chapter 4

Recognizing a Firm's Intellectual Assets

Moving beyond a Firm's Tangible Resources

**After reading this chapter, you should have a good understanding of the following learning objectives:**

LO4.1 Why the management of knowledge professionals and knowledge itself are so critical in today's organizations.

LO4.2 The importance of recognizing the interdependence of attracting, developing, and retaining human capital.

LO4.3 The key role of social capital in leveraging human capital within and across the firm.

LO4.4 The importance of social networks in knowledge management and in promoting career success.

LO4.5 The vital role of technology in leveraging knowledge and human capital.

LO4.6 Why "electronic" or "virtual" teams are critical in combining and leveraging knowledge in organizations and how they can be made more effective.

LO4.7 The challenge of protecting intellectual property and the importance of a firm's dynamic capabilities.

Learning from Mistakes

In September 2008, Bank of America purchased Merrill Lynch (ML) in the depths of the financial crisis for $50 billion. It seemed like a pretty good deal. However, six months later Bank of America reported $15 billion in losses due to ML's exposure in toxic mortgage-backed securities bonds. This resulted in a class-action lawsuit, with $2.43 billion going to shareholders and $150 million to the Securities Exchange Commission.[1] Despite these early legal woes, ML has helped bolster Bank of America, contributing roughly half the bank's revenue and the bulk of its profits since 2009, according to bank analysts. From 2009 to 2011, Merrill Lynch made $164.4 billion in revenue and $31.9 billion in total profits. Bank of America over that period, as a total entity, made $326.8 billion in revenue and $5.5 billion in profits. Thus, while the bank was hemorrhaging cash and facing a struggling economy, ML was standing strong and keeping the bank afloat with its army of 16,000 brokers.

Investment bankers, senior executives, and brokers receive Bank of America stock as a significant portion of their compensation in order to align their interests with those of Bank of America's. Yet hundreds of
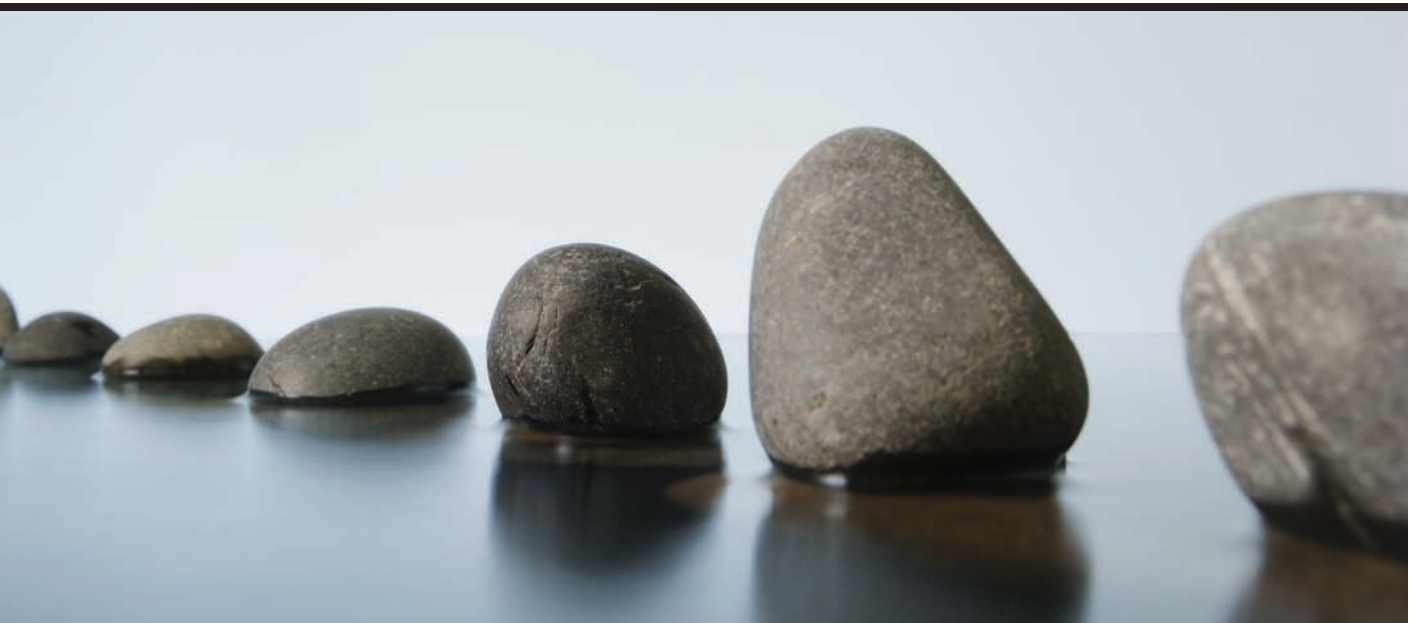
high-performing brokers and financial advisors at Merrill Lynch have recently fled the firm. What happened?

Bank of America mismanaged its most valuable asset—its human capital. While it tried to promote the corporate initiative of cross-selling Bank of America's banking products and services to ML's clients, it lost many of its star employees and, of course, their networks of high-net-worth clients in the process.

Leveraging ML's sales force was the focus of Brian Moynihan, chief executive officer. He cited cross-selling as key opportunities for growth, that is, turning brokerage clients into banking clients, and vice versa. However, as Sanford C. Bernstein analyst Brad Hintz pointed out, "the payout on banking products is less to brokers, and they're being asked to share client relationships with Bank of America. That's never a good thing for a broker." Bank of America poorly executed its cross-selling strategy. This left both clients and brokers demanding higher quality levels of service and questioning why they were associated with Bank of America in the first place. Brokers who were managing over $1 billion in client assets were getting calls from their clients dealing with elementary banking and checking issues. For example, one high-end broker was called about misprinted checks! Additionally, the special white-glove service that ML brokers were accustomed to giving their high value clients was falling short: Mortgages for ultra-high-net-worth individuals were taking nine months to complete, and the standard practice of charging maintenance fees to cover expenses when accounts fell below their minimum could not be waived at the discretion of the broker.

Bank of America also had some inflexible human resource practices that alienated the brokers. For example, Patrick Rush had been teaching continuing education courses focusing on retirement planning at local colleges. Although Merrill saw value in his teaching and community involvement, Bank of America told him he had to stop. Rush left in 2011 and started his own wealth management firm.

Clearly, Bank of America did not realize that their brokers are highly valuable assets (along with their high-net-worth clients). They paid the price for not fostering the environment for these employees to flourish.

Discussion Questions

1. What actions should Bank of America take to retain its top investment advisors?
2. Can they do this while still leveraging value?
3. Should they continue to cross-sell?

Managers are always looking for stellar professionals who can take their organizations to the next level. However, attracting talent is a necessary but *not* sufficient condition for success. In today's knowledge economy, it does not matter how big your stock of resources is—whether it be top talent, physical resources, or financial capital. Rather, the question becomes: How good is the organization at attracting top talent and leveraging that talent to produce a stream of products and services valued by the marketplace?

Bank of America's problems with Merrill Lynch, its brokerage division, illustrate issues related to effectively developing and retaining talent. Faced with pressures to cross-sell Bank of America products to their high-net-worth clients, many Merrill brokers have chosen to leave and, of course, taken their clients with them. Restrictive personnel policies, such as barring them from teaching continuing education courses, didn't help either. As a recent article commented, "Merrill's best assets have legs. A heavy corporate hand could send them sprinting."

In this chapter, we also address how human capital can be leveraged in an organization. We point out the important roles of social capital and technology.

<div>
L04.1

Why the management of knowledge professionals and knowledge itself are so critical in today's organizations.
</div>

The Central Role of Knowledge in Today's Economy

Central to our discussion is an enormous change that has accelerated over the past few decades and its implications for the strategic management of organizations.[2] For most of the 20th century, managers focused on tangible resources such as land, equipment, and money as well as intangibles such as brands, image, and customer loyalty. Efforts were directed more toward the efficient allocation of labor and capital—the two traditional factors of production.

How times have changed. Today, more than 50 percent of the gross domestic product (GDP) in developed economies is knowledge-based; it is based on intellectual assets and intangible people skills.[3] In the U.S., intellectual and information processes create most of the value for firms in large service industries (e.g., software, medical care, communications, and education), which make up 77 percent of the U.S. GDP. In the manufacturing sector, intellectual activities like R&D, process design, product design, logistics, marketing, and technological innovation produce the preponderance of value added.[4] To drive home the point, Gary Hamel and the late C. K. Prahalad, two leading writers in strategic management state:

> The machine age was a physical world. It consisted of things. Companies made and distributed things (physical products). Management allocated things (capital budgets); management invested in things (plant and equipment).
>
> In the machine age, people were ancillary, and things were central. In the information age, things are ancillary, knowledge is central. A company's value derives not from things, but from knowledge, know-how, intellectual assets, competencies—all embedded in people.[5]

In the **knowledge economy,** wealth is increasingly created by effective management of knowledge workers instead of by the efficient control of physical and financial assets. The growing importance of knowledge, coupled with the move by labor markets to reward knowledge work, tells us that investing in a company is, in essence, buying a set of talents, capabilities, skills, and ideas—intellectual capital—not physical and financial resources.[6]

Let's provide a few examples. People don't buy Microsoft's stock because of its software factories; it doesn't own any. Rather, the value of Microsoft is bid up because it sets standards for personal-computing software, exploits the value of its name, and forges alliances with other companies. Similarly, Merck didn't become the "Most Admired" company, for seven consecutive years in *Fortune*'s annual survey, because it can manufacture pills, but because its scientists can discover medicines. P. Roy Vagelos, former CEO of Merck, the $47 billion pharmaceutical giant, during its long run atop the "Most Admired" survey, said, "A low-value product can be made by anyone anywhere. When you have knowledge no one else has access to—that's dynamite. We guard our research even more carefully than our financial assets."[7]

To apply some numbers to our arguments, let's ask, What's a company worth?[8] Start with the "big three" financial statements: income statement, balance sheet, and statement of cash flow. If these statements tell a story that investors find useful, then a company's market value* should roughly (but not precisely, because the market looks forward and the books look backward) be the same as the value that accountants ascribe to it—the book value of the firm. However, this is not the case. A study compared the market value with the book value of 3,500 U.S. companies over a period of two decades. In 1978 the two were similar: Book value was 95 percent of market value. However, market values and book values have diverged significantly. Within 20 years, the S&P industrials were—on average—trading at 2.2 times book value.[9] Robert A. Howell, an expert on the changing role of finance and accounting, muses, "The big three financial statements . . . are about as useful as an 80-year-old Los Angeles road map."

The gap between a firm's market value and book value is far greater for knowledge-intensive corporations than for firms with strategies based primarily on tangible assets.[10] Exhibit 4.1 shows the ratio of market-to-book value for some well-known companies. In firms where knowledge and the management of knowledge workers are relatively important contributors to developing products and services—and physical resources are less critical—the ratio of market-to-book value tends to be much higher.

As shown in Exhibit 4.1, firms such as Apple, Google, Microsoft, and Oracle have very high market value to book value ratios because of their high investment in knowledge resources and technological expertise. In contrast, firms in more traditional industry sectors such as Nucor and Southwest Airlines have relatively low market to book ratios. This reflects their greater investments in physical resources and lower investment in knowledge resources. A firm like Intel has a market to book value ratio that falls between the above two groups of firms. This is because their high level of investment in knowledge resources is matched by a correspondingly huge investment in plant and equipment. For example, Intel recently invested $3 billion to build a fabrication facility in Chandler, Arizona.[11]

Many writers have defined **intellectual capital** as the difference between a firm's market value and book value—that is, a measure of the value of a firm's intangible assets.[12] This broad definition includes assets such as reputation, employee loyalty and commitment,

*The market value of a firm is equal to the value of a share of its common stock times the number of shares outstanding. The book value of a firm is primarily a measure of the value of its tangible assets. It can be calculated by the formula: total assets − total liabilities.

EXHIBIT 4.1

Ratio of Market Value to Book Value for Selected Companies

Company	Annual Sales ($ billions)	Market Value ($ billions)	Book Value ($ billions)	Ratio of Market to Book Value
Apple	157.0	510.0	117.2	4.4
Google	47.3	237.8	58.1	4.1
Oracle	37.1	162.4	44.1	3.7
Microsoft	73.7	229.4	66.4	3.5
Intel	53.8	106.1	45.9	2.3
Nucor	19.8	14.2	7.5	1.9
Southwest Airlines	17.0	7.9	6.9	1.1

Note: The data on market valuations are as of January 4, 2013. All other financial data are based on the most recently available balance sheets and income statements.

Source: *finance.yahoo.com.*

customer relationships, company values, brand names, and the experience and skills of employees.[13] Thus, simplifying, we have:

$$\text{Intellectual capital} = \text{Market value of firm} - \text{Book value of the firm}$$

How do companies create value in the knowledge-intensive economy? The general answer is to attract and leverage human capital effectively through mechanisms that create products and services of value over time.

First, **human capital** is the "*individual* capabilities, knowledge, skills, and experience of the company's employees and managers."[14] This knowledge is relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, and experience through learning.[15]

Second, **social capital** is "the network of relationships that individuals have throughout the organization." Relationships are critical in sharing and leveraging knowledge and in acquiring resources.[16] Social capital can extend beyond the organizational boundaries to include relationships between the firm and its suppliers, customers, and alliance partners.[17]

Third is the concept of "knowledge," which comes in two different forms. First, there is **explicit knowledge** that is codified, documented, easily reproduced, and widely distributed, such as engineering drawings, software code, and patents.[18] The other type of knowledge is **tacit knowledge.** That is in the minds of employees and is based on their experiences and backgrounds.[19] Tacit knowledge is shared only with the consent and participation of the individual.

New knowledge is constantly created through the continual interaction of explicit and tacit knowledge. Consider, two software engineers working together on a computer code. The computer code is the explicit knowledge. By sharing ideas based on each individual's experience—that is, their tacit knowledge—they create new knowledge when they modify the code. Another important issue is the role of "socially complex processes," which include leadership, culture, and trust.[20] These processes play a central role in the creation of knowledge.[21] They represent the "glue" that holds the organization together and helps to create a working environment where individuals are more willing to share their ideas, work in teams, and, in the end, create products and services of value.[22]

Numerous books have been written on the subject of knowledge management and the central role that it has played in creating wealth in organizations and countries throughout the developed world.[23] Here, we focus on some of the key issues that organizations must address to compete through knowledge.

We will now turn our discussion to the central resource itself—human capital—and some guidelines on how it can be attracted/selected, developed, and retained.[24] Tom Stewart, former editor of the *Harvard Business Review,* noted that organizations must also undergo

human capital
the individual capabilities, knowledge, skills, and experience of a company's employees and managers.

social capital
the network of friendships and working relationships between talented people both inside and outside the organization.

explicit knowledge
knowledge that is codified, documented, easily reproduced, and widely distributed.

tacit knowledge
knowledge that is in the minds of employees and is based on their experiences and backgrounds.

significant efforts to protect their human capital. A firm may "diversify the ownership of vital knowledge by emphasizing teamwork, guard against obsolescence by developing learning programs, and shackle key people with golden handcuffs."[25] In addition, people are less likely to leave an organization if there are effective structures to promote teamwork and information sharing, strong leadership that encourages innovation, and cultures that demand excellence and ethical behavior. Such issues are central to this chapter. Although we touch on these issues throughout this chapter, we provide more detail in later chapters. We discuss organizational controls (culture, rewards, and boundaries) in Chapter 9, organization structure and design in Chapter 10, and a variety of leadership and entrepreneurship topics in Chapters 11 and 12.

Human Capital: The Foundation of Intellectual Capital

Organizations must recruit talented people—employees at all levels with the proper sets of skills and capabilities coupled with the right values and attitudes. Such skills and attitudes must be continually developed, strengthened, and reinforced, and each employee must be motivated and her efforts focused on the organization's goals and objectives.[26]

The rise to prominence of knowledge workers as a vital source of competitive advantage is changing the balance of power in today's organization.[27] Knowledge workers place professional development and personal enrichment (financial and otherwise) above company loyalty. Attracting, recruiting, and hiring the "best and the brightest," is a critical first step in the process of building intellectual capital. At a symposium for CEOs, Bill Gates said, "The thing that is holding Microsoft back . . . is simply how [hard] we find it to go out and recruit the kind of people we want to grow our research team."[28]

Hiring is only the first of three processes in which all successful organizations must engage to build and leverage their human capital. Firms must also *develop* employees to fulfill their full potential to maximize their joint contributions.[29] Finally, the first two processes are for naught if firms can't provide the working environment and intrinsic and extrinsic rewards to *retain* their best and brightest.[30]

These activities are highly interrelated. We would like to suggest the imagery of a three-legged stool (see Exhibit 4.2).[31] If one leg is weak or broken, the stool collapses.

To illustrate such interdependence, poor hiring impedes the effectiveness of development and retention processes. In a similar vein, ineffective retention efforts place additional

EXHIBIT 4.2   Human Capital: Three Interdependent Activities
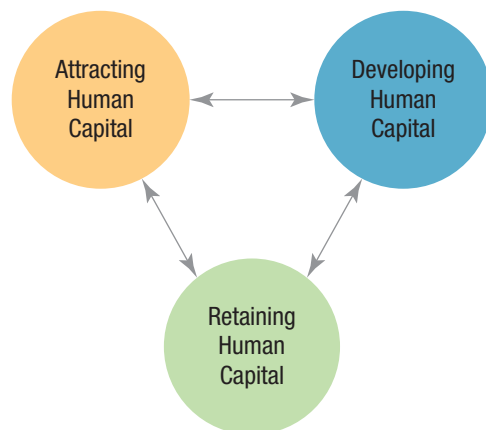
GOING "GREEN" HELPS ATTRACT TALENT

When companies go "green," they often find that the benefits extend beyond the environment. Eco-friendly strategies can also help attract young talent and reduce costs. According to Lindsey Pollack, author of *Getting from College to Career:*

> Students are looking to work for companies that care about the environment. They are almost expecting greenness like they expect work-life balance, ethnic diversity, and globalization.

A recent poll on green employment by MonsterTRAK.com, a job website geared toward students and entry-level hires, found that 80 percent of young professionals are interested in securing a job that has a positive impact on the environment, and 92 percent would be more inclined to work for a company that is environmentally friendly. And, in another survey, 45 percent of Millennials would take a 15 percent pay cut for a job that makes a social and environmental impact.

In response, paper maker NewPage Corp. distributes a brochure that highlights the firm's commitment to environmental responsibility when it recruits on campuses. It showcases the company's new corporate headquarters, in Miamisburg, Ohio, that uses 28 percent to 39 percent less energy than a standard office building and is furnished with environmentally friendly materials. Says NewPage CEO Mark Sunwyn, "At the end of the day, we are competing with everyone else for the best talent, and this is a generation that is very concerned with the environment."

Sources: Weinreb, E. 2012. Proof: A strong CSR program can attract, retain talent for less. *greenbiz.com*, June 6: np; Luhby, T. 2008. How to Lure Gen Y Workers? *CNNMoney.com*, August 17: np; Mattioli. 2007. How Going Green Draws Talent, Cut Costs. *Wall Street Journal*, November 13: B10; and, Odell, A. M. 2007. Working for the Earth: Green Companies and Green Jobs Attract Employees. www.socialfunds.com, October 9: np.

burdens on hiring and development. Consider the following anecdote, provided by Jeffrey Pfeffer of the Stanford University Business School:

> Not long ago, I went to a large, fancy San Francisco law firm—where they treat their associates like dog doo and where the turnover is very high. I asked the managing partner about the turnover rate. He said, "A few years ago, it was 25 percent, and now we're up to 30 percent." I asked him how the firm had responded to that trend. He said, "We increased our recruiting." So I asked him, "What kind of doctor would you be if your patient was bleeding faster and faster, and your only response was to increase the speed of the transfusion?"[32]

Clearly, stepped-up recruiting is a poor substitute for weak retention.[33] Although there are no simple, easy-to-apply answers, we can learn from what leading-edge firms are doing to attract, develop, and retain human capital in today's highly competitive marketplace.[34] Before moving on, Strategy Spotlight 4.1 addresses the importance of a firm's "green" or environmental sustainability strategy in attracting young talent.

Attracting Human Capital

> *In today's world, talent is so critical to the success of what you're doing—their core competencies and how well they fit into your office culture. The combination can be, well, extraordinary. But only if you bring in the right people.[35]*
>
> Mindy Grossman, CEO of HSN (Home Shopping Network)

The first step in the process of building superior human capital is input control: attracting and selecting the right person.[36] Human resource professionals often approach employee selection from a "lock and key" mentality—that is, fit a key (a job candidate) into a lock (the job). Such an approach involves a thorough analysis of the person and the job. Only then can the right decision be made as to how well the two will fit together. How can you fail, the theory goes, if you get a precise match of knowledge, ability, and skill profiles? Frequently, however, the precise matching approach places its emphasis on task-specific skills (e.g., motor skills, specific information processing capabilities, and communication skills) and puts less emphasis on the broad general knowledge and experience, social skills, values, beliefs, and attitudes of employees.[37]

Many have questioned the precise matching approach. They argue that firms can identify top performers by focusing on key employee mind-sets, attitudes, social skills, and general orientations. If they get these elements right, the task-specific skills can be learned quickly. (This does not imply, however, that task-specific skills are unimportant; rather, it suggests that the requisite skill sets must be viewed as a necessary but not sufficient condition.) This leads us to a popular phrase today that serves as the title of the next section.

"Hire for Attitude, Train for Skill" Organizations are increasingly emphasizing general knowledge and experience, social skills, values, beliefs, and attitudes of employees.[38] Consider Southwest Airlines' hiring practices, which focus on employee values and attitudes. Given its strong team orientation, Southwest uses an "indirect" approach. For example, the interviewing team asks a group of employees to prepare a five-minute presentation about themselves. During the presentations, interviewers observe which candidates enthusiastically support their peers and which candidates focus on polishing their own presentations while the others are presenting.[39] The former are, of course, favored.

Alan Cooper, president of Cooper Software, Inc., in Palo Alto, California, goes further. He cleverly *uses technology* to hone in on the problem-solving ability of his applicants and their attitudes before an interview even takes place. He has devised a "Bozo Filter," an online test that can be applied to any industry. Before you spend time on whether job candidates will work out satisfactorily, find out how their minds work. Cooper advised, "Hiring was a black hole. I don't talk to bozos anymore, because 90 percent of them turn away when they see our test. It's a self-administering bozo filter."[40] How does it work?

> The online test asks questions designed to see how prospective employees approach problem-solving tasks. For example, one key question asks software engineer applicants to design a table-creation software program for Microsoft Word. Candidates provide pencil sketches and a description of the new user interface. Another question used for design communicators asks them to develop a marketing strategy for a new touch-tone phone—directed at consumers in the year 1850. Candidates e-mail their answers back to the company, and the answers are circulated around the firm to solicit feedback. Only candidates with the highest marks get interviews.

Sound Recruiting Approaches and Networking Companies that take hiring seriously must also take recruiting seriously. The number of jobs that successful knowledge-intensive companies must fill is astonishing. Ironically, many companies still have no shortage of applicants. For example, Google ranked first on *Fortune*'s 2012 and 2013 "100 Best Companies to Work For," is planning to hire thousands of employees—even though its hiring rate has slowed.[41] The challenge becomes having the right job candidates, not the greatest number of them.

GE Medical Systems, which builds CT scanners and magnetic resonance imaging (MRI) systems, relies extensively on networking. They have found that current employees are the best source for new ones. Recently, Steven Patscot, head of staffing and leadership development, made a few simple changes to double the number of referrals. First, he simplified the process—no complex forms, no bureaucracy, and so on. Second, he increased incentives. Everyone referring a qualified candidate receives a gift certificate from Sears. For referrals who are hired, the "bounty" increases to $2,000. Although this may sound like a lot of money, it is "peanuts" compared to the $15,000 to $20,000 fees that GE typically pays to headhunters for each person hired.[42] Also, when someone refers a former colleague or friend for a job, his or her credibility is on the line. Thus, employees will be careful in recommending people for employment unless they are reasonably confident that these people are good candidates.

Attracting Millennials   This generation has also been termed "Generation Y" or "Echo Boom" and includes people that were born after 1982. Many call them impatient, demanding, or entitled. However, if employers don't provide incentives to attract and retain young workers, somebody else will. Thus, they will be at a competitive disadvantage.[43]

Why? Demographics are on their side—within a few years they will outnumber any other generation. The U.S. Bureau of Labor Statistics projects that by 2020 Millennials will make up 40 percent of the workforce. Baby boomers are retiring, and Millennials will be working for the next several decades. Additionally, they have many of the requisite skills to succeed in the future workplace—tech-savviness and the ability to innovate—and they are more racially diverse than any prior generation. Thus, they are better able to relate rapidly to different customs and cultures.

What are some of the "best practices" to attract Millennials and keep them engaged?

- **Don't fudge the sales pitch.** High-tech sales presentations and one-on-one attention may be attractive to undergrads. However, the pitch had better match the experience. Consider that today's ultra connected students can get the lowdown on a company by spending five minutes on a social networking site.
- **Let them have a life.** Typically, they are unenthusiastic about their parents' 70- or 80-hour workweeks. Millennials strive for more work-life balance, so liberal vacations become very important. They also want assurances that they can use it. At KPMG, 80 percent of employees used 40 hours of paid time off in the first six months of a recent year.
- **No time clocks, please.** Recent graduates don't mind long hours—if they can work them on their own schedule. Lockheed Martin allows employees to work nine-hour days with every other Friday off. And Chegg, the online textbook service, recently introduced an unlimited vacation policy—turnover rates among the younger workers dropped 50 percent. As noted by its CEO, Dan Rosensweig, "If you provide them with the right environment, they'll work forever."
- **Give them responsibility.** A chance to work on fulfilling projects and develop new ones on their own is important. Google urges entry-level employees to spend 20 percent of their time developing new ideas. PepsiCo allows promising young employees to manage small teams in six months.
- **Feedback and more feedback.** Career planning advice and frequent performance appraisals are keys to holding on to young hires. Several firms provide new hires with two mentors—a slightly older peer to help them get settled and a senior employee to give long-term guidance.
- **Giving back matters.** Today's altruistic young graduates expect to have opportunities for community service. Wells Fargo encourages its employees to teach financial literacy classes in the community. Accenture and Bain allow employees to consult for nonprofits.

A study from the Center for Work-Life Policy sums this issue up rather well: Instead of the traditional plums of prestigious title, powerful position, and concomitant compensation, Millennials value challenging and diverse job opportunities, stimulating colleagues, a well-designed communal workspace, and flexible work options. In fact, 89 percent of Millennials say that flexible work options are an important consideration in choosing an employer.

Developing Human Capital

It is not enough to hire top-level talent and expect that the skills and capabilities of those employees remain current throughout the duration of their employment. Rather, training and development must take place at all levels of the organization.[44] For example, Solectron assembles printed circuit boards and other components for its Silicon Valley clients.[45] Its employees

receive an average of 95 hours of company-provided training each year. Chairman Winston Chen observed, "Technology changes so fast that we estimate 20 percent of an engineer's knowledge becomes obsolete each year. Training is an obligation we owe to our employees. If you want high growth and high quality, then training is a big part of the equation."

Leaders who are committed to developing the people who work for them in order to bring out their strengths and enhance their careers will have committed followers. According to James Rogers, CEO of Duke Energy: "One of the biggest things I find in organizations is that people tend to limit their perceptions of themselves and their capabilities, and one of my challenges is to open them up to the possibilities. I have this belief that anybody can do almost anything in the right context."[46]

In addition to training and developing human capital, firms must encourage widespread involvement, monitor and track employee development, and evaluate human capital.[47]

Encouraging Widespread Involvement   Developing human capital requires the active involvement of leaders at all levels. It won't be successful if it is viewed only as the responsibility of the human resources department. Each year at General Electric, 200 facilitators, 30 officers, 30 human resource executives, and many young managers actively participate in GE's orientation program at Crotonville, its training center outside New York City. Topics include global competition, winning on the global playing field, and personal examination of the new employee's core values vis-à-vis GE's values. As a senior manager once commented, "There is nothing like teaching Sunday school to force you to confront your own values."

Similarly, A. G. Lafley, Procter & Gamble's former CEO, claimed that he spent 40 percent of his time on personnel.[48] Andy Grove, who was previously Intel's CEO, required all senior people, including himself, to spend at least a week a year teaching high flyers. And Nitin Paranjpe, CEO of Hindustan Unilever, recruits people from campuses and regularly visits high-potential employees in their offices.

Mentoring and Sponsoring   Mentoring is most often a formal or informal relationship between two people—a senior mentor and a junior protégé.[49] Mentoring can potentially be a valuable influence in professional development in both the public and private sectors. The war for talent is creating challenges within organizations to both recruit new talent as well as retain talent.

Mentoring can provide many benefits—to the organization as well as the individual.[50] For the organization, it can help to recruit qualified managers, decrease turnover, fill senior-level positions with qualified professionals, enhance diversity initiatives with senior-level management, and facilitate organizational change efforts. Individuals can also benefit from effective mentoring programs. These benefits include helping newer employees transition into the organization, helping developmental relationships for people who lack access to informal mentoring relationships, and providing support and challenge to people on an organization's "fast track" to positions of higher responsibility.

Mentoring is traditionally viewed as a program to transfer knowledge and experience from more senior managers to up-and-comers. However, many organizations have reinvented it to fit today's highly competitive, knowledge-intensive industries. For example, consider Intel:

> Intel matches people not by job title and years of experience but by specific skills that are in demand. Lory Lanese, Intel's mentor champion at its huge New Mexico plant (with 5,500 employees) states, "This is definitely not a special program for special people." Instead, Intel's program uses an intranet and email to perform the matchmaking, creating relationships that stretch across state lines and national boundaries. Such an approach enables Intel to spread best practices quickly throughout the far-flung organization. Finally, Intel relies on written contracts and tight deadlines to make sure that its mentoring program gets results—and fast.[51]

Intel has also initiated a mentoring program involving a job titled technical assistants (TAs) who work with senior executives. This concept is sometimes referred to as "reverse mentoring" because senior executives benefit from the insights of professionals who have more updated technical skills—but rank lower in the organizational hierarchy. And, not surprisingly, the TAs stand to benefit quite a bit as well. Here are some insights offered by Andy Grove (formerly Intel's CEO):[52]

> In the 1980s I had a marketing manager named Dennis Carter. I probably learned more from him than anyone in my career. He is a genius. He taught me what brands are. I had no idea—I thought a brand was the name on the box. He showed me the connection of brands to strategies. Dennis went on to be Chief Marketing Officer. He was the person responsible for the Pentium name, "Intel Inside," he came up with all my good ideas.

Clearly, not everyone will have the opportunity to be a marketing manager at Intel and work directly with Andy Grove! So, when it comes to getting promoted, one might ask: How do sponsors differ from mentors?[53] Some have argued that in today's hot competition among professionals for advancement in an organization, having a mentor may provide many benefits—but sponsors are more likely to get one promoted. Why? A mentor may coach you, provide advice, and help prepare you for your next position. A sponsor, on the other hand, is someone in a senior position who's willing to advocate for and facilitate and enjoy more career moves, make introductions to the right people, translate and teach the secret language of success, and most important, "use up chips" for their protégé. Heather Forest-Cummings, a senior director of research at Catalyst claims: "A mentor will talk *with* you, but a sponsor will talk *about* you."

The idea of sponsorship has gained traction lately as more companies aim to move more women into corporate leadership. A recent study of 4,000 high-level employees found that 19 percent of men had a sponsor, but only 13 percent of women. However, women who had a sponsor were more likely to negotiate for raises, seek promotions and higher salaries, and self more career satisfaction—and get to the top. One of the co-authors of the study, Sylvia Ann Hewlett, president of the Center for Talent Innovation, boldly claims: "Sponsorship is the only way to get those top appointments."

Sponsorships, of course, involve a two-way street. Below, we provide some advice to those seeking sponsors and their responsibilities and obligations to their sponsors after the matchmaking process is completed.

- Your work must be of the highest quality. Executives need to be convinced that you are loyal, trustworthy, and dependable. After all, they are betting their own reputations on your career.
- Don't just put your head down and work hard. You need to be noticed and become a known quantity. Become active in your industry, volunteer for larger assignments, and attend conferences.
- Keep in mind that relationships evolve naturally. Don't simply ask someone to be your sponsor. And, be sure to hedge your bets. After all, your sponsor may leave the organization. So, be sure to nurture relationships with several people.
- Sponsors expect you to reciprocate with your loyal support. Sponsors also benefit from the "power of the posse" to enhance their own careers. After all, no one reaches the top of the organization on their own.

Monitoring Progress and Tracking Development   Whether a firm uses on-site formal training, off-site training (e.g., universities), or on-the-job training, tracking individual progress—and sharing this knowledge with both the employee and key managers—becomes essential. Like many leading-edge firms, GlaxoSmithKline (GSK) places strong emphasis on broader experiences over longer time periods. Dan Phelan, senior vice

president and director of human resources, explained, "We ideally follow a two-plus-two-plus-two formula in developing people for top management positions." This reflects the belief that GSK's best people should gain experience in two business units, two functional units (such as finance and marketing), and in two countries.

Evaluating Human Capital   In today's competitive environment, collaboration and interdependence are vital to organizational success. Individuals must share their knowledge and work constructively to achieve collective, not just individual, goals. However, traditional systems evaluate performance from a single perspective (i.e., "top down") and generally don't address the "softer" dimensions of communications and social skills, values, beliefs, and attitudes.[54]

To address the limitations of the traditional approach, many organizations use **360-degree evaluation and feedback systems.**[55] Here, superiors, direct reports, colleagues, and even internal and external customers rate a person's performance.[56] Managers rate themselves to have a personal benchmark. The 360-degree feedback system complements teamwork, employee involvement, and organizational flattening. As organizations continue to push responsibility downward, traditional top-down appraisal systems become insufficient.[57] For example, a manager who previously managed the performance of 3 supervisors might now be responsible for 10 and is less likely to have the in-depth knowledge needed to appraise and develop them adequately. Exhibit 4.3 provides a portion of GE's 360-degree system.

Evaluation systems must also ensure that a manager's success does not come at the cost of compromising the organization's core values. Such behavior generally leads to only short-term wins for both the manager and the organization. The organization typically suffers long-term losses in terms of morale, turnover, productivity, and so on. Accordingly, Merck's former chairman, Ray Gilmartin, told his employees, "If someone is achieving results but not demonstrating the core values of the company, at the expense of our people, that manager does not have much of a career here."

360-degree evaluation and feedback systems superiors, direct reports, colleagues, and even external and internal customers rate a person's performance.

Vision	• Has developed and communicated a clear, simple, customer-focused vision/direction for the organization. • Forward-thinking, stretches horizons, challenges imaginations. • Inspires and energizes others to commit to Vision. Captures minds. Leads by example. • As appropriate, updates Vision to reflect constant and accelerating change affecting the business.
Customer/Quality Focus	
Integrity	
Accountability/Commitment	
Communication/Influence	
Shared Ownership/Boundaryless	
Team Builder/Empowerment	
Knowledge/Expertise/Intellect	
Initiative/Speed	
Global Mind-Set	

EXHIBIT 4.3
An Excerpt from General Electric's 360-Degree Leadership Assessment Chart

Note: This evaluation system consists of 10 "characteristics"—Vision, Customer/Quality Focus, Integrity, and so on. Each of these characteristics has four "performance criteria." For illustrative purposes, the four performance criteria of "Vision" are included.

Source: Adapted from Slater, R. 1994. *Get Better or Get Beaten:* 152–155. Burr Ridge, IL: Irwin Professional Publishing.

HCL'S EFFECTIVE 360-DEGREE EVALUATION SYSTEM

In order to foster innovation and encourage collaborative opportunities, leaders should be advised to set the tone by being good collaborators themselves. Collaborative leaders can inspire others in the organization to work with individuals outside of their formal line of work and depoliticize interactions. One method to encourage collaboration from the top is to increase transparency.

Take HCL, an Indian technology and IT enterprise operating in 31 countries, for example. CEO Vineet Nayar showed his commitment to collaboration by adopting a fundamentally different 360-degree evaluation for his top managers—he asked lower-level employees to weigh in on the evaluation of top executives. HCL in the past used a more traditional 360-degree evaluation in which each manager was assessed by a small number of people that made up this manager's work circle. As Nayar states, "Most of the respondents operated within the same area as the person they were evaluating. This reinforced the boundaries between the parts of the pyramid. But we were trying to change all that. We wanted

to encourage people to operate across these boundaries." To create a more collaborative environment, Mr. Nayar was the first to become more transparent, by posting his own 360-degree evaluation on the Web. Once the new transparency became a part of the organizational culture, more managers were included. Ultimately, HCL introduced a feature called "Happy Feet," allowing employees to evaluate managers who might affect or influence them.

Increased transparency also seems to be gaining acceptance in other companies and contexts. A third of U.S. executives, according to Aon Hewitt Associates, recognize the value potential of more transparency and share their 360 results with direct reports, up from 20 percent a few years ago. For instance, Dell Inc. is one U.S. company that actively encourages transparent 360-degree evaluations and considers it good management practice. As in the case of HCL, Dell CEO Michael Dell led by example and shared his 360 review with other members of the organization—emphasizing the need for CEOs to lead by example.

Sources: Ibarra, H. & Hansen, M.T. 2011. Are you a collaborative leader? *Harvard Business Review*, 89(7/8): 68–75; Lublin, J. S. 2011. Transparency pays off in 360-degree reviews. *Wall Street Journal. online.wsj.com*, December 8: np.

Strategy Spotlight 4.2 discusses HCL's unique approach to 360-degree evaluations.

Retaining Human Capital

It has been said that talented employees are like "frogs in a wheelbarrow."[58] They can jump out at any time! By analogy, the organization can either try to force employees to stay in the firm or try to keep them from jumping out by creating incentives.[59] In other words, today's leaders can either provide the work environment and incentives to keep productive employees and management from wanting to bail out, or they can use legal means such as employment contracts and noncompete clauses.[60] Firms must prevent the transfer of valuable and sensitive information outside the organization. Failure to do so would be the neglect of a leader's fiduciary responsibility to shareholders. However, greater efforts should be directed at the former (e.g., good work environment and incentives), but, as we all know, the latter (e.g., employment contracts and noncompete clauses) have their place.[61]

Identifying with an Organization's Mission and Values   People who identify with and are more committed to the core mission and values of the organization are less likely to stray or bolt to the competition. For example, take the perspective of the late Steve Jobs, Apple's widely admired former CEO:[62]

> When I hire somebody really senior, competence is the ante. They have to be really smart. But the real issue for me is: Are they going to fall in love with Apple? Because if they fall in love with Apple, everything else will take care of itself. They'll want to do what's best for Apple, not what's best for them, what's best for Steve, or anyone else.

"Tribal loyalty" is another key factor that links people to the organization.[63] A tribe is not the organization as a whole (unless it is very small). Rather, it is teams, communities of practice, and other groups within an organization or occupation.

Brian Hall, CEO of Values Technology in Santa Cruz, California, documented a shift in people's emotional expectations from work. From the 1950s on, a "task first" relationship—"tell me what the job is, and let's get on with it"—dominated employee attitudes. Emotions and personal life were checked at the door. In the past few years, a "relationship-first" set of values has challenged the task orientation. Hall believes that it will become dominant. Employees want to share attitudes and beliefs as well as workspace.

Challenging Work and a Stimulating Environment   Arthur Schawlow, winner of the 1981 Nobel Prize in physics, was asked what made the difference between highly creative and less creative scientists. His reply: "The labor of love aspect is very important. The most successful scientists often are not the most talented.[64] But they are the ones impelled by curiosity. They've got to know what the answer is."[65] Such insights highlight the importance of intrinsic motivation: the motivation to work on something because it is exciting, satisfying, or personally challenging.[66]

One way firms keep highly mobile employees motivated and challenged is through opportunities that lower barriers to an employee's mobility within a company. For example, Shell Oil Company has created an "open sourcing" model for talent. Jobs are listed on its intranet, and, with a two-month notice, employees can go to work on anything that interests them.

Financial and Nonfinancial Rewards and Incentives   Financial rewards are a vital organizational control mechanism (as we will discuss in Chapter 9). Money—whether in the form of salary, bonus, stock options, and so forth—can mean many different things to people. It might mean security, recognition, or a sense of freedom and independence.

Paying people more is seldom the most important factor in attracting and retaining human capital.[67] Most surveys show that money is not the most important reason why people take or leave jobs, and that money, in some surveys, is not even in the top 10. Consistent with these findings, Tandem Computers (part of Hewlett-Packard) typically doesn't tell people being recruited what their salaries would be. People who asked were told that their salaries were competitive. If they persisted along this line of questioning, they would not be offered a position. Why? Tandem realized a rather simple idea: People who come for money will leave for money.

Another nonfinancial reward is accommodating working families with children. Balancing demands of family and work is a problem at some point for virtually all employees.

Below we discuss how Google attracts and retains talent through financial and nonfinancial incentives. Its unique "Google culture," a huge attraction to potential employees, transforms a traditional workspace into a fun, feel-at-home, and flexible place to work.[68]

> Googlers do not merely work but have a great time doing it. The Mountain View, California, headquarters includes on-site medical and dental facilities, oil change and bike repair, foosball, pool tables, volleyball courts, and free breakfast, lunch, and dinner on a daily basis at 11 gourmet restaurants. Googlers have access to training programs and receive tuition reimbursement while they take a leave of absence to pursue higher education. Google states on its website, "Though Google has grown a lot since it opened in 1998, we still maintain a small company feel."

Enhancing Human Capital: The Role of Diversity in the Workforce

A combination of demographic trends and accelerating globalization of business has made the management of cultural differences a critical issue.[69] Workforces, which reflect demographic changes in the overall population, will be increasingly heterogeneous along dimensions such as gender, race, ethnicity, and nationality.[70] Demographic trends in the United States indicate a growth in Hispanic Americans from 6.9 million in 1960 to over

35 million in 2000, an expected increase to over 59 million by 2020 and 102 million by 2050. Similarly, the Asian-American population should grow to 20 million in 2020 from 12 million in 2000 and only 1.5 million in 1970. And the African-American population is expected to increase from 12.8 percent of the U.S. population in 2000 to 14.2 percent by 2025.[71]

Such demographic changes have implications not only for the labor pool but also for customer bases, which are also becoming more diverse.[72] This creates important organizational challenges and opportunities.

The effective management of diversity can enhance the social responsibility goals of an organization.[73] However, there are many other benefits as well. Six other areas where sound management of diverse workforces can improve an organization's effectiveness and competitive advantages are: (1) cost, (2) resource acquisition, (3) marketing, (4) creativity, (5) problem-solving, and (6) organizational flexibility.

- *Cost Argument.* As organizations become more diverse, firms effective in managing diversity will have a cost advantage over those that are not.
- *Resource Acquisition Argument.* Firms with excellent reputations as prospective employers for women and ethnic minorities will have an advantage in the competition for top talent. As labor pools shrink and change in composition, such advantages will become even more important.
- *Marketing Argument.* For multinational firms, the insight and cultural sensitivity that members with roots in other countries bring to marketing efforts will be very useful. A similar rationale applies to subpopulations within domestic operations.
- *Creativity Argument.* Less emphasis on conformity to norms of the past and a diversity of perspectives will improve the level of creativity.
- *Problem-Solving Argument.* Heterogeniety in decision-making and problem-solving groups typically produces better decisions because of a wider range of perspectives as well as more thorough analysis. Jim Schiro, former CEO of PriceWaterhouse Coopers, explains, "When you make a genuine commitment to diversity, you bring a greater diversity of ideas, approaches, and experiences and abilities that can be applied to client problems. After all, six people with different perspectives have a better shot at solving complex problems than sixty people who all think alike."[74]
- *Organizational Flexibility Argument.* With effective programs to enhance workplace diversity, systems become less determinant, less standardized, and therefore more fluid. Such fluidity should lead to greater flexibility to react to environmental changes. Reactions should be faster and less costly.

Strategy Spotlight 4.3 discusses Reckitt Benckiser's approach to diversity, which incorporates many different aspects of diversity

The Vital Role of Social Capital

Successful firms are well aware that the attraction, development, and retention of talent *is a necessary but not sufficient condition* for creating competitive advantages.[75] In the knowledge economy, it is not the stock of human capital that is important, but the extent to which it is combined and leveraged.[76] In a sense, developing and retaining human capital becomes less important as key players (talented professionals, in particular) take the role of "free agents" and bring with them the requisite skill in many cases. Rather, the development of social capital (that is, the friendships and working relationships among talented individuals) gains importance, because it helps tie knowledge workers to a given firm.[77] Knowledge workers often exhibit greater loyalties to their colleagues and their profession

DIVERSITY AT WORK: RECKITT BENCKISER

At Reckitt Benckiser, the UK-based producer of home, health, and personal care products, workforce diversity is considered a competitive advantage and a key reason for net income growth of 17 percent annually, on average, from 1999 to 2010. In terms of traditional measures of diversity such as nationality, Reckitt Benckiser's senior team is not dominated by any nationality. Two executives are Dutch, one is German, two are British, one is South African, two are Italian, and one is from India. According to CEO Bart Becht, "It doesn't matter whether I have a Pakistani, a Chinese person, a Brit, or a Turk, man or woman, sitting in the same room, or whether I have people from sales or something else, so long as I have people with different experiences—because the chance for new ideas is much greater when you have people with different backgrounds. The chance for conflict is also higher—and conflict is good per se, as long as it's constructive and gets us to the best idea."

While nationality is an important measure of diversity, other less often discussed diversity measures become increasingly important for businesses. For instance, successful collaborations between divisions and people (whether measured in terms of patent citation, critical acclaim, or financial return) often involve a healthy mix of experienced employees and newcomers and also bring together people who have no working history with one another. The challenge for leaders is to make a concerted effort to promote this mix.

When given the choice, people will often choose to collaborate with others they know well or who have similar backgrounds, yet static groups breed insularity and may suffocate innovation. Take Nokia's former executive team as an example, which was 100 percent Finnish and had worked closely together for more than a decade. Many believe this homogeneity explains why Nokia failed to see the smartphone threat emerging from Silicon Valley. Moreover, diversity in corporate boardrooms has become increasingly important. Julie Causey, director at the Federal Reserve Bank of Minneapolis, highlights the importance of age diversity as "directors in their 30s and 40s can bring strong technical savvy, an appetite for innovation, and a fresh way of thinking."

Sources: Ibarra, H. & Hansen, M.T. 2011. Are you a collaborative leader? *Harvard Business Review,* 89(7/8): 68–75; Chase, S. 2012. Directors to watch 2012. *Directors & Boards,* 36(4): 53–58

than their employing organization, which may be "an amorphous, distant, and sometimes threatening entity."[78] Thus, a firm must find ways to create "ties" among its knowledge workers.

Let's look at a hypothetical example. Two pharmaceutical firms are fortunate enough to hire Nobel Prize–winning scientists.[79] In one case, the scientist is offered a very attractive salary, outstanding facilities and equipment, and told to "go to it!" In the second case, the scientist is offered approximately the same salary, facilities, and equipment plus one additional ingredient: working in a laboratory with 10 highly skilled and enthusiastic scientists. Part of the job is to collaborate with these peers and jointly develop promising drug compounds. There is little doubt as to which scenario will lead to a higher probability of retaining the scientist. The interaction, sharing, and collaboration will create a situation in which the scientist will develop firm-specific ties and be less likely to "bolt" for a higher salary offer. Such ties are critical because knowledge-based resources tend to be more tacit in nature, as we mentioned early in this chapter. Therefore, they are much more difficult to protect against loss (i.e., the individual quitting the organization) than other types of capital, such as equipment, machinery, and land.

Another way to view this situation is in terms of the resource-based view of the firm that we discussed in Chapter 3. That is, competitive advantages tend to be harder for competitors to copy if they are based on "unique bundles" of resources.[80] So, if employees are working effectively in teams and sharing their knowledge and learning from each other, not only will they be more likely to add value to the firm, but they also will be less likely to leave the organization, because of the loyalties and social ties that they develop over time.

How Social Capital Helps Attract and Retain Talent

The importance of social ties among talented professionals creates a significant challenge (and opportunity) for organizations. In *The Wall Street Journal,* Bernard Wysocki described the increase in a type of "Pied Piper Effect," in which teams or networks of people are leaving one company for another.[81] The trend is to recruit job candidates at the crux of social relationships in organizations, particularly if they are seen as having the potential to bring with them valuable colleagues.[82] This is a process that is referred to as "hiring via personal networks." Let's look at one instance of this practice.

> Gerald Eickhoff, founder of an electronic commerce company called Third Millennium Communications, tried for 15 years to hire Michael Reene. Why? Mr. Eickhoff says that he has "these Pied Piper skills." Mr. Reene was a star at Andersen Consulting in the 1980s and at IBM in the 1990s. He built his businesses and kept turning down overtures from Mr. Eickhoff.
>
> However, in early 2000, he joined Third Millennium as chief executive officer, with a salary of just $120,000 but with a 20 percent stake in the firm. Since then, he has brought in a raft of former IBM colleagues and Andersen subordinates. One protégé from his time at Andersen, Mary Goode, was brought on board as executive vice president. She promptly tapped her own network and brought along former colleagues.
>
> Wysocki considers the Pied Piper effect one of the underappreciated factors in the war for talent today. This is because one of the myths of the New Economy is rampant individualism, wherein individuals find jobs on the Internet career sites and go to work for complete strangers. Perhaps, instead of Me Inc., the truth is closer to We Inc.[83]

Another example of social relationships causing human capital mobility is the emigration of talent from an organization to form start-up ventures. Microsoft is perhaps the best-known example of this phenomenon.[84] Professionals frequently leave Microsoft en masse to form venture capital and technology start-ups, called "Baby Bills," built around teams of software developers. For example, Ignition Corporation, of Bellevue, Washington, was formed by Brad Silverberg, a former Microsoft senior vice president. Eight former Microsoft executives, among others, founded the company.

Social Networks: Implications for Knowledge Management and Career Success

Managers face many challenges driven by such factors as rapid changes in globalization and technology. Leading a successful company is more than a one-person job. As Tom Malone recently put it in *The Future of Work,* "As managers, we need to shift our thinking from command and control to coordinate and cultivate—the best way to gain power is sometimes to give it away."[85] The move away from top-down bureaucratic control to more open, decentralized network models makes it more difficult for managers to understand how work is actually getting done, who is interacting with whom both within and outside the organization, and the consequences of these interactions for the long-term health of the organization.[86]

Malcolm Gladwell, in his best-selling book *The Tipping Point,* used the term *connector* to describe people who have *used* many ties to different social worlds.[87] It's not the number of people that connectors know that makes them significant. Rather, it is their ability to link people, ideas, and resources that wouldn't normally bump into one another. In business, connectors are critical facilitators for collaboration and integration. David Kenny, president of Akamai Technologies, believes that being a connector is one of the most important ways in which he adds value:

> Kenny spends much of his time traveling around the world to meet with employees, partners, and customers. He states, "I spend time with media owners to hear what they think about digital platforms, Facebook, and new pricing models, and with Microsoft

leaders to get their views on cloud computing. I'm interested in hearing how our clients feel about macroeconomic issues, the G20, and how debt will affect future generations." These conversations lead to new strategic insights and relationships and help Akamai develop critical external partnerships.

Social network analysis depicts the pattern of interactions among individuals and helps to diagnose effective and ineffective patterns.[88] It helps identify groups or clusters of individuals that comprise the network, individuals who link the clusters, and other network members. It helps diagnose communication patterns and, consequently, communication effectiveness.[89] Such analysis of communication patterns is helpful because the configuration of group members' social ties within and outside the group affects the extent to which members connect to individuals who:

- convey needed resources,
- have the opportunity to exchange information and support,
- have the motivation to treat each other in positive ways, and,
- have the time to develop trusting relationships that might improve the groups' effectiveness.

However, such relationships don't "just happen."[90] Developing social capital requires interdependence among group members. Social capital erodes when people in the network become independent. And increased interactions between members aid in the development and maintenance of mutual obligations in a social network.[91] Social networks such as Facebook may facilitate increased interactions between members in a social network via Internet-based communications.

Let's take a brief look at a simplified network analysis to get a grasp of the key ideas. In Exhibit 4.4, the links depict informal relationships among individuals, such as communication flows, personal support, and advice networks. There may be some individuals with literally no linkages, such as Fred. These individuals are typically labeled "isolates." However, most people do have some linkages with others.

To simplify, there are two primary types of mechanisms through which social capital will flow: *closure relationships* (depicted by Bill, Frank, George, and Susan) and *bridging relationships* (depicted by Mary). As we can see, in the former relationships one member is central to the communication flows in a group. In contrast, in the latter relationship, one person "bridges" or brings together groups that would have been otherwise unconnected.

Both closure and bridging relationships have important implications for the effective flow of information in organizations and for the management of knowledge. We will now briefly discuss each of these types of relationships. We will also address some of the implications that understanding social networks has for one's career success.

Closure   With **closure,** many members have relationships (or ties) with other members. As indicated in Exhibit 4.4, Bill's group would have a higher level of closure than Frank, Susan, or George's groups because more group members are connected to each other. Through closure, group members develop strong relationships with each other, high levels of trust, and greater solidarity. High levels of trust help to ensure that informal norms in the group are easily enforced and there is less "free riding." Social pressure will prevent people from withholding effort or shirking their responsibilities. In addition, people in the network are more willing to extend favors and "go the extra mile" on a colleague's behalf because they are confident that their efforts will be reciprocated by another member in their group. Another benefit of a network with closure is the high level of emotional support. This becomes particularly valuable when setbacks occur that may destroy morale or an unexpected tragedy happens that might cause the group to lose its focus. Social support helps the group to rebound from misfortune and get back on track.
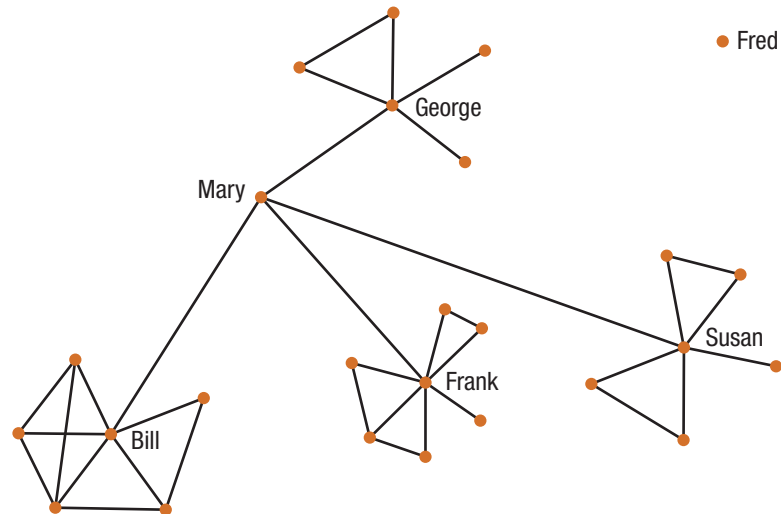
EXHIBIT 4.4   A Simplified Social Network

But high levels of closure often come with a price. Groups that become too closed can become insular. They cut themselves off from the rest of the organization and fail to share what they are learning from people outside their group. Research shows that while managers need to encourage closure up to a point, if there is too much closure, they need to encourage people to open up their groups and infuse new ideas through bridging relationships.[92]

bridging relationships
relationships in a social network that connect otherwise disconnected people.

Bridging Relationships   The closure perspective rests on an assumption that there is a high level of similarity among group members. However, members can be quite heterogeneous with regard to their positions in either the formal or informal structures of the group or the organization. Such heterogeneity exists because of, for example, vertical boundaries (different levels in the hierarchy) and horizontal boundaries (different functional areas).

Bridging relationships, in contrast to closure, stresses the importance of ties connecting people. Employees who bridge disconnected people tend to receive timely, diverse information because of their access to a wide range of heterogeneous information flows. Such bridging relationships span a number of different types of boundaries.

structural holes
social gaps between groups in a social network where there are few relationships bridging the groups.

The University of Chicago's Ron Burt originally coined the term **"structural holes"** to refer to the social gap between two groups. Structural holes are common in organizations. When they occur in business, managers typically refer to them as "silos" or "stovepipes." Sales and engineering are a classic example of two groups whose members traditionally interact with their peers rather than across groups.

A study that Burt conducted at Raytheon, a $25 billion U.S. electronics company and military contractor, provides further insight into the benefits of bridging.[93]

Burt studied several hundred managers in Raytheon's supply chain group and asked them to write down ideas to improve the company's supply chain management. Then he asked two Raytheon executives to rate the ideas. The conclusion: *The best suggestions consistently came from managers who discussed ideas outside their regular work group.*

Burt found that Raytheon managers were good at thinking of ideas but bad at developing them. Too often, Burt said, the managers discussed their ideas with colleagues already in their informal discussion network. Instead, he said, they should have had discussions outside their typical contacts, particularly with an informal boss, or someone with enough power to be an ally but not an actual supervisor.

Developing Social Capital: Overcoming Barriers to Collaboration   Social capital within a group or organization develops through repeated interactions among its members and the resulting collaboration.[94] However, collaboration does not "just happen." People don't collaborate for various reasons. Effective collaboration requires overcoming four barriers:

- The not-invented-here barrier (people aren't willing to provide help)
- The hoarding barrier (people aren't willing to provide help)
- The search barrier (people are unable to find what they are looking for)
- The transfer barrier (people are unable to work with the people they don't know well)

All four barriers need to be low before effective collaboration can take place. Each one is enough to prevent people from collaborating well. The key is to identify which barriers are present in an organization and then to devise appropriate ways to overcome them.

Different barriers require different solutions. Motivational barriers require leaders to pull levers that make people more willing to collaborate. Ability barriers mean that leaders need to pull levers that enable motivated people to collaborate throughout the organization.

To be effective, leaders can choose a mix of three levers. First, when motivation is the problem, they can use the **unification lever**, wherein they craft compelling common goals, articulate a strong value of cross-company teamwork, and encourage collaboration in order to send strong signals to lift people's sights beyond their narrow interests toward a common goal.

Second, with the **people lever**, the emphasis isn't on getting people to collaborate more. Rather, it's on getting the right people to collaborate on the right projects. This means cultivating what may be called **T-shaped management**: people who simultaneously focus on the performance of their unit (the vertical part of the T) and across boundaries (the horizontal part of the T). People become able to collaborate when needed but are disciplined enough to say no when it's not required.

Third, by using the **network lever**, leaders can build nimble interpersonal networks across the company so that employees are better able to collaborate. Interpersonal networks are more effective than formal hierarchies. However, there is a dark side to networks: When people spend more time networking than getting work done, collaboration can adversely affect results.

Implications for Career Success   Let's go back in time in order to illustrate the value of social networks in one's career success. Consider two of the most celebrated artists of all time: Vincent van Gogh and Pablo Picasso. Strategy Spotlight 4.4 points out why these two artists enjoyed sharply contrasting levels of success during their lifetimes.

Effective social networks provide many advantages for the firm.[95] They can play a key role in an individual's career advancement and success. One's social network potentially can provide three unique advantages: private information, access to diverse skill sets, and power.[96] Managers see these advantages at work every day but might not consider how their networks regulate them.

Private Information   We make judgments, using both public and private information. Today, public information is available from many sources, including the Internet. However, since it is so accessible, public information offers less competitive advantage than it used to.

In contrast, private information from personal contacts can offer something not found in publicly available sources, such as the release date of a new product or knowledge about what a particular interviewer looks for in candidates. Private information can give managers an edge, though it is more subjective than public information since it cannot be easily

unification lever
method for making people more willing to collaborate by crafting compelling common goals articulating a strong value of cross-company teamwork, and encouraging collaboration in order to send strong signals to lift people's sights beyond their narrow interests towards a common goal.

people lever
method for making people more willing to collaborate by getting the right people to work on the right projects.

T-shaped management
people's dual focus on the performance of their unit (the vertical part of the T) and across boundaries (the horizontal part of the T).

network lever
method for making people more willing to collaborate by building nimble interpersonal networks across the company.

PICASSO VERSUS VAN GOGH: WHO WAS MORE SUCCESSFUL AND WHY?

Vincent van Gogh and Pablo Picasso are two of the most iconoclastic—and famous—artists of modern times. Paintings by both of them have fetched over $100 million. And both of them were responsible for some of the most iconic images in the art world: Van Gogh's *Self-Portrait* (the one sans the earlobe) and *Starry Night* and Picasso's *The Old Guitarist* and *Guernica.* However, there is an important difference between van Gogh and Picasso. Van Gogh died penniless. Picasso's estate was estimated at $750 million when he died in 1973. What was the difference?

Van Gogh's primary connection to the art world was through his brother. Unfortunately, this connection didn't feed directly into the money that could have turned him into a living success. In contrast, Picasso's myriad connections provided him with access to commercial riches. As noted by Gregory Berns in his book

Iconoclast: A Neuroscientist Reveals How to Think Differently, "Picasso's wide ranging social network, which included artists, writers, and politicians, meant that he was never more than a few people away from anyone of importance in the world."

In effect, van Gogh was a loner, and the charismatic Picasso was an active member of multiple social circles. In social networking terms, van Gogh was a solitary "node" who had few connections. Picasso, on the other hand, was a "hub" who embedded himself in a vast network that stretched across various social lines. Where Picasso smoothly navigated multiple social circles, van Gogh had to struggle just to maintain connections with even those closest to him. Van Gogh inhabited an alien world, whereas Picasso was a social magnet. And because he knew so many people, the world was at Picasso's fingertips. From his perspective, the world was smaller.

Sources: Hayashi, A. M. 2008. Why Picasso Out Earned van Gogh. *MIT Sloan Management Review,* 50(1): 11–12; and Berns, G. 2008. *A Neuroscientist Reveals How to Think Differently.* Boston, MA: Harvard Business Press.

verified by independent sources, such as Dunn & Bradstreet. Consequently the value of your private information to others—and the value of others' private information to you—depends on how much trust exists in the network of relationships.

Access to Diverse Skill Sets   Linus Pauling, one of only two people to win a Nobel Prize in two different areas and considered one of the towering geniuses of the 20th century, attributed his creative success not to his immense brainpower or luck but to his diverse contacts. He said, "The best way to have a good idea is to have a lot of ideas."

While expertise has become more specialized during the past few decades, organizational, product, and marketing issues have become more interdisciplinary. This means that success is tied to the ability to transcend natural skill limitations through others. Highly diverse network relationships, therefore, can help you develop more complete, creative, and unbiased perspectives on issues. Trading information or skills with people whose experiences differ from your own, provides you with unique, exceptionally valuable resources. It is common for people in relationships to share their problems. If you know enough people, you will begin to see how the problems that another person is struggling with can be solved by the solutions being developed by others. If you can bring together problems and solutions, it will greatly benefit your career.

Power   Traditionally, a manager's power was embedded in a firm's hierarchy. But, when corporate organizations became flatter, more like pancakes than pyramids, that power was repositioned in the network's brokers (people who bridged multiple networks), who could adapt to changes in the organization, develop clients, and synthesize opposing points of view. Such brokers weren't necessarily at the top of the hierarchy or experts in their fields, but they linked specialists in the firm with trustworthy and informative relationships.[97]

Most personal networks are highly clustered; that is, an individual's friends are likely to be friends with one another as well. Most corporate networks are made up of several

clusters that have few links between them. Brokers are especially powerful because they connect separate clusters, thus stimulating collaboration among otherwise independent specialists.

A Cautionary Note: Three Kinds of Network Traps   A recent study of over 300 companies explored how management teams can understand and capitalize on the formal and informal social networks of their employees.[98] Six common types of managers who get stuck in three types of network traps were identified. Such findings have important career implications:

- **The wrong structure.** The "formalist" relies too much on his firm's official hierarchy, missing out on the efficiencies and opportunities that come from informal connections. The "overloaded manager" has so much contact with colleagues and external ties that she becomes a bottleneck to progress and burns herself out.
- **The wrong relationships.** The "disconnected expert" sticks with people who keep him focused on safe, existing competencies, rather than those who push him to build new skills. The "biased leader" relies on advisers (same functional background, location, or values) who reinforce her biases, when she should instead seek outsiders to prompt more fully informed decisions.
- **The wrong behavior.** The "superficial networker" engages in surface-level interaction with as many people as possible; mistakenly believing that a bigger network is a better network. The "chameleon" changes his interests, values, and personality to match those of whatever subgroup is his audience, and winds up being disconnected from every group.

The Potential Downside of Social Capital

We'd like to close our discussion of social capital by addressing some of its limitations. First, some firms have been adversely affected by very high levels of social capital because it may breed **"groupthink"**—a tendency not to question shared beliefs.[99] Such thinking may occur in networks with high levels of closure where there is little input from people outside of the network. In effect, too many warm and fuzzy feelings among group members prevent people from rigorously challenging each other. People are discouraged from engaging in the "creative abrasion" that Dorothy Leonard of Harvard University describes as a key source of innovation.[100] Two firms that were well known for their collegiality, strong sense of employee membership, and humane treatment—Digital Equipment (now part of Hewlett-Packard) and Polaroid—suffered greatly from market misjudgments and strategic errors. The aforementioned aspects of their culture contributed to their problems.

Second, if there are deep-rooted mindsets, there would be a tendency to develop dysfunctional human resource practices. That is, the organization (or group) would continue to hire, reward, and promote like-minded people who tend to further intensify organizational inertia and erode innovation. Such homogeneity would increase over time and decrease the effectiveness of decision-making processes.

Third, the socialization processes (orientation, training, etc.) can be expensive in terms of both financial resources and managerial commitment. Such investments can represent a significant opportunity cost that should be evaluated in terms of the intended benefits. If such expenses become excessive, profitability would be adversely affected.

Finally, individuals may use the contacts they develop to pursue their own interests and agendas that may be inconsistent with the organization's goals and objectives. Thus, they may distort or selectively use information to favor their preferred courses of action or withhold information in their own self-interest to enhance their power to the detriment of the common good. Drawing on our discussion of social networks, this is particularly true in an

groupthink
a tendency in an organization for individuals not to question shared beliefs.

organization that has too many bridging relationships but not enough closure relationships. In high closure groups, it is easier to watch each other to ensure that illegal or unethical acts don't occur. By contrast, bridging relationships make it easier for a person to play one group or individual off on another, with no one being the wiser.[101] We will discuss some behavioral control mechanisms in Chapter 9 (rewards, control, boundaries) that reduce such dysfunctional behaviors and actions.[102]

Using Technology to Leverage Human Capital and Knowledge

Sharing knowledge and information throughout the organization can be a means of conserving resources, developing products and services, and creating new opportunities. In this section we will discuss how technology can be used to leverage human capital and knowledge within organizations as well as with customers and suppliers beyond their boundaries.

Using Networks to Share Information

As we all know, email is an effective means of communicating a wide variety of information. It is quick, easy, and almost costless. Of course, it can become a problem when employees use it extensively for personal reasons. And we all know how fast jokes or rumors can spread within and across organizations!

Below is an example of how a CEO curbed what he felt was excessive time he spent on email.

> Brian Scudamore, CEO of 1-800-GOT-Junk, the $100 million clutter-removal service, found he was spending far too much time tackling his inbox.[103] He asked his assistant to take over and handle his emails. He says that getting rid of this "business killer" improved his productivity and made him a better manager. It also freed him to encourage and inspire his team. "It's given me time to walk around and talk to people," he says. Imagine that!

Email can also cause embarrassment, or worse, if one is not careful. Consider the plight of a potential CEO—as recalled by Marshall Goldsmith, a well-known executive coach:[104]

> I witnessed a series of e-mails between a potential CEO and a friend inside the company. The first e-mail to the friend provided an elaborate description of "why the current CEO is an idiot." The friend sent a reply. Several rounds of e-mails followed. Then the friend sent an e-mail containing a funny joke. The potential CEO decided that the current CEO would love this joke and forwarded it to him. You can guess what happened next. The CEO scrolled down the e-mail chain and found the "idiot" message. The heir apparent was gone in a week.

Email can, however, be a means for top executives to communicate information efficiently. For example, Martin Sorrell, chairman of WPP Group PLC, the huge $17 billion advertising and public relations firm, is a strong believer in the use of email.[105] He emails all of his employees once a month to discuss how the company is doing, address specific issues, and offer his perspectives on hot issues, such as new business models for the Internet. He believes that it keeps people abreast of what he is working on.

Technology can also enable much more sophisticated forms of communication in addition to knowledge sharing. Cisco, for example, launched Integrated Workforce Experience (IWE) in 2010.[106] It is a social business platform designed to facilitate internal and external collaboration and decentralize decision making. It functions much like a Facebook "wall": A real-time news feed provides updates on employees' status and activities as well as information about relevant communities, business projects, and customer and partner interactions. One manager likens it to Amazon. "It makes recommendations based on what you are doing, the role you are in, and the choices of other people like you. We are taking that to the enterprise level and basically allowing appropriate information to find you," he says.

Electronic Teams: Using Technology to Enhance Collaboration

Technology enables professionals to work as part of electronic, or virtual, teams to enhance the speed and effectiveness with which products are developed. For example, Microsoft has concentrated much of its development on **electronic teams** (or e-teams) that are networked together.[107] This helps to accelerate design and testing of new software modules that use the Windows-based framework as their central architecture. Microsoft is able to foster specialized technical expertise while sharing knowledge rapidly throughout the firm. This helps the firm learn how its new technologies can be applied rapidly to new business ventures such as cable television, broadcasting, travel services, and financial services.

What are electronic teams (or e-teams)? There are two key differences between e-teams and more traditional teams:[108]

electronic teams
a team of individuals that completes tasks primarily through e-mail communication.

- E-team members either work in geographically separated work places or they may work in the same space but at different times. E-teams may have members working in different spaces and time zones, as is the case with many multinational teams.
- Most of the interactions among members of e-teams occur through electronic communication channels such as fax machines and groupware tools such as email, bulletin boards, chat, and videoconferencing.

E-teams have expanded exponentially in recent years.[109] Organizations face increasingly high levels of complex and dynamic change. E-teams are also effective in helping businesses cope with global challenges. Most e-teams perform very complex tasks and most knowledge-based teams are charged with developing new products, improving organizational processes, and satisfying challenging customer problems. For example, Hewlett Packard's e-teams solve clients' computing problems, and Sun Microsystems' (part of Oracle) e-teams generate new business models.

Advantages   There are multiple advantages of e-teams.[110] In addition to the rather obvious use of technology to facilitate communications, the potential benefits parallel the other two major sections in this chapter—human capital and social capital.

First, e-teams are less restricted by the geographic constraints that are placed on face-to-face teams. Thus, e-teams have the potential to acquire a broader range of "human capital" or the skills and capacities that are necessary to complete complex assignments. So, e-team leaders can draw upon a greater pool of talent to address a wider range of problems since they are not constrained by geographic space. Once formed, e-teams can be more flexible in responding to unanticipated work challenges and opportunities because team members can be rotated out of projects when demands and contingencies alter the team's objectives.

Second, e-teams can be very effective in generating "social capital"—the quality of relationships and networks that form. Such capital is a key lubricant in work transactions and operations. Given the broader boundaries associated with e-teams, members and leaders generally have access to a wider range of social contacts than would be typically available in more traditional face-to-face teams. Such contacts are often connected to a broader scope of clients, customers, constituents, and other key stakeholders.

Challenges   However, there are challenges associated with making e-teams effective. Successful action by both traditional teams and e-teams requires that:

- Members *identify* who among them can provide the most appropriate knowledge and resources, and,
- E-team leaders and key members know how to *combine* individual contributions in the most effective manner for a coordinated and appropriate response.

Group psychologists have termed such activities "identification and combination" activities and teams that fail to perform them face a "process loss."[111] Process losses prevent teams from reaching high levels of performance because of inefficient interaction dynamics among team members. Such poor dynamics require that some collective energy, time, and effort be devoted to dealing with team inefficiencies, thus diverting the team away from its objectives. For example, if a team member fails to communicate important information at critical phases of a project, other members may waste time and energy. This can lead to conflict and resentment as well as to decreased motivation to work hard to complete tasks.

The potential for process losses tends to be more prevalent in e-teams than in traditional teams because the geographical dispersion of members increases the complexity of establishing effective interaction and exchanges. Generally, teams suffer process loss because of low cohesion, low trust among members, a lack of appropriate norms or standard operating procedures, or a lack of shared understanding among team members about their tasks. With e-teams, members are more geographically or temporally dispersed, and the team becomes more susceptible to the risk factors that can create process loss. Such problems can be exacerbated when team members have less than ideal competencies and social skills. This can erode problem-solving capabilities as well as the effective functioning of the group as a social unit.

A variety of technologies, from email and Internet groups to Skype and Cisco's Umi TelePresence, have facilitated the formation and effective functioning of e-teams as well as a wide range of collaborations within companies. Such technologies greatly enhance the collaborative abilities of employees and managers within a company at a reasonable cost—despite the distances that separate them.

Codifying Knowledge for Competitive Advantage

There are two different kinds of knowledge. Tacit knowledge is embedded in personal experience and shared only with the consent and participation of the individual. Explicit (or codified) knowledge, on the other hand, is knowledge that can be documented, widely distributed, and easily replicated. One of the challenges of knowledge-intensive organizations is to capture and codify the knowledge and experience that, in effect, resides in the heads of its employees. Otherwise, they will have to constantly "reinvent the wheel," which is both expensive and inefficient. Also, the "new wheel" may not necessarily be superior to the "old wheel."[112]

Once a knowledge asset (e.g., a software code or a process) is developed and paid for, it can be reused many times at very low cost, assuming that it doesn't have to be substantially modified each time. Let's take the case of a consulting company, such as Accenture (formerly Andersen Consulting).[113]

> Since the knowledge of its consultants has been codified and stored in electronic repositories, it can be employed in many jobs by a huge number of consultants. Additionally, since the work has a high level of standardization (i.e., there are strong similarities across the numerous client engagements), there is a rather high ratio of consultants to partners. For example, the ratio of consultants to partners is roughly 30, which is quite high. As one might expect, there must be extensive training of the newly hired consultants for such an approach to work. The recruits are trained at Accenture's Center for Professional Education, a 150-acre campus in St. Charles, Illinois. Using the center's knowledge-management respository, the consultants work through many scenarios designed to improve business processes. In effect, the information technologies enable the consultants to be "implementers, not inventors."

Access Health, a call-in medical center, also uses technology to capture and share knowledge. When someone calls the center, a registered nurse uses the company's "clinical decision architecture" to assess the caller's symptoms, rule out possible conditions, and recommend a home remedy, doctor's visit, or trip to the emergency room. The company's

HOW SAP TAPS KNOWLEDGE WELL BEYOND ITS BOUNDARIES

Traditionally, organizations built and protected their knowledge stocks—proprietary resources that no one else could access. However, the more the business environment changes, the faster the value of what you know at any point in time diminishes. In today's world, success hinges on the ability to access a growing variety of knowledge flows in order to rapidly replenish the firm's knowledge stocks. For example, when an organization tries to improve cycle times in a manufacturing process, it finds far more value in problem solving shaped by the diverse experiences, perspectives, and learning of a tightly knit team (shared through knowledge flows) than in a training manual (knowledge stocks) alone.

Knowledge flows can help companies gain competitive advantage in an age of near-constant disruption. The software company SAP, for example, routinely taps the nearly 3 million participants in its Community Network, which extends well beyond the boundaries of the firm. By providing a virtual platform for customers, developers, system integrators, and service vendors to create and exchange knowledge, SAP has significantly increased the productivity of all the participants in its ecosystem.

According to Mark Yolton, Senior Vice President of SAP Communications and Social Media, "It's a very robust community with a great deal of activity. We see about 1.2 million unique visitors every month. Hundreds of millions of pages are viewed every year. There are 4,000 discussion forum posts every single day, 365 days a year, and about 115 blogs every day, 365 days a year, from any of the nearly 3 million members."

The site is open to everyone, regardless of whether you are an SAP customer, partner, or newcomer who needs to work with SAP technology. The site offers technical articles, Web-based training, code samples, evaluation systems, discussion forums, and excellent blogs for community experts.

Source: Yolton, M. 2012. SAP: Using social media for building, selling and supporting. *sloanreview.mit.edu*, August 7: np; Hagel, J., III., Brown, J. S., & Davison, L. 2009. The Big Shift: Measuring the Forces of Change. *Harvard Business Review*, 87(4): 87; and Anonymous. undated. SAP Developer Network. *sap.sys-con.com*. np.

knowledge repository contains algorithms of the symptoms of more than 500 illnesses. According to CEO Joseph Tallman, "We are not inventing a new way to cure disease. We are taking available knowledge and inventing processes to put it to better use." The software algorithms were very expensive to develop, but the investment has been repaid many times over. The first 300 algorithms that Access Health developed have each been used an average of 8,000 times a year. Further, the company's paying customers—insurance companies and provider groups—save money because many callers would have made expensive trips to the emergency room or the doctor's office had they not been diagnosed over the phone.

The user community can be a major source of knowledge creation for a firm. Strategy Spotlight 4.5 highlights how SAP, in an example of effective crowdsourcing, has been able to leverage the expertise and involvement of its users to develop new knowledge and transmit it to their entire user community.

We close this section with a series of questions managers should consider in determining (1) how effective their organization is in attracting, developing, and retaining human capital and (2) how effective they are in leveraging human capital through social capital and technology. These questions, included in Exhibit 4.5, summarize some of the key issues addressed in this chapter.

Protecting the Intellectual Assets of the Organization: Intellectual Property and Dynamic Capabilities

In today's dynamic and turbulent world, unpredictability and fast change dominate the business environment. Firms can use technology, attract human capital, or tap into research and design networks to get access to pretty much the same information as their competitors. So what would give firms a sustainable competitive advantage?[114]

LO4.7

The challenge of protecting intellectual property and the importance of a firm's dynamic capabilities.

EXHIBIT 4.5 Issues to Consider in Creating Value through Human Capital, Social Capital, and Technology

Human Capital

Recruiting "Top-Notch" Human Capital

- Does the organization assess attitude and "general makeup" instead of focusing primarily on skills and background in selecting employees at all levels?
- How important are creativity and problem-solving ability? Are they properly considered in hiring decisions?
- Do people throughout the organization engage in effective networking activities to obtain a broad pool of worthy potential employees? Is the organization creative in such endeavors?

Enhancing Human Capital through Employee Development

- Does the development and training process inculcate an "organizationwide" perspective?
- Is there widespread involvement, including top executives, in the preparation and delivery of training and development programs?
- Is the development of human capital effectively tracked and monitored?
- Are there effective programs for succession at all levels of the organization, especially at the top-most levels?
- Does the firm effectively evaluate its human capital? Is a 360-degree evaluation used? Why? Why not?
- Are mechanisms in place to assure that a manager's success does not come at the cost of compromising the organization's core values?

Retaining the Best Employees

- Are there appropriate financial rewards to motivate employees at all levels?
- Do people throughout the organization strongly identify with the organization's mission?
- Are employees provided with a stimulating and challenging work environment that fosters professional growth?
- Are valued amenities provided (e.g., flex time, child-care facilities, telecommuting) that are appropriate given the organization's mission, strategy, and how work is accomplished?
- Is the organization continually devising strategies and mechanisms to retain top performers?

Social Capital

- Are there positive personal and professional relationships among employees?
- Is the organization benefiting (or being penalized) by hiring (or by voluntary turnover) en masse?
- Does an environment of caring and encouragement rather than competition enhance team performance?
- Do the social networks within the organization have the appropriate levels of closure and bridging relationships?
- Does the organization minimize the adverse effects of excessive social capital, such as excessive costs and "groupthink"?

Technology

- Has the organization used technologies such as email and networks to develop products and services?
- Does the organization effectively use technology to transfer best practices across the organization?
- Does the organization use technology to leverage human capital and knowledge both within the boundaries of the organization and among its suppliers and customers?
- Has the organization effectively used technology to codify knowledge for competitive advantage?
- Does the organization try to retain some of the knowledge of employees when they decide to leave the firm?

Source: Adapted from Dess, G. G., & Picken, J. C. 1999. *Beyond Productivity:* 63–64. New York: AMACON.

Protecting a firm's intellectual property requires a concerted effort on the part of the company. After all, employees become disgruntled and patents expire. The management of intellectual property (IP) involves, besides patents, contracts with confidentiality and noncompete clauses, copyrights, and the development of trademarks. Moreover, developing dynamic capabilities is the only avenue providing firms with the ability to reconfigure their knowledge and activities to achieve a sustainable competitive advantage.

Intellectual Property Rights

Intellectual property rights are more difficult to define and protect than property rights for physical assets (e.g., plant, equipment, and land). However, if intellectual property rights are not reliably protected by the state, there will be no incentive to develop new products and services. Property rights have been enshrined in constitutions and rules of law in many countries. In the information era, though, adjustments need to be made to accommodate the new realities of knowledge. Knowledge and information are fundamentally different assets from the physical ones that property rights have been designed to protect.

The protection of intellectual rights raises unique issues, compared to physical property rights. IP is characterized by significant development costs and very low marginal costs. Indeed, it may take a substantial investment to develop a software program, an idea, or a digital music tune. Once developed, though, their reproduction and distribution cost may be almost zero, especially if the Internet is used. Effective protection of intellectual property is necessary before any investor will finance such an undertaking. Appropriation of their returns is harder to police since possession and deployment are not as readily observable. Unlike physical assets, intellectual property can be stolen by simply broadcasting it. Recall Napster and MP3 as well as the debates about counterfeit software, music CDs, and DVDs coming from developing countries such as China. Part of the problem is that using an idea does not prevent others from simultaneously using it for their own benefit, which is typically impossible with physical assets. Moreover, new ideas are frequently built on old ideas and are not easily traceable.

Given these unique challenges in protecting IP, it comes as no surprise that legal battles over patents become commonplace in IP-heavy industries such as telecommunications. Take the recent patent battles Apple is fighting against smartphone makers running Android, Google's mobile operating system.[115]

> In 2012, Apple and HTC, a Taiwanese smartphone maker, agreed to dismiss a series of lawsuits filed against each other after Apple accused HTC of copying the iPhone. While this settlement may be a sign that Apple's new CEO, Timothy Cook is eager to end the distractions caused by IP-related litigation, other patent battles continue, including one between Apple and Samsung, the largest maker of Android phones. This legal battle involves much higher stakes, because Samsung shipped almost eight times as many Android smartphones as HTC in the third quarter of 2012. It remains to be seen how these IP-related legal battles eventually turn out, but Apple's new leadership seems to be more pragmatic about this issue. In Mr. Cook's words, "It is awkward. I hate litigation. I absolutely hate it," suggesting that he is not as enthusiastic a combatant in the patent wars as was his predecessor, Steve Jobs, who famously promised to "destroy Android, because it's a stolen product."

Countries are attempting to pass new legislation to cope with developments in new pharmaceutical compounds, stem cell research, and biotechnology. However, a firm that is faced with this challenge today cannot wait for the legislation to catch up. New technological developments, software solutions, electronic games, online services, and other products and services contribute to our economic prosperity and the creation of wealth for those entrepreneurs who have the idea first and risk bringing it to the market.

Dynamic Capabilities

Dynamic capabilities entail the capacity to build and protect a competitive advantage.[116] This rests on knowledge, assets, competencies, and complementary assets and technologies as well as the ability to sense and seize new opportunities, generate new knowledge, and reconfigure existing assets and capabilities.[117] According to David Teece, an economist at the University of California at Berkeley, dynamic capabilities are related to the

intellectual property rights
intangible property owned by a firm in the forms of patents, copyrights, trademarks, or trade secrets.

dynamic capabilities
a firm's capacity to build and protect a competitive advantage, which rests on knowledge, assets, competencies, complementary assets, and technologies. Dynamic capabilities include the ability to sense and seize new opportunities, generate new knowledge, and reconfigure existing assets and capabilities.

Microchip Technologies Eliminates Sales Commissions

Mitch Little started to question the conventional wisdom on sales commissions in the late 1990s, shortly after he became vice president for worldwide sales and applications at Microchip Technologies, a large semiconductor company based near Phoenix, Arizona. He managed 400 salespeople whose compensation was based on the industry standard—60 percent base salary, 40 percent commissions.

In what might be considered an act of sacrilege for the former salesman, Little discontinued commissions altogether! Under his new plan, salespeople received 90 percent of their compensation in a high base salary and the other 10 percent was linked to corporate (rather than individual) measures such as Microchip's total revenues, profits, and earnings per share.

The result? Total sales soared—and the cost of sales remained the same. Attrition dropped and retention rose. Today Microchip is a $6.5 billion public company, and its revenues have jumped 46 percent over the past two years. It still maintains its commission-free 90/10 system—not only for the salesforce but also for virtually everyone who isn't an hourly worker, including the CEO and Little. Its alternative compensation scheme is one reason why Microchip has long been one of the top-performing firms in the semiconductor industry, ringing up 86 consecutive quarters of profits.

Discussion Questions

1. Why do you think this compensation system worked so well at Microchip Technologies?
2. Would such a compensation package work in all industries? Why? Why not?

Sources: Pink, D. H. 2012. A radical prescription for sales. *Harvard Business Review,* 90 (7/8): 76–77; and *finance.yahoo.com*.

---

entrepreneurial side of the firm and are built within a firm through its environmental and technological "sensing" apparatus, its choices of organizational form, and its collective ability to strategize. Dynamic capabilities are about the ability of an organization to challenge the conventional wisdom within its industry and market, learn and innovate, adapt to the changing world, and continuously adopt new ways to serve the evolving needs of the market.[118]

Examples of dynamic capabilities include product development, strategic decision making, alliances, and acquisitions.[119] Some firms have clearly developed internal processes and routines that make them superior in such activities. For example, 3M and Apple are ahead of their competitors in product development. Cisco Systems has made numerous acquisitions over the years. They seem to have developed the capability to identify and evaluate potential acquisition candidates and seamlessly integrate them once the acquisition is completed. Other organizations can try to copy Cisco's practices. However, Cisco's combination of the resources of the acquired companies and their reconfiguration that Cisco has already achieved places them well ahead of their competitors. As markets become increasingly dynamic, traditional sources of long-term competitive advantage become less relevant. In such markets, all that a firm can strive for are a series of temporary advantages. Dynamic capabilities allow a firm to create this series of temporary advantages through new resource configurations.[120]

summary

Firms throughout the industrial world are recognizing that the knowledge worker is the key to success in the marketplace. However, we also recognize that human capital, although vital, is still only a necessary, but not a sufficient, condition for creating value. We began the first section of the chapter by addressing the importance of human capital and how it can be attracted, developed, and retained. Then we discussed the role of social capital and technology in leveraging human capital for competitive success. We pointed out that intellectual capital—the difference between a firm's market value and its book value—has increased significantly over the past few decades. This is particularly true for firms in knowledge-intensive industries, especially where there are relatively few tangible assets, such as software development.

The second section of the chapter addressed the attraction, development, and retention of human capital. We viewed these three activities as a "three-legged stool"—that is, it is difficult for firms to be successful if they ignore or are unsuccessful in any one of these activities. Among the issues we discussed in *attracting* human capital were "hiring for attitude, training for skill" and the value of using social networks to attract human capital. In particular, it is important to attract employees who can collaborate with others, given the importance of collective efforts such as teams and task forces. With regard to *developing* human capital, we discussed the need to encourage widespread involvement throughout the organization, monitor progress and track the development of human capital, and evaluate human capital. Among the issues that are widely practiced in evaluating human capital is the 360-degree evaluation system. Employees are evaluated by their superiors, peers, direct reports, and even internal and external customers. We also addressed the value of maintaining a diverse workforce. Finally, some mechanisms for retaining human capital are employees' identification with the organization's mission and values, providing challenging work and a stimulating environment, the importance of financial and nonfinancial rewards and incentives, and providing flexibility and amenities. A key issue here is that a firm should not overemphasize financial rewards. After all, if individuals join an organization for money, they also are likely to leave for money. With money as the primary motivator, there is little chance that employees will develop firm-specific ties to keep them with the organization.

The third section of the chapter discussed the importance of social capital in leveraging human capital. Social capital refers to the network of relationships that individuals have throughout the organization as well as with customers and suppliers. Such ties can be critical in obtaining both information and resources. With regard to recruiting, for example, we saw how some firms are able to hire en masse groups of individuals who are part of social networks. Social relationships can also be very important in the effective functioning of groups. Finally, we discussed some of the potential downsides of social capital. These include the expenses that firms may bear when promoting social and working relationships among individuals as well as the potential for "groupthink," wherein individuals are reluctant to express divergent (or opposing) views on an issue because of social pressures to conform. We also

introduced the concept of social networks. The relative advantages of being central in a network versus bridging multiple networks was discussed. We addressed the key role that social networks can play in both improving knowledge management and promoting career success.

The fourth section addressed the role of technology in leveraging human capital. We discussed relatively simple means of using technology, such as email and networks where individuals can collaborate by way of personal computers. We provided suggestions and guidelines on how electronic teams can be effectively managed. We also addressed more sophisticated uses of technology, such as sophisticated management systems. Here knowledge can be codified and reused at very low cost, as we saw in the examples of firms in the consulting, health care, and high-technology industries.

In the last section we discussed the increasing importance of protecting a firm's intellectual property. Although traditional approaches such as patents, copyrights, and trademarks are important, the development of dynamic capabilities may be the best protection in the long run.

key terms

knowledge economy 107
intellectual capital 107
human capital 108
social capital 108
explicit knowledge 108
tacit knowledge 108
360-degree evaluation and
   feedback systems 115
social network analysis 121

closure 121
bridging
   relationships 122
structural holes 122
unification lever 123
people lever 123
T-shaped
   management 123
network lever 123
groupthink 125
electronic teams 127
intellectual property
   rights 131
dynamic capabilities 131

SUMMARY REVIEW QUESTIONS

1. Explain the role of knowledge in today's competitive environment.
2. Why is it important for managers to recognize the interdependence in the attraction, development, and retention of talented professionals?

3. What are some of the potential downsides for firms that engage in a "war for talent"?
4. Discuss the need for managers to use social capital in leveraging their human capital both within and across their firm.
5. Discuss the key role of technology in leveraging knowledge and human capital.

experiential exercise

Pfizer, a leading health care firm with $59 billion in revenues, is often rated as one of *Fortune*'s "Most Admired Firms." It is also considered an excellent place to work and has generated high return to shareholders. Clearly, they value their human capital. Using the Internet and/or library resources, identify some of the actions/strategies Pfizer has taken to attract, develop, and retain human capital. What are their implications?

application questions & exercises

1. Look up successful firms in a high-technology industry as well as two successful firms in more traditional industries such as automobile manufacturing and retailing. Compare their market values and book values. What are some implications of these differences?
2. Select a firm for which you believe its social capital—both within the firm and among its suppliers and customers—is vital to its competitive advantage. Support your arguments.
3. Choose a company with which you are familiar. What are some of the ways in which it uses technology to leverage its human capital?
4. Using the Internet, look up a company with which you are familiar. What are some of the policies and procedures that it uses to enhance the firm's human and social capital?

ethics questions

1. Recall an example of a firm that recently faced an ethical crisis. How do you feel the crisis and management's handling of it affected the firm's human capital and social capital?
2. Based on your experiences or what you have learned in your previous classes, are you familiar with any companies that used unethical practices to attract talented professionals? What do you feel were the short-term and long-term consequences of such practices?

Activity	Actions/Strategies	Implications
Attracting human capital		
Developing human capital		
Retaining human capital		

references

1. Touryalai, H. 2011. Meddling with Merrill: Merrill Lynch's profits are bolstering BofA. What is Merrill getting in return? *Forbes,* September 26: 45–47; Benoit, D. 2012. BofA-Merrill: Still a bottom-line success. *www.wsj.com*, September 28: np; Silver-Greenberg, J & Craig, S. 2012. Bank of America settles suit over Merrill for $2.43 billion. *www.nytimes.com*, September 28: np.

2. Parts of this chapter draw upon some of the ideas and examples from Dess, G. G. & Picken, J. C. 1999. *Beyond productivity.* New York: AMACOM.

3. An acknowledged trend: The world economic survey. 1996. *The Economist,* September 2(8): 25–28.

4. Quinn, J. B., Anderson, P., & Finkelstein, S. 1996. Leveraging intellect. *Academy of Management Executive,* 10(3): 7–27; and *https://www.cia.gov/library/publications/the=world=factbook/geos/us.html.*

5. Hamel, G. & Prahalad, C. K. 1996. Competing in the new economy: Managing out of bounds. *Strategic Management Journal,* 17: 238.

6. Stewart, T. A. 1997. *Intellectual capital: The new wealth of organizations.* New York: Doubleday/Currency.

7. Leif Edvisson and Michael S. Malone have a similar, more detailed definition of *intellectual capital:* "the combined knowledge, skill, innovativeness, and ability to meet the task at hand." They consider intellectual capital to equal human capital plus structural capital. *Structural capital* is defined as "the hardware, software, databases, organization structure, patents, trademarks, and everything else of organizational capability that supports those employees' productivity—in a word, everything left at the office when the employees go home." Edvisson, L. & Malone, M. S. 1997. *Intellectual capital: Realizing your company's true value by finding its hidden brainpower:* 10–14. New York: HarperBusiness.

8. Stewart, T. A. 2001. Accounting gets radical. *Fortune,* April 16: 184–194.

9. Adams, S. & Kichen, S. 2008. Ben Graham then and now. *Forbes,* November 10: 56.

10. An interesting discussion of Steve Jobs's impact on Apple's valuation is in: Lashinsky, A. 2009. Steve's leave—what does it really mean? *Fortune,* February 2: 96–102.

11. Anonymous. 2007. Intel opens first high volume 45 nm microprocessor manufacturing factory. *www.intel.com.* October 25: np.

12. Thomas Stewart has suggested this formula in his book *Intellectual capital.* He provides an insightful discussion on pages 224–225, including some of the limitations of this approach to measuring intellectual capital. We recognize, of course, that during the late 1990s and in early 2000, there were some excessive market valuations of high-technology and Internet firms. For an interesting discussion of the extraordinary market valuation of Yahoo!, an Internet company, refer to Perkins, A. B. 2001. The Internet bubble encapsulated: Yahoo! *Red Herring,* April 15: 17–18.

13. Roberts, P. W. & Dowling, G. R. 2002. Corporate reputation and sustained superior financial performance. *Strategic Management Journal,* 23(12): 1077–1095.

14. For a recent study on the relationships between human capital, learning, and sustainable competitive advantage, read Hatch, N. W. & Dyer, J. H. 2005. Human capital and learning as a source of sustainable competitive advantage. *Strategic Management Journal,* 25: 1155–1178.

15. One of the seminal contributions on knowledge management is Becker, G. S. 1993. *Human capital: A theoretical and empirical analysis with special reference to education* (3rd ed.). Chicago: University of Chicago Press.

16. For an excellent overview of the topic of social capital, read Baron, R. A. 2005. Social capital. In Hitt, M. A. & Ireland, R. D. (Eds.), *The Blackwell encyclopedia of management* (2nd ed.): 224–226. Malden, MA: Blackwell.

17. For an excellent discussion of social capital and its impact on organizational performance, refer to Nahapiet, J. & Ghoshal, S. 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review,* 23: 242–266.

18. An interesting discussion of how knowledge management (patents) can enhance organizational performance can be found in Bogner, W. C. & Bansal, P. 2007. Knowledge management as the basis of sustained high performance. *Journal of Management Studies,* 44(1): 165–188.

19. Polanyi, M. 1967. *The tacit dimension.* Garden City, NY: Anchor Publishing.

20. Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management,* 17: 99–120.

21. For an interesting perspective of empirical research on how knowledge can adversely affect performance, read Haas, M. R. & Hansen, M. T. 2005. When using knowledge can hurt performance: The value of organizational capabilities in a management consulting company. Strategic *Management Journal,* 26(1): 1–24.

22. New insights on managing talent are provided in: Cappelli, P. 2008. Talent management for the twenty-first century. *Harvard Business Review,* 66(3): 74–81.

23. Some of the notable books on this topic include Edvisson & Malone, op. cit.; Stewart, op. cit.; and Nonaka, I. & Takeuchi, I. 1995. *The knowledge creating company.* New York: Oxford University Press.

24. Segalla, M. & Felton, N. 2010. Find the real power in your organization. *Harvard Business Review,* 88(5): 34–35.

25. Stewart, T. A. 2000. Taking risk to the marketplace. *Fortune,* March 6: 424.

26. Insights on the Generation X's perspective on the workplace are in: Erickson, T. J. 2008. Task, not time: Profile of a Gen Y job. *Harvard Business Review,* 86(2): 19.

27. Pfeffer, J. 2010. Building sustainable organizations: The human factor. *The Academy of Management Perspectives,* 24(1): 34–45.

28. Dutton, G. 1997. Are you techno-logically competent? *Management Review,* November: 54–58.

29. Some workplace implications for the aging workforce are addressed in: Strack, R., Baier, J., & Fahlander, A. 2008. Managing demographic risk. *Harvard Business Review,* 66(2): 119–128.

30. For a discussion of attracting, developing, and retaining top talent, refer to Goffee, R. & Jones, G. 2007. Leading clever people. *Harvard Business Review,* 85(3): 72–89.

31. Dess & Picken, op. cit.: 34.

32. Webber, A. M. 1998. Danger: Toxic company. *Fast Company,* November: 152–161.

33. Martin, J. & Schmidt, C. 2010. How to keep your top talent. *Harvard Business Review,* 88(5): 54–61.

34. Some interesting insights on why home-grown American talent is going abroad is found in: Saffo, P. 2009. A looming American diaspora. *Harvard Business Review,* 87(2): 27.

35. Grossman, M. 2012. The best advice I ever got. *Fortune,* May 12: 119.

36. Davenport, T. H., Harris, J. & Shapiro, J. 2010. Competing on talent analytics. *Harvard Business Review,* 88(10): 62–69.

37. Ployhart, R. E. & Moliterno, T. P. 2011. Emergence of the human capital resource: A multilevel model. *Academy of Management Review,* 36(1): 127–150.

38. For insights on management development and firm performance in several countries, refer to: Mabey, C. 2008. Management development and firm performance in Germany, Norway, Spain, and the UK. *Journal of International Business Studies,* 39(8): 1327–1342.

39. Martin, J. 1998. So, you want to work for the best. . . . *Fortune,* January 12: 77.

40. Cardin, R. 1997. Make your own Bozo Filter. *Fast Company,* October–November: 56.

41. Anonymous 100 best companies to work for *money.cnn.com.* Undated: np.

42. Martin, op. cit.; Henkoff, R. 1993. Companies that train best. *Fortune,* March 22: 53–60.

43. This section draws on: Garg, V. 2012. Here's why companies should give Millennial workers everything they ask for. *buisnessinsider.com,* August 23: np; *worklifepolicy.com*; and Gerdes, L. 2006. The top 50 employers for new college grads. *BusinessWeek,* September 18: 64–81.

44. An interesting perspective on developing new talent rapidly when they join an organization can be found in Rollag, K., Parise, S., & Cross, R. 2005. Getting new hires up to speed quickly. *MIT Sloan Management Review,* 46(2): 35–41.

45. Stewart, T. A. 1998. Gray flannel suit? moi? *Fortune,* March 18: 80–82.

46. Bryant, A. 2011. *The corner office.* St. Martin's Griffin: New York: 227.

47. An interesting perspective on how Cisco Systems develops its talent can be found in Chatman, J., O'Reilly, C., & Chang, V. 2005. Cisco Systems: Developing a human capital strategy. *California Management Review,* 47(2): 137–166.

48. Anonymous. 2011. Schumpeter: The tussle for talent. *The Economist.* January 8: 68.

49. Training and development policy: Mentoring. nd. *opm.gov*: np.

50. Douglas, C. A. 1997. Formal mentoring programs in organizations. *centerforcreativeleadership.org*: np.

51. Warner, F. 2002. Inside Intel's mentoring movement. *fastcompany .com*, March 31: np.

52. Grove, A. 2011. Be a mentor. *Bloomberg BusinessWeek,* September 21: 80.

53. Our discussion of sponsorship draws on: Alsever, J. 2012. Want to move up? Get a sponsor. *Fortune,* May 21: 53–54; and Aguirre, D. 2010. When female networks aren't enough. *blogs.org/hbr/hewlett*, May 12: np.

54. For an innovative perspective on the appropriateness of alternate approaches to evaluation and rewards, refer to Seijts, G. H. & Lathan, G. P. 2005. Learning versus performance goals: When should each be used? *Academy of Management Executive,* 19(1): 124–132.

55. The discussion of the 360-degree feedback system draws on the article UPS. 1997. 360-degree feedback: Coming from all sides. *Vision* (a UPS Corporation internal company publication), March: 3; Slater, R. 1994. *Get better or get beaten: Thirty-one leadership secrets from Jack Welch.* Burr Ridge, IL: Irwin; Nexon, M. 1997. General Electric: The secrets of the finest company in the world. *L'Expansion,* July 23: 18–30; and Smith, D. 1996. Bold new directions for human resources. *Merck World* (internal company publication), October: 8.

56. Interesting insights on 360-degree evaluation systems are discussed in: Barwise, P. & Meehan, Sean. 2008. So you think you're a good listener. *Harvard Business Review,* 66(4): 22–23.

57. Insights into the use of 360-degree evaluation are in: Kaplan, R. E. & Kaiser, R. B. 2009. Stop overdoing your strengths. *Harvard Business Review,* 87(2): 100–103.

58. Kets de Vries, M. F. R. 1998. Charisma in action: The transformational abilities of Virgin's Richard Branson and ABB's Percy Barnevik. *Organizational Dynamics,* Winter: 20.

59. For an interesting discussion on how organizational culture has helped Zappos become number one in *Fortune's* 2009 survey of the best companies to work for, see: O'Brien, J. M. n 2009. Zappos knows how to kick it. *Fortune,* February 2: 54–58.

60. We have only to consider the most celebrated case of industrial espionage in recent years, wherein José Ignacio Lopez was indicted in a German court for stealing sensitive product planning documents from his former employer, General Motors, and sharing them with his executive colleagues at Volkswagen. The lawsuit was dismissed by the German courts, but Lopez and his colleagues were investigated by the U.S. Justice Department. Also consider the recent litigation involving noncompete employment contracts and confidentiality clauses of *International Paper v. Louisiana-Pacific, Campbell Soup v. H. J. Heinz Co.,* and *PepsiCo v. Quaker Oats's Gatorade.* In addition to retaining valuable human resources and often their valuable network of customers, firms must also protect proprietary information and knowledge. For interesting insights, refer to Carley, W. M. 1998. CEO gets hard lesson in how not to keep his lieutenants. *The Wall Street Journal,* February 11: A1, A10; and Lenzner, R. & Shook, C. 1998. Whose Rolodex is it, anyway? *Forbes,* February 23: 100–103.

61. For an insightful discussion of retention of knowledge workers in today's economy, read Davenport, T. H. 2005. *The care and feeding of the knowledge worker.* Boston, MA: Harvard Business School Press.

62. Fisher, A. 2008. America's most admired companies. *Fortune,* March 17: 74.

63. Stewart, T. A. 2001. *The wealth of knowledge.* New York: Currency.

64. For insights on fulfilling one's potential, refer to: Kaplan, R. S. 2008. Reaching your potential. *Harvard Business Review,* 66(7/8): 45–57.

65. Amabile, T. M. 1997. Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review,* Fall: 39–58.

66. For an insightful perspective on alternate types of employee–employer relationships, read Erickson, T. J. & Gratton, L. 2007. What it means to work here. *Harvard Business Review,* 85(3): 104–112.

67. Pfeffer, J. 2001. Fighting the war for talent is hazardous to your organization's health. *Organizational Dynamics,* 29(4): 248–259.

68. Best companies to work for 2011. 2011. *finance.yahoo.com*, January 20: np.

69. Cox, T. L. 1991. The multinational organization. *Academy of Management Executive,* 5(2): 34–47. Without doubt, a great deal has been written on the topic of creating and

maintaining an effective diverse workforce. Some excellent, recent books include: Harvey, C. P. & Allard, M. J. 2005. *Understanding and managing diversity: Readings, cases, and exercises.* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice-Hall; Miller, F. A. & Katz, J. H. 2002. *The inclusion breakthrough: Unleashing the real power of diversity.* San Francisco: Berrett Koehler; and Williams, M. A. 2001. *The 10 lenses: Your guide to living and working in a multicultural world.* Sterling, VA: Capital Books.

70. For an interesting perspective on benefits and downsides of diversity in global consulting firms, refer to: Mors, M. L. 2010. Innovation in a global consulting firm: When the problem is too much diversity. *Strategic Management Journal,* 31(8): 841–872.

71. Day, J.C. undated. National population projections. *cps.ipums.org*: np.

72. Hewlett, S. A. & Rashid, R. 2010. The battle for female talent in emerging markets. *Harvard Business Review,* 88(5): 101–107.

73. This section, including the six potential benefits of a diverse workforce, draws on Cox, T. H. & Blake, S. 1991. Managing cultural diversity: Implications for organizational competitiveness. *Academy of Management Executive,* 5(3): 45–56.

74. *www.pwcglobal.com/us/eng/careers/ diversity/index.html.*

75. This discussion draws on Dess, G. G. & Lumpkin, G. T. 2001. Emerging issues in strategy process research. In Hitt, M. A., Freeman, R. E. & Harrison, J. S. (Eds.). *Handbook of strategic management:* 3–34. Malden, MA: Blackwell.

76. Wong, S.-S. & Boh, W. F. 2010. Leveraging the ties of others to build a reputation for trustworthiness among peers. *Academy of Management Journal,* 53(1): 129–148.

77. Adler, P. S. & Kwon, S. W. 2002. Social capital: Prospects for a new concept. *Academy of Management Review,* 27(1): 17–40.

78. Capelli, P. 2000. A market-driven approach to retaining talent. *Harvard Business Review,* 78(1): 103–113.

79. This hypothetical example draws on Peteraf, M. 1993. The cornerstones of competitive advantage. *Strategic Management Journal,* 14: 179–191.

80. Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal,* 5: 171–180.

81. Wysocki, B., Jr. 2000. Yet another hazard of the new economy: The Pied Piper Effect. *The Wall Street Journal,* March 20: A1–A16.

82. Ideas on how managers can more effectively use their social network are addressed in: McGrath, C. & Zell, D. 2009. Profiles of trust: Who to turn to, and for what. *MIT Sloan Management Review,* 50(2): 75–80.

83. Ibid.

84. Buckman, R. C. 2000. Tech defectors from Microsoft resettle together. *The Wall Street Journal,* October: B1–B6.

85. A study of the relationship between social networks and performance in China is found in: Li, J. J., Poppo, L., & Zhou, K. Z. 2008. Do managerial ties in China always produce value? Competition, uncertainty, and domestic vs. foreign firms. *Strategic Management Journal,* 29(4): 383–400.

86. Aime, F., Johnson, S., Ridge, J. W. & Hill, A. D. 2010. The routine may be stable but the advantage is not: Competitive implications of key employee mobility. *Strategic Management Journal,* 31(1): 75–87.

87. Ibarra, H. & Hansen, M. T. 2011. Are you a collaborative leader? *Harvard Business Review,* 89 (7/8): 68–74.

88. There has been a tremendous amount of theory building and empirical research in recent years in the area of social network analysis. Unquestionably, two of the major contributors to this domain have been Ronald Burt and J. S. Coleman. For excellent background discussions, refer to: Burt, R. S. 1992. *Structural holes: The social structure of competition.* Cambridge, MA: Harvard University Press; Coleman, J. S. 1990. *Foundations of social theory.* Cambridge, MA: Harvard University Press; and Coleman, J. S. 1988. Social capital in the creation of human capital. *American Journal of Sociology.* 94: S95–S120. For a more recent review and integration of current thought on social network theory, consider: Burt, R. S. 2005. *Brokerage & closure: An introduction to social capital.* Oxford Press: New York.

89. Our discussion draws on the concepts developed by Burt, 1992, op. cit.; Coleman, 1990, op. cit.; Coleman, 1988, op. cit.; and Oh, H., Chung, M. & Labianca, G. 2004. Group social capital and group effectiveness: The role of informal socializing ties. *Academy of Management Journal,* 47(6): 860–875. We would like to thank Joe Labianca (University of Kentucky)

for his helpful feedback and ideas in our discussion of social networks.

90. Arregle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. 2007. The development of organizational social capital: Attributes of family firms. *Journal of Management Studies,* 44(1): 73–95.

91. A novel perspective on social networks is in: Pentland, A. 2009. How social networks network best. *Harvard Business Review,* 87(2): 37.

92. Oh et al., op. cit.

93. Hoppe, op. cit.

94. This section draws on: Hansen, M. T. 2009. *Collaboration: How leaders avoid the traps, create unity, and reap big results.* Boston, MA: Harvard Business Press.

95. Perspectives on how to use and develop decision networks are discussed in: Cross, R., Thomas, R. J., & Light, D. A. 2009. How "who you know" affects what you decide. *MIT Sloan Management Review,* 50(2): 35–42.

96. Our discussion of the three advantages of social networks draws on Uzzi, B. & Dunlap. S. 2005. How to build your network. *Harvard Business Review,* 83(12): 53–60. For a recent, excellent review on the research exploring the relationship between social capital and managerial performance, read Moran, P. 2005. Structural vs. relational embeddedness: Social capital and managerial performance. *Strategic Management Journal,* 26(12): 1129–1151.

97. A perspective on personal influence is in: Christakis, N. A. 2009. The dynamics of personal influence. *Harvard Business Review,* 87(2): 31.

98. Cross, R. & Thomas, R. 2011. A smarter way to network. *Harvard Business Review,* 7/8 (89): 149–153.

99. Prusak, L. & Cohen, D. 2001. How to invest in social capital. *Harvard Business Review,* 79(6): 86–93.

100. Leonard, D. & Straus, S. 1997. Putting your company's whole brain to work. *Harvard Business Review,* 75(4): 110–122.

101. For an excellent discussion of public (i.e., the organization) versus private (i.e., the individual manager) benefits of social capital, refer to Leana, C. R. & Van Buren, H. J. 1999. Organizational social capital and employment practices. *Academy of Management Review,* 24(3): 538–555.

102. The authors would like to thank Joe Labianca, University of Kentucky, and John Lin, University of Texas at

Dallas, for their very helpful input in our discussion of social network theory and its practical implications.

103. Harnish, V. 2010. Stop doing these five business killers now. *Fortune,* December 6: 71.

104. Goldsmith, M. 2009. How not to lose the top job. *Harvard Business Review,* 87(1): 74.

105. Taylor, W. C. 1999. Whatever happened to globalization? *Fast Company,* December: 228–236.

106. Wilson, H. J., Guinan, P. J., Paris, S., & Weinberg, D. 2011. What's your social media strategy? *Harvard Business Review,* 7/8 (89): 23–25.

107. Lei, D., Slocum, J., & Pitts, R. A. 1999. Designing organizations for competitive advantage: The power of unlearning and learning. *Organizational Dynamics,* Winter: 24–38.

108. This section draws upon Zaccaro, S. J. & Bader, P. 2002. E-Leadership and the challenges of leading e-teams: Minimizing the bad and maximizing the good. *Organizational Dynamics,* 31(4): 377–387.

109. Kirkman, B. L., Rosen, B., Tesluk, P. E., & Gibson, C. B. 2004. The impact of team empowerment on virtual team performance: The moderating role of face-to-face interaction. *Academy of Management Journal,* 47(2): 175–192.

110. The discussion of the advantages and challenges associated with e-teams draws on Zacarro & Bader, op. cit.

111. For a recent study exploring the relationship between team empowerment, face-to-face interaction, and performance in virtual teams, read Kirkman, Rosen, Tesluk, & Gibson, op. cit.

112. For an innovative study on how firms share knowledge with competitors and the performance implications, read Spencer, J. W. 2003. Firms' knowledge sharing strategies in the global innovation system: Empirical evidence from the flat panel display industry. *Strategic Management Journal,* 24(3): 217–235.

113. The examples of Andersen Consulting and Access Health draw upon Hansen, M. T., Nohria, N., & Tierney, T. 1999. What's your strategy for managing knowledge? *Harvard Business Review,* 77(2): 106–118.

114. This discussion draws on Conley, J. G. 2005. *Intellectual capital management,* Kellogg School of Management and Schulich School of Business, York University, Toronto, KS 2003; Conley, J. G. & Szobocsan, J. 2001. Snow White shows the way. *Managing Intellectual Property,* June: 15–25; Greenspan, A. 2004. Intellectual property rights, The Federal Reserve Board, Remarks by the chairman, February 27; and Teece, D. J. 1998. Capturing value from knowledge assets, *California Management Review,* 40(3): 54–79. The authors would like to thank Professor Theo Peridis, York University, for his contribution to this section.

115. Wingfield, N. 2012. As Apple and HTC end lawsuits, smartphone patent battles continue. *New York Times. www.nytimes.com.* November 11: 57–63; and Tyrangiel, J. 2012. Tim Cook's freshman year: The Apple CEO speaks. *Bloomberg BusinessWeek,* December 6: 62–76.

116. E. Danneels. 2011. Trying to become a different type of company: Dynamic capability at Smith Corona. *Strategic Management Journal,* 32(1): 1–31.

117. A study of the relationship between dynamic capabilities and related diversification is: Doving, E. & Gooderham, P. N. 2008. *Strategic Management Journal,* 29(8): 841–858.

118. A perspective on strategy in turbulent markets is in: Sull, D. 2009. How to thrive in turbulent markets. *Harvard Business Review,* 87(2): 78–88.

119. Lee, G. K. 2008. Relevance of organizational capabilities and its dynamics: What to learn from entrants' product portfolios about the determinants of entry timing. *Strategic Management Journal,* 29(12): 1257–1280.

120. Eisenhardt, K. M. & Martin, J. E. 2000. Dynamic capabilities: What are they? *Strategic Management Journal,* 21: 1105–1121.