

Moving towards e-government: a case study of organisational change processes

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Abstract

Looks at an online strategy project at Legal Aid in Western Australia. Begins with an overview of e-government and the Western Australian Government context, and then discusses the research model and methodology. Gives a background to the case and analyses the change management process against a comprehensive model of business process change. Concludes with some lessons learned and future directions for research in this area.

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Introduction

The Internet has become an important medium for organisations required to interact with a wide range of stakeholders. It has the potential to market products and services, communicate information to a global community, provide an electronic forum for communications and, process business transactions (Fink and Laupase, 2000). A totally new environment is emerging where companies must work together to create online networks of customers, suppliers and value-added processes (Ticoll *et al.*, 1998). Government, however, with few exceptions, have arrived late on the scene. Nevertheless the drive is now on for radical government change and the re-invention of government has been accelerated by the move towards online services (Sprecher, 2000).

The Web has the potential to increase dramatically the government's level of quality service by making the current paper-driven or counter-based services more convenient and accessible to citizens and businesses. Because directives largely drive government with priorities set by its leaders, e-government presents an outstanding opportunity to react to citizen and business demands by offering new methods of service delivery to meet these new expectations. For governments, the Internet is a cost-effective medium for the provision of information and, increasingly, services (Luling, 2001).

As with e-business, e-government requires major business process change and this paper examines this process in the context of an e-government initiative utilising the Internet to provide extended services. The study looks at an online strategy project at Legal Aid in Western Australia (WA). This paper begins with an overview of e-government and the WA government context, and then discusses the research model and methodology. It gives a background to the case and analyses the change management process against a comprehensive model of business process change (Guha *et al.*, 1997). The paper concludes with some lessons learned and future directions for research in this area.

E-government

Much has been written about the information revolution and its effects on modern society,



economics, and government. Reschenthaler and Thompson (1996) view the increasing use of IT in government as the latest in a series of great transformations that have refashioned government. E-government could be defined as governments' efforts to provide citizens with the information and services they need, using a range of information and communication technologies. Luling (2001) defines e-government as "online government services, that is, any interaction one might have with any government body or agency, using the Internet or the World Wide Web". Ultimately, e-government is about our relationships with our civic institutions and the foundation of our next-generation communities. It is about extending the social contract to provide better services to all citizens and businesses. E-government is not just about putting existing forms and services online. It provides the opportunity to rethink how the government provides services and how it links them in a way that is tailored to users' needs. The government must abandon the "build it and they will use it" approach that permeates much of its online thinking. Government must develop a far more sophisticated view of the people it is there to serve and devolve real power to regions and localities as an integral part of its approach to e-government and provide more freedom of information (Kearns, 2001).

E-government has four guiding principles:

- (1) Build services around increasing choice for the citizen.
- (2) Make government and its services more accessible.
- (3) Ensure social inclusion.
- (4) Use information better (McCartney, 2000).

In their book, *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector*, Osborne and Gaebler (1992) developed the idea that the traditional bureaucratic model of government was no longer functional. The primary goal is to make government work better. They propose a citizen-as-customer approach to reform, which advocates a departure from the traditional, bureaucrat-centred model and a move to establish a closer interaction between government employees and citizens they serve. Public servants now speak about stakeholders, customers and clients of government agencies, and about performance indicators, business plans and vision

statements (Tupper, 2001). These principles have been embedded into the Western Australian e-Government strategy.

Western Australian Government background

Western Australia (WA) is an extremely large and isolated state of Australia which covers 2.5 million km² and spans 2,400km from north to south. Many country towns are extremely remote from centralised services with limited access to current communications technology. The Western Australian Government services its clients through the establishment of 23 government departments that deliver services direct to clients, provide policy advice to the government and implement government policy on behalf of the government. Many of the government departments have a central office based in Perth and a number of small satellite offices located in strategic country towns. Given these circumstances, it is essential that information systems are developed to enable effective access to both information and electronic communications.

To deliver public services better, particularly to regional centres, the WA Government have developed an online strategy. The major aim of this strategy is to develop a "technology-enriched community" where:

- technology is used to its full advantage to enrich the lives of its citizens;
- the "digital divide" is replaced with "digital inclusion";
- children are skilled to take charge of the future and reap its benefits;
- daily life is made easier by the way that the citizen interacts with their environment;
- the benefits of technology flow to all members of the community and are available for all to utilise if they so desire;
- communities embrace technology to improve their ability to interact and to communicate.

The overall strategy is one where WA becomes a centre for e-commerce expertise and locally developed innovations lead the next wave of technological and scientific advances; government is integrated and coordinated across all agencies and only interacts with the citizen as a single entity in

the manner and in the form that the citizen wants; and technology is fully utilised to aid government to business interaction and to build, operate and integrate the transaction points (WA Government, 2001). This ambitious strategy is one which can only be implemented through radical change.

Change model

In the 1990s many organisations undertook major business process change (BPC) initiatives with varying degrees of success. Analysing this process Guha *et al.* (1997) used a model which proposed various antecedents to successful BPC. The general thesis of their framework is that any significant business process change requires a strategic initiative where top managers act as leaders in defining and communicating a vision of change (Kalakota *et al.*, 1999). The organisational environment, with a ready culture, a willingness to share knowledge, balanced network relationships, and a capacity to learn, should facilitate the implementation of prescribed process management and change management practices. Process and change management practices, along with the change environment, contribute to better business processes and help in securing improved quality of work life, both of which are requisite for customer success and, ultimately, in achieving measurable and sustainable competitive performance gains (Kumar and Crook, 1999). The same model in Figure 1 guides this study in identifying

facilitators and inhibitors of successful e-government change.

Based on this work each component of the framework is described below as it is applied to the subsequent case analysis.

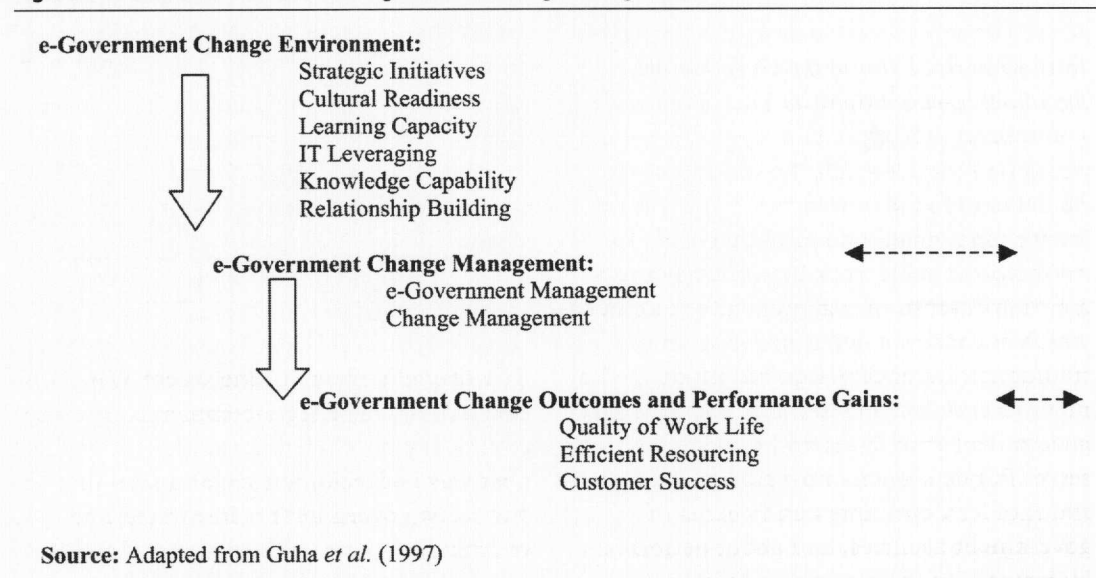
Strategic initiatives

Process change typically begins with strategic initiatives such as envisioning, commitment, and enabling from the senior management team (Kotter, 1995). Initiatives can be forced on the organisation through mandate (autocratic) or pushed through consensus within the structure of the organisation (bureaucratic) (Shrivastava, 1994). Champions may emerge to keep the project momentum going and to enthuse other members of the organisation to come on board. Any project that involves change should develop a specific plan of action and include a strategy to motivate the organisation toward achievement of the goals. The key constructs that can be probed are: stimuli (proactive versus reactive), formulation scope (incremental versus revolutionary), decision making (autocratic, bureaucratic, champion emergence), and whether the change process is strategy-led (onset, eventually, none).

Learning capacity

A major goal of learning is to provide positive outcomes through effective adaptation to environmental changes and improved efficiency in the process of learning (Guha *et al.*, 1997). Increased efficiency in learning has been a primary focus of industrial economists who posit the notion of “learning by doing”

Figure 1 A theoretical framework of e-government change management



(Arrow, 1962) and accumulation of knowledge through cross-functional interfaces (Adler, 1990). Declarative knowledge (i.e. bodies of organized information) facilitates learning in a collective fashion (Corsini, 1987). External information scanning can enhance the knowledge required to ensure success of the project. Learning organisations are characterized by the ability to adapt and improve, to build internal and external knowledge, and to achieve higher levels of learning that may be critical to successful BPC. The key constructs are: adaptation (response to technology change, learning from others), improved efficiency (learning by doing), declarative knowledge (R&D resources and technology development, knowledge base, focus on core competencies) and external information use.

Cultural readiness

Organisation culture is best understood in terms of cultural beliefs, values, and norms (Schein, 1990). Beliefs shape interpretations of information, while value systems relate behaviors across units and levels of the organisation (Guha *et al.*, 1997). Values often exhibit a propensity to resist change because of their shared nature (Fitzgerald, 1988). Norms that promote change include risk taking, openness, shared vision, respect and trust, high expectation for action, and a focus on quality, whilst norms that discourage change include risk avoidance, ambivalence, group think, and excessive competition (Saffold, 1988). Cultural readiness can be enabled by leadership or change agents, characterised by open communication, and can define the risk-taking propensity in the firm. The key constructs are: change agents and leadership, risk aversion (cautious, aggressive), and extent of open communications.

IT leverageability and knowledge-sharing capability

Davenport (1993) explains IT's process impacts in terms of organisation streamlining/simplification, capturing and distributing information, coordination, monitoring, analysis and decision making. The role of IT can be described in terms of the technological, organisational, and emergent imperatives depending on the extent to which IT is the dominant factor (Markus and Robey, 1988). IT can play a varied role, and

its communications infrastructure and the extent of knowledge sharing can create an environment that assists with ensuring the success of the project. The key constructs are: IT role (enabling, sociotechnical, dominant factor) and use of communications technology.

Network relationships balancing

Prahalad and Ramaswamy (2000) suggest that organisations need to "create their future by harnessing competence in an enhanced network that includes customers". Many companies already focus on core value-adding processes, working with external partners jointly to bring forward a service. These companies believe that a more flexible organisation built around a series of alliances and business relationships is the most effective way to respond quickly and creatively to constantly changing market conditions (Miles and Snow, 1995).

Equally important are the creation of more flexible patterns of working, a greater empowerment of the workforce and the customer, the displacement of hierarchy by teamwork, the development of a greater sense of collective responsibility and the creation of more collaborative relationships among co-workers and customers (Burn and Barnett, 2000). Organisations must recognise the need to manage both internal and external forces to effect change. The key constructs are: interorganisational linkages and cross-functional cooperation (cooperative, competitive).

Change management practice

Change management involves effectively balancing forces in favour of a change over forces of resistance (Teng *et al.*, 1996). It is often done in a phased manner, but the tactics used could vary depending on the scope of change required. The key constructs are: pattern of change, management's readiness to change (committed, participative, resistant), scope of change (improvement, radical change), managed change (alleviation of dissatisfaction; a vision for change; and a well-managed process of change, evolutionary or revolutionary change tactics use).

Process management practice

Process management has been defined as a set of concepts and practices aimed at better stewardship of business processes

(Davenport, 1995). It combines methodological approaches with human resource management (Anderson *et al.*, 1994). Critical is the notion of process measurement and going beyond typical financial indicators to effectively collecting process information and metrics (Davenport and Beers, 1995). Further, improved feedback and auditing of the process, by tying it back to corporate objectives, are critical to achieving organisational effectiveness (Teng *et al.*, 1994).

Process management can supplement traditional sociotechnical perspectives by including quantitative process goals such as output, productivity, costs, and profit measures. The key constructs are: process measurement (use of process metrics, process information capture, improvement feedback loop, audit), use of tools and techniques, and use of team-based structures.

Outcomes and performance gains

Davenport (1993) suggests that performance should be measured in terms of quality, cycle time, costs, and ultimately customer satisfaction. These can be benchmarked against expectations and actual performance. Successful BPC can be characterised by process outcomes that exceed expectations, including customer satisfaction. The key constructs: gaps between effectiveness expectations (goals) and actual performance improvements and employee satisfaction.

Research methodology

An embedded case-study analysis was chosen. Embedded implies the use of multiple units of analysis: the Legal Aid Department, the Online Strategy team, and the Online Strategy project users. Data-collection methods included a semi-structured case protocol, multiple documents and archival records, and individual personal interviews. Such triangulation reduces bias and is recommended in case research (Yin, 1989). Literature regarding the Online Strategy project was studied prior to and after the interviews. This included an overview of the project, documents compiled by the team, systems plans, and notes compiled by the team. This approach provided richness and depth and enhanced the construct validity of the study. Interviews provided the major

source for primary data. Other sources included public information such as the Web site, annual reports, the organisation's business plan and the information plan.

The focal point for contact was a senior-level manager in the organisation who was directly responsible and integrally involved with the project from beginning to end. Respondents with the following profiles were sought out and interviewed:

- Senior management, process champion, and project team leader (to discuss strategy and process implementation, corporate culture, learning and effectiveness);
- Functional associates (to discuss culture and change process and expectation gaps).

The interviewees were either sponsors of the project or major team members who had a good, objective, and knowledgeable view of the project. Each interview was taped with the permission of the respondents. The nature and objective of the study were first explained to the respondent(s), who were also informed up front about expectations of involvement and the duration of the interview, as well as being reassured about issues of confidentiality.

Each interview was conducted by using a standard case study protocol to ensure reliability (Yin, 1989). The protocol was based on the BPC management model described earlier and contained major constructs and probes. "How?" and "why?" questions were raised in an open-ended fashion. Responses were solicited in a semistructured manner. Given the exploratory nature of the research, explanation building and pattern matching were used to provide evidence of links between constructs.

The case studied Legal Aid Western Australia – a state government organisation with the responsibility to ensure that citizens without the financial means are provided with legal advice and representation when required. Owing to the funding for legal aid being capped, it cannot finance all requests for legal representation and is currently reviewing how it can better provide advice to enable some clients to represent themselves in court or to assist clients with filing the appropriate documents with the courts. It sees its online strategy as a major part of

reducing its costs and extending its reach for providing legal assistance. It is a centralised organisation with numerous geographically separated branches. The organisation deals with criminal, family and civil law and runs a legal practice division as a separate legal firm that must apply for legal aid for its clients in the same way as private practitioners must do.

Research findings

This section covers each construct of the research model with summarised findings. The tables in each subsection summarise interpretation of the data gathered for each construct.

Stimuli

Legal Aid was strategically proactive and wanted to change the way they approached their business. During a process of looking at why they existed they discovered that they were not meeting client demand for legal assistance and started to look at alternate ways to providing legal assistance to the clients. As one respondent put it, “the organisation wanted to look for new ways to connect people with information assistance to progress legal action.” They saw the initiation of an online strategy as a mechanism to progress this and to meet demand better.

An interesting finding is that the project was initiated by a local functional team who gained the support of one of the senior executives, who would be considered second in charge within the organisation, from the beginning. This led to the executive looking at why they existed and during this process they identified the two project objectives:

- (1) To set the agency up for a concentrated effort to bring online access to legal knowledge resources to the forefront of service planning.
- (2) To address legal liability issues associated with the agency’s first Web site.

The senior executive became the major sponsor and undertook a hands-on role within the project from the beginning. This resulted in a high level of corporate-wide buy-in and greatly impacted on the success of the project. This is inline with Guha *et al.*’s (1997) observation that, to be successful, a project aimed at changing the performance of the firm cannot be led by IT alone and that IT innovations must be backed by a sense of

urgency in other business functions in the organisation (see Table I).

Formulation scope

Legal Aid formulated and maintained a strategy of revolutionary change from the start and remained with this strategy throughout. The idea was to completely develop the online strategy and to launch it as a whole rather than take the incremental approach. This decision was based on the objective of providing rich content on the Web while guarding against legal liability by failing to provide total content from the start. As a respondent put it, “richer veins of content were required that targeted support providers and to provide total legal content to assist community-based legal organisations” (see Table I).

Decision making

A local functional team started the effort with assistance from a senior executive who elevated it to the corporate level, and eventually received a bureaucratic consensus to proceed as a corporate-level initiative. The senior executive spearheaded the project. Having a senior executive as a champion was seen as an extremely positive influence and helped to ensure the success of the project. Guha *et al.* (1997) indicates the emergence of a champion is considered critical to the success of a business process change project (see Table I).

Table I Summary of strategic initiative results

Construct	Evidence
<i>Stimuli</i>	
Proactive	
Reactive	Proactive
<i>Formulation scope</i>	
Incremental	
Revolutionary	Revolutionary
<i>Decision making</i>	
Autocratic	
Bureaucratic	Bureaucratic →
Champion emergence	Champion emergence
<i>Strategy-led</i>	
Onset	
Eventually	
No	Onset

Strategy-led

The project was led by strategy from the top down and began by reviewing why the organisation exists. The fact that Legal Aid made the effort part of its strategic goals at the onset was cited by interviewees as a major facilitator of success (see Table I).

Adaptation

The “response to technology change” played a role in the initial IT-focused effort.

Respondents indicated that benchmarking (learning from others) did not play a role in the project but indicated that they mainly reviewed other legal organisations’ Web sites to assist with the design of their Web site but did not look for best of class vendors or look for how other organisations had implemented an online strategy (see Table II).

Improved efficiency

There was a tendency to improve learning efficiency through “learning by doing”. The respondents indicated that the project would have been enhanced and progressed more quickly, had more reflective techniques been applied, and some of the problems encountered later might have been avoided (see Table II).

Declarative knowledge

From the onset Legal Aid understood the value of developing a cumulative knowledge base. Respondents indicated that a critical success factor was involving all sections of the

organisation and building up a knowledge base around the core competencies within the organisation. There was a clear pattern of efforts to enrich the knowledge base for the purpose of better understanding the business and the client requirements. As a result, the project was able to tap into this knowledge base to develop a product that crosses all boundaries of the organisation (see Table II).

External information use

An interesting point that came through was that the respondents saw little value in the use of external information to enhance learning capacity. Minimal effort was put into scanning the environment for new developments and opportunities. There was no process put in place to survey clients or enable clients to have input into the project (see Table II).

Change agents and leadership

While a team approach was taken to the project and the involvement of representatives from all sections of the organisation was seen as a critical success factor, the respondents indicated that the senior executive who took ownership of the project had a major influence and without this sponsorship the project may not have been as successful. As Mintzberg and Westley (1992) suggest, a “visionary leader” is a single leader who influences change and this helped develop the momentum for change (see Table III).

Risk aversion

As a legal organisation it is extremely risk-averse. The organisation was very reluctant to implement on an incremental basis for fear of legal liability. The preference was to fully cover all bases within the organisation, scrutinise every component and then go for the “big bang” approach. The team achieved consensus by involving all sections of the organisation and by identifying an information officer for each section (see Table III)

Table II Summary of learning capacity results

Construct	Evidence
<i>Adaptation</i>	
Response to technology change	Response to technology change
Learning from others	
<i>Improved efficiency</i>	
Learning by doing	Insufficient learning by doing
<i>Declarative knowledge</i>	
R&D resources and technology developed	
Knowledge base	Knowledge base
Focus on core competencies	Focus on core competencies
<i>External information base</i>	
Boundary spanners	None
Technology gatekeepers	
Customers	

Table III Summary of cultural readiness results

Construct	Evidence
<i>Change agents and leadership</i>	Senior executive champion
<i>Risk aversion</i>	
Cautious	Cautious
Aggressor	
<i>Open communications</i>	Medium



Open communications

Throughout the project open meetings were held with all staff encouraged to attend and all documents associated with the project were made available through the computer network. However, it was indicated that the sessions were more of an information-giving nature than enabling staff to provide input into the project. The senior executive "champion" indicated that, if the project was to be repeated, then he would prefer to run more workshop-oriented sessions where staff could actively identify issues and participate in the project (see Table III).

The project team consisted of cross-functional members who openly discussed the process tasks and identified areas for improvement. There was very little attempt to communicate to the clients. Community Legal Councils were used late in the project to test the Web site that was developed from the online strategy. While the organisation clearly encouraged open communications and kept all staff informed throughout the project, an inhibiting factor was one of time and conflicting priorities. Some of the middle managers did not see the project as a priority which was communicated to the staff within these sections and at times this impeded the progress of the project.

IT role and extent of knowledge sharing

Respondents all indicated a need to adopt a sociotechnical design approach. They indicated that if it had been seen as a purely IT project then it would have failed. The IT section were seen very much as providing a support role to the project and heavy reliance was placed on the IT section to provide expert advice on the underlying technology requirements however, the major focus of the project team was on the non-technical information area. This can be seen through the make-up of the main team members who consisted of a senior executive, librarian and staff with legal content knowledge (see Table IV).

Use of communications technology

Communications technology was seen as a major IT enabler. The use of e-mail provided better cross-divisional communications. Also the very nature of the project demands a high use of communication technology (see Table IV).

Table IV Summary of IT leverageability and knowledge-sharing capability results

Construct	Evidence
<i>IT role</i>	
Enabling	Enabling
Sociotechnical	Sociotechnical
Dominant factor	Support
<i>Use of communications technology</i>	
	High

Interorganisational linkages

There was no evidence of interorganisational process linkages. However, the organisation did indicate that the next phase of the project was to look seriously at e-business initiatives. In particular Legal Aid intends to implement a system to provide private practitioners with the ability to lodge applications for aid electronically. Associated with electronic lodgement is providing private practitioners with the ability to self-assess applications and for the form to be validated as it is being filled in. All respondents indicated that there was a requirement to look more closely at interorganisational linkages and to place more emphasis on involving external stakeholders. The indication was that this would have assisted in meeting the project objectives and may have improved the final outcome (see Table V).

Cross-functional cooperation

Respondents indicated high levels of cooperation among the cross-functional members of the team. There was also an indication that cooperation between functions also existed. However, there were several pockets of resistance by functional managers during the project. This was based more on competing priorities and the sections not seeing the project as their core business or primary priority (see Table V).

Pattern of change

There was no formality in their process of change. There was evidence that the project team had thought about change management

Table V Summary of network relationship results

Construct	Evidence
<i>Interorganisational linkages</i>	
	None
<i>Cross-functional cooperation</i>	
Cooperative	Cooperative
Competitive	Competitive

from the outset and loosely applied change management techniques. In particular they put in place a communication plan to ensure that all staff were kept informed throughout and provided with some opportunities to participate (see Table VI).

Management's readiness to change

Senior management was very supportive of the project, which included participative support from senior management. The senior manager who was part of the team indicated that the senior management totally endorsed the project from an early stage, provided credibility to the project and actively provided resources. As indicated at middle management level, there was initial reluctance to be involved in the project. This resistance was overcome through the senior executive processes (see Table VI).

Scope of change

The organisation did not envisage radical change to business process, but saw it as a mechanism to complement their current mechanisms of doing business and a way of extending its service to clients as well as providing legal information to citizens it does not consider clients (see Table VI).

Managed change

The organisation did not see the project as requiring extensive change management processes. The feeling was that the change

was more about providing additional information than changing business processes and therefore little needed to be done in the area of change management, in particular in the area of alleviating staff anxieties. There was little indication that steps were taken to remove employee dissatisfaction. Senior management did provide a vision for change, but employees were generally excluded from participating in the process design (see Table VI).

Process measurement and tools and techniques

Legal Aid has little experience in process management. The project paid very little attention to this area. There was a lack of process metrics and process information capture for the business process (see Table VII).

Team basis

Cross-functional teams were used extensively. Respondents indicated that this was considered vital to the project. In particular the indication was that this was essential to ensure that all areas of the department were covered or catered for as well as ensuring that the project was not derailed by a business unit asserting a negative influence (see Table VII).

To date no formal or informal assessment procedures have been implemented to evaluate the project and the success of the online strategy. The organisation has appointed a team responsible for establishing performance indicators and an evaluation strategy for the project. Legal Aid expected to see gains in customer satisfaction and expectations for service quality increase, particularly in providing more extensive legal information and self-access to community legal centres and individual citizens.

Table VI Summary of change management results

Construct	Evidence
<i>Pattern of change</i>	
No formal process	No formal process
Semiformal process	
Formal phased process	
<i>Management's readiness to change</i>	
Committed	Committed
Participative	Participative
Resistant	
<i>Scope of change</i>	
Improvement	Improvement
Radical	
<i>Managed change</i>	
Alleviate employee dissatisfaction	Yes
Vision for change	Yes
Well-managed process of change	Semiformal
Evolutionary/revolutionary change	Evolutionary

Table VII Summary of process management results

Construct	Evidence
<i>Process measurement</i>	None
<i>Use of process metrics</i>	
<i>Process</i>	
<i>Information capture</i>	
<i>Improvement</i>	
<i>Feedback loop</i>	
<i>Audit</i>	
<i>Tools and technique</i>	Low
<i>Team-based</i>	Yes

All respondents indicated that the project had achieved the two objectives that it set out to achieve, these being:

- (1) To set the agency up for a concentrated effort to bring online access to legal knowledge resources to the forefront of service planning.
- (2) To address legal liability issues associated with the agency's first Web site,

although the respondents did indicate that further work or more concentrated effort in the areas of interorganisational linkages, communication and change management would have potentially improved the final outcomes (see Table VIII).

Lessons learned

Overall the case study demonstrated that the online strategy project undertaken by Legal Aid Western Australia was successful in achieving what it set out to achieve. While a single case study does not allow for generalising about the results, the indication is that the project success directly correlates with the number of positive facilitators. The major facilitators of success were identified as the need for a project champion, the need for senior executive support and a requirement to involve all sections of the organisation. While the study found a requirement for the involvement of the IT section particularly in providing technical expertise, the respondents all indicated that it would not have been appropriate to have the IT section as the driver of the project.

All respondents indicated one negative was experienced in ensuring functional units made the project a priority and felt that concentrating more on change management issues and establishing different ways of communicating would have improved the process. In particular it was mentioned that workshop style sessions would have been more effective than forums that simply imparted information. The indication was that there was also a requirement to develop strategies to involve external stakeholders and

clients to assist in all processes within the project.

Conclusion

While this is a single case study and there are no comparative results, the study does appear to indicate that the Guha *et al.* (1997) model does provide an appropriate analysis tool for e-government projects. In addition, this research indicates that certain constructs in the model had more impact on the outcome of the project than others. Several important themes emerged which could have implications for both research and practice in the e-government area:

- There was a strategic "stimulus" that triggered undertaking the business process change. The stimulus itself was not necessarily a determinant of success.
- Incremental process change did work but appeared to be appropriate due to the organisation being risk-averse.
- The establishment of a cross-functional team assisted in ensuring success. The changes needed to be implemented without barriers from functional managers.
- An important ingredient in the right cultural mix for a successful project is leadership from the top, together with an atmosphere of open communication and participation.
- IT playing a supportive but not always commanding role. Balanced consideration of the social, technical, and business value elements should be maintained throughout the project.
- To quell likely pockets of resistance, an organisation's "vision" for change must be embraced throughout all levels of the organisation, especially by those functional and middle-level managers affected by the process change. To achieve this requires continuous articulation and communication of the value of reporting results and how each individual is contributing and accountable to the overall company's change effort.

The model provided a good structure for the case study and further research into other similar case studies should assist in determining if the model is effective in

Table VIII Summary of outcomes and performance results

Construct	Evidence
Process performance improvements	Not measured
Quality of work life improvements	Not measured
Overall results	Met objectives

analysing e-government projects and enable the continued refinement of the model. Further research may provide insight into which situational conditions best predict the strength that particular facilitators or inhibitors will lend to e-government projects' success.

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