

P A R T
O N E

THE NEW RULES OF COMPETITION

The book opens with a look at the competitive environment of the digital economy, and the implications for strategy. Major themes include the rapid pace of growth and change, the redefinition of value, the growing importance of knowledge and knowledge management, and new organizational forms. Each of these areas is crucial to understanding the emerging rules of competition and how to win in the new world of e-business communities. The underlying message is that traditional business models are dead.

JOINED AT THE BIT

THE EMERGENCE OF THE E-BUSINESS COMMUNITY

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Throughout history, new information technologies have enabled and stimulated new organizational forms. With the emergence of the World Wide Web, a totally new business environment is emerging.

As competition intensifies, innovation cannot be attained solely within the integrated industrial enterprise, or even the so-called virtual corporation. Rather, companies must work together to create online networks of customers, suppliers, and value-added processes. The result is what we call the e-business community, or EBC.¹

We define EBCs as networks of suppliers, distributors, commerce providers, and customers that use the Internet and other electronic media as platforms for collaboration and competition.

The question is not whether e-business communities are upon us, but how to develop strategies that capitalize on this new formation. EBCs are transforming the rules of competition, inventing new value propositions, and mobilizing people and resources to unprecedented levels of performance. Firms must learn to co-evolve with partners to create favorable conditions for all players. The new game is about leading a community for mutually beneficial long-term relationships with cosuppliers and customers.

To achieve these goals, a whole new way of thinking is required:

- It makes more sense to view a company within its e-business community than in competition with firms that have traditionally been considered part of the same “industry.”
- Competitive advantage no longer necessarily accrues from economies of scale and scope. Smaller is often better.
- But not always. Net-enabled scale contributes to historically unprecedented levels of “superaggregation.”
- Mass customization is no longer enough—the next step is significant service-based value-added.

Only through understanding such new principles of industry design can businesses begin to develop strategies for success. In this chapter, we develop a model for understanding the new rules of competition. More specifically, we look at the four EBC types and their strategic implications. Our premise is that e-business communities are emerging as both the new organizational form and competitive space.

Before examining the new competitive environment, it is important to understand the larger forces of the digital revolution that are driving the e-business community. These are:

- *The redefinition of value.* As wealth creation, communications, commerce, and distribution converge on common digital, networked platforms, industry boundaries blur, causing providers to rethink the basis of value creation. Car manufacturers, for example, are reinventing their offering as a service-enhanced electronics package that also provides mobility. To compete with Net-based periodicals, traditional print publishers have begun delivering customized content in real time while offering value-added services. As broadband data services replace the old voice telephone system, telecommunications companies are moving up the food chain into value-added applications like online shopping and video-on-demand.
- *Digital knowledge economics are fundamentally different and poorly understood.* Hoarding knowledge (as opposed to land, goods, or capital) is typically counterproductive and nearly impossible; in the digital economy, knowledge *must* be shared.

Knowledge-based products (like software applications or marketing research questionnaires) often obey a law of *increasing*, rather than diminishing returns: the more widely they are used,

the greater their value. Consequently, early market entry can yield long-term competitive advantages that far exceed those enjoyed by industrial age innovators.

Measurement is a major issue: we have no commonly accepted “units” of knowledge, and no public markets that meaningfully set its value. “Return on knowledge,” as Peter Drucker has suggested, is nearly impossible to measure rigorously.² From boardrooms to the Securities Exchange Commission, organizations are trying to figure out how to capitalize these intangible assets.³

- *Accelerating technology-driven pace of growth and change.* Information technology is driving change everywhere. Every executive—in every industry—must embrace the pace and dynamics of the information technology industry. Agility, immediacy, and techno-savvy innovation will distinguish the winners.
- *Friction-free electronic business economics mean disintermediation, reintermediation, and customer empowerment.* Moving business processes from physical to digital networks eliminates transactional friction, dramatically reducing costs, time, and opportunities for error. Jobs, business processes, companies—indeed, entire industries—face elimination or digital transformation. Meanwhile, customers gain both tangible (cost, quality) and intangible (information, control, relationships) benefits while they contribute ever more value to the system.
- *The digital implosion drives disaggregation and specialization, undermining the economic rationality of the vertically or horizontally integrated firm.* Digital knowledge reduces the time and financial costs of information and coordination. It is now economically feasible for large and diverse sets of people to have the information they need to make safe decisions in near real time. Consequently, we can increase wealth by adding knowledge value to a product—through innovation, enhancement, cost reduction, or customization—at each step in its life cycle. Often, specialists do a better value-adding job than vertically integrated firms. In the digital economy, the notion of a separate (electronically) negotiated deal at each step of the value cycle becomes a reasonable, indeed, attractive, proposition.⁴

A business strategist must address every one of these forces. Each on its own is tremendously powerful. Together, they have the potential to transform or destroy entire industries.

But it is the disaggregation of the traditional industrial enterprise that is at the heart of the transition to the e-business community. The core customer value proposition is broken down—disaggregated—into its atomic elements and reaggregated to create an entirely new value proposition. The dream (or nightmare) behind Coase’s question is now being realized, thanks to the forms of coordination and knowledge deployment which are made possible by the Internet.

E-BUSINESS COMMUNITIES: THE NEW COMPETITIVE SPACE

As illustrated in Fig. 1-1, the first stage of the enterprise was the vertically integrated *industrial age corporation*. With stable industry processes and technologies, its internal structure was hierarchical and labor was organized for mass production. It was supply-driven and employed lengthy planning cycles.

The *virtual corporation* was an important transitional form in the evolution toward a “postmodern” business environment. As described by William Davidow and Michael Malone, the virtual corporation operates “on an integrated network that includes not only

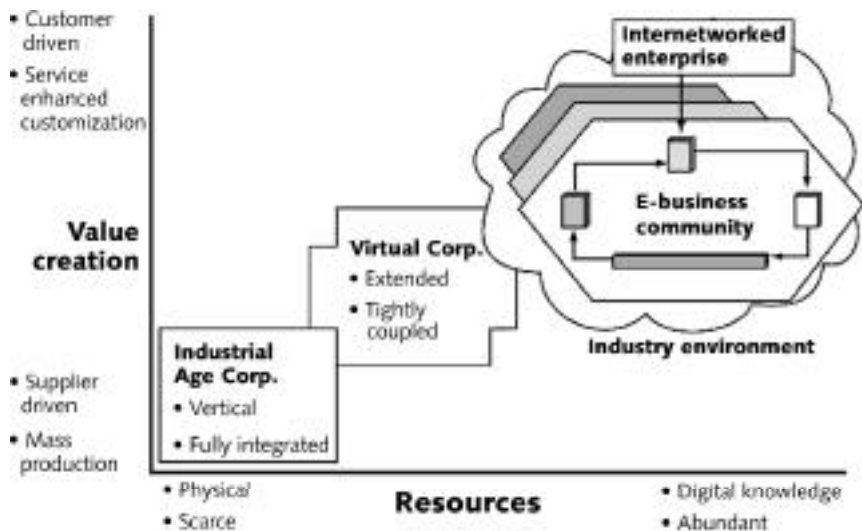


FIGURE 1-1. Vertically integrated enterprises have given way to the virtual corporation and are now moving to the e-business community.

highly skilled employees of the company but also suppliers, distributors, retailers, and even consumers.”⁵

The core network technologies of the virtual corporation are EDI (electronic data interchange) and client/server computing, technologies that drive “hub-and-spoke” models of organization. The hub controls interactions and value-creation processes.

Chrysler Corporation, a pioneer in virtual enterprise competitive strategy, worked diligently to bring its suppliers into design, production, and logistics processes but continued to specify the details of parts design. Only recently have Chrysler’s suppliers of car interiors begun to conduct their own customer market research. They are starting to gain some freedom to create their own integrated designs, rather than only build to the specs of Chrysler engineers. (But suppliers like Lear and Magna still dream of independently branding their seats and interiors.)

Such changes are happening faster in service industries like banking and health care. As we approach the twenty-first century, the outlines of the postmodern model are becoming sharper, with the emergence of the *internetworked enterprise* in the *e-business community*.⁶ The new enabling technology is the Internet, a web of connections where nodes of power and coordination stand out, but with no pure hubs comparable to those of the EDI era.

We define three layers in this new digital economy enterprise model.

1. The *internetworked enterprise* is the basic functional unit of an industry environment. It relies on internetworked, knowledge-based systems to enhance its capacity to learn, be agile, and respond quickly to customer requirements. It collaborates and competes in industry environments and e-business communities—often in several EBCs at once. It embraces digital strategies for developing products and services and for renewing relationships with customers and suppliers.

2. An *e-business community* is a specific set of players with shared interests, who, together, seek market dominance within the industry environment. In the software industry, the leading EBCs are Wintel (led by Microsoft and Intel) and Java (led by Sun, IBM, Oracle, and Netscape). Often, a single company is a member of two or more competing EBCs; Microsoft and Intel, for better or worse, are involved in the Java community. Meanwhile, IBM, Oracle, and Netscape are active players in the Wintel EBC. The term “coopetition” best describes these dynamics.

3. The *industry environment* is the overall context in which businesses operate (for example, the software industry). An industry environment consists of multiple e-business communities, each of which is competing to dominate and control the overall environment.

As noted earlier, it is the coordination of business practices and the deployment of knowledge as enabled by the Internet that distinguishes the new environment. In the EBC, the concept of partnership is not merely a vendor's euphemism for a conventional sales relationship; it takes on real meaning.

- *End customers are genuine “prosumers.”* Customers no longer merely tailor products to their own needs (for example, the Levi's jeans kiosk); they gain much more control over every aspect of the value creation experience. They also contribute, adding genuine value to the entire system. At America Online, customers provide over half the content: e-mail, chats, forums, stadium events, etc. In the Java software development community, thousands of individual and corporate customers discuss standards and contribute bits of “code” to a shared resource pool. With collaborative filtering technologies like Firefly, consumers share musical preferences to help the system make recommendations to users who share their tastes.
- *Value network partners share risks and rewards, are encouraged to take initiative, and are expected to understand (often to deal directly with) the end customer.* E*Trade aggregates dozens of content and service providers in its Internet brokerage. Many of these providers deal directly with the consumer once a connection is made through the E*Trade channel. Cisco links its supply chain members directly to its \$2 billion sales per year (and growing) Web site, enabling them to sense and respond to changing customer needs in near real time. Microsoft may be a ruthless competitor in many respects, but thousands of software developers (including arch-rivals like Netscape and IBM) contribute independently to the ultimate Windows value proposition.

FOUR TYPES OF EBC

Are all EBCs the same? Much of the writing on the future of “Internet communities” or “value webs” recalls the blind man and the elephant syndrome; an entire scenario for Internet commerce is built on the assumption that the whole world will do business like Microsoft, Netscape, America Online, or whichever company’s perspective the author is writing from.

In our work at the Alliance for Converging Technologies, we identified over 170 candidate EBCs, and examined 32 in detail. This analysis helped us to understand that there are a number of fundamental types of EBC. We also learned that an EBC’s “type strategy” (whether conscious or implicit) is central to its success or failure.

As Fig. 1-2 illustrates, EBCs differentiate along two primary dimensions: economic control (self-organizing or hierarchical) and value integration (low to high).

Economic control. Only some EBCs are hierarchical in the sense that they have a boss who controls the nature of value and the flow of transactions. Integrated supply networks designed and

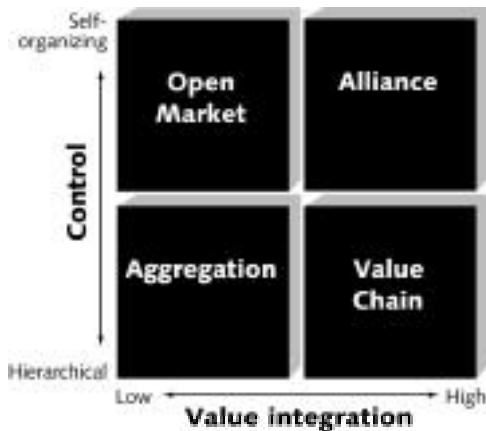


FIGURE 1-2. E-business communities differentiate on axes of economic control and value integration. ©1998 Alliance for Converging Technologies.

managed by a major customer (like General Motors) to produce preconceived products (for example, a Cadillac Catera), are clearly hierarchical. On the other hand, stock exchanges and other types of auctions are self-organizing. No single entity or class of entity drives the content of transactions or the economic outcomes. One day it's the Asian markets crashing, the next day it's the Fed's increasing interest rates, and on the third it's a stampeding group of institutional investors unloading their shares in a panic. (On the other hand, nearly all EBCs have a leader who sets the rules and standards of conduct and interchange. Exceptions include structured democracies or those with distributed rule-making leadership, like Visa and the OASIS network in the electric power industry.)

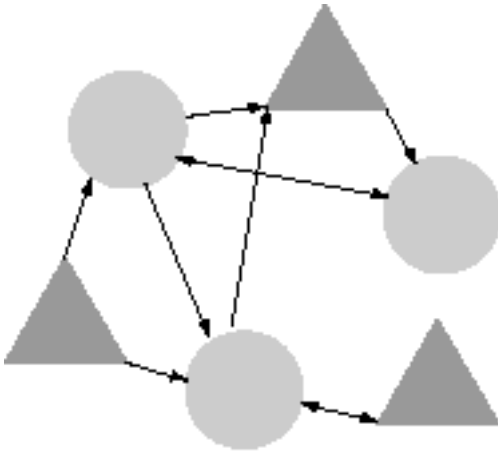
Value integration. Some EBCs focus on high value integration: facilitating the creation and delivery of specific product/service offerings that integrate components from multiple sources (like cars). Others, which provide low value integration (like supermarkets), focus on facilitating trade in a diverse basket of goods and services.

These two parameters—economic control and value integration—help us understand the fundamental characteristics of the four types of EBC: Open Market, Aggregation, Value Chain, and Alliance. The types are guidelines; in the real world, most situations will blend the features of multiple types. However, the core organizing principle of every EBC can be described by one of these types.

An *Open Market*—like the stock exchange—is the electronic version of the primitive, traditional *agora*, or town market. Anyone can be a buyer or a seller (see Fig. 1-3). Some sellers hawk their own products, while others rely on intermediaries.

Value integration is relatively low, and no single entity is in control. People generally play by the rules, however, in the ebb and flow of commerce, different players and coalitions drive events from moment to moment.

Trust is not inherent in the system, and the maxim *caveat emptor* (buyer beware) is a useful guide to action. Leadership depends on timing and market intelligence (a critical form of knowledge); it's all a matter of being in the right place, at the right time, with the right solution for the right price. In many respects, the Internet as a whole is one big open market. These characteristics help explain why the Net poses a challenge and threat to buyers and sellers who



Buyers and Sellers

FIGURE 1-3. Open Market EBC. ©1998 Alliance for Converging Technologies.

are more accustomed to the Aggregation marketplace model described here.

Examples of an Open Market include eBay, an Internet-based electronic flea-market for consumers and small businesses founded in 1995 with expected 1998 transaction volumes of over \$200 million; and OASIS, a \$25+ billion emerging Open Market for electrical transmission capacity.

In an *Aggregation* EBC, one company usually leads in hierarchical fashion, positioning itself as an intermediary between producers and customers (see Fig. 1-4). Wal-Mart is the master example of an Aggregation EBC leader, keeping its product suppliers under tight reign. With the emergence of Internet technologies, control and management of the supply chain becomes even more effective and cost efficient. As in many cases, the Net levels the playing field, enabling just about anyone to become an aggregator.

As in the Open Market, value integration is low. America Online, the world's largest proprietary and Web-based online service provider, aggregates 19,000 chat sites and more than 325 retailers. E*Trade, the largest all-electronic brokerage service, brings together more than two dozen strategic partners.

In a *Value Chain* EBC (see Fig. 1-5), the focus is on process optimization. Similar to an Aggregation EBC, a primary company leads in

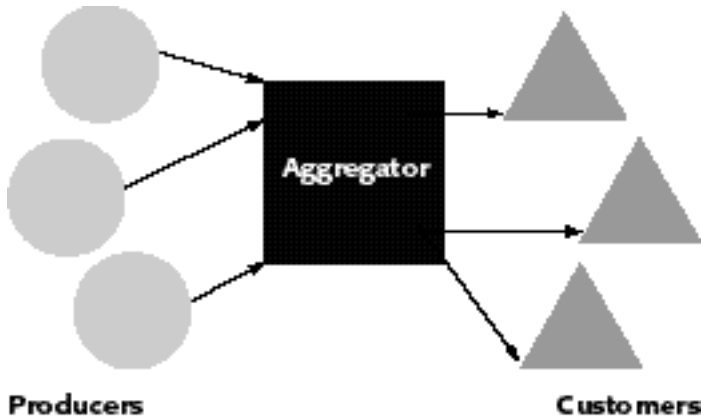


FIGURE 1-4. An Aggregation EBC.

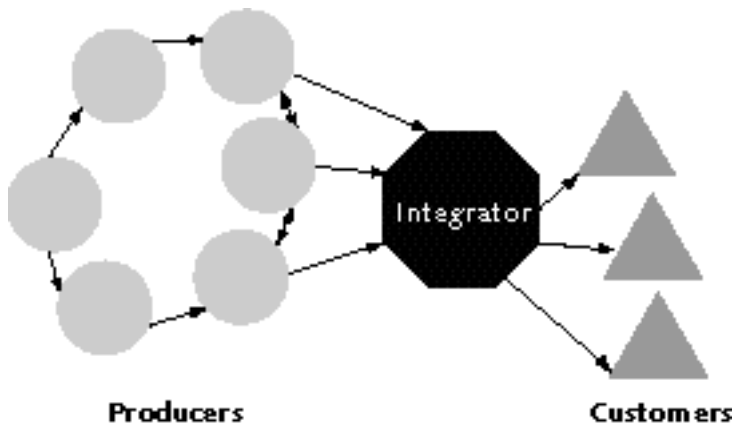


FIGURE 1-5. Value Chain EBC. ©1998 Alliance for Converging Technologies.

a more or less hierarchical fashion, but unlike an aggregator, the objective is maximizing value integration through operational effectiveness. Cisco Systems, the leading internetworking technologies company, leverages its supply network to achieve \$585,000 in revenues per employee. Firefly Network engages consumers in virtual value networks wherein they share their preferences via collaborative filtering technology.

The *Alliance* EBC is the most “virtual” of the EBCs, aiming to achieve high value integration in the absence of hierarchical con-

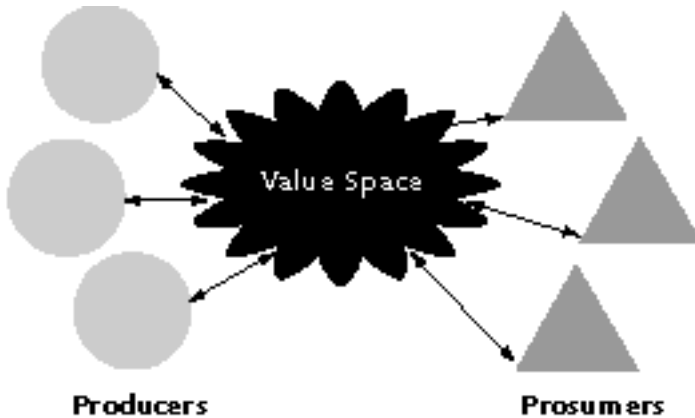


FIGURE 1-6. Alliance EBC. ©1998 Alliance for Converging Technologies.

trol. An Alliance EBC may have one or more leaders—but the leaders cannot exercise control, and are continually subject to challenges.

A healthy Alliance EBC protects its participants and customers from the Wild West hazards of the Open Market EBC. An Alliance EBC is engineered to enhance a “value space”—an idea, or a vision, of how to meet customer requirements in a specific domain (see Fig. 1-6). Producers comply with standards that result in a “plug-and-play” full-solution environment. Customers have a wide range of choices, with the ability to tailor and integrate their own solutions.

Visa International is an example of a successful Alliance EBC. It has brought together hundreds of competitors, each of whom contributes to a global brand based on shared standards and business practices. In the Java Alliance, Sun, IBM, Oracle, and Netscape are working to mobilize an entire industry behind a new computing platform and engage in competition with the Microsoft-led Wintel Alliance.

STRATEGIC IMPLICATIONS

Strategy depends a lot on EBC type. Digital economy strategies often involve shifting from one type to another. Leaders should consider whether they need to change their EBC type—and the implications of the shift for business strategy and process management.

For example:

- OASIS is an Internet-based system that allows for the reservation of electric power transmission. It is a result of the industry's shift from vertically integrated monopolies toward a deregulated Open Market.
- eBay facilitates electronic auctions over the Internet for consumers and small businesses by providing the infrastructure to enable Open Market transactions.
- Members of the *Java Alliance* (Sun, IBM, Oracle, and others) tried once before to work together in support of "open" computing, when they were promoting Unix and related standards in the late 1980s. This effort failed, in no small measure because each company was jockeying for position in its own self-interest. Meanwhile, Microsoft was harnessing the creativity of hundreds of companies and individual developers through its version of an Alliance value creation model. In their second effort, Java Alliance members are now working much harder to subordinate their individual interests to their broader goals. In essence, they are shifting from a Value Chain to an Alliance orientation.

LEADERSHIP AND GOVERNANCE

Community leadership and management policies are critical. Leading an EBC is not the same as leading in the relatively private and controlled environment of the single enterprise. In theory at least, everyone within the enterprise shares a set of accountabilities; in an EBC, divergence of interests is fundamental to the system. Given this basic tension, the more each and every contributor participates in value processes that focus on the end customer, the more effective the system will be in achieving its strategic objectives.

Shared customer focus depends on some very human "community" practices: high collaboration, mutual respect, trust, information sharing, and—often—joint branding. Successful EBCs, like Cisco and E*Trade, exemplify these traits. Other EBCs—like Wintel and AOL—face challenges precisely because their leaders are viewed as being less than "community friendly."

Governance is not a side issue in e-business communities. It is central to every EBC's mission. The right governance strategy—effectively executed—will contribute to the success and sustainabili-

ty of the EBC in very tangible ways. The wrong strategy could be disastrous. Because the EBC is by definition a multienterprise endeavor, the standards for rule making and enforcement must be known to all, and therefore should be clearly thought out.

Governance will have a direct impact on the leader's ability to ensure that their strategic objectives are achieved in key areas such as:

- Standardization and market penetration of product/service definitions and technologies
- Ability to attract, retain, and motivate suppliers, partners, channels, and customers
- Market profile and brand image
- Efficiency and effectiveness of business processes, from product/service innovation to customer service
- Effective knowledge creation and deployment

RULE MAKING

Rule making can be highly autocratic (controlled by a single company), highly participative, or—most likely—somewhere in between. Also, rule-making processes may vary from one type of rule to the next. EBC leaders need to decide what types of rules will be critical to their objectives for the EBC initiative, and what are the strategic business issues associated with these rules. For each of these types of rules, they need to think about:

- Which classes of EBC players (for example, Value Chain suppliers, innovation partners, distribution channels, customers) are stakeholders for each type of rule?
- How much control is appropriate to share in order to gain informed, active buy-in? Sometimes it's more effective to leave most of the decisions to the leader; other times, it can be a big mistake.
- How should the rules be made—formal versus informal processes? Part of the trick is to get rule making done in a way that ensures the desired level of participation, but doesn't get bogged down in bureaucracy.

A systematic analysis of a range of successful EBC cases indicates no direct, predictable relationship between EBC type and approach

to rule making. However, we have found some important linkages between EBC type and the variables of rule *compliance*.

RULE COMPLIANCE

Rule compliance can be mandatory or voluntary. When compliance is mandatory, the “authorities” of the EBC have the power to enforce compliance and to penalize noncompliance, in some cases, through legal means. People who break the rules in some types of Open Market EBCs—like the New York Stock Exchange—can end up going to jail. At the other extreme, Alliances (like Java and Wintel) depend mainly on participants’ voluntary compliance. This can only work over the long run on the basis of self-interest, fear—or some combination thereof. EBC leaders need to determine, again, for each class of rules:

- How “mandatory” or “voluntary” is compliance likely to be?
- What will motivate compliance? What will be the penalties of noncompliance?
- How will compliance and noncompliance be identified and measured—and by whom?
- What formal/informal processes will be put in place to support compliance monitoring and enforcement?
- What are the competitive implications of the EBC’s approach to rule making and enforcement?
- What are the legal issues, if any?

CONCLUSION

E-business communities are still in their early, formative days. There is much to learn from pioneers like Cisco, E*Trade, and eBay. Is the e-business community just a transitory consultant’s fiction? We don’t think so. The evidence suggests that the EBC is a genuinely new business form, with many robust features. It is modular in structure and highly malleable in design. It is capable of rapid innovation and response to customers, technological change, and competitive threats. It is a living system where Darwinian survival of the fittest behavior coexists with social safety nets. It maps well to the increasingly fluid infostructure of the global digital econ-

omy. As you explore this book, you can expect to discover many key themes and new rules of competition for the emerging world of e-business communities.

NOTES

1. The key insights presented in this chapter are based on a multiclient research project conducted by the Alliance for Converging Technologies, June 1997–June 1998. The project, called Winning in the Digital Economy, was supported by Andersen Consulting, Bank of Montreal, Bell Atlantic, Bell Canada, Federal Express, Fujitsu, General Motors, GTE, Hewlett-Packard, IBM, McGraw-Hill, Nortel, Oracle, Procter & Gamble, Revenue Canada, and Star Data.

The Alliance for Converging Technologies has coined the term “e-business communities” to extend the new concept of “e-business,” which was trademarked and popularized by IBM.

2. Drucker, Peter, *Post-Capitalist Society* (New York: Harper Business), 1993, p. 189.
3. For a more detailed discussion on knowledge and knowledge management, see Chap. 3, “Building Smarter, Faster Organizations.”
4. Alliance for Converging Technologies, Interactive Multimedia in the High Performance Organization: Wealth Creation in the Digital Economy, *Report on State of the Art*, 1995, pp. 1.124–1.126.
5. It is amusing to think of tailor-made clothing as a modern breakthrough, when, in fact, it is actually “off-the-rack” that is new in human sartorial history.
6. This view builds on the concept of the business ecosystem developed by James Moore in *The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems* (New York: Harper Business), 1996. For a more detailed discussion on business ecosystems, see Chap. 4, “The New Corporate Form.”