

ONLINE SUPPLEMENTS

Changing the Competitive Landscape: Continuous Innovation through IT-Enabled Knowledge Capabilities

Table A: List of Keywords and Journals for IT Data Collection

Keywords	Journals
Knowledge acquisition	<i>Academy of Management Journal</i>
Knowledge creation	<i>Academy of Management Review</i>
Knowledge diffusion	<i>Annual Review of Sociology</i>
Knowledge exchange	<i>Decision Sciences</i>
Knowledge generation	<i>Decision Support Systems</i>
Knowledge integration	<i>European Journal of Information Systems</i>
Knowledge management	<i>Expert Systems with Applications</i>
Knowledge management activities	<i>Information Systems Research</i>
Knowledge process	<i>International Journal of Knowledge Management</i>
Knowledge sharing	<i>Journal of Management Information Systems</i>
Knowledge transfer	<i>Journal of Management Studies</i>
	<i>Journal of Operations Management</i>
	<i>Journal of Strategic Information Systems</i>
	<i>Journal of the Association for Information Systems</i>
	<i>Management Science</i>
	<i>MIS Quarterly</i>
	<i>Organization Science</i>
	<i>Organization Studies</i>
	<i>Organizational Behavior and Human Decision Processes</i>
	<i>Strategic Management Journal</i>

Table B. Sample Technologies and News Coding Examples

IT-Enabled Knowledge Capabilities & Sample Technologies	News Coding Examples
<u>IT-RACAP</u> Analytical software; business intelligence; data analytics; data mining; simulation software; decision support system; digital dashboard; online analytical processing; visualization.	1. Union Pacific Railroad, <i>KM World</i>, July 23, 2001: Of prime importance to any railroad company, for both safety and financial reasons, is the maintenance of its tracks. Union Pacific Railroad, one of North America's largest, is using Internet-based information intelligence software to analyze data about the condition of its tracks - when the tracks were last tested, what defects were found, etc.- to make repairs before major problems occur. nQuire Suite 3.0... [t]he Internet Intelligence Platform (IIP) provides business analytics for large, complex data warehouses, and can access and integrate data from multiple sources and systems. Our coding: In this example, the technology application was first identified as nQuire Suite 3.0, a business intelligence tool, which was further mapped to IT-RACAP based on our coding protocol. 2. Biogen Inc., <i>eWeek</i>, February 10, 2003: Accelrys Inc., the software development arm of Pharmacopeia Inc., a company that offers products and services enabling drug and chemical discovery, has a wide array of products, but two of the most interesting are DS Gene and DS Modeling, which work in tandem with DecisionSite. Whereas DecisionSite is a powerful application for analyzing existing data, Accelrys' products were developed to take initial raw data and embellish it with new data that can be calculated from the original data. That data can be passed into DecisionSite for analysis and visualization. A third package called Discovery Studio ties the two together and is used to create the embellished data. Although it is impossible to say if any new, widely recognized drugs have been created using the combination of Accelrys' tools and DecisionSite, it is likely that some were. Biotech biggie Biogen Inc. has patents pending on drugs created in part with Accelrys. Our coding: In this example, the technology application was identified as Accelrys' data visualization and data analytics tool, DS Gene, DS Modeling, DecisionSite and Discovery Studio, which could analyze and visualize data for drug and chemical discovery. This technology application was further mapped to IT-RACAP based on our coding protocol.
<u>IT-PACAP</u> Enterprise resource planning system; Customer relationship management system; Supply chain management system; Database; Content management system; Repository; Information retrieval or search software; Data reading system.	3. Xerox, <i>KM World</i>, January 1, 2000: Xerox rolled out a knowledge sharing, best-practice repository called Eureka that enhances customer service by increasing Xerox's 14,000 technicians' ability to diagnose, solve and prevent equipment problems in the field, anywhere in the world. Eureka enables Xerox to bring many of the insights gained from the service people to the groups that produce documentation, manufacture products and make engineering and design improvements. For example, in Brazil, a customer had problems with a Xerox DocuColor 40 production color copier/printer to the point where the technicians were going to replace the \$40,000 machine. Using Eureka, the technicians in Sao Paulo discovered a tip from Canada that suggested replacing a 90-

	cent connector. The technicians replaced the connector and fixed the machine. But it doesn't stop there. That tip was sent back to manufacturing, and the problem can now be remedied at the source. For Xerox, a little knowledge, insight and experience goes a long way toward the bottom line and customer satisfaction. Our coding: In this example, the technology application was identified as Eureka, a best-practice repository. The technology application was further mapped to IT-PACAP based on our coding protocol. 4. Union Pacific Railroad, <i>KM World</i>, July 23, 2001: The information is available to railroad employees with a click of a button through a customized Web portal. The addition of voice and wireless capabilities enables engineers to access data anywhere in the field from a variety of wireless devices including cell phones, PDAs and laptops. Union Pacific Railroad provides 4,000 employees with timely and actionable information, from huge volumes of data across multiple sources and systems. These capabilities are enabling us to positively impact operating efficiencies, improve our ability to exploit our information assets and allow employees at all levels of the organization access to the information that they specifically require to do their job. Our coding: In this example, the technology application was identified as portal, which primarily was used to provide an integrated interface to allow employees to access to company data across multiple sources and systems. This technology was further mapped to IT-PACAP based on our coding protocol and the specific application context at Union Pacific Railroad.
<u>IT-SIC</u> Collaboration technology; e-community of practice, Web 2.0, groupware; messaging service; computer conferencing; video conferencing; Web conferencing.	5. General Motors, <i>KM World</i>, October 25, 2000: The Web-based groupware solution, called SLATE... Its systems-based architecture gives project teams a consistent frame of reference and enables them to make decisions based on collaboration among all of the various disciplines involved. Our coding: In this example, the technology application was identified as groupware SLATE, which was primarily used to share information among project teams. This technology was further mapped to IT-SIC based on our coding protocol. 6. Eli Lilly, <i>eWeek</i>, February 2, 2004: Eli Lilly's InnoCentive project... uses the Web to post small research problems online, offering a reward and recognition for scientists who can come up with a solution. The initiative recently led to a scholar working on a doctorate in organic medicinal chemistry in Shanghai, China, solving a problem linked to obesity. Our coding: In this example, the technology application was identified as InnoCentive, an e-community of practice for open source innovation that engages creative thinkers- engineers, scientists, inventors and business people - to jointly solve R&D challenges. This technology application was further mapped to IT-SIC based on our coding protocol.

