Knowledge management systems (KMS) have the potential to contribute to the strategic and competitive abilities of an organization by supporting and enabling end users in creation, storage, transfer, and application of new knowledge. Driven by the realization that people and organizational know-how represent a strategic asset for organizations, the practice of knowledge management (KM) has become pervasive and ubiquitous across business environments. In order to improve efficiency and effectiveness through better decisions, organizations have started to consciously plan, organize, actuate, and control activities that prompt the utilization of existing knowledge and new knowledge creation for current and future decision making activities.

The design, implementation, and use of KMS are significantly affected by complex issues in organizational structure, innovation management, human resource management, learning, IT engineering, and many other fields. As noted by Desouza (2003) there are significant barriers to the use of KMS. Contrary to popular belief, most users, for example, are reluctant to contribute their knowledge to artificial spaces (e.g., databases and intranets) because they fear the recognition that accompanies being an expert will be lost. Furthermore they are worried that future projects may be limited to their areas of expertise, reducing the individual’s opportunity to grow and learn professionally.

Companies reporting successful KM practices are the ones that inject KM practices directly into business processes (Davenport & Glaser, 2002; Seeley, 2002). Employees, therefore, need to interact with organizational knowledge during their work assignments. The tasks conducted by a member of the R&D lab differ from the work being conducted by a production engineer, the marketing analyst, or the secretary. It is, therefore, our contention that how and which existing knowledge is (or could be) utilized and how new knowledge is (or could be) created, depends on the work-context. Combining field research with previous literature findings, Smith and McKeen (2004) examined various cases of how different organizations have injected knowledge practices in business processes. They then suggested a framework involving the following steps (Smith & McKeen, 2004):

1. Focus on core business processes
2. Start with process redesign: IT/IS and KM specialists need to understand both capabilities and potentials of “the other” side and understand the business process itself
3. Add KM to the process: organize and package codified and reusable knowledge, formalize common practices of knowledge sharing, identify links to (tacit) knowledge holders.

4. Perform contextual analysis where knowledge from the process is looked at from a higher level of organization: Where can knowledge (or new knowledge created based on existing knowledge) also be used?

5. Maintain and improve KM practices constantly

If not properly addressed, these complexities can result in implementing systems which fail to fulfill their goals. Some reports suggest this is true in up to 70% of the cases! Inappropriate systems can be a source of immense frustration for the end users and for the organization. One example is the subject of a KMS repository laden with obsolete and incomplete nuggets of insights. Desouza and Awazu (2005) found that maintaining KMS is often an overlooked function. There is a need to clearly segment knowledge objects and even delete outdated knowledge so that the system reflects the current state of practice. A system without such maintenance will not only deter users, but can also cost an organization substantially if incomplete and obsolete information is utilized in decision making. Similarly, KMS that are rigid and cannot be tailored (e.g., personalized or customized) by end users will be more likely to be underutilized. A similar apathy will occur if the KMS of an organization do not support and enable the everyday work through seamless integration into work processes and other routines. Furthermore, practitioners lack efficiency- and effectiveness-related metrics to evaluate KMS and their contribution to business value of an organization.

While acknowledging the existing body of research, this special issue “Interacting with Knowledge Management Systems” called for contributions that are both practically relevant and, at the same time, revise current understanding in the research domain. A 30% KMS-implementations success rate clearly leaves room for improvement. We are pleased to announce to our readers that the call attracted a wide range of authors and that the number and quality of inquiries and submissions received exceeded our expectations. The content enabled us to connect the entire process of KMS design, implementation, and use, to the context of the end user.

The Articles in this Special Issue

Introducing and diffusing KMS is a complex process spanning several areas, which resulted in the selection of nine contributions, which will be presented in two issues. Four appear in the first issue, which mainly focus on KMS design and implementation, and five appear in the second issue, which mostly discuss evaluation and appraisal matters. These contributions provide our readers with an opportunity to think about various ways end users can interact with KMS and provide discussion on user interaction with KMS from various theoretical and methodological angles. These nine contributions discuss end user interactions in the post-introduction stage of technological innovation. However, they also show part of the complexities that need to be understood, examined, and acknowledged, when introducing KMS.

In this sense, our first issue begins with an article from Butler, Heavin, and O’Donovan (‘A Theoretical Model and Framework for Understanding KMS Implementation’) who developed a theoretical model and framework for the successful implementation of KMS. Specifically, the authors identified the critical success factors (CSF) in the past literature and evaluated their validity through multiple case studies conducted in 12 multinational organizations. This helped them identify and confirm a collective set of 20 factors, belonging to strategic, organizational, and technological clusters. They conclude that many of the traditional IS-deployment CSFs hold for the KMS environment as well, yet, some of them are more appropriate for the latter category. Our readers will benefit from the CSF model, which empirically revises the existing body of knowledge in the context of KMS implementations.

The article by Baloh (‘The Role of Fit in the Knowledge Management Systems: Tentative Propositions of the KMS Design’) continues and extends these ideas. Using the principles of design science, Baloh builds the theoretical background for a KMS design, based upon extant IS and organization science theories and concepts. The study is important as it recognizes the flaw of the
one-strategy-fits-the-whole-company approach to KM and KMS initiatives and explains the need for a focused and segmented approach. Baloh suggests three dimensions through which the end user’s organizational context can be analyzed using the KM lens in order to match fitting KMS functionalities to end user’s knowledge needs. Such an approach also calls upon organizations to develop competency in managing multiple KMS and serving as a coordinator of these KMS.

The third article shifts our attention to the micro level. Burns and Light (Users as Developers: A Field Study of Call Centre Knowledge Work) discuss the role of the user as a developer in the context of call center. Developers and end users play dynamic roles in interacting with KMS. Drawing on the social shaping of technology, Burns and Light conducted an exploratory case study at call center and analyzed how users shape KMS by claiming a developer role. The study is of particular interest as call centers are usually perceived as highly routine knowledge environments where knowledge is constructed by developers beforehand and “downloaded” into the KMS. In order to ensure adoption of the KMS, its design should enable end users’ knowledge creation- and knowledge use-types of interactions with the system.

The fourth and final article in this first volume discusses adoption of the system and its continuous use. Drawing on the Rogers’ innovation diffusion theory, theory of reasoned action (TRA), and technology acceptance model (TAM), Xu and Quaddus (Exploring the Factors Influencing End Users’ Acceptance of Knowledge Management Systems: Development of a Research Model of Adoption and Continued Use) identify the factors that affect end user’s pre-adoption and post-adoption of KMS, and build a 16-hypotheses research model to test these factors. Findings of the proposed study would yield important insights in to the two stages of the KMS diffusion.

It was our great pleasure to serve as guest editors for this special issue. We would like to thank Dr. M. Adam Mahmood, editor-in-chief of the Journal of Organizational and End User Computing, for initially supporting the idea for one special issue and then encouraging a two-volume special issue after we received a sizeable number of manuscripts. We are grateful to all reviewers who shared their expertise in their respective disciplines, providing constructive comments on each manuscript, and later working with authors in improving the quality of submissions through successive revisions.

We will see you in the next issue, which will round up our quest for new findings in the KMS and KMS-user-interaction areas. We hope this volume helps you conduct further research and teaching in the area.

REFERENCES


