**What are the Implications of being a Public Organisation on Creating Online Services?**

# Abstract

It is common rhetoric that e-business is good for business, and that this applies equally in the public and private sectors. But public and private sector organisations are different in focus and operation. Are there, then, implications on the design of electronic services in the public sector by virtue of the services being delivered by public organisations? This paper seeks to answer that question. It draws on public administration literature to identify the differences between public sector and private sector organisations, then works through the differences attributed to actions between the organisations and their boundaries (specifically, the service delivery transactions) examining the implications of being a public organisation. Several implications for service process design are identified. The paper concludes that the publicness of government organisations leads to certain desirable attributes of electronic services becoming minimum requirements when the electronic services are implemented in the public sector.

# Introduction

We can all recall the hype of the Internet and electronic commerce, which reached a crescendo at the end of 1999 and then became almost heretical by the middle of 2000. Electronic commerce, enabled for all by the Internet, was to solve all our business problems. Its use was going to result in improved customer service, better data, cost savings, and greater accuracy, efficiency and flexibility (Department of Communications Information Technology and the Arts 2000)}(1988; Vallerand 1996) . These benefits were espoused for government organisations with almost the same vigour as for commercial organisations (1988; Vallerand 1996; Department of Communications Information Technology and the Arts 2000; 2001) . Calls for the implementation of e-government were many, and governments responded with strategies and implementation plans (for example, Central IT Unit 2000; Bush 2001) (Department of Communications Information Technology and the Arts 2000; 2000) .

Although much of the heat has gone out of the discussion of electronic commerce, its demise is greatly exaggerated. Similarly, although e-government no longer receives the high levels of media attention that it once did, e-government initiatives are on-going. In Australia, important benchmarks in e-government development are being met and will be built upon further (Alston 2002). This progress is being made in a more sober atmosphere. In line with that sobriety, this paper steps back from the rush to implement electronic government services to consider what the implications are for electronic commerce implementation given the apparently different circumstances of government services generally.

This paper is premised on the idea that e-government is built on the same technologies and principles as e-business, but is also quite different. Typical differences (discussed in detail later) such as delivering services to a 'market' larger than any private organisation faces, the absence of simple quantitative measures of effectiveness of service delivery (eg, profit), and the balance between the roles of provider of services

and monitor of compliance in the one organisation. The paper concludes that the nature of e-government requires some 'good' or 'best' practice elements of e-business to be embedded as minimum requirements in e-government processes because of the public nature of government.

# What is e-government?

"Simply stated, [e-government] is the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners, and employees" (Deloitte Research 2000). This definition is appealing as it does not stipulate a specific need for the Internet and focuses on who is involved. Other definitions tend to focus too heavily on the need for the Internet in delivering e-government services (for example,2001). The sample of e-government vision statements presented below also indicates that governments are not fixated on the involvement of the Internet, while recognising that it is a crucial element in most electronic service delivery.

> "There is hardly any sphere of activity which is not able to be improved by the online environment—to achieve more, and to do it more quickly and efficiently. … Government Online aims to extend the benefits of the information revolution … to … dealings with government" (Department of Communications Information Technology and the Arts 2000).

> "E-government is a way for governments to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in our democratic institutions and processes" (2000).

> "The Information Age revolution has already brought huge changes … **e-government** … focuses on better services for citizens and businesses and more effective use of the Government's information resources. Implementing it will create an environment for the transformation of government activities by the application of e-business methods throughout the public sector" (Central IT Unit 2000).

> "Citizen-centered Government will use the Internet to bring about transformational change: agencies will conduct transactions with the public along secure web-enabled systems that use portals to link common applications and protect privacy, which will give citizens the ability to go online and interact with their Government … around citizen preferences and not agency boundaries" (Bush 2001).

These visionary statements also point to transformations in the way government is conducted. The real potential for transformation of government given the political and legal environment in which it exists and operates is an area of on-going research.

## *What are e-government services?*

The Australian National Audit Office (ANAO) developed a categorisation of electronic government services in a review of the impact of the Internet on electronic service delivery (Australian National Audit Office 1999). The essence of that categorisation is shown in the ANAO's model reproduced here:
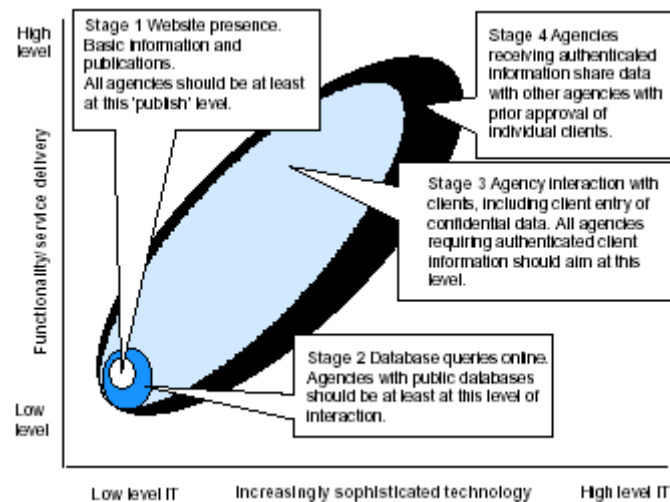


**Figure 1: ANAO-OGO model of service delivery by the Internet (Australian National Audit Office 1999)**

The ANAO's model suggests services move from passive information dissemination, through active information provision, interactive transactions and finally to integrated interactive services. Typical examples of e-government services are: exchanges of information and payment to obtain some permission, to register for a service, or to claim a benefit (1988). The United Kingdom's Central Information Technology Unit (CITU) summarises electronic government services as fundamentally enabling the electronic conduct of giving and receiving of money or information, and regulation and procurement (Central IT Unit 2000). Other concepts of e-government, such as the necessary element that the service must be wholly requested online, and wholly provided online (2001), appear too prescriptive and do not allow sufficient latitude for already successful approaches involving government services being provided through electronic communications with agents (for example, Australia's electronic taxation lodgement scheme and customs import document lodgement scheme (Rimmer 2001)).

However, it is important to bear in mind that "not all [government] services are amenable to the electronic mode of delivery, because of issues such as bulky submissions, interview requirements, and submission of physical samples and so forth" (Alan Siu, quoted in Deloitte Research 2001).

# Differences between Public and Private Sector Organisations

The argument that everything that is good for business (the private sector) is also good for the government (public sector) is regularly promulgated; most notably in the privatization debate (Emmert and Crow 1988)(Mintzberg 1996; 1997; Harris 1999;

Hodge 1999; Officer 1999; Quiggin 1999; Ryan 2000; Haque 2001). Opponents of the 'making business-like' of government claim that the public sector is different from the private sector, that the difference is important and that it should not be overlooked (Bozeman 1979; Emmert and Crow 1988; Mintzberg 1996; 1997; Hodge 1999; Officer 1999; Ryan 2000; Haque 2001). Australian history contains a myriad of examples of government provision of 'commercial' goods and services and similarly a wide range of instances where private sector firms have delivered public goods (Quiggin 1999). So, if the public and private sectors are really different, what are the differences? Let us turn our attention to determining exactly what the differences between the public sector and the private sector might be, and then consider what impact that might have on implementing electronic commerce approaches in government.

But firstly, a clarification. The distinction between public and private sectors is not a simple dichotomy (Rainey, Backoff et al. 1976; Rainey 1983; Emmert and Crow 1988; Mintzberg 1996; Quiggin 1999). On many dimensions that might be considered for the distinction between the two sectors, no hard-and-fast rules exist for definitively stating 'here public organisations begin and private organisations end', especially when different ownership or organisational models are considered such as quangos and cooperatives (Emmert and Crow 1988; Mintzberg 1996; Quiggin 1999). For the purposes of this discussion however, the "common sense" distinction (Rainey, Backoff et al. 1976) will suffice; the reader's understanding of the difference is (presumed) sufficient to underpin consideration of the remainder of the discussion.

Emmert and Crow (1988) note that the several research studies focused on the identification of differences between public and private organizations have focused on the internal structure of the organisation or the employees, rather than broader issues at the sector level. They argue that an analytical approach will allow consideration of the differences that incorporates the complexity of the environment and the organisations themselves. Taking heed of this advice, we will start from a more prescriptive base and then build in analytical thinking to identify the differences that impact our area of interest, the provision of government services, particularly in an electronic form.

From a comprehensive review of the literature, Rainey *et al* (1976) developed a classification of the differences between public and private sector organisations along three main dimensions; summarised in Table 1. Bozeman and Bretschneider (1986) extended that and other work in the context of information technology use in public and private sectors, building four models of publicness; shown in Table 2. Figure 2 illustrates the overlap between the two approaches. Notwithstanding Emmert and Crow's (1988) concerns, the distinctions that these authors draw are intuitively comfortable and widely cited.

**Table 1: Four Dimensions of Difference Between Public and Private Organisations (from Rainey, Backoff et al. 1976)**

| Environmental Factors | Degree of Market Exposure (Reliance on Appropriations) |
|---|---|
| | Legal, formal constraints (courts, legislature, hierarchy) |

| | Political Influences |
|---|---|
| Organization-Environment Transactions | Coerciveness ("coercive," "monopolistic," unavoidable nature of many government activities |
| | Breadth of impact |
| | Public scrutiny |
| | Unique public expectations |
| Internal Structures and Processes | Complexity of objectives, evaluation and decision criteria |
| | Authority relations and the role of the administrator |
| | Organizational performance |
| | Incentives and incentive structures |
| | Personal characteristics of employees |

**Table 2: Four Models of Difference Between Public and Private Organisations (from Bozeman and Bretschneider 1986)**

| Publicness Model | Distinguishing Variables |
|---|---|
| Economic Authority Model | Market Failure<br>    Poor Information<br>    Breakdowns in Competition<br>    Transaction Costs<br>    Externalities and Public Goods<br>Property Rights<br>    Input of Entrepreneurs and Wealth-sharing Managers<br>    Inability to Transfer Ownership in the Public Sector |
| Political Authority Model | Legal and Constitutional Structure<br>    Fragmentation and Inter-dependency<br>    Representativeness and Electoral Process<br>    Individual Rights<br>Social Psychological Sources of Authority<br>    Public Expectations, Public Interest<br>    Civic Responsibility of the Individual |
| Work Context Model | Time Frame<br>Political Cycles<br>Media Attention<br>Crisis Orientation<br>Accountability and Monitoring |
| Personnel Model | Personnel Systems and Incentives<br>Motivation, Job Satisfaction<br>Red Tape and Formalism<br>Self-selection |
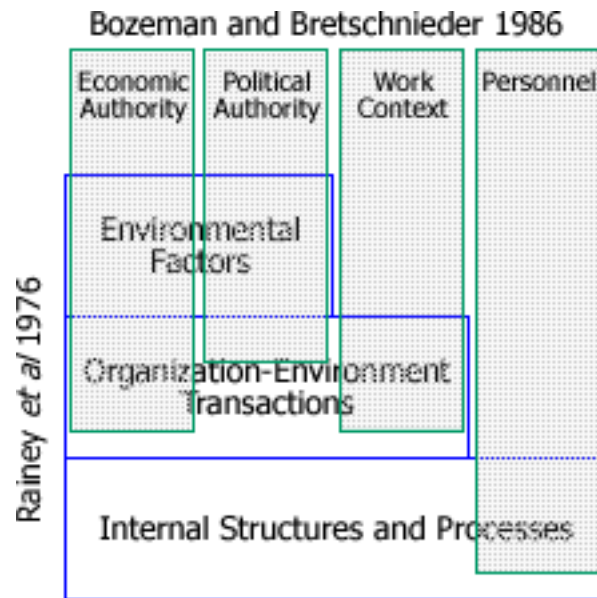
**Figure 2: Interaction of Different Approaches to Difference Identification**

Figure 2 provides a simplistic view of the overlap, but it is a helpful aid in focusing our attention. As we are interested in e-government services, the most important area will be what Rainey *et al* (Rainey, Backoff et al. 1976) call Organization-Environment Transactions. From Figure 2, this means we also consider the Economic Authority Model, the Work Context Model, and look at the Political Authority Model of Bozeman and Bretschneider (1986). Rainey *et al* (1976) suggest four main areas of difference between public and private sector in the area of Organization-Environment Transactions. We will look at each in turn.

## *Coerciveness or the unavoidable nature of government, and breadth of impact*

"Consumers in a competitive market who are dissatisfied with the quality of service from some particular supplier have the option of exit, that is, of choosing another supplier… By contrast, where unsatisfactory services are provided by a government agency, it is necessary to resort to voice, through complaints to the local member of parliament, [or] the ombudsman" (Quiggin 1999) and ultimately, the polling booth.

Many writers note the coercive characteristic of government services (Rainey, Backoff et al. 1976; Bozeman 1979; Field 1996; Mintzberg 1996; Officer 1999; Quiggin 1999; Ryan 2000; Symonds 2000; Deloitte Research 2001; Haque 2001). In terms of e-government services it means that the service must be available to all citizens to allow them to comply with their obligations. This makes the 'market' for such services larger than any private market. There appear to be three major impacts on processes themselves, in an e-government context:

- Inability to rely solely on electronic delivery—it is received conventional wisdom in e-government discussion that citizens will not universally adopt e-government services (1988; Burdon 1998; Central IT Unit 2000; Deloitte Research 2000; Deloitte Research 2001; Singh, Ryan et al. 2001). Consequently, any process design for e-government services must incorporate other delivery channels (ie,

face-to-face counter services, telephone call centres, mail processing, and participation by agents). All these channels might ultimately exercise the e-government process directly (ie, public servants or other agents may use the e-government service on behalf of citizens), but provision of the service through other channels must still be made (that is, forms must still be printed, staff must still be trained, etc).

- Coordination across delivery channels—the progress and decisions made in one channel must be reflected, preferably in (near) real-time across all delivery channels. This coordination is claimed by the proponents of customer-relationship management (CRM) systems as their purview (Deloitte Research 2000; Deloitte Research 2001). The coordination is simplified if all channels ultimately use the same e-government service for actual processing. Nevertheless, explicit design for this coordination is called for.

- Explicit use of identity—Government can end up with two roles: those of both the service provider and a monitor of compliance with entitlements and other policy or legislation (Officer 1999). Some services (for example, voting in some countries) require universal participation. Monitoring that participation and even the proactive encouragement of it, involve special process elements. For example, a definitive register of participants, accurate recording of participation, or appropriate approaches to reminding participants of their obligations.

In summary then, the coerciveness element of public sector services would imply e-government services designed with specific accommodation for:

- Monitoring and management of participation of a defined set of service recipients (for example, the electoral roll)

- Explicit coordination of service delivery progress in one channel across all channels, preferably by the electronic implementation actually underlying delivery in all other channels.

The support of staff and agents delivering government services available electronically through other channels will require a set of processes to maintain the knowledge and skills of those people. These processes would not be directly part of the e-government service process design itself, however.

These requirements are not unique to government, indeed they are really little more than an explicit call for good customer service. The fact that government services are (often) inherently coercive makes the focus on these requirements more important.

## *Public Scrutiny*

This is, again, a frequently cited difference between private and public sectors (Rainey, Backoff et al. 1976; Bozeman and Bretschneider 1986; Barrett 1999). This element of difference involves three related ideas:

- **Interdependency**—many government organisations rely upon other organisations either for support, as a 'partner' in delivering services, or as a monitor on activity quality and distribution (Rainey, Backoff et al. 1976; Barrett 2001).

- **Accountability**—it is commonly acknowledged that public sector organisations are more often held accountable, even if not actually more accountable, than private sector organisations (Bozeman and Bretschneider 1986). All public sector organisations are required to be transparent, responsive and accountable" (Barrett 2001).

- **Red Tape**—"The concept of procedural delay, related to many layers of oversight, can be thought of as a form of red tape" (Bretschneider 1990). A consequence of the interdependency and likelihood of being scrutinised is that public sector activities tend to be more process-oriented, with greater numbers of checks and authorities imbedded within the process than might otherwise appear (Rainey, Backoff et al. 1976; Bozeman and Bretschneider 1986; Watson and Carte 2000).

## Interdependency

Public organization theory tells us that public organisations exhibit greater interdependence with other organizations than private organizations (Bozeman and Bretschneider 1986). Symonds (2000) points out that "one of the basic reasons for public-sector inefficiency—'bureacracy'—is that, whereas departments are vertically organised, many of the services that they have to deliver require complex collaboration between employees across departments." This interdependence involves responding to the various needs and demands of a wide range of stakeholders, including the legislature, other agencies, ministers, the judiciary and the public (Bozeman and Bretschneider 1986; Ryan 2000; Watson and Carte 2000), often through reporting to oversight groups and external organisations (Bretschneider 1990). Ultimately, the mission of the public agency is not established within the organization but through the elected representatives by the public (Bozeman 1979). The authority of public organisations is at least partly derived from legal and constitutional arrangements that demand checks and balances (Bozeman and Bretschneider 1986; Bretschneider 1990), which frequently impose demands that conflict with each other and with goals such as operating efficiency, equity and accountability (Rainey 1983).

Added to this inherent interdependence is an increasing desire to implement integrated government services, that is, services that are offered to customers as a single transaction where several government agencies might be involved, frequently labelled as customer-centric services, or 'life event' services (Deloitte Research 2001). This trend presents some additional challenges, notably:

- cultural conflict between agencies that have developed individual traditions and practices mirroring individual business practices (Burdon 1998)

- political conflict where provision of integrated electronic services from across many jurisdictions but branded as one, may influence the location of economic entities (Deloitte Research 2000), and

- technical challenges such as integrating data across agencies or jurisdictions (Deloitte Research 2000).

## Accountability

Accountability is the requirement to answer to somebody for something (Barrett 2001). It is important in both private and public organisations, but is generally more important in public organisations (Bozeman and Bretschneider 1986). "The ability of the public sector external auditor to report in detail to the public domain of Parliament on the efficiency and effectiveness has no similar parallel in the private sector" (Barrett 1996). In the private sector, provided the decision-maker does not break the law, they may choose to do as they wish with no requirement to justify their decisions to others (Bozeman 1979; Quiggin 1999). The higher level of scrutiny in public organisations leads to higher levels of accountability mechanisms (Bozeman and Bretschneider 1986) usually implemented as controls over process and procedures (the means) because of the difficulty in identifying performance and output measures (the ends) to control (Rainey 1983; Bretschneider 1990).

Bozeman (1979) maintains that although there are different accountability requirements, the effectiveness of legislative and executive oversight, especially in large, complex organisations, is questionable. This can be further exacerbated if some outsourced, or public-private partnership arrangement, is established to implement government service delivery as "common citizens 'may simply not be able to determine whether government or its contractors is responsible for a particular service…'" (Haque 2001). The high levels of accountability can also potentially exacerbate the privacy issue (2000), discussed in more detail below.

## Red Tape

The Economic Authority Model described by Bozeman and Bretschneider (1986) claims a lack of market-based incentives to efficiency through the lack of property rights of public servants within the organisation. Consequently to achieve needed efficiency and effectiveness highly structured and formalized rules and procedures, are elaborated within the organization (Rainey 1983)—in lay terms, red tape. The Australian Auditor General, Mr Patrick Barrett AM, provides some clear explanation of just why red tape is needed in public organisations. He maintains that information and records are critical to provide a clear evidential trail (Barrett 2001). This means keeping detailed and accurate information about processes. Barrett (Barrett 1996) also notes that provided the evidence is tangible, it can be integrated completely within the processes of the organisation.

> "Transparency is achieved by ensuring that the decision-making process and the reasons for decisions made are adequately documented and communicated to stakeholders. … I would like to stress the importance of implementing effective record-keeping systems in an environment where significant decision-making is taking place through electronic media" (Barrett 1999).

There are positives to the automation of red tape. By integrating the data that arises from electronically delivered services, much valuable information can be collected about service use, as well as much more accurate data about customers (Bellamy and Taylor 1998). This could lead to "more accurate identification and fulfilment of specific customer needs, assist with demand forecasting and strategic planning as well as aid in the development of better customer-centric programs" (Deloitte Research 2001). There is always a danger in the collection and aggregation of data in

government processing, especially as the government can oblige disclosure of sensitive data, and that is the potential for abuses of personal privacy (2000).

In summary, the pressures of public scrutiny lead to several process-specific requirements for electronic government services. Table 3 provides a simple correlation between the following requirements and the pressures that impose them.

Process requirements imposed by public scrutiny include:

- **Standards**—for processes to be readily reviewed by external scrutineers, and to facilitate interoperability where needed, they must be based upon common standards across government(s). The nature of the government sector allows for greater cooperation on standards implementation than might exist in other industry sectors, largely because of a lack of competition for organisational success and because of common drivers.

- **Explicit, automated, red tape**—processes must include within them sufficient controls to allow accurate and (relatively) ready scrutiny by external auditors. The nature of electronic services allows for such record-keeping to be implemented without the usual burdens of time and complexity (if the record-keeping is designed as part of the process), and can provide the necessary evidence to satisfy the scrutiny needs of oversight organisations.

- **Explicit encoding of business rules**—as part of the requirement for accountability, electronic processes must encode directly more of the legislative, policy, or business rules by which processes are defined (in contrast to simply recording data arising from those processes) to provide sufficient data for necessary public accountability.

- **Explicit use of identity**—the collection of personal data, its integration in various processes or across various agencies and jurisdictions, and the relatively ready access provided to external scrutineers, all call for increased emphasis on maintaining the privacy of personal data. This issue is discussed further below.

**Table 3: Summary of Process Requirements Imposed by Public Scrutiny**

| Requirement | Interdependence | Accountability | Red Tape |
|---|---|---|---|
| Standards | ✓ | ✓ | ✓ |
| Explicit, automated, red tape | | ✓ | ✓ |
| Explicit encoding of business rules | ✓ | ✓ | |
| Explicit use of identity | ✓ | ✓ | |

## *Unique Public Expectations*

Citizens feel that, by virtue of government agencies' public ownership, they have rights and obligations that they do not have toward private organisations (Rainey 1983; Singh, Ryan et al. 2001). Citizens want to interact with governments on their own terms (Central IT Unit 2000).

On the same basis, public services must "respond to the needs and expectations of all citizens, not just the affluent customers or clients who 'seem unable to function as a

public'" (Haque 2001). Bozeman and Bretschneider's (Bozeman and Bretschneider 1986) Political Authority Model reasons that public organizations and public employees must work in the public interest.

The public can be seen to have three main expectations that will influence electronic government service processes:

- **Privacy**—the public recognises the need for government to collect personal information but expects it to be used 'appropriately' and not cross-correlated between government agencies (Bellamy 1998; 2001).

- **Equity (of Access)**—in keeping with the general view that government works for the people, the public expects to be able to access government services as they prefer, when they prefer, and to not be discriminated against as a consequence of those choices (Harris 1999; Central IT Unit 2000; Haque 2001).

- **Fee-free**—the public does not expect to pay for the provision of government services, as the funding for government is already sourced from them through taxes (Deloitte Research 2001; 2001).

## Privacy

A substantial body of evidence exists that the public is concerned about the collection and protection of private confidential information by governments (Bellamy 1998; Deloitte Research 2001; 2001). As Symonds (2000) points out, although banks and insurance companies hold a lot of personal data, governments amass a huge range and detail of information on their citizens; usually by force of law and frequently in excess of the specific needs of the process by which it is collected (2000; 2000).

A key implementation issue for electronic government is that of electronic identification and authentication (1988; Central IT Unit 2000; 2001). When the government provides services to an individual, it must authenticate that the person receiving the service is eligible to receive it (2001). Bellamy (1998) highlights the obvious irony of electronic services relying upon identification of citizens for the establishment of entitlements: "If the client orientation in public administration is, in part, a response to the erosion of citizens' confidence in government, does it make sense to develop innovations that draw so heavily on such trust?" Clearly, implementing and enforcing privacy legislation is a major first step (1988; OTA 1996; Barrett 1999).

This leads to the question: Just how much customer data do governments need to achieve optimised service fulfilment? It is also important to ensure that distinguishing between clients for greater specialisation of services and advice—an admirable and probably beneficial approach advocated within e-government literature—does not lead to discrimination between client groups (Bellamy and Taylor 1998; Haque 2001).

One technical approach is to 'anonymise' personal data using 'Privacy Enhancing Technologies'. This would allow data pooling and sharing without risking individuals' privacy (1988). Privacy advocates point out that "when dealing with government, however, anonymity or pseudonymity is often impossible, illegal, or at the very least, suspicious"(2000).

## Equity (of Access)

Much of the drive to e-government reflects "the belief that these new capabilities will permit wider, more inclusive access, greater choice, and more flexible, responsive public services capable of being tailored to the increasingly disparate needs of consumers" (Bellamy and Taylor 1998). Inherently, public service has an obligation to treat members of the public consistently: it cannot distinguish between members of the public because of criteria that are not relevant to the services (Bellamy and Taylor 1998; Harris 1999; Haque 2001). Consequently, online services must be accessible to all including provision for multiple language groups, physical and mental impairments (Central IT Unit 2000), not discouraging use just because of "its remote and dehumanizing nature" (Bellamy and Taylor 1998), and not exclusively offered electronically (as discussed earlier).

There has been considerable discussion in recent years about how some segments of the population lack access to home computers and the Internet—usually referred to as the 'Digital Divide' (2001). As e-government services expand, the issue of access and the ability to fully use the available systems will dominate discussion (2001). If electronic service delivery is to achieve its full potential, its users, the public, will need universal, affordable access to telecommunications and computer networking (OTA 1996; Bellamy and Taylor 1998). Just having access to the services is not sufficient. Citizens must also know that services exist and how to obtain them (OTA 1996). The actual level of interaction differs among different client groups too, of course. Some access government services by any means only once or twice a year, while others "(predominantly unemployed or otherwise needy citizens) make far more frequent calls upon government. For them, access to government services can become a significant component of their lives" (Singh, Ryan et al. 2001).

Another crucial influence on access is that, since the 1980s, the primary objectives of public service have changed from the realization of citizen's rights or entitlements to the accomplishment of economic goals based on efficiency and competition (Haque 2001). Between this restructuring in the allocation and use of public sector resources and the likely uneven adoption of electronic services through a retreat from universal service principles (Bellamy and Taylor 1998), underprivileged citizens may potentially be excluded from government provision of services. Such a result would be in stark contrast to Singh *et al*'s (2001) claims of such people being the biggest users of government services.

## Free

A further consequence of the belief that government organisations are inherently owned by the public is the reticence to pay for services provided by government. This reticence differs between countries (Deloitte Research 2001). From the government perspective, the issue of covering the cost of services is also contentious. There may be services that the government believes should be free (2001). Charging for services may inadvertently discriminate between citizens on the basis of their ability to pay (OTA 1996; Haque 2001).

There are, of course, some services that already attract a fee. Another key issue in implementing e-government services is whether the changed cost base of delivering the service should be reflected in the customer fee (either positively or negatively) (Deloitte Research 2001). Is offering a cheaper sevice over the web a form of discrimination on the basis of Internet access? Is profit-taking by holding fees constant over (arguably) cheaper channels in line with citizen expectations of 'low-cost' government?(Deloitte Research 2001; 2001). These interesting questions are being pursued in other research.

In a devolved budgetary environment, who will meet the cost of providing the service? (1988; Rimmer 2001). Even if services do accrue a charge, the return on investment in collecting, storing and disseminating public information remains difficult to measure, especially by the business case methods currently used in government (Bellamy and Taylor 1998). Finally, in line with Bozeman and Breschneiders' (1986) Economic Authority Model, some authors (Officer 1999; Stiglitz, Orszag et al. 2000) note that some information is a public good and consequently, may defy appropriate pricing in common with other public goods (Rainey, Backoff et al. 1976; Bozeman 1979).

In summary, public expectations play a significant role in the development and implementation of electronic government services. Specific impacts of public expectations at a process level include:

- **Monitoring and managing participation**—the supposition that services are provided to citizens because they are citizens means that strong forms of identification and authentication will be needed, built into every interaction between the citizen and the government where an entitlement is claimed.

- **Explicit use of identity**—citizens require access to services in one of two modes: claiming an identity, and consequently a set of rights, entitlements and obligations; and anonymously. Services must not only use the reliable identification and authentication described above, but must explicitly and reliably **not** use it, at the discretion of the citizen. This will act to reassure the citizen that their privacy is controlled (or at least influenced) by them and that they can interact with government without influencing the government's view of them (for example, by inquiring about matters which might effect an existing entitlement and implying that there has been a change in their circumstances).

- **Inability to rely solely on electronic channels**—as described previously, electronic government services will only ever supplement more conventional service delivery methods.

- **Explicit charging for services**—where the government decides that an electronic service must be paid for directly by the citizen the process must include payment options, including (possibly) deferment, offset against other entitlements, and waiver of fee according to specific conditions being met. The selection of a level of charge to apply will be a difficult policy matter.

## *Work Context Model*

Within the Work Context model proposed by Bozeman and Bretschneider (1986) there is one area that Rainey *et al* (1976) did not specifically identify, that of the influence of changes in government and policy because of political cycles. Although it is common for all political parties to support electronic government initiatives, it is also common for them to have different agenda and priorities. Consequently, the influence of political cycles must also be considered for its impact on e-government processes.

## Political Cycles

"There is no private sector counterpart to political control of public organizations" (Bozeman and Bretschneider 1986). Probably the most important difference in the time frame for public and private sector managers is that of regular pressures to re-consider agenda and workplans (Bozeman and Bretschneider 1986; Caudle, Gorr et al. 1991; Watson and Carte 2000). Appropriations financing generally means annual budgeting, governments change regularly, and there is a constant pressure to achieve quick results—results that help the agency claim a larger budget and that can help in reelection (Bozeman and Bretschneider 1986). Contrarily, the political influence on directions and initiatives can mean that public sector managers have less choice about starting or stopping activities (Rainey, Backoff et al. 1976).

The regular changes of political masters and politically-established agenda, which are supposed to represent changes in requirement by the public (Bozeman and Bretschneider 1986; Bretschneider 1990), can result in changes down to the level of data element definitions (Caudle, Gorr et al. 1991). Ultimately, the changes in direction, and conflicts generated by many political agenda being present at one time.

These pressures from the political cycle have a direct effect on potential electronic government services, specifically:

- **A need for consistent standards**—to obviate the pressure of detailed changes, establishing robust standards for data and process definition can facilitate politically instituted changes without compromising the work already completed.

- **Explicit encoding of business rules**—particularly in the face of changing governments, having a clear understanding of how and why processes act as they do, and consequently a clear understanding of what changes will be needed to meet changed agenda, is a requirement for accommodating the pressure of political cycles.

- **Explicit charging for services**—in the same light as the encoding of business rules, the explicit understanding of what is being charged for (and how much is being charged) will facilitate accommodating changed policy positions.

- **Processes defined in loosely-coupled, tightly integrated architectures**—by creating processes using small well-defined, internally consistent components, assembled as building blocks to achieve (current) process objectives, changes can be accommodated more efficiently by re-assembling the process from (hopefully unchanged) building blocks, rather than creating whole new processes from scratch. Such an approach would also accommodate the changes in portfolio

responsibilities that often accompany a change of government or a re-elected government seeking a 'new broom' appearance.

## *Summary of Process Implications*

The foregoing review of the differences between private and public sector operations is summarised in Table 4. The table re-iterates the impacts identified and correlates them to the differences between the sectors discussed.

**Table 4: Summary of Process Implications**

| Implication | Coercive Nature | Public Scrutiny | Public Expectations | Work Context |
|---|---|---|---|---|
| Explicit coordination across channels | ✓ | ✓ | ✓ | |
| Explicit use of identity | ✓ | ✓ | ✓ | |
| Government-wide standards | | ✓ | | ✓ |
| Explicit, automated, red-tape | | ✓ | | |
| Explicit encoding of business rules | | ✓ | | ✓ |
| Explicit charging for services | | | ✓ | ✓ |
| Processes assembled from 'components' | | | | ✓ |

# Conclusions and Further Research

This paper has briefly reviewed the nature of being a public organisation to determine what, if any, implications being public might have on designing and delivering electronic or online services. Models developed to explain the differences between public and private organisations have been analysed to determine the potential process impacts that the differences suggest. These differences, summarised in Table 4, point to a small but distinct set of implications for process design in electronic government services.

Some of the implications might be generalised as 'good' or 'best' practice in well-known fields such as customer relationship management and this would not be contested. The importance of identifying them is that within a public sector organisation seeking to deliver electronic services, they move from being desirable objectives to mandatory minimum requirements by virtue of the organisations being public. This represents an interesting extension of the idea that "what's good for business is good for government." Furthermore, process design efforts for electronic government service would benefit from centring attention on these items when designing the processes underlying the online service.

Further research is currently underway to identify a process language in which electronic government services can be readily described. Once identified, the elements identified here can be encoded in a common process language and current and future electronic government services can be assessed for the presence of these necessary elements.

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