Challenges of eGovernment Project Implementation in a South African Context

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Abstract: The growing adoption of eGovernment by countries worldwide is a testimony to its role as an effective tool for public service delivery. In South Africa, it has been adopted as one of the cornerstones of the government's strategy for making services accessible to its citizens. Consequently, various national, provincial and local government eGovernment initiatives have been implemented. The Western Cape provincial initiative is, to date, one of the flagships. The province is home to numerous government sanctioned projects at varying degrees of completion. The purpose of this exploratory research was to identify some of the factors which inhibit the successful implementation of eGovernment in the Western Cape, South Africa. Using analysis techniques derived from Grounded Theory Methodology, we show that leadership, project fragmentation, perceived value of Information Technology, citizen inclusion and task co-ordination are among the key inhibitors of eGovernment success in the Western Cape Province. The relationships between the constraints to successful eGovernment implementation are also elucidated. We also point to further areas of study that can illuminate the key concerns within eGovernment discourse.

1. Introduction

The establishment of an increasingly pervasive internet, facilitated through a number of disruptive technologies, has created a new landscape in which private and public sector organisations must operate. In this new landscape, knowledge constitutes the most important factor, while learning, which emerges through cooperation, together with increased reliability and trust, is the most important process (Lundvall & Johnson 1994). EGovernment has emerged as the means by which governments, and hence the public sector, can participate in the new knowledge landscape for improved service delivery.

EGovernment is the use of Information and Communication Technology (ICT) to transform government by making it more accessible, effective and accountable (Farelo & Morris 2006). In South Africa, ICT has been adopted as a cornerstone of *Batho Pele* (people first), a government framework for equal access to effective public service delivery (Government Gazette 2002). In the South African context, ICT initiatives are seen as key in the drive to alleviate poverty and effects of social exclusion (Moodley 2005). Since 1994, the South African government has been focusing on the concept of an information society with the aim of investigating how it can act as a modernising catalyst in transforming the South African society and economy through the use of ICT (Bellamy & Taylor 1998).

The overall objective of this study is to inductively discover the core issues that affect the successful implementation of eGovernment projects in a South African context using the Western Cape as a case study. The specific questions answered by the research are therefore:

- What are the dominant factors inhibiting eGovernment implementation in the Western Cape province?

- What are the relationships between the key factors affecting eGovernment implementation?

- How can the key concerns of eGovernment implementation be resolved?

By addressing the above questions we also, through this research, will recommend possible avenues to pursue in order to increase success rates of eGovernment projects in developing countries. Heeks and Bailur (2007:251) espouse that "a whole range of evidence and insights on eGovernment [is] yet undiscovered......because of the absence of interpretivist or critical work" This study was partly a response to the call for eGovernment research to build its own knowledge about the phenomenon and not borrow from reference disciplines (Heeks & Bailur 2007). It is especially relevant for South Africa where such studies have proven to be scarce, with the predominant research outlets demonstrating a proliferation of developed country perspectives (Heeks & Bailur 2007).

The selection of the Western Cape as a case for this study was largely informed by the standard of eGovernment implementation in the province. The province has won notable accolades because of the multiplicity, success and vision of its eGovernment initiatives (Vosloo & Van Belle 2005). Furthermore, other provinces have indicated the intention to replicate strategies and initiatives adopted by the Western Cape provincial government (Vosloo & Chigona 2010). It can therefore be hoped that the lessons learnt from this study can be have an impact on the implementations which will be based on Western Cape initiatives. The approach chosen for this study was the use of techniques from Grounded Theory Methodology (GTM) (Glaser & Strauss 1967). The aim of the research was the generation of concepts that fitted the phenomenon and were relevant, not only to the particular context, but which could be further developed into a substantive theory. Grounded theory was hence the ideal candidate as it aids in the emergence of transcendental categories about a phenomenon of concern (Glaser & Strauss 1967). It also enables researchers to construct relationships between the core concerns, which are systematic and cannot be addressed in isolation.

2. eGovernment

2.1 Overview

Ndou (2004) argues that some of the adopted eGovernment definitions are too narrow, which results in inadequate interpretations of its objectives. EGovernment represents a paradigm shift for governments from traditional models to more service-based models which view citizens as customers (Ndou 2004). Facilitated by the internet, eGovernment offers a host of transformation capabilities ranging from radically shrinking communications and information costs, maximizing speed, broadening reach, to eradicating distance (Jaeger & Thompson 2003). The full extent of the benefits of eGovernment remains an open ended question. Frameworks like that by Gupta and Jana (2003) which assess eGovernment's tangible and intangible benefits have been developed. With these issues taken into account, a systematic definition of eGovernment is adopted in this study. Ndou (2004) identifies transformatory capabilities within the internal, external and interrelationship domains, the actors, and the application domain as the elements that encompass eGovernment. This view departs from previous constrained definitions of eGovernment and is therefore chosen for this study.

Perspectives on the core requirements for successful implementation of eGovernment differ throughout literature. Borins (2002) asserts that eGovernment relies on the use of Information Technology (IT), implying the ability to use the appropriate technology is key. Stanforth (2007) argues that its implementation is dependent on the network of actors involved and is inherently a political process as opposed to it being a technology process. Ciborra (2005) argues that developing nations are not ready for eGovernment and it would only benefit privileged sections of society. This notion is supported by a study by Wheeler (2003) based on attempts to build an information society in Egypt which revealed the attempts only benefited the well-off. These examples highlight a design-reality gap in eGovernment projects as espoused by Heeks (2002, 2003) and Dada (2006).

2.2 Challenges of eGovernment in developing countries

EGovernment implementations in developing countries are generally more problematic in comparison to those in the developed nations. This is exemplified by a study by Ndou (2004); the study conducted an empirical, web-based research of 15 case studies in developing countries (Argentina, Brazil, Chile, China, Colombia, Guatemala, India, Jamaica, Philippines) which had explored and implemented eGovernment initiatives. The study found that eGovernment offers opportunities for governments; however, the ability of developing countries to reap the full benefits of eGovernment is limited and is largely hampered by the existence of a myriad of political, social and economic hindrances.

Cogburn and Adeya (1999: vi) posit that the key challenges to ICT implementation in Africa broadly consist of "(1) the development of information and communications infrastructure; (2) human resources development and employment creation; (3) the current African position in the world economy; and (4) insufficient legal and regulatory frameworks and government strategy". Bhuiyan (2009) echoes these sentiments, even going as far as adding corruption as an added challenge; especially where the developing country's political landscape is characterised by a political elite who influence the direction of ICT initiatives. Van Dijk and Hacker (2003) identify access problems as part of the complexity of the digital divide. Access problems constitute mental access, skills access, material access and usage access (Fuchs & Horak 2008, Van Dijk & Hacker 2003). Other scholars espouse that the technological determinism in most ICT implementations is perhaps the key challenge (Wilson 2003). ICT's in the developing world are often naively adopted without sufficient consideration of the social, cultural and historical context in which implementation occurs (Braa, Monteiro & Sahay 2004). Kitaw (2006) goes on to add literacy levels to the list of challenges, stating that low literacy levels hinder the types of media available for eGovernment implementations. Overall, there appears to be no consensus in literature on what the main challenges are in developing countries though it can be argued that the challenges facing governments are contextual. The challenges facing eGovernment can hence be broadly categorised into Social issues, Economic issues and Technological issues (Signore, Chesi, Pallotti 2005), which rightly encompasses all the challenges highlighted in literature. The ensuing section will look at eGovernment implementation in South Africa.

2.3 eGovernment in South Africa

EGovernment in Africa, has been promoted by developed nations as a hypothetical remedy for poverty related problems (Ochara 2008). Based on the fundamental human right to have access to information, the South African constitution places an obligation on the State to provide wide access to government information (CapeGateway 2009). In response to this obligation, the government, in partnership with private organisations, has launched numerous ICT initiatives in the country (Moodley 2005). Amongst the ICT initiatives are: Cape Gateway Project, Cape Information Technology Initiative (CITI), Tele-centres in rural areas in South Africa, SchoolNet South Africa Project, Mindset Network Organisation and the Khanya Project (Riordon 2009; Evoh 2007). The South African government has established statutory bodies to co-ordinate implementation of eGovernment projects. Amongst these are the State Information Systems Agency (SITA) and Government Information Technology Officers Council (GITO Council). SITA is responsible for the acquisition, installation, implementation and maintenance of IT in the public sector. On the other hand the GITO Council, which consists of national and provincial IT officers, is responsible for consolidating and coordinating IT initiatives in government, including eGovernment, to facilitate service delivery Regulatory frameworks have also been developed to direct the implementation of eGovernment initiatives. The white papers on Transforming Public Service Delivery (WPTPSD), Promotion of Access to Information Act, Electronic Communication and Transaction Act, Electronic Government Policy Framework, Minimum Information Security Standards (MISS), Minimum Interoperability Standards (MIOB) and Policy on Free and Open Software (FOSS) are noteworthy. Collectively, the frameworks promote transparency, accountability, good governance, information security, and freedom in the acquisition and use of IT. Given this extraordinary attention paid to eGovernment, it becomes essential to establish the situation in practice as opposed to that espoused.

3. Grounded theory

Grounded Theory Methodology (GTM) is a transcendental theory generating methodology founded by Glaser and Strauss (1967). GTM "has the purpose of generating concepts and their relationships that explain, account for and interpret the variation in a substantive area under study" (Glaser 1992: 19). Since its formulation, the methodology has undergone a metamorphosis into multiple streams due to differing interpretations of its canons (Eisenhardt 1989; Strauss & Corbin 1990; Glaser 1992; Baskerville & Pries-Heje 1999). The predominant methodological stances have been characterised as Glaserian and Straussian (Duchscher & Morgan 2004). Aside from these interpretations, there is a growing awareness to the utility of GTM analytical methods in Qualitative Data Analysis (QDA) for Information Systems research (Matavire & Brown 2008). This is seen in the proliferation of studies in the disciplines top publications utilising the coding techniques (Alvarez 2008; Levina, & Vaast 2008; Ren, Kiesler & Fussell 2008). The coding techniques espoused in the Glaserian formulation of the methodology are open coding, selective coding and theoretical coding while axial coding is espoused in the Straussian interpretation (Glaser & Strauss 1967; Strauss & Corbin 1990). Open Coding is the process whereby data is run open by analysing every single line and generating *in vivo* or conceptual codes (Glaser 1978). Selective coding is a process of delimiting conceptual codes generated in the

previous step to those that are significantly related to the core category (Glaser & Strauss 1967; Glaser 1978). Axial coding is whereby the generated categories are related to subcategories (Strauss & Corbin 1990). Theoretical coding views axial coding as a single class of codes which cannot sufficiently explain or describe phenomenon (Glaser 1992).

4. Research approach

The study adopted the Glaserian analytic techniques of open, selective and theoretical coding as part of a general QDA study. Hence GTM was used from an analytic perspective and not as a theory generating methodology.

4.1 Epistemology

While some authors may ascribe an epistemological paradigm to grounded theory, Fitzgerald and Howcroft (1998) demonstrate the differences in epistemology, axiology, ontology and methodology. Therefore, despite using grounded theory methodology analytic techniques, researchers are not necessarily restricted into any particular epistemic stance. The underlying epistemology chosen was interpretive since we were investigating the co-constructed views and opinions of individuals on eGovernment initiatives in the Western Cape, South Africa. Klein and Myers (1999) seven principles of interpretive research were used as the interpretive guidelines for this research.

4.2 Sampling

Qualitative research demands that excellent informants be sought out (Morse 2007). The sampling approach adopted for this study can hence be aligned with purposeful sampling, based on the fact that literature reviewing had been done *a priori*. Respondents hence were chosen based on their direct involvement in eGovernment initiatives around the Western Cape Province. Members from four government offices were interviewed with a total of nine informants participating in the interviews. The participating offices comprised two provincial offices, one local office and one office servicing both local and provincial government thereby having national scope. The positions held within the different offices were diverse therefore the properties of emergent concepts could be established (Glaser & Strauss 1967). The profiles of the respondents are presented in Table 1.

Table 1: Generalised profile of the respondents

Respondent	Department Type	Position	Project Domain
1	Provincial	Senior Executive	Health Information Systems
2	National	Management	National Information Technology Resources Coordination and Consolidation
3	National	Management	National Information Technology Resources Coordination and Consolidation
4	Provincial	Policy, Strategy and Planning	Online Government to Citizen Information Exchange
5	Provincial	Technical	Online Government to Citizen Information Exchange
6	Provincial	Technical	Online Government to Citizen Information Exchange
7	Provincial	Management	Provincial eGovernment Project Coordination
8	Provincial	Management	Provincial eGovernment Project Coordination
9	Local	Technical	EGovernment Initiative Research

4.3 Data collection and analysis

Data was predominantly collected via semi-structured interviews. Interview questions were derived from literature and experience while theoretical sensitivity (Glaser 1978) guided us in diverting from

the prompt sheet; thus ensuring salient concepts were captured in the transcripts. The themes pursued in questioning were governmental influence, culture, project status, legislation, and private sector involvement.

Initially, open coding was used to generate a set of categories, *in vivo* or otherwise. Constant comparative analysis was iteratively used to compare similar incidents within the data thereby illuminating the properties and, sometimes, relationships between categories. As relationships emerged, memos where created and also analysed as secondary data. Though the aim of the research was conceptual description and not theory generation, memoing proved important in the analysis (Glaser 1978).

Selective coding was then used to delimit codes to those related to the main categories. The canons of GTM were not strictly adhered to as codes were delimited around our core focus, 'problems affecting eGovernment'. After the core issues had been identified, their relationships were established through, both, the opening of new memos and the consolidation of older ones, a process usually termed theoretical coding.

5. Findings

As illustrated in Figure 1, leadership, perceived IT value, citizen inclusion, task conflict and project fragmentation were found to be key in inhibiting eGovernment initiatives. While no core category was sought out, the key relationships and concept properties are highlighted in the diagram. The model represents the most dominant factors which need to be addressed. A discussion of the categories follows in the proceeding sections.
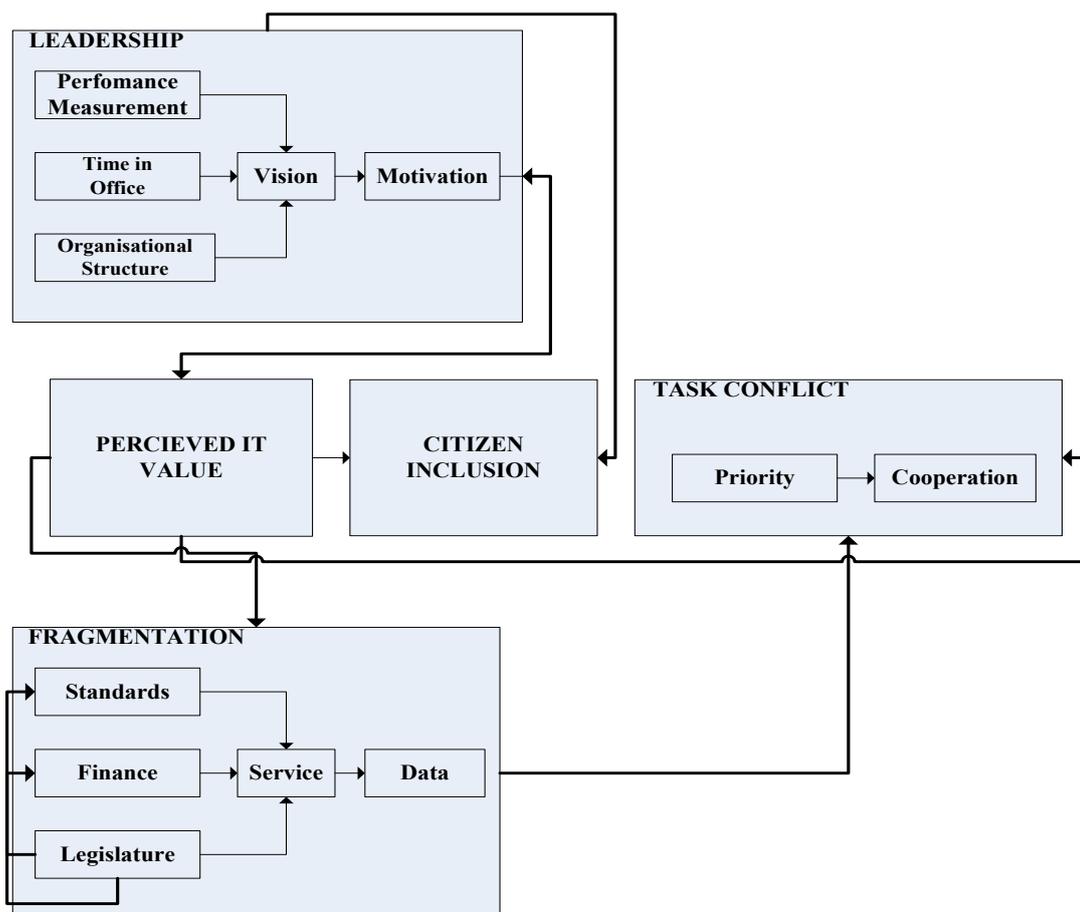
Figure 1: Concerns affecting the implementation of eGovernment in the Western Cape

5.1 Challenges in leadership

Leadership was noted as a pertinent concern of the respondents. Numerous dimensions of leadership emerged from the data, among them being leadership structure, success measures, continuity and sustained interest.

5.1.1 Leadership structure

Government departments are traditionally hierarchical which creates numerous layers of abstraction between the implementers of technology and the leaders of the organisations. Our findings show that the abstraction desensitises the leaders from the key concerns of those on the ground. A Respondent described the situation as follows:

> *"some leaders at the top management and government level ...seem to have lost touch with the eGovernment needs on the ground".*

The weakest chain in communicating the needs upwards, or addressing requirements downwards has a significant bearing on eGovernment initiative success.

5.1.2 Government performance measurement system for departmental heads

From the data it was evident that the performance indicators of the South African government officers are not conducive to the implementation of extensive IT projects. A head of department in the South African civil service is measured "*on specific things for that specific year*". This system of performance measurement is not ideal for projects with implementations which may extend beyond a single financial year. Another performance indicator for departmental heads is the ability to spend the allocated budget within the fiscal year; officers who fail to spend their allocated budgets are perceived as less productive. Consequently, officers tend to shy away from "*project[s] [which appear to] take forever*" and may not therefore allow them to spend their allocated funds. In cases where departments embark on such projects, the projects tend to fail due to lack of financial commitment. To mitigate this problem, there is need for the government to rework its performance assessment models taking into account long-term projects; a system which allows risks to be incorporated into the key performance indicators for leadership would be ideal..

5.1.3 Continuity of leadership

In some cases it was noted that continuity of project leadership had a bearing on the performance of an eGovernment project. The value of specific eGovernment projects varies from leader to leader depending on their perceptions. So lack of continuity in leadership can effectively lead to the failure of projects. When a leader with a vision and passion for a specific project leaves, there is often a risk that the replacement may not have a similar attitude towards the project. Further, the new leader would have to contend with a multitude of legislation and other information in order to proceed with assigned eGovernment initiatives. This hurdle on its own can cause the stagnation of projects, especially when relating to measures of success alluded to earlier.

5.1.4 Sustained interest

The evidence showed that even initially motivated leaders suffered from a diminishing level of interest in eGovernment initiatives. This is perhaps typical in bureaucratic organisations but is directly at odds with IT project essentials. Project importance diminishes over time as leaders are bogged down by bureaucracy thereby stifling their initial impetus in projects.

5.2 Fragmentation of projects

Our findings show that some projects were fragmented along numerous lines e.g. financial, service and legislative lines. The fragmentation had a negative impact on the success rate of eGovernment implementations. A respondent stated that there are a "*few initiatives happening (sic) but they are fairly isolated*". According to the respondents, the fragmentation leads to duplication of effort and poor resource management because of limited interchangeability in roles and services. The private sector continues to rake in profits as they are "*happy to sell the same service to ... .different municipalities*".

5.2.1 Financial systems fragmentation

Responding to a question on sustainability of eGovernment projects, a respondent stated that "*funding is very fragmented*". Sponsorship for eGovernment projects is channelled at different rates in differing locations and from different sponsors. The respondents also noted that projects which span over a single department were often hampered by differences in the financial processes and priorities of the affected departments. Key performance measures within departments also emerged as contributing to the fragmentation of financial resources in projects that required inter-departmental collaboration. Funding would be awarded to projects that enable departments to "*perform*" and differences across departments in terms of priority would increase financial fragmentation.

5.2.2 Service fragmentation

Duplication of similar services across different departments was highlighted as a key problem in eGovernment implementation. A respondent noted that:

> "*Co-ordination is missing or in the wrong place. There is duplication taking place. If they synergised a bit they would get a lot more back from the buck.*"

Evidentially, this is predominantly caused by a limited flow of information across the implementation barriers, be it departmental or regional. The flow of information is limited through bureaucratic delays resulting in messages reaching their destination after an expiry of their value. Services are also fragmented along implementation time-lines, a view supported by Janssen and Wagenaar (2007). Jansenn and Klievink (2010) also attribute fragmentation to the high level of dependencies across essential services which are the focus of eGovernment initiatives. Fragmentation in service leads to data duplication and parallel efforts which in the long term creates a more challenging task in the integration of eGovernment systems. There was, evidentially, limited alignment of standards across departments.

5.2.3 Legislative fragmentation

Legislative and regulatory frameworks are important to establishing appropriate infrastructure and ensuring secure access of eGovernment services to the citizens. The frameworks present an additional barrier to eGovernment implementation where they do not provide a cohesive platform for initiatives to operate. A European Commission report (2003) laments that "The reality of today is the emergence of 'islands' of government that are frequently unable to interoperate due to fragmentation resulting from uncoordinated efforts at all levels of public administration". Implementers of eGovernment initiatives have to take unique legislation within and among departments and tiers of government into consideration while ensuring collaboration among tiers of government. It emerged that while provincial ICT implementations were governed by one act, local implementations were governed by another. The differences extended to even the definition of eGovernment. A respondent stated that there is "*lots of legislation, lots of it*". Contending with the various aspects of legislation in implementing eGovernment projects is thus difficult in the project planning stage and leads to a ballooning of the initial requirements and in some cases, leads to failure. As alluded to by one respondent: "*it is a challenge keeping up-to-date with all the legislation*". The generic eGovernment methodologies used do not account for the different legislative issues that emerge as the projects proceed. A new public service act has been created to overcome this concern. Perhaps a new study will assess its impact on addressing the raised concerns.

5.3 Appreciation of perceived IT value

Though it is typically assumed that it is the society at large that is mostly unaware of the value of IT, it was evident from the data that in some cases the providers of the services are unaware of the potential or primary benefits of eGovernment. IT was either perceived as a cost or a tool as a respondent stated:

> "*What further complicates the eGovernment strategy is not seeing IT as delivering value to the community. The value of a house which is a basic need for the poor and then compared to IT*"

The sentiment was that the staffing needs of IT initiatives are sidelined for departments providing the more basic services required in the Western Cape such as housing and public works. This is a direct result of IT being considered as a support service as opposed to a strategic value adding function.

This in turn leads to a limitation of funds awarded to eGovernment initiatives within departments which could cause their failure.

5.4 Citizen inclusion

From the data it appears that the hierarchical structures of the government are not compatible with the social inclusivity which the eGovernment channels seek to afford the citizens. While channels for citizens to voice their socially constructed eGovernment needs existed, hierarchical structures seem incapable of being sensitive to those needs. According to the respondents, community involvement is usually undertaken at the service delivery stage. One respondent mentioned that

> *"[service providers] tend to think that the delivery of the service is important, but the communicating about it, how to do it....is probably more important"*

Citizen-to-government interactions are mired with complexity. Sarmad and Hamid (2009) noted, in their development of an eGovernment evaluation framework, that developing countries suffer from poor citizen utilisation. The lack of utilisation stems from little inclusion of the populous in the implementation and thus not capturing their true needs in the eGovernment implementations, as well as inadequate marketing around the benefits. A respondent highlighted this through an example of an eGovernment project hosted in a school laboratory at which public access was denied during learning hours and evenings. This effectively rendered the initiative to be of no value to the community. Though this could be a case of citizen exclusion in logistical issues, it is indeed a symptom of wider exclusion of citizens in eGovernment implementation.

5.5 Tasking scheduling conflict

Although task scheduling and attendance is closely coupled with the observed project fragmentation, properties within it made for its separate consideration.

5.5.1 Task priority

With some of the respondents as members of a national agency mandated to handle the interfacing requirements of eGovernment across departments and constituencies, various issues emerged regarding task priority. A responded stated that:

> *"In fact I just had a meeting in the street, where one of the departments is doing something around job creation. But where they should actually be concentrating on is the backend system, the portal and making information available"*

Task priority is a constantly negotiated subject between government and citizens, government and the private sector, and internally within government itself. On the one hand, there are the proponents of the primacy of infrastructure development over information management while others believe information management takes precedence. Focus on one over the other, in these dichotomy debates, severely limits eGovernment. Timing and coordination would help identify what takes precedence at any stage of implementation. Different respondents expressed different opinions of the perceived value addition that the organisations get from IT. These perceptions also affect the priority and focus awarded to IT projects that support the eGovernment process.

5.5.2 Task cooperation

Issues of task priority arise in cooperation and various other properties and categories feed into this concept, hence its separate consideration. A factor that emerged in the data analysis concerns the turfing tendencies of inter-departmental project participants. Individual resistance, justifiable or not, hampers cooperation as information does not flow efficiently across the barriers. As project ownership issues become blurred, resistance is encountered in their implementation and accountability issues arise in cases of failure. At a very high level it is difficult to see who is accountable in the eGovernment project, who continues with it and who updates the information on portals?

6. Discussion

A number of relationships were identified between the categories that emerged from the analysis. An intensive systems-thinking approach is therefore required to alter the course of eGovernment implementations. Focusing on the relationships and improving them creates the potential for positive

results in addressing the challenges faced by government departments involved in eGovernment initiatives.

6.1 The role of leadership in eGovernment implementation

EGovernment requires strong political leadership in order to succeed (Infodev, 2002). The overarching importance of leadership in eGovernment implementation came out strongly in our data and was significantly related to the other categories. Bureaucratic, hierarchical leadership approaches might be efficient in dealing with most government concerns; however, the approach is not appropriate for eGovernment implementation. Further, the concept of sustaining project vision in leadership came out strongly in the analysis. While some leaders may be motivated in the initial project stages, the enthusiasm wanes over the project time-line. It is key to ensure leaders understand the long-term value of eGovernment projects to enable a sustained enthusiasm. The belief in net personal benefit could in essence enhance the leader's ability to actively engage in the projects as motivated visionaries.

Information Technology insensitive performance measures were observed in government departments. Key performance indicators that place primacy on cost and expenditure per period are extremely damaging to the success in eGovernment projects. Cost is indeed an issue in IT projects; however methodologies for calculating this risk differ from the conventional projects that are task-oriented.

Committed leadership can ensure the ongoing commitment of resources across all sectors. Leadership can be seen to guarantee the requisite stakeholder buy-in, secure resources, articulate a unifying vision for eGovernment implementation (Infodev, 2002) and above all facilitate continuity in eGovernment initiatives over time. The effects of leadership in eGovernment projects have far reaching consequences beyond those which have been stated here and would indeed require a separate study for more rigorous consideration.

6.2 Fragmentation of eGovernment projects

Significant progress has been made to ensure eGovernment projects are synchronised, the establishment of institutions specifically mandated to ensure the coordination of ICT projects across different departments is a positive step. However, from our findings it may be concluded that much more still needs to occur to improve the success rates. The fragmentation culminated into parallel duplicated efforts which increase project costs; an untenable issue in resource-constrained developing nations. There is need to revisit frameworks for information flow across departmental boundaries to ensure the increased visibility of the possible areas of cooperation. Furthermore, by altering the measures of success across departments in eGovernment projects, from finance based ones, the extent of fragmentation due to financial resource allocation, financial priorities and standards could be greatly reduced. General primary objectives and definitions should be ascertained at a national level, with the observable extent of generality decreasing through the provincial and local government levels.

Stakeholder collaboration could be critical in dealing with the problem of fragmentation. Fragmentation is likely to occur where there is no coordination of tasks across stakeholder boundaries. A review of eGovernment regulations is required to ensure there is collaboration, and hence coordination, between the tiers of government. A respondent suggested a "compulsory cross-government forum to ensure [a] cohesive approach to eGovernment." This can indeed ensure continued priority negotiations and foster better communication across boundaries for better service delivery. However, a systematic approach is crucial in addressing the challenges faced in eGovernment. At best such a forum can be the information hub facilitating eGovernment while at worst it could be an additional cog in a dysfunctional machine. The challenge of project fragmentation is inherent in decentralised organisation systems. The establishment of institutions mandated to coordinate eGovernment projects is meant to mitigate this problem. The findings show that despite the efforts a significant level of fragmentation persists. There is need therefore for the government to reconceptualise how it deals with decentralisation and ICT projects in the public service.

6.3 Stakeholder engagement

The findings that (1) some stakeholders had a distorted perception of the value of eGovernment projects; (2) citizens were not meaningfully consulted and (3) the tasks were not properly coordinated could point to the problem of stakeholder engagement in eGovernment implementation. For the

success and sustained interests of the department leadership on eGovernment projects, there is need to meaningfully engage with the various stakeholders (i.e. those who impact and those affected by the projects). The stakeholders need to understand not only the benefits but also the nature of eGovernment projects. It is important to ensure that eGovernment initiatives are understood as minimally disruptive technologies whose purpose is not to be used but rather to be useful to both the implementers and end-users. This understanding of eGovernment should start with an informed leadership and be allowed to filter down to the citizens. The understanding should shift from the project-requirements perspective to a citizen needs perspective and this would ensure longer-term initiative support from the citizens who have a stake in the initiatives.

Engagement with citizens is particularly problematic. In the case of Government to Citizen (G2C) initiatives, the role and value of citizens is often misunderstood. The citizen is often viewed as an agent who is cultured into the structure, which is the eGovernment system, to use and not to change it. The goal of G2C eGovernment is for the initiatives to be useful to the citizens and to add value to the responsible departments in the long-term. To ensure the sustainability of the systems, it is therefore important to allow the citizens to directly contribute to eGovernment over time, based on their own views of the requirements. It is therefore important to continually negotiate the meaning of success in eGovernment projects between the implementers and the users. Our findings show that the citizens were often consulted at the end of the project. This is similar to Chigona et al (2010) when they note that citizen consultation for eGovernment projects can be reduced to a token process serving to legitimise the process other than solicit input.

7. Conclusion

This study has shown that leadership, project fragmentation, and stakeholder engagement are some of the main factors that affect the implementation of eGovernment projects at a provincial level in the South African context. The distinct jurisdiction of tiers of government in respect of service delivery has resulted in excessive legislation, complex and rigid organisational structure and uncoordinated strategies and initiatives which hinder the implementation of eGovernment and, therefore, service delivery. Among other things, the findings of this study highlight the need for further research focusing on eGovernment projects at a regional level in a decentralised context. Notwithstanding the challenges, the policy and regulatory framework in South Africa has created an enabling environment for eGovernment success. The legislation on security and interoperability promotes eGovernment while the institution of statutory bodies and clusters has enhanced coordination between national and provincial endeavours. Furthermore, the deregulation of the telecommunications market is envisaged to improve accessibility and reduce cost. Working with community structures has also contributed significantly to the success of eGovernment initiatives, yet much still remains to be done to enhance cooperation. Numerous questions arose during the analysis of the data which could be the subject of further work. How can a hierarchical structure such as government implement a social system without affecting community beliefs? Furthermore, how can an ontological clash between eGovernment and society be overcome? Perhaps these can be investigated in the continuing discourse in Information Systems. We believe that these could very well be the fundamental issues for consideration if eGovernment initiatives are to succeed in the developing world.

Acknowledgements

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