Critical issues pertaining to the planning and implementation of E-Government initiatives

Wade R. Rose, Gerald G. Grant *

Carleton University

A R T I C L E   I N F O
Available online 8 October 2009

Keywords:
E-Government
Program management
Constituent relationship management
E-government planning
E-government implementation

A B S T R A C T
E-Government initiatives of varying scope and complexity have been implemented at the municipal and other levels of government throughout the world. These projects have been chronicled in both academic and practitioner journals and the proceedings of various E-Government conferences. As a consequence of this growing body of data, it is now possible to look across the experiences of numerous governments to understand if there are common issues that may impact the probability of success of E-Government programs. This paper examines the literature to search for critical planning and implementation issues that have had significant effects upon the success of E-Government initiatives. A conceptual framework is proposed which contributes to the theoretical understanding of E-Government initiative planning and implementation, and may inform practitioner success with new E-Government initiatives.

© 2009 Elsevier Inc. All rights reserved.

1. Introduction

Since the late 1990s, municipal, provincial/state, and federal governments around the world have been implementing E-Government initiatives (Torres, Pina, & Acerete, 2005). While there has been an increasing level of political and financial commitment (Grant & Chau, 2005), these initiatives are extremely varied with respect to scope, performance, and sophistication (Kaylor, Deshazo, & Eck, 2001; Torres et al., 2005; West, 2001; Wimmer, 2006). For example, as of 2003, some European cities with populations over 500,000 had yet to offer even basic E-Government services, while other cities were providing up to 67 e-services (Torres et al., 2005). E-Government capabilities can vary from the provision of simple information via a website, to the ability to conduct financial transactions, and finally to the provision of a level of e-democracy such as e-voting or policy development participation (Holden, Norris, & Fletcher, 2003). However, few E-Government portals have ventured into the e-democracy realm (CCEG, 2002; Torres et al., 2005).

As the scope of E-Government capabilities has grown and the concept has evolved, the definition of E-Government has evolved with it. E-Government is no longer viewed as the simple provision of information or services via the internet but as a way of transforming how citizens interact with government and how government interacts with itself (Jackson & Curthoys, 2001; Löfstedt, 2007). It is also viewed as a way to transform and improve the political, economic, and social relationship that citizens and government can have with one another (Torres et al., 2005), thereby impacting the socioeconomic fabric of society (Martin & Byrne, 2003). For example, E-Government allows interaction without the limitations of time and space that office hours and municipal buildings impose (Danielsson & Danielsson, 2005), resulting in 24/7/365 access to, and potential e-democratic involvement with, government (Hutton, 2003). Given the ongoing evolution of E-Government, the definition used in this paper takes a very broad approach. As defined by the Organization for Economic Cooperation and Development (OECD) in 2003, E-Government is "the use of ICTs [information and communications technology], and particularly the internet, as a tool to achieve better government" (OECD, 2003).

The implications of E-Government growth and evolution have not always been obvious, and unintended consequences, often from unfulfilled expectations, have resulted (Jorgensen & Cable, 2002). This should not be surprising given that E-Government initiatives can put thousands of citizens and businesses in direct contact with civil servants in a very dispersed authority environment. Over the past decade, as more people shopped, banked, or did their professional work online, they expected to be able to take similar actions with correspondingly fast response times in an E-Government environment. This has resulted in very high commercial-level expectations falling upon government structures that are often ill-equipped to handle them (Curtin, Sommer, & Vis-Sommer, 2003). In the municipal context, cities are usually an amalgamation of many unrelated “businesses” (e.g., police, planning, garbage collection, snow clearance, etc.) and it has become clear that simply putting these traditional government structures online does not meet citizens’ expectations (Gronlund, 2002).

On a more positive note, lessons have been learned from the planning and implementation of numerous E-Government initiatives all over the world. Scholars and practitioners have collected lessons...
learned through case studies, surveys, and post-implementation audits, which, if applied to future E-Government initiatives, may increase the potential for their success. This paper presents the results of a review of the literature that identifies the critical issues which must be addressed during the planning and implementation of these initiatives. The E-Government implementation programs reviewed in the literature include cities, counties, and nations throughout Europe, the United States, Canada, and Asia. While the programs vary dramatically in size and scope, and no simple replicable solution is available, the initiatives yield a set of critical issues which, if considered in the context of the specific new initiative, may increase the probability of success.

This paper will present a conceptual framework which structures critical E-Government planning and implementation issues in a coherent and useable format. Each component of the framework houses a group of critical issues which will be discussed in turn. The paper concludes with comments on the potential use of the framework in new E-Government initiatives.

1.1. Research method

This research is based on a survey of papers that focus on E-Government implementation and were published in scholarly journals or refereed conference proceedings, as well as several post-implementation reports produced by public sector institutions. Published scholarly journal articles were identified through searches of pertinent electronic databases, specifically, Business Source Complete and Web of Science. Applicable papers from conference proceedings were identified using the Association for Information Systems website, which contains a searchable e-library of conference proceedings. The search for papers dealing with E-Government implementation since the year 2000 yielded 240 applicable papers. After reviewing the articles to determine their pertinence to the subject at hand, 40 papers were selected for inclusion in the review. The selection of a paper was dependent upon its specific identification of critical E-Government planning and implementation issues and lessons learned. If these were not specifically identified, the paper was not included. The information from each selected paper was carefully analyzed to identify salient critical planning and implementation issues as well as lessons learned with respect to the implementation of E-Government programs. Thirty-four (34) critical issues were identified as having significant impact on the success of E-Government programs.

1.2. Method of classification of identified issues pertinent to E-Government planning and implementation

Upon gathering the critical planning and implementation issues which have been identified by scholars and practitioners over many E-Government programs, the key issue that arose was how to classify them. After careful study, it became clear that the issues fell into several discreet categories. A number of these issues were program management related and would be important considerations in any type of program, whether information systems related or otherwise. The remaining issues were analyzed against various theoretical models into which they might fit. Looking to the marketing literature, one can identify all of the remaining issues as aspects of marketing theory. This is logical from a conceptual perspective given that E-Government can be viewed as a product which a provider (i.e., government) wishes to promote to customers (i.e., citizens and other users). Further, the concept falls within the scope of social marketing, which, in broad terms, involves using marketing techniques to influence the behavior of groups toward the benefit of society (Arunmani & Abdulla, 2007).

It is not the purpose of this paper to review all of the related components of program management and marketing theory, although actions such as customer segmentation and needs identification by segment would help identify which e-services would have the most impact. This paper will specifically cover the critical planning and implementation issues identified by scholars and practitioners through case studies, surveys, and post-audits of actual E-Government initiatives. Support will also be drawn from the public sector strategy literature to further elucidate the critical issues. In the next section, program management and aspects of marketing theory will be discussed as a vehicle for describing the amassed critical E-Government planning and implementation issues.

2. Critical program management issues

Whether a particular program involves the design and construction of a new commercial product, the implementation of a new policy initiative, or the planning and implementation of an E-Government initiative, the discipline and rigor of program management can significantly contribute to the overall success of the program. Table 1 lists the critical program management issues related to E-Government that are found in the literature. At the top of the list for E-Government is the need for strong, consistent, and active leadership of the initiative by top political and bureaucratic management (Reddick & Frank, 2007). E-Government programs are far more than technology implementations. As such, sufficient attention must be paid to change management, policy, processes, structure, laws, and regulations (Gant & Gant, 2002; Ke & Wei, 2004).

These programs require changing the behaviors of both the customers and civil servants involved, as well as changing the processes and structure of government. In Singapore, this required agencies and departments who had never done so before, to share information and work together (Ke & Wei, 2004). This mandated the consistent focus and visible action of top management throughout the program to make the change management aspects of the program a success. In others words, political and bureaucratic leaders had to ensure that the employees understood and believed that the initiative was a priority and would be implemented to conclusion. This level of program support must be fostered in managers throughout the various levels of the bureaucracy. To ensure that a program is implemented in a consistent fashion throughout the various agencies and departments, Ke and Wei (2004) also suggest that funding and control be centralized.

![Table 1: Critical program management issues.](image-url)

- Ensure strong, consistent and active leadership by top political and bureaucratic management (Reddick & Frank, 2007).
- Ensure support of senior bureaucrats (Ke & Wei, 2004).
- Pay sufficient attention to change management, policy, processes, laws, and regulations, i.e., E-Government is not just about technology (Gant & Gant, 2002; Ke & Wei, 2004).
- Centralize funding and control (Ke & Wei, 2004).
- Build a strategy that has specific strategic thrusts and actions, political and bureaucratic support, and sufficient funding (Kaylor et al., 2001; Ke & Wei, 2004).
- Clearly define the goals and scope of the E-Government initiative (Kaylor et al., 2001).
- Ensure the availability of intangible human resources such as time and energy (Wang, Bertschneider, & Gant, 2005).
- Ensure that internal government structure and processes are redesigned to account for job and information flow changes (Becker, Niehaves, Algermissen, Delfmann, & Fahl, 2004; Bhatnagar, 2002).
- Coordinate federal, provincial, and local E-Government programs (Jaeger & Thompson, 2003; Roy, 2006).
- Actively engage all applicable governmental levels and agencies and ensure that an effective governance system is in place and maintained (Moore, 2005; Ogilvie, 2005).
- Develop and utilize a performance measurement methodology. Ensure adherence to performance standards (Gupta & Jana, 2003; Jaeger & Thompson, 2003).
- Utilize pilot projects and get user feedback (Bhardwaj, 2005; Bhatnagar, 2002).
A common theme throughout the literature is the importance of building a robust strategy that has specific strategic thrusts and actions, political and bureaucratic support, and sufficient funding (Kaylor et al., 2001; Ke & Wei, 2004). However, this task is made more challenging as numerous researchers have noted significant differences between the public and private sectors with respect to characteristics that impact strategy formulation (see Bryson, 1981; Ferlie, 1992; Frederickson, Rainey, Backoff, & Levine, 1976; Lindblom, 1977; Montanari & Bracker, 1986; Richardson, 1995; Ring & Perry, 1985). As noted by Richardson (1995) and Montanari and Bracker (1986), the cycle of leadership change poses a significant obstacle to government strategy formulation and implementation, especially in terms of consistent goals and funding. Further, numerous internal and external stakeholder groups with competing agendas make consensus difficult to achieve and the definition of success often up for debate. Therefore, in this challenging environment, it is crucial that program goals and scope are clearly defined (Kaylor et al., 2001). These factors combine to place a premium on information gathering and analysis.

To aid with data gathering and analysis, Montanari and Bracker (1986) propose a variation on the private sector Strengths, Weaknesses, Opportunities, and Threats (SWOT) framework, a variation that addresses the unique issues and needs of the public sector. Their approach focuses on an analysis of Strengths, Weaknesses, Advocates, and Adversaries (SWAA). The strengths and weaknesses segments are similar to the internal analysis of the SWOT framework, but with an increased focus on barriers such as budgets, policy constraints, and the number of initiatives underway. Barrier identification and mitigation also feature prominently in the stakeholder analysis (Richardson, 1995), which is represented in the SWAA framework as Advocates and Adversaries. In analyzing each of these groups, Montanari and Bracker (1986) stress the rate of change of their leadership and their possible impact on initiatives as key variables. They suggest that the greater their possible impact and the faster their rate of leadership change, the higher their importance as key stakeholders. Given the level of consensus required to move public sector initiatives forward, identifying ways to motivate the most important stakeholders is critical to success.

Communications are also crucial in the public sector strategy formulation and implementation environment and must be targeted at key stakeholders (Boal & Bryson, 1987; Montanari & Bracker, 1986; Richardson, 1995). They must be effective, focused, and frequent to keep a particular initiative prominent in the minds of key stakeholders. Given the level of consensus required to move public sector initiatives forward, identifying ways to motivate the most important stakeholders is critical to success.

While the assurance of adequate financial resources is an obvious success factor, there is also a need to ensure the availability of intangible human resources such as time and energy (Wang, Bretschneider, & Gant, 2005). Even if managers and employees are enthused about an E-Government initiative, their enthusiasm can quickly evolve into program-defeating frustration if they are required to implement the initiative in addition to meeting the requirements of their regular jobs. This need for additional human resources and energy can become particularly apparent when creative actions are required. One of the critical requirements of a successful E-Government initiative is changing organizational structure and processes to account for job and information flow changes (Becker, Niehaves, Alermisen, Delfmam, & Falk, 2004; Bhatnagar, 2002). The creative approach necessary for effective results in this endeavor requires participants who have sufficient time and energy to devote to the task.

Another critical aspect of success in the public sector environment is coordinating federal, provincial/state, and local E-Government programs (Jaeger & Thompson, 2003). This is a difficult task considering the numerous policy, funding, and authority debates that can be ongoing in a country; Roy's discussion of the Canadian context is germane (Roy, 2006). With respect to E-Government programs in the United States and Canada, it is crucial that all applicable governmental levels and agencies are actively engaged to ensure that an effective governance system is in place and maintained; this is exemplified by Moore (2005) and Ogilvie (2005). This active engagement must start early in the planning stages and continue throughout implementation and ongoing operations.

As with all program management exercises, a performance management methodology and effective performance indicators must be developed and utilized to assess the success of the various aspects of the E-Government initiative (Gupta & Jana, 2003; Jaeger & Thompson, 2003). Once these program and system performance standards are chosen, ongoing active monitoring and management can be an extremely effective aid to the success of the initiative (Ogilvie, 2005). Another common tactic used in program implementations is the use of prototypes or pilots. Their use in E-Government programs, and the user feedback that can be gained, can be a valuable means of meeting customer expectations with the final product (Bhardwaj, 2005; Bhatnagar, 2002).

The use of these program management methodologies can provide the backdrop against which the marketing related aspects of E-Government initiatives can succeed. Understanding the customers and actively managing the relationship between the customers and government can have a significant, positive impact on the entire program.

3. Critical customer (i.e., constituent) relationship management issues

The central concepts of customer relationship management (CRM) include the following: “a complex set of interactive processes that aims to achieve an optimum balance between corporate investments and the fulfilling of customer needs,” “an integrated effort to identify, build-up and maintain a network with individual customers,” and “Customer relationships’ design and management ... are aimed at ... increasing customer loyalty” (Schierholz, Kolbe, & Brenner, 2007, p. 832). While a government will not have the same profit motivations as a business for promoting CRM, it will be interested, through its E-Government initiative, in balancing investments against fulfilling customer needs, creating an ICT network with customers at an individual level and increasing customer loyalty to the E-Government initiative. Table 2 contains the critical E-Government planning and implementation issues found in the literature, which align with the concepts of customer relationship management.

Table 2
Critical customer relationship management issues.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure involvement from all stakeholders, including citizens of various ICT</td>
<td>Brown &amp; Schelin, 2005; Carter &amp; Bélanger, 2005; Jaeger &amp; Thompson, 2003;</td>
</tr>
<tr>
<td>means and capabilities</td>
<td>Lofstedt, 2007; Moore, 2005; Yoon, 2005.</td>
</tr>
<tr>
<td>• Develop a clear understanding upfront of which services would most</td>
<td>Moore (2005) and Ogilvie (2005).</td>
</tr>
<tr>
<td>positively impact the citizens. User focus groups indicative of a wide</td>
<td></td>
</tr>
<tr>
<td>gamut of citizens and businesses should be engaged to comment on various</td>
<td></td>
</tr>
<tr>
<td>approaches, services, and designs (Carter &amp; Bélanger, 2005; Lofstedt, 2007).</td>
<td></td>
</tr>
<tr>
<td>• Be aware of the expectations being created and the impact of not meeting</td>
<td>Torres et al., 2005.</td>
</tr>
<tr>
<td>them (Torres et al., 2005).</td>
<td></td>
</tr>
<tr>
<td>• Ensure that E-Government does not lessen the responsiveness of government</td>
<td>It may be easier to provide a slow response to an electronic communication</td>
</tr>
<tr>
<td>officials. It may be easier to provide a slow response to an electronic</td>
<td>than to a person on the phone or face-to-face (Jaeger &amp; Thompson, 2003).</td>
</tr>
<tr>
<td>communication than to a person on the phone or face-to-face</td>
<td></td>
</tr>
<tr>
<td>• Ensure the clear delineation of responsibility and accountability for all</td>
<td>(Jaeger &amp; Thompson, 2003).</td>
</tr>
<tr>
<td>information and services provided. An E-Government initiative should not be</td>
<td></td>
</tr>
<tr>
<td>allowed to lessen the accountability of government officials (Jaeger &amp;</td>
<td></td>
</tr>
<tr>
<td>Thompson, 2003).</td>
<td></td>
</tr>
<tr>
<td>• Understand the legal ramifications of false or incorrect information</td>
<td>Jorgensen &amp; Cable, 2002.</td>
</tr>
<tr>
<td>(Jorgensen &amp; Cable, 2002).</td>
<td></td>
</tr>
</tbody>
</table>

The use of these program management methodologies can provide the backdrop against which the marketing related aspects of E-Government initiatives can succeed. Understanding the customers and actively managing the relationship between the customers and government can have a significant, positive impact on the entire program.
Central to CRM is the concept of customer involvement and the importance of the perception of this involvement from the perspective of the customer. In the case of E-Government, the broadest approach to the term customer is probably most appropriate and would include representation from all stakeholders. In particular, the involvement of citizens and businesses of various ICT means and capability has been found to be critical to success (Brown & Schelin, 2005) by ensuring that the information and services eventually provided are useful to the customers (Jaeger & Thompson, 2003). This means that governments must make a concerted effort to find out what customers actually want if the initiative is to be successful (Carter & Bélanger, 2005; Löfstedt, 2007). The involvement of all internal and external stakeholders ensures that what citizens and businesses actually want is also possible and affordable. The importance of broad-based participation has been a consistent theme in E-Government studies worldwide (Brown & Schelin, 2005; Carter & Bélanger, 2005; Jaeger & Thompson, 2003; Moore, 2005; Yoon, 2005).

Contact with a wide selection of the user community also has the benefit of allowing an understanding, and some level of management, of expectations. By being aware of the high level of expectations of customers, governments can avoid customer frustration by proactively meeting expectations or communicating situational realities brought about by factors such as available funding (Torres et al., 2007).

An unintended consequence of electronic communications is the possibility that government officials may become less responsive and less accountable (Jaeger & Thompson, 2003). For example, a person standing at a wicket or waiting on the phone is much harder to ignore than an email. Further, the ease of changing documentation on a website may make government officials less concerned with the accuracy of their work or the result in unauthorized persons altering documentation. It is incumbent upon governments implementing E-Government initiatives to build process frameworks which monitor the timeliness of response to customers and solicit feedback from those customers as to the quality of the response. Processes must also be put into place to ensure clear lines of accountability and authority for the accuracy and approval of information placed on a government site. A special case of this accountability is the possible legal ramifications of inaccurate information provided to citizens or businesses (Jorgensen & Cable, 2002). A simple example might be errors in building code documents that might cause a business to legally build or modify a commercial property, thereby leaving the applicable government liable.

These CRM-related critical issues condense to the importance of customer focus in E-Government initiatives. Customers should participate in the planning, implementation, and testing of E-Government systems. Customer needs should be paramount throughout the life of the initiative and every effort should be made to be proactive in meeting future customer needs. Finally, responsiveness and accountability should not be allowed to lessen with the onset of an E-Government initiative; in fact, given the taxpayer investments involved, stakeholders should expect heightened levels of responsiveness and performance from governments.

### 4. Critical product-related issues

In designing a new product, a business will include features which it believes will represent value to its targeted customer segment so that the customers will buy the product. In designing an E-Government “product,” a government attempts to do much the same thing. It will try to include features which it believes will represent value to its targeted customers so that the customers will repeatedly use the system. The literature on planning and implementing E-Government programs contains a number of critical issues which align with product design. Table 3 contains these issues.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Critical product-related issues.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure that the information and services provided are useful to the citizens, businesses, and other customers (Jaeger &amp; Thompson, 2003).</td>
<td></td>
</tr>
<tr>
<td>• Ensure a customer-centric approach to site design (Ke &amp; Wei, 2004; Roy, 2006).</td>
<td></td>
</tr>
<tr>
<td>• Ensure that issues of privacy and security (and perceptions of same) receive adequate focus (Bhatnagar, 2002; Moore, 2005; Norris &amp; Moon, 2005; Reddick &amp; Frank, 2007).</td>
<td></td>
</tr>
<tr>
<td>• Address language and communications issues (Jaeger &amp; Thompson, 2003; Moore, 2005).</td>
<td></td>
</tr>
<tr>
<td>• Consider using a commercial search engine such as Google on the site instead of an in-house developed search tool (Moore, 2005).</td>
<td></td>
</tr>
<tr>
<td>• Ensure processes that connect the electronic services to follow-on physical actions by applicable government agencies are in place and that follow-up is built-in (Jorgensen &amp; Cable, 2002; Ke &amp; Wei, 2004).</td>
<td></td>
</tr>
</tbody>
</table>

Among the CRM critical issues is the importance of engaging customers to ensure the identification of E-Government services that would be useful to customers. A key success factor for the product is that this information is actually utilized in the design and operation of the E-Government initiative (Jaeger & Thompson, 2003). In addition to the services being useful, the site must also be usable for the customers. The decision to make the site customer-centric versus agency-centric is an important part of this process (Ke & Wei, 2004).

For example, navigation from an agency-centric perspective could mean that a site is structured in alignment with existing departments including police, planning, garbage collection, and municipal taxation for a city site. However, unless a customer knows in advance which department contains the service sought, navigation can be a frustrating experience. A customer-centric approach might structure the site around type of user (e.g., business, citizen, visitor, etc.), type of event, or a list of common topics (Roy, 2006).

Another critical issue that is seen in E-Government initiatives worldwide is the necessity to ensure that issues of privacy and security, and the customers’ perception of privacy and security, receive adequate focus (Bhatnagar, 2002; Moore, 2005; Norris & Moon, 2005; Reddick & Frank, 2007). Simply stated, if customers feel unsure of their safety in providing personal information or in conducting financial transactions on a site, they will not use the services requiring these actions. Language and communication issues must also be addressed (Jaeger & Thompson, 2003; Moore, 2005). The languages used by the targeted customers must all be present; however, this alone is not sufficient. Many of the customers who might use a site may be unaccustomed to the more formal words and phrases that are common in bureaucratic discourse. Therefore, the choice of tools, structure, and instructional verbiage used on the site should be aligned with what will be familiar and easily understood by the customers. For example, in terms of ease of use, this approach may mean using a customer-familiar commercial search engine such as Google on the site versus an in-house developed engine (Moore, 2005).

As noted above, an E-Government initiative represents much more than a technology program. In fact, the technology is only the customer facing front-end of a complex set of organizational structures, policies, and processes that are designed to provide particular services. As such, one of the issues highlighted in both Korea and the United States is the importance of ensuring processes are in place that connect the electronic services to follow-up physical actions by applicable government agencies (Jorgensen & Cable, 2002; Ke & Wei, 2004). For example, if the site has a place for requests of government services such as road repair, processes must be in place to collect these requests, provide them to the applicable agency, and initiate follow-up to ensure requests have been completely addressed.

A focus on these critical product-related issues will ensure the product has features that represent value to the citizens, businesses, and other users of an E-Government site. This, in turn, should increase
the use of the site by its customers as well as their level of satisfaction with the E-Government initiative.

5. Critical place (i.e., distribution)-related issues

In the marketing context, “place” refers to all the complexities of the distribution channels utilized by a product or service with specific focus on ensuring that customers have easy and consistent access to the product. In the E-Government context, this takes on special meaning if a government is truly concerned with transforming the way it relates to its customers and ensuring that all its customers have access. Table 4 lists the critical place-related E-Government planning and implementation issues found in the literature.

While it might seem obvious, an important step in designing an E-Government site is ensuring that the customers who will use the site are actually capable of using the technology employed (Jaeger & Thompson, 2003). The user interface employed will probably be designed by technical experts with vast and intuitive knowledge of systems operation. However, the customers will include ageing and disadvantaged portions of the population with limited computer skills who may be intimidated by overly complex systems operation requirements. If the goal is to engage the greatest percentage of the population possible, alternative designs should be trialed with a cross-section of the possible users (Bhardvaj, 2005) and their feedback conscientiously employed. Confidence in the system must also be taken into account if financial transactions are among the services offered. Financial transactions must be easy, secure, and also feel secure, if customers are to feel comfortable using the site for these actions (Carter & Bélanger, 2005; Ke & Wei, 2004).

The implementation of E-Government initiatives presents a significant opportunity or threat relative to the disadvantaged in society. A lack of access to E-Government can increase the digital divide between the advantaged and disadvantaged (Armstrong, 2000; Jaeger & Thompson, 2003; Jorgensen & Cable, 2002), and if the E-Government site is used to foster e-democracy, this lack of access will impact the distribution channels utilized by a product or service with specific consideration to its customers and ensuring that all its customers have access. Table 4 lists the critical place-related E-Government planning and implementation issues found in the literature.

Table 4
Critical place (i.e., distribution)-related issues.

- Ensure the ability of citizens to use the technologies involved (Bhardvaj, 2005; Jaeger & Thompson, 2003).
- Ensure that transaction payment is easy, secure, and also feels secure (Carter & Bélanger, 2005; Ke & Wei, 2004).
- Ensure that a lack of access to E-Government is not present for the disadvantaged. This increases the gap in the digital divide (Armstrong, 2000; Jaeger & Thompson, 2003; Jorgensen & Cable, 2002; Ke & Wei, 2004).
- Ensure that persons with disabilities have access to E-Government (Jaeger & Thompson, 2003; West, 2001).
- Ensure that the system’s architectural approach is finalized first. This will impact all the applications and services which come later (Moore, 2005; Ogilvie, 2005).
- Ensure that processes are in place that will keep the site up-to-date and running properly (Jorgensen & Cable, 2002; Ke & Wei, 2004).

6. Critical promotion-related issues

One of the fundamental truisms in marketing is that a company can have the most innovative and useful product in the world, but if customers are not aware of it, it will not sell. Table 5 includes the promotion-related critical issues found in the E-Government literature. While only two issues are present, they are powerful factors with respect to the success of an E-Government initiative.

To promote the use of E-Government among citizens and businesses, two separate but interrelated actions must be accomplished. First of all, customers must be educated with respect to the scope of services and utility of the specific E-Government initiative (Wang et al., 2005). Secondly, customers must be convinced that use of the site will provide a level of value to them (Jaeger & Thompson, 2003; Wang et al., 2005). The educational aspect of promoting E-Government is fairly straightforward in that it should involve a factual, albeit interesting and engaging, rendition of the scope of services, how they can be accessed, how the site can be navigated and operated, and other pertinent information. Various types of advertising and informational media and demonstrations can be utilized to accomplish this task, noting that different segments of the customer market may require different media for the message to be effective.

Convincing the diverse spectrum of customers targeted for an E-Government initiative that ICTs represent a better way to interact with government may be a much more difficult challenge (Carter & Bélanger, 2005; Wang et al., 2005). For the tech-savvy segment of the population, the value may be obvious. However, in many cases, large segments of the population may not easily see the benefit of changing their previous modes of interaction with the government. Also, as noted above, the segments of society on the disadvantaged side of the digital divide face the additional challenge of having to acquire computer skills and gain access to the hardware and software needed to utilize E-Government. Ignoring these challenges can place government in the position of worsening the plight of these persons (Armstrong, 2000; Jaeger & Thompson, 2003; Jorgensen & Cable, 2002). In this case, convincing may mean more than advertising and demonstrating. It may mean providing training and community self-service terminals such as those that were successful in Singapore (Ke & Wei, 2004). Further, convincing, in the context of persons with disabilities, may mean creating the additional funding and infrastructure required to facilitate their access (Jaeger & Thompson, 2003; West, 2001).

Table 5
Critical promotion-related issues.

- Educate citizens about the scope and use of the specific E-Government initiative (Wang et al., 2005).
- Convince citizens that E-Government has value for them (Carter & Bélanger, 2005; Jaeger & Thompson, 2003; Wang et al., 2005).
Promoting the use of E-Government will have a cost; however, the widespread use of this innovation should result in tangible and intangible benefits to both the government and its customers. The challenge is to convincingly inform customers about these benefits so as to promote their use of E-Government.

7. Critical price-related issues

In a business context, pricing decisions relate to the expenses associated with the product, assumptions related to perceived value on the parts of the customers, planned profit margins, anticipated volume, and a host of other factors. In a government context, "price"-related issues for a program are related to available budgetary funds, political exigencies, perceived value on the parts of the customers, perceived willingness of customers to pay user fees, and numerous others factors. Table 6 lists the only price-related critical planning and implementation issues found in this review.

This in itself is interesting given the multiple opinions and debate that usually surrounds funding for any new government program. However, these critical issues are broad enough to encompass many of the factors mentioned above.

Noting the numerous potential cost drivers included in all the preceding critical issues, it is clear that even a modest E-Government initiative can involve considerable expenditures. Further, these expenses can often escalate as the program proceeds (Jørgensen & Cable, 2002). One option is to target a sizeable budgetary line item for the program; however, given the ever-present focus on reducing expenditures at all levels of government, this may not always be feasible. The argument is often put forth that information technology investments will result in significant savings, but studies in this area have provided mixed results (see Soh & Markus, 1995).

Another possibility is to consider innovative funding and system management options including private or combination public/private arrangements. For example, the state government of Indiana successfully pursued a self-funding framework with a private sector partner (Gant, 2002). The private sector partner recoups its implementation investment and ongoing operating costs through user fees for transactions and high-end services on the site. While this may not be the appropriate solution for other E-Government initiatives, it does provide the benefits of reducing government implementation and operations expenditures and negating the need for hiring numerous permanent information technology resources. While user fees are always a difficult issue for governments to implement, the customers’ overall costs may in reality be reduced compared with their former costs associated with fuel, parking, and the time required for a visit to a government facility. However, this approach adds another layer of complexity and challenge to the promotion issues discussed above.

While program funding and user fees are difficult issues to resolve, they can have a dramatic impact on the scope and success of an E-Government initiative. A number of options are available and should be considered during the planning of the program (Gant, 2002).

8. Discussion

As noted above, all of the critical issues identified in the literature aligned with program management concepts or marketing theory.

Table 6
Critical price-related issues.

| • Consider various funding and system management options, including public, private, or a combination of both (Gant, 2002). |
| • Upfront and ongoing expenses can be larger than expected (Jørgensen & Cable, 2002). |

These building blocks are now presented in a model which may aid in the conceptualization of E-Government planning and implementation processes. Fig. 1 is a representation of the proposed E-Government Planning and Implementation Conceptual Framework. The E-Government initiative at its center is composed of the “4 Ps” of the marketing mix: product, promotion, place (i.e., distribution), and price (Kotler & Turner, 1995). The E-Government marketing mix is encompassed by the customer focused approach, which is brought about by customer relationship management. The applicable critical issues taken from the literature on E-Government initiatives are all issues which would normally be considered when applying these aspects of marketing theory as can be seen in any university level introductory marketing text (for example Kotler & Turner, 1995). The marketing aspects of the initiative are enclosed in the rigor that is brought to bear by the tenets and discipline of program management.

The conceptual framework provides a coherent structure in which to house these identified issues and allows them to be positioned within the broader context of established theory and literature. From an academic perspective, the framework allows us to think about these issues relative to accepted and well-documented theory in the program management and marketing realms. Given the wealth of scholarly study into marketing, linking the E-Government literature with marketing theory may create significant opportunities to study E-Government in new ways. The well-developed literature on marketing theory may also give scholars of E-Government new ways to conceptualize and theorize E-Government-related phenomena.

From the practitioner perspective, the E-Government Planning and Implementation Conceptual Framework gives those charged with the planning and implementation of an E-Government program a way to structure and proceed through this complex process. An understanding that the creation and implementation of a new E-Government program can be thought of as a marketing initiative wrapped inside the rigor of program management gives the team a new way to think about and plan the initiative and may also facilitate the use of expertise on a program that might not otherwise be involved. Bringing marketing personnel onto a team with technical, program, and operations staff may allow the marketing aspects of the identified critical issues to be more fully developed and successfully deployed. By identifying and delineating the critical planning and implementation issues from such a wide array of E-Government initiatives, this
9. Conclusions
E-Government initiatives of varying scope and complexity have been proliferating at all levels of government throughout the world since the late 1990s (Torres et al., 2005). Scholars and practitioners have been studying these programs through the use of case studies, surveys, and post-implementation audits. Their findings have provided a set of lessons learned and critical issues which may be considered during the planning and implementation of new initiatives. This paper has attempted to present the results of a literature review of the planning and implementation of E-Government initiatives in the form of a conceptual framework that may aid practitioners with the planning and implementation of new E-Government programs.

The critical issues discovered in the literature were sorted and analyzed in an effort to provide structure which might make them more useful in practice, as well as present opportunities for further empirical research in this area. It was found that a number of the issues were related specifically to program management. The remaining issues were similar to those that would generally be considered as part of a marketing approach to a new product or service. This aligns with the concept of social marketing whereby marketing techniques are employed, often by non-profit public or private groups, to promote behaviors which help achieve social goals (Arulmani & Abdulla, 2007).

The conceptual framework for E-Government planning and implementation surrounds the traditional marketing mix components with the customer focus perspective of customer relationship management. The marketing aspects are encompassed in the discipline and rigor of program management. Each of the parts of the conceptual framework includes the applicable critical issues gleaned from the literature on the planning and implementation of E-Government initiatives.

While each E-Government initiative is different – depending upon the requirements of the government and citizenry involved, available budgets, and country infrastructure – the critical issues found in the literature relating to previous implementations are all worthy of consideration when executing new initiatives. That does not insinuate that the results of considering each issue will be consistent across programs, but taking each issue into account may provide insights or inform alternative approaches that might not otherwise present themselves.

At this point, no assumptions can be made as to which critical issues impact an initiative more profoundly or how the initiatives interrelate with one another. More specifically, unanswered questions include whether each issue has a direct impact on program success or if it acts in a mediating or moderating role. These questions offer opportunities for research into this important area. If E-Government is truly transforming the relationship between governments and citizens, a more complete understanding of all aspects of this phenomenon is essential.

References
ment Journal, 13(6), 830–852.


Wade R. Rose is a Ph.D. candidate in management at the Sprott School of Business, Carleton University. He holds graduate degrees in engineering and business administration, and his research interests concern strategy and strategy formulation in the public and private sectors. His management experience includes over 20 years in the public sector, as well as executive roles in both the aerospace and third-party logistics industries.

Gerald G. Grant is an Associate Professor and Coordinator of the Information Systems Area at the Sprott School of Business, Carleton University, Ottawa, Canada. He obtained his Ph.D. in Information Systems from the London School of Economics and Political Science, London, United Kingdom. Dr. Grant currently serves as an associate editor of both the European Journal of Information Systems and of the Journal of Global Information Management. He is also a member of the editorial board for the Information Technology for Development Journal.