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Critical Success Factors of Portal-Based Knowledge Management

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	Challenges ←	Critical Success Factors	→ Barriers
Corporate culture	Cultural aspects	Corporate culture	Corporate culture
Management and strategy	Gain top management support	Top management support	Missing of top management support
Human resource management	Motivate employees for active participation	Employees (motivation and qualification)	Missing motivation and incentives
Organizational structure and processes	Definition of processes	Defined processes (Process orientation)	Routines and habits
	Find promoters and leaders	Leadership personality	Missing responsibilities within the organization

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Critical Success Factors of Portal-Based Knowledge Management

Completed Research Paper

Introduction

Against the background of ever increasing competition and the advancement of globalization, and thus an explosion of data and overload of information, enterprises and organizations are faced with the challenge of understanding knowledge as a production factor. Loss of knowledge must be prevented and intellectual capital must be utilized (Alavi and Leidner 2001). Since the mid 90s, knowledge management (KM) has provided an approach to meet these challenges (Davenport and Prusak 1998; Wiig 1999).

Once companies recognized the potential of knowledge management, they began to provide their employees with applications such as intranets and groupware in order to leverage their knowledge. Over time, increasingly disillusionment set in, because the technical solutions did work, but only few employees were willing to provide their knowledge and share it with others (Malhotra 2005). Knowledge management requires technical solutions and support. Enterprise portals provide the necessary tools that can be accessed independent of location and can be used as the central platform for employee collaboration and as a store for explicit knowledge (Detlor 2000; Remus 2006). This knowledge management is called portal-based knowledge management.

Simply introducing such portals does not guarantee success (Collins 2003). Only successfully introduced portals fulfill their potential for support and make a true contribution to the success of a company (Le-Nguyen et al. 2008). Introducing a portal causes a considerable expense for a company and can only be justified if the benefit clearly surpasses the costs. How the introduction of portal-based knowledge management can be successful remains to be understood. A number of critical success factors (CSFs) must be taken into consideration (Remus 2006). Only a few models take these critical success factors, which are relevant to successful introduction and usage, into consideration (Butler and Murphy 2007, in the context of public sector organizations). These critical success factors are generally not consistently taken into account during the introduction of portal-based knowledge management.

The objective of this paper is to identify the critical success factors for introducing portal-based knowledge management and to derive a process model based on an introduction strategy. We will show how the critical success factors can be taken into account as part of a process model to define concrete measures. The goal of this approach is to reduce the often high level of complexity in decisive situations within this context and to make optimal use of the opportunities that arise in order to contribute to the success of the project.

Two following research questions act as a framework for our research:

- Which critical success factors, challenges and barriers exist in the introduction to portal-based knowledge management?
- How can the previously identified critical success factors, challenges and barriers be considered in a process model for implementing portal-based knowledge management?

This paper is structured as follows: The next section provides an overview of the research design and methodology. The section that follows provides and compares the results of an empirical analysis of reference and process models for knowledge management and the implementation of enterprise knowledge portals to the state of the art (best practices). Due to the lack of existing models, a process model for the implementation of portal-based knowledge management is created. During development of this process model, recommendations for phases and activities are made that take the critical success factors into account and that help overcome the barriers that arise during introduction and use of portal-based knowledge management. The closing section shows how to integrate the identified success factors into the model and concludes by summarizing the core statements and the main new insights.

Figure 6 provides an extensive overview, which can help with successful implementation of portal-based knowledge management. The schematic representation helps users control resources usefully in connection with the project. It also illustrates which measures are relevant for each dimension and phase. The results shown here could be helpful in creating a checklist for planning and controlling portal projects and to mitigate potential risks while implementing the portal.

Conclusions and Outlook

This paper analyzes the state of the art in portal-based knowledge management and develops a process model for its successful implementation. We analyzed the existing reference and process models in the environment of portal-based knowledge management, and found that reference and process models do exist for the implementation of knowledge management and portals separately, but that there is no complete model for the implementation of portal-based knowledge management as a whole. We also determined that up to now, there has been no consideration of the critical success factors for the various reference and process models. In order to develop a process model, and to take the critical success factors into account and provide relevant, practicable action and design recommendations, we performed a literature review and interviewed experts. The critical success factors and the process model illustrated in this paper are substantiated and can be used to support successful implementation projects for enterprise knowledge portals.

This paper contains several new contributions to the research field and answers our two research questions (cf. Introduction):

1. Which critical success factors, challenges and barriers exist in the introduction to portal-based knowledge management?

The initial research question could be answered by comparing the results of the literature analysis and the expert interviews. A total of 18 critical success factors, 17 challenges and 15 barriers are identified and presented within this paper. They must be taken into account while introducing portal-based knowledge management. Figure 2 provides an overview of these.

2. How can the previously identified critical success factors, challenges and barriers be considered in a process model for implementing portal-based knowledge management?

Beyond that, we determine how the previously identified critical success factors and resultant challenges and barriers can be considered in a process model for implementing portal-based knowledge management. Specific measures can be taken during the individual phases for each critical success factor to ensure that the investigation was extensive enough. The second research question is first made concrete when a model is developed for the implementation of portal-based knowledge management. Figure 6 shows these measures for each phase and indicates which challenges can be conquered and which barriers overcome once the measures are implemented.

In order to meet the requirements of today's information and knowledge-based society, companies need to take fundamental steps to adapt. This paper illustrates that corporate portals have the potential to become the central technical platform for knowledge management activities within enterprises and organizations. Currently they appear to be the best approach to dealing with ever-increasing requirements, such as HR self services, integration of Web 2.0 applications and social software, service-oriented architecture and mashups. Some experts emphasize that communities, social software and networking can increase acceptance and use of portals in a corporate environment.

Portals will continue to play an important role in support of knowledge management over the mid and long term, because they are the only way of integrating various applications, bundling and consolidating various sources of information and storing knowledge, and providing a user-oriented view of roles and personalization.

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