FROM DOG LICENCES TO DEMOCRACY: LOCAL GOVERNMENT APPROACHES TO E-SERVICE DELIVERY IN AUSTRALIA

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Abstract

Municipal councils worldwide are recognizing the need and value of the Internet to deliver information and services. The move to e-Government in Australia and across the world has been prompted by factors such as government reform and the need to reduce cost, and to improve the efficiency and effectiveness of service delivery. Only recently, however, have there been more significant moves towards local e-Government in many countries. This research paper reports on the progress local governments in Victoria, Australia have made towards e-Government implementation. The paper provides a background to types of electronic information and services provided by local government and the stages of electronic maturity. The research identifies many of the internal and external pressures on local governments which are often different from those at higher levels of government. The result for local government is often a varied and at times confused approach to e-Government and electronic information and services which have a heavy focus on governance related issues.

Keywords: Local government, Municipal Councils, e-Government, e-Commerce, Internet

1 INTRODUCTION

Most research on electronic service delivery within the government sector has concentrated on national e-Government policies, initiatives and implementations (Prins, 2001; United Nations, 2002; World Bank, 2002). The benefits to the community of enhanced service delivery and improved government-to-citizen relations from truly 'joined up' e-Government is only possible, however, with the inclusion and co-operation of all levels of government. Until recently, local government has been a notable omission from national strategies despite the fact that up to 80% of government transactions with citizens take place at this level of government in many countries (SOCITM & I&DeA, 2002). Local e-Government offers more than electronic replication of existing information and services as it provides an opportunity to offer new and enhanced services to the public, to increase the involvement of communities in policy making and improved service provision.

In local government in Australia and throughout many OECD countries, the implementation of e-Government has not been easy. Local governments frequently lack truly independent decision making powers, they are often reliant upon funding from higher levels of government and they find it difficult to attract and retain experienced IT personnel. This has led some to observe that many local councils have often *window dressed* their implementations in an effort to maintain legitimacy with state and federal government and amongst their communities (Dollery, Marshal, & Worthington, 2003).

Australia is ranked highly in the e-Government area and is well placed to make significant advancements in the future (United Nations, 2003). The current literature suggests that the direction

and implementation of e-Government strategies is influenced by the different types of relationships with citizens at different levels of government. This paper builds on previous research on the progress local governments in the State of Victoria, Australia have made utilising the Internet to deliver traditional services, improve governance and enhance community contact (Shackleton, 2002; Shackleton, Fisher, & Dawson, 2004). Through a case study of three councils, it identifies the factors impacting on local government that determine the level, type and support for different forms of electronic service delivery and governance. It also examines longitudinally the changes in directions local governments have made (Shackleton, 2002).

2 AUSTRALIAN LOCAL GOVERNMENT

Australian local governments (known as municipal councils), have no constitutional legitimacy, but have responsibility for the implementation of a large range of services such as roads, waste collection and local town planning. Councillors within each Victorian council are elected by residents for three years. Residents pay council rates that supplement funds from the State government and the council is responsible for the management of those funds to provide a variety of services. Whilst different from some local government models in other countries, the Australian local e-Government experience described in this paper is still relevant because like many other shire, municipal or county councils it lacks independent power, provides a disparate range of services and is highly responsive to the communities they serve.

2.1 Services

Despite their apparent lack of independence and limited number of revenue options, Australian local governments provide an impressive array of functions and services and are becoming increasingly important in the grassroots implementation of policy and service provision (Industry Commission, 1997). In the last two decades council responsibilities have expanded to include services such as social and community welfare, economic development and environmental management. It is for this reason that in Australia, e-Service provision is mandated by State and Commonwealth policies, as the major focus of local e-Government implementation (Lips, 2001).

2.2 Factors affecting local e-Government Implementation

The OECD (2004) identified four broad external barriers to e-Government; legislative and regulatory barriers and budgetary barriers (the responsibility of higher levels of government in Australia), technological change, and the digital divide. The literature further highlights factors that impact on electronic service delivery in the local government sector (Deakins & Dillon, 2002; Dollery et al., 2003; Feng, 2003; Hackney & Jones, 2002; Lenk & Traunmuller, 2001; OECD, 2004; Prins, 2001). These include factors such as structural reform in the sector, process reform to service delivery and the policy priorities of local councils who are under pressure to provide a range of services with decreasing resources. These factors are combined and shown diagrammatically in Figure 1.

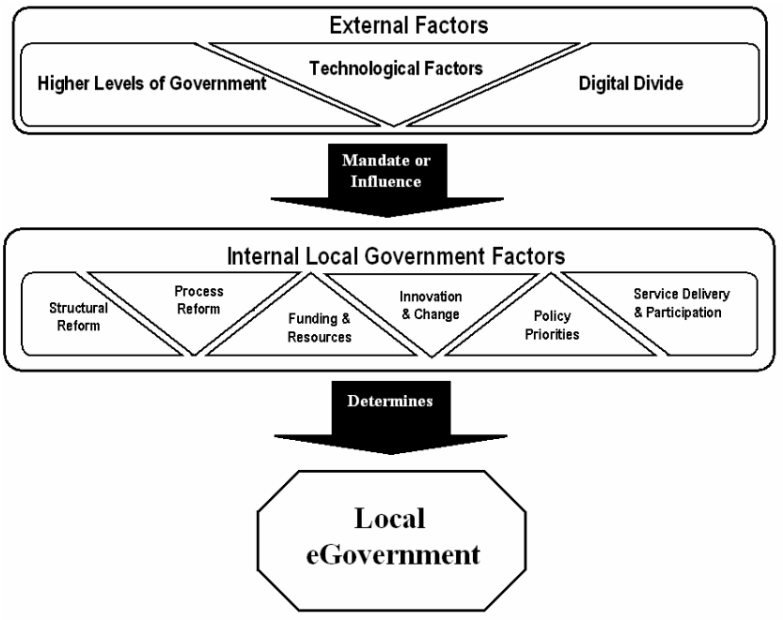

Figure 1 Internal and external influences on local Government

3 LOCAL E-GOVERNMENT MATURITY

A number of models have been presented in the literature that attempt to depict the path that governments follow as their electronic activities grow and mature (Deakins & Dillon, 2002; Layne & Lee, 2001; Riley, 2001; Sood, 2000; Stowers, 1999). The models outline a transition that moves from basic web presence where web sites are little more than an alternative technology on which to place basic information (Stowers, 2004) to integrated systems which involve more complex service provision. These models are primarily descriptive outlining the stages of development without specifically marrying these in some cases to economic and sociological conceptual theories such as Total Cost Theory (Williamson, 1996), Institutional Theory (Berger & Luckman, 1967), and Technology Acceptance Theory (Davis, 1989).

Many of the e-Government models describe maturity within state and national bureaucracies and emphasise service provision (United Nations, 2002). However, the move from a physical to an online delivery environment in the local government sector is more complex as it involves multiple types of service provision and high levels of community engagement. Thus more recent research has identified different patterns of e-Maturity for local government. There is a growing belief that local governments mature in different ways other than via a linear path and that they concentrate on different areas of importance. Some research has emphasised different *directions* or *flavours* of local e-Government (SOCITM & I&DeA, 2002), other models differentiate between entrepreneurial and participatory activities (Weare, Musso, & Hale, 1999), while some models concentrate on policy rather than overall maturity levels (Stamoulis, Gouscos, Georgiadis, & Martakos, 2001).

While Quirk (2000) offers a four stage descriptive model with Information Giving at the lower end and Empowering Citizens as the final stage, he outlines different *spaces* of e-Government for local authorities; “e-Service: Interface with customers, e-Commerce: Cash transactions, e-Democracy: Political dialogue citizen and community, e-Decision-making: Better informed public interest decisions, e-Management: Improved management of people” (Quirk, 2000). The model described by Quirk (2000) in Figure 2 has been selected as a basis for this research as it suggests that local e-Government maturity need not follow a linear path and it emphasizes the disparate range of functions and services provided by governments at the local level.

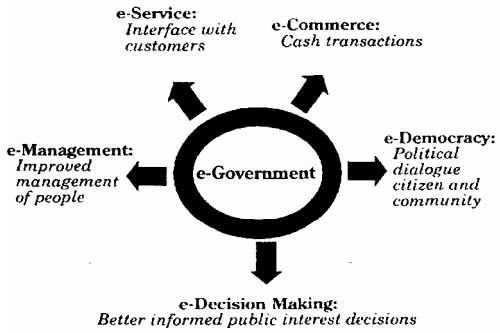

Figure 2: e-Government for Local Authorities (Quirk, 2000)

The model described in Figure 2 enables us to explain and examine the development of local e-Government maturity at different stages and in different areas particularly in the important area of community participation and engagement.

4 RESEARCH METHODOLOGY

4.1 Council Web Sites

The objective of the first stage of the research was to identify content, investigate changes to content and level of maturity of different aspects of Victorian council web sites over the last three years. The focus of the second stage was to provide qualitative data from a case study of three councils to supplement the survey data and help explain what was happening at the local government level.

A context matrix was developed and used to examine the presence of information and services and to assess the changes in the sophistication of service delivery over a three year period. Twenty of seventy nine council web sites (25%) were selected to be examined. It should be noted that the time the first content analysis was conducted some Councils did not have any web presence at all. The representative sample was chosen to reflect the breakdown between metropolitan, rural and outer suburban councils known as 'interface' councils as well as budgetary size and population size.

4.2 Ethnographic-based Case Study

The primary objective of the study reported in this paper is to provide rich qualitative data from an in-depth ethnographic case study to identify the factors influencing the adoption and development of e-Government initiatives and to illustrate how those factors impacted on a council's electronic service delivery strategies.

This study began in 2002 and involved the researcher working with staff in a council (identified as OzCouncil) for over two years with an intensive period of six months, observing and interviewing council staff as they developed and implemented OzCouncil's latest web site in March 2003. Further interviews were conducted in 2004 after the launch of the most current web site. A strength of this interactive research methodology is that prolonged engagement in the natural setting allows the researcher to observe and record processes that would be difficult to observe by the use of other methods (Leedy, 1997). Apart from observing the process OzCouncil undertook in its moves to web development and electronic service delivery, fourteen interviews were conducted with a range of OzCouncil staff such as area and service managers, IT and Web staff, councillors and associated OzCouncil support staff. The in-depth interviews were conducted over a two-year period and were

typically 45 minutes to an hour in length and explored the council's decision-making process, its web development strategy and implementation issues. Documents were collected and collated, while detailed observations were made both of formal and informal meetings and other settings. Analysis was undertaken using a detailed meta-matrix (Miles & Huberman, 1994).

The majority of the research was done in that venue although at least two interviews with staff from two other councils were undertaken to identify similarities and differences between the councils. Each of the councils chosen for the case study research were at various stages of e-Government implementation and represented different demographic parts of Victoria.

OzCouncil is located on the fringe of Melbourne. It is classified as an *interface* council because most of the population is concentrated in a number of large suburbs but the council must also service a sparsely populated rural constituency. Historically the community has a strong commitment to environmental protection, arts and local history and is actively involved in council governance. The council serves 20,600 households, has an annual income of $35 million, but only one full time Web developer/IT/business analyst, and a full-time Communications manager. Some IT staff are working on separate web-based projects such as GIS systems. Although comparatively small it has had made significant progress in its e-Government strategy. Since its first introduction in 1999 the council has not only changed the format and content of its site but on two occasions it has completely replaced the old web page.

The other two councils used for comparison are identified as RuralCouncil and MetroCouncil. RuralCouncil is a small rural municipal council located in the Victorian Mallee district. It has a basic static but dated web page. There is no IT support at the council and an Environmental Engineer works approximately 4 hours per week on web related support. Both the CEO and the Environmental Engineer are responsible for electronic service delivery and they were interviewed in this case. MetroCouncil is a metropolitan council that covers a number of affluent inner suburban areas of Melbourne. It has five Web/IT support staff incorporating business analysts, web editor, editor in the Communications section. The council has had a web page for several years and it uses a content management package and payment software. The CIO and web editor were interviewed in this case.

5 ANALYSIS

5.1 Content Analysis of Council Web sites

The Content Analysis was undertaken three times on the Web sites of the same Councils. A summary of the findings of the early research conducted in 2001 (Shackleton, 2002) together with the most recent analysis is summarised in Table 1.

Although, information and services were grouped in key areas as identified by Quirk (2000), many local council services have multiple roles. As an example, while community information may inform a resident of local activities, it also helps in the engagement of the community with the council. This is particularly the case with e-Democracy and e-Decision Making compared to e-Services which is easier to define and thus measure. Nevertheless, as the purpose of the context matrix was to show overall maturity in broad functional areas, individual services have been grouped under headings as outlined in Table 1. In this research, e-Decision Making and e-Democracy were grouped together as the information available on a council web page assists the user and both could be regarded as decision making relating to democratic processes.

Strengthening links with citizens is a core element in good governance (OECD, 2001). The Internet enables local governments to better inform communities, to build trust and strengthen the democratic process (OECD, 2001). Part of that process is improving access to and the quality of information, seeking consultation and actively encouraging community participation. While many measures of e-

Democracy are qualitative in nature, there is an increased amount of governance-related information in the form of council details and information relating to council decision making on council Web sites. Internet based service delivery grew rapidly until 2003 with growth slowing since then. Most of the growth as indicated in Table 1, has been in providing email contact details, postings related to community information and providing details of available services.

Category & Feature	**Present (%)**		
	2001	2003	2004
eService			
Service details	90%	95%	100%
News and coming events	25%	100%	100%
FAQs	25%	25%	25%
Direct Email support	0%	5%	25%
Novel e-Services (interactive maps, lost dogs)	0%	20%	25%
Service Tracking	0%	55%	55%
eCommerce			
On-line payments (Rates)	23%	90%	95%
On-line payments (Other – pet registration, fines)	0%	5%	55%
Ordering facility (Downloadable Forms direct ordering, prepared forms)	5%	70%	100%
Email payment/ordering	5%	15%	20%
e-Decision Making/e-Democracy			
Council Information	95%	100%	100%
Community information	20%	100%	100%
Email address (for contact with the Council)	95%	100%	100%
Council decision making – minutes, strategic plans	20%	95%	100%
Links to other organizations/businesses	65%	95%	95%
Community Groups/Bulletin boards/Chat Room/Broadcasting	0%	5%	5%

Table 1: Summary of main characteristics by category in 2001 to 2004

E-Commerce is the area in which there has been the greatest growth over the last four years, however there is substantial variation between Councils and the figures are deceptive. Whilst all but one council is providing an e-Commerce facility for the payment of rates, there is great variation on what can be paid online and how. Four Councils have their own electronic payment systems while the rest use an external link to another provider. Three of these four Councils had provision for a number of accounts to be paid online, the fourth only allowed for the payment of rates and parking fines. The council with the most comprehensive payment options included, pet registrations, fines, child care costs, meals on wheels, other payments relating to aged care uses a link to an external electronic provider. Seven (35%) Councils only had provision for the payment of rates and all of these Councils were using an external provider for electronic payments. Six councils (30%) allowed two payments; online rates and usually animal registration. .

The most variation, however, comes when we examine the e-Service category. This category included what could be regarded as the more creative uses of the technology for the delivery of services with some councils using the web to provide services such as tracking of building permits and other more novel uses. Some examples of these are: interactive maps which allow the user to drill down and find a specific street or building, pictures of dogs held at the pound searchable on breed, electronic feedback forms and opinion polls, tracking of services and in one case video streaming of council meetings. There was however no correlation between the level of e-Commerce activity and the provision of other electronic services. For example one council offers a very sophisticated map

function and searchable photographs of lost dogs however the same council only offers online payment options for rates and pet registration through a link to a third party payment provider. Another council with their own e-system provides for the payment of a variety of accounts online however offers no other electronic services.

To understand the reasons for these differences a large ethnographic-based case study of a council, with two smaller case studies, were undertaken.

5.2 Case Study Analysis

Table 1 suggests a somewhat ad hoc approach to the use of the web by local government to deliver services, provide information and gain community views. The following section details the results of the case study illustrating the impact of the pressures on local government web development and electronic service delivery.

The analysis found three broad areas impacting on electronic service delivery and governance, higher-level government policies, other external factors and municipal council internal e-Government initiatives.

Higher-Level Government Priorities

The case study revealed high levels of adoption of new forms of managerial efficiency and accountability in government by local government employees. Coupled with this general trend were e-Government priorities from the State and Commonwealth governments that had municipal councils reacting to what they referred to as *new programs*. The combined result was a mixture of pressures that had municipal councils attempting to achieve improved forms of government, such as better service delivery that matched the needs of constituents, but at the same time restricted by costs, knowledge and resources. The case study revealed that the e-Government incentive programs often forced upon them by the controlling State government, enabled some councils to mature their electronic service delivery but they often had to forgo another good initiative to take advantage of the offer. Moreover, councils appear to have a discontinuous approach to e-Government maturity by immersing themselves in a series of self-contained *new programs* often when funds become available. The result of this somewhat unplanned approach is a skewing of e-Government services towards mandated programs and a widening of the gap between services offered electronic by individual councils.

The Victorian Local government Online Service Delivery Project, as an example, provided funds to enable rural councils to implement specific identified initiatives. Expert assistance was provided to all councils but funding support was only available to rural councils. Ironically while this was designed to move rural councils forward with respect to electronic service delivery, metropolitan councils often gained more advantage because of their ability to implement programs. In the case study, despite the lure of $10,000 for a content management system the rural council, RuralCouncil, was unable to integrate the system given resourcing problems. MetroCouncil, which was not eligible for funding, used the expert assistance which was available to them under the project to implement a different web content management system to support the implementation of a new web page in January, 2003.

Another example mentioned by councils was SPEAR, a State government program to consolidate and provide uniformity in the management of land titles including GIS. This program requires the co-operation and involvement of local government. The initiative was seen by all of the case study councils as important but again its implementation is only feasible with extensive resources. MetroCouncil had sufficient resources to purchase and implement a system, OzCouncil gained a grant to pilot a system while the rural council was unable to implement a system.

Councils are often forced to make decisions between the implementation of fundamental e-Services which is illustrated in this quote from one interviewee:

If people can pay rates over the phone then I don't see a lot of merit of pushing payment of the rates over the web. It is an easy solution for them – the quality of the transaction from the consumer point of view is no better over the web than it is over the phone. Compare that to something like [building] plans then the quality of the transaction over the phone is far inferior compared to looking at it over the web.

It is about tailoring the limited resources to get the maximum improvement in services. If you are getting a 5% improvement in putting resources into transactional stuff then I see that as marginal. Getting a 50% improvement somewhere else I see that as substantial and that is where I think resources should go ahead.

By 2004 many more municipal councils had mature e-Commerce functions mainly for the payment of rates but also for other charges such as dog licences and parking fines. Expensive back-end systems are required to support electronic payments and councils often lack both the money and expertise to implement and support these systems. This is clearly evident in the range of e-Service and e-Commerce implementations amongst councils. Some councils provide electronic payment of all charges including rates, while other councils at the other end of the spectrum opt for rate payments with a third party.

Other External Influences

Councils are directly accountable to their readily identifiable communities and the case studies revealed the explicit and implicit influence of communities on e-Government maturity. Specifically, the community impacts in two broad areas; in e-Decision Making and e-Democracy by the need to provide increased transparency and access to information, and perceived community pressure from within the councils to *catch up* with other state and semi-government authorities by providing better e-Services.

The outcome of this community pressure was for council administrations to skew their response towards what it felt would satisfy the community at that time. In many cases, councils do not have the funds to develop back-end systems to provide better electronic service delivery, despite the obvious advantages, and chose instead to expand into areas of governance and democracy. It is important to appreciate that this not only relates to available funds but, as revealed in interviews with staff and councillors, to a belief amongst councils that the community view e-Government as an opportunity to provide greater transparency. Thus this takes a higher priority over enhanced services, is the key driver of e-Democracy, and accounts for the emphasis on this area as revealed in the content analysis.

Where an enhanced electronic service is provided it is often in response to a community need or criticism. As an example, OzCouncil was criticized for having a low level of web-based service delivery in an article in July, 2001 in one of the large syndicated papers. Although there was no evidence to suggest extensive community pressure for electronic service delivery in any of the three councils in the case study, there was a perception that the metropolitan councils needed to have more than just a basic static web site.

Another influence on municipal councils was the state-wide council association, the Municipal Association of Victoria (MAV), of which all councils are members. The association is seen as the voice of councils on general issues and lobbies the State and Commonwealth government. The MAV was seen as applying pressure to move lagging councils towards mature sites with enhanced services. 'Lighthouse' examples of progressive councils were often flagged by the association for others to follow. The interviews exposed the insecurity of councils who were often envious of more progressive councils, and they frequently offered excuses why they had not or could not replicate that progress in their own council. Asked why they had not progressed as rapidly as similar councils in recent times the CIO at MetroCouncil stated:

We are about average and that is where our management here would probably prefer us to be. They don't want us to be leading edge because they don't want it to be seen that we are pouring

money into fancy toys for the community. So I think they are comfortable for us to be middle of the road.

Importantly, community influence can also act as a barrier to e-Government maturity. In RuralCouncil e-Government is viewed as a low priority amongst all of the key stakeholders; the council, council staff and the community where even basic services are difficult to provide. This resistance to implement electronic service delivery is despite the extensive computer usage within the community to support functions such as crop and animal management. Council services are seen as being accessible via phone queries and visits to the main town.

Internal Initiatives

The case study interviews reveal that it is often internal factors such as the push from staff or councillors for more flexible delivery that accelerates the process of e-Government. In part this would account for the slow transition to the web by some councils initially and the acceleration in e-Service and e-Commerce in recent years as revealed by the Content Analysis. All of the three councils experienced some of this change in the early stages where an enthusiastic staff member championed the need for web-based service delivery and developed an initial static web page. Moving on, however, from this initial stage has often been more difficult.

At OzCouncil, the Communications Branch developed their *second* stage web page that contained a large amount of rich but static information but was well organized and functionally easy to access and download. The interviews with staff reveal that they did not have a sense of ownership of the page but saw it as the domain of one area, the Communications Branch. The restrictive updating routines quickly dated the static information. A parallel project involved an innovative web site developed for the By Laws division was also an example of an initiative by one staff member. The difference in this case from earlier iterations within OzCouncil is that it had the support of the innovative division manager and it quickly became an achievable benchmark for the rest of the council

The IT manager at OzCouncil then engaged staff in discussion of e-Government issues, involved other divisions in new programs but more importantly he was committed to using technology to support and then change business processes. His work encouraged council staff in a range of divisions to question existing service delivery processes and look to electronic service delivery as a way of improving everyday business. Council staff were starting to question the type of material on the existing web page and the need to deliver genuine services. A staff member observed:

We need to go beyond the governance side and concentrate more on services. As a ratepayer I want to go to a web page and find out what services they can provide. Through the technology it gives me the opportunity to seek out the right people and it has confidentiality.

The metropolitan council, MetroCouncil appears to be similar although without the same level of success. Recognising the problems getting divisions to input into the web page, they eventually implemented content management software and established 30 content editors from divisions within the council.

While the content management system was supported and made available to the RuralCouncil in the case study by the VLGOSD, it did not bring about significantly improved electronic service delivery. In part, this is explained by the lack of internal support for such an initiative and available resources.

6 DISCUSSION AND FUTURE RESEARCH

Local government has until recently been a most reluctant entrant into the world of e-Government. A comparison of web sites over a four year period indicates a major improvement in the level of local e-Government in part due to the financial resources and expertise available under specific programs, and the needs for better services by the community. A comparative examination of 20 representative local council web sites found that electronic maturity occurred between 2001 and 2004 in a number of key

areas including: service tracking, online ordering and payment, provision of information relevant to the local community. Future research is needed not only to track the maturity of local government electronic services but also to identify the changes to the nature of those services. Research into the types of services that are important to councils at various stages would also provide some understanding of council priorities at various stages of maturity.

The case study presented in this paper helps to explain the shifts and further illustrate why more improvement has not yet occurred. The research revealed that many municipal councils often have little discretionary funding particularly for e-Government. Limited funds are targeted for specific projects and any alteration to funding priorities must be justified to the community. In this environment, local governments are highly reliant on tagged external funding from State and Commonwealth grants and projects, and there will often be an expansion in local e-Government maturity even when only limited funds are available.

In addition, the research found that local communities have brought e-Government to the fore for some municipal councils. This pressure incorporates both what is perceived by council staff about community expectations and real where limited evaluations have been done. In poorer rural councils the community has electronic service delivery low on the list of projects competing for scarce funds while most metropolitan councils have made decisions themselves to support more than just a basic web site.

The use of content management packages in local government, many of which were financed under the VLGOSD project appear to have had a major impact on the development local government web pages and ongoing maintenance. Future research examining how these packages have impacted on the maturity of local e-Government would be highly beneficial.

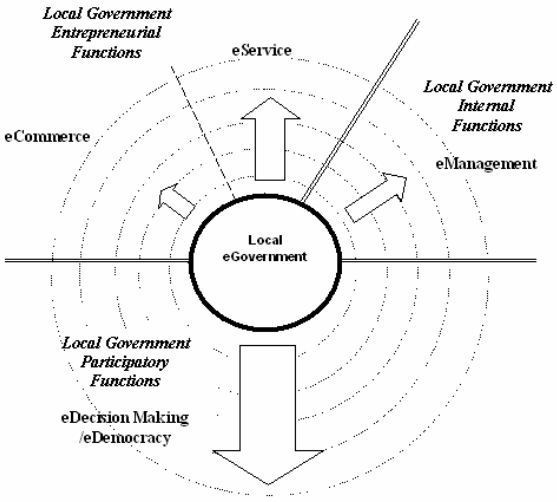

Figure 4 Local e-Government Maturity Model

The research found that although the web sites of Victorian municipal councils have improved overall in recent years, they still have a heavy focus on governance issues. This suggests that that e-Government maturity within local e-Government is not undertaken across all areas in linear fashion but at different rates in different areas. Figure 4 outlines a model of local e-Government maturity that depicts three broad functional areas of local government activity: Entrepreneurial, Participatory and Internal functions.

With respect to e-Government maturity, local governments are more suited to and place emphasis on participatory functions and their e-Government implementations reflect this policy emphasis.

Entrepreneurial and internal functions, e-Service, e-Commerce and e-Management respectively, are also supported by councils although funding restrictions and a lack of expertise often restricts maturity in this area or places it lower in priority.

7 CONCLUSION

This paper reported on the progress local governments in Victoria, have made towards e-Government. The paper outlined the types of services provided by local government and their strong community links. In Victoria municipal councils need to be more transparent and accountable and they are under pressure to continually improve the quality of services while reducing costs and fees to residents. While the availability of external funds and other forms of expertise have assisted municipal councils on their path to e-Government, many external factors and internal initiatives have influenced the extent and direction of their e-Government implementations. Local councils have improved e-Service and e-Commerce in recent years in varying degrees. Strong links to the community is a central tenet of local government, and the research found that municipal council staff place great emphasis on governance issues through web delivery in preference to electronic service delivery. Even at more mature levels of e-Government, municipal councils appear to emphasize governance issues looking for new ways to deliver information such as web casting. This paper has presented a model that addresses these issues with respect to the different emphases that councils appear to be placing on these functions and their contexts in the overall development of local e-Government. Future research is needed to identify the extent to which local government is influenced by community factors and the degree and direction which electronic service delivery is affected by this pressure.

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