

## Chapter 23

# Ontology Development and the Role of Knowledge in E–Government Project Management: A Lesson for Developing Countries

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### **ABSTRACT**

*The literature suggests that the elaboration of ontology contributes to the standardization and classification of concepts and terminologies, and it has been happening in some sectors, such as software engineering, e-Government services implementation, and project management. In the area of e-Government, knowledge plays a critical role in the development of e-Government transformation project management ontology, which aims at adopting and customizing the existing project management approaches according to the specific challenges encountered in the e-Government environment. It is in this context that this chapter presents an ontological representation of the concepts of e-Government project management in one of the developing countries in southern Africa. The chapter further intends to collaborate in the excellence and productivity of the management of the e-Government project process. This will also enable the interoperability and knowledge reuse between all factors and stakeholders related with the implementation of such types of projects as a lesson for developing countries. The data was collected by use of an interview protocol or schedule, and the researcher interviewed relevant employees of the two ministries, the Ministry of Information Technology and the Ministry of Information and Communication. The data was then analyzed qualitatively to draw a model that the Zimbabwean government is adopting.*

DOI: 10.4018/978-1-4666-9814-7.ch023

## INTRODUCTION

Middleton (2007) suggests that e-Government is an idea raised by former U.S. vice president (Al Gore), within his vision of linking the citizen to the various agencies of government for getting all kinds of government services in an automated and automatic way, using information and communication networks to reduce costs, improve performance, speed of delivery and effectiveness of implementation. E-Government program seeks to achieve greater efficiency in government performance, through raising the performance of services for beneficiaries and investors from all segments of society easily, accurately and efficiently, to become a new type of performance of official government transactions. Online interactive services may include such facilities as petitioning, rate paying, licensing or information queries. There continues to be a diversity of implementation quality and levels for such services (Middleton, 2007). To achieve this requires utilizing the latest means of technology, communications and followup to the rapid global developments and analyzing the reasons for the failure and the success of e-Government programs and to encourage the use of technology and effectively increase the number of users of computers and Internet tools. All this cannot be achieved without proper knowledge on ontology development in e-Government projects management, and this outlines this chapter's focus.

Sarantis and Askounis (2010) suggest that there is a unanimous view among politicians, decision makers, public administration officials, e-Government researchers and information technology practitioners that knowledge is an important driving force in government transformation. According to Lin *et al.*, (2004) communication and knowledge exchange between project teams comprising members from within information systems vendors, external consultants and different public organizations is often hampered by, among other things, confusion in terms of vocabulary. Extended collaboration, such as joint private and

public sector ventures, will raise the difficulty and complexity of communication between the cooperating stakeholders. One of the main technical issues is the knowledge management problem when processing shared implicit and explicit knowledge within different systems (Sarantis & Askounis, 2010).

The authors emphasize that collaboration in e-Government projects faces knowledge conflict during knowledge sharing and project development. Prudent knowledge management is critical because poor knowledge management by involved parties can mislead the project processes and cause serious wastage of resources, lack of best practices exploitation and even the failure of the project.

In order for e-Government project management to be properly understood and successfully applied, it needs to be more comprehensively conceptualized. Conceptualization involves a need to address a variety of concerns beyond the existing hard rational Information Technology project management approaches (Sarantis & Askounis, 2009). However e-Government is a detailed and complex development that is difficult to conceptualize and what is known and understood is mostly of a descriptive and anecdotal nature. The bottom line is that e-Government implementations have yet to realize the upper stages of maturity particularly in developing countries and that the understanding and knowledge of the area is still in the process of formation. The development of ontology expands the practitioner's ability to generate information by using search methods beyond simple keywords. If only keywords are used in e-Government project management process, then information that is retrieved will often lack the precision necessary for generating quality information. Therefore, in order to retrieve quality information more quickly and accurately, a broader and more extensive ontology development is required (Lin *et al.*, 2004).

So, the assumption is building an e-Government project Ontology for common understanding within the group of all project stakeholders during the project management will improve

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