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ERP systems implementation: Best practices in Canadian government organizations

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Abstract

ERP (*Enterprise resource planning*) systems implementation is a complex exercise in organizational innovation and change management. Government organizations are increasing their adoption of these systems for various benefits such as integrated real-time information, better administration, and result-based management. Government organizations, due to their social obligations, higher legislative and public accountability, and unique culture face many specific challenges in the transition to enterprise systems. This motivated the authors to explore the key considerations and typical activities in government organizations adopting ERP systems. The article adopts the innovation process theory framework as well as the (Markus & Tanis, 2000) model as a basis to delineate the ERP adoption process. Although, each adopting organization has a distinct set of objectives for its systems, the study found many similarities in motivations, concerns, and strategies across organizations. © 2002 Elsevier Science Inc. All rights reserved.

1. Introduction

Enterprise Resource Planning systems are reshaping business and government organizations as they promise to solve the challenges posed by portfolios of supposedly disconnected and uncoordinated applications (Davenport, 1998). Also referred to as enterprise-wide systems or enterprise systems due to their enterprise-wide scope, these integrated enterprise-computing systems provide seamless integration of all the information flowing through an organization (Davenport, 1998; Markus & Tanis, 2000). According to the research firm Meta Group, more than 70% of U.S. federal, state, and local government agencies, drawn by the same reasons as businesses, have installed ERP systems or are looking to implement an ERP

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system in the next five years. ERP vendors are wagering that the coming years will see government agencies around the world making a big push to purchase ERP applications to amend or replace their aging legacy systems.

Organizations that have adopted successfully ERP systems to manage their operations view them as one of the most important innovations that have led to the realization of substantial tangible and intangible improvements in a variety of areas (Davenport, 1998, 2000, Markus & Tanis, 2000). However, there are a number of examples in which organizations were not successful in reaping the potential benefits that motivated them to make large investments in these systems (Davenport, 1998, 2000; Markus & Tanis, 2000). In the near-term, managers find ERP projects to be the most difficult systems development projects (Wilder & Davis, 1998). ERP projects are set apart by their complexity, enterprise-wide scope and challenges posed by the accompanying large-scale organizational changes in transition to new systems and processes. In the long-term, the impact on the organization's information technology (IT) support and maintenance and organizational performance of ERP projects is still unknown (Glass, 1998). Despite wide spread popularity of ERP, not all organizations are aggressively adopting ERP systems. Some have adopted certain stand-alone or partially integrated functional modules, while some organizations have even discontinued implementing ERP systems after adoption (Davenport, 1998; Bingi et al., 1999).¹

ERP implementation is a complex exercise in technology innovation and organizational change management (Markus & Tanis, 2000). The ERP adoption process is also important because ERP applications lock the operating principles and processes of the organization into software systems. Organizations must reconcile the technological imperatives of the enterprise systems with the business needs (Davenport, 1998). The cost, complexity, investment of time and staff, and implications of modifications, make a rollback after adoption very difficult. One extreme example of not getting strategic ERP adoption choices right is FoxMeyer Drugs, where the bankruptcy trustees are suing its systems' vendor and consultant company, blaming the ERP system for its business failure (Davenport, 1998).

The government of Canada is exploring new and better ways of delivering its services to Canadians, including alternative service delivery, public/private partnerships, and privatization. Many alternatives to traditional departmental structures for delivering programs, such as ongoing program review, a move to corporate-like administration and result-based management, have been identified. The government is vigorously pursuing those alternatives. The strategic use of IT is playing a key role in this modernization process. The Canadian government's management of information technology policy (last revised in 1994) has set its objectives, "to ensure that information technology is used as a strategic tool to support government priorities and program delivery, to increase productivity, and to enhance and support its corporate goals such as service to the public" (Nilsen, 1999, p. 15). The policy goes on to state that the government is to "... use a business-case approach. . . . to select and approve government information technology based investments" and requires government institutions to "... make information more easily accessible" (Management of Information Technology, 1994, pp. 1–2). The Treasury Board Secretariat has established a new three-year strategic direction for information technology, which will guide progress and investment across government (OAG Report, 1999). A major information systems initiative in the direction towards realization of corporate-like administration and result-based man-

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