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The specialized enterprise

A fundamental redesign of firms and industries

Strategy and Change

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Introduction

Academic studies and the popular press have identified myriad trends impacting today's business environment. From globalization to increased price competitiveness to more demanding financial markets to the proliferation of technology, the list of issues facing business executives is well known. But what should executives be doing to deal with these phenomena? In a recent global study, IBM asked more than 450 CEOs to identify the most critical imperatives of success in today's economy.[1] Their top responses – to achieve differentiation, responsiveness and efficiency – are a clear endorsement of business fundamentals: strong, differentiated value propositions are critical for growth and profitability; organizations must be able to sense and respond rapidly to customer and marketplace changes; cost structures and business processes must be adapted in a flexible manner to maintain productivity and reduce risk (see Figure 1).

What is striking about the CEOs' responses is their recognition that, in today's environment, business models *must simultaneously* achieve all three of these attributes.

In the past, practical limitations forced companies to build their business models around only one of these attributes, keeping significant achievement of the others an intense desire but impractical to implement. Competing on price, for example, tended to rule out highly differentiated products or top-notch customer service. Until recently, such tradeoffs were an undisputed reality of doing business. The barriers of time and distance limited the ability of companies to integrate internal and external capabilities.

Now CEOs sense – correctly – that times have changed. Information and communications technologies have made the world a smaller place. Operations and financials are more visible, and the risks of collaboration have declined. Companies can now tap a much broader range of capabilities, regardless of where they reside. (Even distances of thousands of miles pose few problems.) Moreover, it is now much easier to find the *best* providers of the capabilities that fit their business needs.

Figure 1. Imperatives of today's economy.

	Differentiation	Responsiveness	Efficiency
CEO perspective	Over 64% of CEOs globally believe **new products and services** will lead their enterprises' growth	CEOs find that growth can come by **increasing the customer voice** in product development while **reducing cycle time**	Two-thirds of CEOs indicate that **cost reduction will remain a major focus area**, making it a not-too-distant second place to sales growth
Company examples	**JetBlue** • Better customer experience • Underserved airport locations • Simplified flight patterns	**Zara** • Rapidly introduces new designs • Dynamically adapts to demand • Local decisioning • Limited runs reduce oversupply	**Wal-Mart** • Low corporate overhead • Tightly integrated suppliers • Leverages scale economies • Leadership in technology use

Source: "Your Turn: The Global CEO Study 2004" IBM Business Consulting Services. 2004; IBM Institute for Business Value.

Strategically, however, many companies do not yet feel a sense of urgency to change their business designs. Instead, they maintain their traditional assumptions about the nature of the firm and what it means to be a successful player in their industries. These businesses underestimate just how radically the changes of the past few years could impact the competitive dynamics in their industries. The progressive thinkers, however, consider the tools and capabilities that have emerged over the past decade as fundamental to their strategies and operations of their businesses. They are making it an *imperative* for their organizations to use them for competitive advantage and ultimately to redefine the competitive dynamics in their industries.

Operationally, years of reliance on the same "hard-wired" business functions and technology infrastructures have made it expensive and time-consuming to change a company's business model. Creeping organizational complexity makes efficiency gains difficult to achieve. Attempts to establish best-in-class capabilities across all parts of the business have left many companies with a lack of focus. Persistent business unit silos saddle others with redundant activities across the enterprise.

The organizations that have gone beyond these challenges are redefining their business models by assembling the best capabilities available in the market. For capabilities that confer the greatest competitive position and profit, they are creating pools of specialized capabilities within the structure of their own enterprises. For capabilities that do not provide competitive superiority or critical levers to profitability, they are establishing relationships with external parties, each of which is a specialist in its own right.

We refer to the business model assembled from these internal and external specialists as *the specialized enterprise*. By eliminating the tradeoffs executives have traditionally been forced to make between differentiation, responsiveness and efficiency, we believe that the specialized enterprise will fundamentally reshape firms and industries for the 21st century.

The rise of the global connectivity platform

Over the last five years, a number of diverse business and technology architectures have matured and converged to form a global connectivity platform that supports widespread collaboration.[2] By slashing the cost of coordination both within the firm and externally, with partners, this new platform represents a de facto weakening of traditional business structures and boundaries.

The three interrelated, mutually reinforcing architectures that make up the global connectivity platform should be familiar to anyone who has followed the technology and business developments of the past decade.

First, communication networks, specifically broadband and wireless technologies, have made digital connectivity faster and more affordable. Today, the number of worldwide broadband connections is estimated to swell 22 percent per year,[3] while the number of worldwide wireless hotspots is growing by 40 percent per year.[4] This rapid spread of communication networks is accelerating global interoperability among businesses and allowing more companies to access information in realtime.

Second, information technology has evolved. With the consolidation of the enterprise software market (SAP currently owns 25 percent of the ERP market, while Siebel owns 45 percent of the CRM software market)[5] and the proliferation of business integration software, companies now have a common platform upon which broader and better functionality can be built. The emergence of these common solutions across the business environment is enabling firms to organize and seek partnerships more easily along their process flows. This is creating, in effect, a new, shared infrastructure.

Third, open standards – both technology and business – are optimizing interoperability and creating the potential for truly modularized infrastructures. On the technology side, XML has been adopted by 25 percent of companies and is currently being rolled out in another 33 percent.[6] On the business side, the increasing ability of enterprises

The global connectivity platform is creating a powerful new set of economic incentives that companies ignore at their peril.

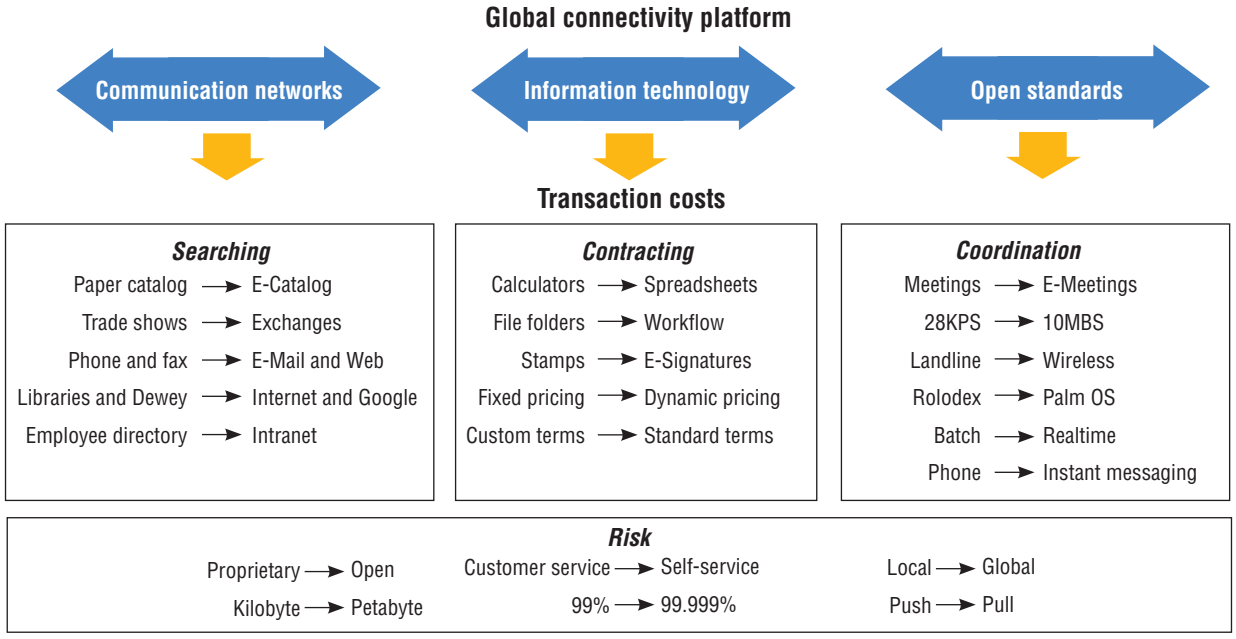
to define common processes and activities is simplifying day-to-day commerce and improving work flow. The result is something new: a universal ability to piece together solutions quickly from disparate components. Today's enterprises can increasingly "program" the business by selecting from a wide variety of established modules, all due to open connectivity in the marketplace.

Taken as a whole, the global connectivity platform presents firms with a wide array of new capabilities, ranging from wireless tracking to Web Services. But this same force is also creating a powerful new set of economic incentives that companies ignore at their peril. The driver: a game-altering fall in transaction costs. It is difficult to overestimate the importance of this development. In short, the dramatically lower transaction costs made possible by global connectivity are leading to a renaissance of business specialization.

In "The Nature of the Firm" (1937), noted economist and Nobel-laureate Ronald Coase divides transaction costs into four categories: the cost of searching (finding someone to transact with), the cost of contracting (creating the agreement), the cost of coordination (implementing and maintaining), and the cost of the risk associated with the transactions (see sidebar, "Coase's Law," for details).[7]

As Figure 2 illustrates, the global connectivity platform is transforming business in each of these areas. In the area of search, firms are using the Internet to locate suppliers and partners at negligible cost, and in minutes instead of days.

Figure 2. Example of lower transaction costs (1995 to 2005)

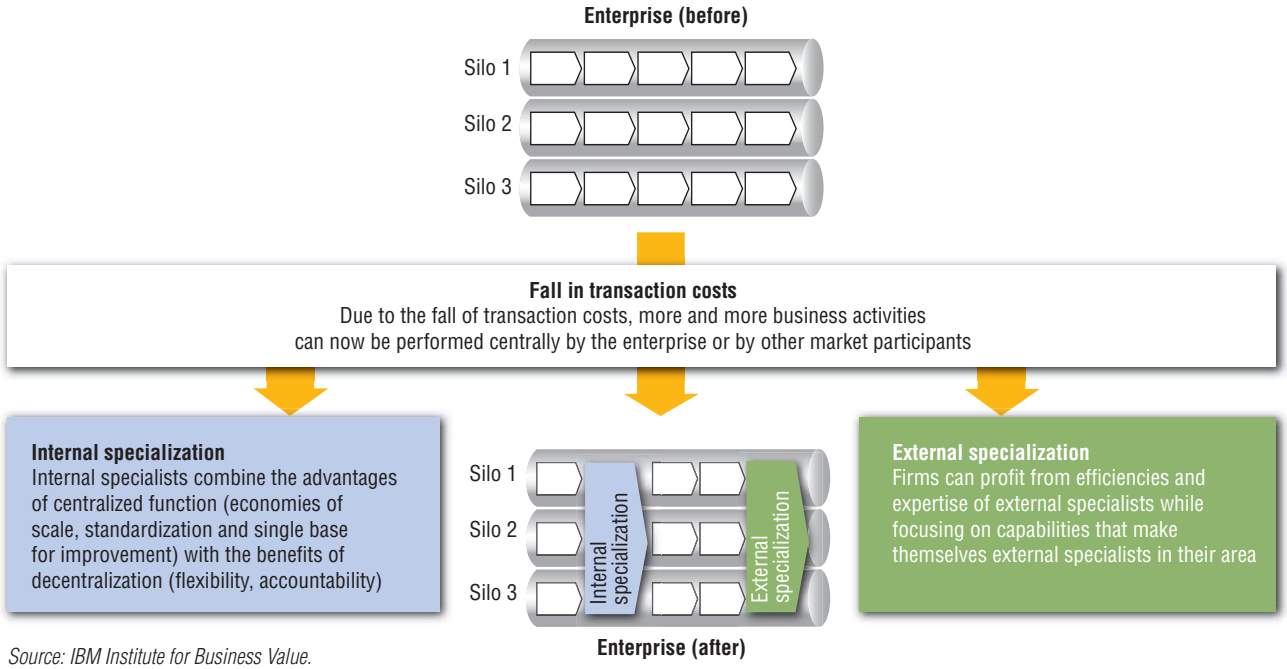


Source: IBM Institute for Business Value.

Contracting costs are declining as vendors leverage standard terms and promote variable pricing. Coordination costs are similarly falling as virtual connections proliferate and a local presence is no longer a prerequisite (at least for many types of businesses). Finally, the risks inherent to all three of these areas (search, contracting and coordination) are declining as companies use the global connectivity platform to shorten feedback cycles and boost the speed and quality of transactions through the use of digital certificates and other verification technologies. When an issue arises, managers can verify and resolve it much more quickly, making the performance of the entire network more reliable.

The rapid decline of transaction costs is having an especially profound and lasting effect on ownership decisions. In a world of efficiently connected services, which capabilities, exactly, should a firm own? When comparing the costs and benefits of handling an activity internally or externally, firms are finding more and more opportunities to move away from traditional business designs. As seen in Figure 3, transaction costs have indeed reached a tipping point, beyond which ownership decisions within a firm and across the market are fundamentally transformed.

Figure 3. Internal and external specialization.



Source: IBM Institute for Business Value.

Coase's Law – "The Nature of the Firm" (1937)

Coase's Law is about ownership. It helps executives evaluate the cost of completing an activity internally versus delegating it to be conducted externally. Coase's Law asserts that the cost of completing an activity internally is equal to the internal production cost plus the cost of actually completing the transaction. The external cost reflects the market cost of the goods and/or services plus the associated transaction costs.

Coase identified four types of transaction costs – searching, contracting, coordination and risk – each of which has been lowered by the global connectivity platform.

The cost of *searching* is incurred while locating optimal resources. Today, the global connectivity platform has drastically cut costs by speeding search time and aggregating information under standard interfaces and universal search engines. One recent survey showed that 61 percent of companies use the Internet to collaborate with suppliers.[8] The Internet has also broken down geographic obstacles, allowing companies to quickly locate and communicate with potential partners regardless of location.

Once the partner is identified, there is the *contracting* cost of determining the true value and negotiating the appropriate price for the exchange. Standardization and knowledge sharing enabled by the global connectivity platform have reduced the cost of contracting and decreased negotiation time. An estimated 62 percent of companies use the Internet as a part of a request for proposal process.[9] Standardized agreements have reduced the time needed to customize and negotiate the terms and conditions of external relationships.

After the resource is contracted, there are *coordination* costs associated with managing and monitoring the transaction. The cost of coordination has dropped significantly with the rise of the Internet and digital technologies. Indeed, by 2007 approximately 70 percent of companies will invest in self-service via the Internet, providing time and cost savings to both parties in the transaction.[10] These technologies have succeeded because they reduce friction throughout the process, from procurement, fulfillment, management, invoicing, payment and supplier performance reviews.

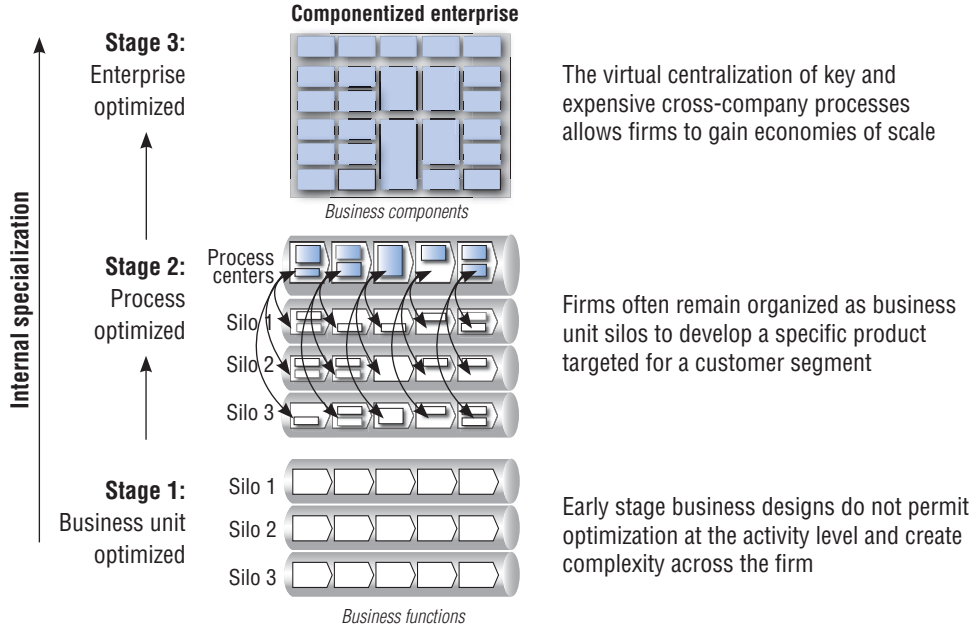
Finally, throughout all these steps, a cost is incurred to reduce the potential *risk* associated with loss of control over the activity. Today, standardization, network reliability and partner quality have decreased the risk of partnering. This is demonstrated by the fact that two-thirds of Fortune 1000 executives say that their companies are now better prepared than before 9/11 to access critical data in a disaster situation.[11]

Internal specialization: The path to business components

This fundamental transformation, enabled by the global connectivity platform, is the latest stage in a decades-long process. Over the past thirty or forty years, business design has migrated along three sequential stages of internal specialization, as seen in Figure 4. In the 1970s and 1980s, firms focused almost exclusively on optimization at the business-unit level. As PCs and the Internet emerged onto the scene, enterprises recognized the need to optimize processes. Now, with the maturity of the global connectivity platform, firms are increasingly focusing on the optimization of their enterprises as a whole.

When companies were optimized around business units, activities were owned and operated by distinctly different organizations within the same enterprise. In the most extreme cases, each unit took care of itself, performing a range of similar activities – from opening customer accounts to purchasing office chairs – with no coordination or knowledge-sharing among units. This early-stage business design embraced the development of management strategies such as "Strategic Business Units," portfolio management and organizational matrices. In this stage, firms often looked to incorporate "best-in-class" practices, but these initiatives tended to overlook obvious opportunities to optimize at the activity

Figure 4. Illustration of internal specialization.



Source: IBM Institute for Business Value.

level and often actually created complexity across the firm. While many companies progressed through this stage, a few visionary enterprises have managed to leapfrog optimization at the business unit level.

Firms disillusioned with business-unit optimization often turn to process optimization. Today, many companies are in this stage, optimizing key business processes across silos on an opportunistic basis. Process optimization typically advances as new technology capabilities arrive in the marketplace. "Business Process Reengineering" is a common practice in many firms, as an alphabet soup of business system solutions – Supply Chain Management (SCM), Product Lifecycle Management (PLM) and Customer Relationship Management (CRM) – promise opportunities for cost reduction. Process savings can be further squeezed by using proven methodologies such as Six Sigma, Total Quality Management and ISO 9000.

While process optimization does allow firms to centralize some activities within a process area (e.g., a process center), they often retain legacy business unit silos that focus on specific products targeted for particular customer segments. And as process optimization takes hold, the deflationary effects of the global connectivity platform can begin to counteract initial efficiency gains. That is because, paradoxically, falling transaction costs often drive up integration costs. As the unit cost of each transaction declines, the volume of transactions tends to rise as customers discover they can do more for less.

As process optimization takes hold, the deflationary effects of the global connectivity platform can begin to counteract efficiency gains. Paradoxically, falling transaction costs often drive up integration costs.

In the banking industry, for example, migrating to cheap, Web-based transactions had the long-term effect of raising the cost of serving each customer. Where customers used to visit the branch office once a week (then the ATM two or three times a week), the advent of Internet banking allowed them to manage their accounts much more often – to the point now that it is not uncommon for customers to check their balances multiple times per day.

In the final stage of internal specialization, firms optimize decisions at the enterprise level. Enterprise-optimized firms invest in the virtual centralization of cross-company activities to gain economies of scale across the business. Key activities are centralized into discrete business areas. Duplication of activities is reduced, and the enterprise operates as a networked "federation" of focused performance centers. Functions once diffused across the firm are centralized, including back-office functions (e.g., procurement, finance, IT and HR) and operational functions (e.g., channel unification, data mining, cross-selling and product bundling).

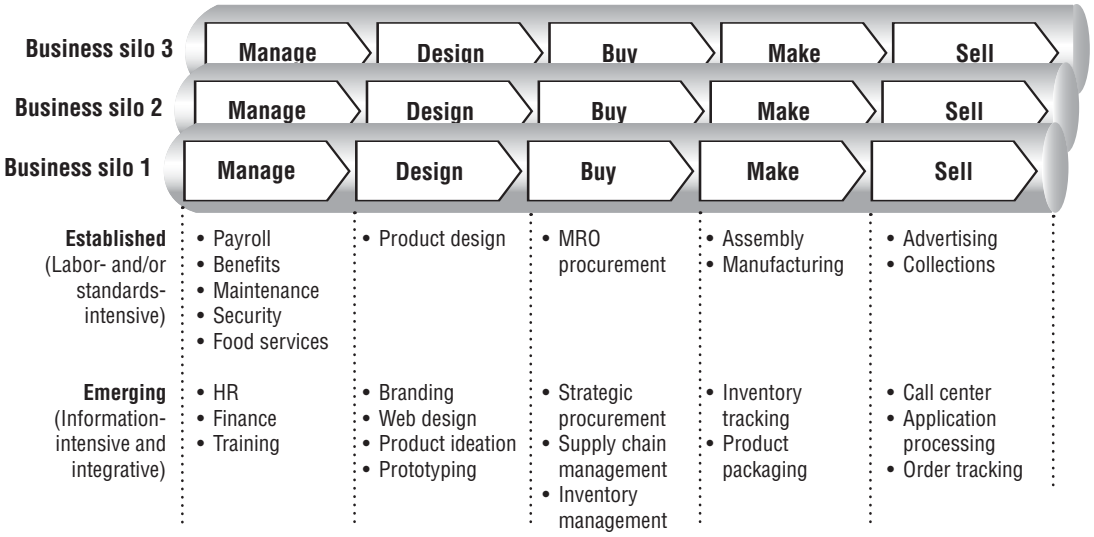
Optimizing at the enterprise level requires not only new technologies, but a new way of thinking about business design. As internal specialization matures, the aggregation of cohesive activities transforms the firm into a network of individual business modules, each encompassing a coherent set of activities supported by appropriate assets, including people, processes and technology. Each of these modules serves a unique purpose within the organization but could also, in principle, operate as an independent entity. One advantage of this "federation of modules" design is that it makes the process of deciding whether an activity should be internally or externally sourced more responsive.

We call these modules "business components." Think of them as the building blocks of a firm, with each component interacting in a loosely coupled manner with the others. As an organizing principle, business components allow an enterprise to expand and evolve without increasing complexity, a common problem with traditional, "hard-wired" business design. Adopting a modular structure does not imply an abandonment of central control. While components require flexibility, they must also be aligned with the firm's architecture and strategy.

To make enterprise optimization practical, we developed an approach to help clients evolve into a better business design. The "Component Business Model" (CBM) framework provides firms with a new perspective on enterprise structure. Typically, CBM projects provide clients with a "future state" map of the business as a fully mature, internally specialized organization. As a diagnostic tool, the map helps to identify and isolate the issues faced by firms organized around complex and rigid business models.

Are firms embracing enterprise-optimized internal specialization? Studies show that they are, albeit under different guises. For example, many firms have embraced internal specialization by centralizing common activities into shared service centers, which provide economies of scale. Over 95 percent of Fortune 500 companies have considered shared services strategies, and currently 86 percent have implemented or are currently deploying a shared services strategy.[12] Internal specialization is especially popular in parts of the business that are labor-intensive or require strict standards. Further automation, consolidation and standardization of specialized capabilities help drive costs out of the businesses, with information-intensive parts of the business emerging as an opportunity area (see Figure 5).

Figure 5. Examples of internal specialization.



Source: IBM Institute for Business Value.

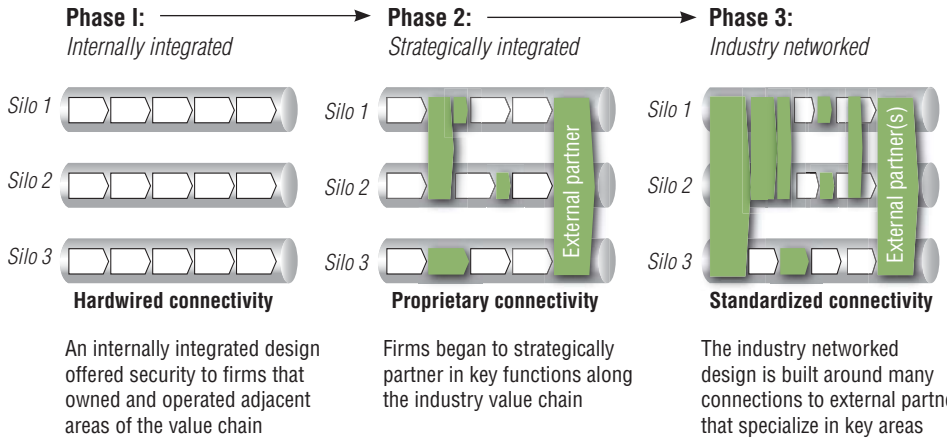
External specialization: Leveraging industry networks

The flip side of internal specialization is, perhaps not surprisingly, external specialization. As standards-driven internal specialization matures, firms gain the ability to leverage the benefits of lower transaction costs by engaging with external partners through collaborative industry networks. The flexibility afforded by interoperable business components allows enterprise-optimized firms to loosely couple with focused external specialists – be they independent providers or outward-facing components within larger organizations.

As Figure 6 shows, firms evolve toward external specialization in three sequential phases. Initially, "internally integrated" organizations try to participate in all areas of the industry. Most firms today have advanced to the "strategically partnered" phase, using a few select partners in areas of weakness. In the final phase, "industry-networked" firms focus on areas of strength as they find a role within a larger business ecosystem.

In the first phase of external specialization, the enterprise owns and manages nearly all segments of the industry value chain in the belief that vertical integration is the only way to maintain access to trusted suppliers and targeted customers. Thus, automakers once sought to own the rubber plantations that supplied their tire factories, while beer brewers owned the saloons where their products were sold. Firms in this "internally integrated" phase attempt to drive quality in their offerings by tightly controlling inputs and distribution. As a result, the internally integrated firm is often times a "customized" firm that develops and uses solutions in-house based on proprietary systems and interfaces across the business. This model was attractive when the threat of supplier power loomed large and distribution channels remained uncertain. But increasingly, internally integrated firms have difficulty partnering due to their one-of-a-kind configuration (which, not incidentally, also demands large investments in people, processes and technology).

Figure 6. Illustration of external specialization.



Source: IBM Institute for Business Value.

Many firms have moved past the internally integrated design phase and learned to work with a few select partners. These "strategically partnered" firms identify key functions along the industry value chain where outside help is needed. While still relying on proprietary solutions, they embrace open standards in areas of partnership to support inter-enterprise communication. In this phase, firms begin to identify areas of specialization within the value chain. Elements of the old, internally integrated structure often persist, with many non-core activities still performed in-house.

In the final phase of external specialization, firms leverage the low transaction costs of the global connectivity platform to build connections to multiple external specialists. These "industry networked" enterprises focus on an area of expertise while transforming their organizations to play in a coordinated industry ecosystem. Communication between partners relies on open standards (such as XML, SOAP, Linux®) and business protocols. The industry networked firm concentrates heavily on core activities while simultaneously orchestrating a value network that includes a mix of industry-specific and cross-industry specialists, as these best-in-class providers gain scale around their particular area of expertise. Ecosystems of niche players and value chain specialists emerge around major, growth-driving players.

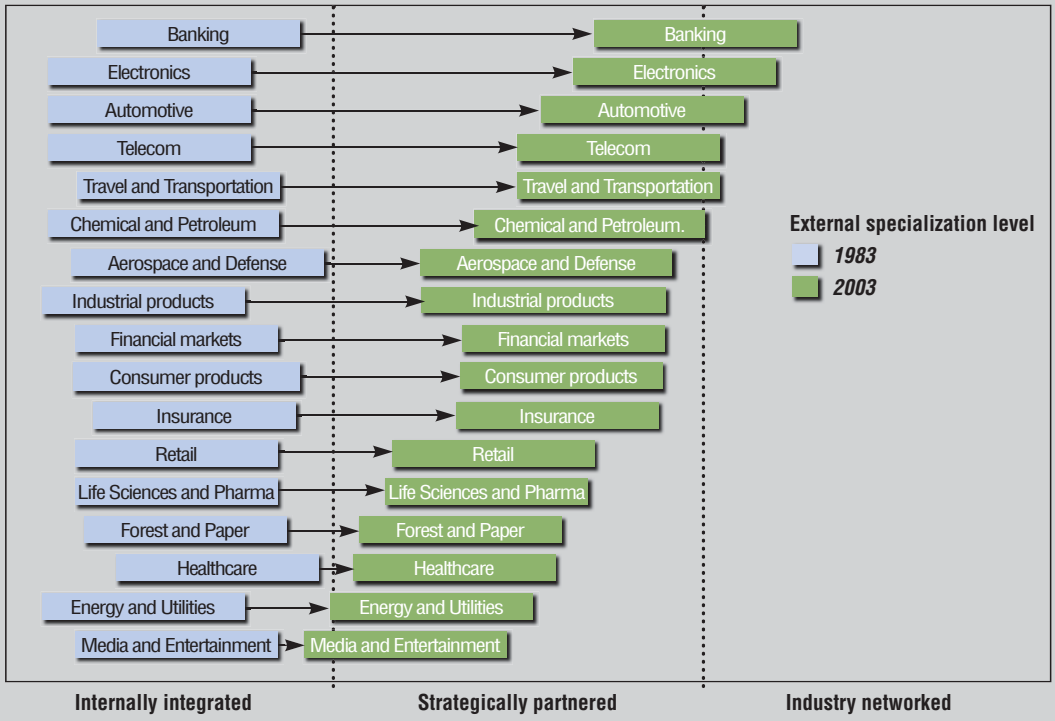
Changes in the PC industry over the last three decades illustrate this evolution toward external specialization. In the 1970s, the vertically integrated model prevailed. IBM and Digital Equipment Company sourced and built every aspect of their PCs internally.[13] (Of course, the term *PC* was not usually used for those early personal machines.) During the same time period, Apple Computer sought to control the entire value chain with its propriety approach to operating systems and hardware designs. By the 1980s, the partnership model came into prominence and changed the face of the industry. Key technology providers such as Intel and Microsoft® staked strong positions and new brands such as Dell and Gateway emerged as customer-facing sellers. The industry moved into the networked stage in the 1990s as contract manufacturing enabled the commoditization of PCs. In less than thirty years, the dominance of internally integrated players has given way to an industry network of focused specialists.

External specialization across industries

To better understand trends in the marketplace, we developed a qualitative methodology to measure the level of external specialization across 17 industries, based on a comparison of how each was structured in 1983 and 2003. Primary inputs included an assessment of value chains, economic trends, regulatory issues and merger activities within each industry. We also examined the leading firms in 1983 and 2003 to understand the impact of external specialization at the firm level.

The study's findings, illustrated in Figure 7, indicate that, while some are progressing faster than others, each industry has moved away from an internally integrated structure toward a strategically partnered model.

Figure 7. Different industries are at different points along the path to external specialization.



Source: IBM Institute for Business Value.

One of the sectors at the forefront of external specialization is financial services, particularly in the areas of banking and financial markets. By and large, leaders in this sector no longer attempt to manage and deliver every aspect of the offerings they provide to the marketplace. Players in the mortgage game now thrive by focusing on discrete aspects of the industry, whether origination, servicing or risk management. Credit card divisions cross-sell mutual funds and insurance products from other providers along with their own cards. And the best performing firms leverage specialists in credit risk and portfolio optimization to deliver lower-cost solutions to customers and greater profits to shareholders. This "deconstruction" of traditional value chains – driven largely by technology – has fundamentally altered the financial services industry.[14]

What has happened in financial services is also happening elsewhere. Whatever their industry, executives should no longer be surprised when niche providers emerge and quickly dominate positions in industry value chains, even in roles that were once considered too small or too proprietary for specialization. More and more, executives need to address tough questions regarding the future market environment:

- Where will the greatest economic rents be earned, and where will nonprofitable competition take place?
- Which positions are defensible through sustainable advantages, and which positions are prone to attack from new or existing competitors?
- What potential acquisitions or divestitures will reshape the industry?

Emerging value nets

Today, business thinkers recognize that the old, internally integrated design is no longer efficient. Firms can create far more value by focusing on differentiating strategies while leveraging industry value networks to handle some activities. These value nets take two forms: industry-specific and cross-industry. In both cases, the economics are compelling: the value provided grows as transaction volume aggregates, economies of scale increase and unit costs per transaction decline. For the business enterprise, employing the services of these specialists frees up resources to be focused on strategic activities and processes.

Within industries, the standardization of common functions has given rise to best-in-class specialists that dominate their vertical markets. These specialists build their businesses around expertise in the undifferentiated capabilities specific to a particular industry. In this context, *undifferentiated* should not be confused with *strategically peripheral*. Indeed, some industry specialists provide highly customized solutions that play a key role in differentiating the core products of their customers.

For example, International Flavors & Fragrances (IFF) provides taste and smell technologies to the food and perfume industries. This leading company offers its expertise in sensory experiences to add differentiating value to the product development process, in many cases becoming an essential partner to its many clients. While the taste of a food product is certainly at the strategic core of the company that makes and distributes it, the capability that *creates* that distinctive taste is only strategically differentiating to the company that can provide it most effectively. Increasingly, that company will tend to be an external niche specialist.

In the age of external specialization, value will accrue to the provider with absolute advantage – regardless of where that provider resides.

This new dynamic can create tension for executives unaccustomed to the notion of ceding control of the elements that define their products. But in the age of external specialization, value will accrue to the provider with absolute advantage – regardless of where that provider resides. In other words, developing a capability in-house confers no differentiation if an outside specialist can provide the same capability more effectively or efficiently.

Employing the services of a best-in-class specialist can also allow industry participants to avoid the extra overhead of a do-it-yourself approach. Because the functions they perform do not differentiate industry players from each other, these specialists provide efficiencies that can be shared across the entire industry. A rising tide lifts all boats, but only those on board stand to benefit.

Cross-industry functions are likewise being standardized, and a similar population of best-in-class hubs has emerged to increase efficiency by leveraging tremendous scale. The common, undifferentiated processes of all market participants are handled by these specialists, whose core expertise is the common process itself. Ariba Inc. is one company that illustrates this principle. As a pioneer in the self-described "spend management" market, Ariba has built a wide range of software and service solutions for diverse customer segments.

Not all specialists are designed as such from the ground up. One advantage of modularity-driven specialization is that it enables industry players to grow an internal business component into a hub that serves other companies – as long as there is demand and the company can provide value to other firms that serve end customers. The sidebar "Lessons learned from best-in-class specialists" identifies three success factors that specialists should embrace to succeed in a networked industry.

The use of specialists is growing as enterprises seek out global providers to capture the economic benefits of scale, flexibility and expertise. Worldwide spending on business process outsourcing is expected to reach approximately US$500 billion in 2005 and is projected to grow 11 percent annually through 2008.[15] Much of this work will be conducted in the large emerging markets, such as India and China. In the United States, spending on offshore outsourcing increased 26 percent between 2000 and 2005.[16] In 2003, the number of outsourcing deals over US$100 million increased by 49 percent, to 244.[17]

Lessons learned from best-in-class specialists

Standardization of common functions within industries has led to a growing number of best-in-class specialists that dominate their markets. To better understand key success factors in partnering, we interviewed top executives at ten best-in-class specialists (Automatic Data Processing, Employease, Ariba, Celestica, salesforce.com, IMS Health, State Street, Fair Isaac, International Flavors & Fragrances, and Industrial Light & Magic) that serve a wide range of industries with unique areas of expertise. Three key lessons emerged that are helping sustain the success of these players.

Lesson 1: Pursue loose coupling

Best-in-class specialists avoid hard-wired solutions and use interfaces that permit flexibility. These firms connect externally with their customers and internally across divisions through standardized interfaces, so changes in service support remain invisible to the user. Loose coupling simplifies the addition of features and functionality, supports knowledge gathering and improves benchmarking efforts. It also allows for dynamic configuration and scalability. As one executive noted in an interview, "Customers want more flexibility. They don't want to be tied to your platform."

Lesson 2: Support configurability, not customization

Best-in-class specialists standardize offerings across customers to gain scale and provide services that are configured to meet customer demands. The process of connecting and contracting should not require high levels of customization. Configurability provides quick time-to-value, enables the scalability of solutions for different customers and supports the addition of new types of services. It also simplifies contracting processes, decreases the investment required for supporting new customers and reduces maintenance and servicing costs. As one Senior VP enthused, "We've stopped worrying about custom coding."

Lesson 3: Provide broader and deeper value

Best-in-class specialists can gain share within their area of expertise and strengthen their advantages by looking to adjacent markets to extend the boundaries of their customer relationships. Doing so enables specialists to leverage existing clients for cross-sell opportunities and raises barriers to competition. It also fortifies relationships, exploits existing market knowledge and limits investment requirements (and therefore risk). One executive noted that an expansion of offerings is demanded by customers, since they want "more of a full-service experience." For example, the software players among the companies we spoke with said that they have or are likely to move into services.

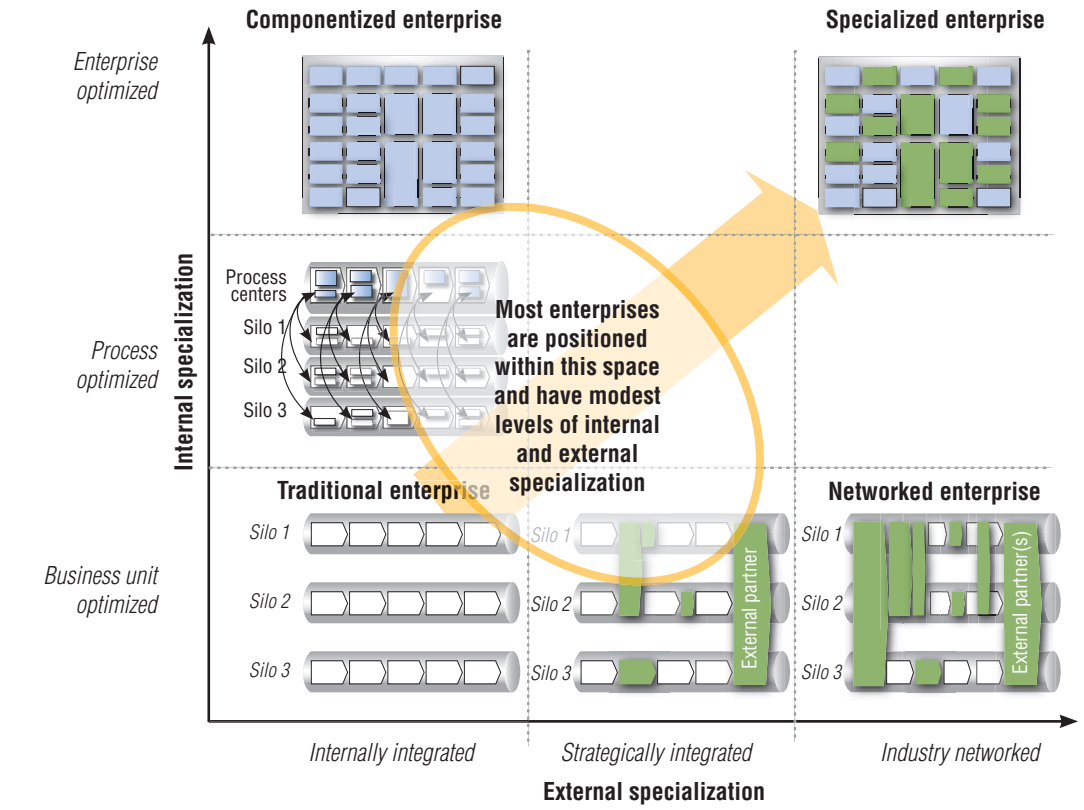
The specialized enterprise: New imperatives

Capital follows efficiency. It is little wonder, then, that the seismic shifts of the global connectivity platform are transforming business first and foremost by lowering transaction costs. But there is a dark side to this revolution. Its downward pressure on Coase's four costs creates new threats. Firms slow to react risk being inundated by the wave of change. Failure to embrace internal and external specialization – to jettison allegiance to traditional business design – will place many companies at an increasing competitive disadvantage against their more differentiated, responsive and efficient peers.

This shift in business priorities is primarily related to the increasing importance of absolute advantage. In the world of the specialized enterprise, firms must evaluate component performance to determine where their advantage lies – where the greatest value (quality versus cost) is achieved. Declining transaction costs not only allow firms to externalize components that are not contributing directly to their absolute advantage; they practically demand it. The alternative is to compete against rivals happy to leverage the absolute advantage of external specialists. Coase's work suggests that a firm should only perform a function internally if it cannot be handled more cheaply by the market.[18]

The upside is just as real: Firms that fully embrace these new realities can become specialized enterprises. As seen in Figure 8, the specialized enterprise represents the intersection of internal and external specialization – the enterprise optimized and industry networked stages, respectively, as described above. The specialized

Figure 8. Internal and external specialization.



Source: IBM Institute for Business Value.

enterprise is organized into components, which enables it to deliver best-in-class performance through internal excellence and external partnerships.

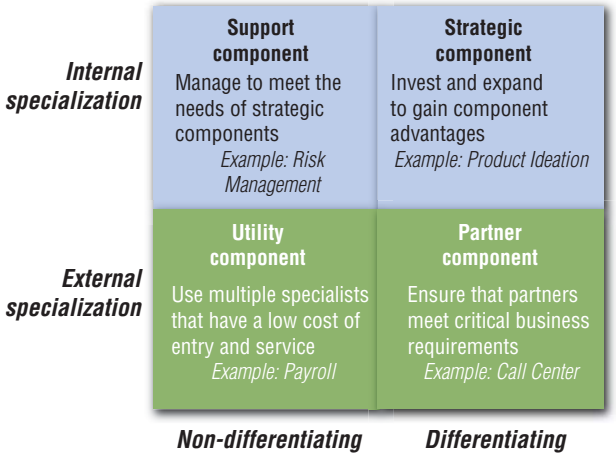
For most companies today, nonstrategic components play too large of a role in enterprise operations. Over the next five years, smart firms will begin to focus on internal strategic components by leveraging more external resources for nonstrategic activities. A large percentage of support roles will go from being conducted internally to being outsourced to external specialists.

Thanks to the pervasiveness of process reengineering and the benefits of partnering, most companies today already have a blended model that is part "process optimized" and part "strategically partnered." But to mature into specialized enterprises, they must drive these trends to their logical conclusion, assessing each component – the individual business modules that play specific roles within the enterprise – to determine how and by whom it should be managed. This job is made easier by another feature of the specialized enterprise: the interaction between components is based on standardized inputs and outputs. This allows components to collaborate and integrate seamlessly with each other based on agreed cost and service levels. Separately, each component may function in a significant or subordinate role in differentiating the company's strategy.

Using two criteria – ownership and strategic differentiation – companies can group their constituent components into four main categories: strategic, support, partner and utility (see Figure 9).

The bulk of management attention and investment are directed at the strategic components of the firm. In a specialized enterprise, strategic components embody functions that are critical to differentiating the firm in the marketplace, and so are internally owned and managed. These functions require enterprisewide focus and continuous reinvestment to sustain their competitiveness, and they must be managed to maintain absolute advantage against competitors.

Figure 9. Firms assess each component to determine where and how it should be managed.



Source: IBM Institute for Business Value.

Specialized enterprises also manage support components internally, but for reasons of economic efficiency rather than strategic differentiation. Support components encompass activities that would incur high transaction costs if handled outside the firm, and thus are owned and operated internally. Sometimes these are required business activities that should not be performed outside of the firm due to liability issues. To increase the efficiency and control of support components, specialized firms aggregate these activities in shared services organizations.

Activities with high strategic differentiation and low transaction costs are aggregated into partner components. As the name suggests, these components are owned and managed by external, best-in-class specialists. Although there are costs associated with searching, contracting, and coordinating with specialized partners, the overall transaction costs are low enough to merit the externalization of the associated activities.

The fourth class of components, utility components, are characterized by both low strategic differentiation and low transaction costs. Open business and technology

standards allow the specialized enterprise to use more utility components than the traditional business model allows. Unlike partner components, utility components provide flexibility in choice of vendor. Specialized enterprises can source utility components as needed, based on market conditions and the changing requirements of the organization.

Specialization and the composition of the firm

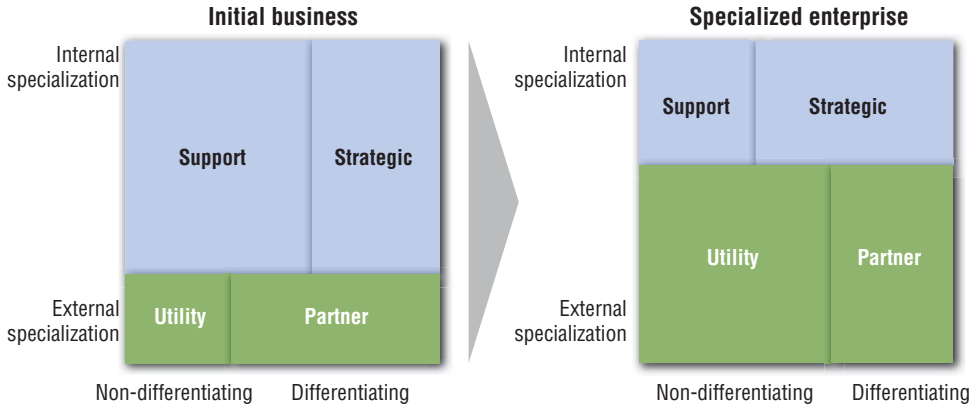
As specialization takes hold across the marketplace, the composition of firms will begin to change (see Figure 10). Many of the non-differentiating activities now conducted internally will be handed over to external specialists. As a result, the proportion of support components will tend to diminish as those functions are shifted to utility components. Activities will also tend to migrate from differentiating partnerships toward looser, commodity service arrangements as the capabilities of utility specialists mature.

In other situations, activities will migrate in the opposite direction. During the process of assessing its business, a company may discover that some of its support components house top-notch capabilities. In such cases, it may make sense to repackage these capabilities as strategic components and offer their services to the marketplace – in essence transforming a cost center into a profit center.

A quick survey of the economic landscape reveals how leading companies are moving toward specialization, often along different paths. Sara Lee has transformed its organization around its strong brand as a leader in baked goods, divesting heavily and partnering for many tasks. Sprint PCS has pursued a similar strategy, focusing on its strong wireless network and leveraging specialists for distribution and customer service. Motorola has shifted its focus to handsets and externalized components that do not directly influence mobile devices. Siebel Systems has focused on shifting some of its support components to utility components, seeking partnerships to maintain IT infrastructure and facilities management and externalize non-core activities previously handled in-house.

Conversely, UPS has converted support components into strategic components by parlaying the top-notch logistics capabilities it uses to support its shipping business into a profit-making business of its own.

Figure 10. As specialization takes hold, the balance of components tends to shift from internal to external.



Source: IBM Institute for Business Value.

As diverse as they are, each of these cases contains a common theme: firms evolve into specialized enterprises by maintaining a laser-like focus on the strategic components that define the heart of the business. As each company plays to its strengths, the whole marketplace benefits. Over time, companies that specialize will truly become players in a loosely-coupled industry network, able to assemble best-in-class capabilities from a wide range of sources.

Examples of specialization

Today, few companies can claim to be exemplars of the specialized enterprise. While none have arrived at the final destination, many firms have taken steps along the path – some without realizing they are specializing as such. A visionary few have made significant strides. BP and Procter & Gamble are large enterprises that have restructured internally, consolidating key activities into dedicated business areas and increasing the use of external partners, particularly for back-office operations.

BP

As a leader in oil exploration and distribution, BP recognized the need to optimize the performance of its global organization and evolve its business design to provide greater flexibility and efficiency. The first step was to identify the company's strategic business competencies, which included marketing, production, oil field assets and a strong network of filling stations. Based on these strengths, BP began taking steps for internal and external specialization.

BP's internal specialization efforts began in the mid 1990s, when the company dismantled its centralized, hierarchical structure into 90 discrete units – each small enough to preserve one-to-one contact between leaders and workers. It also flattened its organization, with each unit reporting directly to the company's nine-member executive suite. To give employees a sense of ownership, BP pushed decision-making out to the business units, replacing tangled bureaucratic procedures with transparent processes that encouraged learning and explicitly linked jobs to value creation. By 1997, the company had cut its roster to 53,000 employees, from 129,000 a decade earlier.[19]

Taking a modular approach also gave senior executives the flexibility to reconfigure the organization as performance and strategic requirements change.[20] In an interview with *Harvard Business Review*, BP CEO John Browne described how the firm leverages its modular structure to drive specialization: "[W]e don't think of our business units as permanent structures. When we were setting them up, we did a lot of experimenting to get them right. We're still constantly scrutinizing them to make sure they serve their business purpose, maximize learning, and help teams perform. If they don't, we change them: we split them up or combine them."[21]

BP also turned to specialization in 1998, when it committed to cutting greenhouse emissions to 10 percent below 1990 levels by 2010. Instead of relying on central management to ration emission credits, the company decided to specialize, setting up its own electronic marketplace where credits could be bought and sold at market value. Specializing in markets allowed BP to coordinate efforts across the enterprise much more effectively. Instead of relying on the wisdom of central planners, the company was able to leverage the price mechanism to signal the changing value of a scarce commodity based on local information. Units that cut emissions ahead of schedule were free to sell surplus credits to peers who lagged behind. The approach yielded dramatic results: BP met its emission reduction goals by 2001, nine years ahead of schedule.[22]

On the external side, BP looked to partners to support the non-core parts of its business, forming a joint venture with Mobil in 1996 to improve its undifferentiated fuel and lubricants business.[23] BP also centralized telecommunications services for its business units and signed contracts with external specialists to manage applications development and hosting.[24] More recently, BP has outsourced its human resources, finance and accounting functions.[25]

Procter & Gamble

As a leading consumer packaged goods firm, Procter & Gamble (P&G) has learned to rely on internal and external specialists in most every area of its business. Chairman and CEO A.G. Lafley explains the company's philosophy this way: "Our core capability is to develop and commercialize. Branding is a core capability. Customer business development is a core capability. We concluded in a lot of areas that manufacturing isn't. Therefore, I let the businesses go do more outsourcing. We concluded that running a back room wasn't a core capability. You do what you do best and can do world-class."[26]

Internally, the company maintains a strong product focus and is renowned for its research and development and branding expertise. But not all ideas need to be internal. Indeed, Lafley has expressed that he wants half of new ideas to come from outside of the company.[27] Even within its core business, P&G leverages experts. For example, P&G partnered with design specialist Design Continuum to assist with the product development of the highly successful Swiffer mop business.[28] P&G is also willing to leverage its R&D expertise with competitors, and in 2002 formed a joint-venture with Clorox's Glad brand.[29]

Externally, P&G has extensively increased its use of partnerships and specialists in non-core parts of its business. In 2001, it began to consolidate its manufacturing in order to increase flexibility,[30] and in 2002, it outsourced its global facilities management to external specialists.[31] P&G's IT infrastructure, finished goods distribution, and logistics are all fulfilled by specialists.[32] Similarly, several aspects of human resources were outsourced to a third party in 2003.[33]

Specialization in action: Differentiation, responsiveness and efficiency

By driving the organization toward internal and external specialization, firms can deliver simultaneous, step-change improvements in differentiation, responsiveness and efficiency beyond the scope of traditional business designs.

Differentiation through componentization offers a variety of benefits. Differentiated firms command higher revenues through premium product pricing and new markets. Partnering with specialists improves margins and allows companies to exit nonprofitable markets. Maintaining fewer assets in-house enables the reallocation of resources for investment in more strategic components. The focus and expertise required for differentiation, and the ability to control performance offered by a component structure, serve as powerful risk mitigators. The key is to analyze the firm's positioning within the overall industry environment and only invest in components that are truly differentiating, driving innovation in these key strategic components while pursuing the right partnerships to fill out the rest.

Responsiveness is a second advantage of specialized enterprises. Historically, companies have operated a deliberate business model based on forecasted opportunities and perceived threats while forcing customers to accept the predicted value proposition. In effect, these companies are laden with fixed processes and relationships. This inflexibility boosts the lead time required to introduce new business and hampers the ability to partner effectively. In contrast, specialized enterprises sense and respond rapidly to otherwise unpredictable changes in the market environment and the needs of their stakeholders. Responsiveness is achieved through modularization, elimination of nonessential components and leveraging existing specialists.

Specialized enterprises are also far more efficient than companies with traditional business models. Traditional models solidify operations and organizations in silos. These enterprises invest in fixed assets, seek to build scale all across the business and pursue in-house development of table-stakes capabilities.

The specialized enterprise differs in that it is able to adapt cost structures and business processes flexibly in order to reduce risk and to conduct business at higher levels of productivity, cost control, capital efficiency and financial predictability. This is accomplished by investing primarily in strategic components, while external specialists are selected on an optimal price-per-performance basis.

The result of this focus on differentiation, responsiveness and efficiency is that specialized enterprises are able to provide much greater value to their customers, employees and shareholders. Customers benefit through increased choice, greater channel options and personalization of services. They also receive greater value with faster time-to-gratification. Employees are presented with clear promotion paths, opportunities for advancement and training with non-commodity skills. Shareholders reap benefits from greater revenue growth, premium price-to-earning multiples, long-term investment strength and greater predictability.

The relationship between the enterprise and the people to whom it delivers value (customers, employees, and shareholders) is symbiotic. For each unit of value the enterprise delivers to a customer, employee or shareholder, it also creates value for itself. By satisfying customers, the enterprise can gain loyalty and limit price erosion. By satisfying employees, it increases the potential for better leadership and reduced churn. Finally, realizing value for shareholders can create increased levels of trust and more financing options.

Conclusion

By 2015, we expect business to be very different. The world's most successful firms will be specialized enterprises that focus on a few critical pieces of the business. The deflationary economics of the global connectivity platform will keep a tight lid on transaction costs, imposing a new set of imperatives on business. Enterprises will join into high-volume, low-cost industry value networks. In these virtual business ecosystems, traditional competitors will become strategic allies. Cost centers will become sources of revenue. The transactions of the past will be parlayed into the relationships for the future. The boundaries that define today's enterprise will continue to rupture as loosely coupled components replace integrated functional silos. In the end, the companies that succeed will be those that find the optimal balance of centralizing core activities within the firm and distributing non-core tasks to external specialists.

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