LOCAL E-GOVERNMENT IN WESTERN AUSTRALIA: HOW PREPARED ARE COUNCILS TO DELIVER SERVICES AND INTERACT WITH COMMUNITIES IN AN ELECTRONIC ENVIRONMENT?

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Discussion paper no. 1

Synopsis

Australian governments at all levels are participating in the global trend towards delivering services online and interacting with communities in an electronic environment. The primary focus thus far has been an internal one as governments put in place the management and technology models to support this transformation. As this transformation is achieved, an outward looking phase focusing on citizen interaction and active participation is developing with the thrust past e-government to e-governance and e-democracy becoming more pronounced.

Just how prepared are local governments in Western Australia to take up this challenge? In this practitioner-based paper, the attitudes of elected and appointed representatives from all councils in Western Australia towards online service delivery and interacting with citizens in an electronic environment are discussed based on a study undertaken in 2003. A management model to support local e-government is presented and its dimensions used to predict the capacity of Western Australian local governments to implement local e-government. Various themes relating to e-governance and e-democracy, including that of trust, are explored and some gaps between thinking and practice in managing to enable local e-government in Western Australia are discussed.

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Introduction

Western Australia makes up approximately one-third of Australia and 10.42 per cent of its population. Services are provided through 143 Local Government Authorities, making up 23 per cent of Australia’s local governments. The median age of households is 34 (WALGA 2003). Some Local Government Authorities are also grouped into voluntary Regional Local Government Bodies, established to provide better service through collaborative resource sharing.

Increasingly, citizens are demanding more accountability and transparency in their dealings with government and seamless interaction between government departments to complete transactions efficiently. This has provided a strong and irreversible impetus for the move towards e-government at all levels. E-government has been defined as ‘... the use of information and communication technologies and particularly the Internet, as a tool to achieve better government’ (Organisation for Economic Cooperation and Development 2003). This definition can be further broadened to encompass the application of technology to ‘... provide citizens and organizations with more convenient access to government information and services; and to provide delivery of public services to citizens, business partners and suppliers, and those working in the government sector’ (Warkentin, Gefen, Pavlou & Rose 2002, p. 157). Implicit in these definitions is the provision of information and services to citizens online. The components of e-government can be further defined as ‘... e-access; e-provision; e-delivery; e-policy; e-community and e-democracy’ (Huang, D’Ambra & Bhalla 2002, p. 577). This further definition indicates the citizen-centric context within which e-government should be placed.

The Office of E-Government was established within the Western Australian Department of the Premier and Cabinet in February 2003 in an effort to harness the use of information and communication technologies to transform the public sector. According to its strategic plan, the mission of this office is ‘to transform the operations of government, using technology as a tool, to improve internal efficiency, service delivery to citizens and community participation’ (Office of E-Government 2003).

Various reports by government and business have sought to define the extent of actual and proposed implementation of e-government at a national (Accenture 2001; World Markets Research Centre 2001; UNDPEPA 2002; Organisation for Economic Cooperation and Development 2003), state and local government level (DTLR 2002; Multimedia Victoria 2002). For councils — traditionally the closest interface between government and citizens — use of the Internet is increasingly becoming the medium of interaction, with generations from the baby boomers onward seeing the Internet as the premier business channel. Indeed, the imperative to interact with citizens in an online environment is illustrated by figures for usage of government online services which peak in the 25–34 year age group, remaining strong in the 35–44 years age group and then declining (Dexter and Parr 2003).

Providing choice: The interactive component of e-government

The impact of this urgent move towards e-government and its extensions of e-governance, e-democracy and e-participation is that local government is now being required to provide a choice of channels for interaction between itself and the community. The effect of e-government overall and local e-government in particular is thus to aim to provide a more customer-centric service focused on access, choice, and engagement for the citizen.
A recent United Nations report points out that while e-government services ‘... have proven instrumental in raising the efficiency and effectiveness of public administration, ... much more has to be done to fully realise their promise and potential to deepen deliberative democracy’ (United Nations 2003(a)). In seeking to interact with their citizens in an electronic environment local governments must clearly distinguish between the short-term institutional (whether this be physical or virtual) and long-term interactive components of e-government. The interactive component of e-governance seeks to engage citizens and government in dialogue throughout the political process leading to the end product of citizen-centric service delivery (Riley 2003). Its focus is on the way decisions are made rather than the way they are implemented (Marche & McNiven 2003). In so doing, complexities are created for government in its approach to interacting with their citizens and customers in a technology mediated environment. E-governance and its subsets of e-democracy and e-participation are vital to ensuring the sustainability of the transformation to e-government. Where electronic service delivery is a feature of e-government, electronic engagement and consultation are features of e-governance.

**Website maturity**

Various inquiries into local government in Western Australia have urged structural reform to enable councils to more efficiently service citizens. Delivering services online through a virtually-extended enterprise has been suggested as a mechanism to achieve this required efficiency through transforming local government into local e-government (Stanton 2002). In this type of enterprise, the council provides services and interaction online while maintaining a physical face, providing a choice of interaction points for its community.

In 2001, the Western Australian Local Government Association (WALGA) was successful in gaining $6.6 million funding from the federal Networking the Nation scheme to implement two projects designed to deliver online local government services — Linking Councils and Communities and Community Access to the Information Age. Initial funding for the Linking Councils and Communities project was $1.2 million with a further $4.4 million for implementation of later stages of the project. The Community Access to the Information Age project attracted $232 000 funding (Australian Local Government Association 2001).

Progress towards local e-government transformation can be aligned with the maturity of council web sites. Generally three categories are used to rank the service maturity of web sites (Accenture 2001):

- publish (static information and one-way provision of information)
- interact (capacity for communication is present and a two-way feedback opportunity is available for citizens)
- transact (capacity for complex interaction, including online transactions is present).

Increasingly a fourth category — that of innovate — is being used for those sites which engage citizens as partners in policy making (Caldow 2004). Characteristics of this interactive/strategic category include providing options for domestic citizen engagement such as e-petition; e-consultation and e-policy to achieve the ‘e’ service outcomes and priorities of e-citizenship and democratic accountability (DTLR 2002).

**New Public Management in the local government context**

Considerable debate is now taking place as to the definition and separation of the roles of elected and appointed local government representatives. Council governance is being recast in New Public Management terms. Political and operational management are being separated. Elected representatives
(the Mayor or Shire President and Councillors) are now viewed as the Chairman and Board of Directors whose role is to set strategic and policy direction. The role of the appointed representatives (the Chief Executive Officer and Executive staff) is to implement this strategic and policy direction operationally. Indeed, the Local Government Act 1995 confers sole operational responsibility on the CEO. Hansen (2001) suggests that in the local government context, New Public Management could be renamed New Public Government, with debate about the extent to which the institution of government is being reorganised using New Public Management principles, along with the administration of government. Whatever the outcome of this debate, the benefits of New Public Management in increased customer focus, transparency and accountability are tangible and present, however clear distinction between the strategic and operational levels is often still an issue, particularly for elected members (Marton 2003).

It is also becoming clear that information and communications technologies should not be used as an end in themselves, although certainly they will provide New Public Management outcomes of efficiency and effectiveness in government. Rather e-government development must sit within the context of ‘the vision ... of society with which people want to identify and make part of their life experience’ (United Nations 2003(b)).

Management models for transforming to local e-government: geocentrism versus cybercentrism

What management skills are required to achieve customer-focused outcomes in an e-government environment? Councils are commonly perceived as operating under hierarchical, bureaucratic management models. A recent OECD report (Organisation for Economic Cooperation and Development 2003) cites various requirements for effective e-government, including leadership, better e-government skills for managers and public-private partnerships. It would appear that a different management model incorporating increased flexibility and a focus on interacting in the virtual, rather than the purely physical, environment is required.

In transforming to local e-government, councils are beginning to operate in a new virtual environment, reliant to a far greater extent on information and communications technologies to produce this transformation. This requires implementation of a new management model to support this shift and act as an enabler for this transformation. The cybercentric management model, proposed by Gordon (2000; 2001) is suggested by the author as the new management paradigm for interacting in the local e-government environment. The dimensions of Gordon’s original cybercentric management model have been adapted for local government (Stanton 2002). In contrast to the old model of geocentric management with its focus on the physical environment and marginalisation of information technology and management information systems from the decision-making process, cybercentric management is designed to enhance customer outcomes through flexibility, efficiency and increased accountability. Its various dimensions support public sector implementation of New Public Management principles to provide outcomes in a digital age as local governments move from a place to a space orientation in interacting with citizens.

A comparison of the elements of the geocentric and cybercentric models drawn from Gordon (2001) and adapted for local government by Stanton (2002) is shown in Table 1. The applicability of these cybercentric dimensions as enablers of local e-government is further supported by the inclusion of leadership characteristics and guiding principles for successful e-government implementation derived from the literature as indicated.
Table 1: Comparison of Gordon’s Geocentrism and Cybercentrism Dimensions, adapted for local e-government implementation

<table>
<thead>
<tr>
<th>Cybercentric model dimension</th>
<th>Features of Geocentric Management</th>
<th>Features of Cybercentric Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Information Technology (IT) and Management Information Systems (MIS) segregated from the rest of the business.</td>
<td>IT and MIS brought into key decision making. Single points of entry to multiple agencies allowing the opportunity to interact seamlessly. Integration of e-government as an enabler into broader policy and service delivery goals.</td>
</tr>
<tr>
<td>Corporate Structure</td>
<td>Broad, hierarchical structure with vertical command.</td>
<td>Flattening of the organisation with horizontal authority. Accountability, monitoring and evaluation. Strong performance management focus.</td>
</tr>
<tr>
<td>Company Goals</td>
<td>Goals/objectives are known and not questioned by management.</td>
<td>Goals/objectives are elastic and reinvented as the market evolves and changes. Creating innovative solutions for the citizens and businesses served. More structured knowledge management strategies to facilitate greater information flows, better knowledge of the customer and a greater sense of organisational identity. Reengineering business processes to change the way the organisation works. Importance of focus on implementation as well as strategies.</td>
</tr>
<tr>
<td>Market Position</td>
<td>Defined by competition and view of market structure as defined by physical presence.</td>
<td>Virtually-extended company understands the agility of e-commerce. Importance of customer relationship management. Customer focus providing access, choice, citizen engagement and privacy. Sustained customer focus and development of improved services, not just improved access.</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>The company fights for market share, and bitterly defends its knowledge.</td>
<td>The company looks for opportunities to enjoin other companies in mutually beneficial R&amp;D ventures. Inter-agency collaboration in customer-focused groupings. Information and communications technology funding seen as an investment. Councils work together and with public sector agencies to deliver e-government.</td>
</tr>
<tr>
<td>Employment</td>
<td>Lifetime employment.</td>
<td>Contract workers and consultancy. Skills required by managers are not solely technical [or administrative] but also embrace facility in participating in the information and communications technology decision-making process.</td>
</tr>
</tbody>
</table>
Information and communications technology skills and knowledge are essential and should be accessed from more than one person or employment source to build capacity required.

| Strategic Vision strategic | Vision defines strategies according to a limited choice of options. | Cyber vision offers a wide range of options limited only by the ability to alter perceptions, intervene, or destabilise existing realities. Vision and implementation. Striking the right balance between political leadership & administrative simplicity. Vision/political will including leadership and commitment at both political and administrative levels. |

Practical and realistic vision and political will with a change management emphasis.

Notes:


**E-government drivers and the cybercentrism continuum**

There is basic agreement on the drivers enabling transformation to e-government. These include vision/political will; common frameworks/cooperation; customer focus and responsibility encompassing accountability, monitoring and evaluation (Organisation for Economic Cooperation and Development 2003); strategic investment; and civic engagement (in defining a shared vision of e-government) (InfoDev 2002). These drivers apply equally to global and local levels of government. The cybercentric dimensions described above can thus be seen as required enablers of e-government implementation.

Using the cybercentric dimensions of the model, the preparedness of elected and appointed council representatives for e-government implementation can be mapped onto a continuum (see Figure 1).
The continuum is made up of four quadrants, with responses from elected representatives mapped on one axis with corresponding responses from appointed representatives mapped on the other axis.

**Testing the management model to support online service delivery**

A pilot study was carried out in 2002 among six adjacent councils in Western Australia forming the Western Suburbs Regional Organisation of Councils (WESROC) (Stanton 2002). Cybercentric management was hypothesised as the means to support service delivery through the virtually-extended enterprise. Such an enterprise achieves better customer-focused outcomes through resource sharing, economies of scale, no additional bureaucracy, flexibility and the development of fields of work rather than organisations of jobs, acting as the virtual face of a physical entity (Stough, Eom & Buckenmyer 2000).

The pilot study was designed to investigate the attitudes of elected and appointed council representatives towards interacting in an e-government environment — and their preparedness to do so — based on their level of cybercentrism. The continuum map produced for this pilot group of councils confirmed the anecdotal observation that in transforming to local e-government, councils were moving into a cybercentric management environment.

**Results of a survey of Western Australian councils**

In 2003 the pilot study was extended to encompass all appointed and elected representatives of the 143 Local Government Authorities in Western Australia. The aims of this were twofold:

- to assess the level of implementation of the cybercentric management model in progressing towards local e-government
- to provide deeper information on management attitudes towards the key cybercentric dimensions and their interpretation in a local e-government environment.

Survey questions from the initial pilot study, based on the seven cybercentric dimensions of the proposed management model were further refined. The dimension of trust was also investigated, as this has been
identified as one of the key factors for e-government adoption and citizen uptake (Warkentin et al. 2002), making a total of eight dimensions examined.

A total of 134 responses were received. Of these, 84 were from CEOs and 50 from Mayors/Shire Presidents, with 34 paired responses from the same council. The overall cybercentrism of response is shown in Figure 2 below.

**Figure 2: Overall comparative cybercentrism of response**

![Histogram showing comparative cybercentrism of response](source: Stanton 2004)

The average CEO response is 3.77 ranging from 3 to 4.6. The average Mayor/Shire President response is 3.74, ranging from 2.0 to 4.4 with 1 and 5 indicating the geocentric and cybercentric extremes respectively.
The overall paired response is mapped in Figure 3. These paired responses are clustered almost entirely in the cybercentric quadrant of the continuum map.

Finally, the responses were clustered to ascertain the congruence of the questions and the relevant dimension was confirmed — confirming the integrity of the survey. The overall degree of cybercentrism of the eight dimensions is shown in Figure 4. This can be used as an indicator of the degree of readiness and probable success of Western Australian councils to implement local e-government. A high degree of cybercentrism in all dimensions indicates a high degree of readiness and high probability of success. As the dimensions become more geocentric, overall or individually, the degree of readiness and the probability of success will decrease. Individual councils exhibiting a high degree of geocentricity in a majority of dimensions are unlikely to succeed in the transformation to local e-government, to the detriment of their citizens.

Figure 3: Overall paired response continuum map.

Figure 4: Degree of cybercentrism exhibited by WA Councils in the eight dimensions surveyed

Source: Stanton 2004
Discussion

There can be no doubt that Australian usage of online services has become part of our way of life. Government funding of programs at all levels, simplification of web sites and introduction of citizen-focused portals has sustained this growth. A corresponding focus on addressing the problem of the digital divide, particularly in regional areas has produced a high level of uptake of e-government services. An average 50 per cent of producers in regional Western Australia use the Internet regularly (Curtis and Stanton 2001). This is confirmed in a study of Internet use in various countries including Australia (Prattipati 2003) where 58 per cent of our citizens had used the Internet in the previous month, 79 per cent of that usage being for online government services. Not surprisingly, this study identified public access to the Internet as the most important factor associated with use of government online services and thereby influencing the implementation of e-governance.

Western Australians, in both regional and metropolitan areas, are well placed to use appropriately targeted online services provided through local e-government. An assessment of Western Australian council web sites in August 2002 (Gentle 2002) indicated 50 per cent of councils had a web site. The site rating for these web sites indicated 65 per cent were introductory (corresponding to the ‘publish’ category); 30 per cent were medium (corresponding to the ‘interactive’ category) and 5 per cent were advanced with backend integration (corresponding to the ‘transaction’ category). By December 2003, the number of councils with web sites had increased to 88 per cent.

Dexter and Parr (2003) point out that while global Government Online usage has remained relatively stable at 30 per cent in both 2003 and 2002 (up from 26 per cent in 2001), consulting continues to be the least used online service overall at 4 per cent, with no change from 2002. However, Government Online use in Australia in 2003 was 47 per cent (up from 31 per cent in 2001) but stabilising, with 29 per cent using interactive services in 2003 compared to 22 per cent in 2002. Of this figure, 9 per cent was attributable to ‘consulting’ usage. Similarly, while the global average for ‘transacting’ and ‘providing’ increased by 1 per cent to 8 per cent and 9 per cent respectively, the corresponding Australian figures are 20 per cent and 18 per cent. In fact, a recent United Nations report benchmarking e-government in its member states ranks Australia second only to the United States in its implementation of and capacity to develop e-government (UNDPEPA, 2002).

Citizen interaction, customer focus and cybercentrism

Overall, the responses to this study indicate Western Australian local governments are beginning to operate in the cybercentric mode necessary for implementation of local e-government. This suggests that overall the attitude of appointed and elected representatives is moving towards providing an environment for service delivery online and for interacting with citizens in an electronic environment. However, the study shows that different cybercentrism dimensions have been addressed to different extents, which may slow the transformation to local e-government and beyond.

Agreement is apparent between elected and appointed representatives on the importance of customer focus, illustrated by the response to the market position dimension. While this dimension is cybercentric, it is clear that the focus is still an internal one, with dimensions relating to internal structure outranking the market dimension in importance.

Although numerous councils have developed consultation policies, guidelines and strategies in recent years, the majority of these centre on implementation in the physical environment using techniques such as workshops, forums and information sessions. This raises issues of access and...
equity of participation as well as cost-effectiveness. Physical methods of consultation are costly, however use of e-participation methods is limited. Overall, there is limited readiness as yet within Western Australian councils to pursue an outward focus, actively engaging citizens and businesses, despite an awareness of the importance of the customer. It is also clear that this shift in focus cannot take place while the dimension of strategic vision dimension, with its reliance on knowledge of customer needs, ranks relatively lower than those dimensions with an internal focus.

**Trust and cybercentrism**

Clift (2003) suggests that ‘Increasing citizen satisfaction and service is the bridging outcome between traditional e-government projects and online efforts to promote participatory democracy’. Trust is also a vital aspect in this process, just as it is a central aspect of our economic and societal interactions (Warkentin et al. 2002) and the basis for transparency and accountability, two much-touted outcomes of e-government. Pavlou (2001) shows that trust is one of the four important variables (which also include perceived risk, perceived usefulness and perceived ease of use) for predicting the intention to use online transactions. Even in a virtual environment, local e-government is the most intimate level of government for our citizens. For this level of e-government to succeed, it must be preceded by an intention to engage and a lack of trust will inhibit the development of this intention.

Marshall and colleagues (2001) point out that a trusting relationship is a fundamental critical success factor in the virtual organisational environment. Cybercentristic management styles, with their emphasis on flattened hierarchies, flexibility and communication flows provide the environment for development of trust. It is evident that development of trust between both internal collaborative and external participative e-government stakeholders must be a condition for effective interaction in this virtual environment.

It is important that trust is developed between levels of government offering online services as well as between the government and the citizen in providing that service. The quality of initial local e-government interactions will influence uptake of online services and ultimately the e-participation of the citizen. If trust can be built between the council and the citizen, increasing participation in local e-democracy and e-participation initiatives will result in improved policy-making and increased citizen satisfaction.

This study shows conclusively that elected and appointed council representatives have recognised the importance of trust building in a local e-government environment, with trust emerging as the most cybercentric dimension tested in the study. However, the strategic vision to implement this outcome and interact comprehensively with citizens in an electronic environment is still in transition from the geocentric to the cybercentric. This transition effect is likely to limit the transition to local e-democracy and e-participation as the provision of a wide range of strategic options is limited.

New Public Management principles form one of the pillars supporting the move towards e-government at a national, state and local level. They act as enablers of the change from a geocentric to cybercentric management environment in the Australian public service through ‘the transformation of the culture of the public service from a rules-bound bureaucracy to an entrepreneurial and performance-based focus in which the public service is at arms length from the state’ (Van Gramberg & Teicher 2000, cited in Anderson, Griffin & Teicher 2002 p. 14). A new management model for local e-government utilising the dimensions of cybercentrism is suggested to support this change.
Slow progress in developing some of the cybercentric foundations for local e-government

There has been some evidence that implementation of cybercentric principles leads to increasing flexibility in skill sets and a workforce able to do more with less (Anderson, Griffin & Teicher 2002). In the present study, however, it is apparent that the council approach to employment is only marginally cybercentric, with little progress being made away from the geocentric dimension of lifetime employment to the cybercentric dimension of contract workers and consultancy to provide more flexibility in skill sets and staff distribution. This is reinforced by the geocentric attitude towards corporate structure, where a vertical, hierarchical structure is preferred to a horizontal, flattened structure which would provide more flexibility and more options in the field of work.

The performance-based and increasingly accountable culture of New Public Management shifts the focus onto citizen satisfaction and the provision of services and opportunities for interaction and participation that enhance this. However, incomplete transformation to the cybercentric management model, with central control maintained in some areas, has led to slower progress, particularly in relation to implementation of e-governance and its subsets of e-democracy and e-participation.

Conclusion

This study has examined the attitudes of elected and appointed council representatives towards provision of services online and interaction with citizens, placing these attitudes within the wider context of national and global e-government and the requirements of New Public Management. A management model to support the transformation from a physical to a virtual environment and thus implementation of local e-government has been proposed and its characteristics identified.

The responses provided by elected and appointed representatives have been mapped on a continuum to visually represent the overall level of implementation of the cybercentric management model. This has established a baseline for progress in implementation of the management dimensions critical to sustainable implementation of local e-government, including local e-governance.

Significant levels of agreement are apparent between elected and appointed representatives in all dimensions of the cybercentric management model. However, significant lag in transforming some management dimensions to a cybercentric mode has been noted and it is predicted this will impede the transformation process. If the local e-government effort is to be successful and timely the corporate structure, employment and market position dimensions must become cybercentric to support the development of trust and thus citizen satisfaction.

This study shows that Western Australian councils are embracing local e-government and that progress is being made towards implementing the cybercentric management paradigm required for this to be successful. Significant overall agreement between elected and appointed representatives in all dimensions tested indicates an overall harmony in attitudes. The necessity and value of trust and the need to bring technology skills into decision making if information and communications technologies are to be used to improve service delivery is recognised. Recognition of the necessity for collaboration and resource sharing for successful local e-government is also obvious.
However, while the employment dimension remains only marginally cybercentric and the corporate structure dimension remains geocentric there must be concern about the ability of Western Australian local e-government to provide effective outcomes. It appears that, while elected and appointed council representatives have embraced the ideology of local e-government and its necessity, inconsistent progress is being made across the cybercentrism dimensions overall to ensure a sufficiently flexible corporate structure to deliver cost-effective local e-government.

While implementation of Western Australian council web sites has increased by over 70 per cent since August 2002, the majority of sites are no more than transactional at best, indicating councils are still at the initial implementation stages for local e-government and have some way to go in progressing from local e-government towards local e-governance. Consistent implementation of the cybercentric management model, along with funding and political vision, will be the enablers of this further transformation.

**Further work**

Further work will analyse and rank council website maturity at the time of the study, thus providing a benchmark for longitudinal study of progress. Case studies and interviews linked to this baseline and implementation of cybercentrism dimensions will be undertaken with regional and metropolitan councils at various stages on the cybercentrism continuum to assess best practice indicators for local e-government and e-governance in Western Australia.

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