

### E-GOVERNMENT IN AUSTRALIA AND SPAIN: A STUDY OF CONTRASTS AND SIMILARITIES

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## Abstract

Studies about the social impact of Internet and information and communication technologies (ICTs) are usually focused on private sector organizations. However, under the rubric of e-government, developments in the public sector are proceeding at a similar if not greater pace and are giving rise to a range of important issues which impact on the internal (organisational and managerial) and external (relations between government and citizens and clients) dimensions of public sector management and administration. Despite the importance of these developments, there is a dearth of academic critiques with the major contributors to the literature being public managers and consultants. This paper is the result of a Spanish-Australian collaboration to investigate the development of e-government and its implications for public management and society at large.

At first glance a comparative paper on Spain and Australia may seem surprising, however, the pervasiveness of the ideas of the New Public Management (NPM) and the universal character of the set of innovations described as e-government suggests that a comparison of similar developments across divergent cultural, political and economic contexts may generate valuable insights into the character of both NPM and e-government, both separately and with respect to their interaction with each other.

This paper proceeds on the hypothesis that governments in the two countries are making rapid advances in their use of e-government, but that this is not matched by the pace of change in the management process and the relations of governments and citizens. It is evident that public managers in both countries have welcomed Web sites and other Internet uses but it is necessary to ask whether these changes represent substantive rather than superficial advances. We suggest that, despite some notable exceptions, the development of ICT in Australia and Spain is actually improving unidirectional services rather than making innovations to online services and providing for interaction with citizens.

This paper is in three parts. The first provides a comparative overview of developments in e-government in Australia and Spain. The second employs case study analysis of the leading e-government experiences at the different levels of government in the two countries to explore the limitations of e-government in developing the information and knowledge society. Finally, as a result of interviews with managers, webmasters, ICT experts and public policy specialists from Spain and Australia about future trends and problems concerning e-government, we raise some questions for further discussion. The key issues here are: facilitating citizens access to ICTs, adapting organizations to ICTs and opening the internal structure of government to the social and political environment.

## **E-GOVERNMENT IN AUSTRALIA AND SPAIN: A STUDY OF CONTRASTS AND SIMILARITIES**

### **INTRODUCTION**

The complex of changes referred to as e-government do have the potential to dramatically alter the ways in which governments provide services. Both Australia and Spain are proceeding with the development of e-government, though in somewhat different ways. While the current paper is not greatly concerned with new public management and e-government, that being the subject of another paper (see Criado, Hughes and Teicher, 2002), it is the case that e-government and New Public Management (NPM) are related. The emphasis on service delivery, on customer satisfaction, on efficiency and crossing departmental boundaries are common between NPM and e-government.

Spain and Australia are developing forms of e-government in ways that are quite similar. The pervasiveness of the ideas of the NPM and the universal character of the set of innovations described as e-government suggests that a comparison of similar developments across divergent cultural, political and economic contexts may generate valuable insights into the character of both NPM and e-government both separately and in the way they interact with each other.

In this paper e-government is defined as the different ways in which governments and public managers use to contact and interact with their citizens through their Web Sites but also other Internet applications. These uses of ICT can be considered on a continuum from passive data, relational information, basic transactions through to fully interactive public relationships.

This paper proceeds on the hypothesis that governments in the two countries are making rapid advances in their use of e-government but that this is not matched by the pace of change in the management process and the relations of governments and citizens. It is evident that public managers in both countries have welcomed Web sites and other internet uses but it is necessary to ask whether these changes represent substantive rather than superficial advances.

### **RESEARCH NOTE**

The paper is informed by surveys carried out in both countries. At this stage the questionnaires used in each country are not identical, but there is sufficient commonality for some comparisons to be made. Further collaborative research is planned and a more precise instrument will be developed for use in both countries.

Research in Spain was aimed at generating primary data to analyse the extent of developments in the area of e-government. Data was collected by analysing 174 web sites in the Basque Country and in Madrid during October 2000 and January 2001. The addresses of web sites to be analysed were compiled in a number of ways: phone calls to city councils; accessing <http://www.admiweb.org>; <http://www.pglocal.com>; information from different governmental agencies, such as the Ministry of Public Administrations (Ministerio de Administraciones Públicas, <http://www.map.es>), Community of Madrid Government (Gobierno de la Comunidad de Madrid, <http://www.comadrid.es>), the Basque Government (Gobierno Vasco, <http://www.euskadi.net>), EUDEL (<http://www.eudel.es>), and web sites of two provincial governments of the Basque Country: Vizcaya (<http://www.bizkaia.net>) and Guipúzcoa (<http://www.gipuzkoa.net>). We also used the 1998 population census data for Madrid and EUSTAT and the Provincial Governments' 1999 census for the Basque Country. In Australia the research involved a sample survey of government users conducted by the authors as well as publicly available government material.

### **E-GOVERNMENT IN AUSTRALIA AND SPAIN**

Many countries are involved in advancing e-government within their jurisdictions. Australia and Spain are no exception. A report by Accenture found that Australia was 5th in maturity of e-government user

countries and Spain 12th (Accenture, 2001). Another survey of 27 countries in 2001 found that Australia was equal 6th and Spain was 13th, with Australia one of 8 countries in the high penetration band of online users and Spain in the next group of medium penetration (Taylor, Nelson, Sofres, 2001).

### **Levels of e-Government**

The EU defines four stages of on-line service delivery.

#### ***First Stage: Information***

In this stage departments and agencies use the world wide web to post information about themselves for the benefit of external users. The information is easily accessible with relatively few clicks of the mouse, but the site is passive and does not provide a service as such. Often these web sites are not well managed, are specific to a department and have no technical staff responsible for updating them. They are also often poorly designed with unclear definitions, making it difficult to access relevant information. Thousands of such 'one way' communication sites are already up and running.

#### ***Second Stage: Interaction***

This stage introduces a degree of interactivity. Second stage sites allow two way communication via e-mail or box files giving citizens the facility to provide information about themselves by completing forms on-line (e.g. change of address). It is also possible to download PDF documents such as forms and complete them off-line. Presentation of information is much improved with content files making access to information about services easier and more flexible. However, feedback is limited and there is no integration of content across departments. Navigation can still be difficult for users. There are many second stage sites in existence, many of them dependant on the relatively low technology of e-mail.

#### ***Third Stage: Processing***

Automation of many of the tasks previously carried out by public servants occurs in this stage. Requests for service can be submitted on-line and subjected to basic editing and validation before being stored for off-line processing. Transactions which involve a fixed price, for example renewing a license, paying a fine or enrolling for an education course, can be completed on-line. Information and service provision is more citizen-centric, focussing on the function rather than the department or agency providing the service. The promotion of feedback and the use of various tools, links, and updated pages has made managers more accessible to citizens. Finally, the design of systems is more coherent, incorporating logic tools, presenting information in a manner which reflects the institutional view, and catering for different languages and disabilities such as blindness and deafness. There are several hundred such sites, mostly operating at the state or local, rather than central, government level.

#### ***Fourth Stage: Transaction***

This final stage is much more than a simple web site. Rather, it is a collection of web sites accessible via a portal that integrates the complete range of government services and provides citizens with seamless access to more than one agency. Different dimensions (information, content, management, style, update, etc.) are integrated providing a global view of a new virtual parallel organization. The focus is strategic design, addressing citizen and business needs by offering a complete range of services on-line, while seeking to extend services as a consequence of improved technical and human resources. This stage allows customers to interact fully with government, and provides aggregated and customized information and services in subject areas. It is a complex, growing system, rich in data, transactions and multimedia.

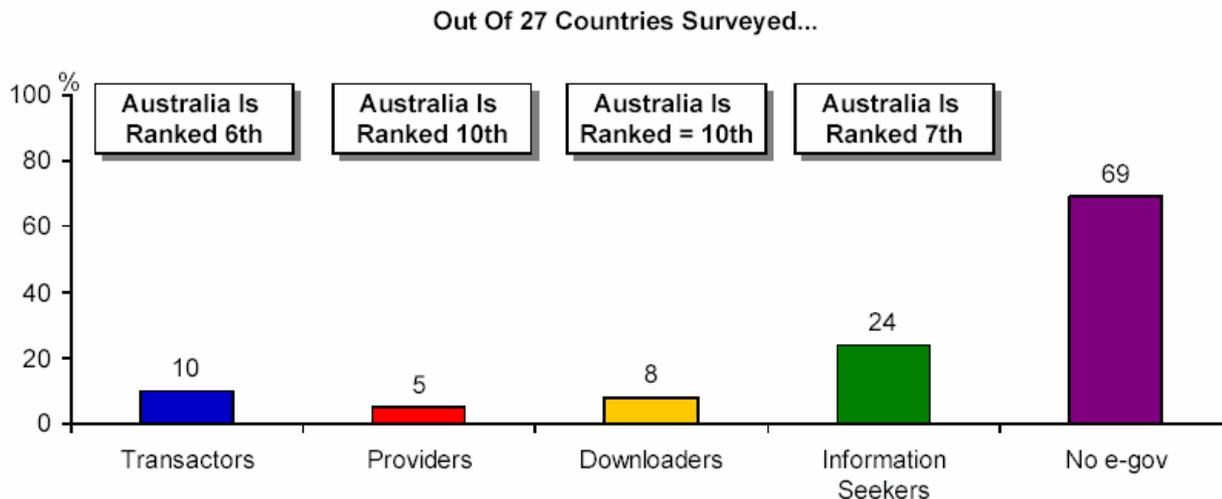
### **AUSTRALIA**

Australia is usually regarded as one of the leading users of internet technology and it is also ranked highly in use of e-government. A survey carried out at the end of 2001 (Taylor, Nelson, Sofres, 2001) found a relatively high level of internet usage in Australia with 31 per cent of Australians having used the internet to access Government Online over the last twelve months. This represents 65 per cent of those who used the internet within the last month. The major Government Online use is Information Seeking (24 per cent) but 10 per cent of those surveyed had Transacted (i.e. used the internet to pay for Government services or

products using a credit card or bank account number). Interestingly the incidence of Government Online usage amongst internet users is slightly higher (21 per cent) than the incidence of online product shopping (18 per cent).

**Table 1: Total e-government usage**

Base: Total Sample n=1004



Source: Taylor, Nelson, Soffres (2001)

### Australian Government Policy

The federal government and all state governments have stated commitments to the provision of services by electronic means. The current federal government's Online Strategy aims to ensure that the Prime Minister's commitment that all appropriate Commonwealth services are available online by the end of 2001, is met. The results of The Online Survey – Round 4 (NOIE, 2002) indicates that 48 per cent agencies had met the Prime Minister's commitment as at October, 2001 and a follow-up survey in January 2002 confirmed that all agencies had met the target.

Results from the Round 4 survey indicated that as at October 2001 1665 services are provided online by Commonwealth Government agencies. Agencies also reported that 602 additional services are planned for the future. This represents a figure of around 60 per cent of services currently available online, which compares favourably to the UK. Services are targeted at a wide variety of groups, including business, community organisations, students, government, youth, and families. Current trends indicate an exponential growth in online enablement by agencies. Currently 27 per cent of services are at complexity level 1 (publication of static information only). A further 43 per cent are at complexity level 2 (providing online access to the information resources and databases of an agency, such as providing downloadable/manipulable database information), with the remaining 30 per cent at complexity level 3 (where two-way data interchange occurs between clients and an agency). In future, services will be of a higher level of sophistication and functionality. (NOIE, 2002)

The federal government has announced a whole-of-government Portals Framework to provide a customer-focused coordinated approach to the Commonwealth's online presence. This framework will facilitate cross-agency services and capture the opportunity that exists in the online environment to package together information and services, which would otherwise be delivered separately. This provides efficiency benefits both for users and for government.

### The Australia.gov.au Portal

In February 2002, a new single entry point to the Commonwealth government information and services was

launched by the minister. The portal - australia.gov.au - is the culmination of the Government Online Strategy and links a number of existing portal websites. The portals are arranged into customer and subject groupings with links to all areas of the Commonwealth Government and with some further links to state and local governments. As is best practice in e-government the portal is designed to cross agency boundaries with the first nine portals being: business, regional Australia, families, youth, education, agriculture, science and industry, culture and recreation, and the workplace. The second set of portals are due online by mid-2002 and will cover further customer groups – Indigenous Australians, women, community, and seniors - and the subject environments of government, law and justice, and health and immigration.

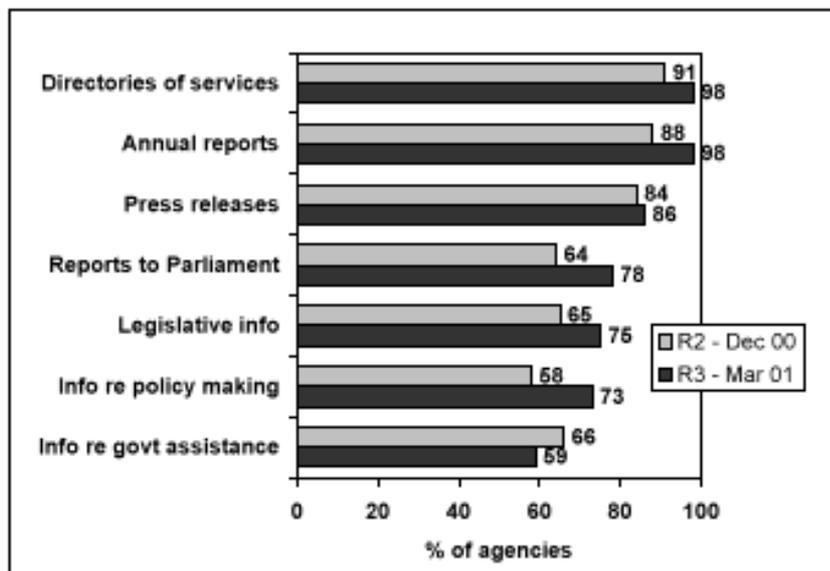
The development of each portal is undertaken by a consortium of relevant government departments. This means that the information available through one portal website can span many different areas of government, ‘resulting in a seamless user experience’ according to the Minister, who also claims that the content that is found on the portal websites ‘is based on research and the knowledge the different government departments have of their customers’ and it will be ‘tested and enhanced on an ongoing basis with customer feedback a welcome and vital part of the ongoing development of the portals’.

The federal government has undertaken regular surveys of its agencies to monitor progress in the promise to have all government services available on-line. As the following tables show, this promise is now close to realisation.

Table 2 shows that virtually all agencies provided directories of service and annual reports by the end of 2001, but also shows very high compliance levels in other information categories.

**Table 2: Online information by government - Australia**

**Minimum online information**



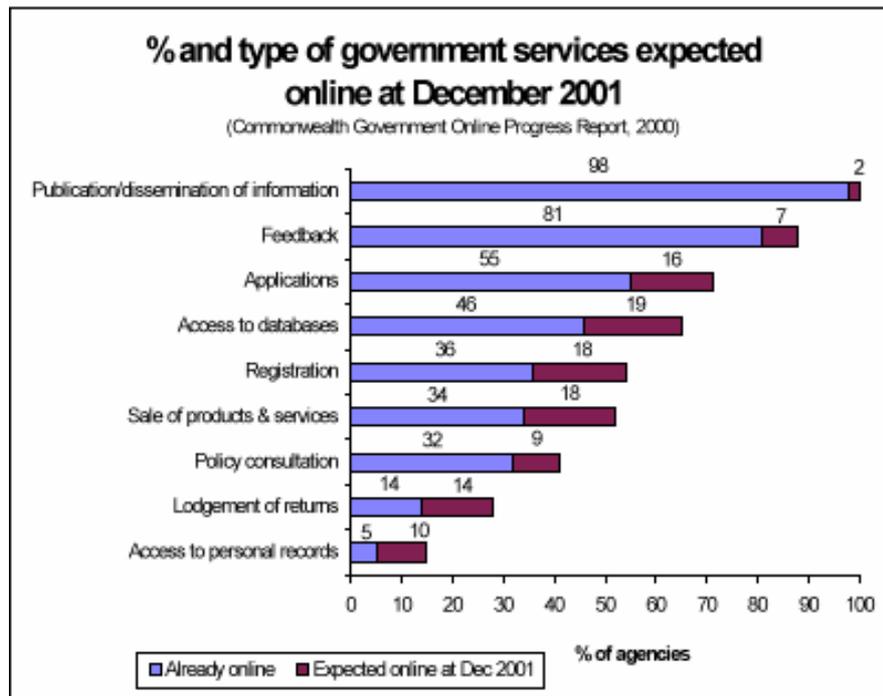
Source: Australia, National Office of the Information Economy (2001) *The Current State of Play, June 2001*, Canberra, NOIE.

Information and Communication is by far the most common function provided by agencies, with 75 per cent of current services classified as such. The functions which make up the other 25 percent are Consultation (8), Regulation (7), Grants (6), Collection and Management of Revenue (3) and Procurement (2).

Table 3 indicates that all agencies were to have publication/provision of information available at the end of 2001 with other categories of service at different levels by that time. More than 50 percent were to be in the areas of sale of products and services, registration, access to databases, applications, and with means of

feedback approaching 90 per cent. The areas that lagged were access to personal records where there are obvious problems with privacy and lodgement of returns, although on the latter, the Australian Tax Office is regarded as a world leader in electronic lodgement.

**Table 3: Increase in Service Provision**



Source: Australia, National Office of the Information Economy (2001) *The Current State of Play, June 2001*, Canberra, NOIE.

### THE AUSTRALIAN TAX OFFICE

The ATO is a leader in the adoption of ICT and this is not confined to information only provision. Rather the ATO is developing a range of interactive services. Despite this leadership position, it faces a range of obstacles some of which are discussed below.

Australian taxpayers have been able to lodge their tax returns electronically since 1990 (Carmody 1997), and currently 80 per cent are lodged electronically (Carmody 2002b). Since 1990 the ICT services provided to the taxpayer have grown substantially. The ATO website, ATOAssist, provides four main user headings, individuals, businesses, non-profit organizations and tax professionals, which provide users with direct access to information and facilities relevant to them (ATO 2002a). This website has been applauded by the Human Rights Commission for continuing to improve its accessibility and useability and for complying with guidelines for the visually impaired (ATO 2000). The ATO OnLine Action Plan reports Interactive Voice Recognition is available for some matters, such as luxury car taxation and wool taxation (ATO 2002c).

The website is largely informational (such as ATO Law which is an up to date database of tax law). Some of the informational strategies are quite innovative, for example the tax calculator allows users to calculate PAYG (Pay-As-You-Go) tax payments (Carmody 1999). There are some significant interactive initiatives. For example, 'smart forms', or 'eforms', have special programming capabilities incorporated into the software to validate details and help users to avoid errors. However, most of the forms on the web site still have to be downloaded, printed and sent to the Tax Office (ATO 2002b).

In March 2002, the Tax Commissioner announced plans to take taxation fully online. The intention is for all

taxpayers, businesses and individuals to have a logon and password and be able to get 24 hours access to their taxation details. A pilot program involving a number of businesses will commence shortly, following a similar pilot conducted in the UK (Carmody, 2002b).

E-tax is a new form of electronic lodgement for tax returns. The tax office provide free to taxpayers an electronic Tax Pack which can be downloaded from the ATO website. It helps taxpayers get their tax correct by providing useful hints and examples (ATO 2001). Other e initiatives include:

- Provision of 'e-record' free to small business. This is a software program which supports record-keeping and the accurate completion of business activity statements.
- E-grant, a new initiative commencing in July 2002, which provides truck drivers with automatic receipt of tax grants when purchasing diesel and alternative fuels when they swipe their card at the service station bowser (Carmody, 2002a).

In addition to the provision of services to taxpayers, the ATO has made significant use of ICT to change the way work is performed. Call Centre services rely on up to date and immediately accessible information for staff. With the implementation of the Goods and Services Tax in 2000, the ATO changed its style of service from enforcement to educating and assisting tax-payers to comply with the new legislation. This service requires the employment of field-staff that visit businesses, requiring the use of portable online technology.

The ATO was the first government agency to make a commitment to a Whole of Government portal is now leading the way for 50 other agencies (Carmody, 2002a). One important advantage to Australian businesses from a whole of Government approach is that it provides the opportunity for them to supply their details to one Government agency and these details will be available to other agencies who need them. The ATO is in the process of establishing a secure Australian Business Register that allows online registration for businesses that provides data to all the relevant government agencies. Business can already apply online for their Australian Business Number (Carmody, 2002b).

In order to enable electronic lodgement of tax information, the Electronic Transactions Act 1999 was enacted by the federal government which provides that certain electronic communications satisfy any Commonwealth legislative requirements. Other than legislative barriers, other major barriers faced by the ATO include security and privacy for tax payers, authentication, integrity and accuracy of documents. The solution has been the adoption of Public Key Technology which ensures that any communication between a taxpayer holding a private key and the ATO remains confidential whilst in-transit as well as authenticating the author of the communication and detecting alterations (ATO, 2002a).

Other problems encountered by the ATO include the expense and limited life of ICT infrastructure, existing business practices resistant to electronic advances and technological gaps (ATO 2002a). Interestingly the ATO acknowledged in 1997 that one of main drivers for the Tax Office to lead the way with electronic technology was the fast growing e-commerce phenomena, requiring the Tax Office to participate or loose touch with current business practices (ATO, 1997).

### **Government-to-business e-Government**

The Australian Tax Office is a leader in electronic lodgment, but as most tax returns are submitted by tax agents rather than individuals, this could be regarded at least as much government-to-business electronic commerce as it is government-to-citizen. Other areas of government-to-business e-government show this area is rapidly growing. Results of the Online Survey (Round 4) showed that the vast majority of agencies currently pay at least some of their suppliers electronically; 30 per cent of agencies pay more than 90 percent of their suppliers electronically; and half of them pay more than 80 percent electronically. At the time of the survey, 30 per cent were able to conduct simple procurement using open standards (such as the Open Buying on the Internet and XML standards) (NOIE, 2002).

## THE SURVEY RESULTS

In a survey of government managers conducted by one of the authors 63.6 per cent of respondents indicated that their organization has an existing e-government program. Local government authorities are the entities least likely to have an e-government program, although there are five state and one federal agency in a similar position. Eighty-three per cent of rural councils do not have an existing e-government program. Local government generally lagged behind federal and state government in having their own intranets, public web sites or portals. For example, 88 per cent of federal and state organisations surveyed had their own portals, compared to 37 per cent of local governments.

### Level of internet service

The majority of sites (45.9 per cent) provide only the lowest, level of internet service which makes data available on the internet and allows downloads of information and forms, see table 4. Only one site has a fully integrated facility with the ability to get all necessary information, fulfil all obligations and apply for and receive all services to which one is entitled from one place. There is no difference between Federal, State and Local government levels. However, there are considerable differences between the various types of Local government where 73 per cent of rural councils have web sites still at the transmit level.

**Table 4: E-government level**

	Overall		Federal/State		Local	
	Freq	%	Freq	%	Freq	%
Transmit	51	45.9	25	45.5	26	46.4
Interact	27	24.3	13	23.6	14	25.0
Transact	32	28.8	16	29.1	16	28.6
Integrate	1	0.9	1	1.8	0	0
<b>Total</b>	111	100.0	55	100.0	56	100

As might be expected, rural local governments are more likely than those in capital cities to be at the lower level of e-government usage, with only 13 per cent at the transact level, compared to 40 per cent for capital city local government. Of those with no plans for portals 88.9 per cent are from local councils in rural areas, and an overwhelming 80 per cent of rural councils who do not yet have a portal, have no plans to get one.

### Service Improvement

Respondents either agreed or strongly agreed with the idea that e-government would improve service provision. 77.8 per cent agreed that efficiency would improve and only 4.5 percent thought that efficiency would be worse; see table 5.

**Table 5: We should proceed quickly because e-government offers improved**

	Range & Quality of Service		Communication		Participation		Efficiency	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Strongly agree</b>	34	25.2	51	37.8	36	26.7	42	31.1
<b>Agree</b>	72	53.3	76	56.3	62	45.9	63	46.7
<b>Neither</b>	17	12.6	5	3.7	28	20.7	24	17.8
<b>Disagree</b>	9	6.7	3	2.2	8	5.9	4	3.0
<b>Strongly disagree</b>	3	2.2	135	100.0	1	0.7	2	1.5
<b>Total</b>	135	100	51	37.8	135	100	135	100

Added to the generally favourable view, the most important aspects of e-government were that it would facilitate citizen's access to information from government agencies, that services would be made available at a convenient time and place and that there would be an improvement in efficiency.

**Table 6: How will the following areas be affected by the introduction of e-government?**

	<b>Much better %</b>	<b>Somewhat better %</b>	<b>Neither better nor worse %</b>	<b>Somewhat worse %</b>	<b>Much worse %</b>
Offering services at a convenient time and place	60.4	29.1	10.4	0	0
Facilitating citizens' access to information from government agencies	53.5	39.5	7.0	0	0
Efficiency	39.8	45.9	12.8	1.5	0
Facilitate communication between citizens & government	30.8	57.9	11.3	0	0
Provision of easy-to-use services	29.1	58.2	12.7	0	0
Your ability to do your job well	25.4	54.5	19.4	0.7	0
Responding to the needs of the disabled	21.8	56.4	18.8	3.0	0
Facilitate communication between citizens and elected representatives	20.3	58.6	20.3	0.8	0
Accountability of government to citizens	14.3	40.6	42.9	2.3	0
Level of personal service	10.4	30.6	35.1	23.1	0.7
Responding to the needs of citizens who do not speak English	9.0	28.4	56.0	5.2	1.5
Improve coordination between different levels of government	8.3	51.9	38.3	0.8	0.8
Level of privacy protection	8.3	12.8	61.7	15.8	1.5
Security of personal information	6.1	18.2	59.1	15.9	0.8

It was generally perceived that the introduction of e-government would have a beneficial effect on many operations of government agencies (see Table 6). The areas that would be greatly enhanced were offering services at a convenient time and place, and facilitating citizen's access to information from government agencies. The areas of operations that respondents considered would either not be affected or would be adversely affected were personal service, privacy and security.

The internet and other information technologies were helpful in several areas of operation. Respondents felt they helped a lot with internal communication (62 per cent) and research (46 per cent). Other areas such as public outreach and communications, coordinating activities and sharing information with other gov't agencies, and providing quality services or products to citizens were helped a little. A somewhat surprising result was that 49 per cent of respondents considered that procurement was neither helped nor hindered by these technologies and only 7.6 per cent thought it was helped a lot.

### **Obstacles to e-government**

Lack of resources, the funding models used and security issues are seen as the greatest obstacles to the implementation of e-government. More than 50 per cent of respondents cited lack of resources as either a major or a moderate impediment. While 20.5 per cent saw security issues as a major impediment, 63 percent saw it as not at all an impediment. Human resource issues such as shortage of skilled staff, employee resistance, training and fear of job loss were not seen as an impediment at all by more than 80 per cent of respondents.

## Human Resource and Change Management

Because major technological change such as the provision of services via the internet presents organizations with an opportunity to implement changes to their structure and the way work is organised, respondents were asked what impact e-government had on various aspects of human resource management and change management. Those aspects are shown in Table 7. On the whole e-government was seen to have a positive effect on most of the areas listed, although very few respondents thought the impact was very positive.

**Table 7: What has been the impact of e-government on the following:**

	<b>Very Positive %</b>	<b>Positive %</b>	<b>No Impact %</b>	<b>Negative %</b>	<b>Very Negative %</b>
Introduction of change	7.2	61.6	30.4	0.8	0
Training and career development opportunities	4.0	57.1	38.1	0.8	0
Job satisfaction	4.8	56.3	38.1	0.8	0
Speed of decision-making	8.0	48.8	40.8	2.4	0
Repetitive processing	12.7	46.8	32.5	7.9	0
Horizontal job enrichment	5.6	41.9	51.6	0.8	0
Career paths for employees	4.0	40.0	55.2	0.8	0
Vertical job enrichment	4.0	37.9	56.5	1.6	0
Reorganization of the agency to provide one-stop shopping	5.6	32.8	60.8	0.8	0
Adoption of private sector practises such as performance management	3.2	31.5	64.5	0.8	0

The respondents from the agencies surveyed were very positive about the future state of e-government. Local government was somewhat less enthusiastic but still positive.

## SPAIN

As a member of the EU Spain is part of the wider aims of the EU to further e-government within Europe. The Lisbon European Council meeting in March 2000 set the objective for the EU to become the most dynamic knowledge-based economy in the world by 2010. The eEurope Action Plan 2002 endorsed at the Feira European Council in June 2000, is a central element of this strategy to transform the European Economy (European Commission, 2002):

The overall objective of eEurope is to bring Europe on-line as fast as possible. In pursuing this objective the Action Plan targets three areas:

- i. cheaper, faster and secure Internet
- ii. investing in people and skills
- iii. stimulating the use of the Internet

The eEurope Action Plan is built upon a methodology which consists of accelerating legal measures; re-focusing existing financial support programs; and benchmarking.

Within this general framework, most member states have adopted or are in the process of adopting e-government strategies for the provision of on-line services for citizens and businesses. The eEurope target was to have all basic services available on-line by the end of 2002. The Internal Market Council agreed to a definition of basic services covering 8 services to businesses and 12 to citizens. These are set out in Table 8.

**Table 8: Provision of basic services by e-government in Europe**

<i>CITIZENS</i>	<i>BUSINESSES</i>
Income Tax	Social contribution for employees
Job search services	Corporate tax
Social Security benefits (1)	VAT
Personal documents (2)	Registration of a new company
Car registration	Submission of statistical data
Application for building permission	Custom declaration
Declaration to the police	Environmental permits
Public libraries	Public procurement
Birth & marriage certificates	
Enrolment in higher education	
Announcement of moving	
Health-related services	

(1) Sub-services: unemployment benefits, child allowances, medical costs, students grants.

(2) Sub-services: passport, driver's licence.

*Source:* CAP GEMINI-ERNST & YOUNG (2001) 'Web Based Survey on Electronic Public Services', Summary Report.

Progress in getting these services on-line was monitored by a survey of Cap Gemini-Ernst & Young (2001), that investigated 10,000 public service providers in the EU. The European Commission, DG Information Society, asked Cap Gemini-Ernst & Young to carry out a web-based survey on public services on the Internet. This benchmark study is based on one E-government indicator from a set of 23 adopted by Council of Ministers on 30 November, 2000. The survey produced an overall average of 45 per cent for the 20 services in the 17 countries, (15 Members, plus Iceland and Norway). When the scores are broken down by service, the results are as presented in Table 9:

**Table 9: Web Based Survey on Electronic Public Services**

<b>SERVICES</b>	<b>EU</b>	<b>% SPAIN</b>
Job search services	81	50
Income Tax	74	100
VAT	68	100
Corporate Tax	62	100
Registration a new company	58	25
Customs declaration	57	100
Submission of data to statistical offices	56	100
Social contribution for employees	50	25
Public procurement	44	25
Social Security benefits	43	42
Announcement of moving	40	2
Personal documents	40	18
Public libraries	38	96
Enrolment in higher education	37	65
Car registration	33	25
Birth and marriage certificates	31	2
Environment-related permits	29	15
Declaration to the police	29	100
Application for building permission	27	2
Health related services	7	20

*Source:* CAP GEMINI-ERNST & YOUNG (2001) 'Web Based Survey on Electronic Public Services', Summary Report.

Other findings are:

- i. Services provided by a single administrative unit have higher levels of on-line service delivery.
- ii. Services provided by decentralised local agencies are less well developed.
- iii. Complicated administrative procedures require important back office reorganisation to transform complete transactions into simple procedures.

Final conclusions are focused on the demand side (European Commission, 2002, 62, pp. 15) which claimed that 'government services are one of the main areas of information sought by Internet users. Nearly a half of European Internet users have visited government sites. However, they mostly just obtain information or download forms. Less than 10 per cent users have submitted forms'.

## **GOVERNMENT POLICY IN SPAIN**

In Spain, following the strategy agreed under eEurope the government created the INFO XXI Action Plan within the Ministry of Science and Technology, where all instruments of public intervention concerning research, development and innovation, as well as information society promotion and the regulation of the ICT sector, were concentrated. The Ministry focuses on two areas: measures to achieve deregulation of the telecommunication sector and measures to accelerate the implementation of the Information Society (IS) in Spain. The second group of measures is pertinent to this paper and relates specifically to the INFO XXI Action Plan.

The INFO XXI Action Plan presented to the Spanish Government in January, 2001, defines the core strategy for accelerating the implementation of the IS in Spain. More than € 2900 million will be invest over a three year period (2001-03). There are 300 projects, and they involve a number of actions proposed by different Ministries. Three major areas of the INFO XXI Action Plan are (Fundación Retevisión-Retevisión Foundation, 2001):

1. Improvement of the telecommunication and ICT sector, completing deregulation, enhancing competence, and stimulating Research and Development (R&D) and the innovation of companies within this sector.
2. Completion of the Information Society for all, with three kinds of actions: facilitating access and the users formation; incorporating companies, specially the smallest, within the IS and New Economy; and stimulating Internet contents in Spanish.
3. Enhancing e-government to develop the potential to increase management efficiency and the efficacy of public administrations and, at the same time, improve external relationships between government and citizens (G2C) and businesses (G2B).

Within these two areas related to e-government a number of projects have been developed. The most important are:

- Portal of the Public Administration: (<http://www.administracion.es>). This portal involves all actors within National (Federal) Public Administration, with coordination from the Public Administrations Ministry. Work commenced in 2000, and this portal was finally launched in November 2001. It includes some of the most interesting content now available on the Net and all online services provided by the Public Administrations Ministry.
- The provision of a number of services that can be completed on-line. Most notable among these is the Tax Agency and the Social Security Agency, which will be discussed in detail later.
- Getting government schools online. Education is a strategic area of e-government development in Spain. During 2000 94 per cent of secondary schools and 81 per cent of primary schools in Spain were connected to the Internet. Also, 96 per cent of the teacher training centres are on the internet and 70,000 teachers are provided with their own e-mail. More than 20 per cent of public schools have their own Web site.

It is necessary to include the efforts of In order to improve information and services available to citizens and businesses on the internet, many different public agencies and ministries will need to be involved. Therefore, resources for the use of ICTs within the General (Federal) Administration have been increased to nearly €1,150 millions.

In conclusion, the political objective consists of promoting citizen access to the internet and to the telecommunication services. To this end, a number of initiatives have been planned for the future:

- Provide citizens with basic information via the internet.
- Provide training to public and private sector employees to enhance their knowledge of the internet and software applications.
- Provide universal access to the Internet from Correos-Post Offices using ADSL, RDSI, and VSAT technologies. In order to allow free public access, 650 offices will be equipped during 2001 and 650 during 2002. .

### **Tax Administration Agency-Agencia Estatal De Administración Tributaria (AEAT)**

The Spanish Tax Administration Agency (Agencia Estatal de Administración Tributaria-AEAT), uses ICTs to provide citizens with services such as tax self-service, tax information, help software, income tax return or other tax declarations.

On the one hand, AEAT receives directly information from taxpayers and needs less human and material resources to attend these agents that ask for their income tax return or declaration. On the other hand, citizens are compensated by reducing the waiting time, eliminating physical visits and simplifying procedures. Besides, taxpayers can know if AEAT has received properly their data and even whether they have made tax declaration properly.

The most common services provided for AEAT in its portal are (<http://www.aeat.es>):

- Information. Tax information, taxpayers calendars, legal resolutions of General Department of Tax (Treasury Ministry) in order to coordinate the activity with regional governments, general information about AEAT, general regulation and legislation.
- Download of help software and tax models.
- Digital tax declaration. Through the Internet, whoever and whatever (institution) can completed tax declaration. They need a digital certification or an e-sign (expedition from the official Agency to certification and authenticity) in order proof identity of taxpayer.
- Tax payment. AEAT has agreements with banks in order to generate digital codes that taxpayers include in their declarations. Besides, AEAT can seize personal accounts whether they are under €4,000.
- In the future, AEAT is working with the idea of including complaints and appeals through the Internet.

This tax declaration system became available from 1998. In the first instance it was optional for the biggest 18,000 companies of the country, now for them it is compulsory. Later, this service was provided for medium and small businesses and professionals. Finally, the general income tax declaration was launched in 1999. Success of the different services provided on-line for the AEAT to the citizens and businesses is clear:

1. During 2000, AEAT received more than 7.5 million visits on their portal, 30 per cent more than previous year.
2. Self-service section visits, or personal management visits made, increased to 4.9 million, 48 per cent more than previous year.
3. During 2000, almost 1 million taxpayers downloaded help software for presentation of their tax declaration.
4. About 600,000 taxpayers completed their declarations on-line with 20 per cent personal income tax, with the rest, companies and professionals.

As a result of these activities the AEAT has received the Prize for Excellence In Information Technologies by the World Alliance of Information Technology (WITSA), probably the most important prize for e-government world wide.

### **Social Security Agency-Seguridad Social (SSA)**

According to Holmes (2001) people in Spain have a smart card, which is presented to a doctor on visits which contains information about the visit (illnesses, medicines, clinical histories, etc.) and this is settled within Intranets of the Social Security Agency. However, Holmes is incorrect in arguing that there is a generalized system of kiosks providing information about services and the system of digital appointments is not working as Holmes says. The universal card is just used when you go to the doctor, nothing more.

However, the Social Security Agency has developed a Digital Office where citizens, companies and collaborators can gather information and complete services on-line. In order to guarantee security and confidentiality of data, access to the Social Security Agency portal (<http://www.seg-social.es>) is only possible with digital certification or an e-sign (from the Agency for certification and authenticity, like AEAT) and security software provided by the Agency.

Previously, this Agency started RED (NET) System, service that allows companies and professionals the exchange of information and documents over digital networks. Using this system gives the opportunity to complete services and receive answers referred to the status of workers, social charges, etc. without movements and timetable limitations.

RED System provides access to the General Database of Workers Affiliation, which means that it is possible to communicate new contracts and dismissals of employees on-line. In Spain it is compulsory to provide this information in order to make effective the payment of social contributions. Beforehand paper-based systems were needed supported by the Agency bureaucracy and companies which incurred costs for agency and company alike. The RED system provides immediate answers to such transactions. Also, the SS Agency communicates new regulations and other information that could affect companies or professionals.

In order to join this network it is necessary to have an EDI connection with the SS Agency, which is compatible with simple computer systems. It is now possible to complete through the RED System contributions to the Social Security system, and in the near future the SS Agency will provide a new way to address payments to banks and this opens the possibility for new services.

### **Local government in Spain**

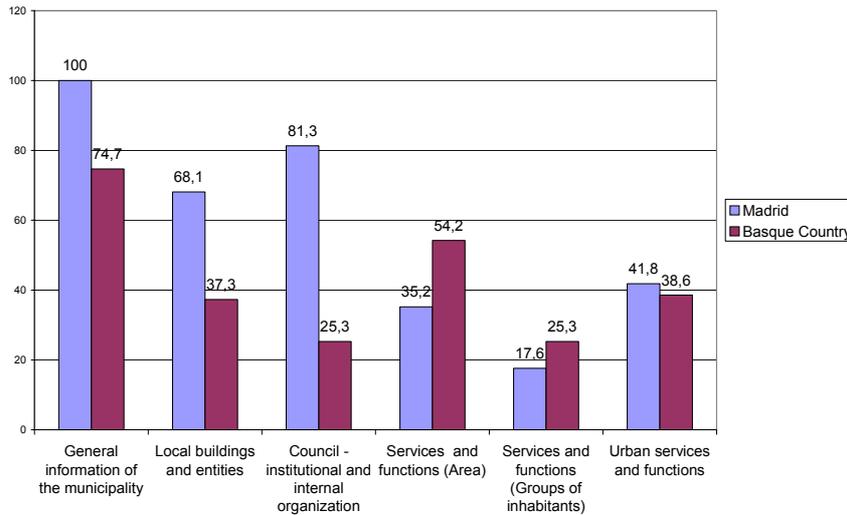
The following mainly focuses on the experience of web site use within local level of government in Spain, especially those of two regions, the Basque Country and Madrid, to produce primary data about their orientation to the citizens. Results confirm a preliminary level of web site use, which means information prevalence over interaction, unidirectional approach over transactions on line and lacks in management and style.

#### ***Web Site Contents***

The content of websites allows us to view governmental proximity to citizens. We consider five different groups of contents: *general information of the municipality; local buildings and entities; council - institutional and internal organization; services and functions of the council; and relational information.* With this analysis we cover the principal areas of the agenda within Spain's local level of government.

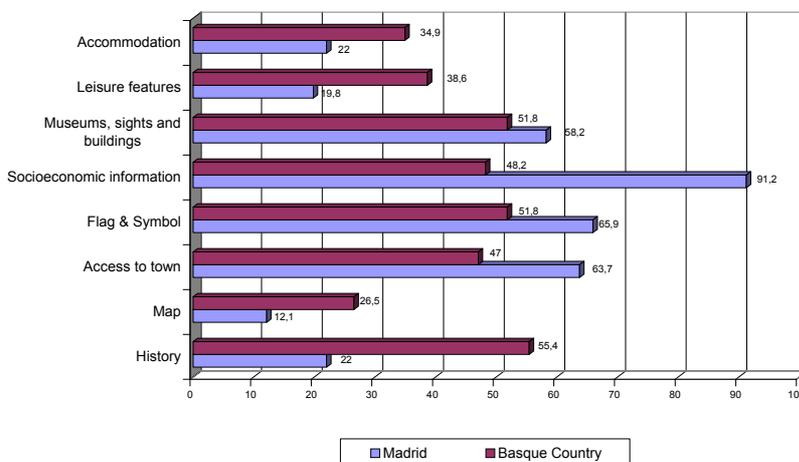
*General Information on the Municipality* - This category reflects the most symbolic and miscellaneous data. At least one of the indicators considered is presented in 100 per cent of Madrid web sites and 74 per cent in the Basque Country. Includes generic data about some general areas related to the municipality, from an economic, social and historic view: *flag/symbol; history; museums, sights and buildings; socio-economic information; and access to town.* The rest of indicators have minimal presence; they inform about *accommodation, map and leisure features* and are on less than 50 per cent of the web sites.

### TYPES OF INFORMATION. GENERAL PRESENCE (%)



*Local Buildings and Entities* - Here, we find information about public structures, buildings, entities, etc., used to deliver public services. This type is found in 68 per cent (Madrid) and 37 per cent (Basque Country) of the web sites. Mainly, they refer to *culture, education, sports* and *health* items: the percentage of web sites reaches to 60 per cent in Madrid, and varies from 20 per cent (health) and 40 per cent (sports) in the Basque Country.

### GENERAL INFORMATION OF THE MUNICIPALITY (%)



*Council - Institutional and Internal Organization* This category refers to the aspects of political and administrative organization of the councils (81 per cent Madrid and 25 per cent Basque Country), such as *budget, local government structure, organizational flow chart, human resources, internal and external regulations* and *council current activities*. Interactivity increases: within local government structure we find examples from a mere compilation of public representatives to promote contact with them through e-mail, even chat rooms. The rest of categories offer good examples of interaction considering the possibility of downloading PDF documents or reports. We observe decreasing percentages of presence, significantly in the Basque Country, where no indicators exhibit over 30 per cent presence.

*Services and Functions of the Council* - This is the most complete category analysed. We pay attention to information offered by the councils about the services and functions that they deliver to the citizens. In order to understand the complete range of categories, they are presented in three groups considering different goals (functions and services attending urban issues, areas and groups of inhabitants) and three levels of

information/interactivity with the citizens (low-unidirectional, high-bidirectional and on line delivery of services).

- *Functions and Services (Area)*. This is the group of services and functions with strongest presence within local web sites (35 per cent Madrid and 54 per cent Basque Country). *Census, training, taxes, tourism, healthy, sports, employment, leisure, culture* are the areas considered. Within this group exists a high orientation to the citizens: it is possible to find out some services which offer fully interactive relationships with citizens, even more, services delivered on line, mainly, in areas such as taxes, employment or census.
- *Urban Functions and Services*. Categories addressed are relevant to local government in terms of social impact and budget expenses: *town planning, housing, public transport, police, environment, maintenance or public works*. Services and functions within this category have an even smaller presence (41 per cent Madrid and 38 per cent Basque Country).
- *Functions and Services (groups of inhabitants)*. This group has the least presence amongst all considered (17 per cent Madrid and 25 per cent Basque Country). Percentages are low in all the categories: *children; youth; women; elderly; and disabled persons*. It is not possible to find any services completed on line. However, we point out the strong effort of some municipalities in order to inform and promote issues relevant to women, elderly or disabled persons, generally discriminated within our societies. Discrimination that also can be distinguished into Web technology in terms of use, contents and orientation.

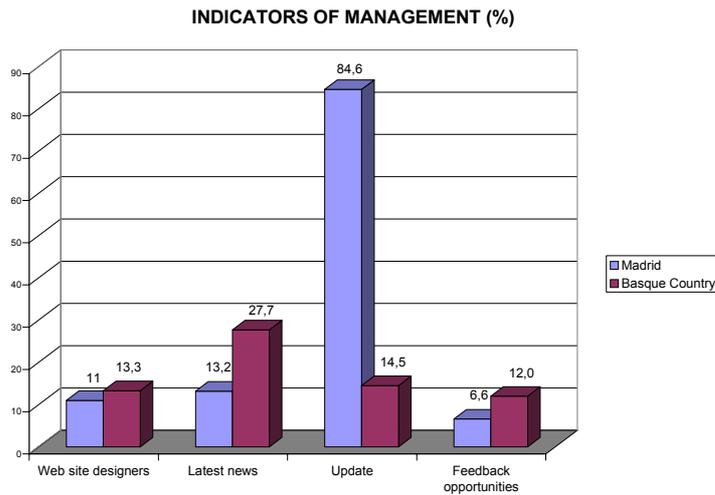
A positive fact is that within the three categories is evident a high level of information/interactivity within the different indicators. When sites are on the Net, they usually start with an acceptable initial standard of information, but this does not mean that then they promote delivery on line, management or style, as observed below.

*Relational Information* - Relational information reflects the web sites ability for linking citizens with the council organization, other entities and individuals. This is measured using an indicator for attending *e-mail addresses* and *direct links* offered and types of organizations linked.

Data interpretation shows that council web sites tend to provide contact with closer public administrations, municipal actors or internal entities of the council. Less importance is given to interaction with other governments that seem to be more distant, such as General Government (Spanish Government) or European Union. Despite some councils being on the Net, this does not guarantee successful use by citizens of their web sites. Municipalities have to interact and be linked with other levels of government, moreover with local agents (individuals, companies, or other municipalities), in order to ensure an effective jump into and use of the Internet.

### ***Web Site Management***

This dimension measures how web sites are managed in terms of contents. Web sites, as a new way to communicate and give information to the citizens, need to be maintained and adapted to new realities and impacts. Citizens demand greater government accountability, however web sites seem to be fuzziier than other structures of the public sector. Regarding this issue, do the web sites enhance transparency or are they merely a shop-front providing nothing new? Indicators in this category should be clearly present on web sites: direct contact with *web site designers*; existence of categories with *latest news; feedback opportunities* for the citizens; and date of last *updating*. Finally, we consider two indicators about ICT's projects ambition: *server ownership* and *type of domain*.



Data analysis shows modest presence in the majority of indicators with no more than 30 per cent of web sites. These results support our previous assumption considering that municipalities in the Basque Country and Madrid do not consider web sites as a live and actual competence of management and interaction. New abilities and extra resources for public ICT's projects should be displayed in order to obtain results, this seems to be one of the tasks for the next few years. Here, there are two ideas, first, e-government is considered as another area of management within public organizations. Second, web sites require attention and trained personnel to become a reality: attention to feedback and diary management seems to be the first step.

Finally, if we observe server ownership: in 77 per cent municipalities (70) the server is owned by the regional government of Madrid (Gema Project), only 2 per cent (2) have their own server and in 21 per cent (19) is owned by private companies. In 46 per cent (38) of the cases the server is owned by the provincial governments within the Basque Country, and 50 per cent (42) by private companies. In terms of domains, in Madrid 80 per cent (73) of the municipalities do not have their own domain, meanwhile, in the Basque Country 63 per cent (52) are in the same situation.

### ***Spanish local government and e-government***

The extremely high number of municipalities in Spain introduces enormous problems for the small ones to create, maintain and develop web sites. Provincial and regional networks involving other levels of government and actors have allowed access e-government to this group. Gema Project in Madrid and Udalweb or e-Gipuzkoa Projects in the Basque Country are playing the role of getting web site access to councils with minimal resources, promoting ICT's policies that overcome national frames and give to regional and local level of government the ability for independent action. It will interesting to analyse if this autonomous policies are oriented to spread ICT's access and enhance democracy quality within these local political systems.

Other results support a preliminary hypothesis that Spanish municipalities present an initial stage of web site development and a low web site orientation to citizens. Considering the types of information, it is more feasible to find general or institutional categories than data about services and functions of the councils. Also, most prevalent is the presentation of unidirectional and symbolic information rather than other categories with greater possibilities for interaction with citizens. Feedback is reduced to tokenism, giving some e-mail addresses, however not related to on line delivery: only a few services and functions can be completed on line by the citizens, for example, tax payments, census changes, employment services and training delivery. Finally, relational information reflects an initial effort for linking governmental structures with citizens and other entities and individuals, mainly, the closest to the municipality. However, it has to be kept in mind that this is a primary and not developed attempt to consider the potential of Web technology.

## COMPARING THE TWO COUNTRIES

These two surveys have different methodologies and address different problems. However, they both examine the detail of e-government strategies in the two countries and point to some common issues.

1. The usage of websites by citizens is growing quickly but is nowhere near the level that would be needed for it to be claimed that the era of e-government had arrived. In both Spain and Australia there is some distance between where governments wish to be, as the result of declared policy, and where they actually are. E-government usage rates are increasing quickly but from such a low base that it will be some years before the Internet is the main way for citizens to access government. There is, however, a low level of interaction between government and citizens through public web sites. More needs to be done to create more flexible structures of government and to overcome problems with the digital divide particularly to provide easier access for specific groups of people. At the same time, the most experienced governments are promoting a range of services through their web sites, including delivery systems integrated with real life events, for example, issuing visa card payments. What is more, a few cases are involved in negotiations with other levels of government in order to generate vertical one stop shops.
2. The take-up of government-to-business e-government is more rapid and more important in the short term than is government-to-citizen. Anyone wishing to sell something to government or buy something from government is likely to have to do so using the Internet. This shows up particularly in Australia.
3. Services such as social security and taxation are most amenable to either government-to-business or government-to-citizen links. The commodity in both is basically money, which can be electronically transferred anyway, providing that eligibility criteria can be met through the filling-in of forms. These forms can be provided on-line.
4. It is clear that it is necessary for the highest levels of government to make binding commitments on agencies for on-line delivery targets to be met. The Australian federal government's requirement that all agencies achieve on-line delivery by the end of 2001 was a successful strategy. The Spanish government has made similar declarations and the EU has also required its member governments to comply with its views on e-government, but the promises come into effect a little later than is the case in Australia.
5. There are differences in levels of government between the two countries. In Spain it appears that local and regional government were the innovation leaders in e-government with the central government some distance behind. In Australia it was the reverse of this. It is difficult to work out quite why, other than point to the Australian federal government's requiring of all its agencies to comply with its policy, where local governments are more disparate. Also the local government level in Australia is relatively starved of resources compared to other levels. In Spain, however, it appears that innovation has been most noticeable at the local level.
6. Much of the detailed work on e-government is carried out by contract. Informal interviews with managers and webmasters in Spain confirm this. This fits well with the new public management approach. However, this raises more questions for the future. How will governments control ICT policies? How will the relationship between public/private partners be managed? Will security and encryption management of public and fundamental data be in private hands? What is beyond doubt is that there will be effects caused by e-government on public sector organizations and that such changes have implications for NPM theory. There are potential risks with this strategy. Even if new public management strategies are used more than old public administration approaches to develop e-government, it will be interesting to evaluate future results of such strategies, in particular, emergent issues related to privatisation of a policy without much of a history within public management.
7. It is possible that approaches to NPM (and e-government) may be differently expressed in Anglo-American and continental European societies as is sometimes argued (Pollitt and Bouckaert, 2000). At this point we identify three key areas which distinguish the latter group: human resources management

(labour market rigidity and bureaucratic work structures); contracting (limits scope for contracting out government services due to an entrenched view of citizen rights to services); and deregulation and fragmentation of government (limited moves in the direction of creating a proliferation of smaller agencies).

## **CONCLUSION**

It is often assumed that ICT will not produce extreme changes in the core structure of governments or the way that they used to interact with the citizens. The question for further study will be whether e-government is reinforcing or not new public management strategies within public administration. E-government reforms are clearly related (see Criado, Hughes Teicher, 2002), notably issues such as contracting-out and the desire for better service delivery. But also, some indicators show possibilities to reinforce the old public administration, specifically, addressing that ICT could further separate citizens from civil servants, devaluating public sectors workers and reinforcing organizational control of the citizens and employees. Future analysis about e-government may address whether either the NPM or traditional administration views will provide the best explanation of the process of change. It is without doubt that greater use of information and communication technologies will occur over the next few years. This means an important challenge for public management studies will be to conduct more comparative studies across nations are required, as well as differing approaches by different levels of government within nations. Designing and implementing the same survey in different countries will be the next step to investigate this.

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