

Part One

Why Performance Management Matters

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Why Today's Management Processes Are Obsolete

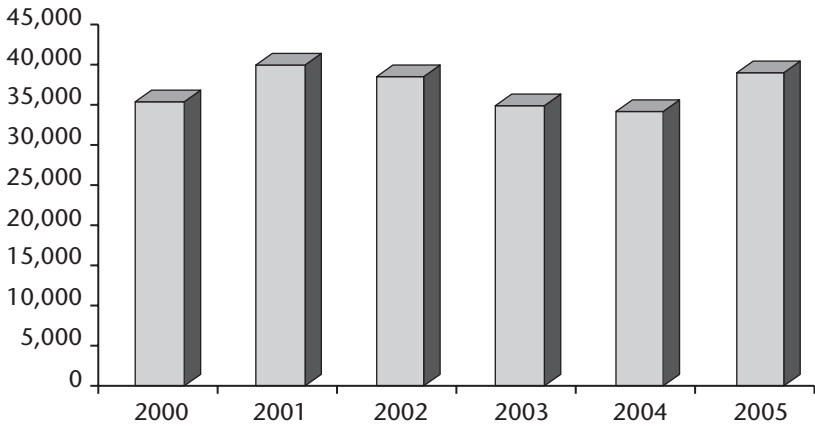
Change is inevitable in a progressive country. Change is constant.

—Benjamin Disraeli

Disraeli's statement is as true now as it was when he was prime minister of Great Britain in the 1870s. At the time, he was focused on introducing many of the reforms needed to address some of the negative effects of the Industrial Revolution then raging in Britain. Legislation passed during his administration included the Artisans Dwellings Act (1875), the Public Health Act (1875), the Pure Food and Drugs Act (1875), the Climbing Boys Act (1875), and the Education Act (1876), all of which sought to adapt British law to the changing times. Today we have moved beyond the industrial age and are hurtling through the information age. The drivers of change are diverse, impacting everything from how markets are defined, to how companies are organized and how technology is utilized. The result is that managers must deal with unprecedented complexity, volatility, uncertainty, and risk. The facts speak for themselves:

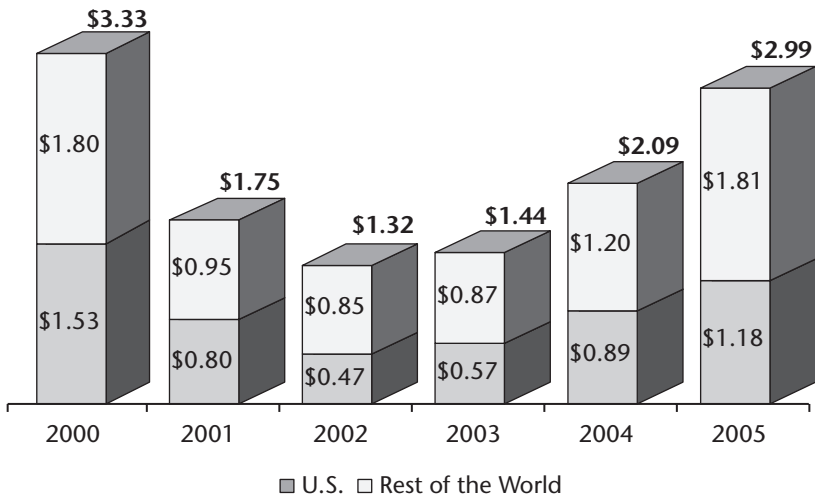
- Mintel reported that during 2005, “a new product was launched every three and a half minutes. A staggering 156,125 new food and non-food fast moving consumer goods were introduced around the world.”¹
- Over 39,000 companies filed for bankruptcy in 2005, including Delta Airlines, Winn-Dixie Stores, Delphi, Refco, and another 80 public companies (see Exhibit 1.1).
- Almost 30 percent of public companies missed their earnings estimates during 2004/5, and there were over 1,100 accounting restatements in 2005, up from 600 in 2004.
- Nearly 10,000 acquisitions were made in the United States during 2005 with a total value of over \$800 billion. In the last few years such revered corporate names as Sears, Gillette, MBNA, Fleet Boston, MCI, AT&T, Georgia Pacific, Hertz, Nextel, Compaq, and Texaco have succumbed to takeovers. Globally almost \$3 trillion of deals were completed in 2005 (see Exhibit 1.2).
- The U.S. Justice Department reported that between July 2002 and March 2006, there were over 1,000 convictions in corporate fraud cases.

Exhibit 1.1 U.S. Business Bankruptcies, 2000–2005



Source: American Bankruptcy Institute

Exhibit 1.2 Global M&A Volume 2000–2005 (\$trillion)



Source: Dealogic

The cumulative effect of these and other factors is changing forever the role of managers and more important the processes and tools needed to manage business performance: five-year strategic plans; static, detailed annual budgets; and purely financial forecasts of future performance are obsolete tools. Let's explore some of the major forces of change in more detail.

BETTER-INFORMED CUSTOMERS

I was going to title this section "smarter customers"; however, more knowledge does not always equate with more wisdom. Notwithstanding this nuance, there is no doubt that customers have access to better information than ever before when considering a purchasing decision.

The easy access to multiple sources of information and advice, not all of them good, has created customers who feel more confident, knowledgeable, and empowered. The balance of power between suppliers and customers has shifted irrevocably. For example, more than 80 percent of prospective car buyers research their purchase online before entering the dealership: they compare product and pricing information, assess financing options, and check the value of their trade-in all before they ever step into the salesperson's lair. The Internet has become the first stop for those seeking the best airfares or searching for a new job. Despite the wealth of new information available to customers, more information does not necessarily mean better decision making. Organizations need to understand the implications of dealing with a better-informed if not necessarily smarter customer base.

The Illusion of Competence

An interesting phenomenon presents a conundrum as companies seek to get ever closer to their customers. I call this the "illusion of competence" and define it as the "aura of misplaced confidence resulting from the assimilation of too much free information or advice of questionable quality." It manifests itself when people gain so much new knowledge that they mistakenly believe that they are now experts.

The Internet has given this phenomenon a powerful stimulus. Large amounts of information can be accessed easily. Examples include people who buy something on eBay for more than they would have paid at the local store and boast about the great deal they got, or those who plunged into managing their own investments, gave up their real jobs to become day traders, and boasted of having "got into Yahoo at \$106 or Ariba at \$75." These are probably the same individuals who started suing their online brokers when the market crashed in late 2000 or entered the Las Vegas real estate market in late 2005. Simply because customers can access millions of pages of free information and compare and contrast thousands of different products from the comfort of their armchairs does not guarantee that they will be transformed from suckers to seers.

Regardless of whether more information makes one smarter or just confused, there is no doubt that it is changing business. Organizations have unparalleled

access to data about customers, suppliers, employees, and competitors that can provide managers with greater knowledge in order to make better decisions. Purchasing managers are able to ascertain complete pricing information for any item before entering into negotiations for suppliers. A human resources manager can compare the salaries being offered for different positions to ensure that the organization remains competitive; employees can do the same. Throughout the organization, people have access to better information; those who can take advantage can realize real benefits fast.

CHANGING MARKET AND BUSINESS MODELS

For anyone seeking to understand today's rapidly changing markets, a look back to the Industrial Revolution can be enlightening. The Industrial Revolution was founded on three significant changes:

1. A whole series of technological innovations broke the relationship between human energy and productive capacity. Prior to the Industrial Revolution, farmers could only be as productive as their own capacity to harvest their crops, and weavers were limited by the amount of wool they could weave.
2. Rapid advances in transportation allowed raw materials to be moved from their point of origin to a different location for manufacture into a finished product. It is no coincidence that the Industrial Revolution first took hold in Great Britain, the country with the largest and most efficient shipping fleet in the world at the time.
3. The recognition that these advances demanded new and different operating models, such as factories, in order to fully leverage these technological innovations.

In a relatively short time, the main underpinning of economic activity moved from the farm to the factory, and the population moved from the countryside to the town. This shift from a largely rural society to one based in urban areas was the defining social impact of the Industrial Revolution and was driven by the need to concentrate labor to exploit the productive capacity unleashed by the new innovations of powered machinery.

The dominant organizing factor was collocation of all aspects of the production process in a series of logical steps. Vertical integration reached its zenith with Henry Ford's massive River Rouge plant just outside Detroit, Michigan. Set on 2,000 acres by the Rouge River, the plant, completed in 1927, was the largest single manufacturing complex in the United States. At its peak during World War II, it employed over 120,000 people. The plant was self-sufficient in all aspects of automobile production, from producing a continuous flow of iron ore and other raw materials to finished automobiles. The complex included dock facilities, blast furnaces, open-hearth steel mills, foundries, a rolling mill, metal stamping facilities, an engine plant, a glass manufacturing building, a tire plant, and a power house supplying steam and electricity. However, the dominance of vertically integrated businesses was already beginning to wane even as Ford constructed his industrial age masterpiece.

Organizations found that the capital and skill set requirements needed to sustain excellence in all aspects of the process were too great. It was easier and cheaper to outsource much of the design and manufacturing process.

By the dawn of the computer age, the main elements of an integrated supply chain from raw material extraction to delivery of the finished product to the customer were well established. Unfortunately, one downside of this process was the creation of a series of cumbersome, bureaucratic paper-based processes to move the information needed to sustain the production process. Documentation of orders, shipping notices, invoices, and payments grew at a rapid rate, triggering the creation of paper factories alongside the real factories in most large corporations. The computer was perfectly placed to address this challenge by automating much of the basic accounting and transaction processing activities. As electronic communications improved, networks facilitating electronic data interchange (EDI) attacked the flow of paper between organizations. Emergence of Internet-based e-commerce made these capabilities easier and cheaper, fueling rapid adoption by almost all organizations.

While physical goods and services remain important, information-based services comprise an increasing share of the economy. In 1991, capital spending in the United States on information technology (\$112 billion) exceeded spending for production technology (\$107 billion) for the first time. By 2005, investments in information technology had grown to \$489 billion, with software accounting for 40 percent of the total.²

Beyond basic transaction-processing applications, organizations increasingly began to use the same technologies to share other information, such as design documents and contract information. With the arrival of e-mail and the Internet, no exchange of information was out of bounds. No longer were organizations required physically to collocate all their people or operations. The level of flexibility is such that a company like Boeing can relocate its corporate headquarters from Seattle to Chicago, occupying its new facility less than five months after making the initial announcement. Philip Condit, the company's then chairman and chief executive, described the reason for moving as "to be in a location central to our operating units, customers and the financial community, but separate from our existing operations."³

Today, a call to a credit card company may be routed to a customer service agent in Des Moines, Dublin, or Delhi, and the computer systems may be running in Prague or Poona. Basic business rules are being redefined; new products and markets are being created. Who would have thought that eBay, essentially an automated flea market, could sustain a \$35 billion market capitalization (up from \$20 billion in 2002), Google \$113 billion (as of August 2006), or that General Motors would employ less than 20 percent of its workforce in actually making cars? Such changes require ever more flexible performance management processes and demand new and different types of management information.

Technology is literally changing the physics of business. Barriers of geography and scale have been redefined. Booksellers do not need stores, telephone companies do not need networks, manufacturers do not need factories, and film companies do not need film studios. Amazon did not need to establish a physical retail presence to compete with traditional booksellers. E*Trade and Ameritrade did not need

thousands of highly trained and highly compensated brokers to shake up the retail securities industry. Whether all these disruptive players survive is not the point; in each case, established players, such as Barnes & Noble and Merrill Lynch, were forced to respond.

Technology has enabled new entrants to enter markets with a new and differentiated service offering that has had a major impact on the traditional players. Companies are creating new products and services and inventing new ways to interact with current and prospective customers. Nike has created a \$13 billion business and a very powerful brand based almost exclusively around design and marketing. Others, such as Dell and Cisco, have developed very successful product businesses while owning little manufacturing capacity.

Changing Market Boundaries or Arbitraging Harry Potter

In the summer of 1999, the third book in the hugely successful Harry Potter series written by English author J. K. Rowling was published. The launch of *Harry Potter and the Prisoner of Azkaban* was scheduled to follow a fairly typical rollout plan. To manage the associated advertising and promotional campaigns, the publication dates in each market were to be staggered throughout the summer in much the same way as for the opening of a new film. The initial release was to be in England, the author's home country, followed a few weeks later by release in the United States. Traditionally, this process had worked well, but this time things were very different.

The Harry Potter series had become a publishing phenomenon, doing for children's fantasy what John Grisham did for the courtroom and Stephen King did for the horror story. The level of interest in the new book was huge. CNN ran stories about the new book's publication; bookstores scheduled midnight openings so that eager readers could be first to snare their copies of the book. The hype, itself a function of the increasing global and instantaneous nature of communications, was unprecedented. There was also another crucial ingredient: A new medium was available—the online bookseller. What followed was a sequence of events that would have profound implications for the way new products were brought to market in the future.

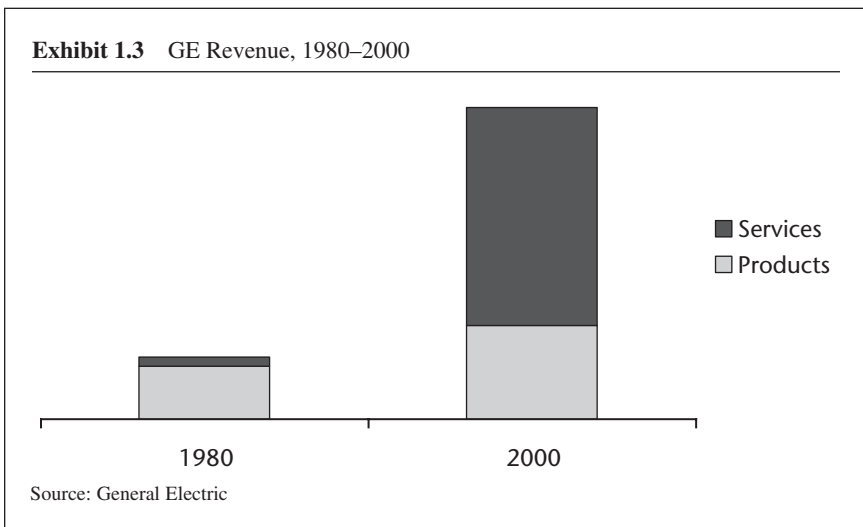
Back in 1998, Amazon.com, the pioneering Internet retailer, launched a U.K. service, Amazon.co.uk, following its acquisition of online bookseller Bookpages. The difference with most other expansions was that in this case, now anyone in the world who had a computer and Internet connection could access Amazon's new U.K. Web site. The impending launch of *Harry Potter and the Prisoner of Azkaban* presented a unique opportunity. Devoted fans as well as some entrepreneurial individuals quickly logged on to Amazon.co.uk and ordered the new book. Soon there was a flourishing gray market in the United States for copies of the book. Many people were prepared to pay three, four, or even five times the cover price to secure a copy before the official U.S. publication date. Technology had decimated the traditional definition of a market and forever altered the planning assumptions associated with launching new products.

By the time the fourth book in the series, *Harry Potter and the Goblet of Fire*, was ready for publication in July 2000, the lesson had been learned. There was a simultaneous launch across the globe. Notwithstanding the logistical challenges of this launch, the hype was even greater. Television cameras covered the unique publishing event, and the launch was the most successful yet seen, only to be surpassed by the launch of the fifth and sixth books.

An organization’s performance management processes must address the dual effects of simultaneously achieving much tighter integration up and down the supply chain combined with the effects of globalization and its impact on redefining markets. The need for timely, accurate information is much greater yet the organization’s ability to mandate its provision is weakened. Similarly, planning is no longer an internal process; it requires the participation and collaboration of numerous players, some of whom also may be doing significant business with a firm’s biggest competitors. It does not matter how many personal computers Dell manages to sell if its suppliers are unable to supply enough parts to meet the demand.

STRUCTURAL CHANGE IN THE ECONOMICS OF BUSINESS

The 1970s were a bleak time for the traditional stalwarts of the western economy. The three-pronged attack of sky-high oil prices, rising inflation, and aggressive competition from fast-growing, lower-cost Asian economies decimated whole segments of the North American and European economies. Some segments, such as consumer electronics, textiles, and shipbuilding, effectively disappeared. Others, such as iron and steel, automotive, and many manufacturing segments, were forever changed. In the space of a single decade, much of the foundation on which the Industrial Revolution was built was dismantled. If there was a positive effect of this brutal transformation, it was the increased focus on all aspects of productivity, quality, and cost management that took hold as management recognized that operational efficiency was a prerequisite for survival, let alone growth. Even successful companies were forced through a radical transformation. Exhibit 1.3 shows that, in 1980, General Electric derived 85 percent of its revenue from manufacturing; by 2000, this had been reduced to 30 percent, even as revenues grew from \$25 billion to \$125 billion.



During the 1980s, the manufacturing sector led the way in realizing productivity gains as it fought for survival in the face of intense global competition. Process innovations using tools such as total quality management (TQM), outsourcing, and just-in-time (JIT) manufacturing drove significant change and productivity improvement. The results were impressive—between 1981 and 1991, manufacturing productivity as measured by the U.S. Bureau of Labor Statistics increased 34 percent.

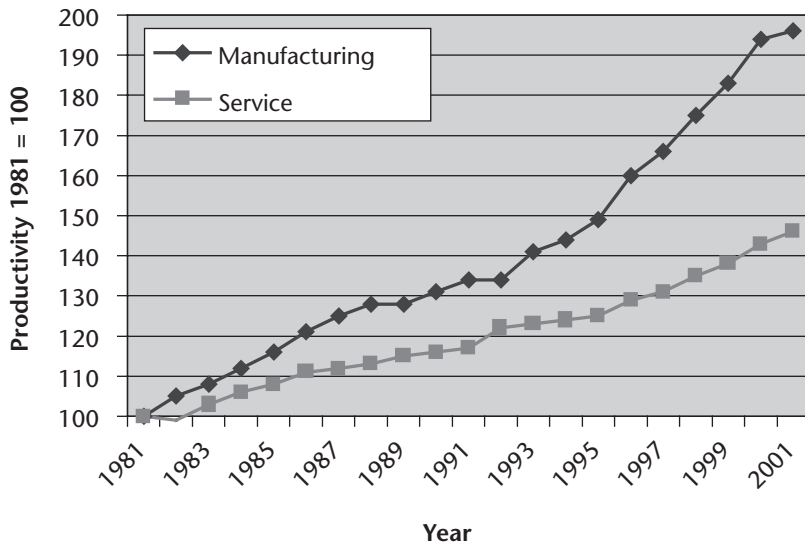
However, as at GE, the focus of the economy was shifting—manufacturing was no longer the dominant segment. The U.S. economy no longer caught a cold just because General Motors sneezed. In 1950, manufacturing was the largest sector of the economy, accounting for more than 33 percent of all nonfarm employment. However, by the end of 1998, manufacturing had shrunk to less than 15 percent. While the manufacturing sector was declining, the service sector was rapidly gaining in importance, growing from 12 percent of all nonfarm payroll jobs in 1950 to 31 percent in 1998, and had supplanted manufacturing as the largest industrial sector. By the end of 2001, Wal-Mart had become the world's largest company with sales of over \$217 billion. Farther down the list over half of the top 100 companies on the Fortune list were service companies. By 2006, Wal-Mart had lost its number-one spot to Exxon-Mobil but had still grown sales to almost \$315 billion, and 60 of top 100 companies were primarily service providers.

Despite its rise to prominence, service sector productivity lagged behind that of manufacturing from 1981 to 2001. Between 1981 and 1991, service sector productivity improved by only 17 percent—half the rate of manufacturing (see Exhibit 1.4). Over the next 10 years, the rate of improvement grew to 24 percent but still lagged behind manufacturing, which achieved an impressive 46 percent improvement.

Manufacturing companies recognized that survival and competitiveness demanded continuous improvements in productivity and quality and reductions in costs. Fast-growing service companies were ready to embrace the new technologies that were fueling their growth. The result was an explosion in best practice innovation in core business practices. As the productivity data show, manufacturing led the way. Alcoa, Chrysler, Dow Chemical, and Honeywell (formerly AlliedSignal) drove substantial improvements in productivity throughout their operating processes and adapted many of the best practice techniques they developed in their core operations to back-office processes, such as finance and human resources. Service companies did not stand still; they began to translate practices developed on the plant floor to their own processes as well as driving technology-enabled improvements through critical areas of their business, such as customer service and support.

The combination of retrenchment in the manufacturing sector and rapid growth in services placed significant strain on traditional planning, budgeting, forecasting, and reporting processes and created significant impetus for innovation. During the first years of the twenty-first century, there were numerous signs that improvements in service sector productivity were accelerating. Many companies began to realize significant operating efficiencies as they deployed new technologies that targeted core service sector processes, such as customer relationship management (CRM), call centers, and customer self-service. Companies such as eBay, Google, Netflix,

Exhibit 1.4 U.S. Productivity, 1981–2001



Source: U.S. Bureau of Labor Statistics

Vonage, and Skype (acquired by eBay in 2005) introduced new business models that were rapidly adopted. Further innovations such as Apple’s iPod and iTunes, Tivo, exchange-traded funds, and craigslist began to disrupt traditional marketplaces and business models. The effect was to further imperil static, calendar-driven, financially focused performance management processes.

With respect to performance management, significant increases in volatility, competition, and globalization, combined with the increase in the amount of data being produced from new systems and the introduction of new tools to analyze and report the resultant information, has increased management focus. As we shall see later, the technology enablers have often proven to be double-edged swords.

REGULATORY REVOLUTION

The election of Margaret Thatcher as prime minister of the United Kingdom in 1979 and Ronald Reagan as president of the United States a year later ushered in a radically different regulatory environment on both sides of the Atlantic. Thatcher reversed over 30 years of tight regulation and increasing government ownership of major businesses. Whole industries, such as telecommunications and utilities, were turned almost overnight from monopolies into competitive markets. Rolls-Royce and British Airways were privatized and emerged as strong competitors in their respective markets. In the United States, the breakup of AT&T in 1984 triggered

a transformation in the telecommunications industry that served as a precursor to subsequent relaxation of regulation in many other industries, such as financial services, gas, and electricity. Many other countries followed suit albeit at a slower pace. Even changes in political leadership, with the Democrats and Bill Clinton taking the White House in 1992 and Tony Blair and the Labour Party ending 18 years of Conservative leadership in the United Kingdom in 1997, did not reverse the trend. Although the merits of more or less regulation are not the subject of this book, it is clear that regulatory change has been a powerful stimulant for many of the changes that have taken place over the last 20 years. Changing regulation creates great opportunity but also great risks that an organization's performance management processes need to address. The U.S. telecommunications industry provides a chilling case study of the volatility and risk that regulation can create.

Before the passage of the 1996 Telecommunications Act, local telephone service was a simple, sedate, and very profitable business. Long-distance service, while less profitable, was dominated by three large players, AT&T, MCI (soon to become WorldCom), and Sprint, companies that together commanded 85 percent of the market in 1995. Deregulation changed the picture overnight. The intent of the act as defined by the Federal Communications Commission (FCC) was "to let anyone enter any communications business—to let any communications business compete in any market against any other." Local markets were opened up to competition, ownership restrictions were relaxed, and a number of other provisions were designed to facilitate greater access to different telecommunications markets by both existing and new players. For the first time, local service providers had to focus on customer service, competitive pricing, and productivity improvement to remain competitive. Overnight, a relatively stable, slow-moving industry was transformed into a Wild West shoot-out. Compounding the effect was that the act was passed at precisely the same time as the Internet was exploding. Americans seemed to have an insatiable thirst for communication capacity, or bandwidth. The number of companies seeking to participate in the market exploded from 3,000 in 1995 to over 4,800 by 1999. During the same period, over \$2 trillion was invested in the telecommunications sector. Stock prices of new entrants, such as Winstar and Global Crossing, soared. Equipment makers Cisco, Lucent, and Nortel all reported record sales and earnings. A true revolution was under way. Unfortunately, it was all a house of cards. In a collapse reminiscent of that in the railway industry a century earlier, the bubble burst in less than two years. Winstar, Global Crossing, and WorldCom filed for bankruptcy. Qwest, Lucent, and Nortel saw their stock prices decline more than 90 percent, losing their chief executive officers (CEOs) in the process. Paper losses of over \$2 trillion were recorded as the industry's collective market capitalization dropped by over 60 percent. During the boom, an estimated 39 million miles of fiber optic cable had been laid in the United States; by early 2002, less than 10 percent of that cable was being used. Subsequently even the established players succumbed as AT&T, MCI, Nextel, GTE, Ameritech and others all were acquired during another major wave of industry consolidation.

How many of the participants in this process saw the warning signs? Did their strategic planning processes ever contemplate that the demand for all the capacity

that was being built was simply not there? Did their reporting and forecasting processes provide any advance warning that revenues were never likely to grow to a sufficient level to service all debt taken on, let alone make a profit for investors?

We learn from this and other examples, such as the fallout in the energy industry from events at Enron, that the positive and negative effects of changing regulation must constantly be considered in any organization's planning process.

GROWTH THROUGH ACQUISITION AS THE NORMAL COURSE OF BUSINESS

Mergers, acquisitions, and divestitures have long been part of the commercial world. Many of the early twentieth-century powerhouses, such as Standard Oil, General Motors, and Westinghouse, used acquisitions as a vehicle for growth. In the 1960s, often termed the age of the conglomerate, companies including ITT and United Technologies hit the acquisition trail. However, it was not until the 1980s that mergers and acquisitions (M&A) became an everyday business activity. Easier access to capital through junk bonds and the like fueled a boom in hostile takeovers and leveraged buyouts. In 1981, there were just 1,000 such deals completed worldwide with a total value of about \$90 billion; by 1999, the number of deals had increased to more than 32,000, and the value was an astonishing \$1.1 trillion. The economic boom of the 1990s combined with changing regulations in many industries sustained the wave of activity. Volume declined during 2001 and 2002 but by 2005 was back to record levels.

Cisco completed 50 acquisitions in the three years from 1998 to 2000, 23 of which came in 2000 alone. Thereafter the pace slackened somewhat, but the company still completed 12 deals in 2005. For many companies, acquisitions became a way to acquire new products or market access without having to do all the work themselves.

Despite the increasing popularity of M&A activity, the track record has been very uneven. At the outset, every deal promises significant benefits to investors and shareholders—that organizations will become leaner and more competitive, and tremendous synergies will be realized, delivering significant cost reductions. However, the reality is often very different.

Larry Bossidy described what he found on becoming CEO of Allied-Signal (now Honeywell) in 1991, a company created through a series of acquisitions made in 1980s:

Allied-Signal had no productivity culture Individual businesses were allowed to have their own identities.⁴

I was a consultant to the company at the time and could recognize the truth in Bossidy's statement. Employees described themselves as working for Bendix or Garrett or one of the other acquired companies, rather than for Allied-Signal. Each business had its own set of financial systems and its own unique planning and reporting processes. Those systems and processes did not survive for long under

Bossidy's focused leadership. One small action early in his tenure set the tone: He removed the hyphen from the company name. Allied-Signal became AlliedSignal, a single company focused on operational excellence.

Even in situations where the postmerger integration pain is less, companies often find that new acquisitions create significant cultural, operational, and technological challenges. Problems range from getting diverse organizations to work together, to integrating the patchwork quilt of systems that most acquisitions create. Notwithstanding the variable track record, the use of acquisitions as a normal part of business has increased, introducing a whole new set of planning variables and information needs. Traditionally, M&A analysis has been handled outside of the core planning and management reporting process. This works fine until the level of activity reaches the point where day-to-day operating decisions are impacted by the level of M&A activity. Many high-technology and pharmaceutical companies fuel their research and development processes by taking stakes in or acquiring smaller companies.

The ability to continually scan the marketplace for potential acquisition targets—to develop sophisticated valuation and funding models to assess the real worth of any transaction—and the need to include acquisition-driven growth in strategic, tactical, and financial plans are all driving new planning and information requirements. Bank of America has grown from a small North Carolina bank to the rank third on *Fortune* magazine's Global 2000 list for 2006 with sales of \$85 billion, profits of \$16 billion, and assets of \$1.3 trillion largely through a 30-year program of acquisitions. Two of its most recent deals, the acquisitions of FleetBoston and MBNA, went from concept to public announcement in less than two weeks, which reflects the need for timely and rapid analysis to support decision making.

REDEFINING ASSET VALUES

Traditionally, an organization's assets were tangible, physical things. Property, plant, equipment, and inventory made up the bulk of the assets of any organization and were reflected as such on the balance sheet. However, as the economy has evolved from a manufacturing focus to a service focus, the ability to relate an organization's true value to its hard assets has become much more difficult. Organizational success is increasingly tied to intangible assets, such as intellectual property, brands, skills, and customer franchises. While the valuation of such assets is problematic, no one can doubt that Coca-Cola or Nike's brand, Nordstrom's service levels, and NASCAR's loyal fan base are not valuable assets. Even a faded intangible asset can have considerable value; when SBC acquired AT&T in 2005, it considered the tarnished brand to still possess such value that it took the AT&T name.

The challenge for many organizations is that their performance management processes are much more closely aligned with the older tangible assets model than the newer intangible assets model. How many plans or reports clearly identify the

return expected from investments made in proprietary intellectual capital, brands, customer franchises, or talented people?

CHANGING DELIVERY CHANNELS

Just as the introduction of postal service and telephones created new channels for selling and service, the Internet has created a new channel between suppliers and customers. Companies that were comfortable using one or perhaps two primary channels for getting their products to market are now dealing with multiple channels through multiple intermediaries. Traditional sales forces are learning to interact with Web-based direct selling. Companies are managing potential conflicts between selling their products directly to their customers over the Web and upsetting long-standing retail partners or internal sales forces by introducing an alternative channel that bypasses them. For example, Levi-Strauss encountered significant resistance from its traditional retail partners when it started selling its products online but barred them from selling Levi's and Dockers on their own Web sites. After months of high costs and poor sales, Levi's pulled the plug on selling from its own Web sites and developed partnerships with J.C. Penney, Kohl's, Macy's, and others to sell Levi merchandise on their sites, a change that solved the initial conflict issue. Charles Schwab solved the conflict between its retail offices and its online presence by ensuring that retail offices received full credit for all online business conducted by clients in the territory of each office. Best Buy turned another potential channel conflict into a marketing campaign by advertising that anything bought online could be returned to a store for a full refund—solving a problem that many other multichannel retailers initially failed to address adequately.

Increasing channel complexity adds yet another layer to the variables that need to be addressed by a company's performance management processes. Managers have to be able to develop plans that reflect multiple combinations of product, channel, and customer and the complex relationships between each.

COMPRESSED CYCLE TIMES

The need for increased speed has been one of the dominant themes of the last 200 years. In transportation, the evolution from horses, to stagecoaches, to trains, to planes has progressively shortened the time it takes to move people and product. In communications, the corresponding progression from mail, to telegraph, to fax, to broadband connection speeds data across the globe at ever-faster rates. The ability to execute flawlessly at great speed has become a distinctive competitive weapon. Drive-through windows at restaurants, banks, and dry cleaners, E-ZPass tollbooths, Disney's Fastpass, FedEx's Custom Critical, and Domino's Pizza have all successfully used speed as a distinctive product feature. It seems that everything in the business world is being driven by an insatiable desire for speed.

In their 1990 book, *Competing against Time: How Time-Based Competition Is Reshaping Global Markets*, George Stalk and Thomas Hout provided a powerful argument regarding the role of time in competitive success.⁵ In the years since the book was published, little has occurred to weaken their fundamental proposition that time is a key driver of competitive advantage.

Despite the increased focus on speed and cycle time, most companies have relatively few time-based measurements in their plans or standard management reports. Typically targets and measures focus on broad areas, such as product development cycles, on-time delivery rates, and processing cycle times. Many organizations have little understanding of the trade-offs among speed, cost, and service quality that must be managed.

Elements of Time-Based Competition

- Time to market for new products and services from concept to realization
- Time to deliver products and services to the customer
- Time to close the books
- Time to hire new staff
- Time to deploy new staff
- Time for new staff to achieve full productivity
- Time to make key decisions
- Time to complete major business transactions
- Time to obsolescence for equipment and products
- Time to integrate acquisitions
- Time to respond to competitive actions
- Time to realize value from new technology investments
- Time to enter a new market

VAST NEW INFORMATION SOURCES

Peter Drucker talks about information replacing authority in organizations, Bill Gates describes the digital nervous system, and Australia even has a National Office for the Information Economy. The sheer volume of data now available is staggering. Samuel Taylor Coleridge, in the classic poem “The Rime of the Ancient Mariner,” wrote: “Water, water, everywhere, nor any drop to drink.” Many executives feel the same way about data. Plagiarizing Coleridge, the phrase “Data, data everywhere, nor any information to make a decision” accurately reflects the feelings of many business managers.

A study conducted by the School of Information Management and Systems at the University of California at Berkeley in 2000 estimated that the world produces between 1 and 2 exabytes of unique information per year, which is roughly 250 megabytes or the text of 250 books for every man, woman, and child on earth.⁶ (An exabyte is a billion gigabytes, or 1,018 bytes.) The numbers are beyond comprehension, and they are getting bigger. Today all businesses rely heavily on infor-

mation to drive every aspect of their operation. Wal-Mart has grown to be a \$312 billion behemoth in a seemingly mundane industry: retailing. Although the company's success often has been attributed to the culture associated with its founder, Sam Walton, and its commitment to "everyday low prices," a more significant contributor has been driven by its use of computer systems that allow it to better manage inventory and track customer demand. FedEx, another success story of the last 30 years, redefined another simple business: package delivery. Again, a key element in FedEx's success has been the innovative use of technology to manage the flow of millions of individual shipments every day. Spend a few hours in the company's main Memphis, Tennessee, hub and the power of technology in enabling the business is clear. For a period in the late 1990s, the company built much of its advertising around its ability to tell users precisely where their packages were at any point in time. FedEx was using its ability to provide information about package delivery rather than the basic service itself as a selling point. Both Wal-Mart and FedEx have been able to profitably redefine seemingly mundane businesses through their ability to better manage information and turn it into better business decision making, allowing them to outpace more established rivals.

Conversely, too much information can be an impediment to effective management. On becoming CEO of General Electric in 1981, Jack Welch found that detail dominated the planning process. As Welch describes in his biography, *Straight from the Gut*: "These [planning] books were the lifeblood of the bureaucracy . . . I never wanted to see a planning book before the person presented it. To me the value of these sessions wasn't in the books. It was in the heads and hearts of the people who were coming into Fairfield [GE's headquarters]."⁷

The task of managing the vast amounts of data coursing through the veins of the modern business is not going to get easier any time soon. The digitization of much of the information flow between suppliers and customers and between companies and their associates is providing a major opportunity to capture the meaningful insight they need. The driving force behind the development and deployment of best practices in planning and management reporting is the desire to leverage the data effectively without overwhelming the recipient.

RIGHT TECHNOLOGY

The final and most potent ingredient is technology. As with the inventions that triggered the Industrial Revolution in the eighteenth and nineteenth centuries, technological innovation is the yeast in the recipe of economic growth. Born in England in the second half of the eighteenth century, the Industrial Revolution was the result of a confluence of new ideas and inventions, including the spinning jenny (1765), Richard Arkwright's water frame (1790), and James Watt's steam engine (1782), that transformed the cotton industry and made the factory method of production possible. Aided by further developments, such as the railway, the ingredients were in place for a transformation of the once-agrarian economy to a factory-based

economy. The same scenario has clearly been repeating itself during the early years of the twenty-first century.

The pace of technological change continues to be frenetic. Less than 20 years ago, the personal computer (PC) was in its infancy, databases were rudimentary, and the Internet was merely a government and academic network. Computers were housed in specially constructed buildings, and reports consumed vast quantities of green-and-white lined paper that spewed endlessly from industrial-strength printers. Today computers transact billions of dollars' worth of business every day, and corporations tap vast reservoirs of data housed in multidimensional databases. It seems that as soon as an organization starts deploying the latest new system, it is immediately made obsolete by the next generation.

More specifically, the convergence of three distinct technologies has fueled a transformation every bit as potent as the Industrial Revolution:

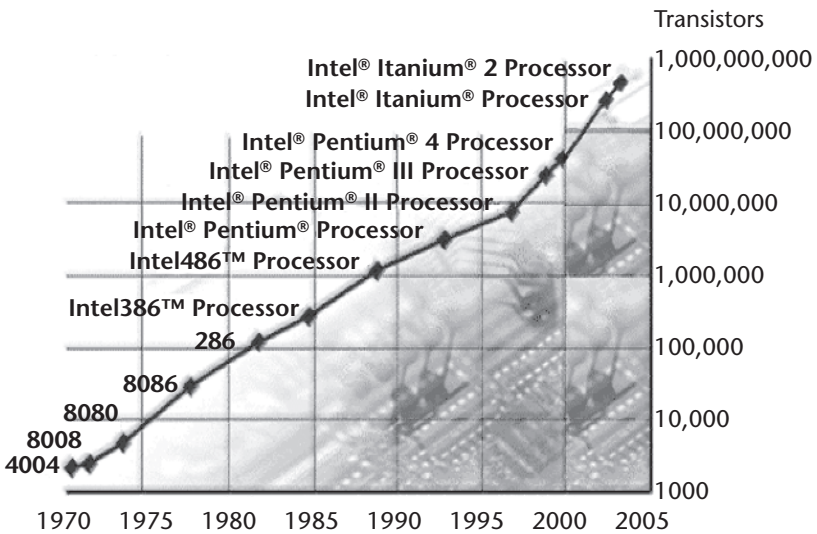
1. Improvements in the price/performance ratio of technology
2. Development of integrated package software offerings
3. Availability of high-bandwidth, low-cost communications

The dramatic improvements in the price/performance ratio of computer and communications technology have made it economical to place computing power wherever it can add value, from the supermarket checkout to the truck cab. Moore's law, named after Gordon Moore, one of the founders of Intel, encapsulated the exponential growth in performance. In 1965, Moore observed that the number of transistors per square inch on an integrated circuit had doubled every year since the integrated circuit was invented. He predicted that this trend would continue for the foreseeable future—and he was right (see Exhibit 1.5). The reduction in the relative cost of computing power is even more startling. By 2006, a Dell 3.8 GHz (GigaHertz) PC could be purchased for around \$1,600, about half the price of an IBM PC/XT in 1983; however, the Dell machine was a staggering 1 million times faster than its predecessor.

The second advance saw the rapid commercialization of software into integrated suites of standard applications supporting basic business functions, such as accounts payable, payroll, and general ledger. Data processing no longer requires the development of custom applications to execute core business transactions or transform transaction data into usable information. Package software provides proven functionality at much lower risk with a lower overall cost of ownership than custom-developed software. The final piece of the technology puzzle has been the emergence of low-cost, ubiquitous, and easy-to-use mechanisms for communication, collaboration, and commerce. E-mail, the Internet, and wireless and broadband communications offer multiple ways for people to share information and communicate in both synchronous and asynchronous ways. By 2005, it was estimated that there were 120 million U.S. broadband subscribers, an increase of 36 percent in a little over a year.⁸

The convergence of powerful computers, sophisticated software, and ubiquitous high-speed communications has provided the catalyst for much of the advances

Exhibit 1.5 Moore's Law



Source: Intel Corporation

seen during the last 20 years. Alan Greenspan, chairman of the Federal Reserve, described the phenomena in a speech in June 2001:

The inexorably rising share of the nation's output that is conceptual appears to have accelerated following World War II with the insights that led to the development of the transistor, microprocessor, laser, and fiber optic technologies. By the 1990s, these and other critical innovations had fostered an enormous new capacity to capture, analyze, and disseminate information and had begun to alter significantly how we do business and create economic value, often in ways that were not foreseeable even a decade ago. Indeed, it is the proliferation of information technology throughout the economy that makes the current period so special.⁹

The continuous advances in technology create new opportunities that offer enormous potential benefits while also creating new risks. Applications that only a few years ago were science fiction are now everyday reality. Buying a soda using your cell phone, printing tickets for a concert on your home printer, purchasing a book at 3 A.M., or sending a photograph of the kids to their grandparents seconds after it was taken were all far-fetched notions that are now commonplace. Unfortunately, so are viruses that destroy users' computers, hackers who crash users' systems, and thieves who steal people's identities. Despite the risks, organizations feel under tremendous pressure to implement every new innovation. Fear of being at a competitive disadvantage drives a pace of adoption that allows little margin

for error and is unlikely to slacken. Periodic breathers, such as that induced in the post-dot-com era, will occur, but the relentless pace of technological innovation and adoption is inexorable, and business performance management is moving into the eye of the storm. While much work remains to clean up the inefficiencies that remain in the core operational processes, many organizations are shifting their focus. They want to move beyond simple transaction processing and reporting; they want to use the information they now have to make better decisions, faster. Nimble, flexible planning processes and rich, targeted reporting are two important elements in enhancing an organization's decision-making ability.

NEED FOR A BURNING PLATFORM

Even though all the ingredients were in place, progress toward the development and adoption of best practices for performance management was relatively slow. Although manufacturing, supply chain, and accounting processes underwent significant change throughout the 1990s, most companies muddled along with slow, bureaucratic, detailed budgeting processes that created plans that were largely obsolete the day they were created. In essence, many managers were flying blind and didn't really care.

However, it was rare for the pain to be sufficient to trigger a fundamental redesign of the performance management processes. For most of the 1990s, business was good; sales and profits were growing. Some commentators even went so far as to predict the death of the normal economic cycle of alternating periods of growth and recession. In such an environment, imperfections were an irritant but not a major problem. However, that was all about to change.

Beginning in March 2000, a series of events dramatically changed the business climate and brought the problems inherent in the planning and reporting processes sharply into focus. On March 10, 2000, the Nasdaq Market Index reached a new high of 5,048. It then began a decline that saw the index fall to less than 1,400 by the summer of 2002, over a 70 percent decline. Aside from wiping out billions of dollars of paper wealth, the decline precipitated a massive shakeout in the nascent dot-com segment. More important, it ushered in a new era of realism. The speed of the slowdown was so rapid that few companies had any forewarning. Annual budgets set only weeks earlier were suddenly obsolete. The much-vaunted visibility offered by integrated sales and supply-chain forecasting systems failed to materialize in the time of greatest need.

The effects of the shakeout in the technology industry started to ripple through the economy. The broader U.S. stock market indices began to decline in the third quarter of 2000. The Standard and Poor's (S&P) 500 peaked at a little over 1,500 before starting its decline to less than 900 by the summer of 2002. While it fell less than the technology-heavy Nasdaq, the S&P 500 still declined by 40 percent.

Starting in the fourth quarter of 2000, company after company was forced to admit that it had little or no visibility into its future business prospects. The number of public companies forced to make negative earnings preannouncements dou-

bled from just a year earlier—a damning indictment given the amount of effort expended on planning, budgeting, and forecasting. Throughout the rest of 2000, a steady stream of high-technology business failures rocked investor confidence and the first signs of a mainstream economic slowdown appeared with the usual round of layoffs and expense reductions.

The dawn of 2001 offered no respite from the bad news. In May, Cisco, one of the acknowledged leaders in developing a highly integrated e-business and much admired for its flexibility and responsiveness, announced a \$2.25 billion inventory write-down. In July, Webvan, one of the most heavily financed and lauded Internet-based businesses, closed its doors after spending \$830 million of investors' money without ever turning a profit. As if this stream of bad news was not enough, then came the terrorist attacks of September 11, 2001.

The economic impact was immediate as fear and uncertainty resulted in slashed spending plans and a deepening of the economic crisis. Adding further fuel to the fire on December 2, 2001, Enron Corporation—ranked fifth on that year's Fortune 500 list—filed for bankruptcy protection amid accusations of fraud, deception, and false accounting. Additional bankruptcy filings from Kmart, WorldCom, and Global Crossing, and the collapse of Arthur Andersen, one of the oldest and largest accounting firms, added to the general uncertainty.

The passage of the Sarbanes-Oxley Act in 2002 ushered in a new era for corporate managers; integrity in reporting and accuracy in forecasting were no longer optional. The cumulative effect of all these events served to highlight the shortcomings of the typical planning and performance management process. No CEO likes to admit to having no insight into the future performance of the business, let alone being seen as anything less than ethical in his or her stewardship. Improving the quality, accuracy, and efficiency of all aspects of planning and reporting moved rapidly to the top of the management agenda. Investors began demanding greater assurance that reported numbers were based on sound business and accounting principles. Future plans and other forward-looking statements were placed under intense scrutiny.

The effects of corporate failures and new regulations initiated a significant economic restructuring that continues apace. At the time of writing, the automotive and airline industries continue to struggle despite sales recovering to record levels after the post 9/11 decline. Merger activity in financial services, retail, telecommunications, and many other industries is at new record levels. The velocity of change has only been multiplied by the effects of the War on Terror, \$70-per-barrel oil prices, Hurricanes Katrina and Rita, the Asian tsunami, and other one-time events that have battered many parts of the world.

The need for best practices for effectively managing in today's increasingly volatile and uncertain world has never been greater.

NOTES

1. Mintel International Group, March 8, 2006.
2. Digest of Education Statistics 2004, National Center for Education Statistics, Table 278.

3. John S. McClenahan, "Where Will Boeing Land?" *Industry Week*, May 5, 2001.
4. Larry Bossidy and Ram Charan, *Execution* (New York: Crown Business, 2002), p. 2.
5. George Stalk and Thomas Hout, *Competing Against Time: How Time-Based Competition Is Reshaping Global Markets* (New York: Free Press, 1990).
6. Peter Lyman and Hal R. Varian, *How Much Information* (Berkeley: School of Information Management & Systems, University of California, 2000).
7. Jack Welch with John A. Byrne, *Jack—Straight from the Gut* (New York: Warner Books, 2001), pp. 93–94.
8. Nielsen/NetRatings, October 2005.
9. Alan Greenspan, "The Growing Need for Skills in the 21st Century," speech before the U.S. Department of Labor 21st Century Workforce Summit, Washington, D.C., June 20, 2001.