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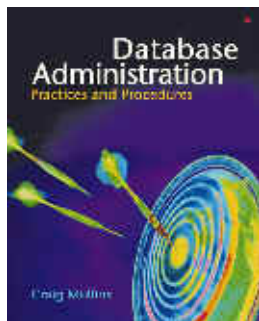
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The DBA Corner
by Craig S. Mullins

What is Knowledge and Can It be Managed?

What is knowledge? Furthermore, what is knowledge management and can knowledge really be managed? Webster's New Collegiate Dictionary defines knowledge as "the fact or condition of knowing something with familiarity gained through experience or association." This seems to be a good definition of knowledge as it is universally used and accepted.

However, it begs the following question: what is meant by the term "knowing?" Webster's defines the word "know" as "to perceive directly: have direct cognition of." And just for completeness sake, cognition is defined as "the act or process of knowing including both awareness and judgment." According to these definitions, knowledge implies cognition, and cognition implies awareness. And computers do not have "awareness"-- yet. So it seems suspect that a computer would be able to perform knowledge management, doesn't it? But let's dive a little deeper.

The basic building block of knowledge is data. Data is a fact represented as an item or event out of context and without any relation to other things. Examples of data are 27, 010110, and JAN. Without additional details, we know nothing about any of these three pieces of data. Information, on the other hand, adds context through relationships between data, and possibly other information. Data with metadata and context makes information. The relationships may represent information, yet the relations do not actually constitute information until they are understood. Knowledge adds understanding and retention to information. It is the next natural progression after information. The final step would be to move from knowledge to wisdom. Wisdom can be thought of as knowledge applied. Knowledge management requires technology, business strategy, and people. It is the process of capturing the collective knowledge of the organization, analyzing it, and transforming it into easily recognizable forms for mass consumption and communicating the results to the organization by easily accessible means. The business strategy of the organization must acknowledge the requirement to capture knowledge and actively foster the effort. Technology can help to capture information, but it cannot create knowledge. Useful technologies include search engines, scanning technology, optical character and voice recognition software, intelligent agents, database management systems, document management systems, and repositories.

Once the information is identified, collected, and managed, it must be transformed into knowledge. This requires classification, analysis, and synthesis. This step, too, requires human intervention. Only a human being can render information into a format that causes it to be easily transformed into knowledge by another human being upon retrieval. Useful technologies for this phase of the knowledge management process include statistical analysis software, data mining tools, OLAP and decision support systems, AI, and data visualization tools.

The final phase is effectively communicating the captured "knowledge." What is captured is information that is more easily transformed into knowledge by the recipient. Technologies that help to facilitate communication include collaboration technology, groupware, workflow management systems, e-mail, the Web, networking technology, and mobile computing. The captured "knowledge" should be easily convertible into any format preferred by the recipient.

More progressive organizations share information and knowledge freely. This attitude needs to permeate the organization for knowledge management to succeed. An organization also needs to make the time to "capture" its knowledge. Knowledge management is not a technology, but an amalgamation of strategy, technology, and people. The proliferation of "knowledge" throughout an organization is a good thing. Start today to understand what it is and work toward a plan that maps out a knowledge management strategy for your organization.

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