McDonaldization of society' (Ritzer, 1993) in which rationalization and globalization processes begin to decisively erode the genetic diversity of regional or local cultures, of social arrangements and of national government policies. A constantly changing but relatively evanescent and non-fundamental display of diversity may float rather epiphenomenally on the surface of a much more powerful and more insistent processes advancing the homogenization of cultures, social arrangements, economic policies and government strategies. In IT policy terms this viewpoint predicts a strong push towards more uniform government IT systems, with multi-national corporations expanding their influence from IT operations alone into wider back office tasks, and essentially advancing the generalization of solutions developed in the private sector into government (Dunleavy, 1994).

Potential forces for cross-national standardization of government IT policies are as follows:

(a) Governments' similar experiences with information technology projects have led to a high probability of similar responses. The 'easy wins' of early office automation efforts have long been exhausted, with governments' second generation computing or automation projects of the 1980s and '90s in many cases failing to deliver promised savings and often only disappointing levels of functionality or quite degraded service quality enhancements, a trend also reflected in the private sector (Strassman, 1990, 1997). Large IT projects got harder to accomplish successfully, more difficult to plan, more risky in terms of prospective benefit/cost ratios, at exactly the same time as the long post-war expansion of government services slowed under the impacts of inflation, budget deficits and sharply increased fiscal stress. This combination of unfavourable circumstances helps explain why in many countries public sector IT began to be seen in the 1990s as a peculiarly high risk area, reputationally akin to public sector construction projects in terms of cost over-runs, project delays, 'false savings' or low benefit/cost problems, and agencies' apparent inability to manage major projects effectively or to recognize when things had begun to go wrong. Very similar overview reports on IT projects' risks were issued by different national government auditors (NAO, 2000c; NZNAO, 2000; Treasury Board of Canada, 1998). Substantially similar new 'gateway' and checking institutions and procedures have merged independently in advanced industrial countries, emphasizing the importance of modularizing IT projects, building in 'exit ramps' to allow partial implementations only in the light of experience, creating strong

'milestones' for assessing whether projects should continue, and in some case introducing powerful external checking bodies.

(b) Technological trends across all sectors provide another cross-national pressure, as the pace of technical advances continues and new waves of technology render legacy systems obsolescent or hard to maintain. In particular, the development of web-based technologies have introduced new possibilities for the transformation of relationships between organisations and their customers. Previous implied expectations of attaining a 'steady state' condition, formalized for decade after decade by 'big bang' government strategies with IT planning periods of 10 to 15 years, have now been generally succeeded by 3 to 5 year look-aheads. As one Australian government official put it: 'Longer than 5 years it's anyone's guess where the technology'll be; shorter than 3 years, why is this a capital project?' Instances of mega-buck, decade-long government IT development projects are by no means extinct - especially in the USA where the scale of federal government activities is immense, and in the UK where government is perhaps more centralized than any other established liberal democracy except Japan – but they are increasingly out of line with technological development.

(c) Another pressure comes from outsourcing trends in the private and public sectors which have produced substantial consolidation of ownership and control of the expertise in running large computer facilities and complex IT systems worldwide (see Margetts, 1999; Lacity and Willcocks, 2000a and 2000b; Dunleavy et al, 2001; Margetts, 2003). In the past, of course, proprietary hardware and software manufacturers always played a large role in how government IT policy developed, often working in partnerships with government staffs, albeit within a conventional procurement model. By and large governments retained their own very extensive in-house IT staffs to plan the strategic evolution of their systems, to manage development jointly with contractors, and to operate the finished systems once the development work was complete. Since the middle 1980s, however, some governments have increasingly taken the view that they should get out of the business of running large IT systems directly, and have hived off this role plus much of the development role to industry prime contractors specializing in systems integration and facilities management (see Margetts, 1999; Dunleavy et al, 2000; Dunleavy et al 2001; Margetts et al, 2003).

(d) The development of new public management (NPM) ideas in many liberal democracies stressed the assimilation of public sector organizations into a claimed general business management model, focusing on disaggregation, competition, and incentivization (Dunleavy, 1994). An important focus of NPM was on 'best practice research' as used in the private sector (Overman and Boyd, 1994), with examples of innovations that worked being pulled out of context in many different countries, regions and tiers of government and

assembled into formulaic blue print manuals (for instance, Osborne and Gaebler, 1992). The cross-flow of ideas involved in NPM, and the difference amongst some its variants (such as market liberal, 'residualizing' versions or the more 'humanized' approaches) have been well explored elsewhere (Dunleavy and Hood, 1994; Hood, 1996). As public managers embraced a new ethos of business units and tight corporate management focusing on financial bottom lines they also extensively accepted arguments that government should cease to be involved in activities where it was not 'best in world', and instead focus on 'intelligent enterprise' roles, steering not rowing. This change too had important implications for government IT outsourcing, but more importantly for the older tradition of governments and administrators seeing public sector administration and public sector systems as *sui generis*, different in kind from private sector applications. Increasingly NPM suggested that government sector business practices should be run in a directly analogous way to similar kinds of work in the large corporations sector.

### **E-government strategies across seven countries**

For each country, we investigate these possible forces towards standardization of e-government strategies along two dimensions. First, governments in almost all developed countries have introduced some kind of central initiatives towards the information society and economy in general and e-government in particular. These initiatives vary according to the amount of political support they receive, the amount of resources devoted to central initiatives and the extent to which individual departmental strategies are co-ordinated across the government. Second, research has shown that departmental responses to these central push will vary within countries as well as across them. Therefore, we make a brief attempt to compare the departmental realities of these e-government initiatives 'on the ground'.

#### ***Britain***

The British government has lagged behind the private sector in capitalising upon the potential attractions of e-government, in spite of seemingly early realisation of the potential.

*Central Drivers:* In line with central government in general, IT policy became increasingly fragmented during the 1990s; by 1996 only a small Central IT Unit in the Cabinet Office was left to try and influence government-wide policy. This unit issued an ideas paper suggesting that what it called 'government direct' processes would be more important in the future using call centres, and perhaps the Internet. The theme was picked up by both Conservative and Labour governments during the election campaign and in autumn 1997 Tony Blair used his Labour conference speech to pledge that by 2002 at least 25 per cent of all government

interactions with citizens would be 'electronic'. By April 1999 the *Modernizing Government* white paper put in place later targets of 50 per cent 'electronic' interactions by 2005 and 100 per cent by 2008 (see Dunleavy, Margetts et al, 1999, Parts 1 and 4). An Office of the E Envoy (OeE) was established in autumn 1999 with a high profile head reporting to the PM, charged to both make Britain the best place in the world to carry on e-commerce and to marshal and direct the government's electronic service delivery (ESD) efforts. OeE appointed a lot of new staff (by 2001 the total was around 200) with running costs of around £50 million by 2001 and developed a new government portal (called UK Online) which started operating in spring 2001. The 100 per cent 'electronic' capability target was moved forward to 2005 (but in the process the Treasury and Cabinet Office essentially abandoned the old way of measuring progress against these across-the-board targets, thereby stopping the publication of any regular statistics on government Internet transactions). Their new control mechanism ran through the OeE and the Treasury's system of Public Service Agreements (PSAs) and subordinate service-level agreements which specify output and efficiency improvement targets for departments and agencies.

*Departmental responses:* At the end of 1999 an NAO study *Government on the Web* showed that this apparently rapid conversion to Web-enabled administration was more skin deep than it looked, with huge roadblocks and bureaucratic inertia in some departments (Dunleavy, Margetts et al, 1999). The 'electronic' targets were defined by Whitehall to include phone calls, electronic data interchange (EDI) systems and electronic transfers to bank accounts (many of which had been in place for twenty years). Targets also referred to capabilities for electronic transactions not actual take-up, so that the Treasury for instance boasted a 100 per cent capability figure but had zero take-up. Actual Internet transactions were very small percentages for most departments. Within departments, management lines of responsibility for developing government on the Web were obscure or non-existent. Although senior officials at the height of the dot.com boom were positive in expecting major changes (Dunleavy, Margetts et al, 1999, Part 1), the issue rarely made it to departmental or agency management boards. Spending on Internet developments varied from very small to non-existent, prioritization of Web developments was low, and government Web sites tended to move in spurts with relaunches followed by long static periods. Most sites were elementary with only 'brochureware' contents and low levels of usability. Fundamental re-engineering of departmental processes to respond to the Web capabilities was very rare, although a small number of business-facing agencies and others dealing with IT-literate communities (like science research councils) were moving towards being fully digital agencies, with large-scale cost savings in prospect. Elsewhere, however, the IT systems

were so dated as to prevent virtually all staff from seeing Web pages on their desktop, and here Internet developments were largely put on hold, pending the implementation of 'big bang' procurements which over a period of ten years might create the right IT infrastructure. It seemed clear that many British central government agencies had severe cultural problems in adapting to the Internet era.

By 2003, departments and agencies are assigning more priority to e-government issues, Treasury involvement with the issue has increased and there is more recognition of the need to incentivize departments and agencies to implement radical changes if need be in their methods of working. A programme of tagged incentives for local authorities to adopt Internet delivery has been put in place, costing £125 million over three years. Yet very substantial problems seem to remain. Fundamental re-engineering of administrative processes to facilitate electronic services delivery is lagging far behind, with excessively complex and hard to maintain systems still in place and pervasive paper-based processes. Ambitious targets for some prominent Web-based schemes have slipped badly. For instance, the aim of getting 600,000 taxpayers to submit self-assessment forms online faltered after Inland Revenue software proved essentially unusable and a private sector stop-gap had to be substituted. Actual electronic submission rates are projected at less than one twentieth of the target for 2000-1. A troubled contract with BT Syntegra and lack of linkages between OeE and the key service delivery departments have meant that UK Online is not yet delivering the key functions of a 'front-end' to government achieved in other countries. And many government Web sites continue to show signs of being weakly managed, with static appearances and contents, little development of more interactive features, and few online transactions. Large numbers of civil servants and agency staff still do not have Web-compatible desktops or even effective internal Intranets, often directly due to a long-running IT contract resulting in the supply of out-of-date office computers.

### ***Australia***

The Australian government was an early leader in developing electronic initiatives and developed an international reputation for e-government which peaked around 1999. The Accenture report of 2002 placed Australia at 5<sup>th</sup> in the world in 2001 and 4<sup>th</sup> in 2002.

*Central Drivers:* The Liberal coalition government launched Internet issues prominently in 1997 when the Prime Minister John Howard pledged that by the end of 2001 'all appropriate services' would be available on-line via the Internet, with early dates for e-procurement changes to be implemented. By mid 2000 the social background was supportive, with 34 per cent of Australian households having home Internet access and 57 per cent PCs (Canberra

Connect, 2001, pp. 10-11). Nearly three fifths of businesses had Internet access, especially larger firms. The National Office of the Information Economy (NOIE) was charged both with developing the Australian push into e-commerce and with promoting e-government (DOC1ITA, 2000a, 2000b). NOIE gained only a restricted budget for background work to ensure inter-operability and common Web standards amongst government sites and some piloting work (NOIE, 2001). Some small-scale efforts have been made to facilitate linkages with the six state and two territory governments which actually carry on most of the services that citizens interact with or use day to day. Links beyond the states to local government have remained almost undeveloped, and are anyway difficult constitutional terrain for the Commonwealth agencies to operate in.

*Departmental Responses:* The de facto lead in Internet developments was set not by NOIE but by the large already IT advanced departments, especially ATO, the Customs and Centrelink, the agency delivering social welfare services across Australia (NOIE, 2001). ATO first pushed ahead electronic filing of income tax and later goods and services tax (GST, the Australian equivalent of VAT) by businesses and by tax practitioners on behalf of personal clients, and later developed direct E-filing by citizens. By 2001 seventy per cent of income tax forms were being filed on line in one of these ways, and ATO had successfully promulgated a new Australian Business Number for companies and enterprises as part and parcel of the introduction of GST. The ABN will form a component part of a well-advanced PKI (public key infrastructure) certification system which the banks are expected to launch jointly. By 2002 95 per cent of accountants and 25 per cent of individuals who fill out their tax forms were filing their taxes online.

Similarly the Customs moved in the late 1990s to accepting 90 to 95 per cent of their caseload from businesses using private networks directly or smaller firms using agents and intermediaries similarly hooked up to Customs systems. A second stage, Web based version of e-filing (the Cargo Management Re-engineering project) developed by Customs with EDS is due to go live in 2003, and will replace the previous multiple routes in running via a private sector-run 'hub' with direct Web linkages with Customs databases. Finally another large agency, the Department of Employment, Workplace Relations and Small Businesses developed a Web-based jobs placement service that has regularly been amongst the most heavily used Australian Web sites and offers nationwide details of vacancies updated daily.

Beyond the core of key agencies, Australian government's progress onto the Internet shows a more mixed picture. Virtually all agencies have extensive Web information, and most forms can be downloaded on line. But relatively few agencies present data in a more accessible or search-based form, and still fewer exchange information with citizens or

enterprises, allow full on-line transactions. Some smaller agencies are still rushing to implement the basic 1997 pledge that 'all appropriate services' should be on-line by end 2001. The great mass of agencies have not implemented the requirement restrictively - partly because agencies have to account for exceptions. The federal government has a useful locator site and is in the process of implementing around ten intended portal sites, which re-present information to particular target groups of clients (such as the 'business entry point') or for groups of related policy areas (such as culture and tourism). So far these sites have been pretty unsuccessful in giving seamless information, with erratic contents and somewhat clunky operation.

Industry and government interviewees say that it is difficult to avoid the impression that the furore over the Howard government's legislated initiatives, plus a moderately active lead up to the Y2K renewal date, combined to displace attention from the original 1997 e-government agenda. NOIE's 'government online' Web site was fairly static for nearly two years, and without a follow-through budget and greater clout in central administrative processes its impact has been small. Although e-commerce and e-government programmes are both nominally influenced by NOIE, in practice there are other powerful departments and agencies whose involvement and agreement is more important, especially DOFA and the trade and industry agencies. Without the progress made by the large tax agencies, Centrelink and some arms of state government (such as an integrated Web/phone/shopfront effort launched by the Canberra ACT government), it would be easy to see Australia as falling back from its pioneer e-government status to become a slightly complacent and strategy-less follower of a wave now lead from elsewhere. The achievement of any joined-up governance objectives via e-government programmes seems particularly unlikely to show much progress. Federal/state initiatives on joining up are likely to remain scattered, episodic and hard to predict, partly because of the strong partisan differentiation between Labour and the Liberals and the usual divided control of government across the federal and state levels.

### ***New Zealand***

Progress towards e-government has been tardy, despite the presence of some factors which should have facilitated rapid change. New Zealand is located more than 1,200 miles away from any other substantial centre of population, and in overcoming this distance problem its population have historically been very progressive in adopting communications innovations. Telephone services are generally good and PC familiarity was high by the mid 1990s, so New Zealand had one of the fastest take-ups of Internet use by both businesses and households, despite problems in providing access to remoter parts of the country. The home Internet penetration rate reached 40 per cent in 2000 (Ministry of Social Policy, 2001, p. 92),

and is especially high amongst non-pensioner households (49 per cent) and in the two main cities, Auckland and Wellington, whose metropolitan areas account for around half the country's population.

*Central Drivers:* As a small country with an agriculturally based economy confronting poor terms of trade and slipping rapidly down the OECD rankings, and with a favourable social culture and the great advantage of speaking English as a native tongue, New Zealand might have been expected to identify e-commerce opportunities as important by the later 1990s. New Zealand's policy elites were certainly made aware early on of Singapore's strong commitment to e-commerce and e-government, of the Irish government's success in attracting IT investments, and of the Finnish government's strategy for economic renewal (Minister for Information Technology's IT advisory Group, 1999). An early policy document explained the Internet's significance for New Zealand as being 'the freezer ship of the 21<sup>st</sup> century', in terms of allowing products to be exported more easily (NZ Ministry of Commerce, 1998). But the Liberal-lead coalition government elected in 1996 gave the issue scant attention and e-government none at all. Nor was e-commerce an early priority for the incoming Labour-lead coalition in 1999, pre-occupied with its social agenda.

In the event the Ministry of Economic Development began a slow process of gathering political and administrative support for e-commerce initiatives, and in mid 2000 the State Services Commission (SSC) also set up a unit with around 40 staff to develop a separate e-government strategy, reversing years of disengagement of the centre from IT policy issues in favour of agency autonomy. The strategy was eventually unveiled only in April 2001, approximately four years after the UK and Australian political initiatives and more than five years after Singapore (NZ State Services Commission, 2001). It is essentially a kind of indicative planning or framework document, with agencies exhorted to consider Internet- and Web-based systems and to work together jointly, but without their being *any* additional or tagged budget line for such developments. Meanwhile SSC's e-gov unit is working away on a raft of background issues, co-ordinating the development of government-wide meta-data and Web protocols, fostering inter-operability standards, working on a government portal to arrive in mid 2002, addressing PKI (public key infrastructure) issues, and encouraging the development of e-procurement. Some IT industry people are sceptical that much will come from such work, arguing that unless it is closely linked into what agencies and ministries are doing on the ground it risks becoming worthy but non-relevant - because supply-side factors in what agencies are trying to do and demand-side factors in how citizens respond are constantly changing.

*Departmental Responses:* The Wellington civil service generally recognize that their Web provision has slipped behind leading countries and confronts some key problems. Without developmental budgets the SSC is highly reliant on agencies integrating Web delivery into their service modernization plans. The official policy line stresses that multi-channel delivery will apparently always persist into the future and apparently for all agencies, suggesting that paper-based, call centre services, pre-Web electronic linkages and Internet-based services will all endure, despite the obvious cost control problems in this stance for agencies with tight budgets. Existing objective evidence suggests characteristic problems (NZNAO, 1999, Appendix 2) Officials looking on the bright side tend to point out that agencies have well-developed cost accountability structures, and have begun to acquire more output-orientated information. They also have relatively modern IT systems and the system of accountability means that chief executives are incentivized to pay attention to SSC and moderate governmental support for e-government to develop. Virtually all our interviewees also pointed hopefully to a New Zealand tradition of being early adopters of innovations, the 'quick Kiwis' syndrome (see Ministry for Economic Planning, 2000, p. 3). Some also felt that the experience of more or less constant administrative reorganization over nearly two decades suggested that channel rivalry resistances will be lower in their case than for larger countries. However, few foresaw substantial opportunities for cost-savings (given earlier relentless pressure on agency costs) leaving the rationale for e-government changes very dependent on realizing service extensions or quality of service provision improvements.

The chief opportunity for radical cost-savings via e-government in New Zealand would now appear to lie with a re-centralization and re-integration of public service agencies into a much more streamlined and less fragmented structure. There are some early signs of such a change already apparent in the social welfare area. The government portal plan promises a seamless access for citizens who will no longer need to understand the pattern of organizations behind services. But even in areas like encouragement of new business start-ups or e-commerce little progress has been made in achieving the effective integration even of information provision, let alone of approvals and regulation (see Ministry of Economic Planning, 2001). And despite the successive withdrawal of agencies from having outstations in rural areas, there are no one-stop shop schemes in prospect in the public service. Past efforts at agencies joint working have not been very successful, reflecting the problems discussed by Bardach (1999). Achieving joined-up governance via Web-based services is undoubtedly the major area where cost-savings and service improvements could be made, but change here will battle against a conflicting NPM tradition, with an accumulated momentum of nearly two decades. It would rarely be rational action for an agency chief executive to recommend the winding up or re-integration of her organization

into a larger neighbour. In addition New Zealand's important local government tier is lagging behind in terms of Web developments and efforts to link between centre and localities are only just beginning. Other restrictions on change are likely to be the resistance to any single government ID number (following the patterns in the USA and UK) and strong privacy law constraints on data-sharing between government agencies.

In 1993 the right-wing UK Institute of Directors celebrated 'New Zealand; The Turnaround Economy' as a paradigm of market liberal change. The IOD chief executive argued that 'all the world will benefit if the New Zealand model is followed elsewhere' (Prebble, 1993, p.2). But by summer 2001 the OECD ranked New Zealand 23rd out of its 26 members in terms of GDP per head, with only Greece and Turkey among non-micro states ranking as less economically developed. 'The gap between our living standards and those of other developed countries continues to widen' recognized a leading opposition parliamentarian in 2000 (Upton, 2000). The Economist Intelligence Unit e-readiness rankings for 2001 above show New Zealand lagging behind all the other countries covered here, likewise for 2002 apart from Japan. The opportunities for exploiting the country's English-language base in developing e-commerce may soon begin to fade away. Chinese is expected to be the fastest-growing perhaps new dominant language group on the Internet by 2005-7, a change favouring Singapore and Hong Kong, both running already strongly developed e-commerce pushes closely linked to much more forceful e-government and e-access strategies.

### ***United States***

The US ranks in the top league for most consultancy reports on e-government, with Internet penetration rates leading the world at the end of the 1990s and innovations such as electronic filing introduced at an early stage. But co-ordination problems across the decentralised federal system and a history of struggling with complex and tattered legacy systems over prolonged periods of time (particularly in the mammoth tax and social security systems) weakens the overall applicability of these judgements.

*Central Drivers:* 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 and moving from 'industrial-era bureaucracy' to 'information-age government'. A proliferation of central agencies, initiatives and committees play a role in information technology development. The NPR 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 governmentwide digital certificate service. The Office of Management and Budget mandated agencies to offer all government services electronically by 2003, as part of the Government Paperwork Elimination Act. In 2002 the President's e-government act was passed, OMB released the e-government strategy, detailing 24 e-government initiatives organised into G2C, G2B and G2G projects. Most fall into the last two categories, with more geared at businesses or internal efficiency than citizen-facing. The aim is to 'apply the tools of E-Business to create E-Government' (OMB Director, 2003).

*Departmental Responses:* In terms of e-government the USA scores well in international reports, coming in 3<sup>rd</sup> in the Accenture reports of 2001 and 2002. In April 2003, four of the President's 'e-gov' initiatives won awards from the 'High-tec Community' for innovation, including GovBenefits, a single point of access for citizens to locate and determine potential eligibility for government benefits and services and which has received more than 4 million hits since its launch and is listed as one of USA Today's 'hot sites' and GoLearn.Gov, a training site for federal employees which has received more than 36 million hits.

However, the pluralistic nature of the US governmental system is reflected in its e-government. There is a rapid spiralling in the numbers of agency Web sites (over 3,000 in the Pentagon alone), with consequent co-ordination problems. Fragmentation of central initiatives led to very slow and fractured portal development - the first effective portal project began operating only in fall 2000 after four or five earlier failures, costing the government only \$4 million out of its trillion and a half dollar budget and really acts as a 'directory of directories' for indicating the way around the federal government. However, after this modest start with no budget for marketing or branding until June 2001, the portal has become very popular. It received 4 million page requests to its home page, 2 million visits and 700,000 unique visits per month by August 2001. Over 35,400 pages now link to FirstGov (compared to 19,000 to [ukonline.gov.uk](http://ukonline.gov.uk)) and a wide range of agencies now use the site's search engine. The site was widely acclaimed for its response to the terrorist attacks of 11 September 2001. and usage rose to over 7.1 million page requests and over 2 million visits during September 2001. Between 2001 and 2002 the number of unique visitors rose to 37 million

Fragmentation between departments and agencies at federal level is intense and joined-up governance is still a pipe dream (Bardach, 1999), although there are a few efforts to bridge the federal/state divide. But some major agency e-projects offering genuine government-to-citizen transactions, including the electronic filing of IRS tax forms; 27 million

tax returns were filed electronically in 2003, an 8 per cent increase from the previous year. But these have come at a price. The Internal Revenue Service has been in a continual process of modernisation called the Tax Systems Modernisation Project since 1986 (see Margetts, 1999) with expenditure so far amounting to 'either \$4 billion, \$8 billion, \$20 billion or \$50 billion ('it just depends who you ask', *Computer Weekly*, 23<sup>rd</sup> January, 1997). In 1998 the IRS committed another \$5 billion. OMB are now instigating a performance management regime for e-government, whereby an annual study will highlight best practices and identify agencies that still need to improve and this regime will be used to consolidate IT investments among e-government projects, allocating 24 per cent less funding in 2004 than 2003 – recognition of spiralling ICT expenditure.

### ***The Netherlands***

Both society and government in the Netherlands have a long history of successful use of information and communication technologies. Internet penetration in the Netherlands has long been high, estimated by [www.nua.ie](http://www.nua.ie) at 46 per cent in Spring 2001 (compared with 34 per cent in the UK at the same time) and more than 90 per cent of Dutch households reportedly have a PC at home, very high relative to neighbouring European countries – partly due to an initiative in which citizens were given tax benefits for purchasing PCs through employers. The Netherlands has long prioritised the development of ICTs, for example, spending 2.3 per cent of GDP on IT in 1989 compared with 2 per cent in the UK and US, ADSL and cable have been introduced for the fixed telephone network and more recently the government have invested heavily in broadband mobile networks. The government of the turn of the century was committed to development in this area and announced in its coalition agreement its intention to 'devote attention to the processes of shaping the information society, as a whole' (Infodrome, 1999: 3).

The Netherlands government's successful record in dealing with ICTs leads to a somewhat paradoxical approach to e-government in comparison with the UK. On the one hand, the high level of Internet penetration and general societal sophistication in the use of technology means that the government is accustomed to deal with citizens electronically and made an early showing in consultancy rankings. In Accenture's (2001) survey, the Netherlands was seventh from the top in terms of overall maturity in e-government. On the other hand, the very fact that Dutch organisations in general have experience of technological initiatives (it has long been possible to complete a tax form electronically via a modem, or to conduct banking transactions electronically) and that the information systems within the government seem to have worked better for longer – there are far fewer 'disasters' than in the UK, in fact when questioned by one of the authors in the mid-1990s a group of

policy experts could think of only one (Dunleavy, 1995) – means that society in general and government officials in particular are perhaps less excited about the potential of the Internet and there is less of a perception of difference between the Internet and earlier inward facing technologies than in other countries. Some commentators observed that Dutch pressure groups and social movements are making greater use of the full potential of the Internet than the government and that any sense of urgency to reinvent government organisations in response to new technologies is in partial recognition of this divide.

*Central Drivers:* It must not be underestimated how network-oriented (rather than hierarchical and centralised) is Dutch governance in comparison with the UK. This characteristic is reflected in any central e-government efforts. Barriers between public, private and quasi-governmental are blurred with an extremely high involvement of quasi-governmental organisations in all aspects of government, from regulation to service provision. An e-government example is *Infodrome* (found at <http://www.infodrome.nl>), a quango/think-tank/project set up by a committee of the Dutch Cabinet, which aims to 'stimulate debate' on the strategic choices that government must make to meet the challenges of the information society. Academics in particular demonstrate the 'connectivity' of Dutch governance: many professors of public administration and in particular 'informatization' also work for government ministries and consultancy firms at least two days a week and many sit on parliamentary committees. There is even a philosopher at Erasmus who is funded by Getronics to investigate the ethics of electronic government.

On the other hand, there is very little formal, central co-ordination; both agencies and municipalities have high levels of autonomy and central initiatives of any kind tend to be project based. The strongest degree of control the department with responsibility for e-government (Ministry of Interior, see below) will admit to is a policy of 'keep it small' and 'open co-ordination'. Portals play less of a role in central government plans than they do in the UK (the site [www.overheid.nl](http://www.overheid.nl) is the nearest there is to a portal) and there are no plans to create a government ISP. However, there is a government-wide secure intranet for email and directory services and an intranet for schools called 'Kennisnet' (knowledge net) which includes educational tools, news services and access to the Internet. Central initiatives tend to reflect joint working across departments, for example, the *Dutch Digital Delta* was a joint initiative by the Ministry of Economic Affairs, the Ministry of the Interior and Kingdom Relations, the Ministry of Finance, the Ministry of Justice, the Ministry of Education, Culture and Science and the Ministry of Transport, Public Works and Water Management. The Digital Delta proposed further liberation of the telecommunications market and regulations for electronic commerce, electronic government services, and electronic highway traffic.

Expenditure on the initiative (70 million gilder, about 20 million pounds spent on it every year, in 1999, 2000 and 2001) – in addition, each department produces policy papers to which they devote further funding. The Digital Delta set targets for electronic service delivery as 25 per cent by 2002, but there were no subsequent targets and informal sources suggest that this target was played down by the government from 2001 onwards as it became increasingly clear it would not be met in a meaningful way.

In terms of any central control and co-ordination, the Ministry of the Interior (with three ministers and 3,000 civil servants) is the key ministry with responsibility for e-government and the Minister for Urban Policy and Integration of Ethnic Minorities is also responsible for government information systems and related policy areas such as municipal personal records databases and travel documents (including passports). This Minister has taken responsibility for all the information systems in the Dutch government for the last fifteen years (something no UK minister would be likely to admit to!), but the current incumbent is particularly enthusiastic about all ICT innovations and has a chat page on his home site, where he encourages citizens to give their views on e-government and on-line participation. The Ministry of the Interior created the [www.overheid.nl](http://www.overheid.nl) site, intended to offer simple and reliable access to all information from the Dutch government available on the Internet, including municipalities, libraries, schools, and (health) care institutions. Although the site has received little publicity, its usage figures increased from 4,500 unique user visits a month to around 10,000 by October 2001, about a million page requests a month, the same as the UK at the same time for a much smaller population (see Dunleavy and Margetts, 2002). As well as providing a guide to citizens, it is used to stimulate web-based initiatives in governmental organisations. The site includes a report on the 'Web Wiser' award which is a monthly ranking of local governments, ministries and agencies, with a first prize awarded by the Minister. This scheme has been successful in encouraging innovation, with many local aldermen keen to see their local government at the top of the list. The site also has a helpdesk for local government organisations to ring if they have problems with web-based initiatives. The Ministry of the Interior have also conducted a number of initiatives to stimulate societal use of the Internet, including provision of grants to local governments and agencies to work together: for example, around 250 municipalities and agencies have received 25,000 DG (about £7,000) apiece for putting forms on the web. The 'Digital Playground' initiative involved creating public Internet cafes in the Netherlands' 30 biggest cities. Each city gets one cafe, funded half by the government and half by local private companies and the largest cities have extended the initiative to create more. In Rotterdam, there has been an initiative to give homeless people email addresses, so at least they have some form of contact address, an initiative costing around DG 20 million (about £6 million).

At the local level, the *OL2000 (Public Counter 2000)* initiative was developed by the Ministry of the Interior in the first half of the 1990s as a move towards integrated service counters or one-stop shops from government and non-profit organisations to citizens and businesses, organised along 'demand patterns'. In the late 1990s the concept was extended, with ICTs performing a more important role than the previous initiative, which was organised around physical counters. Because of local government autonomy in the Netherlands, it would be unquestionable for the central ministry to mandate the concept – but they provide funding for projects proposed by local community projects, usually a collaboration between private sector, non-profit and government organisations. In the latest phase, started in 1999, OL2000 is trying to develop national cover of the project by stimulating all local governments to do the same, with particular focus on four counters: 'business', 'building and housing', healthcare and 'work and income' (with funding from appropriate ministries). It is intended that these virtual counters will act as a generic counter for future initiatives.

Other initiatives include the Proactive Service Delivery initiative to make people more aware of their rights, run for the Ministry of Housing and the Environment and the IB-Groep. For example, when a baby is registered, the parents should automatically receive information about benefit and tax implications. There are already 5-10 municipalities where it is possible to order passports on-line. In the Netherlands, linkages between the tax authority, municipalities and housing organisation makes this kind of initiative much more plausible, especially since all persons are identified with a unique number. The main barriers to further progress are seen as privacy concerns and the need for legislation on electronic signatures and public key infrastructure for government- citizen transactions (now prioritised by the Ministry of the Interior and an inter-departmental taskforce on PKI). These central initiatives, including OL2000 are now being brought together in ICTU, an implementation unit funded by all ministries except defence, which is intended to encourage local programmes, issue guidelines, disseminate best practice and hand out on a matching basis a budget of DG18 million for stimulating municipalities.

*Departmental Responses:* Lack of central initiatives, control or co-ordination means that it is hard to generalise e-government across the Netherlands and Accenture (2002) considered that implementation had been slowed by lack of governance and little alignment across departments. Thus, as in Australia, there are big differences across agencies. The Internal Revenue Service seems to be one of the most advanced, with a long history of expertise in ICT development and was described as 'the best operated tax department in the world' by the CEO of one private sector provider. The taxation agency already gets information from

employers which allows them to send out a form with the majority of information already completed. Tax forms can already be submitted via floppy disk and over 2 million citizens were filing on line by 2001. The authority are introducing some incentives to use the Internet, for example an initiative whereby users can get their tax rebate for the 1st July if they file on-line. The department can be emailed with queries and has a special counter for younger people providing taxation information geared at them in response to questions about age and circumstances. The taxation authority has also experimented with using the web to encourage more widespread involvement in policy-making. In January 2001, there was a change in the tax law and the first draft of the legislation was put on the Web, before it went to Parliament. The taxation authority found themselves deluged with advice from tax consultants as to how to improve the draft law. Those who wrote the law were impressed – the advice was good and the legislation much improved.

The Ministry of Housing, Spatial Planning and the Environment (VROM) is another leading ministry. VROM has an ICT budget of 75 million euros and in common with other Dutch ministries, maintain their own in-house expertise with around 300 ICT staff; a central ICT division has around 50 staff, and other units have their own people and contracts. Web policy is developed by ten staff in the Communication division. Web statistics are collected and there is central calculation of the use of email and the Internet – every 2 years a study is carried out of how web use is changing, starting 8 years ago. In the last couple of years it has been observed that there is use of higher quality email and more substantive tasks; for the Internet, they monitor what sites are being accessed (not by whom!) and the top 10 categories of sites are not related to everyday work – stockmarket, music sites, job vacancies, for example. But VROM managers are philosophical about this (especially in comparison with UK government, where civil servant use of the Internet is tightly monitored), seeing it as a positive sign that staff are bringing the Internet into the administrative culture.

Overall, the Dutch government's distinctively decentralised approach to government on the web – with strong variations across central government - might be having advantages as well as the drawbacks pointed out by Accenture and other consultancy reports. The strongly non-hierarchical approach of government per se, where the Prime Ministers is considered equal among ministers, the secretary general is not head of a department and directors general are equal, makes it more possible for new values to be applied to government administration – a move away from the administrative values of integrity, solidarity and equality and towards service, flexibility, interaction and co-operation (Margetts and Dunleavy, 2002). For example, the Ministry of Transport recently tried to initiate a public discussion on road congestion – but at the same time recognised that there was a much more active discussion of a pressure group ('the pub of the tired cyclists') about the same

topic and that the ministry would be excluded from discussions unless it tried to join those instead of starting its own. Dutch e-government officials have an entrepreneurial approach to challenges like this - one even suggested that VROM did not need its own site at all – but should be advertising services on other sites, for example environmentally sustainable products. Innovative approaches like this will not show up on Accenture rankings but may well be the way forward for some aspects of e-government.

### ***Japan***

Perhaps surprisingly given its strong reputation for technological innovation, Japan lags in the field of e-government or indeed information technologies more generally. In 2001, a damning report by the Ministry of Economy, Trade and Industry concluded from a white paper on international trade that Japanese companies' IT strategies were weak and that a lack of competition, high costs and bad IT infrastructure need to be addressed immediately if Japan is to catch up (*Financial Times*, 22 May 2001). Internet use charges in Japan at the time were three times higher than in the US and most of Europe and the percentage of regular Internet users is relatively low at 38.2 per cent (Accenture, 2002) compared with the other countries covered here. In contrast, penetration of mobile telephones is more or less universal, with citizens accustomed to use them to access information and well as for voice.

*Central Drivers:* Central government has introduced central initiatives towards e-government but prioritisation lagged behind the other countries covered here. The cabinet produced a 'Master Plan for the Promotion of Government-wide Use of Information Technology' in 1994, with revisions in 1997 and 1999, with the promotion of information sharing across departments and the use of IT in the interface between society and the government. By 2000 all ministry and agency head offices had web sites and there were over one PC per member staff across central offices. But legislation did not come until 2000, when 'the Basic Law for creating Highly Integrated Information and communication Network Society' was enacted. In 2001, the e-Japan strategy was introduced, whereby substantially all administrative procedures would be available by the Internet by 2003 as a part of the Prime Minister's campaign to turn Japan into an information technology superpower. E-government was perceived as both supporting the administrative reform of 2001 and demanding it – that a revision of the Japanese public administration would be necessary before introducing ICTs. An e-government portal site began operation in 2001, consisting of a homepage retrieval system, an administrative document management retrieval system and an administrative procedure retrieval system (Furukawa, 2001) – not very citizen oriented, in spite of the claims of the e-Japan strategy. Japan's current citizen portal at [www.e-gov.go.jp](http://www.e-gov.go.jp)

is organized around government agency rather than users and provides government information rather than services (Accenture, 2002).

*Departmental Responses:* ICTs in the Japanese government have developed very distinctively, due to a particular relation between ministries and their contract providers. Ministries have never developed their ICT systems themselves, but since the 1970s have bought them in from leading Japanese hardware manufacturers, developing virtually no expertise in-house. There is no tradition of paying for ICT services – ministries are accustomed to buy the computers and receive associated software and services as part of the deal. Although these contracts would be tendered in the first instance, they are rarely re-tendered, as subsequent contract renewals are considered as ‘maintenance’ and are let to the original provider in a relatively routinised way at a low level in the organisation. Thus contract providers make up the profits lost through providing computer services at no cost through reasonably routine year on year contract renewals. This pattern of contracting means that each system developed by a ministry is delivered by a specific company – there are virtually no linkages between ministries and few between systems within a ministry. Most of the systems are reliable and efficient (particularly in tax and social security) but relatively old-fashioned and we found few examples of web-based initiatives in government. Central infrastructure initiatives such as Central Government PKI which consists of Bridget Certification Authority and ministry/agency Certification Authorities appear in ministry systems diagrams and future plans but have had few benefits in electronic service delivery as yet.

Thus the promises of e-Japan look rather unobtainable for some years to come. Taylor Nelson Sofres found that government online usage fell by four per cent to 13 per cent of citizens between 2001 and 2002 and that 90 per cent of citizens thought that accessing government service online was ‘unsafe’ (EuropeMedia, 7<sup>th</sup> November 2002). The most promising short-term gains at the central level seem to lie in government plans to capitalize on Japanese citizens’ enthusiasm for mobile phones to access information and the ‘uGovernment space’ is offering an electronic newsletter from the Prime Minister and lists of politicians as well as a space for citizen comment. However, initial evidence suggests that initiatives at the prefecture level may well be more innovative (and would score higher in e-government rankings) than those at central government level. Different contracting regimes certainly exist at local levels, with more strategic outsourcing approaches and far less of the entrenched contract relationships observed at the centre. Such a pattern would be in contrast to the US, where a recent world bank report observed strong variation across state e-government development but all lagged behind the federal government (West, 2000).

## **Canada**

Canada has for the last couple of years emerged triumphant from consultancy rankings of e-government (see tables 1 and 2), although one outlying report placed it only fifth.

*Central Drivers:* The Canadian portal site at [www.Canada.gc.ca](http://www.Canada.gc.ca) provides both citizens and businesses with a range of services on-line, as well as tailored information for non-Canadians, such as immigration and Customs information. The on-line initiative, Government On-Line (GOL) started in 2000, with an initial two-year funding of \$600 million for the next four years to complete the strategy by 2005. By December 2000 there was information on all government programs and services as well as key forms on-line, with key transactional services quickly following. GOL also mandated that by 2002, all government web sites must use common navigational tools and formats and conform to a 'Common Look and Feel': 'the intent is to make it easier for citizens and businesses to recognize, navigate and use federal web sites and services (*Government On-Line Report*, January 2002). Community Profiles provide information on local communities; simply by entering the name of a place provides access to maps and data on population, education, income and work, families, dwelling characteristics and births and deaths for 6,000 Canadian communities. The GOL initiative is aided by the fact that Canadians are amongst the most connected to the Internet in the world, second in overall connectivity only to the US. Even by 2001 two-thirds of Canadians had Internet access, spending on average of nine hours per week on the Internet more than any other nation (*Communication Canada*, Spring 2001). In 2000, 97 per cent of businesses with 100 or more employees used the Internet as did 63 per cent of business enterprises with fewer than 100 employees. Even by 2001 over half of Canadian Internet users had visited a Government of Canada Web site and 73 per cent believed that putting services and information on-line is a good use of tax dollars with 77 per cent believing that GOL would improve how Canadians interact with Government (*Listening to Canadians*, 2001). The Canadian government sees e-government as a potential stimulator for societal internet usage and growth in the e-economy, rather than as a (late) by-product of Internet use by other organisations: 'We need to stimulate economic growth by investing more in moving government on-line, for everything from paying taxes to finalizing government purchases. Not only would this be a more effective use of taxpayers' money, the work of designing those systems would fall to Canadian e-business' (*E-Business Opportunities Roundtable*, 7<sup>th</sup> December 2001). The government is using targets to improve citizens' view of e-government: the Government is committed to improving Canadians' satisfaction with its service delivery by a measure of 10 per cent by 2005.

*Departmental responses:* All departments are requested to produce Government On-Line reports through the GOL initiative. The Canadian Customs and Revenue Agency (CCRA) site provides a nice example of a whole raft of electronic services provided over 19,000 pages, such as an on-line calculator of benefit entitlement and an address changing facility. Citizens register for a Government Online e-pass which gives access to all CCRA services but also other government services if required – citizens can opt however to create a separate e-pass to deal with each department, overcoming citizen fears of sharing of information between departments. E-pass requires only the creation of a username and password – no digital certificates or other complications – and various pieces of security information. Electronic filing was first offered in 2001 and was used by over 1.4 million taxpayers; in 2002 forty per cent of individual tax returns (9 million returns) were filed on-line through a variety of electronic channels. A secure interactive system T.I.P.S. provides personalized tax information such as current year tax refund and Canada Child Tax Benefit.

Whatever the weaknesses of international benchmarking methods, it is clear that Canada has forged ahead in this area. The government sites look clean and simple and unambitious, yet the service delivery offerings are far more sophisticated than the other countries we looked at. The Accenture report (2002) again put Canada in the lead for the third year running claiming that Canada stands alone in eGovernment maturity, the only nation to reach the fifth state of 'service transformation', and estimating that half of the Canada population have used online services, compared with only one in ten in the UK (*Kablenet*, 8<sup>th</sup> April 2003). A distinctive feature of the Canadian approach that we found in no other countries is extensive and sustained use of focus groups to involve citizens in web site design, to identify what features they would consider useful.

### **Conclusions**

The brief summary of central initiatives and departmental responses outlined above suggests a complex pattern of influences on e-government performance in each country. Some similarities are evident: all countries have some kind of e-government initiative with political support, all have set up and endeavoured to implement targets for electronic service delivery based on similar web-based technologies. All have perceived e-government as important and have at least claimed that the e-commerce environment is a key factor in the economy of the future. All have initiated for some kind of campaign to increase societal use of the Internet. To deliver e-government, all are reliant – to varying degrees – on a distinctive market of computer services providers and a complex array of contracts and public-private partnerships. All governments have since the 1970s and 80s run large scale ICT systems

which now prevent a challenge in terms of joined-up government and link-ups to newer web-based initiatives. By 2003, all perceive take-up of electronic services as an important challenge for the future. There is clearly a strong underlying rationalization push consistent with the basic Weberian view of social development, which operates to ensure that restrictive limits and penalties attach to most of the range of choices that polities can make in this field.

However, the pressures towards standardisation noted in the first part have had different influences in different countries, with complex interactions between them. Differences are clear, in the extent to which central strategies have been successfully implemented, the extent to which citizens are using governments' on-line offerings and the extent to which governments are poised to capitalise on future benefits of e-government.

**Table 5. Combination of e-government rankings across 7 countries, 2002**  
(maximum =28, minimum = 4)

US	25
Canada	22
Australia	21
UK	15
Netherlands	14
New Zealand	10
Japan	6

*Source: countries were ranked in relative order for each of the rankings shown in tables 1-4 above and assigned scores (top score for 1<sup>st</sup>, bottom score for last) which were added together to obtain combination score*

Whatever the weaknesses of attempts to summarise e-government performance with one figure, table 5 suggests three bands across our seven countries. In the top band are the US, Canada and Australia, in the second the UK and the Netherlands and the lowest band New Zealand and Japan. Yet even within these bands, differences across countries (such as greater levels of innovation at local level in Japan and the Netherlands, in contrast to the US and UK) can be identified above.

The brief outline of e-government across our seven countries leaves us little space to explore the factors that underpin these continuing differences but research carried out for this and previous papers by the same research team suggests that the following factors are important:

*Political support for e-government:* Although all countries have political support for e-government, the extent to which that represents a key plank of a reform agenda is variable. For reform to really carry through, e-government needs champions on the ground. In the

Netherlands, van Boxtall as a Minister was important in stimulating interest in e-government. For Canada, an Accenture partner claimed that the government's 'strong central approach to e-government' was due to the setting up of 'a Chief Information Office CIO for the country who drives things forward. These things don't take a year or two to achieve' (Accenture, 2002). Such an appointment is not enough however: the e-Envoy in the UK has been criticised for a campaigning role which seems ineffectual in progressing real e-government gains (Dunleavy and Margetts, 2002).

*Financial commitment:* Although web-based e-government provides new potential for cost savings in administrative activities, it is by no means an automatic by-product and we can cite many examples of departments that are making large IT infrastructure investments aimed at electronic service delivery but unlikely to save money (the UK Customs and Excise for example, see Dunleavy and Margetts, 2002). However, it is clear that consistently beneficial e-government requires up-front investment and the leading nations provide it: Canada's budget for GOL has increased by \$280 million over the next two fiscal years, to \$880 million by 2005. Much more dramatically, federal IT spending in the US will exceed \$48 billion in 2002 and \$52 billion in 2003 (although successful initiatives like firstgov.gov have been very cheap while extremely expensive projects such as the Internal Revenue Service's Tax Systems Modernisation have had disappointing results). Accenture (2002) considered that tight budgetary constraints were inhibiting progress in the Netherlands. However, expenditure alone is no guarantee; the UK's annual £50 million on the running costs of the Office of the e-Envoy have yet to pay off and are already facing budgetary constraints.

*New Public Management reforms:* The countries identified here vary in the extent and shape of NPM reforms. In terms of the introduction of business techniques and strategies, identified as a pressure towards standardization, it is clear that the seven governments vary in the extent to which such ideas have been applied to e-government. In Canada, e-government is seen as a possible stimulus towards e-commerce – so that government is the leader in this field in the same way as government's dealings with earlier technologies were in the 1970s (Keliher, 1994; Margetts, 1999), whereas in the UK and the Netherlands 'e-readiness' for business has been prioritised and e-government has emerged more as a by-product.

*Fragmentation of central government:* One key theme of NPM was disaggregation, which in those countries with radical NPM agendas has led to fragmentation of central government. In the case of the UK and New Zealand, this fragmentation has led to a proliferation of organisational boundaries which resist central initiatives towards 'joined-up' e-government.

The Netherlands central government is fragmented for a different reason – with similar challenges for e-government but allowing innovative initiatives to flourish. The networked administrative culture minimises the transaction costs of innovation. The Japanese government is centralised but the powerful ministries retain great autonomy, with vertical divisions in central government reinforced through impenetrable contract arrangements – which are similarly resistant to any central initiative and introduce high agency costs to innovation based on e-government.

*Contract regimes:* Again, public management reform has been one of the factors that has shaped distinctive patterns of contract provision in each of the countries (see Dunleavy et al, 2001; Margetts et al, 2003). The authors' concurrent research into public-private partnerships in central government ICT systems across the countries investigated here has identified distinct ICT 'contract regimes' in each government, which clearly acts as an intermediary variable in the delivery of e-government. In the UK, distinctively huge and long term contract relationships between government departments and huge global computer services providers has clear implications for e-government, as departments struggled to manage these vital relationships and try to emerge from a troubled history of central government computing littered with disasters. In the US sustained regulatory devices aimed at maintaining competition in the government ICT market means that the market is far less concentrated, with the top five companies cornering only 20 per cent of the market – compared with 90 per cent in the UK and New Zealand (see Dunleavy et al, 2001; Margetts, 2003).

*Administrative culture:* There are clear cultural differences across these governments which has shaped and continues to shape their e-governments. The networked nature of government in the Netherlands has benefits for e-government, allowing the Dutch government to overcome some of the cultural barriers identified by Margetts and Dunleavy (2002). One official suggested to us that Australian public servants had a distinctive 'try it and see' approach which worked well with web-based initiatives – in UK civil servants we observe an obsessional 'lets not start until we are completely ready' approach which can lead to 'big-bang' systems development projects that are allowed to delay web-based initiatives (Margetts, 2003). In Japan, the culture of company honour means that the Japanese companies delivering the Japanese government's legacy systems cannot fail – and will spend what ever it takes to overcome systems problems, making these systems far more reliable in those of the UK, for example. In the US, a culture of competition seems to

have aided federal initiatives to keep the computer services market more diffused than that of the UK, New Zealand, Japan or Australia.

Identification of these factors should not be used to over-validate institutionalist claims of uniqueness or path dependency in the development of e-government. There is nothing inevitable about these or other factors which differentiate the e-governments of each country. Sustained commitment from the top to the benefits of e-government, sensible financial investment, retention of organisational expertise which can be used to shape contract regimes and markets of computer services providers and efforts towards steering administrative cultures away from identified barriers to the development of e-government can still bring benefits in terms of administrative efficiency and innovative policy-making for the governments which employ them.

## NOTES

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### Contact details:

Professor Patrick Dunleavy  
Department of Government  
LSE  
Houghton Street  
London  
WC2A 2AE

Tel. 0044 (0)20 79557178  
Email. [P.Dunleavy@lse.ac.uk](mailto:P.Dunleavy@lse.ac.uk)  
[www.lse.ac.uk](http://www.lse.ac.uk)

Professor Helen Margetts  
Director, School of Public Policy  
UCL  
29/30 Tavistock Square  
London  
WC1H 9QU

Tel. 0044 (0)20 76794980  
Email. [H.Margetts@ucl.ac.uk](mailto:H.Margetts@ucl.ac.uk)  
[www.ucl.ac.uk/spp](http://www.ucl.ac.uk/spp)



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