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Abstract

With the developed economies now firmly based on the power of information, the need to effectively harness, manage, and exploit organizational knowledge for competitive advantage has not been greater. Knowledge management initiatives have been undertaken by various organizations, with varying levels of success. The definitions of "knowledge," "knowledge management," and "knowledge management systems" are fluid at best, leading to a certain amount of confusion for organizations wishing to exploit their institutional knowledge. Nevertheless, several success stories (and a few failures) have been reported in the literature about organizations that have implemented knowledge management systems. It is the objective of this paper to identify some of the lessons learned from these experiences, with the expectation that some direction and guidance can emerge for organizations contemplating this endeavor. As a research-in-progress, the ultimate objective is to expand on the case studies and, eventually, incorporate the lessons learned into a comprehensive strategic framework for organizational knowledge management.

Keywords

Knowledge Management, Knowledge Management Systems, Organizational Knowledge, Success Factors, Lessons Learned.

1. Introduction

In today's information economy, with its burgeoning numbers of "knowledge workers," it is becoming increasingly apparent that organizational performance depends less on tangible assets and more on intangible ones—notably knowledge—contrary to just a couple of decades ago (Norton, 2001). Citing studies conducted by The Brookings Institute, among others, Norton notes the increasing trend in market value attributed to intangible assets (38 percent in 1982, 62 percent in 1992, and 85 percent in 1998), with a corresponding decline in market value attributed to tangible assets. Other authors have made similar observations about today's economy (e.g., Jessup and Valacich, 2008; Laudon and Traver, 2008; Turban, et al., 2006; Luftman, 2004). Drucker (1993) also asserts that knowledge has become the only meaningful resource today, relegating the traditional 'factors of production' to a secondary level of importance. Therefore, an organization's ability to improve its competitive position in today's marketplace will depend, to a large extent, on its ability to harness and successfully utilize its knowledge resources. As indicated by Jennex et al. (2003), a comprehensive and deliberate strategy for organizational knowledge management is needed to address this issue.

Knowledge management poses a significant challenge to many organizations. For one thing, the concept is relatively new and somewhat ill-defined and, for another, there is very little strategic direction and guidance for organizations to follow in their quest to implement

effective knowledge management systems. However, most organizations contemplating knowledge management systems instinctively know that there are benefits to be derived from these systems, if implemented properly. Citing KPMG's "Knowledge Management Report 2000," in which 137 companies were surveyed, Barth (2000) noted that companies practicing knowledge management were generally better off than those that weren't, however, the benefits did not always fulfill the respondents' expectations. The main reasons cited for this failure to meet user expectations include the following: (a) lack of user update due to inadequate communication (b) knowledge management system not integrated into normal everyday working practice (c) lack of time to learn a complicated system (d) lack of training (e) users not seeing any personal benefits (f) senior management not standing behind the project and (g) unsolved technical problems.

At the present time, there is significant interest in knowledge management in the information systems literature. Numerous articles have been written on the subject. However, almost invariably, each article has come with its own set of definitions and classification system for the various aspects of knowledge management (see, for example, Jennex et al., 2003; Liebowitz, 2001; Nonaka and Takeuchi, 1995). This makes it difficult for organizations to obtain useful guidance for knowledge management strategy and implementation. Liebowitz (2001) stipulates that the knowledge management lifecycle comprises the following stages: (a) knowledge capture (b) knowledge sharing (c) knowledge application and (d) knowledge creation. Within this overarching context, several case studies of successful, as well as unsuccessful, knowledge management projects were analyzed for this study.

2. The case studies

The companies examined include the following: Cisco Systems, Bouygues Telecom, Best Buy Company, Xerox Corporation, Pillsbury Company, and IBM. These companies embarked on their knowledge management projects with different objectives, ranging from increasing company profitability to consolidating information/knowledge that was dispersed throughout the organization.

2.1 Successful KM projects

- *Cisco Systems.* Concerned about its ability to harness and utilize its vast amount of institutional knowledge, Cisco Systems utilized sound knowledge management design and implementation principles to build successful knowledge management systems for the capture and dissemination of technical knowledge pertaining to its products. This has greatly facilitated both internal knowledge sharing among Cisco employees as well as providing accurate information to customers, including online self-help tools (Cisco Knowledge Services, 2009). This has resulted in significant cost savings to the company and increased customer satisfaction (Ijaz Qureshi, 2004)
- *Bouygues Telecom.* Given the huge size of this French telecom company—its networks cover 98 percent of France (Knowledge Board, 2009)—information and knowledge sharing became a problem for the company. They took an incremental approach to knowledge management, implementing relatively short, practical KM projects, each addressing a different aspect of their KM needs, including the sharing of accurate information and best practices within the company and with their customers through a single knowledge portal. The systems were able to leverage the company's existing IT systems and infrastructure within the overall knowledge management context. The company improved both its business performance and customer satisfaction (Knowledge Board, 2009).

- *Best Buy Company*. Towards the end of the 1990s, Best Buy's profits began to decline and projections into the future indicated that the downward trend would continue (the company had previously seen its profits grow consistently earlier in the decade) (Barth, 2001). Management quickly realized that the problem was due to the company's fast growth, with the usual accompanying "bad habits" of poor information/knowledge management. They decided that the best approach to solving their problem was to acquire knowledge from strategic partners like Microsoft, IBM, and some select consultants in order to build a knowledge management system with which to better gather, share, and utilize the organization's knowledge and help shorten the learning curve for their over 60,000 employees. Best Buy also elicited the help of the American Productivity and Quality Center (APQC), a non-profit consultancy based in Houston, to help with employee attitudes, among other things. The overall effort resulted in a knowledge management system which helped reverse Best Buy's declining profitability (Barth, 2001).
- *Xerox Corporation*. Xerox implemented a KMS called *Eureka* to collect in a central location the information and knowledge that its technicians shared informally among themselves while doing their jobs. The technicians relied more on these informal notes than on the company's formal paper-based documentation for their maintenance and other technical work. It is worth noting that this system was implemented after some initial resistance and hesitation by senior management (who were initially concerned about costs), but when pilot tests revealed that those technicians using the system had 10 percent lower costs and 10 percent shorter service times than those not using it, management came around and lent the necessary financial support to what has become a successful knowledge management system (Mitchell, 2001).

2.2 Unsuccessful KM projects

- *Pillsbury Company*. A Pillsbury scientist, frustrated that he was unable to locate relevant information in the company's R&D department for his work, proposed the creation of a forum in which everyone would participate and contribute ideas and suggestions for improving product quality. A virtual space was created within the company's network for this purpose. An application was built, a few thought-provoking questions were posted, and e-mail invitations were sent out to all the groups, soliciting their input. To the scientist's chagrin, not a single person responded, and after six months the application was shut down. The reason for this was quite simply that the organizational culture did not recognize or reward this sort of activity, thus there was no incentive for anyone to invest time and energy to solve other people's problems. In fact, some vice presidents frowned upon the idea of 'their' people working to help other teams (Barth, 2000). This underscores the importance of *not* looking at KM projects from a purely technical viewpoint; the cultural and attitudinal aspects are equally, if not more, important.
- *IBM*. An experience at IBM's Global Knowledge Management Consulting and Solutions group reveals that sometimes even when incentives are provided to employees in order to facilitate the development of knowledge management systems, things can still go wrong. The Global Knowledge Management Consulting and Solutions (GKMCS) group teaches lessons learned in extracting value from IT investments to Fortune 1000 companies. The group's senior management recognized the importance of capturing knowledge from client engagements and decided to create an intranet repository for best practices. To encourage participation, contributions to the repository were reflected in employee performance evaluations and bonuses, as appropriate. However, what the employees ended up doing was to write long, unintelligible report (to superficially impress with sheer volume) or wait till the last two weeks in December to submit a hurriedly written

report (in time to beat the year-end deadline for bonuses). Needless to say, the system did not perform as intended. To the GKMCS group's credit, they were able to use this experience to design a better system, thus turning the apparent failure into a success story. They did this by creating a "community submission process" involving a network of experts that, on a rotating basis, would review, comment on, and request contributions to the knowledge base. IBM called the resulting system an intellectual capital management system and it became a key tool in its consulting arsenal (Barth, 2000).

3. Lessons learned

Preliminary analysis of the case studies mentioned above reveals several lessons for success. These include the following:

1. *It is important to create and actively promote a culture of knowledge sharing within the organization. This includes*:
   a. clearly articulating and sharing a corporate vision of knowledge management
   b. rewarding employees for knowledge sharing activities
   c. creating communities of practice to improve communication among people with common interests
   d. involving multiple departments and levels within the organization in KM projects to further encourage cross-functional knowledge sharing
   e. encouraging, and even championing, the creation of a "best practices" repository

2. *Align individual goals with corporate goals*

3. *Build a learning organization by*:
   a. creating an environment that encourages and rewards experimentation and creativity
   b. providing the necessary training for employees who will use the knowledge management system (KMS)
   c. encouraging, collecting, and using employee feedback

4. *In the design and planning of a given KMS project, it is important to*:
   a. Correctly define the problem at hand, and identify it as one that requires a KMS solution, as opposed to some other technology.
   b. Precisely define the KMS project objectives.
   c. Approach the problem not as a technical problem, but as an enterprise-wide problem, whose solution will most likely involve a realigning of people, processes, and technologies.
   d. Create and standardize a knowledge submission process
   e. Create methodologies and processes for the codification, documentation, and storage of structured knowledge in relevant databases
   f. Design processes for capturing and converting individual tacit knowledge into organizational knowledge; this can include the use of apprenticeship programs, workshops, and demonstrations by recognized experts to reveal their tacit knowledge
   g. Aim to capture knowledge that has the following characteristics:
      • is relevant to the intended users' daily activities and is easily accessible
      • has value (i.e., produces some real benefit to the user and the organization)
      • is accurate, reliable, and up-to-date
   h. Use formal design methodologies
   i. Design relevant and easily accessible portals and knowledge-sharing databases
   j. Create a system for cataloging the team members' strengths and expertise

5. *During implementation, it is important to*:
   a. Use a pilot approach to manage complexity and demonstrate success
   b. Employ effective change management techniques
   c. Measure the benefits of the pilot system by means of appropriate and valid metrics
   d. Utilize operational knowledge whenever possible
   e. Involve subject matter experts for content management
   f. Use formal implementation methodologies
   g. As much as possible, use advisory boards and steering committees, comprised of relevant players, to further ensure buy-in and implementation success
   h. Use appropriate knowledge management tools and technologies, such as portals and intranets, where necessary
   i. Acquire requisite expertise by using external consultants and/or other strategic partners where necessary

4. Conclusion

Knowledge management can be effectively and successfully implemented in organizations if approached properly. Preliminary results from this study have revealed some important lessons learned for organizations contemplating knowledge management systems. Each of the lessons learned above fits within Liebowitz's (2001) knowledge management lifecycle and, collectively, can provide useful guidance for the successful implementation of knowledge management systems within organizations.

References

Barna, Z. (2002) *Knowledge Management: A critical e-Business Strategic Factor*, Information and Decision Systems Department, San Diego State University: Unpublished Master's Thesis.

Barth (2001) "Learning from mistakes: Best Buy applies best practices to save itself from potential disaster", *Knowledge Management Magazine* (Cover story, April), http://www.destinationcrm.com/km/dcrm_km_article,asp?=818

Barth, S. (2000) "KM Horror Stories: These tales from the dark side of knowledge initiatives may keep you up at night", *Knowledge Management*, (3)10, pp. 37-40.

Cisco Knowledge Services (2009) "Remote knowledge transfer sessions", retrieved December
http://www.cisco.com/web/learning/le31/ase/knowledgeservices/index.html#~rkts

Drucker, P. (1993) *Post-Capitalist Society*, New York: Harper Business.

Jennex, M., L. Olfman, and T. Addo (2003) "The Need for an Organizational Knowledge Management Strategy", *Proceedings of the Hawaii International Conference on Systems Science (HICSS)*, January.

Jessup, L. and J. Valacich (2008) *Information Systems Today: Managing in the digital world*, New Jersey: Pearson/Prentice-Hall.

Knowledge Board (2009) "KM The Bouygues Telecom Way", retrieved December http://www.knowledgeboard.com/cgi-bin/item.cgi?id=1299

Laudon, K.C. and C.G. Traver (2008) *E-Commerce: Business, Technology, Society*, New Jersey: Pearson/Prentice-Hall.

Liebowitz, J. (2001) *Knowledge Management: Learning from Knowledge Engineering*, Boca Raton: CRC Press LLC.

Luftman, J. N. (2004) *Managing the Information Technology Resource: Leadership in the Information Age*, New Jersey: Pearson/Prentice-Hall.

Mitchell, M. (2001) "Xerox may have trouble at the top, but it's learning to manage knowledge from the bottom up", *Darwin magazine*, retrieved December 4, 2001 http://www.darwinmag.com/read/020101/share_content.html

Nonaka, I. and H. Takeuchi (1995) *The Knowledge-Creating Company: How Japanese companies create the dynamics of innovation*, New York: Oxford University Press.

Norton, D.P. (2001) "Measuring and Managing the Value of Information Capital", *BSCol NetConference*, Sept. 21.

Qureshi, Ijaz (2004) *Knowledge Management and E-Learning at Cisco Systems*, Research Paper For IS 211, School of Information management and Systems, UC Berkeley.

Turban, E., D. Leidner, E. McLean and J.C. Wetherbe (2006) *Information Technology for Management: Transforming organizations in the digital economy*. New Jersey: Wiley & Sons, Inc.