Chapter 14 Review Questions

1. **What is tacit knowledge? What is explicit knowledge?**

Tacit knowledge exists within a person’s mind, and is private and unique to each person. Explicit knowledge has been articulated, codified, and made public. Western management practices have concentrated on managing explicit knowledge, but cultivating and leveraging tacit knowledge is just as important. Effective knowledge management requires transferring knowledge between these two states.

1. **What are the four phases of Giga’s knowledge management model?**

The four stages represent what people generally do with knowledge.

1) They create it, or capture it from a source

2) They organize it and put it into categories for easy retrieval

3) They distribute it (push) or access it (pull), and

4) They absorb another’s knowledge for their own use or to create more new knowledge, beginning the cycle again.

1. **What are the differences among human capital, structural capital, and customer capital?**

Human capital consists of knowledge, skills, and innovativeness of employees as well as company values, culture, and philosophy. It is created during the knowledge creation-capture and knowledge absorption-reuse stages because these two stages focus on getting people together to share knowledge. They deal with the people aspects of knowledge management.

Structural capital is the capabilities embedded in hardware, software, databases, organizational structure, patents, and trademarks that support employees as well as relationships with customers. It is formed in the knowledge organization-categorization and knowledge distribution-access stages because these stages focus on moving knowledge from people’s heads to a tangible company asset. These stages deal with the technology issues surrounding knowledge management and sharing.

Customer capital is the strength of a company’s franchise with its customers and is concerned with its relationships and networks of associates. It is formed when customers are familiar with a company’s products or services. This form of capital may be either human (relationships with the company) or structural (products used from the company).

1. **How has Buckman Laboratories encouraged knowledge creation and capture worldwide?**

Buckman established a knowledge transfer system called K’Netix, the Buckman Knowledge Network. The goal of K’Netix is to get people who have not met each other, but belong to the same business, to communicate with each other and develop trust in each other. When employees need information or help, they just ask via forums, which are Buckman-only online forums over the Internet. In so doing, Buckman is creating a self-building knowledge base, which can be used for what-if analyses and can be mined to create new knowledge.

1. **What is “The Rudy problem” and how did Seemann attempt to deal with it?**

“Rudy” is a fictional worker who represents employees who “do not work” but stand around and talk all day and “sort of help out.” But if “Rudy” is laid off, his department falls apart because there was no one to help or to provide guidance. When a company fires a “Rudy,” they fire their organizational memory. He is a crucial, yet unrecognized asset, because he is willing to share his knowledge. One way to fix “the Rudy problem” is to create a technical career track and promote knowledge brokers. This sends a signal that knowledge sharing was recognized in the company, since companies cannot appoint knowledge brokers.

1. **What are the two roles of the BP T-shaped manager in Egypt?**

The T-shaped executive who heads BP’s gas business unit in Egypt has two roles: one vertical and one horizontal. As CEO of the business unit, he is responsible for its profit-and-loss statements and capital investment decisions, as well as for participating in cross-unit activities. He and the seven gas-production peers in the Mediterranean and Atlantic region in his peer group limit their meetings to business purposes, not meeting for knowledge sharing but for deciding how to allocate capital amongst themselves and how to meet production targets set by their division’s executive committee.

In his knowledge-sharing role, he connects people, acting in some ways like a “human portal.” He gives advice to peer business units and requests peer assists—due to all this networking, people know where expertise lies, so they go directly rather than through headquarters. And because sharing is rewarded, bosses know who is sharing (and requesting assistance) and who isn’t. BP has aimed to change management activities, not corporate structure, to gain the benefits of knowledge sharing while preserving the autonomy of its business units – so they can more quickly and effectively serve their local markets

1. **What did the pharmaceutical company do to create a knowledge infrastructure?**

The project revolved around creating a “knowledge infrastructure” that manages information, enables understanding, and supports learning. The crux of the matter was to understand the customer’s needs (in this case, the FDA is the primary customer, but insurance companies, doctors, and consumers are also customers). The company sees itself in the business of selling knowledge about disease, treatment, and how a drug will work in particular scenarios. The project began by studying and codifying 60,000 pages of documents, but the knowledge infrastructure project team found the files lacking when they did not each contain purpose, content, logic, and context.

To rectify the situation, the study team created a generic knowledge tree of the questions the FDA asks when deciding whether or not to approve a drug. The top of the tree has their three main questions, and then lays out the supporting questions for these three to show which questions they needed to answer to the FDA’s satisfaction. It also showed people why others needed specific information, thus giving them a context (beyond trust) for sharing.

The project team also got other teams to write up their 10-year drug study before they did it, so they were clear about the data they needed to gather and present to the FDA.

1. **What approach did the energy company take to encourage knowledge sharing among its 15 business units?**

In this highly autonomous energy company, management decided to focus on promulgating best practices across the business units. Best practices were documented using Lotus Notes and similar programs. These efforts were disparate, however, so an enterprising manager within IT gathered all the statistics together and created a booklet to align the various divisions, explaining the company’s mission, vision, values, total quality management (TQM), and environmental policies. This became the guide for sharing best practices, and played an important role in espousing knowledge distribution and reuse.

Seeing the benefits of this process orientation, the corporate office funded other cross-business-unit initiatives that fostered sharing. Certain people designated “technical knowledge experts” disseminated tacit knowledge technically into explicit knowledge. Lotus Notes again linked best practice databases across the 15 operating companies, and employees were encouraged to use Notes to describe best practices, search for a mentor on a subject they need to know about, and find best practices. The company has also created online discussion databases to encourage sharing and reduce travel, yet have led to face-to-face get-togethers, which has further spurred sharing on common topics.

This company has spurred best practice sharing wherever it makes sense, mainly guided by the interests of the employees. The results have not only been cost savings but a change in employee perception, based on the results of employee satisfaction surveys. Employees responded that there was increased emphasis on processes, and more sharing of best practices across the company.

1. **Give three cultural roadblocks to knowledge management projects, as noted by Brooks.**

* Being seen as a whistle-blower or messenger of bad news: few people want to betray their boss, so they avoid presenting early warnings or disagreeing with internal documents.
* Losing one’s place as a knowledge gatekeeper: while knowledge brokers are important in organizations, their self-value comes from their controlling the knowledge they house, and sharing it only with whom and when they choose. They may see a knowledge management system that encourages the free-flow of ideas as decreasing their value, and therefore fight it.
* Knowledge sharing takes time: experts may hide so that they are not bothered by requests from others, while others may not present ideas that may benefit the organization as a whole but have no personal reward.

1. **What three questions does Stewart recommend be asked before launching a knowledge management project?**

Given the high number of failed knowledge management projects, Stewart suggests answering the following three questions before launching off:

Which group will use this knowledge space? Once determined, make them responsible for the content.

What kind of knowledge does the group need? Once known, that knowledge needs to be managed within that group’s context because that’s where the value arises. A knowledge management system or resource should only deal with a single group that creates value in the same way.

What’s the company culture, reusers or originators? The difference matters. A repository of things helps a reuse culture; an online chat room helps originators – but not vice versa.

1. **According to Davenport, what are three management issues in managing information? Briefly describe each.**

* Value issues: information’s value depends on the recipient and the context. The only practical way to establish the value of information is to establish a price for it and see whether anyone buys.
* Usage issues: information management deals with how people use information, not how they use machines. The importance and difficulty of managing information use are that information’s complexity needs to be preserved, that culture often blocks sharing (especially in highly competitive organizational cultures), and that technology does not change culture (this requires changing basic behaviors, values, attitudes, and management expectations).
* Sharing issues: a sharing culture must be in place or the existing disincentives will thwart using a sharing system. Technical solutions do not address the sharing issue, since managers get two-thirds of their information from conversations, one-third from documents, and almost none directly from computer systems. Also, forcing employees to share information with those above them can lead to intrusive management. Limits are also necessary, since unlimited information sharing does not work.

1. **According to Moor, what is the role of computer ethics?**

Moor stated that new technologies raise ethical issues because they create policy vacuums. The role of computer ethics is to fill the vacuums: privacy, property rights, liabilities, free speech, and professional ethics. New technologies bring benefits and problems, which raise the ethical issues of how to shape a technology’s use for good and minimize its use for harm. We need to make moral choices about how we are going to use IT, personally, organizationally, nationally, and even globally. The central task of computer ethics is to determine what our personal and social policies should be.

1. **Give some examples of IT ethical issues.**

Borrowing a software package, copying it, and then returning the original software to the owner. (Intellectual property rights)

Using data mining tools to uncover patterns and correlations among customers. (Privacy)

Designing insecure systems that monitor radar signals and launch missiles in response to those signals but cannot adequately distinguish between a missile and a small airplane. (Professional ethics)

Unmoderated listservs, where reprimanding messages can be confused for broadcasting personal attacks. (Flaming)

Expert systems that conflict with personal experience—how can its logic be checked? (Accountability)

Are bulletin board owners liable for the contents posted on their board? (Accountability)

1. **How does Johnson recommend increasing information privacy protection?**

Johnson recommends five ways to increase information privacy protection:

1. At the national level: Treat privacy as a social good that lies at the heart of democracy, giving its protection more weight. Deal with privacy policy nationwide rather than industry by industry, as it has been in the past. Citizens need protection from private institutions just as much as public ones, so include both public and private information-gathering, with an eye toward global exchange. Treat personal information as part of the infrastructure of our society. It is better to manage this information outside the marketplace.
2. Computer professionals: Point out privacy matters to clients when they build databases that contain personal information.
3. Technology: Use privacy protection technologies, such as Web anonymity and tools for detecting the privacy level of a Website.
4. Institutions: Adopt internal policies that protect privacy, such as restricting who can see personal information.
5. Individuals: Take personal actions to increase the privacy of information about you.
6. **What are the four methods of legal protection of intellectual property?**

* Copyrights aim to protect an author’s or artist’s expression once it is in a tangible form. The work must be expressive rather than functional; a copyright protects the expression, not the idea.
* Patents aim to protect inventions things or processes for producing things. Valid for 20 years, the protection is quite strong. In the U.S., patents are granted by the U.S. Patent and Trademark Office after stringent thresholds on inventiveness have been met.
* Trademarks protect names, symbols, and other icons use to identify a company or product. Trademarks can be registered with the U.S. Patent & Trademark Office. A trademark is valid indefinitely, as long as it is used and does not become a generic name for the goods or services.
* Trade Secrets protect company secrets, which can cover a wide range of processes, formulas, and techniques. A trade secret is not registered and is valid indefinitely, as long as it remains a secret. Although laws protect the thief of trade secrets, it is not illegal to discover a trade secret through reverse engineering.