Millennium Intelligence

Understanding and Conducting Competitive Intelligence in the Digital Age

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and the
Business Intelligence Braintrust

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CHAPTER 1

The Intelligence Process—What It Is, Its Benefits, and Current Status

Jerry P. Miller

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- The Intelligence Process Defined
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Why Conduct Intelligence?

Conscientious managers can't keep up with changes in the marketplace. Making sound decisions that give their firm a competitive advantage requires careful study of the relevant issues. However, most managers can't devote the time to review and analyze information systematically. Conscientious managers recognize that organizations compete effectively when its managers make sound decisions based upon an accurate understanding of the potential opportunities and threats in the business environment. Organizations cannot operate effectively without intelligence; just as airplanes can't fly without radar. As we know, U.S. government agencies that conduct intelligence focus primarily on threats to national security and spend less time on opportunities. In corporations, the situation is reversed; although managers must be concerned with threats, such as competitor moves and the

misappropriation of trade secrets and corporate intellectual assets, they spend considerably more time looking for opportunities to gain and/or maintain their market share.

To compound the issue, businesses are moving at warp speeds, with staffs typically wired across the globe via personal digital assistants (PDAs), and laptop and/or desktop computers. Telecommunication technologies are changing the way firms conduct business functions, including intelligence. Business-to-business applications enable closer relationships between suppliers, vendors, and customers. Information about products, payment terms, and operating instructions are widely available online. Inventory costs have been drastically reduced while sales have increased significantly, as evidenced by Wal-Mart and Baxter Healthcare with their digital logistics and distribution systems.

Cisco Systems, a major supplier of networking products and services on the Internet, also demonstrates the potential of these electronic interfaces: a representative from investor relations at the company recently told me that the firm took in $5.6 billion, or 64 percent of their total 1998 sales, through its Web site (this is an average of $20 million per business day). Forrester Research, a leading research and analysis firm, estimates that business transactions on the Internet will account for up to 6 percent of the U.S. gross domestic product in 2005 (Rigdon, 1999).

Nicholas Negroponte envisioned this digital revolution in his book, *Being Digital* (Knopf, 1995). According to Negroponte, as the resources of the world become more extensively composed of bits rather than atoms, society will assume a digital state of being. Organizations populated with computers can work together to crunch complex data sets and, thereby, meet customer needs more effectively and more collaboratively.

In his recent article, Slywotzky (1999) applied Negroponte's futuristic perspective to today's digital business environment when he asked readers, "How digital is your company?" That is, what aspects of work involve atoms as represented by paper, pens, and people? What aspects involve bits as evidenced by the use of digital technologies such as groupware, computer-aided-design, and electronic distribution and logistics technologies? What aspects of work, currently in the form of atoms, are key to the business? If digitized, what resulting cost and competitive advantages would you recognize?

You can also examine the digital status of corporate information resources and the intelligence function. At least 70 percent of the information needed to conduct intelligence effectively already resides within most firms. Are the resources in a digital format? Can the entire staff

communicate electronically? Do you have access to analytical software that organizes and examines information from key business operations? Can you access external information resources that offer critical insights about your market environment? Can you disseminate intelligence reports electronically across the firm? How can managers try to keep up in an environment whose rate of change grows exponentially?

Managers have some options. They can rely on their past experience, their business associates, and their expertise for making decisions. This cavalier approach may work in some instances, but not in all. Most managers talk to trusted colleagues before making decisions. Yet, these sources of information cannot identify all the critical issues to consider. For example, supermarket managers can talk with supervisors to determine how much chicken noodle soup to re-order. Yet, consumers may favor the low-fat and low-salt brands—a fact that the staff may not know.

A second option is to ignore marketplace fluctuations completely; disregard changes and run the business as usual. Arrogant managers believe that their rank and title demonstrate their understanding of the industry; therefore, no one needs to inform them of marketplace changes before making decisions. This option has led many firms to lose market share or, even worse, file for bankruptcy. The past disruption of the U.S. automobile industry is a good example of the consequences of such ignorance and arrogance.

As a third alternative, managers can attempt to conduct some type of intelligence work. This option is a logical choice today, especially for managers of small firms with fewer than 500 employees. Since many such firms cannot afford to hire an intelligence professional, their managers need to learn the basics of the intelligence process as well as what local, print, oral, or digital sources are available to them.

The digital sources are increasingly seen as a great leveler. On the Web, for instance, for a small monthly charge at Scoop (**http://www.scoop.com/services/services.html**), you can obtain personal intelligence services that deliver search results from over 1,600 sources to your e-mail account. There are many other Web-based news filtering services available to managers at reasonable cost.

There is still the problem of analysis: if a small firm participates in a highly competitive market and plans to execute a major business venture, its managers probably won't have the time to systematically analyze all the relevant information they are able to retrieve. Instead, as is the case with many small research and development firms, they may

need to rely on the expertise of an intelligence consultant. This alternative is risky for medium or large firms in highly volatile industries, however, because the number and significance of marketplace changes call for frequent and careful tracking.

The final choice: hire intelligence professionals to coordinate the function, and assign aspects of the process to key managers across the firm. These directors of divisions and departments will need extensive training if they are to collect specific types of information effectively. Meantime, to ensure the incorporation of the process into the mind-set of the firm, the entire staff will need to learn about the benefits of intelligence.

The Intelligence Process Defined

According to Kahaner (1996), intelligence is an absolute imperative due to the rapid pace of business, information overload, increased global competition from new competitors, more aggressive competition, rapid technological changes, and forceful global changes such as the European Union (EU) and the North American Free Trade Agreement (NAFTA).

Most managers gather information about their business. They read *The Wall Street Journal, Business Week*, or the business section of their local newspaper. Yet, when a story hits the press, it's already old news. Most managers talk with customers and business colleagues from whom they gather important insights. Yet, today's business climate requires a more consistent and formal method for gathering information and creating intelligence. Many firms have begun to conduct some type of structured intelligence work—but perhaps not enough to survive in today's fast-changing, global business environment.

A product-line manager within a U.S.-based pharmaceuticals firm learns from a field representative that a Japan firm is developing a similar product. How will she acquire the relevant and accurate information? Conduct intelligence or lose competitive advantage.

The premier manufacturer of alkaline batteries wants to understand the status of research, worldwide, regarding non-alkaline batteries. How will the company acquire the relevant and accurate information? Conduct intelligence or face the threat of product replacements.

The intelligence process is based on the assumption that managers seek to become better informed about critical issues on a *formal* and *systematic* basis. Intelligence is distilled information. As defined by the Society of Competitive Intelligence Professionals (SCIP), intelligence is

"...the process of ethically collecting, analyzing, and disseminating accurate, relevant, specific, timely, foresighted and actionable intelligence regarding the implications of the business environment, competitors, and the organization itself." Intelligence is more than reading newspaper articles; it is about developing *unique* insights regarding issues within a firm's business environment. Note that the intelligence process generates insightful recommendations regarding *future* events for decision makers rather than generating reports to justify *past* decisions. The process offers critical choices regarding *future* decisions that provide a desired competitive advantage.

Data, when organized, become information; information, when analyzed, becomes intelligence. Based on this model, intelligence professionals usually execute a four-phased process, or cycle: 1) they identify the intelligence needs of *key* decision makers across the firm; 2) they collect information about events in a firm's external business environment from print, electronic, and oral sources; 3) they analyze and synthesize the information; and 4) they disseminate the resulting intelligence to decision makers.

The focus of decision making often determines the aim of the intelligence process. Strategic intelligence emphasizes its relationship to strategic decision making and business and/or product development. *Business* intelligence incorporates the monitoring of a wide range of developments across an organization's external business environment or marketplace. *Competitive* intelligence focuses on the present and potential strengths, weaknesses and activities of organizations with similar products or services within a single industry. *Competitor* intelligence involves profiling a specific organization. Regardless of its focus, the intelligence process usually includes each of the four phases. Note that intelligence is more extensive than market research, which usually focuses on consumers' preferences for products and/or services.

In addition to understanding these various definitions of the intelligence function, decision makers, if not everyone in the firm, should come to a consensus as to what constitutes data, information, intelligence, and knowledge. If managers and intelligence professionals fail to address these fundamental issues, staff will misinterpret these distinctions, which in turn can lead to an ineffective intelligence process. Furthermore, managers must differentiate between facts, organizational mission, and vision as well as corporate-wide presumptions regarding the business environment and the marketplace. Assuming that decision makers have a common understanding on these issues, when

in reality such an understanding doesn't exist, will lead to a diffused intelligence function.

Intelligence can assist areas of the firm where management desires a sustained or increased competitive advantage. For example, a vehicular parts manufacturer that distributes items nationwide may conduct intelligence on distribution systems. A software engineering firm that must attract and retain creative and skilled employees may conduct intelligence on work force diversity using a benchmarking framework.

Changes occur outside an organization that are significant for decision making. Change is rapid, though, and no one manager or intelligence professional has the time or ability to absorb an increasing amount of information across a firm's entire business environment. Therefore, they cluster these issues into those distinct sectors that are important for the firm. A common set of such sectors are: competitors, suppliers, and customers, as well as economic, technical, and governmental/regulatory issues. Sectoring enables intelligence personnel to gather specific information more effectively and efficiently. Usually, staff with specific industry knowledge and experience will track certain sectors. For example, an intelligence professional with a financial background may follow economic issues. These sectors can vary in type and importance depending upon the industry in which a firm participates. For example, the securities industry closely monitors economic changes; therefore, they may sub-divide an economic sector into bonds, stocks, and mutual funds. Research institutes rely heavily on recent scientific studies; therefore, they may sub-divide the research sector into cancer, cardiac, AIDS/HIV, etc.

The Four-Phased Intelligence Cycle

The four phases of the intelligence cycle include:

- Identification of key decision makers and their intelligence needs
- Collection of information
- Analysis of information and upgrading it to intelligence
- Dissemination of intelligence to decision makers

The following overview highlights the major characteristics of these four phases.

During the first phase, the intelligence staff identifies the intelligence needs of key decision makers. However, the actual decision making often takes place below the executive level. An example of this issue occurred recently within a prominent domestic firm in the computer technology industry. The intelligence staff created a computerized alerting service containing daily news about various critical issues. They marketed the product to key managers at the second and third levels *below* the top executives. After using the product, these managers arrived at some insightful recommendations. The executives were pleased with the results, but wondered how they reached such conclusions. Learning about the alerting product, the executives asked the intelligence staff to place them on the distribution list.

After identifying users and their needs, professionals start collecting information—phase two. During the collection phase, staff acquire relevant information from primary and secondary sources. They also determine the appropriate collection procedures and analytical frameworks. Without a road map, the process rambles. Primary sources are oftentimes industry experts (e.g., analysts, consultants, columnists), as well as customers, suppliers, and staff members within, for example, corporate communications and/or investor relations. Managers regard primary sources quite highly due to their uniqueness and the likely competitive advantage that the information may provide—unlike secondary print and electronic sources that are non-proprietary and readily available. Secondary sources provide the background information to support the insights that are gained from the primary sources. Secondary sources include commercial databases and print publications, such as analysts' reports, government publications, industry newsletters, executives' speeches, technical reports, and patent reports. The Internet provides access to many secondary sources; however, many specialized sources are fee-based and require accounts (see Chapter 6).

Having gathered the necessary information, intelligence professionals identify significant patterns and trends. They seek unique insights and unforeseen relationships in data. For example, a nationwide grocery chain wanted to know what additional types of items deli-counter customers usually purchased. After analyzing cash register receipts, the intelligence staff found that they also bought wine. Based on this finding, headquarters ordered the branch managers to relocate the wine section adjacent to the deli counter. Their wine sales soared.

The analysis phase can require a scientific research approach: formulating a proposition, and determining the validity of assumptions as

well as the probability of the upcoming impacts. The analyst may use statistical software and/or various modeling techniques. Throughout this process, the practitioner may realize the need to acquire additional data. Therefore, collection and analysis are not necessarily sequential phases. This phase demands persistence and creativity on the part of the intelligence staff as well as the recognition of knowing when to stop analyzing (see Chapter 5).

Professionals can create lengthy reports, brief memos, or presentations. Regardless of their content and format, they must disseminate the results effectively—the fourth phase in the cycle. Understanding how decision makers want the information presented furthers the integrity as well as the use of the report. Decision makers may prefer formal research reports, brief outlines of the essential facts, or both. They may also require professionals to present their findings at staff meetings. Intelligence professionals use various ways to disseminate the information. For example, in a networked environment, intelligence professionals broadcast findings to key decision makers across the firm, frequently via the internal Web site or Intranet. Brief memos may be appropriate in other settings.

The Various Roles Involved in Conducting Intelligence

The expertise of various professionals contributes to a comprehensive intelligence function (see Figure 1.1). Researchers comb through secondary sources such as online databases and print sources, while primary researchers contact individuals—oftentimes through interviews and surveys. Subsequently, analysts synthesize and study the information to generate accurate recommendations upon which decision makers can act. Larger firms with many intelligence staff members require a distinct manager to integrate the entire process into the decision-making structure. For example, a large, U.S.-based manufacturing and research firm, with field offices and manufacturing sites across the globe, has a full- and part-time staff of over 300, who report to the chief intelligence officer, or integrator, at world headquarters; this officer reports directly to the CEO.

The intelligence process also requires the expertise of other professionals. Data builders collect, organize, and make accessible vast arrays of textual and graphic information from internal and external sources; commercial database vendors provide these services as well as in-house staff members who mount hybrid services that contain

internally generated corporate information. Systems builders provide the technologies and services to access and distribute intelligence products and services across the firm (see Chapter 7). Security staff protect the data structures and systems from improper access and use by those inside and outside the firm (see Chapter 11). Legal staff ensures compliance with proper methods for conducting intelligence (see Chapter 9). Finally, knowledge builders from academe and the business community research new frameworks and models for conducting intelligence more effectively.

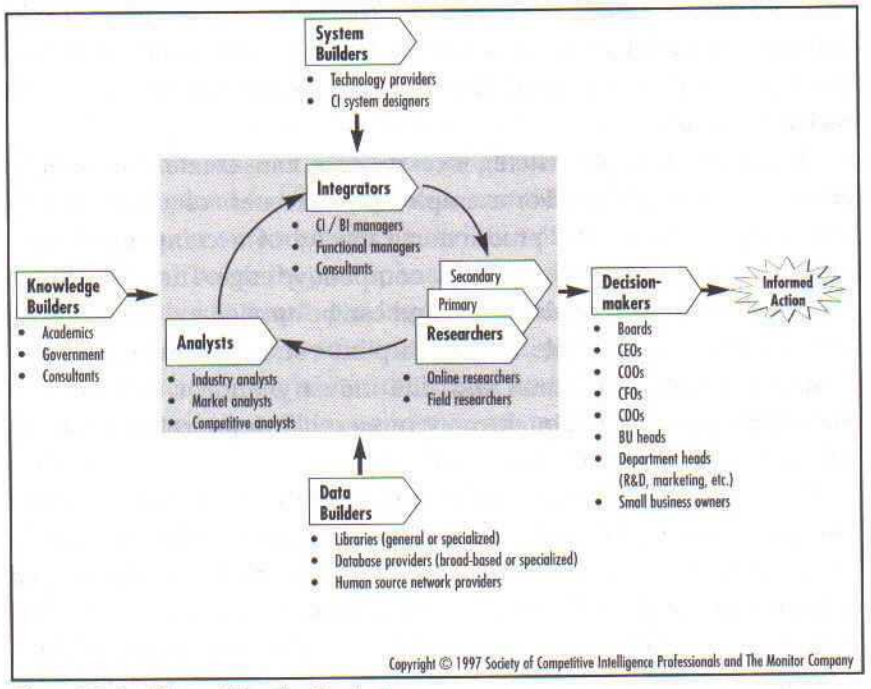

Figure 1.1 Intelligence Value Creation System

To establish an intelligence function, a firm does not need to acquire the skills from all these professional groups; however, a firm will need their expertise at some point. Somebody must identify users' needs, must collect information, must create and distribute intelligence, and must protect it from being stolen. Outsourcing the entire function to consultancies can be appropriate for some firms.

An effective intelligence process does not necessarily require a full-time staff. Making many staff members capable and responsible for some aspect of the intelligence process may be sufficient. The determinants for staff configuration are: the volatility of the industry, the number

of key managers whose decision making requires intelligence, and, of course, available corporate resources. Staff may reside at the corporate, operational, and product-line levels.

The Benefits of the Intelligence Process

Each firm must find its unique place within its industry to confront market forces. Clueless managers *react* to these forces rather than *shape* them. These are the Dilberts in the workplace, as Scott Adams has so creatively demonstrated (1996). In contrast, responsible, responsive, and proactive managers work from the perspective: *define, or be defined.* An intelligence professional from a leading personal-care product manufacturer stated, "I don't worry about being relevant, I just take relevant actions."

Fundamentally, the intelligence process can create competitive advantages for the firm. For example, the awareness of a competitor's upcoming move, or the production capacity of a competitor's new manufacturing plant, can provide a competitive edge. The scope of the intelligence process is quite broad and can be applied to various issues within a firm—for example, a firm's corporate strategy, operational efficiency, competitive position with the industry, and/or new product planning. Therefore, the intelligence process can support key decisions within numerous departments of a firm.

Firms, regardless of size, can benefit from the intelligence process. Two recently completed international studies demonstrate that intelligence activities are being conducted within small- and medium-sized firms across the globe. SCIP members completed a survey that focused primarily on salary ranges (Bentley, 1998); and in 1998 Jonathan Calof, an associate professor from the University of Ottawa, and I delved into the status of intelligence in nine countries. Details of these studies appear later in this chapter, but what is significant to mention at this point is that the demographics of each sample included a large percentage of respondents employed in small- and medium-sized companies: in the SCIP study, 42 percent out of a total sample of 2,225; in the Calof-Miller study, 83.2 percent out of a total sample of 224. Clearly, managers within smaller firms are recognizing the benefits that can be had by conducting intelligence.

The stakes for a small food store that seeks to expand its customer base are proportionally the same as those for the large multinational corporation that wants to introduce a new product line. At Darwin's

Ltd., a small grocery and deli near Harvard Square in Cambridge, Massachusetts, Steve Darwin conducts intelligence—although he doesn't call it that. A neighborhood grocery store had been at this location for years, but it only offered very basic food items such as bologna, beer, and white bread. When Darwin purchased the business, he talked to a number of people in the area and determined that the store wasn't satisfying the needs of the neighborhood's diverse and well-educated customer base. Armed with a business degree and years of experience in the restaurant/food industry, and motivated by the idea of providing customers with a completely unique and satisfying venue, Darwin was convinced he could make the shop commercially successful.

To attract and build his customer base in an area where fast-food restaurants are not even permitted, he had to offer attractive products in a relaxed and welcoming atmosphere. Having lived in the area for years, he had a sense of what customers would like: imported wines, creatively prepared foods, hand-made sandwiches, fresh fruit and vegetables. To make sure, though, he and his wife talked to people in the neighborhood *before* they re-opened and re-furbished the shop. After six years, with soft music playing in the background, his well-trained and congenial staff of five full-time and 11 part-time employees continue to ask customers about their likes and dislikes in order to give them what they what. This common sense approach has generated an unforeseen revenue stream and high customer traffic, which includes the body-pierced grunge crowd as well as suited senior citizens.

In early 1999, Darwin investigated his competitors and recognized a market niche to exploit. Customers wanted to purchase prepared restaurant-quality food to eat on the premises or take home to microwave. No establishment in the area provided this service. He removed shelves of pricey staples that weren't moving and installed a small kitchen and a counter with stools. Since this renovation, Darwin has seen a 27 percent growth in revenues. This occurred during a time when most businesses in the Square were witnessing a drop in customers.

In another example, corporate culture and technology enables a small firm to compete effectively in their marketplace. A culture that listens to people characterizes Classic Restorations, a firm that restores and revitalizes architecturally significant homes in the Boston area.

The full-time marketing director as well as the entire staff listens and responds quickly and effectively to clients' needs. With unobstructed communications lines across the firm, the staff can easily and willingly contribute its expertise to projects by offering insights and suggestions.

Because staff members are committed to providing a high level of service to clients, they have high standards for themselves and expect excellence from co-workers. To coordinate staff efforts, the firm's full-time software engineer has developed an intranet-based application that integrates all phases of the projects—design, ordering, scheduling, execution, status of jobs, supplies, and billing. This system enables the staff to ensure accurate and timely completion of all phases of the projects.

According to Peter LeBau, co-owner of Classic Restorations, the firm receives many calls from frustrated homeowners who say, "I have a contractor and an architect, but they won't speak to one another—can you help me?" In making an effort to listen to customers and provide quality workmanship, the company has gained national recognition, and exemplifies how a fluid culture can contribute to the success of a small business.

Information technology and the use of the Internet specifically can play an important role in enabling small firms to be highly competitive. While brand names flourish, it's not just established companies who are reaping the rewards of ecommerce. Customer satisfaction with products from companies of all types and sizes, along with growing trust in the security of ordering systems, helped boost 1999 online retail sales to $5 billion between Thanksgiving and the end of the year—more than three times the sales for the same period in 1998 (Forrester Research, 2000).

Although size is not a determining factor for establishing the intelligence process, the information intensity of an industry often is. Information intensity refers to the volume of events within an industry that generate information and change (Porter & Millar, 1985). Low information intensity indicates relatively minor change within an industry, such as cardboard-box manufacturing. High information intensity can indicate considerable change, such as deregulated public utilities. Clueless managers working in such intensive industries paralyze the firm. Responsible managers will benefit from the intelligence process by being better prepared to make critical decisions in a fast-paced marketplace.

Because the intelligence process requires the use of both external *and* internal information resources, well-managed firms organize their information resources to permit swift location and use. When managers are aware of the information, and the intelligence that resides within the walls of a firm and the heads of its employees *already*, they respond to marketplace changes more effectively (Jaworski and Wee, 1993). When communication channels are open, managers are able to share information and intelligence rapidly.

The intelligence process thrives within firms that are transparent to themselves. In fact, if most firms knew what they already know, they would be intelligent. If positioned correctly, the intelligence process can enable managers to share information. In fact, the intelligence process usually begins within the marketing or research departments, where managers demand information on competitors, industry changes, and so forth. Then, upon recognizing the importance of such information, they urge managers from other sectors of the firm, such as strategic development and new product planning, to incorporate intelligence into their decision making. Transparency in this process can contribute to the creation of nimble industrial giants.

Intelligence can also change a firm's decision-making culture. Many managers still approach decision making from the perspective that Frederick W. Taylor first described in 1947. Taylor promoted the concept that managers *think* and workers *do*. This philosophical approach may have been appropriate when large numbers of unskilled and uneducated workers were doing assembly line jobs, but today's work force and business climate have undergone a transformation in which employees are much more likely to think and to contribute valuable insights. Unfortunately, despite this, many managers still presume that their title and/or MBA qualifies them to make decisions exclusively and without benefit of worker feedback. Introducing the intelligence process can eventually change this short-sighted approach. Permitting workers to offer recommendations and insights about marketplace changes, as well as to communicate potential opportunities and threats they have encountered, can help stale bureaucracies become intelligent organizations.

Intelligence activities can also lead to improved business performance. A study of 223 U.S. firms in the telecommunications, packaged foods, and pharmaceuticals industries showed that firms engaging in higher levels of intelligence activities also report increases in the quality of products and/or services, the growth of market knowledge, and the quality of strategic planning (Jaworski & Wee, 1993). This study also provided evidence that informal and unstructured intelligence processes lead to less collection, analysis, and use of intelligence products and services.

Although the intelligence process can help to transform an organization, the change does not come overnight. According to an executive of a leading U.S. firm, it took 15 years before the intelligence process was fully integrated across his firm. Intelligence is not a turnkey operation. Hiring an intelligence professional or outsourcing the process

does not create an intelligent organization. The intelligence process must link to decision makers, who value the process and its products and services. The bottom line here is that a firm can gain various benefits from establishing an intelligence process, but behaviors, structures, and attitudes must change in order to maximize its value.

The Current Status of the Intelligence Profession

Which firms are using and "doing" intelligence? As mentioned, most managers gather information, and some analyze it. However, firms within highly competitive industries tend to have established a more formal intelligence process. Companies that are developing new markets, products, services, and/or business processes base their moves on a considerable amount of intelligence. For the most part, firms who have sustained their market share and performance over the past decade conduct intelligence—but this is not always the case.

The Futures Group, an international research and management consulting firm, conducted its third survey on how corporate America conducts intelligence (Harkleroad, 1998). It concluded that corporate America moves slowly to incorporate intelligence activities into business practices. It found that only 60 percent of the sampled businesses have established an intelligence function; this figure demonstrates little movement from the 1995 survey data of 58 percent. The survey consisted of telephone interviews with senior administrators of 101 American corporations from the financial services, pharmaceuticals, aerospace, consumer products, and information products and services industries. In terms of finances, 66 percent had annual revenues exceeding $1 billion and 28 percent exceeding $10 billion.

This study, "Ostriches and Eagles," conducted in 1995, 1996, and 1997, asked executives at major corporations to cite three firms they perceive to be exceptional users of intelligence ("Eagles"). Since inception of the study, the "Eagles" list has been dominated by information services and technology companies: in ranked order, Microsoft, Motorola, IBM, Procter and Gamble (a newcomer to the list in 1997), General Electric, Hewlett Packard, Coca-Cola, and Intel. Microsoft, Motorola, General Electric, and IBM were cited as Eagles in all three years. In response to another survey question, one-fifth of respondents did not believe that intelligence had ever been used against them—these firms were dubbed "Ostriches."

Although less systematic, another way to gauge the status of the intelligence process is to examine its recent coverage in the popular

press. For some years, the press chose to cover the intelligence function from a racy, negative perspective, using terms such as cloak-and-dagger, spying, and corporate espionage. Such stories have appeared in *Forbes, Business Week, U.S. News & World Report,* and *The Wall Street Journal.* The tide seems to have turned. In March 1998, *The New York Times* ran a story, which began: "Competitive intelligence, known variously as CI and business intelligence, is more than just a buzzword thrown about by management consultants. Gathering information on rivals can be one key to success in the cutthroat corporate world" (Sreenivasan, 1998).

In the same month, Trans World Airlines' *Ambassador* magazine ran as its feature story, "The Spy Who Came in with the Gold: An increasing number of companies understand the value of competitive intelligence" (Daviss, 1998). Despite the use of the word "spy" in its title, the story described intelligence activities and those who conduct them positively: "...intelligence-gathering is the newest and most effective way to tip the odds in your favor" (Daviss, 1998:26). "Clearly, an adroit company can do a lot with the 95 percent of competitive information in databases and on library shelves, but then there's that other 5 percent of information that's not public, the kind of information corporations guard like gold. It's in devising ways to mine it that CI professionals earn their battle ribbons" (Daviss, 1998:28).

In Spring 1998, *Fast Company*—the popular business magazine for the thirty-something crowd—ran an article that began, "Business moves fast. Product cycles are measured in months, not years. Partners become rivals quicker that you can say 'breach of contract.' So how can you possibly hope to keep up with your competitors if you can't keep an eye on them? That's why Competitive Intelligence is so important. Forget James Bond. And forget the occasional racy headlines about industrial espionage. We're talking about new approaches to a good old-fashioned business dish: a heads-up on a new product, information on a rival's cost structure, a read on an ally's changing strategy" (Imperato, 1998: 269).

In December 1998, *The Wall Street Journal* stated, "In the corporate world, competitive intelligence has emerged as a must-have tactical tool, every bit as important as, say, a good marketing department" (Thomas, 1998).

An editor on the staff of a prominent U.S.-based magazine contacted me a few years ago to inquire about various intelligence issues for a story he was writing. Among other things, he asked me for the names of

prominent U.S. firms that had developed a sizable intelligence operation and whose staff included SCIP members. I explained that the SCIP membership list is confidential to non-members but said he could easily deduce the names of such firms himself as a business reporter who had been researching the intelligence function for weeks. I suggested he make a list of U.S. firms that he estimated had a lot to lose due to a considerable investment in research and development, and who also had a lot to gain in terms of market share for their products or services. As he began to rattle off a list of over a dozen such firms, I just nodded and smiled.

Firms practice intelligence more extensively when they are trying to be innovative. Dick Klavans, a past president of SCIP, and Professor Peter Lane from Arizona State University recently examined the number of SCIP members within the 200 U.S. manufacturing firms holding the greatest number of patents. The correlation was very strong (.68), and was even stronger when they examined firms holding an extensive number of science-based patents. Their conclusion was that firms holding many patents are highly likely to employ many intelligence professionals.

Recall that IBM and Motorola were included in the "Eagles" ranking in the Futures Group study for three consecutive years. Topping IFI/Plenum Data Corporation's listing of the top 55 recipients of U.S. patents in 1998 (**http://www.ibiplenum.com**) was IBM, which received 2,682—up 54 percent from 1997. Motorola ranked fourth with 1,428 patents. It's not hard to see the connection between the number of new patents and the proficiency with which these two firms conduct intelligence.

Lane (1998) defines science-based innovations as that new scientific knowledge that permits firms to: 1) change their technology platform; 2) develop new ones; or 3) enhance their competitiveness. Usually, firms import this new knowledge from an external source. To do this, they must have qualified staff members in specific scientific disciplines who can recognize the potential value of the information and who can facilitate its integration into their existing knowledge bases. Furthermore, a high degree of ambiguity and a long time horizon characterize science-based innovations. Therefore, such science-based firms experience high staffing needs for intelligence professionals. In turn, the staff fulfill the following objectives for the intelligence activities: 1) to monitor research activity that is relevant to the firm's current science platform; 2) to evaluate the implications of this new research for the science platform; 3) to monitor the network of scientific research partners; and 4) to evaluate the implications of changes in the

science platform for the firm's technology platform as well as for current and future products and services.

Another perspective on the status of the intelligence process can be derived from an examination of the membership demographics of SCIP. Founded in 1986 by a small group of practitioners, SCIP has grown considerably in the past few years. In July 1996, the membership was 3,800, while today SCIP has over 7,200 members worldwide and is growing at a rate of over 200 new members per month (3 percent monthly growth). The majority (80 percent) of SCIP's membership is U.S. based. Although members work in firms across most industries, practitioners from the telecommunications, chemicals, and pharmaceuticals industries dominate SCIP; these are the same industries that the Klavans and Lane study verified as holding the most patents. Many new members are from industries that are experiencing rapid economic change, such as public utilities. New members are from countries such as South Africa, Brazil, and Portugal, whose markets are being rapidly penetrated by foreign firms. Many professionals who have been assigned some responsibility for conducting intelligence and have little understanding or background in the field turn to SCIP for education and training. SCIP estimates that approximately 90 percent of Fortune 500 firms in the U.S. are conducting intelligence, whether on an ad hoc or full-time basis, and that 7 percent of these firms have well-established processes at the corporate and divisional levels.

Data from SCIP's 1997 Salary Survey provides an informative view of the Society. All SCIP members were mailed a survey, with a total response rate of about 44 percent (Bentley, 1998). The average salary of a SCIP member in 1997 was $69,000, an increase of 21 percent over the average reported salary of $57,000 from the 1995 survey (all salaries are given in U.S. dollars). The 1997 salary figures ranged from $48,000 to $120,000. Educational level and specialization affect salary; those with a doctoral degree earned an average of $87,000. Job title and years of professional experience are also important factors; vice presidents earned an average of $100,000 in 1997.

Although this salary data is interesting, the demographic data from this survey provides other insights into the status of the intelligence profession. The primary industries represented in the responding group were telecommunications, independent consulting, chemicals, pharmaceuticals, utility/energy, and industrial products; the least represented were publishing and software. As previously mentioned, many intelligence professionals are located in science-based firms.

SCIP members are a well-educated group overall, with 65 percent of the sample holding masters or doctoral degrees, primarily in the area of business administration and law. The majority (54 percent) have more than 15 years of professional work experience; however, only 32 percent have more than five years of experience in the intelligence profession. In fact, 51 percent of this group has been involved in the field for only one or two years. Half of this group works in an intelligence or marketing department; and the others can be found in strategic planning, business/product development, financial planning, or information services. The majority (60 percent) hold the following job titles: director, manager, supervisor, or senior analyst. The majority report to the senior vice president, director, or manager of marketing, strategic planning, or corporate management. Finally, half of the group conducts intelligence on a part-time basis and devote 30 percent or less of their work-week to intelligence activities; however, 25 percent devote more than 70 percent of their time to the function.

SCIP's Web site provides resources to intelligence professionals, and the interest in its online offerings is on the rise. In October 1996, the average number of visitors per week stood at 950; as of September 1999, the number had risen to over 7,000.

In 1995, I conducted a study on the status of the intelligence process in the U.S. after the years of re-engineering and downsizing (1985-1993). The purpose was to obtain a snapshot rather than a large, balanced sample. After interviewing intelligence professionals in 63 firms across various industries, I divided the resulting sample in three clusters—"robust," "weak," and "in transition"—based on the intensity with which they practiced intelligence. I defined intensity as the frequency with which professionals conducted the intelligence function as well as the number of resources actually used in the process.

The "robust" category contained 14 firms, all of which were dominant players within the consumer foods, pharmaceuticals, telecommunications, and computer industries. From 1985 through 1993, they had increased the number of users of intelligence and pushed the intelligence process down and across their firms by assigning part-time intelligence responsibilities to key lower-level managers. If they had lost market share, they regarded intelligence as the decision-critical function that helped them reposition themselves. They relied on information technologies both to route information to analysts and to broadcast intelligence products to decision makers.

The "weak" category contained 13 firms from various industries. Although the majority had lost considerable market share and faced a questionable future, two industry leaders had little need for intelligence as they participated in rather stable industries. The managers within the remaining firms in this category did not value intelligence and did not know how to incorporate intelligence reports into their decision making. In some instances, the champions of the process had left the firm, leaving it in pieces. In other cases, firms had downsized the process to one professional, who often had difficulty monitoring competitors.

The largest category, "in transition," contained 36 firms from various industries. It was interesting to note that firms from the defense, aerospace, transportation, and automotive industries fell exclusively into this category. Within these firms, the process was clearly in transition. Managers were seeking to find a place for the process—moving professionals from the administrative to the operational level. Management had downsized the process, dispersed it throughout the organization, and were attempting to coordinate it. Recognizing its importance, though, managers were starting to incorporate intelligence reports into their decision making.

Outside the U.S., within firms that practice intelligence the status of the function varies widely. In the Calof-Miller study, SCIP members completed the survey either at local chapter meetings or via the SCIP Web site. We examined the structure and evolution of the process within and across countries as well as how cultural factors affect intelligence activities. Nearly 230 professionals completed the survey. Although members from the U.S. made up 60 percent of the responses, members from the United Kingdom, Germany, Italy, Canada, South Africa, Australia, the Philippines, and China also completed the survey.

On an average across the entire sample, respondents indicated the intelligence function emerged in their firms in 1991. However, averages can be misleading. Looking closer at the data, we saw that by 1980 6.3 percent had begun conducting intelligence, by 1990 27 percent, by 1994 50 percent, with the remaining 50 percent beginning the process between 1995 and 1998. These data mirror the rapid growth in the SCIP membership. As was true for SCIP's Salary Survey, the majority of respondents to Calof-Miller worked in the computers, information services, utilities, and consulting industries—the majority as managers or analysts in the marketing or strategic planning departments.

The Calof-Miller study also revealed that the top five countries where intelligence is best practiced in terms of comprehensiveness and depth

are, in rank order, Japan, closely followed by the U.S., Germany, France, and the United Kingdom. Since the majority of respondents were from the U.S., we factored out all responses from U.S. members to see if the ranking changed. It didn't. Many non-U.S. members have commented often that they can obtain good information from U.S. sources—oftentimes better than from sources within their own countries.

As a global study, Calof-Miller included an examination of how cultural differences (behavior patterns and beliefs) affect the intelligence process. Gaining a better appreciation of this issue can provide insights for practitioners within and across country boundaries, because cultural issues influence the availability and accessibility of information. Respondents indicated that cultural values associated with the use and sharing of information influence the intelligence process. For example, non-U.S. respondents perceive Americans as generators of much readily accessible information. In contrast, Germans perceived themselves as collecting and storing vast amounts of information, but limiting its access, particularly to foreigners. For other respondents, the limited number and breadth of business information sources in their countries constrain their work. Unlike many other countries, extensive U.S. federal regulations require firms to divulge a considerable amount of information. Despite this fact, American respondents frequently expressed their frustration regarding the inaccessibility of information within their own firms.

Examining another cultural aspect related to intelligence, Jean-Marie Bonthous (1994) suggested that different attitudes and practices create different intelligence abilities and disabilities. Managers mirror the extent to which national cultures regard information and education. If the common culture respects reading, education, and information quite highly, managers will carry that same regard into their workplace. For example, within Germany, France, Japan, and Sweden, the illiteracy rate is much lower than the U.S.; the number of books read and the number of newspapers and magazines published per capita is much higher than in the U.S. Because these cultures foster an intelligent environment, their managers practice intelligence at a greater extent than within the U.S. The French, Japanese, and Swiss have well-established and extensive courses for intelligence workers. In the U.S., a handful of colleges offer a single course on intelligence. Unlike their foreign colleagues, few American managers can speak a language other than English. Bonthous suggested that Americans' basic assumptions regarding intelligence prompt them to compartmentalize the intelligence process. Although

Americans may generate a high quantity of intelligence for their firms, and the number of intelligence professionals may be on the rise, many managers do not embrace the process.

A pioneer in the intelligence profession, Jan Herring, addresses many of the issues raised by Bonthous. American firms vary in practicing the intelligence process because relatively few senior managers view intelligence as critical to strategic decision making. As for other countries, the Japanese have an advantage due to their extensive collection and use of information. Although they do not analyze the information extensively, they are able to create a competitive advantage through their effective and timely use of information. Their government assists by providing firms with information regarding the businesses and economies of other nations, and has established an institute for training corporate intelligence and security staff. Virtually all Japanese companies with an international component to their business have an established intelligence function, involving at least 10 staff members.

Herring also discusses Sweden's comprehensive intelligence activities. Their international banks and the government cooperate in the collection of business-related information on a worldwide basis. For example, Swedish embassies collect and provide information to Swedish companies. Swedish consultancies provide support and services to Swedish firms that need assistance regarding intelligence activities. Full-time courses on intelligence are offered both at the Stockholm School of Economics and Lund University. In fact, at Lund University, one can earn a doctoral degree in intelligence. The level of cooperation and support between the government and corporations in collecting and disseminating information is striking in Sweden and some other countries. As discussed further in Chapter 9, the U.S. government passed the Economic Espionage Act into law in October 1996. The Act makes the stealing of trade secrets from U.S. firms by members of domestic and non-U.S. firms a federal crime. Optimists within the intelligence profession see this as an indicator that the federal government will become increasingly involved in supporting the intelligence activities of U.S. corporations.

John Prescott, professor, writer, and former SCIP president, has stated that the intelligence profession around the world is incredibly healthy, but fragmented (1996). Formalized intelligence raises decision making from an intuitive to an analytical process, yet managers tend to regard formalization as a separate office, rather than an organizational mindset. Intelligence professionals focus on practical issues related to

providing their managers with a better understanding of the market forces within their industry. This practical perspective does not lend itself to the development of a unique theoretical base upon which to build a profession. The young intelligence profession has not yet developed a unique set of analytical tools to use for conducting intelligence but, rather, draws its methods from other disciplines. While state-of-the-art practices are well established and frequently used, intelligence professionals and managers need to develop a better understanding of how to manage the intelligence process effectively.

Despite the existence of these growth areas, Prescott offers some realistic suggestions. Intelligence professionals must recognize that their core role is to understand the organizational vision in the context of how the industry is evolving. Depending upon its competitive consequences, their responsibility is to question or support that vision. Finally, the growing, but diverse, intelligence profession needs to focus on two key areas: incorporating the intelligence process into line positions that represent core organizational activities, and addressing the needs not only of managers within multibillion dollar firms, but also those in smaller firms that may be incapable of establishing a formal intelligence structure.

In response to Prescott's suggestions, the following chapters are intended to help managers incorporate the intelligence process within their organizations, regardless of their size.