Towards eGovernment in the National Assembly for Wales (UK): an empirical analysis

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Abstract

This chapter reports the findings from an empirical analysis of the opinions of Heads of Information Technology (IT) in Local Authorities relating to e-government initiatives in Wales in the UK. A highly qualitative questionnaire sought to understand the current strategic and operational implications for the e-government agenda proposed by the National Assembly for Wales. The findings identify a number of critical imperatives, which are of concern to the Heads of IT. These require consideration when planning e-government implementation and are presented in the form of a framework, which consists of e-government objectives, priorities and barriers. The chapter also highlights the need for a fundamental shift in management thinking and practice. Drawing upon the empirical analysis and the framework, the chapter elicits areas for future research. The research is related to academic and executive alliances in the e-government arena. The issues raised in the chapter are believed to be of potential value to public sector authorities and elsewhere, which may help facilitate successful e-government implementations.

Introduction

The evidence is compelling of the need for a more radical change in government perspectives for the implementation of information systems (IS) to transform traditional structures towards an electronic environment, so called e-government (Sprecher, 2000). It is clear that e-government within the next few years, driven through the Internet, will transform not only the way in which most public services are delivered but also the fundamental relationship between government, the community and citizen (Von Hoffman, 1999; Heeks, 1999). A major consideration has been the desire to reduce costs and help revenues go further. Significant savings have been reported as a result of e-business, as organisations network their supply chains (Burn and Hackney, 2000).

U.S. federal, state and local procurement spending on materials and services in 2000 was estimated to be around $550 billion, and in the European Union member states' combined procurement spending was around $778 billion (Symonds, 2000). With just a 10% cut in costs estimated savings of around $125 billion would be realised.

An additional driver comes from customer expectations. Customers now have far greater access to information, are more assertive and demand personalised experiences. Successful central and local government organisations have recognised that developing a customer focus is an absolute necessity to improve services (Cavanagh and Livingston 1997). One of the proposed solutions has been the creation of government portals, such as the Singapore or UK portals. These have been designed around 'life events', such as changes in marital status which allow users to find what they are looking for by using 'How do I…?' type questions rather than invoking complex search patterns repeatedly to numerous departments. The government portal acts as a virtual organisational front interacting with customer driven demand. This type of solution requires major changes both within and outside government and as yet, there is no clear evidence of success (Jellinek, 2000).

An early reference to the enhancement of government services through Internet developments was identified in the PIPER letter (1995),

> *'…when government delivers information, in many ways it is delivering the government service itself. This new interactive medium, with its built in measurements and feedback loops, allows government to 'relate' to individual constituents with a depth and frequency. It can add an entirely new dimension to government's relationship to its stakeholders'*

Thus, the engagement of government in developing websites and electronic media to interface with constituents and the general public is a major challenge. A key opportunity for public sector organisations is to develop, implement and integrate their own e-government strategies. The scope of e-government may therefore be noted as follows (Heeks, 2001):

i)   e-administration – improving government processes by reducing costs, managing performance, making strategic connections within government, and creating empowerment

ii)   e-citizens and e-services – connecting citizens to government by communicating with citizens, supporting accountability by listening to citizens, supporting democracy, and improving public services

iii)   e-society – building interactions beyond the boundaries of government by working better with business, developing communities, building government partnerships, and building society

These are critical issues in the principality of Wales (within the United Kingdom), as the National Assembly for Wales (NAfW) has announced to Welsh Local Authorities in October 2002 that they were required to produce and submit an 'Implementing Electronic Government' (IEG) statement by March 2002. This chapter reports on identified issues, which are believed to be of significant importance for the successful implementation of such an approach. Certainly, the perspectives noted from within the empirical data will be of potential value for other e-government initiatives throughout the UK and elsewhere.

This chapter is structured as follows, in the next section the background to the research is discussed. This is followed by a discussion of the research approach, which sought to understand the current strategic and operational implications for e-government in Wales. The chapter continues with the findings from an empirical analysis, which identify a number of critical imperatives. These are presented in terms of framework, which also highlights the need for a fundamental shift in management thinking and practice. This is followed by a discussion of areas for potential future research, which has been elicited from the literature and empirical work. The chapter concludes by suggesting that the findings are related to academic and executive alliances in the e-government arena and that the issues may of potential value to public sector authorities and elsewhere.

Background

Welsh Unitary Local Authorities were created in April 1996 as a result of the re-organisation of local government in Wales where the existing two-tier model for local government in Wales, consisting of qqq County and qqq District Councils was disbanded and replaced with 22 new Unitary Authorities. County Councils were responsible for the more strategic services, such as education and Highways, with District Council being responsible for more localised services such as Housing, Refuse Collection and Planning. The change was a significant undertaking, both strategically and operationally, with staff, buildings and all other resources having to be disaggregated from the incumbent County and District Authorities and allocated to the new Unitaries. The Unitaries have the responsibility for the full range of local government service provision, previously spilt between Counties and Districts, including education, social services, highways, housing, public protection, leisure and planning.

Having successfully managed this significant undertaking, the new challenge for these

authorities is to the transition to e-government. Consequently, information technology executives in local authorities in Wales have been charged with developing an IEG statement and subsequently implementing this initiative. This study was undertaken with the aim of obtaining the personal opinions of these key individuals regarding this proposed change and to gain insightful views on how to proceed with this initiative.

Research Method

The research was undertaken using qualitative methods of data collection and analysis, via informal, semi-structured questionnaires. The Heads of IT in each Welsh Unitary Authority were initially contacted via e-mail and requested to participate in a research study to ascertain their own interpretive view of e-government. It was stressed that it was very much a personal perspective that was sought, not the employing organisation's official articulated position. It was accepted that these views could be significantly different.

A questionnaire was then sent to Heads of IT who are responsible for developing and implementing e-government initiatives, with the intention of obtaining rich and context-sensitive data with regard to the prevailing situation. Of the 22 questionnaires distributed, one to each Unitary, 16 were returned within the designated timescale. These have been analysed by the authors. The emphasis was on qualitative information and the provision of narrative text. In addition, some questions also included a simple rating system, from 1 to 5, to further indicate the relevance of issues. Where this is present in a question, an average has been calculated and is included in the findings discussed below in parentheses to help with clarity.

Findings

In relation to the processes that should be considered to develop successful e-government initiatives, the Heads of IT indicated four main responses. In order of importance they are noted as follows,

    i)   developing workable and effective e-business strategies (4.5)
    ii)   sharing best practice from pilot e-government projects (4.21)
    iii)   dealing with skill shortages and resource pressures (3.92)
    iv)   learning lessons from partnering with the private sector (2.64)

It was also perceived that e-government can contribute to the successful delivery of high-quality public services (3.79). Furthermore, that integration of e-government

strategies with individual departments' core business strategies and service delivery plans can also be achieved to a certain degree (3.71). However, it was suggested that integration should not be with individual departments' core business strategies, rather that there should be a corporate business or organisational strategy, to which e-government is an integral part. In addition, it was believed that there are some opportunities that exist to work together with commercial partners (2.92).

The role of Heads of IT within the public sector in building and promoting public services on via the Internet was not seen as the most important driver in the organisation for e-government initiatives (3.64). It was thought that the service provider market is responding in a mediocre way to e-government (3.07) and the early-adopters have not fared particularly well and had reported only limited success (2.71). Services that are currently available electronically on websites are predominately limited to information about authorities. Only a few authorities had any transactional services. Where present, these were generally of a low-key nature, such as renewing libraries books and requesting repairs to council-owned housing. It was acknowledged that for authorities to move forward in this area there is a need for more interactive websites to be developed and implemented.

Critical success factors cited in making further progress included changing organisational cultures from one of departmental silos to corporate governance and strong commitment and ownership from the most senior executives in the organisation. In addition, an understanding throughout organisations as to what e-government is, together with specific funding and adequate resources for the initiative. Finally, it was perceived that a unified customer contact strategy would assist with progress.

The Heads of IT also rated their authority's understanding of e-government and its implications for their authority by category as follows,

- i)   Heads of IT (4.43)
- ii)   IT specialists (3.79)
- iii)   Chief Officers (2.85)
- iv)   Elected Members (2.07)

This indicates that Heads of IT have a very good understanding, whereas Elected Members have a poor understanding. Clearly, this is not a surprising finding but it does, of course, have significant implications for a more holistic perspective of the issues and the need for a unified stakeholder strategy. Authorities have recognised to some degree the importance of the contribution of IT as a critical element in delivering e-government (3.71). Nine authorities have formally appointed an e-government champion, and seven

have not. Where appointed, there is a split between Officers and Elected Members, with Officers being more prevalent. However, the champion is a senior official in all cases. Interestingly, only four authorities have a formally documented e-government strategy. In each of the four cases, an internal e-government working group developed the strategy. The authorities' senior management team or Cabinet finally approved the strategy. Only five authorities have set any targets for electronic service or are planning to do so. These targets range from an ambitious 100% of services online by 2005, to small interim targets with a brief route map for future developments.

Several obstacles were identified that were barriers to delivering the e-government agenda. In order of importance they were:

i)   Lack of funding (4.43)
ii)   too many IT initiatives to cope with (4.0)
iii)   lack of integration with existing internal systems (3.93)
iv)   skills shortages (3.61)
v)   poor management and co-ordination between organisations (3.57)
vi)   conflicting priorities of organisations (3.5)
vii)   the Government's approach (3.43)
viii)   lack of management support (3.21)
ix)   lack of political support (2.93) and security concerns (2.86)

In addition, improving working relationships between internal departments and external agencies and adopting a corporate approach were issues, which were also seen as major barriers to successful e-government. To achieve this, it was felt that a major change in culture is required. It was also suggested that although central government is setting the pace of change in England, the NAfW is only slowly catching up with the agenda in Wales. Concern was raised about the lack of public consultation to determine whether e-government is a priority. This is seen as offering further support, or otherwise, to the investment in the implementation of electronic services. There was also concern regarding the lack of understanding and drive from departments outside of the IT department. Heads of IT maintain that e-government is not only about technology, but is about improving services. However, the current focus within the organisations tends to be on electronic service delivery, and improvement in services is secondary.

At present, authorities have few current, or planned, IT initiatives to develop more 'joined-up' services with other partner organisations. Where these existed, they tended to be only isolated single initiatives. They included a shared crime database with community safety partners such as the police and other local authorities and links between health authorities and social services departments. An innovative shared voice

and data network between three local authorities in the same region in mid-Wales was cited as a major success, although this is not an e-government initiative specifically. Some authorities have provided basic web facilities for voluntary organisations and town and community councils. There are also links between council housing departments and private housing associations, for example a joint housing waiting list system.

Interestingly, with regard to the potential of a joint working approach there was a whole spectrum of opinion, ranging from 'very limited' to 'major opportunities to avoid duplication of infrastructure and information'. The opportunities of such an approach included:

i)   providing better and more seamless services to the public
ii)   economies of scale
iii)   lower costs
iv)   greater return on investment
v)   improved services
vi)   improved access to information
vii)   reduction in service delivery time-delays

Heads of IT believe that local government is in a strong position to encourage and promote 'joined-up' working. It was considered that integrating other government agencies such as health, education, and the department of social security would create opportunities for improvements and consequently offer direct benefits to government service recipients generally. Standard information exchange formats would be beneficial, which if agreed and developed would help avoid duplication and lead to a greater consistency of data. Joint working should be encouraged amongst local authorities. However, there is a sense of a degree of protectionism and possibly distrust, which needs to be overcome to make significant progress. Interfacing with the private sector seems inevitable but it is noted that there may be costs, as the private sector will not amend their systems for nothing.

Perceived problem areas included costs, internal divisions, distrust and competing priorities. It was recognised that there is a need to overcome both political obstacles and the ignorance of organisations as to the benefit of partnership working, to achieve the required major cultural change. The addition of new service delivery channels via the introduction of e-government will inevitably cost more in the short to medium term. Security of access to information was an area of concern together with the quality and integrity of information held on some computer-based information systems.

Participants were asked whether they had completed the UK Society of Information

Technology Managers' key performance indicator thirteen (SOCITM KPI13). This indicator was introduced this year and measures electronic service delivery. Only four authorities completed this section. From the data provided, percentages were calculated, as follows:

i)   information available electronically is 29.5%
ii)   applications capable of being serviced electronically is 31.5%
iii)   bookings that can be made electronically is 12.75%
iv)   payments in that are capable of being made electronically is 26.5%
v)   payments to external organisations made electronically is 34.5%
vi)   feedback that is capable of being delivered electronically is 17.6%.

Clearly, these percentages are not high figures.

A strong view emerging from Heads of IT is that e-government is not just a technology problem and that it is very much a corporate and cultural issue. Unfortunately, at present, Heads of IT believe that most of their organisations perceive e-government from an IT perspective. However, the basis for improvement must be local politicians and senior executives setting local targets, having first fully understood all of the guidelines and the potential modernisation objectives. It is also believed that some early adopters have undertaken e-government as a transparent political action, rather than identifying the public demand, producing priorities and implementing an appropriate strategy that will satisfy the public's requirements. An example is web council tax payments, as direct debit is both cheaper and more convenient. There is also the view that the e-government agenda is causing IT departments to neglect existing operational systems, which if they should fail could have a major impact on the organisation and the public.

Having senior political backing is seen as essential in obtaining the required resources and getting the co-operation of services. There is also a need for authorities to spend time and effort undertaking public consultation. This will help guide authorities as to whether a clear mandate is given to create new channels for service delivery. Any tools or approaches should be considered, including, but not limited to, IT. It is also important that ad-hoc initiatives are avoided and an integrated approach is taken. The e-agenda is being driven by political imperative. To be successful, authorities should reflect on the issues and opportunities from the customer perspective. Authorities also need to be more realistic about requirements, in terms of effort, time, funding and capabilities. A change of hearts and minds of stakeholders is required to fundamentally change internal processes, organisational cultures and forge meaningful links with other partners. The recent announcement by the NAfW that each Welsh Local Authority had to produce an

IEG Statement by March 2002 has highlighted the e-government issue in local authorities. As noted, this is regarded predominantly as an IT issue. This has focused attention on Heads of IT to deliver on this initiative. However, these Heads are responding by highlighting that e-government is not just an IT project. Rather, it is a corporate organisational initiative, in which IT is one of a number of complex components.
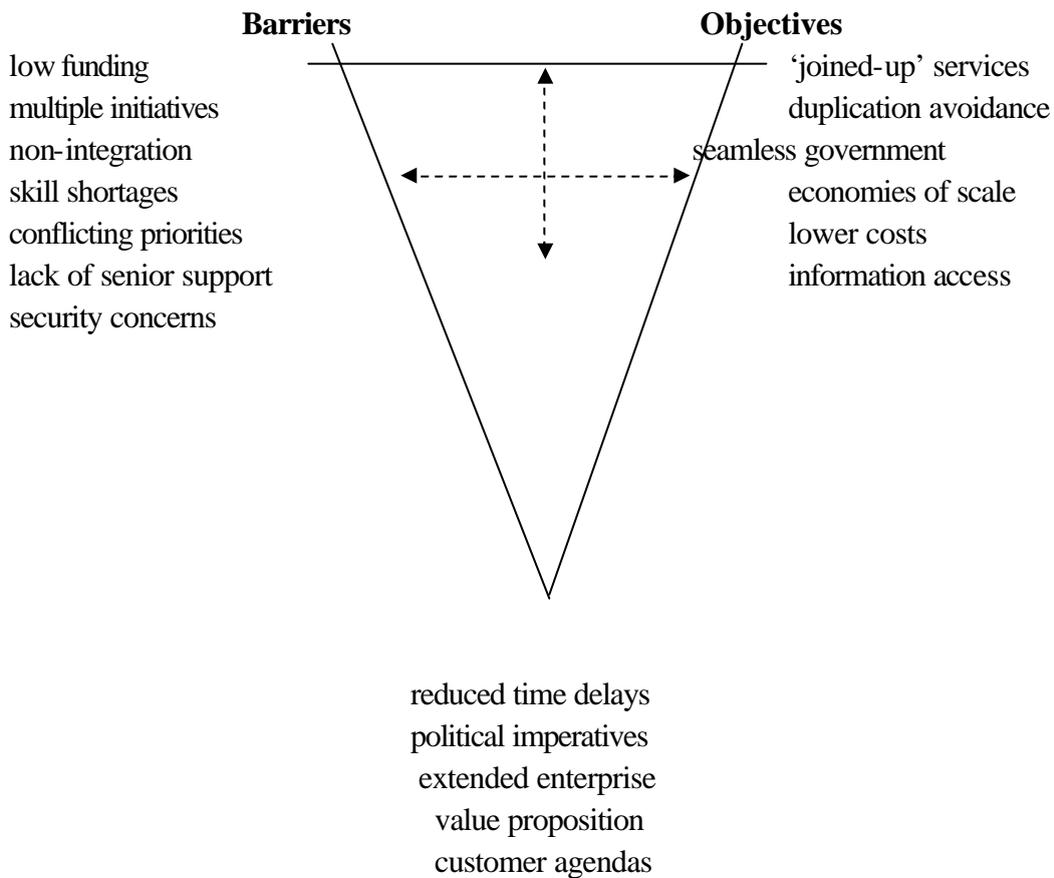
Heads of IT also identified several issues that require urgent attention. These include corporate commitment from the highest level within authorities, adequate resources, ring-fenced funding, and most importantly a change in service department attitudes and organisational cultures. Service departments must take ownership of their respective service areas and demonstrate a business need for e-government. These major challenges must be faced and adequately addressed. IT can then provide an appropriate infrastructure to assist and support its implementation. However, this can only work if all entities are completely committed and open. It is believed that it is unlikely that this approach can be attained in the short term. Senior officials need to fundamentally understand the potential of e-government. It is not just about citizens paying bills over the Internet, it's about fundamentally reviewing and changing current practice to improve services for the public. Achieving this change to business processes and generating the required drive and commitment throughout authorities to attain significant change is, in practice, very difficult. However, Heads of IT have demonstrated, through this study, that they are aware that to move forward, there is a need to identify the current position, formulate options, and consider priorities and to agree a timetable. Resources and finance will then require securing to achieve adequate funds and to maintain momentum. In addition, targets in the IEG Statement requested by NAfW will also be a source of providing objectives and milestones.

Critical Imperatives

The initial findings indicate that e-government should be developed from an organisational strategic perspective. Furthermore, the managerial and political systems within local government identified by Bannister (2001) add an additional level of complexity to the analysis. That is to say that the findings are exacerbated by the diversity and bureaucratic nature of the organisational structures encountered within local authorities. Prahalad and Ramaswamy (2000) suggest that private sector organisations need to 'create their future by harnessing competence in an enhanced network that includes customers'. This aspect will need to be considered by Welsh Unitary authorities, as clearly it is their constituents and stakeholders to whom they deliver services and to whom they are accountable.

Senior managers need to recognise that consumers are a source of some of these competencies. They must focus on developing relationships with the customer as the agent that is most dramatically transforming services and driving e-government initiatives. Historically, government agencies had a traditional focus, which has been internal. They have not embraced the concept of the 'extended enterprise' and have been not been particularly concerned with alliances, networks, and collaborations among other agencies and services. This prevailing scenario has to change, which should lead to enhanced network of virtual alliances, other services, funding bodies and customers, facilitated with the help of e-government (Hopkins and Jamil, 1997).

Figure 1 shows an e-government framework, which the authors contend could be usefully adopted as a template for identifying the barriers, objectives and priorities for such initiative. It demonstrates the notion of extending the government services network and changing the nature of its usage to improve core competencies.

Barriers	Objectives
low funding	'joined-up' services
multiple initiatives	duplication avoidance
non-integration	seamless government
skill shortages	economies of scale
conflicting priorities	lower costs
lack of senior support	information access
security concerns	

reduced time delays
political imperatives
extended enterprise
value proposition
customer agendas

cultural issues

Priorities

Figure 1: E-government Framework

The outline framework above identifies a number of critical issues for further e-government consideration. Clearly, the concepts of the 'extended enterprise' and functional integration are of significant importance and the empirical data confirms this, as Heads of IT consistently indicated that such notions should take priority in organisational e-government strategy formulation.

Many organisations focus on core value adding processes, working with external partners to jointly improve services. They believe that a more flexible organisation built around a series of alliances and business relationships is the most effective way to respond quickly and creatively to constantly changing market conditions (Miles and Snow, 1995). The conventional, vertically integrated public sector organisation may be too slow to facilitate change to provide improved services. If the Welsh Unitaries are to improve their services then they should embrace the notion of the value alliance. This value alliance emphasises the decentralisation of control, the creation of more flexible patterns of working, a greater empowerment of officers and customers and, the displacement of hierarchy by teamwork. The development of a greater sense of collective responsibility and the creation of more collaborative relationships among co-workers and customers is also an imperative (Burn and Barnett, 2000). The key to the success of the Welsh e-government strategy will be a network of open communication flowing both horizontally and vertically throughout the organisation, including:

i)   pervasive knowledge sharing, feedback and communication
ii)   integration of environmental considerations
iii)   effective partnerships with constituents
iv)   commitment to using customer feedback
v)   empowerment to frontline employees to deal with issues

The primary aim is to ensure that all services revolve around its constituents as opposed to establishing bureaucracies that customers need to break into to obtain the services they require. To achieve improvements via e-government initiatives there must be a fundamental shift in management thinking and practices. The key issues that the analysis has highlighted are:

i)   to ensure that the Chief Executive Officers are directly involved at a strategic level to demonstrate commitment to the e-government agenda
ii)   to ensure that commitment is filtered down to the stakeholders within each authority
iii)   to ensure that appropriate communication links are in place and to show evidence of information flows
iv)   to ensure that stakeholders can see immediate benefits
v)   to ensure that stakeholders are able to impact on the goal setting-process
vi)   to ensure that Heads of IT establish a high level of trust with both clients and their counterparts in the participating organisations
vii)   to ensure that service delivery managers gain an insight into client requirements
viii)   to ensure organisations develop a close working relationship with constituents to identify what the client requirements

The above imperative highlights the need for a radical change to public sector organisational practice.

Future Research Issues

The authors recognise that further validity of the proposals contained in this chapter need further review and substantiation. Drawing upon the literature and the empirical analysis, several questions arise for future research into e-government:

i)   how can service managers deal with information and communication that must be passed virtually across functional boundaries, so that close co-operation and teamwork can be increased?
ii)   how can Heads of IT store knowledge and expertise and provide this to all members of the virtual network?
iii)   how can the Welsh Assembly capitalise on customer competencies and improve both local government and governance?

The critical challenge for Unitary Authorities is the development and implementation of e-government initiatives to improve service delivery. A key factor in this is the flow of information and communication within a virtual organization.

Conclusion

This chapter has identified critical imperatives for the formulation of e-government initiatives. It is based upon an empirical analysis of the opinions of Heads of IT within

Welsh Unitary local authorities. A review was undertaken of the issues within e-government, which highlighted the drive towards more 'customer centric' organisations in the context of multiple service provision. Observations were made on how traditional local government organisations are designed and how the concept of a virtual integrated value-alliance between stakeholders can help enable successful e-government implementation. A framework for e-government consideration was elicited for Unitary Authorities, which it is believed could be useful for other UK government agencies. The way in which the framework could be implemented within a virtual organisation and its implications for the management of services in developing e-government community were noted, which highlighted the need for a shift in management thinking. Finally, research areas were identified to help with e-government and virtual organisation research in the future. The research is related to academic and executive alliances in the e-government arena. The issues raised in the chapter are believed to be of potential value to public sector authorities and elsewhere, which may help facilitate successful e-government implementations.

Bibliography

Barreyre, P. Y. (1988) The concept of 'impartition' policies: a different approach to vertical integration strategies, Strategic Management Journal, 9, 507-520.

Burn, J. M. and Hackney, R. (2000) Strategies for E-Business Change in Virtual Markets: a co-evolutionary approach, International Journal of e-Business Strategy Management, Vol. 2, No. 2, 123-133.

Burn, J. M. and Barnett, M. L. (2000) Emerging Virtual Models for Global e-commerce - world wide retailing in the e-grocery business. Special issue on Global E-Commerce, Special Millennium Issue of Journal of Global Information Technology Management, Vol 3, No. 1, pp 18-32.

Campbell, A. and P. DiNicola (1997) Virtual Organisations. Problem setting and research agenda.

Cavanagh, J. J. and D. J. Livingston (1997) Serving The American Public: Best Practices in Customer-Driven Strategic Planning.

Heeks R (1999) (Eds) Reinventing government in the information age: international practice in IT-enabled public sector reform, Routledge Publishing.

Heeks R (2001) Building e-governance for Development: a framework for national donor action, e-government working paper, No 12, ISDPM, University of Manchester, UK.

Hopkins, C. and J. K. Jamil (1997) Serving the American Public - Best Practices in One-Stop Customer Service, Federal Benchmarking Consortium.

Jellinek, D. (2000) E-Government - Reality or Hype? E-Government Bulletin, October, http://www.cisp.org/imp/october_2000/1000jellinek.htm

Miles, R. E. and C. C. Snow (1995) The new network firm: A spherical structure built on a human investment philosophy, Organizational Dynamics 23 (4): 4-18.

Morin, T. Devansky, K. Little, G. and Petrum, C. (2000) The Future of Information Leadership, in Information Leadership - A Government Executive's Guide, PriceWaterhouseCoopers Publications.

PIPER Letter (1995) http://www.webcom.com/-piper/9512/index.html

Prahalad, C. K. and V. Ramaswamy (2000) Co-opting customer competence, Harvard Business Review 78(1) (79-87).

Serafeimidis V. and Smithson S. (2000) Information Systems Evaluation in Practice: a case study of organisational change, Journal of Information Technology, (15), 93-105.

SOCITM (2000) Benchmarking the IT service in Wales, SOCITM Publications, Northampton.

Sprecher, M. H. (2000) Racing to e-government: Using the Internet for citizen service delivery, Government Finance Review, Vol. 16, 5, 21-22.

Symonds, M. (2000) Government and the Internet: The Next Revolution, The Economist, Jun, 24.

Von Hoffman, C. (1999). The Making of E-Government, COI Enterprise Magazine, Nov, 15.