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.

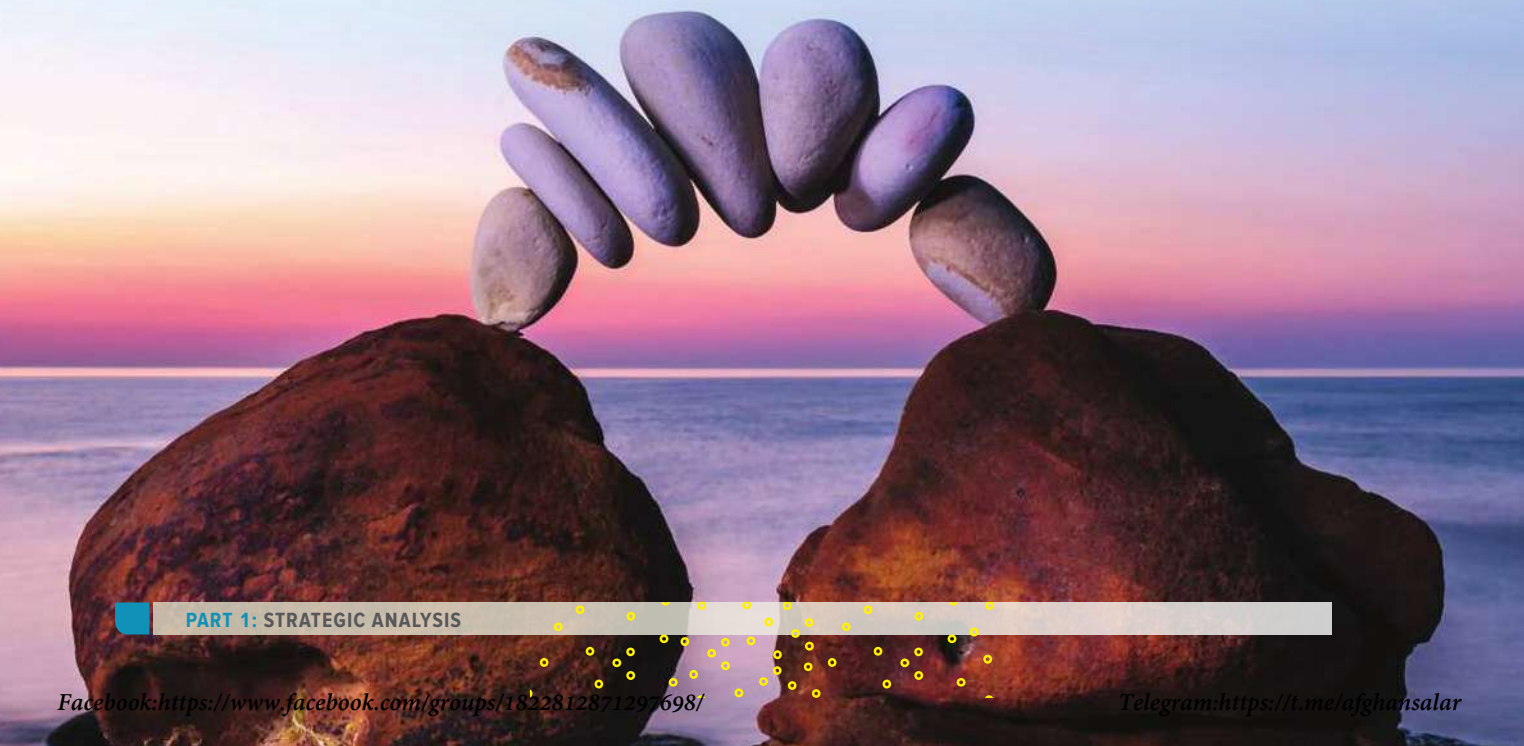
LO4-3 The key role of social capital in leveraging human capital within and across the firm.

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

The 2012 bankruptcy of storied law firm Dewey & LeBoeuf LLP illustrates how even well-established firms can fail because of ineffective management of their talent. The failure of the firm is attributable to three major issues: a reliance on borrowed money, making large promises about compensation to incoming (called "lateral") partners, and a lack of transparency about the firm's financials.

Partnership in a major law firm, considered the brass ring in a legal career, once came with lifetime security, prestige, and entry into the 1 percent—and at times, the one-tenth of the 1 percent. However, the collapse of Dewey & LeBoeuf laid bare the increasingly Darwinian competition for lucrative clients that has afflicted even the highest ranks of the profession. Here was a firm that traced its roots to the 19th century and bore the name of a former Republican presidential candidate and New York governor, Thomas E. Dewey. The New York–based law firm once had 1,300 lawyers but filed for bankruptcy amid a huge exodus of talent and mounting debt. Few firms borrowed as much money as Dewey & LeBoeuf did—its credit line included a private bond placement of $125 million in 2010. And transparency did not seem to be one of Dewey's strengths: Some only learned about this transaction when it surfaced in a news report. One former partner said: "I read about it in the papers. And I certainly didn't sign off on it."

In 2007, Dewey & LeBoeuf was formed in a widely hailed merger of insurance-and-energy-focused LeBoeuf, Lamb, Greene & McRae LLP, and Dewey Ballantine LLP. However, things soured quickly. The newly merged firm grew aggressively by making promises it ultimately couldn't honor—guaranteeing new partners huge salaries, sometimes over $5 million a year. Legacy partners were definitely not happy that new hires were being treated better than they were and, of course, demanded pay pacts of their own. By the fall of 2011, roughly a third of the firm's 300 partners had salary guarantees.

Large law firms sometimes woo big stars by promising to pay them a fixed amount for a year or two—regardless of the firm's or their own financial performance. But most firms use such guarantees very sparingly. By all accounts, Dewey took this practice to an extreme and made compensation guarantees for multiple years. To make matters worse, it offered guarantees to lawyers who did not prove to be rainmakers. News of the widespread guarantees angered the rank-and-file partners at Dewey, many of whom left the firm. Dewey's performance continued to suffer and after a round of failed merger attempts, the firm liquidated. This left thousands of staff and junior lawyers unemployed, and it became the largest law firm failure in U.S. history.

Elizabeth Sharrer, the chairwoman of 500-lawyer Holland and Hart LLP, said, "Leaders hopefully have learned a lesson that if you're making someone a compensation deal you have to hide from our partners, it's not a good deal." Law firms can dissolve within weeks if spooked partners bail. Sharrer notes, "You can circle the drain really, really quickly." Interviews with former partners, consultants, and others in the industry depict Dewey as a firm run by an insular coterie of attorneys and administrators who often withheld critical information from their partners, undermining their own credibility in the process. When the Great Recession of 2008 and 2009 hit and deep problems came to the surface, a sense of shared sacrifice and loyalty was in short supply!

Discussion Questions

1. How could these problems have been avoided at Dewey & LeBoeuf?
2. What practices should firms such as Dewey & LeBoeuf implement to attract and retain top talent?

Sources: Randazzo, S. 2015. Lessons from the Dewey debacle. *The Wall Street Journal.* October 20: B2; Stewart, J. B. 2014. The rise and fall of a rainmaker. *nytimes.com*. December 12: np; Longstreth, A. & Raymond, N. 2012. The Dewey chronicles: The rise and fall of a legal titan, *reuters.com*. May 11: np; and Frank, A. D. 2012. The end of an era. *fortune.com.* May 29: np.

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?

Clearly, Dewey & LeBoeuf failed in retaining top talent. The firm lacked transparency and its partners were very resentful when they discovered that newly hired partners were provided with huge guaranteed pay packages. And, as noted, when major problems arose at the firm, there was very little goodwill among the legacy partners. Not surprisingly, many of them bolted and, as is frequently the case, took many of their clients with them.

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.

THE CENTRAL ROLE OF KNOWLEDGE IN TODAY'S ECONOMY

LO 4-1

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

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.[1] 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. In the last quarter century, employment in the manufacturing sector declined at a significant rate. Today only 9 percent of the U.S. workforce is employed in this sector, compared to 21 percent in 1980.[2] In contrast, the service sector grew from 73 percent of the workforce in 1980 to 86 percent by 2012.

The knowledge-worker segment, in particular, is growing dramatically. Using a broad definition, it is estimated that knowledge workers currently outnumber other types of workers in the United States by at least four to one—they represent between a quarter and a half of all workers in advanced economies. Recent popular press has gone so far as to suggest that, due to the increased speed and competitiveness of modern business, all modern employees are knowledge workers.

knowledge economy
an economy where wealth is created through the effective management of knowledge workers instead of by the efficient control of physical and financial assets.

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.[3]

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
Microsoft	85.3	486.8	72.0	6.8
Apple	215.6	627.0	128.3	4.9
Alphabet (parent of Google)	75.0	564.9	120.3	4.7
Oracle	37.0	160.8	47.3	3.4
Intel	55.4	174.0	61.1	2.8
Nucor	16.4	19.3	7.4	2.6
General Motors	152.4	57.2	39.9	1.4

Note: The data on market valuations are as of January 13, 2017. All other financial data are based on the most recently available balance sheets and income statements.

Source: *finance.yahoo.com*.

Human capital is growing more valuable in virtually every business.[4] This trend has been going on for decades as ever fewer workers function as low-maintenance machines—for example, turning a wrench in a factory—and more become thinkers and creators. Intangible assets, mostly derived from human capital, have soared from 17 percent of the S&P 500's market value in 1975 to 84 percent in 2015, according to the advisory firm Ocean Tomo. Even a manufacturer such as Stryker gets 70 percent of its value from intangibles; it makes replacement knees, hips, and other joints that are, in essence, loaded with intellectual capital.

To apply some numbers to our arguments, let's ask, Whats a company worth?[5] 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. By January 2017, the S&P industrials were—on average—trading at 2.96 times book value.[6] 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 firms market value and book value is far greater for knowledge-intensive corporations than for firms with strategies based primarily on tangible assets.[7] 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, Alphabet (parent of 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

* 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.

ratios. This reflects their greater investment 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 its high level of investment in knowledge resources is matched by a correspondingly huge investment in plant and equipment. For example, Intel invested $3 billion to build a fabrication facility in Chandler, Arizona.[8]

intellectual capital
the difference between the market value of the firm and the book value of the firm, including assets such as reputation, employee loyalty and commitment, customer relationships, company values, brand names, and the experience and skills of employees.

Many writers have defined **intellectual capital** as the difference between a firms market value and book value—that is, a measure of the value of a firm's intangible assets.[9] This broad definition includes assets such as reputation, employee loyalty and commitment, customer relationships, company values, brand names, and the experience and skills of employees.[10] Thus, simplifying, we have:

Intellectual capital = Market value of firm – Book value of 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.

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

First, **human capital** is the "*individual* capabilities, knowledge, skills, and experience of the company's employees and managers."[11] 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.[12]

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

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.[13] Social capital can extend beyond the organizational boundaries to include relationships between the firm and its suppliers, customers, and alliance partners.[14]

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

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.[15] The other type of knowledge is **tacit knowledge.** That is in the minds of employees and is based on their experiences and backgrounds.[16] Tacit knowledge is shared only with the consent and participation of the individual.

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

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.[17] These processes play a central role in the creation of knowledge.[18] 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.[19]

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.[20] 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.[21] Tom Stewart, former editor of the *Harvard Business Review,* noted that organizations must also undergo 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."[22] 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

LO 4-2

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

Take away my people, but leave my factories and soon grass will grow on the factory floors. . . . . Take away my factories, but leave my people and soon we will have a new and better factory.[23]

—Andrew Carnegie, Steel industry legend

The importance of talent to organization success is hardly new. 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 his or her efforts focused on the organization's goals and objectives.[24]

The rise to prominence of knowledge workers as a vital source of competitive advantage is changing the balance of power in today's organization.[25] 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. As noted by law professor Orly Lobel, *talent wants to be free:*[26]

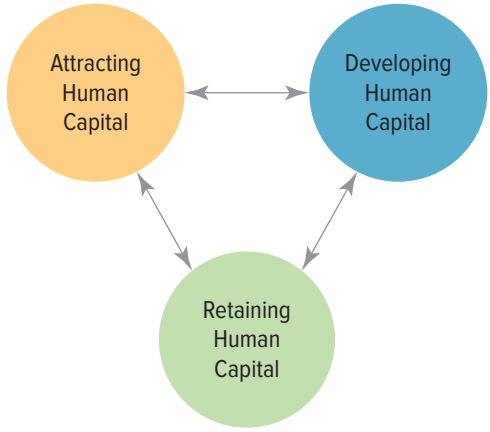
> Companies like Microsoft, Google, and Facebook are so hungry for talent that they acquire (or, as the tech-buzz is now calling it, acq-hire) entire start-ups only to discard the product and keep the teams, founders, and engineers.

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.[27] Finally, the first two processes are for naught if firms can't provide the working environment and intrinsic and extrinsic rewards to *engage* their best and brightest.[28] Interestingly, a recent Gallup study showed that companies whose workers are the most engaged outperform those with the least engaged by a significant amount: 16 percent higher profitability, 18 percent higher productivity, and 25 to 49 percent lower turnover (depending on the industry).[29] The last benefit can really be significant: Software leader SAP calculated that "for each percentage point that our retention rate goes up or down, the impact on our operating profit is approximately $81 million."

These activities are highly interrelated. We would like to suggest the imagery of a three-legged stool (see Exhibit 4.2).[30] 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**



4.1 STRATEGY SPOTLIGHT — ENVIRONMENTAL SUSTAINABILITY

CAN GREEN STRATEGIES ATTRACT AND RETAIN TALENT?

Competing successfully for top talent and retaining high-performing employees are critical factors in an organization's success. Employee recruiting and turnover are, of course, very costly. Losing and replacing a top talent can cost companies up to 200 percent of an employee's annual salary, according to *Engaged! Outbehave Your Competition to Create Customers for Life.*

Today, some 40 percent of job seekers read a company's sustainability report, according to a survey commissioned by the Global Reporting Initiative (GRI). Prospective employees can also riffle through Google in seconds and unearth a myriad of sustainability news and accolades, including an Interbrand "Top 50 Global Green Brand" ranking. Further, a 2014 study by the nonprofit group Net Impact found that business school graduates would take a 15 percent pay cut to:

- Have a job that seeks to make a social or environmental difference in the world (83%)
- Have a job in a company committed to corporate and environmental responsibility (71%)

Below, we discuss an example of a green initiative by a well-known company that helps attract and retain talent:

- Intel's "Green Intel" intranet portal, environmental sustainability network, and environmental excellence awards are beginning to yield benefits for the company. "Intel's employee engagement has resulted in increased employee loyalty, more company pride, and improved morale," according to Carrie Freeman, a sustainability strategist at the firm. Intel managers expect the next organizational health survey will show increased levels of employee pride and satisfaction with their work, which are considered to be good predictors of employee retention.

Sources: Anonymous. 2015. Why a commitment to sustainability can attract and retain the best talent. *grantthornton.com.* April 30: np; Earley, K. 2014. Sustainabilty gives HR teams an edge in attracting and retaining talent. *www.theguardian.com,* February 20: np; Anonymous. 2010. The business case for environmental and sustainability employee education. *National Environmental Education Foundation,* November: np; Mattioli, D. 2007. How going green draws talent, cuts costs. *Wall Street Journal,* November 13: B10; and Lederman, G. 2013. *Engaged! Outbehave your competition to create customers for life.* Ashland, OR: Evolve.

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

> 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?"[31]

Clearly, stepped-up recruiting is a poor substitute for weak retention.[32] 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.[33] 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.*[34]
>
> *—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.[35] 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.[36]

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 subsection.

"Hire for Attitude, Train for Skill" Organizations are increasingly emphasizing general knowledge and experience, social skills, values, beliefs, and attitudes of employees.[37] 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.[38] 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."[39] 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, which 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.[40] 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. GE has found that current employees are the best source for new ones. Stephen Patscot, VP, human resources, 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.[41] 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 The Millennial generation has also been termed "Generation Y" or "Echo Boom" and includes people who 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.[42]

Why? Demographics are on the Millennials' 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.

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.

Organizations often miss out on a potential source of talent—former employees! Not everyone who leaves an organization does so because they are unhappy or dissatisfied. Instead, many leave for what they think they believe is a new opportunity. The accompanying "Insights from Research" text box addresses the benefits of hiring former employees (called "boomerangs") who are willing to come back.

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.[43] For example, Solectron assembles printed circuit boards and other components for its Silicon Valley clients.[44] 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."[45]

In addition to training and developing human capital, firms must encourage widespread involvement, monitor and track employee development, and evaluate human capital.[46]

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 resource 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."

4.1 *INSIGHTS* from Research

WELCOME BACK! RECRUITING BOOMERANG EMPLOYEES

Overview

The common assumption is that turnover creates vacancy problems and expenses to be avoided at all costs. However, sometimes turnover just can't be prevented. Employees who leave an organization aren't always unhappy—some might be willing to come back if given the opportunity. Consider "boomerang" employees as a key recruiting pool to save time and money.

What the Research Shows

Researchers at Texas Christian University, the University of Cincinnati, the University of Illinois, and the University of North Carolina recently published a study in *Personnel Psychology* that examines why employees leave an organization and why they may be willing to return. Using a sample of 452 employees who left and returned for employment, called "boomerangs," and 1,187 who left but had no desire to return, known as "alumni," the authors examined these employees' motives.

Traditional thinking about employment views employee turnover as an end state, where those who leave never want to return. However, this study suggests that this needn't be the case. There may be value in keeping in touch with employees who leave. These findings indicate that employees' willingness to return in the future is influenced by the reasons they left in the first place: Boomerangs were statistically more likely to leave initially for two main reasons. First, they experienced a negative life event, such as taking care of a sick parent that necessitated a change in employment. Second, they received an alternate job offer deemed too good to turn down. The research did find, however, that boomerangs are more likely to accept those alternate jobs in the same industry. Alumni, on the other hand, were statistically more likely to leave because they were dissatisfied with their jobs or because they wanted to change industries.

> *Not all employee turnover is bad. In fact, if business leaders understand the motivations for departures, turnover may create opportunities to bring valued employees back.*

Why This Matters

Employee turnover is expensive. Business leaders appropriate considerable resources trying to minimize employee turnover. Despite best efforts, valued employees still leave the organization. It's an inevitable part of working life. So, what can be done about it? This study indicates that understanding the reasons why employees leave might be beneficial in luring them back.

Boomerang employees are appealing because the training and socialization required for them is quite less than that of other newly hired employees. The implications of this research are that not all employee turnover is bad. In fact, if business leaders understand the motives for departure, turnover may create opportunities to bring valued employees back. This research underscores the essential need for an exit-interview process with all departing employees. Whether conducted in person, online, or on the phone, the interview should assess why an employee is leaving and whether he or she would be willing to return in the future. Ideally, data from the exit interview would connect to a human resource management system with performance information, to allow for easy identification of those high performers leaving for reasons other than dissatisfaction who could be recruited as boomerang employees in the future. Maintaining an active alumni program and asking current managers to identify past employees who would be on their top 10 "hire-back" list are other ways to cultivate a worthy talent pool.

Understanding why employees leave could save your organization money in the long run by broadening the pool of potential hires for future job openings. However, this is not to suggest that you should give up trying to retain valued employees from the start. Maintaining and fostering employee satisfaction remains crucial for reducing turnover caused by dissatisfaction. As a manager, take the initiative to monitor and address employee satisfaction levels so you can prevent your top talent from leaving in the first place.

Key Takeaways

Understanding why employees leave is essential information for company recruiting strategies. Employees are more likely to return and be productive assets if they leave for reasons other than dissatisfaction. Because unhappy employees are more likely to leave and never return, you should monitor and address employee satisfaction levels on an ongoing basis.

Rehiring former employees can save money and time. Make sure your company has exit interviews and alumni programs that track potential boomerang employees.

Apply This Today

Employees are going to leave your organization—that's a fact. Understanding why they leave, though, should be a top priority. By determining the reasons for departure, managers may find that valuable employees are willing to return in the future.

Research Reviewed

Shipp, A. J., Furst-Holloway, S., Harris, T. B., & Rosen, B. 2014. Gone today but here tomorrow: Extending the unfolding model of turnover to consider boomerang employees. *Personnel Psychology,* 67(2): 421–462.

Similarly, A. G. Lafley, Procter & Gamble's former CEO, claimed that he spent 40 percent of his time on personnel.[47] 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 Mentoring is most often a formal or informal relationship between two people—a senior mentor and a junior protégé.[48] 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 recruit new talent as well as retain talent.

Mentoring can provide many benefits—to the organization as well as the individual.[49] 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.[50]

Intel has also initiated a mentoring program involving its 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):[51]

> 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.

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 two countries.

Other companies may take a less formal approach.[52] Alcoa CEO Klaus Kleinfeld says that he brings "the whole executive team into a room for two days to discuss succession planning and the talent that should be developed. We call it Talent Marketplace. In reality it is a fight for great talent." Executives discuss the best employees and candidates for important positions and decide who goes where. "It is not rare that you say, 'Well, that person is ready to develop,' and people are scribbling it down," claims Kleinfeld. "You can bet that when you're not looking, they're already sending notes to the person: 'Hey, we need to talk.'"

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.[53]

To address the limitations of the traditional approach, many organizations use **360-degree evaluation and feedback systems.**[54] Here, superiors, direct reports, colleagues, and even internal and external customers rate a person's performance.[55] 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.[56] For example, a manager who previously managed the performance of three 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 leadership assessment chart.

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

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

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	

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.

At times, a firm's performance assessment methods may get in the way of team success.[57] Microsoft is an example. For many years, the software giant employed a "stack ranking" system as part of its performance evaluation model. With this system, a certain percentage of any team's members would be rated "top performers," "good," "average," "below average," and "poor," regardless of the team's overall performance. Perhaps, in some situations, this type of forced ranking works. However, in Microsoft's case, it had (not too surprisingly!) unintended consequences. Over time, according to inside reports, the stack ranking created a culture in which employees competed with one another rather than against the firm's rivals. And "A" players rarely liked to join groups with other "A" players, because they feared they might be seen as weaker members of the team.

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, either today's leaders can provide the challenges, 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., challenges, good work environment, and incentives), but, as we all know, the latter (e.g., employment contracts and noncompete clauses) have their place.[61]

Gary Burnison, CEO of Korn/Ferry International, the world's largest executive search firm, provides an insight on the importance of employee retention:[62]

> How do you extend the life of an employee? This is not an environment where you work for an organization for 20 years. But if you can extend it from three years to six years, that has an enormous impact. Turnover is a huge hidden cost in a profit-and-loss statement that nobody ever focuses on. If there was a line item that showed that, I guarantee you'd have the attention of a CEO.

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:[63]

> 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.[64] 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.[65] But they are the ones impelled by curiosity. They've got to know what the answer is."[66] Such insights highlight the importance of intrinsic motivation: the motivation to work on something because it is exciting, satisfying, or personally challenging.[67] As noted by Jeff Immelt, former chairman and CEO of General Electric, "You want people with the self-confidence to leave, but you want them to stay. That puts pressure on you to keep work interesting."[68]

Lars Sorensen, CEO of Novo Nordisk, the huge Danish pharmaceutical firm, provides a poignant perspective on how to keep employees engaged: ". . . we bring patients to see employees. We illuminate the big difference we are making. Without our medication, 24 million people would suffer. There is nothing more motivating for people than to go to work and save people's lives."[69]

Firms can also keep highly mobile employees motivated and challenged 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.[70] 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 Tandem's 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.[71]

> 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."

Our discussion of employee retention would not be complete unless we discussed some of the innovations in data analytics that have provided significant benefits to many companies. We address this issue in Strategy Spotlight 4.2.

Enhancing Human Capital: Redefining Jobs and Managing Diversity

Before moving on to our discussion of social capital, it is important to point out that companies are increasingly realizing that the payoff from enhancing their human capital can be substantial. Firms have found that redefining jobs and leveraging the benefits of a diverse workforce can go a long way in improving their performance.

4.2 STRATEGY SPOTLIGHT

WANT TO INCREASE EMPLOYEE RETENTION? TRY DATA ANALYTICS

We have all heard about management by the book. Perhaps, we should consider management by the algorithm. "People analytics" is rapidly emerging as an important tool in the perpetual war to attract and retain talent. Companies have begun hiring data scientists as well as building or buying software that helps predict who will leave and who will make the best vice president.

According to Josh Bersin, principal at Bersin by Deloitte, the HR group at the consulting giant, "It's like *Moneyball* for HR, letting you make better decisions and this year it has really peaked." He states that the percentage of firms using predictive HR analytics has doubled from 4 percent to 8 percent and last year investors poured $2 billion in companies making apps for hiring, performance management, and wellness programs.

Several companies such as Intel Corp., Twitter, and IBM are now using sentiment-analysis software to assess how employees feel about everything from diversity efforts to their prospects for promotion. Such tools enable managers to analyze text such as internal comments on blog posts or responses to open-ended questions on surveys. The goal is to automatically sort through hundreds or thousands of comments to get a feel of where management can make changes that will improve the chances that employees will remain enthusiastic about the company—and ultimately stay there.

McKinsey & Company claims that one company reduced its retention bonuses by $20 million—and employee attrition by half!—because of its use of predictive behavioral analytics. Contrary to expectations, the company discovered that limited investment in management and employee training, and inadequate recognition, were the main drivers of staff defections. In contrast, expensive retention bonuses, which the company had turned to in desperation, turned out to be an ineffective Band-Aid.

A key advantage of the new analytics techniques over traditional approaches (such as exit interviews with departing employees) is that they are predictive, rather than reactive. And they definitely provide more objective information than the more qualitative findings that one would get with a one-on-one discussion.

Sources: Alsever, J. 2016. Is software better at managing people than you are? *Fortune.* March 15: 41-42; King, R. 2015. Companies want to know: How do workers feel? *The Wall Street Journal.* October 14: R3; and, Fecheyr-Lippens, B., Schaninger, B., & Tanner, K. 2015. Power to the new people analytics. *mckinsey.com.* March: np.

Enhancing Human Capital: Redefining Jobs Recent research by McKinsey Global Institute suggests that by 2020, the worldwide shortage of highly skilled, college-educated workers could reach 38 to 40 million, or about 13 percent of demand.[72] In response, some firms are taking steps to expand their talent pool, for example, by investing in apprenticeships and other training programs. However, some are going further: They are redefining the jobs of their experts and transferring some of their tasks to lower-skilled people inside or outside their companies, as well as outsourcing work that requires less scarce skills and is not as strategically important. Redefining high-value knowledge jobs not only can help organizations address skill shortages but also can lower costs and enhance job satisfaction.

Consider the following examples:

- Orrick, Herrington & Sutcliffe, a San Francisco–based law firm with nine U.S. offices, shifted routine discovery work previously performed by partners and partner-tracked associates to a new service center in West Virginia staffed by lower-paid attorneys.
- In the United Kingdom, a growing number of public schools are relieving head teachers (or principals) of administrative tasks such as budgeting, facilities maintenance, human resources, and community relations so that they can devote more time to developing teachers.
- The Narayana Hrudayalaya Heart Hospital in Bangalore has junior surgeons, nurses, and technicians handle routine tasks such as preparing the patient for surgery and closing the chest after surgery. Senior cardiac surgeons arrive at the operating room only when the patient's chest is open and the heart is ready to be operated on. Such an approach helps the hospital lower the cost to a fraction of the cost of U.S. providers while maintaining U.S.-level mortality and infection rates.

Breaking high-end knowledge work into highly specialized pieces involves several processes. These include identifying the gap between the talent your firm has and what it requires; creating

narrower, more-focused job descriptions in areas where talent is scarce; selecting from various options to fill the skills gap; and rewiring processes for talent and knowledge management.

Enhancing Human Capital: Managing Diversity A combination of demographic trends and accelerating globalization of business have made the management of cultural differences a critical issue.[73] Workforces, which reflect demographic changes in the overall population, will be increasingly heterogeneous along dimensions such as gender, race, ethnicity, and nationality.[74] Demographic trends in the United States indicate a growth in Hispanic Americans from 6.9 million in 1960 to over 35 million in 2000, with 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.[75]

Such demographic changes have implications not only for the labor pool but also for customer bases, which are also becoming more diverse.[76] This creates important organizational challenges and opportunities.

The effective management of diversity can enhance the social responsibility goals of an organization.[77] 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.*** Heterogeneity 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 PricewaterhouseCoopers, 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."[78]
- ***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.

Most managers accept that employers benefit from a diverse workforce. However, this notion can often be very difficult to prove or quantify, particularly when it comes to determining how diversity affects a firm's ability to innovate.[79]

New research provides compelling evidence that diversity enhances innovation and drives market growth. This finding should intensify efforts to ensure that organizations both embody and embrace the power of differences.

Strategy Spotlight 4.3 contrasts the views that Millennials have of diversity with those of other generations, and the implications of such differences for organizations.

4.3 STRATEGY SPOTLIGHT

MILLENNIALS HAVE A DIFFERENT DEFINITION OF DIVERSITY AND INCLUSION THAN PRIOR GENERATIONS

A recent study by Deloitte and the Billie Jean King Leadership Initiative (BJKLI) shows that, in general, Millennials see the concepts of diversity and inclusion through a vastly different lens. The study analyzed the responses of 3,726 individuals who came from a wide variety of backgrounds with representation across gender, race/ethnicity, sexual orientation, national status, veteran status, disabilities, level within an organization, and tenure with an organization. The respondents were asked 62 questions about diversity and inclusion and the findings demonstrated a snapshot of shifting generational mindsets.

Millennials (born between 1977 to 1995) look upon diversity as the blending of different backgrounds, experiences, and perspectives within a team—which is known as cognitive diversity. They use this word to describe the mix of unique traits that help to overcome challenges and attain business objectives. For Millennials, inclusion is the support for a collaborative environment, and leadership at such an organization must be transparent, communicative, and engaging. According to the study, when defining diversity, Millennials are 35 percent more likely to focus on unique experiences, whereas 21 percent of non-Millennials are more likely to focus on representation.

The X-generation (born between 1965 and 1976) and Boomer generation (born between 1946 and 1964) have a different take. These generations view diversity as a representation of fairness and protection for all—regardless of gender, race, religion, ethnicity, or sexual orientation. Here, inclusion is the integration of individuals of all demographics into one workplace. It is the right thing to do, that is, a moral and legal imperative to achieve compliance and equality—regardless of whether it benefits the business. The study found that when asked about the business impact on diversity, Millennials are 71 percent more likely to focus on teamwork. In contrast, 28 percent of non-Millennials are more likely to focus on fairness of opportunity.

The study's authors contend that the disconnect between the traditional definitions of diversity and inclusion and those of Millennials can create problems for businesses. For example, clashes may occur when managers do not permit Millennials to express themselves freely. The study found that while 86 percent of Millennials feel that differences of opinion allow teams to excel, only 59 percent believe that their leaders share this perspective.

The study suggests that a company with an inclusive culture promotes innovation. And it cites research by IBM and Morgan Stanley that shows that companies with high levels of innovation achieve the quickest growth in profits and that radical innovation outstrips incremental change by generating 10 times more shareholder value.

Sources: Dishman, L. 2015. Millennials have a different definition of diversity and inclusion. *fastcompany*.com, May 18: np; and Anonymous. 2015. For millennials inclusion goes beyond checking traditional boxes, according to a new Deloitte–Billie Jean King Leadership Initiative Study. *prnewswire*.com, May 13: np.

LO 4-3

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

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.[80] 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.[81] 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.[82] Knowledge workers often exhibit greater loyalties to their colleagues and their profession than their employing organization, which may be "an amorphous, distant, and sometimes threatening entity."[83] 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.[84] 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.[85] 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.[86] 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.[87] 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, later 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.[88]

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.[89] 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

LO 4-4

The importance of social networks in knowledge management and in promoting 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 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."[90] 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.[91]

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.[92] 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 networks can also help one bring about important change in an organization—or simply get things done! Consider a change initiative undertaken at the United Kingdom's National Health Care Service—a huge, government-run institution that employs about a million people in hundreds of units and divisions with deeply rooted, bureaucratic, hierarchical systems. This is certainly an organization in which you can't rely solely on your "position power":[93]

> John wanted to set up a nurse-led preoperative assessment service intended to free up time for the doctors who previously led the assessments, reduce cancelled operations (and costs), and improve patient care. Sounds easy enough . . . after all, John was a senior doctor and near the top of the hospital's formal hierarchy. However, he had only recently joined the organization and was not well connected internally.
>
> As he began talking to other doctors and to nurses about the change, he was met with a lot of resistance. He was about to give up when Carol, a well-respected nurse, offered to help. She had even less seniority than John, but many colleagues relied on her advice about navigating hospital politics. She knew many of the people whose support John needed and she eventually converted them to the change.

social network analysis
analysis of the pattern of social interactions among individuals.

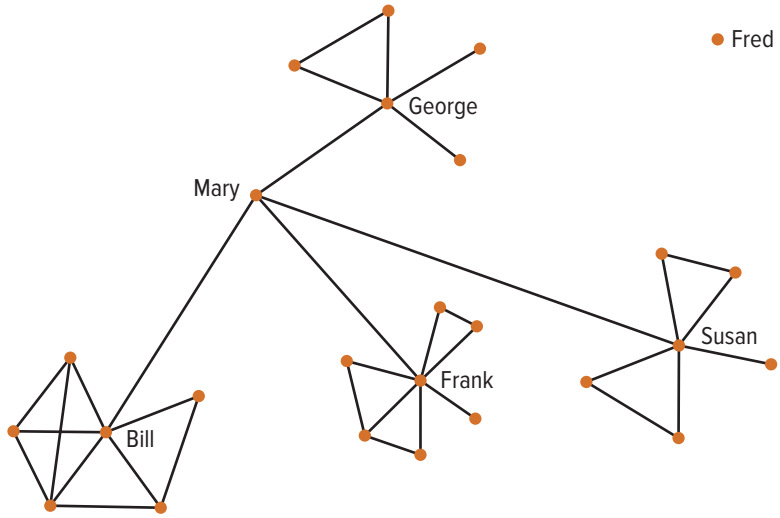
Social network analysis depicts the pattern of interactions among individuals and helps to diagnose effective and ineffective patterns.[94] It helps identify groups or clusters of individuals that comprise the network, individuals who link the clusters, and other network members. It helps diagnose communication patterns and, consequently, communication effectiveness.[95] 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.
- Have the time to develop trusting relationships that might improve the groups' effectiveness.

However, such relationships don't "just happen."[96] 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.[97] 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

EXHIBIT 4.4 **A Simplified Social Network**



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 relationships, 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
the degree to which all members of a social network have relationships (or ties) with other group members.

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's Susan's, 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.

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.[98]

4.4 STRATEGY SPOTLIGHT

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.

* Berns, G., Iconoclast: A Neuroscientist Reveals How to Think Differently. Boston, MA: *Harvard Business Review* Press, 2008.

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

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 relationships in a social network that connect otherwise disconnected people.

Bridging relationships, in contrast to closure, stress 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.[99]

> 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.

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.[100] 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.[101] 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 verified by independent sources, such as Dun & 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.[102]

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.

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.[103] Such thinking may occur in networks with high levels of closure where there is little input from people outside the network. In effect, too many warm and fuzzy feelings among group members prevent people from rigorously challenging each other. People are discouraged

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

from engaging in the "creative abrasion" that Dorothy Leonard of Harvard University describes as a key source of innovation.[104] 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 mind-sets, 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, which 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 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 another, with no one being the wiser.[105] We will discuss some behavioral control mechanisms in Chapter 9 (rewards, control, boundaries) that reduce such dysfunctional behaviors and actions.[106]

LO 4-5

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

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!

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:[107]

> 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 $15 billion advertising and public relations firm, is a strong believer in the use of email.[108] 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.[109] 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

LO 4-6

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

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.[110] 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.

electronic teams
a team of individuals that completes tasks primarily through email communication.

What are electronic teams (or e-teams)? There are two key differences between e-teams and more traditional teams:[111]

- E-team members either work in geographically separated workplaces or 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.[112] 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.[113] 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.
- 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."[114] 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 geographic 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 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

4.5 STRATEGY SPOTLIGHT

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 a 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.

Sources: 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.

is both expensive and inefficient. Also, the "new wheel" may not necessarily be superior to the "old wheel."[115]

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. For example, Access Health, a call-in medical center, 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 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 has been able to leverage the expertise and involvement of its users to develop new knowledge and transmit it to SAP's 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.

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 topmost levels? • Does the firm effectively evaluate its human capital? Is a 360-degree evaluation used? Why? Why not? • Are mechanisms in place to ensure 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., flextime, child care facilities, telecommuting) that are appropriate given the organization's mission, its 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.

LO 4-7

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

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?[116] 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.

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

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, its 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 investors' 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 has been fighting against smartphone makers running Android, Google's mobile operating system.[117]

> 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. However, 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.[118] This rests on knowledge, assets, competencies, and complementary assets and

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.

ISSUE FOR DEBATE

Does Providing Financial Incentives to Employees to Lose Weight Actually Work?

Assume your employer offered each of its staff $550 to lose weight, an amount that would be subtracted from their health insurance premiums the following year. Do you think it would work? Would it provide enough incentive for some of the employees to shed the pounds?

Approximately four out of five large employers in the United States now offer some type of financial incentive for employees to improve their health. And the Affordable Care Act has encouraged such programs by significantly increasing the amount of money, in the form of a percentage of insurance premiums, that employers can reward (or take away) to improve health factors such as body mass index, blood pressure and cholesterol, as well as for ending the use of tobacco.

Several professors and medical professionals decided to test whether or not incentives actually work. Employees were randomly assigned to two conditions: one group in which employees were offered the $550 incentive and another group—the control group—in which no incentive was offered. After one year the results were reported in the journal *Health Affairs.* The result: Employees assigned to the control group that received no financial incentive had no change in their weight. However, employees who were offered the $550 incentive also didn't lose weight.

Discussion Questions

1. Why do you think the $550 incentive did not result in people losing weight?
2. Can you think of how incentives could have been structured to be more successful?

Source: Patel, M. S., Asch, D. A., & Volpp, K. G. 2016. Does paying employees to lose weight work? *Dallas Morning News,* March 20: 1P, 5P.

technologies as well as the ability to sense and seize new opportunities, generate new knowledge, and reconfigure existing assets and capabilities.[119] According to David Teece, an economist at the University of California at Berkeley, dynamic capabilities are related to the 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.[120]

Examples of dynamic capabilities include product development, strategic decision making, alliances, and acquisitions.[121] 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. Cisco seems 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 it well ahead of its 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.[122]

Reflecting on Career Implications . . .

This chapter focuses on the growing importance of intellectual assets in the valuation of firms. Since improved organizational performance occurs when firms effectively combine human capital, social capital, and technology, the following questions help students to consider how they can leverage their talents though relationships and technology.

- **Human Capital:** Identify specific steps taken by your organization to effectively attract, develop, and retain talent. If you cannot identify such steps, you may have fewer career opportunities to develop your human capital at your organization. Do you take advantage of your organization's human resource programs, such as tuition reimbursement, mentoring, and so forth?
- **Human Capital:** As workplaces become more diverse, it is important to reflect on whether your organization values diversity. What kinds of diversity seem to be encouraged (e.g., age-based or ethnicity-based)? In what ways are your colleagues different from and similar to you? If your firm has a homogeneous workforce, there may be limited perspectives on strategic and operational issues and a career at this organization may be less attractive to you.
- **Social Capital:** Does your organization have strong social capital? What is the basis of your conclusion that it has strong or weak social capital? What specific programs are in place to build and develop social capital? What is the impact of social capital on employee turnover in your organization? Alternatively, is social capital so strong that you see effects such as "groupthink"? From your perspective, how might you better leverage social capital toward pursuing other career opportunities?
- **Social Capital:** Are you actively working to build a strong social network at your work organization? To advance your career, strive to build a broad network that gives you access to diverse information.
- **Technology:** Does your organization provide and effectively use technology (e.g., groupware, knowledge management systems) to help you leverage your talents and expand your knowledge base? If your organization does a poor job in this regard, what can you do on your own to expand your knowledge base using technology available outside the organization?

summary

Firms throughout the industrial world are recognizing that the knowledge worker is the key to success in the marketplace. However, they 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.

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.

key terms

knowledge economy 104
intellectual capital 106
human capital 106
social capital 106
explicit knowledge 106
tacit knowledge 106
360-degree evaluation and feedback systems 113
social network analysis 120
closure 121
bridging relationships 122
structural holes 122
groupthink 123
electronic teams 125
intellectual property rights 129
dynamic capabilities 129

EXPERIENTIAL EXERCISE

Pfizer, a leading health care firm with $52 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, Pfizer values its 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? (Fill in the table at bottom of the page.)

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		