

## **Knowledge Management and Innovation in (e) Government**

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### **ABSTRACT**

Today, knowledge is increasingly recognized as an important, strategic resource by all types of organizations and institutions, whether private or public, service oriented or production oriented. Regardless of the importance ostensibly attached to it, public sector organizations have often been less inclined to fully explore the benefits of knowledge management than the private sector. This paper will focus on knowledge management in the public sector. Common challenges and concerns that affect public sectors worldwide are identified as: driving efficiencies across all public services; improving accountability; making informed decisions; enhancing partnerships with stakeholders; capturing the knowledge of an ageing workforce, and; improving overall performance. To deal with these challenges public sectors often introduce several reforms including knowledge management and most recently, e-government. The success of e-government depends on knowledge management. Knowledge management provides the overall strategy and techniques to manage e-government content eloquently in order to make knowledge more usable and accessible and to keep it updated. This paper will posit how knowledge management can be put into practice as a reform instrument and an integral part of e-government to address some of the above challenges and lead the public sector to increased effectiveness, efficiency and productivity.

**Keywords:** Knowledge management, Public sector, e-Government, Information Technology.

### **1. Introduction**

Public sectors around the world are striving to be ever more efficient and effective in order to deal with the constantly evolving needs of their citizens. This is so, because, “increasingly, customers of the public sector are demanding higher service quality, particularly in the area of e-government. Services, particularly e-services, are

expected to be available all the time with immediate response, simplified and with one-stop processing” (Luen & Al-Hawamdeh, 2001). The common problems are: loss of knowledge with the retirement of older employees (Cong & Pandya, 2003, Knudsen, 2005, McNabb, 2007); problems of retaining vibrant staff (Knudsen, 2005); reduced budgets (Kandadi & Acheampong, 2008, Luen & Al-Hawamdeh, 2001, Knudsen, 2005); bureaucracy (Kandadi & Acheampong, 2008), and political exigencies (Kandadi & Acheampong, 2008). All these problems challenge public sectors in terms of driving efficiencies and effectiveness of their services. Demands and expectations encompass transparency, improved accountability; informed decision and policy making; enhanced partnerships with stakeholders (Riege & Lindsay, 2006); connecting silos in various public sector divisions and capturing the knowledge of an ageing workforce (Robertson, 2004); higher returns on taxpayers’ money (Riege & Lindsay, 2006, Mackay & Plimley, 2007); global acceleration of the push to implant e-government (Asoh, Belardo & Neilson, 2002, McNabb, 2007, Yuen, 2007) and; developing new/consolidating existing to improve overall performance.

To solve these common problems public sectors around the world have introduced several reforms with e-government being one of the most recent. E-governments are simply taken as transformation from manual to digital. Either all government information is not available through the e-government portals or e-portals do not allow people to interact with available information. As all the above issues concern organization and access to knowledge, the management of knowledge becomes critical to the success of e-government initiatives.

A lot has been written in both developed and developing countries on e-government. Various success factors have been identified for e-governments such as, administrative change, organizational change, resource allocation, values and cultural changes, legal and regulatory changes, strong leadership, good IT infrastructure, human resources, managerial skills, external/financial support etc. (Shin et al 2008). Knowledge management has received less attention than other aspects of e-government. This paper focuses on the application of knowledge management to make e-government initiatives successful and effective.

## **2. Concept of Knowledge Management**

Traditionally, knowledge is depicted hierarchically, as an ascending pyramid evolving through four stages. Data, the raw facts or observations (O'Brien 1993), form the base and are processed to the information stage, when the data are assembled in a comprehensible form capable of communication (Harrod's librarians' glossary & reference Book, 2000). The third stage is knowledge, which is defined as "information that is relevant, actionable, and based at least partially on experience" (Leonard & Sensiper, 1998). In this stage the user has accessed the needed information, which will create knowledge. The last stage is wisdom, the "ability to perceive or determine what is good, true or sound" (Collier's dic 1986). Wisdom is the pinnacle of the pyramid and refers to the application of knowledge. This paper explores a new perspective: a horizontal approach, where knowledge also expands or multiplies sideways. This

involves the creation, transfer and sharing of knowledge.

Basically, knowledge can be categorized as explicit and tacit knowledge. Explicit knowledge is documented, articulated into formal language, formally expressible and easily communicable; whereas, tacit is hard to put into words. It is expressed through action used by employees to perform their work and achieved during socialization, face-to-face meetings, teleconferencing and electronic discussions forms. At government level, types of knowledge depend on the functions of the government. Government is the highest knowledge consumer and knowledge producer. Commons sources of knowledge in government are: visions and strategic plans, government documents, laws, rules and regulations, notifications and archives. Thus, there is a wide array of knowledge content in the government that needs to be managed.

### **3. Concept and Definition of e-Government**

E-Government means different things to different people with interpretations ranging from a government web-site, to digital government, internet worked government and so on. Generally speaking, e-government is associated with the use of the most recent information and communication technologies, where all government information is available in digital form.

Misra (2007) defines knowledge management (KM) for e-government as “management of knowledge for and by e-government for increased productivity. KM4Eg is a management tool for government decision makers and its programme implementers”.

Heeks (2008) further explains that e-government covers the following three main areas: Improving government process / e-Administration, Connecting citizens (e-Citizens and e-Services) and Building external interactions by creating an e-Society that involves improved relationships between public agencies and other public and private companies.

Thus, e-government can be used to refer to a government that uses IT and e-commerce to provide access to government information and delivery of public service to citizens, and all other business partners and stakeholders including private sectors. E-government is citizen-centric.

### **4. Importance of Knowledge Management in e-Government**

Knowledge management provides the overall strategy to manage the e-content of e-government by providing knowledge organization tools and techniques, monitoring up datedness of knowledge contents and availing all necessary information to citizens. Zhou & Gao (2007) have identified three benefits of knowledge management in e-government as being conducive to enhance governments’ competence, to raise governments service quality, and to promote healthy development of e-government. Knowledge needs to be managed time and cost effectively in order to connect citizens to citizens and citizens to government and vice versa to make participative government policies and decisions. That brings government transparency and citizen empowerment and buys in of government projects and policies and consequently

results in a more citizen centric government. So, the success of e-government depends heavily on knowledge management. “Knowledge management for e-government is no longer a choice but an imperative if economies have to survive in the unfolding era of privatization, liberalization and globalization” (Misra, 2007). Thus e-government is not merely a transformation from manual to digital; it is a collective vision of all government activities, vision and mission. Since e-government is largely knowledge intensive, it requires knowledge management applications and techniques to represent government. This raises several issues of concern in e-government.

### **5. Major Issues of Concerns in e-Government**

There are a number of major issues of concern faced in e-government, identified below:

- E-government content is haphazard
- Information is not updated regularly, which hinders informed decision making in all sectors of government and non-government.
- All necessary information is not available, that leaves an e-portal incomplete..
- Use of obsolete information technology: often the latest information technologies are not used or embraced quickly enough to keep the pace with the global society.
- Government portals are often designed by ‘non professionals’, who are not trained in knowledge application tools and techniques. They do not know how to adequately create, capture, store, share and update the site information.
- Knowledge is presented in a standard format, which may not be suitable for all citizens and stakeholders.
- Budgetary constraints obstruct the affordability of infrastructure for e-government.
- There is a lack of good policies and legislation to provide a roadmap and action plan to manage knowledge on government e-portals; and,
- A lack of understating of ethical behavior in e-government is another issue.

### **6. Knowledge Management Applications for e-Government**

Knowledge management can offer a number of applications and techniques to e-government:

#### **6.1. Community of Practice (Cop) To Capture and Share Knowledge:**

“Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Jashapara, 2004:203). CoPs produce mutual practices as members engage in a collective process of learning. CoPs can be online, digital and face-to-face. Cops have proved the most powerful tools for learning and sharing knowledge for intellectual interaction and experience. They can be used to capture retired and older government employees’ knowledge; connect silos in various public sector divisions and to market government’s new initiatives.

### **6.2. Knowledge Organization Tools:**

There are many knowledge organization tools borrowed from library and information science such as thesauri, classification schemes, subject heading, taxonomies and ontology's, knowledge maps, intranet, discussion list archives, e-mail archives, websites (Jiang & Dong, 2008).

### **6.3. Knowledge Maintenance Tools:**

Knowledge management is meaningful only when accurate, relevant, necessary and up-to-date information is available to the right people at the right time and in the right format in a cost effective way. To achieve this, knowledge management emphasizes the importance of knowledge maintenance.

### **6.4. Social Network Analysis (SNA):**

Similar to knowledge mapping SNA is a tool to analyze how nodes and users are interlinked. It maps and measures the relationships and flows between people, groups, organizations, computers, and websites. SNA identifies knowledge brokers and connectivity gaps.

### **6.5. Knowledge Harvesting:**

Knowledge harvesting is a new dimension in the established field of knowledge management system that is used to elicit a contributor's tacit knowledge. It can be a very useful technique in capturing government employees' tacit knowledge and making it accessible to others.

## **7. Basic Framework for Knowledge Management In e-government**

To manage knowledge in e-government the above framework needs the following six major constituents:

- **Chief Knowledge Manager (CKM):** There should be a well-trained chief knowledge manager, who sets up a dedicated e-government office to steer and co-ordinate all e-government initiatives. Responsibilities would cover knowledge mapping and auditing, deciding which services to be provided electronically, creating awareness of KM and e-government's joint benefits, knowledge renewal and evaluation, updating knowledge content regularly and setting up an environment to aid flow and grow of knowledge.
- **Latest Information Technologies:** To practice KM most effectively, the latest information technologies should be exploited. These would include Wimax, the latest wireless broadband technology, and content management systems to capture create, store, transfer, share, and display, evaluate, maintain and update knowledge.
- **Executive Level Leadership to support e-government:** KM needs full support from government executive management, who can stimulate financing and win the support from other employees, executive decision makers and all other stakeholders.

- **Processes and Policies:** Processes and policies are important to provide a roadmap on how government knowledge can be better managed. The knowledge management strategy is the foremost important in initiating KM practice. It is like an integrated framework to maximize organizational capabilities and leverage existing knowledge.
- **Dedicated and Well-Trained Staff:** Properly trained and committed staffs are critical in making knowledge management in e-government a success. True, "IT has its intended usage in the context of KM; human motive and willingness are the underlying factors that dictate the actual IT usage"
- **Learning and Sharing Culture:** There is a need for a conducive environment where people do not feel forced to share knowledge but rather have a constant desire to learn together, so that they complement each other. This is the biggest challenge in KM.



## 8. Content Management for An e-government

The author suggests the following Points for an e-government content management:

- Knowledge mapping and knowledge auditing in order to identify and address the real knowledge needs and problems of the public sector;

- Formulation of a knowledge management strategy in the e-government environment based on the knowledge mapping and knowledge auditing findings;
- Raise awareness of knowledge management and e-government benefits at all levels of government to win the support from everyone;
- Identification, creation and capture of new knowledge; to publish all important information on the e-portal;
- Storage and organization of all important knowledge for easy retrieval and increased effectiveness and efficiency;
- Transfer and sharing of knowledge through social and electronic networks; and,

## **9. Conclusion**

Based on the foregoing debate it is concluded that knowledge management must be considered as an integral part of e-government and knowledge management professionals should be involved in designing e-government portals. Success depends on how each government, ministry and department can exploit these two reformative, complementary instruments using them as strategic competitive tools in the modern global e-society.

## **10. Recommendations**

To make a successful e-government it is further recommended that:

- E-government should not be limited to a project level, but should be seen a comprehensive government wide ongoing process;
- There is a need of change management ; individual change of mind-set and governmental change to keep pace with the global changes to gain and sustain a competitive edge;
- There should be strong collaboration at local, regional and national levels and between public and private sector organizations;
- Knowledge management portals should be based on citizen empowerment and interaction and they should provide multi-channels delivery of public services to cater for all levels of citizens and stakeholders.
- There is a need of decision support systems for designing new services tailored to citizen needs and suitable for a complex E-government scenario (Meo, 2008).

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