Chapter 1

Knowledge-Based E-Government Solutions in Dynamic Environment

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ABSTRACT

e-Government services have to operate in dynamic environments, and there is a limited time for adaptation in terms of legislation, society, and economy. Maintaining reliable services is even more difficult with continuous changes, like mergers and acquisitions, supply chain activity, staff turnover, and regulatory variation. The nature of the changes has become discontinuous; however, the existing approaches and IT solutions are inadequate for highly dynamic and volatile processes. The management of these challenges requires harmonized change management and knowledge management strategy. In this chapter, the selected change management strategy and the corresponding knowledge management strategy and their IT support are analyzed from the public administration point of view. SAKE (FP6 IST-2005-027128) and SMART projects (LLP 201-1-ES1-LEO05-49395) approaches and IT solutions are discussed to demonstrate the strategic view and to solve the knowledge management and change management related problems and challenges in public administration. Pilots of the projects are focusing on the challenge of dynamically matching educational system offer and job market demand. SAKE provides holistic framework and tool for an agile knowledge-based e-government, while SMART offers an innovative learning environment that will match labour market needs with the training offer.

DOI: 10.4018/978-1-4666-6252-0.ch001
BACKGROUND

There are constant changes in the political, economic and legal environment of public administration, especially since the economic crisis started around 2008. Eastern and Middle European countries are highly affected by these changes since their economic environment was generally vulnerable at that time when every one of those countries expected the continuation of the economic prosperity. All of the issues of the economic crisis increased the burden on public administration, requiring more agile responses in decision-making, as well as more flexible processes and systems that are able to align with the changes within this highly dynamic environment. These challenges are quite new to European countries, as well as to Eastern and Middle European ones, like Latvia, Hungary of Poland.

The increasing dynamism of the environment imposes new challenges to public administration. As an example, increasing information overload of public servants can be mentioned as factor jeopardizing the organizations’ capability of adaptation to its environment’s dynamism. Increasing information complexity, as well as the rising amount and types of information systems available for a certain problem area make information management more difficult (Bray, 2008; Himma, 2007). New decisions and regulations have to be constructed quickly; “time-to-market” of regulations has to be reduced, which necessitates the support of public administration in order to produce agile responses. Management of changes requires a systematic approach as explained by Abrahamson (2000) and Kotter (2011), since changes in one part of the information assets can imply difficulties in other parts of the e-government system.

Knowledge has been and still is government’s most important resource (Heeks, 2006), its management is therefore a crucial task. Unpredictability and dynamism of the environment require adaptive, fast and knowledge-based decisions (Riege, 2006). There are multiple examples available where knowledge-intensive work of public administration can be observed. As a suitable example, UK Government’s Knowledge Network can be mentioned, which is a government-wide electronic communication tool helping government department to share knowledge and collaborate online with colleagues across government; or the knowledge management initiatives in the Federal Government in US (Barquin, 2010).

In order to comply with the permanent renewal need of knowledge, special knowledge management techniques and systems are needed (Jashapara, 2011; Kő & Klimkó 2009). These systems have to cope with the fast changing, context-sensitive character of knowledge; meanwhile they have to support the externalization of knowledge (Holsapple, 2003).

The researches detailed in this chapter aimed to a) analyze the challenges regarding change management and knowledge management in the area of public administration; b) investigate the relationship of change management and knowledge management strategies within the viewpoint of public administration and c) provide holistic frameworks and tools for an agile knowledge-based e-government that is reflecting the challenges collected in a) and expected to be sufficiently flexible to adapt to dynamic environments and applicable for the needs of public administration.

First, knowledge management and change management-related problems and challenges in public administration are detailed. Next, relationships between change management and knowledge management strategies are detailed and analyzed from the public administration perspective, followed by their appropriate IT support. SAKE project approach and IT environment is presented as an example of compliance with needs arising from change management and knowledge management strategies. SMART solution is detailed as another approach to manage the needs coming up from the dynamic nature of job market. Finally an overview about the SAKE and SMART cases are discussed.