THE DUAL NATURE OF EGOVERNMENT: CONTENT MANAGEMENT IN HORRY COUNTY

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ABSTRACT

This paper discusses internal and external aspects of information technology in government, with a focus on content management as a critical part of egovernment. The paper shows that for government organizations, a content management system can be a vital part of establishing the necessary internal support systems in order to expand the external services to the public. The implications for governments are important. Arguably, content management is what drives egovernment, internally as well as externally. In addition, citizens should be the focus of egovernment, which in turn make them the crucial user-group in content management implementations.

INTRODUCTION

Over the last couple of decades, governments have entered into often-ambitious attempts at reforming what they do and the way they operate, and information technology has been a key part of those efforts. Mälkiä & Savolainen [1] suggested that the current reforms in government are driven by four factors: the changing role of knowledge, the changing forms of social organizations and cooperation, globalization, and utilization of new information and communication technologies. Expectations continue to increase, from both private citizens and commercial business, and governments face increasing pressure for accountability and value [2] [3]. In addition, governments face decreasing revenue and increasing mandates, often with conflicting goals [4]. In effect, governments are required to do more with less [5] and egovernment is often seen as the key that will help governments solve that difficult problem.

EGOVERNMENT

The Council for Excellence in Government [6] asked the question "What has the greatest potential to revolutionize the performance of government and revitalize our democracy?" and concluded that the answer is egovernment. In its simplest form, egovernment refers to the availability of government information and services over the internet. Governments have increasingly made information available online including laws, retirement, disability, health, property records, and education. In addition, interactive public services are increasingly available including tax filing for individuals and businesses, licensing, registration, and permitting. For example, in 1999, the state of Utah adopted legislation called the "Digital State" requiring state entities to allow certain services to be transacted on the internet by July 1, 2002 [7]. In Arizona, the Department of Motor Vehicles (DMV) scored an 80% approval rating for its web services [8], arguably a number that few government departments on any level ever achieve. The Alaska DMV implemented a web site in 1997 where citizens could renew vehicle registrations [9]. In Alaska with the new system in place, an internet registration renewal costs $3.62 to process per transaction. That was a reduction from the previous cost of an over-the-counter registration, which was $7.74. The common theme in egovernment is governments' use of information and communication technologies in general, and internet technologies in particular, to transform government organizations and operations in order to provide more and improved services to the public, and doing it more effectively and efficiently resulting in a lower cost. With this in mind, this paper defines egovernment as a the delivery of all aspects of government information and services, externally to the public and internally to employees, through the use of internet technologies with the overall aim of improving service quality, effectiveness and efficiency, and reducing costs.

HORRY COUNTY

Horry County, South Carolina's by area largest county, is in the very early stages of transforming itself with the help of information technology. Since 1998, they have had a web site (http://www.horrycounty.org) that serves in limited capacity as an entry-point to the county's services. Most of the pages on the web site are informational in nature and have been published individually by various County departments. The ability to locate information on the county web site is somewhat hampered by virtue of this departmental rather than service-oriented design, and the value of the published information varies from page to page. Horry County has implemented a few interactive applications that allow the public to access public records or request information. Some forms are

available for download but you cannot submit information or pay for anything online. The main computing platform for most of the county employees is an IBM AS400 mainframe. In late 2002, the Horry County IT Department started thinking about phasing out the old IBM AS400 mainframe and the decision was made to invest in a new AS400 (now called iSeries). The new mainframe was installed and taken into operation in early 2003. There are many benefits of the new iSeries mainframe, including better security options, scalability and backup functionality. Another benefit of the new mainframe is that it can run IBM's Content Manager system, which is going to be one of its first and main tasks.

CONTENT MANAGEMENT

Although governments employ a variety of information technologies to support new initiatives, the use of content management technology is becoming an important component of egovernment. Content management often refers to a variety of products and services related to the management of different types of digital content that can be found in organizations. It can encompass document management, web content management, digital asset management, and records management [10]. To be truly useful, a content management solution must address requirements for disparate technologies, like mass storage, search and access, personalization, integration with business applications, access and version control and rapid delivery over the internet. UK-based Butler Group outlined why there is such an interest in and need for content management [11]:

- Organizations have a large volume of different types of content that needs to be managed.
- In order to achieve gains in efficiencies and effectiveness, there is a need to managed content electronically.
- Content is structured as well as unstructured.
- Content has to be made more widely available.
- Content needs to be targeted at relevant users.
- Users need to be able to easily find all relevant content.

In a similar way, Kartchner [12] laid out the main benefits of content management systems, which included a reduction of costs to update content, making content readily available in a usable form, providing tracking and workflow mechanisms, and making custom-publishing opportunities cost-effective. This interest in and need for content management has created a large market in commercial corporations, so it is safe to assume that it will be and in some ways already is big business for government as well. In a recent survey of CIOs, Bednarz [10] reported that 33% of those surveyed said document and content management was a top priority. The survey ranked content management as the third most important priority in software spending, after security (40%) and employee portal (36%) in software spending priorities. The Gartner Group listed eight different areas of content management including paper scanning/imaging, forms capture/processing, electronic document management, electronic records management, digital asset management (audio, video), print stream data storage, access and management, work process management, and web content management [13]. What is common to most of these uses of content management technology is that they handle mostly unstructured and semi-structured content.

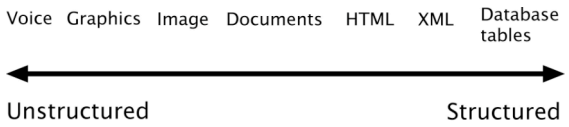

FIGURE 1

For the purposes of this paper, content management is defined as an overall process for capturing, creating, managing, integrating, and delivering semi-structured and unstructured digital content across an organization to employees, and beyond, to customers and partners.

CONTENT MANAGEMENT IN GOVERNMENT

Governments have always collected, processed and produced massive amounts of information - it is an inherent trait of government. However, with increases in the use of information technology, governments are collecting large amounts of data from various sources and need help managing that volume of content; in whatever format it comes, from whatever source it comes, and whatever its intended use is. The Government Paperwork Elimination Act, enacted in October of 1998 [14], states that federal government agencies must by October 2003, offer the optional use and acceptance of electronic documents and signatures, and electronic recordkeeping where practicable. This all but requires government agencies to use content management technologies. Mark Forman, associate director for information technology and egovernment at the U.S. Office of Management and Budget (OMB), said that many of what he referred to as “high-payoff projects” in egovernment, generally focus on “backstage fixes”

like integrating multiple agencies' systems to streamline an application process [10]. That would put content management right at the center of any egovernment initiative. In fact, the Butler Group stated that content management "will play an important role in governments achieving their egovernment goals" [11].

Henderson & Venkatraman [15] differentiated between three major roles of information technology: administrative, operational, and competitive. Figure 2 shows these three roles and how the current and future technologies of Horry County fit within this model. The County's AS400 mainframe is a good example of information technology used in an administrative role. It handles payroll, accounting, and other similar functions involving mainly structured information. It also extends into the operational role, which can be seen as taking the administrative automation one step further and creating automated business processes, not just separate functions. Content management fits in with the operational role but also has applicability in the competitive role of information technology, partly due to its capabilities to handle semi- and unstructured information. As Henderson & Venkatraman states, in the competitive role, "the capability now exists for organizations to deploy new IT applications that leverage the information and technological attributes to obtain different sources of competitive advantages" [15, p.98].

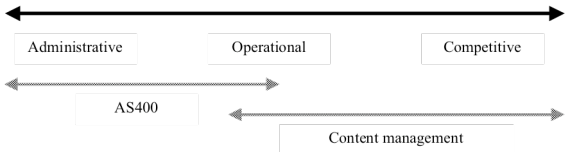

FIGURE 2

In an operational role, content management can help users by capturing, managing, and distributing all types of digital content to all types of users, internal and external. This could be of great benefit to Horry County and other governments in similar situations. However, the real leverage of content management comes when it is used in a more competitive role. It affords organizations, such as Horry County, the possibilities to use their content to change their processes and procedures, and fundamentally change the way they organize and operate.

THE DUAL NATURE OF EGOVERNMENT

It has been suggested that whatever view we take of egovernment we should recognize two distinct aspects [16]. First, it is about changes in the internal government operations that come about as information technology is used for automation, cooperation, and integration among government agencies and as tools assisting in decision processes. While such information technology use has been around for a couple of decades, the current interest in the field is most of all due to the fact that now, also external operations are transformed, as information and services increasingly become available on the internet. This has meant that governments begin to organize their operations based on the idea that citizens and businesses will largely manage their interactions with the public sector on a self-service basis. Therefore, egovernment concerns both internal and external use of information technology, for internal administration as well as for external services [16]. McIver & Elmagarmid [17] distinguished between what they refer to as externalizing systems and internal systems. By using information and communication technologies, governments are "externalizing" [17] information and processes, making it easier for citizens and government to interact. According to the Butler Group [11], "the external part of egovernment is the customer-facing information, that is to say the information that any member of the public has the right to view". For this external interface to succeed, however, there needs to be internal support functions and systems in place that can process and manage information and workflows. Such an "internal system" [17], that seems to be playing a critical role in egovernment initiatives, is content management. Butler Group [11] stated that one important aspect of the internal part of making egovernment happen is to make internal content available to employees and securing it. So, we can conclude that content management is primarily an internal system that is all but required for egovernment initiatives focused on "externalizing" government information and processes.

	Aspect	Focus	Technologies
E-government	Internal	Internal to government organization	Content management, Data warehousing, Client/server
	External	Facing citizens and businesses	Web portals, Automated phone systems, Wireless technologies

FIGURE 3

Figure 3 shows these two distinct aspects of egovernment - external and internal. A web site or portal is primarily an external interface, directed at the public, and uses technologies such as various internet servers, automated phone systems, and wireless technologies. Such an external interface must be constantly provided with up to date, accurate information, which comes from internal systems, such data warehouses and content management systems. These internal systems focus on the

employees and other users inside the government organization. Others also support this dual view of egovernment. For example, Traunmüller & Wimmer [18] said that government portals "by their very nature… display a Janus-nature: they are important for boosting the link with the citizens and, likewise, for promoting a re-engineering of the internal machinery of governance." Schedler & Summermatter's [19] in their model of egovernment, put what they called "eIC", electronic internal collaboration, at the very center. What they argued was, that the internal operations were what everything else in egovernment hinges on. Atkinson & Ulevich [20] argued that governments of all levels must enhance and update their own internal systems and procedures before electronic transactions with citizens and businesses can be successful. In effect, this means that the internal platform has to be built before the external interfaces can be considered.

CONCLUSIONS

First, it should be noted that this paper makes the assertion that there is a strong relationship between egovernment and content management. Indeed, I would say that egovernment cannot succeed, at least in more advanced forms, without a comprehensive content management solution in place. The foundation of that assertion is the dual view of egovernment presented earlier, supported by, for example, [16], [17], and [21]. In this dual view egovernment concerns establishing, along with information and communication technology, external interfaces with the public. These external interfaces, such as portals, needs to be supported by internal systems that can feed them with timely and accurate content. As this paper shows, content management is such an internal system. Wimmer & Traunmüller [22] suggested three main objectives of egovernment; to restructure administrative functions and processes, to overcome barriers to coordination and cooperation within the public administration, and to monitor government performance. It is notable that all three are primarily internal to government. This look at internal systems in support of external egovernment interfaces has not been widely researched. Focus seems to have been more on external aspects of egovernment, for example Gant & Gant [23]. External aspects of egovernment, such as web sites and email, are important since they form the interface between citizens and the government. These external interfaces, however, can only fully function if they are supported by, and integrated with, internal information systems that can provide them with up-to-date and accurate information. Wimmer [24] referred to this as the "integration of front-office and back-office developments". Front-office applications have largely dominated the efforts in egovernment, both in practice and research. But as Wimmer [24] pointed out, the "back-office reorganization and modernization has to have an equal significance in egovernment and… the integration of front- and back office is a turn-key for the success of the next generation of egovernment systems".

Horry County's web site, which serves as the external interface to County services and information, will continue to grow into the future, but it can only do so with proper internal support. Fundamentally transforming County processes to better serve citizens will require external systems and interfaces, as well as their internal support counterparts. A content management system can be one vital part of establishing the necessary internal support systems in order to expand the external services to the public. It could also allow the county to review and revise internal processes, organizational structures, and procedures. In short, content management could be an important part of Horry County's future transformation into egovernment.

This arguably has implications for governments entertaining ideas of launching egovernment initiatives. First, it would seem appropriate to put content management at the heart of egovernment. Content management is what drives egovernment, internally as well as externally, and it needs to be considered carefully by governments implementing new technology. From a user-perspective, content management offers up opportunities for information retrieval, service interaction, and transactions, which have so far been rare in government. Citizens should be the focus of egovernment initiatives, which in turn make them the crucial user-group in content management implementations.

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