ABSTRACT

The rise of the knowledge-based economy has significantly transformed the economies of developed countries from managed economies into entrepreneurial economies, which deal with knowledge as both input and output. Consequently, knowledge has become a key asset for organizations and knowledge management is one of the driving forces of business success. One of the most important challenges faced by enterprises today is to manage both knowledge assets and the e-collaboration process between knowledge workers. Critical business knowledge and information is often contained in mostly unstructured documents in content management systems. Therefore, content management based on knowledge perspectives is crucial for organizations, especially knowledge-intensive organizations. Enterprise Content Management has evolved as an integrated approach to managing documents and content on an enterprise-wide scale. This approach must be enhanced in order to build a robust foundation to support knowledge development and the collaboration process. This paper presents the KBCM (Knowledge-Based Content Management) framework for constructing a knowledge infrastructure based on the perspective of knowledge components that could help enterprises create more business value by classifying content formally and enabling its transformation into valuable knowledge assets.

Keywords: Design Science Research, Enterprise Content Management, Information Management, Knowledge Management, Knowledge-Based Content Management Framework

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INTRODUCTION

The rise of a knowledge-based economy has significantly transformed the economies of developed countries from managed economies into entrepreneurial economies that rely heavily on the production, distribution, and use of knowledge (Beijerse, 1999). Knowledge thus becomes an asset of the organization and knowledge management (KM) becomes a critical factor in the success of a business. Organizational knowledge that is created and held by individuals is integrated within an organization through collaboration (Grant, 1996). E-collaboration is defined as the collaboration among individuals engaged in a common task using electronic technologies (Kock, 2005). With e-collaboration, a change-oriented capability, companies are able to identify, integrate, and apply their knowledge assets in order to meet competitive demands (Fink, 2007). Recent studies show that e-collaboration technologies directly influence innovation (Fedorowicz et al., 2008; Meroño-Cerdán et al., 2008). Especially in knowledge-intensive enterprises, information is a driver of business in general and innovation in particular. Companies want to make use of business-critical knowledge and information, which is existent and used in collaboration processes, that is contained in mostly unstructured documents. This enterprise content is often scattered across several repositories and systems and makes up 80% of a company’s total data (O’Callaghan & Smits, 2005). Huge amounts of content are produced every year and this content needs to be captured, managed, stored, preserved, and delivered efficiently on an enterprise-wide scale (AIIM, 2014). However, content is not just a means to an end; it could help enterprises to create more business value since it contains useful information.

To manage content on an enterprise-wide scale, Enterprise Content Management (ECM) has evolved as an integrated approach to Information Management (IM) (Päivärinta & Munkvold, 2005). More and more companies adopt commercial ECM solutions that are becoming more developed and sophisticated. While ECM received a lot of attention from practitioners (Wiltzius et al., 2011), it has been neglected by academic research (Rickenberg et al., 2012a). Since ECM is still an emerging field in Information Systems (IS) research, more research needs to be conducted in order to add more value to this approach (Wiltzius et al., 2011). While there is little literature about the reconciliation of ECM and KM, integration of the two areas is crucial, especially for knowledge-intensive organizations. Effective knowledge flows and KM can drive innovation; therefore, managing knowledge inside ECM systems, both within and among enterprises, has become vital. Accordingly, this paper seeks to answer the following research question:

How can enterprise content management systems be enhanced to implement a knowledge infrastructure in knowledge-intensive organizations?

In order to respond to this question, this paper presents a Knowledge-Based Content Management (KBCM) framework that proposes a new facet for ECM systems to support knowledge development and the collaboration process. One of our previous papers, which was presented at the HICSS’14 conference, proposed a knowledge-based framework for ECM. This paper extends and formalizes this framework in order to transform ECM systems into a knowledge infrastructure. Enterprises can use the framework to classify content formally and to transform it first into information assets and then into organizational knowledge. Following the guidelines of design science research (Hevner et al., 2004), the next section of this paper presents a literature review and the research design. Next, the KBCM framework for enhancing ECM systems to implement a knowledge infrastructure based on knowledge components is presented. Within a real-world example, the applicability of the framework is then checked and demonstrated. After a discussion on limitations and implications, the paper ends with conclusions and outlook.
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