Introduction

THE CHANGING SHAPE OF THE CORPORATION

Has the corporation as we know it outlived its usefulness? Companies look and act the way they do largely because outside forces have molded and shaped them over the years. Yet those external influences are themselves in the midst of dramatic change. Interaction costs have gone into freefall, nullifying much of the logic behind the current corporate structure. Value will be measured in increasingly smaller units—rendering our current definitions of the corporation obsolete.
Corporations are built on compromise. The genetic makeup of a business—its informal (or rigid) culture, its obsession with growth (or cost controls)—will inevitably fit some areas of the company better than others. But what if smaller pieces of a corporation could be considered on their own, at the equivalent of the individual gene level? Is it not far more effective to fine-tune one specific element of a business than an entire organization? Today, many corporations are beginning to do just that.

In this chapter, we:

➤ Look at historical shifts in the structure of the corporation—each toward a greater degree of focus

➤ Discuss why the current shift to a company organized around smaller units of value is possible, concentrating on falling interaction costs

➤ Present some early evidence of companies’ moving toward organizing around these individual corporate genes (which we call capabilities)

➤ Assess where certain industries fall in the level-of-organization spectrum, and why
Through massive mapping efforts, we are learning how the human genome is sequenced. We can trace which individual genes in the genome determine the color of our eyes, and we are beginning to see glimmers of the links between our health and our genetic coding. Perhaps in the future we shall be able to fend off certain diseases or influence our well-being, not by changing the conditions in and around our bodies, but by affecting the very material that determines our propensity for certain conditions in the first place. Why diet if a little genetic engineering can prevent obesity?

For the human genome, an aura of science fiction still surrounds such considerations. In the business world, however, it is clear that an era of corporate genetic engineering is already dawning. Rather than looking at the well-being of entire companies or business units, we can increasingly address the individual components of a business. We have called these corporate genes *business capabilities*. Just as each human gene is a piece of DNA working as an instruction manual for a particular human characteristic, each business capability is a component of the value chain that makes a unique contribution to a company’s output. The corporate genome holds the design key to what the company sells, whom it sells to, and what resources it deploys. In effect, it defines what products and services corporations offer. Although human genes lack the capacity to make organisms on their own, business capabilities can create the corporate equivalent. In both our client work and in recent press accounts we’ve seen that more potent versions of capabilities can be created when they are taken out of their corporate genome context—and leveraged as separate genes in new and powerful ways.
INTERACTION COSTS IN FREEFALL

Most new ideas are not really new; rather, they are creative extensions of existing ones. The concept of a new stage in the life of the corporation is, in large part, a new wrinkle that furthers the time-tested theories of British economist Ronald Coase. When Coase was awarded the Nobel Prize for economics in 1991, many were stunned: None of his articles contained a single equation or correlation coefficient. Yet his observations are as relevant today as they were in 1937, when he penned The Nature of the Firm. In that insightful work, Coase explored two fundamental questions: Why do firms exist, and what determines the size of a firm?

Coase was the first to identify the significance of transaction costs in determining the shape of the corporation: A firm tends to expand until the costs of organizing an extra transaction within the company become equal to the costs of carrying out the same transaction on the open market. Similarly, if transaction costs were zero, theoretically there would be no firms. Search through articles in prominent business journals and reviews written in 2000, and you'll find Coase's name dozens of times (our Internet search yielded 98 hits). His recent surge in popularity is no coincidence; rather, it represents a consensus on one of the irrefutable benefits of the Internet: the lowering of transaction costs.

Coase's observations have clear implications for organizations: If interaction costs go down, the need to keep all business activities in-house diminishes. As transactions costs have declined, in large part because of developments in information technologies, corporations have come to function at lower levels of aggregation. This evolution validates Coase's arguments (see sidebar: "The History of the Corporation").

The huge decline in transaction costs has been spurred by technological breakthroughs such as the telephone, television, telex, facsimile, and video conferencing, but also
by more physical trends such as the widespread proliferation of air travel. This drop in costs went into freefall with the radically new use of the telecom infrastructure to create the World Wide Web. The Internet has been termed “disruptive” by some because it stormed onto the scene so quickly. The infrastructure and devices required to support

The History of the Corporation

Conventional wisdom holds that the configuration of the firm has progressed through three major stages of increasing focus. The first large corporations—designed about 100 years ago—were diversified functional corporations built to achieve the efficiency and size needed to produce a limited line of goods for the growing American domestic market of the early 1900s. Firms such as DuPont, General Motors, and Ford followed this vertically integrated model. Ford not only made tires but also owned rubber plantations to supply its tire factories and ground the glass to make its windshields. As these firms started to pursue a strategy of diversification in the early 1920s, it became apparent that such a structure posed problems of coordination and control, and some (led by Alfred Sloan of General Motors) soon adopted a multi-divisional structure in which each division was conceptually a distinct business with a specific market. Chevrolet, Pontiac, and Cadillac operated independently, each with its own customers and price range. By the 1960s, the diversified divisional conglomerate was the dominant form of corporation throughout the developed world.

By the 1980s, the next stage had emerged. Competitive pressures forced traditional corporate giants to implement vertical disaggregation strategies (or get rid of previously integrated upstream or downstream activities) and strip down toward more focused companies, or integrated corporations. The change in strategic direction by companies like Eastman Kodak and Westinghouse, and the breakup of conglomerates like ITT, signaled this shift in the United States. In Europe, the trend toward more focused companies was slower to take hold, but soon caught up. Nokia shed businesses like paper and rubber boots; Unilever sold off its chemicals; ICI spun off its pharmaceuticals. The move away
from the conglomerate model in much of the rest of the world was—and still is—much more gradual. Witness the longevity of Korea’s once powerful chaebols (networks of companies); their demise has been only recent.

The next stage is life as most of us know it: the current organization form of multiple strategic business units (SBUs) within an integrated company. As the competitive environment evolved, the integrated corporation responded by transitioning to network organization forms—a collection of business units responding to market forces rather than a chain of command. This new organization, in which business units buy and sell goods and services among themselves at prices determined in the open market, is focused, flexible, and responsive to customer needs and market requirements. Most modern companies today, from IBM to Procter & Gamble, are organized in this fashion.

As defining and developing the core competence of the firm attained popularity among management researchers and practitioners, market-based definitions of businesses shifted toward more competence-based definitions. If Honda’s core competence was in small combustion engines, the domain of Honda’s activities would include any business that leverages this core competence. The typical organization today has become much more focused, but it still generally buys, makes, sells, and distributes its products largely on its own.

That model is about to be turned on its head. With the advent of the Internet, we are poised at the brink of the next stage in corporate history: a modular organization that can selectively link up with other firms to utilize specific skills and capabilities. Suppliers and designers, for example, might ally with manufacturing firms to produce innovative and timely products.

it were already available. A personal computer, a phone line, and a CD-ROM from an Internet access provider will get you online in no time. And once you’re on the Internet, you can download all the software tools you need to carry out a large variety of tasks making use of the Net as an interaction medium. Contrast that with the “revolution” led
by the advance of facsimile communication. Before it could take place, communication equipment had to be developed, manufactured, distributed, and sold.

The Internet is also considered disruptive because it enables fundamental—sometimes even radical—business process improvements. From both an efficiency point of view (the ability to reduce costs) and an effectiveness point of view (the ability to reach a large audience), it is clear that the Net will bring substantial benefits. The improvement potential and the suddenness with which it has been brought about together create an instant gap between yesterday’s benchmarks and tomorrow’s possibilities for many different business processes. One day, a company is best in its class; the next day, it finds itself embarking on a journey to become state of the art. In fact, it could find that competitors are winning the race to capitalize on the newfound opportunities.

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In the end, the disruptive reduction in interaction costs introduces a new, irreversible discontinuity in our thinking about the shape of the corporation. If Coase was right, we are looking at the next split-up of the corporation, which can now be organized around separate business capabilities (see Figure 1.1). In this book, we define business capabilities as a set of value elements (built through knowledge, assets, or processes) within the value chain that lead to a specific output. For example, manufacturing is a capability, as is product design or purchasing.

In essence, the individual genes of the corporation, or the business capabilities, are turned into corporate genomes themselves, with their own definitions of products, services, and customers, and with ever more focused consumption of resources.

Arguably, this is the true impact of the Internet. The
Internet is not merely a means to improve efficiency and effectiveness but actually contributes to redefining business as we know it (ironically what e-commerce was expected to do before the end of the gold rush). Building a company around individual business capabilities is a far different proposition from organizing one around integrated business units.

It is time to rewrite the corporate genome.

THE HARBINGERS OF CHANGE

The organizational form of the future has been described in a number of ways, including the knowledge-creating company and the virtual organization; the contemporary economy has been termed a business ecosystem or networked economy. These labels share a common thread: They signal
a move away from an interest in markets and hierarchies to alternative modular forms. All seem to be responses to roughly the same drivers for change: globalization, deregulation, and technological advances. Most observers believe that the new forms of technology demand that organizations restructure and adopt new ways of working—not to succeed, but to survive. The advent of modular organizations, able to link up rapidly with other firms to form larger, industrywide “constellations” of value, is an attempt to capitalize on the changes in the business environment introduced by the disruptive reduction in interaction costs.

As companies are being redefined, capital markets are also showing signs of change. NASDAQ experimented during the Internet hype with the valuing of ideas or single capabilities rather than entire corporations. Indeed, dot.coms were closer to single-capability ideas than corporations: They had no customers, no assets, no profits. The willingness to value an idea that has not yet become a corporation clearly indicates that capital markets are ready to allocate resources at a level lower than the strategic business unit. The recent market corrections that affected the very companies that were based solely on ideas and not assets, customers, or profit does not invalidate these concepts.

THE EVE OF THE CAPABILITY ORGANIZATION

The integrated corporation as we know it, typically organized around strategic business units, has outlived its usefulness. It is giving way to the rise of separate businesses, organized around the individual business capability—of which manufacturing, assembly, and distribution, as well as development, design, and branding, are all examples.

Consider Motorola and Ericsson, which decided to outsource the production of their mobile phones to Celestica
and Flextronics, respectively. The significance of these deals is that Motorola and Ericsson have essentially defined the manufacturing of goods as a separate capability and a distinct business with its own customers and resources—and in the process have become customers in this new industry. They have also made a strategic decision to concentrate on the capabilities of design and marketing, even though the production of mobile handsets was until recently considered a key aspect of the business. By narrowing their focus, they can concentrate on the pieces of the business at which they excel and add greatest value. Think of the possibilities for a corporation that identifies the most profitable capabilities it possesses—and leaves the rest to a company that can do it better.

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THE VIEW ACROSS INDUSTRIES

Clearly, some industries have captured the lead in harnessing the power of information to rebuild their corporate genomes (see Figure 1.2). While the business unit corporation dominates in most areas of business, conglomerates remain in some industries; in others, leaders are already making the move toward the capability organization. There’s a fair amount of gray area to consider, too. Businesses that might be considered conglomerates, like an ExxonMobil or a GE, actually exhibit many characteristics of a capability-focused organization (see sidebar: “A Study in Contradictions?”).

In the high-tech industry, Cisco and Dell Computers are among those moving toward modular organizations. Dell (like Gateway) either buys products ready-made or pur-
chases all the parts from suppliers and performs only the final assembly. Established competitors—IBM, Hewlett-Packard, and Digital Equipment—used to produce most of their parts in-house. As a result, the smaller modular companies have outgunned their older rivals in profitability. Cisco’s forte is designing and delivering managed network solutions by efficiently outsourcing much of its manufacturing and new product development to the contract manufacturers in its network. Today Cisco advises companies on how to choreograph the key steps in value integration—just as Dell has started to advise on its Web-based integration initiative. For both of these companies, however, selling their core supply chain competency as a consulting service is only the first step toward leveraging their core capability. The next step to becoming a true modular organization will be selling their expertise directly by managing flows for other companies.

In home furnishings retail, world leader IKEA has
A Study in Contradictions?

With Exxon combining forces with Mobil, and British Petroleum merging with Amoco to form a new league of world oil giants, the large vertically integrated oil companies appear to be the remaining giant conglomerates. They profit from the capital power, balanced portfolios, economies of scale, and synergy savings that their shareholders demand. There is a difference, however, between these oil giants and the renowned conglomerates of the '70s: BP-Amoco and ExxonMobil remain focused around oil and its derivatives. Earlier conglomerates such as ITT pursued a strategy of intense diversification, operating in such wide-ranging sectors as manufacturing, hotels, and insurance.

Although the major oil players appear large and vertically integrated, they have actually moved quite far toward becoming capability-driven organizations. For instance, very efficient crude oil markets and oil product markets separate the upstream, sales, and chemical divisions of an oil company. The oil majors view their companies as sets of capabilities, and they work to make the most of each independently of the others.

Oil concessions, for instance, are actively shared to achieve a good balance between risk and upside potential. Many of the capabilities required to drill and complete oil and gas wells have been left to the specialists such as drilling contractors, well logging contractors, cementing companies, and casing handling contractors. Maintenance of all the facilities has often been left to large engineering and maintenance firms. On an even larger scale, refineries are shared if there is no geographic justification for more than one. Shell and ExxonMobil have an equal share in the companies exploiting the oil and gas fields in the United Kingdom and the Netherlands. The oil companies have effectively optimized many capabilities of their own accord without restricting themselves to the footprint of the oil and gas they sell.

In this respect, these companies represent exceptions to what today can be considered common practice. Most large companies have organized themselves in strategic business units that focus on their respective markets that control most of the resources they need to serve those markets.
demonstrated the potential for building competitive advantage by redefining the relationships and organizational practices of its business and building a modular organization. In the IKEA system, each participant contributes a capability: the customer by assembling and taking home the furniture; the IKEA designers in the centralized design office in Almhult, Sweden, by working 2 to 3 years ahead of current product and carefully selecting suppliers; and the 1,800 suppliers, located in more than 50 countries around the world, by offering low-cost, high-quality products in exchange for technical assistance, leased equipment, and advice on bringing production up to quality standards that are recognized around the globe. As a result, IKEA has built an

Another example of the gray area in assessing the capability shift is *Fortune's* repeatedly most admired industrial company, General Electric. With businesses ranging from aircraft engines to television, GE is in its diversification similar to ITT before its breakup. We argue, though, that GE also employs many principles of the capability organization. One key to GE's success is its practice of bundling, which is the business unit level variant of recombining capabilities (we talk more about both capability recombination and GE in chapter 8). The rule of thumb for many acquisitions by GE is that the acquired party must demonstrate a fit with an existing GE product or service offering. For instance, GE has acquired several companies operating in the medical industry. Rather than defining their markets restrictively (as, say, medical imaging systems or patient record-keeping software), it saw the entire spectrum of goods and services required by medical care suppliers as a single market and put together an entire suite of products and service offerings to cover almost every need. Customers get the best product and service propositions in the different fields—and from a single company that also focuses on creating propositions that combine the strengths of the different component businesses.
integrated business system that matches the various capabilities of participants more efficiently and effectively than ever before. This organization form has enabled IKEA to keep costs and prices down while growing exponentially. Once a small Swedish mail-order furniture operation, IKEA is now the world's largest retailer of home furnishings.

The apparel industry is also well on its way toward modular organization. Nike, which has developed its own product line since 1972, has built its success on collaboration with its suppliers (which enable the company to introduce new products to market quite efficiently). Nike recognizes that its key capabilities are designing and marketing, rather than manufacturing, and relies on outside firms to make virtually all of its shoes. Nike is very much organized in a modular fashion, having disconnected manufacturing from marketing, both in space and time. It continues to keep a small domestic manufacturing facility, but for good reason: Maintaining its capability for cutting-edge design is a strategic imperative.

Nike functions the most as a capability organization in its relationship with athletes. By combining its sales and marketing capabilities with Michael Jordan's emblematic character, Nike created unique, differentiating value.

### CONDUCIVE CONDITIONS

Of course, a wide range of external factors, such as regulation, play a role in influencing which industries are ahead or behind. But for practical purposes, we focus on what we see as two main circumstances that influence how much an industry will likely be affected by the reduction in interaction costs:

- The information intensity of the business
- The congruence among a company's capabilities
Products differ in their degree of information content. According to Michael Porter and Victor Millar, information intensity relates to the proportion of an organization's market offering and/or value chain that is information-based. All physical products include information about product characteristics, use, and servicing. Some have relatively low information content (such as agricultural products). Others provide customers with substantial information (package delivery firms have extensive data relating to delivery locations and times). Other products do not have a main physical component, but are information-based, such as banking, newspapers, and computer software.

The notion that information-intensive businesses like banks or insurance would be more affected by reductions in interaction costs is fairly straightforward. In businesses such as the chemical or mining industry, most assets are physical. On the face of it, the Internet has less to offer them. (This is not to say that there will be no impact. Net markets and other forms of transacting electronically are already making old economy trading processes far more effective, but these processes represent little expense compared to the costs of the feedstock, the operating costs, and the capital costs.)

Another factor is the effectiveness of a single capability within its current environment. The greater the compromise it must endure, the higher the chance of disaggregation as interaction costs drop. Consider, for instance, the typical small insurance company. If it is like most insurers, it still develops and services the policies it sells. Its strategies for improving marketing and branding would probably not involve seeking economies of scale—yet that's an important goal for the servicing function of the company. This low congruence of objectives will eventually drive our small insurer apart. When it breaks into pieces, the sales and marketing entity can continue to aim for effectiveness; the policy and claims servicing will increasingly be outsourced to parties that have the right economies of scale. This dynamic in the insurance industry is acceler-
ated as the move toward Web-enabled systems increases the proportion of costs related to information technology (IT) relative to other expenses. As this proportion increases, so will the fixed cost component in the insurance company’s cost column, increasing the sensitivity to economies of scale in the process.

Some companies, like the oil companies we mentioned earlier, have already reached a high degree of effectiveness and efficiency in their business capabilities. They will likely be affected less by the Internet. With their strategies of shared ventures and outsourcing of major processes, these companies have already reaped benefits of both scale and specialization.

If left to its own devices, an industry or company will move toward increasing information intensity and a greater level of capability suboptimization (see Figure 1.3). Porter's observations in the 1980s that the information component of products was taking on a greater importance, and that a plethora of new products based almost

**Figure 1.3. Why Are Industries Ahead?**

*Source: A.T. Kearney.*

The activities of corporations often tend to gradually become more information intensive and less internally aligned. The degree to which this happens will determine the appropriate corrective action.
exclusively on information were entering the marketplace, still hold true. It’s also true that many business capabilities will be affected (in various ways) by new technologies. Chances that a company can keep its capabilities near their full potential without changing its business model are slim. The Internet sets companies back in terms of optimization because suddenly more effective and efficient processes are possible—processes they haven't yet adopted.

How can companies respond? The answer depends on where a company finds itself in terms of information intensity and capability suboptimization. When both can be considered high, there is a good chance that the company will have to fundamentally rethink its business model. At the other extreme are companies that have a low information intensity and have ensured that their capabilities fit within their business definition without too much compromise. They have the (relatively) easier task of anticipating possible disruptions in their capability configuration.

Companies with a high degree of information intensity, but little compromise among capabilities, must be ready to improve their capabilities in line with ever-decreasing interaction costs. Finally, companies with a high level of capability compromise that are not information intensive probably need to innovate specific capabilities to bring them back to a more effective state.

It is interesting to note that as companies in the fashion industry redefine their corporate genomes, distribution maintains its role as the key capability for companies to control, given its impact on getting products to market in a timely manner. More generally, the ratio between fixed and knowledge assets is not static. As products mature and become more like commodities, differentiation tends to come from the knowledge-related components of the production process. The first car owners scrutinized the mechanical system of the car before choosing a model; today nobody buys a car without considering brand, customer service, or options offered with the vehicle. The product life cycle heavily influences how to find new sources of com-
petitive advantage in the new corporate genome. (More on that later.)

THE CEO’S AGENDA

While outsourcing foreshadowed the trend toward modularity (think Cisco or Nike), it is just one way in which a company can restructure its corporate genome. Carving out or spinning off departments that are not key contributors to final output are other strategies. The reciprocal aspect of this is that companies can consider selling single capabilities at which they excel to help solidify their competitive advantage. Because of the disruptive reduction in interaction costs, the role of individual business capabilities can now be more accurately identified in the total output a company creates. This transparency puts us at a lower level of aggregation than the corporate genome: Instead of the genome level we are at the individual gene level—focusing on corporate capabilities.

The Human Genome Project has provided us with a catalog of tens of thousands of genes, but scientists are left with the question, What do proteins made by these genes actually do? Similarly, the shift toward the business capability (or gene) level raises two of the most basic questions any CEO can ask or be asked. Now that capabilities can contribute more independently and transparently to output, it is time once more to reconsider two very fundamental questions: “What businesses am I really in?” and “How am I going to succeed?”

CONCLUSION

➤ The current shape of the corporation has outlived its usefulness. The forces that help shape businesses are
in the midst of change; transaction costs are falling dramatically.

➤ Originally vertically integrated entities built on the conglomerate model, corporations have taken on increasing levels of focus. We now see glimpses of the evolution of a new stage of the corporation: the capability organization. In this model, businesses are broken down into separate capabilities, or elements of the value chain.

➤ The corporate genome holds the design key to what the company sells; whom it sells to; and what resources it deploys. It is time to rewrite the corporate genome so the organization can focus on its key capabilities and key businesses. *Focus* is the key word.