

# Doing Business on the Internet

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## Abstract

How does doing business on the Internet differ from traditional brick-and-mortar operations? What differentiates success from failure in the dot.com world? What have we learned from the rash of dot.com failures? Recent research is shedding light on these questions and more. Surprising findings indicate that often the realities of e-business environments run counter to expectations.

The purpose of this paper is to synthesize recent research and experience about e-business and assess the implications for institutions planning to venture onto the Internet. Findings are organized around the themes of e-commerce trends, driving principles of the new economy, Industrial Era versus Digital Era organizations, and implications for doing business on the Internet.

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## Introduction

Information and networking technologies are transforming the dynamics of business, economics, education, government, and even international relations. Many long-held rules and models are eroding. Traditional business strategies are losing out to new unconventional tactics. Relationships among customers, suppliers, employees, and competitors are changing. New businesses are popping up on the net, threatening long-established enterprises. Success stories abound, but so do the tales of woe.

The recent rash of high profile dot.com failures has heightened the confusion. Businesses are questioning the wisdom of new business models as skeptics advocate a return to past business strategies and management practices. Turning the clock back, however, is not the answer. The prevalence of digital networks has changed forever the economics of the marketplace. Old rules are changing, but the new rules are not yet clear. We are in a time of transition, with the forerunners rushing ahead into the Digital Age while many others—perhaps still the majority—remain firmly anchored in the Industrial Era. The Net represents both threat and opportunity. Like it or not, however, the Internet is affecting all of us.

As with the automobile, the Internet will affect society in many unforeseen ways. When the horseless carriage first arrived, enthusiasts possibly foresaw the need for gas stations, paved roads, auto repair service, and tire manufacturers. Few if any, however, imagined assembly lines, daily commuting, traffic jams, stop signs, traffic lights, car washes, suburban sprawl, drive-in banking windows, motels, campers, traffic tickets, school buses, auto insurance, drivers licenses, seat belts, and many other cultural changes ushered in with the automobile. These and a multitude of other impacts are chronicled in the Ford Museum in Detroit, which emphasizes the cultural impact of technology.

How does doing business on the Internet differ from traditional brick-and-mortar operations? What differentiates success from failure in the dot.com world? What have we learned from the rash of dot.com failures? Should we throw out all the old fundamentals of strategy and management, as some digital age pundits would advocate, or are some of the old principles still valid? How does one separate the hype from the reality? Recent research is shedding light on these questions and more. Surprising findings indicate that often the realities of e-business environments run counter to expectations.

The purpose of this paper is to synthesize recent research and experience related to e-business and assess the implications for institutions planning to venture onto the Internet in the future. Findings are organized around the themes of e-commerce trends, driving principles of the new economy, Industrial Era versus Digital Era organizations, and implications for doing business on the Internet.

## E-Commerce Trends

The U.S. Commerce Department monitors the impact of the Internet and e-commerce on the economy. According to William M. Daley, the Secretary of Commerce, "the benefits of information technology are quickly spreading across the board, and eventually will touch every business, from the smallest mom-and-pop shop to the biggest Fortune 100."<sup>1</sup> In fact, the report shows that over the last five years, technology industries accounted for a third of economic growth in the United States, despite the fact that their share of economic output is just 8 percent. The report also lays out the numbers to prove that technology is making the country more productive, lowering inflation and creating high-paying jobs at a rapid pace.

"The first two reports were titled *The Emerging Digital Economy*," says Under Secretary of Commerce Robert Shapiro. "The third edition has a new title because the digital economy and digital society are no longer emerging. They are here. Americans have definitively crossed into a new era of economic and social experience bound up in digitally-based technological changes that are producing new ways of working, new means and manners of communicating, new goods and services, and new forms of community."<sup>2</sup>

The total U.S. online population has grown from 80 million in 1999 to 120 million in 2001 and is projected to reach over 155 million by 2003. However the U.S. and Canada combined now account for less than 50 percent of the total world online population. The U.S. Commerce Department estimates worldwide usage of the Internet at over 304 million in 2000 versus only 3 million in 1994. By one estimate the Internet had grown to over 2.1 billion unique, publicly available Web pages as of July 2000, and 7 million new pages are being added each day. That number was expected to grow to over 4 billion by 2002. Approximately 84% of Web pages are U.S. based, but that proportion is also expected to change. Projections show that by 2004, more than 640 million people, representing 14 percent of the world population, will be active Internet users, and total e-commerce spending could reach \$3 trillion to \$4 trillion.<sup>3</sup> Although the figures may vary somewhat by source, all the statistics point to continued dramatic growth.

## What's Driving the New Economy?

As a framework for assessing how doing business on the Internet differs from Industrial Era business practice, it's important to recognize the major forces driving the new economy. Although viewpoints vary from source to source, there appears to be substantial concurrence on several factors.

⌘ Faster, cheaper, more ubiquitous information technology.

Internet technology is creating a universal technology platform at an affordable price. Whereas proprietary systems were limited to the big and wealthy, the Internet delivers connectivity all the way to the mom and pop business. "When it comes to intranets, smaller organizations can compete on even terms with their larger counterparts."<sup>4</sup> Individuals and enterprises worldwide are becoming electronically linked.

⌘ Common information standards.

Even more important than universal connectivity is the emergence of common technical standards for communication.<sup>5</sup> As long as connectivity remained proprietary, it was difficult if not impossible to communicate among different enterprises. Every time universal standards have emerged throughout history, the consequences have been dramatic, the advent of standard gauge track for railroads and AC current and universal plugs for electricity being cases in point<sup>6</sup>

⌘ Coming of Age of The Net Generation.

The new generation of workers coming of age has grown up with computers. They think, learn, work, play, and communicate differently than their parents.<sup>7</sup> They come to the workforce with different perspectives and different visions.

⌘ Globalization of the economy.

Globalization, though now widely recognized, is not necessarily universally accepted, as evidenced by recent events such as the unruly demonstrations at meetings of the World Trade Organization. Many factors are driving globalization, however, and its consequences are widely foreseen as continuing to have a major impact on the economy.

⌘ The new economics of information.

Another common theme is the new economics or the economics of information.<sup>8</sup> The Industrial Era scarcity concept, which has dominated economic theory for a century or more, is slowly giving way to a new Information Era abundance concept. If I give you \$100, you have \$100, and I have nothing. If I give you information or an idea, you have the information, but I also still have the same information. Moreover, as the idea is used and shared, it continues to expand and multiply rather than being "consumed." Most likely, I am enriched by the interchange as well as are others. The pure economics of physical things and the pure economics of information are fundamentally different.<sup>9</sup> New terminology, such as *knowledge assets*, *intellectual capital*, and *relationship capital*, are creeping into the language of economics. Renowned economist and best-selling author, Lester Thurow believes that "knowledge-based capital, along with the advent of electronic commerce and a true global economy, are changing the very rules of economics and society."<sup>10</sup>

The Internet shrinks information asymmetry, defined as a situation where one party in a transaction has more information that is important for the transaction than the other party. That information can determine the relative bargaining power. For example, until auto retail sites appeared on the Web, the consumer was at a distinct disadvantage in relationship to the auto dealer. Since only the auto dealers knew the manufacturer's prices and had access to detailed product information, it was difficult for consumers to shop around for the best price. Now the Internet offers a number of sites that provide competitive pricing information and the majority of auto buyers use the Web to comparison shop for the best deals.

☞ Consumer is king.

Consumer expectations and demands are changing. More importantly, the power relationship has changed in favor of the consumer, requiring enterprises to rethink their marketing, sales, and service strategies. The consequence has been a shift from a focus on transactions to a focus on relationship building with clients and suppliers, and we have seen the emergence of new concepts such as customer relationship management (CRM) and enterprise relationship management (ERM).

In summary, it's not just the availability of digital networks that is driving change. The turn of the century has witnessed an explosion of information and other diverse economic and societal trends that is creating a far more complex society. This convergence of factors coupled with the availability of digital networks is driving change at an unprecedented pace.

But what of the recent rash of dot.com failures? What does it all mean? The dot.com failures underscore the importance of understanding the implications, opportunities, and challenges of doing business on the Net. The emerging research indicates that the majority of dot.com companies failed not because they were digital enterprises or that they were based on ill-conceived ideas. Nor did they fail for technical deficiencies. Most Dot.coms failed because they did not follow fundamental business practices, did not have well-conceived business models, or failed to execute effectively – i.e. tried to apply old business practices to the new channel/technology rather than capitalizing on the new technology. Early successes created a “lemming” effect that misled many venture capitalists into believing that anything with .com behind it, would succeed. In other words, they tried to operate the new ventures without truly understanding what business rules from the past applied and what did not. They failed because they failed to understand the new paradigms. The Internet changes everything we are told over and over again!

## **Organizational Culture: Digital Era versus Industrial Era**

So what's so different about doing business in the networked world of the Digital Age? What is e-culture? How does it differ from industrial era brick-and-mortar cultures? What distinguishes successful and unsuccessful e-cultures?

The bottom line is that the Internet makes it possible, practical, and prudent to do things that previously were impossible, impractical, or inefficient. The general conclusion of a growing body of literature and research appears to be that “Taking full advantage of the potential of the Internet Age requires leaders to lead differently and people to work together in new configurations.”<sup>11</sup> This conclusion leaves us with some important fundamental questions:

What has changed?

What remains the same?

Where do the old rules apply but in new ways?

What is the significance of these changes in terms of how leaders lead and how people work?

What critical success factors differentiate enterprises that succeed from those that fail?

This section summarizes major themes related to these questions.

☞ Network power

Availability of a universal networking platform has opened a whole new realm of possibilities and changed the fundamental value proposition of long-established business practices. But how is that different from telephones, TV, and other mass media? The power of open access to a universal network comes from the ability to create strong ties among every partner in the system—a multiplicity of links reaching in all directions.<sup>12</sup> This is many-to-many communication in contrast to the one-to-many communications that characterized the Industrial Era. Coupled with information transparency (discussed next), the Internet provides checks and balances in ways never previously possible—creating a level of self-policing and accountability not previously possible. A major risk of this environment is rumors, however, which can spread incredibly fast with devastating consequences. One of the major issues is control. The Internet breaks down centralized control—if companies in fact had control in the first place. For example, eBay, which is based on multidirectional connections among all members, operates as a self-regulating community. “The goal of a network is not for one part to maintain control but to maximize the power of the whole.”<sup>13</sup> In this networked environment, “The secret of success is multithreading—using many threads to tie many people together throughout partnership networks.”<sup>14</sup>

Perhaps the most significant research to date on e-culture and digital firms is a recent study conducted by a team of Harvard University researchers led by [Rosabeth Moss Kanter](#). The team involved a world-wide survey of 785 organizations of all types, 300 interviews with nearly 80 companies in North America, Europe, and Asia, and in-depth case studies of over two dozen companies. The result of the work is reflected in Kanter’s latest book, *E-volve!: Succeeding in the Digital Culture of Tomorrow*. Kanter contends that the Internet and its associated network technologies are both “the stimulus for a new organizational culture (making it necessary) and a facilitator of that same culture (making it possible).”<sup>15</sup>

#### ⌘ Information Transparency

The notion of information transparency appears frequently in the literature. Transparency refers to providing open access to information, making information readily available to all so that everyone has the relevant facts and can make their own assessment of a situation or necessary action. Open access to information coupled with the ability to communicate directly with nearly anyone anywhere is having a world-wide impact. More data are disclosed about more things in more places to more people faster—and to strangers in audiences of unknown composition as well as to friends and neighbors.”<sup>16</sup> Among the conclusions, as organizations become more virtual, with lean central leadership and far-flung partners and staff, they will require information transparency to ensure that the center and the periphery can communicate with one another.<sup>17</sup> Recent events, such as the Enron case, underscore the critical need for information transparency in an increasingly complex global economy.

#### ⌘ Eliminating the trade-off between richness and reach.

In their recent book, *Blown to Bits*, Philip Evans and Thomas Wurster, contend that the new economics of information is eliminating the trade-off between richness and reach, blowing apart the foundations of traditional business strategy.<sup>18</sup> The trade-offs used to be straight forward, they say: “Your business strategy either could focus on “rich” information—customized products and services tailored to a niche audience—or could reach out to a larger market, but with watered-down information that sacrificed richness in favor of a broad, general appeal.” Now, the availability of connectivity and common standards is redefining the information channels that link businesses with their customers, suppliers, and employees. Increasingly, customers have rich access to a universe of alternatives, suppliers are exploiting direct access to customers, and competitors pick off the most profitable parts of a value chain. Competitive advantage is up for grabs. Moreover, dealing with these changes require skills just the opposite of which most managers are trained to deal. Areas of divergence include the ability to empower workers versus directing them, sharing information versus controlling it, and working collaboratively versus competitively. The authors go on to provide many examples of how richness and reach go hand-in-hand in an Information Age, and show how to build new strategies that make the most of the new forces shaping competitive advantage.

#### ⌘ Disintermediation / reintermediation

Digital networks provide enterprises with direct links to clients, suppliers, and business partners, effectively eliminating traditional intermediaries. Whether it's e-trading of equities, travel, banking, shopping, shipping, music, or whatever the industry, traditional distribution channels are being challenged by the Internet. Although the phenomenon of disintermediation has been in the literature since the early days of computers, the frequency and impact today appear to be much more widespread and at higher levels. When disintermediation was discussed in relationship to word processing, for example, it referred to the disintermediation of jobs as document authors, who formerly dictated to transcriptionists or secretaries, began to create their own documents. Bankers used the term in the 1970's to describe industry changes such as the securities markets displacing corporate banking and money market funds capturing a portion of deposits from retail banks. The focus today, however, is more on the elimination of intermediaries on an industry level.

The significance is that disintermediation reduces "transactional friction,"<sup>19</sup> simplifying or streamlining distribution channels. It not only reduces the costs, time, and opportunities for error, but also creates new opportunities for improving product quality and customer service. Customers gain both tangible benefits (costs, quality) and intangible benefits (information, control, relationships).

Evans and Wurster explain the phenomenon in terms of displacement of the richness/reach curve, allowing new competitors to offer greater reach and greater richness simultaneously. "This poses a far more direct threat to the established intermediary's business model. It threatens not just re-segmentation of the business, but a transformation."<sup>20</sup>

#### ☞ Deconstruction or Disaggregation.

Another prevalent theme is the notion that digital networks are undermining the economic viability of traditional business structures, such as horizontally or vertically organized firms, supply chains, distribution channels, value chains, and consumer franchises. This concept is referred to by terms such as deconstruction and disaggregation. The availability of a universal technology platform for connectivity is driving down the cost, time and effort of information and coordination. Consequently, it is now feasible and cost effective for geographically diverse groups of people to have the information they need to make effective decisions and to coordinate activities. Wealth can be created by adding knowledge value to a product—through innovation, enhancement, cost reduction, or customization—at each step in its life cycle. In this scenario, specialists often do a better job at adding value than vertically integrated firms can do. Thus, in the digital economy, the concept of a separate (electronically) negotiated deal at each step of the value cycle becomes a reasonable and attractive proposition.<sup>21</sup>

Evans and Wurster define deconstruction as the "dismantling and reformulation of traditional business structures." They attribute this impact to two forces: the separation of the economics of information from the economics of things, and the collapse of the trade-off between richness and reach.<sup>22</sup>

"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."<sup>23</sup>

The significance is that by transforming business and industry structure, deconstruction alters the sources of competitive advantage. It is a tremendous threat for existing firms but also creates new opportunity. One of the results is what Evans and Wurster call the rise of navigators as independent businesses. Navigators can be software programs (Quicken), databases (Auto Trader), evaluators (Consumer Reports, J.D. Power), search engines (Yahoo!), or people (financial advisors).<sup>24</sup>

"Deconstruction is not a new set of rules about strategy; it is an argument that all the old rules of strategy apply, but at a much finer level of granularity. . . . The objects of those strategies are different. And the task is therefore one of identifying these new objects and then rethinking and reapplying the same old principles of competitive advantage."<sup>25</sup>

#### ☞ New value proposition.

The fundamentals of wealth and value creation are changing.<sup>26</sup> A variety of new frameworks for theorizing about value creation have emerged. “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.”<sup>27</sup>

“This compromise between the economics of information and the economics of things suppresses economic value, but more so in some businesses than in others.”<sup>28</sup> “The implications of unraveling the informational value chain and the physical value chain—and then allowing each to evolve in accordance with its very distinct economics—are profound. Traditional business models will become deeply vulnerable wherever the compromise between the two sets of economics suppresses value.”<sup>29</sup> New models of wealth creation are evolving.<sup>30</sup>

#### ☞ Emergence of the E-Business Community

One of the most intriguing paradoxes of the Net is the notion of *Community*. The term appears over and over in a variety of contexts and forms. The Alliance for Converging Technologies coined the term e-business community (EBC) to extend the concept of e-business, which was trade-marked and popularized by IBM.<sup>31</sup> Variants of the terminology include Web communities, online communities, dot-communities, communities of interest, and communities of practice.

The community metaphor suggests a different attitude toward customers and users, namely, that consumers have changed from passive members of an audience to more active members of a community.<sup>32</sup>

“It is individuals-in-community that create the greatest value—strong individuals in strong relationships. The worst of individualism involves isolation and separatism that is dysfunctional for the wired world. The best of individualism involves strong individuals with a strong sense of responsibility to others in their community. On the Web community is an analogy more than an emotional reality. The term is often used (incorrectly) as an equivalent for an audience with the potential for interaction, but not every website that claims to form a community fosters much interaction or connect users to one another.”<sup>33</sup>

E-business communities are a new form of commercial organization, which are enabled by digital technology. “Driven by the need to reduce supply chain costs and respond more quickly to end-user demands, communities of companies are using networks to trade with one another and create products or services that draw on the talents of many players.”<sup>34</sup>

An example of community on a national level is the PT3 Collaborative Exchange. Sponsored by the U.S. Department of Education, it provides an electronic learning community (ELC) and Collaborative Exchange (CE) ([www.pt3.org](http://www.pt3.org) and [www.pt3ce.org](http://www.pt3ce.org)) linking hundreds of schools, colleges, universities, and other organizations that are working to transform teacher education programs to ensure that every student graduating from a teacher preparation program is well prepared to use technology in the classroom.

#### ☞ Immediacy

Commerce is non-stop and real-time. Products obsolesce more quickly; the first to market are rewarded. Agility and the capacity to shift to ever-changing conditions are basic.<sup>35</sup>

#### ☞ Knowledge management / learning organization.

The need for continual learning, solving new problems, and capturing and leveraging knowledge is a prevalent theme throughout the literature. The rapid growth of the knowledge management concept has been remarkable, and is likely to become an integral component of 21<sup>st</sup> century e-cultures.<sup>36</sup>

#### ☞ Self-Service

New approaches to customer service and support are evolving. The Web and other network technologies provide a medium through which enterprises can interact directly with customers and suppliers 24 hours a day, 7 days a week. Many enterprises are using the Web, email, and other technologies to provide useful information directly to customers, to answer their questions, or allow them to customize orders, monitor the status of orders, track shipments, or obtain other services. Companies are even integrating the Web with customer call centers. For example, visitors ordering on the Web from Lands' End can click on a "push to talk" link, provide their telephone number, and get a personal call within moments. Or if they prefer, they can submit their question on the Web and a customer service representative replies within a few minutes.

☞ Shift from informational (presentation) Websites to transactional Websites.

Enterprises of all types are transitioning from a focus on providing information to transacting business on the Web. The scope and variety of transactions are constantly expanding. From the initial email contact forms and shopping baskets, applications have expanded to include all types of application processes (job, college, subscriptions, membership, etc.) banking, bill payment, tax filing, securities trading, real estate comparison shopping, conducting auctions, testing and running designs, training, and hundreds more applications.

☞ Emergence of New Business Models

The emergence of new business models is another prevailing theme running through the literature. For the existing business, implementing the Internet is not just creating another channel; it requires connection to all the other channels. E-business cuts across every organizational process. Businesses face tremendous challenges in breaking down old functional silos and providing the level of seamless integration needed to present one, consistent face to the customer.

Various categorization schemes have emerged. Most sources appear to be coalescing around these four categories of electronic business as evidenced by the growing familiarity with the acronyms.

Business-to-consumer (B2C) E-commerce

Business-to-business (B2B) Exchanges

Business to government (B2G)

Consumer-to-consumer (C2C)

A number of new Internet business models have emerged, a sampling of which are listed in Table 1. Many of these models are still largely unproven and new ones are still evolving. New click-and-brick business models are also evolving.

☞ Virtual organizations: the emergence of the Digital Firm

The terms *virtual organizations* and *the digital firm* are being used with growing frequency. The topic of virtual organizations was one of the key themes that emerged from the February 2001 *Organization of the Future Conference*, presented by The Conference Board and the Peter F. Drucker Foundation for Nonprofit Management and sponsored by Booz·Allen & Hamilton.<sup>37</sup> A popular MIS textbook renamed its 2002 7<sup>th</sup> edition with the subtitle *Managing the Digital Firm*.<sup>38</sup>

☞ The U. S. is not leading the way in all sectors.

A factor that is surfacing, but not getting a lot of attention is the changing face of U.S. leadership in technology and the new economy. This U.S. is not the leader in all sectors of the new economy, and is losing ground in other places where it currently has the lead. For example, The U.S. lags greatly behind the European and Japanese in both the adoption and use of wireless phones, and thus in mobile commerce.<sup>39</sup>

☞ The Web is Reshaping not just markets, but also society.

As indicated in the introduction, many Internet proponents foresee a widespread influence that goes well beyond business to touch almost every aspect of life and culture. Articles on the influence of the Internet appear in almost every discipline including music, art, religion, science, medicine, education, library science, government, and law.<sup>40</sup> On a personal level, capabilities such as controlling home utilities and appliances and monitoring children at day-care facilities are already a reality.

*Newsweek* concluded in a special report that “The corner has been turned, but only just. We’re at the beginning of a new way of working, shopping, playing, and communicating. At *Newsweek* we’re calling this phenomenon e-life, and it’s just in time. Because the day is approaching when no one will describe the digital, Net-based, computer-connected gestalt with such a transitory term. We’ll just call it life.”<sup>41</sup>

## Implications for Doing Business in a Digital Age

The findings strongly point to a rapidly changing business environment with implications for transforming the economy on a level comparable to, if not greater than, the transition from an agrarian to an industrial economy.

Based on an analysis of this changing business environment, what then can we conclude about best practices for doing business in a Digital Era? Answering this question requires looking at requirements for both new companies and for existing companies. Although the requirements are similar, the challenges are different. The comparison also raises the interesting question of who has the advantage: the new company or the existing company?

It is evident that a company is not transformed simply by establishing a Website or implementing Web transactions. Success requires a more complete makeover. Enterprises must rethink their business models for how to organize the work of the whole organization. Transformation requires challenging traditional assumptions about relationships with customers, internal and external communication, decision making, operating style, managerial behavior, employee motivation and retention, and then defining a new way. This is clearly a human problem not a technological one, although it is both driven by and enabled by the new universal technology platform. Moreover, leadership offline does not predict success online.

New start-ups have the advantage of building an infrastructure to order from scratch. At the same time, however, they generally lack the depth of industry experience and knowledge of the existing firm. Existing enterprises face huge challenges in achieving the magnitude of systemic change required to transform long-established business practice and processes to new ways of doing business. They also have to deal with channel conflicts, which would not be an issue for a new start-up. New or old, digital enterprises must be organized to support flexibility, distributed decision making, multifunctional teams, and continuous learning.

This section summarizes a number of recommendations which appear to be emerging as best practices in designing the digital enterprise.

## Requirements for Creating an E-Culture

Doing business on the Internet involves so much more than designing a Web site. The most critical part is understanding the new possibilities that the Net provides and how they can be used to create value for a business.

Based on her research, Rosabeth Moss Kanter prescribes four steps to successfully implementing an e-culture:

1. Develop an e-strategy. Having a clear vision and strategy are more important than ever, but not for control and planning in the same sense as during the Industrial Era. Kanter likens e-strategy in the Digital Era more to improvisational theater than traditional strategic planning because it involves emergent strategies that must be made up as the enterprise goes along, i.e., it requires improvisation in response to opportunities.
2. Nurture networks of partners. In the new economy, enterprises must be able to forge meaningful partnerships and working relationships both online and offline. Moreover, those partnerships increasingly will be world-wide.
3. Reconstruct the organization as a community. E-culture demands greater centralization in order for enterprises to present one face to the customer and to create seamless integration across all organizational functions. At the same time, it demands greater autonomy, empowerment, and diversity. This is one of the seeming paradoxes of e-culture that drives the need for enterprises to work together differently. More on community building later in this section.
4. Attract and retain the best talent. Both attracting and retaining new talent and retraining existing talent are critical needs to succeed in the new economy. Enterprises must learn “to treat people as volunteers who renew their commitment periodically through the three Ms of mastery, membership, and meaning.”<sup>42</sup>

Paul Woolner of the Alliance for Converging Technologies identifies seven critical leverage points for developing the organization strategy for the new digital enterprise.<sup>43</sup> The focus here is on the new start-up and how it transitions from the initial informal start-up venture to a viable, sustainable entrepreneurial enterprise. The ability to successfully make this transition is key to the long-term viability of dot.coms and other digital enterprises. Woolner’s seven critical leverage points are briefly outlined here:

1. Vision-driven, value-based enterprise. The general conclusion appears to be that in digital enterprises where the only constant is change, a clear vision and shared values become more critical than ever to provide the fundamental metrics for making decisions and establishing focus. In an environment of constant change, the source of organizational stability is the enterprise’s overall vision rather than defined roles, making vision all the more crucial.
2. Rapid organization prototyping. The digital enterprise must be able to shift to new organizational forms to accommodate and respond to new external factors. They must cultivate the mindset that continual organizational change is the norm. The uncertainties of the business environment—where the basis for competing and adding value is being continually redefined—also necessitate rapid organization prototyping.
3. Aligned organization systems. The term *systems* refers to the core elements of the organization’s infrastructure. It includes strategies, programs, and tools that the enterprise will use for culture creation and performance management. These cover the whole of any employee’s experience of the organization, beginning with the process of being recruited, hired, and oriented to the enterprise. It continues with business and work planning, performance management, rewards, and recognition, and learning and development. It also includes working within a technology environment to facilitate work-related processes and, ultimately, organization and work design.
4. Knowledge, information, and technology infrastructure. Knowledge is central to both the products and services and the organizational processes themselves; thus, the ability to embody and embed knowledge and learning must be at the heart of organizational strategy.
5. Extended enterprise mapping. The new digital enterprise must develop an early and clear delineation of what it will manage internally and what aspects will be developed through external partnerships and alliances.

6. Leadership by reflective practitioners. The digital enterprise requires leaders who are able to function well in environments that are ambiguous. The reflective practitioner is a role model who demonstrates a number of characteristics, including continuous acquisition and renewal of knowledge; flexibility of approaches; the ability to incorporate complex and incomplete sets of information into decision making; and a willingness to learn, to change, and to do things differently. These are also key success factors for the new digital enterprise, and they will not be realized in the enterprise unless they are present in a critical mass of leadership.
7. Innovative organizational form. The way in which a new digital enterprise portrays its organizational form and the language that is developed to describe it are both key levers. It is important the new organizational models and language reflect the knowledge- and project-based nature of the work environment.

## **Making It Up As You Go**

Whether starting a new enterprise or transforming an existing one, leaders need to be prepared to make up the rules as they go. This is an emerging theme in the literature. There is a big difference between using technology to invent new ways of working and using technology to automate existing business practices. From strategy development to organizational form, digital enterprises are embracing the Internet as an opportunity for questioning existing business models and experimenting with new ways of creating value and improving business operations. Innovation is the by word. Successful firms don't wait to figure out all the answers, however. They embrace a new concept or approach and then experiment and innovate as they move forward.

Kanter likens strategy development in the digital firm to improvisational theater. Innovation through improvisation is at the heart of e-culture she says.<sup>44</sup> "Instead of following a script, e-savvy companies run an improvisational theater. A general theme is identified to get the actors started. Then the actors try out different moves, develop the story as they interact with the audience, and create a better experience with each round. Soon the performances of many troupes accumulate to take the organization in a new direction."<sup>45</sup> An important component of improvisational theater underscored by Kanter is audience interaction. Thus the power shift in favor of the customer in the Digital Era makes the improvisational theatre analogy all the more apt.

The notion of making it up as you go underscores the need for systemic change and coincides with the emphasis that many sources place on organizational transformation. It is also consistent with findings that dot.com failures can be attributed primarily to organizational and execution failures rather than technical issues or lack of potential for Internet-based business.

## **Collaborating and Establishing Alliances**

New business alliances are being forged in many industries. Vertical integration is dead. Bureaucratic hierarchies and military style command and control management will not transfer to the Digital Age. Teamwork and collaboration are critical. Contrary to fears about the Web promoting isolation, evidence indicates that the opposite is true. One of the Web's hidden secrets is "that it provokes a shift toward more collaborative work relationships, ones that resemble open, inclusive communities more than they resemble secretive, hierarchical administrative bureaucracies."<sup>46</sup>

Some call it the "I-Paradox: "the hidden paradox of the Internet Age is that rampant individualism destroys the potential to derive economic value from the technology. When members of a network do not cooperate, do not pass on information, the network itself slows down. Having too many ideas, unchanneled by a common theme, impedes innovation and instead invites time-wasting, energy-draining conflict. Companies dominated by individual incentives for unit performance are slower to succeed on the Web than those with collective consciousness. . . ."<sup>47</sup>

Collaboration in the form enabled by the Web, however, is NOT altruism; it stems in part from a sense of shared identity and shared fate.<sup>48</sup> It is about unity not uniformity. It represents inclusion not consensus; communication not decision rights.<sup>49</sup>

## **Building open, inclusive communities**

One of the essential things enterprises must do to achieve excellence in the Digital Age is to "reconstruct the organization as a community." "It is individuals-in-community that create the greatest value—strong individuals in strong relationships. The worst of individualism involves isolation and separatism that is dysfunctional for the wired world. The best of individualism involves strong individuals with a strong sense of responsibility to others in their community. . . . It is important to distinguish community as a label from the underlying principles that make community integral to e-culture: sharing of knowledge, mutual contributions, smooth coordination, easy border-crossing, and responsibility for a shared fate."<sup>50</sup>

The concept of community applies both online and offline. “Offline, the spirit of community is required to implement the changes that the Internet makes possible—to give customers more choices, citizens more voice, educators more capacity to improve children’s learning, and businesses greater market reach and internal efficiency.”<sup>51</sup>

Community does NOT just happen in organizations, however; leaders must explicitly promote it. Just because people are better informed does not mean that they act on the information or work together effectively. The rapid growth of knowledge management coincides with this emphasis on collaboration. But as many firms are discovering, just creating databases of knowledge is not the answer. The hard part is fostering an active exchange of knowledge. So the real question is not how do we collect and organize knowledge, but how do we create a culture of collaboration and sharing of knowledge across all functions of an enterprise?

### **Leadership and Talent in a Digital Firm**

Another important theme is the changing face of leadership in the 21<sup>st</sup> Century Firm – and the word is leadership, not management. Projections indicate a severe shortage of top-level workers in the United States. Much is written about attracting new workers. The importance of retaining older employees is often overlooked or even shunned. However, recent evidence indicates that much can be said for retaining older workers for their intellectual capital. In fact, by looking for easy answers to gaining acceptance for change by sweeping out the old guard and bringing in the new, enterprises may be giving away much of their intellectual capital to the competition. Paying experienced workers a premium to change rather than paying hiring bonuses to inexperienced new hires may be a more prudent approach in the long-run. “Then you get all their wisdom combined with a new economy outlook. You can’t make a change in a company without a strong coalition of the old and the new.”

A growing number of sources are addressing the issues of leadership and talent in digital firms.<sup>52</sup> To achieve excellence in the Digital Age, enterprises must attract and retain the best talent. Digital Age firms must “treat people as volunteers who renew their commitment periodically through the three Ms of mastery, membership, and meaning. Commitment involves a set of linkages between people and organizations that build on human capabilities.”<sup>53</sup>

The implications of each of these factors are in themselves significant. Taken together they constitute a sea change that is drowning the industrial economy and sweeping in the Digital Era.

## **Conclusions and Recommendations**

This study summarizes significant ways in which Internet technologies are affecting business and the economy and considers the implications for enterprises planning to venture onto the Net. Although there is a growing body of research and literature related to the impact of the Internet and other information technologies, it's still early in the evolution of the Digital Era. Conclusions of necessity can be tentative at best. The emergence of the digital firm and dot.com enterprises, however, foreshadow significant changes to come--changes that will influence not just the conduct of business, but that will touch every aspect of society.

In relation to business, it is not an either or situation. Dot.coms likely will coexist with brick and mortar enterprises for the foreseeable future. Most enterprises will be some combination – or click and brick. From an historical perspective, new technologies or new channels tend to coexist with old ones. Take for example, television and radio, microwave and standard ovens, or cell phones and land-based phones. Enterprises making the transition to the Digital Era, however, must be committed to making major systemic changes and to be prepared to make it up as they go.

This research study looked at some of the most prominent resources. There is a need to delve deeper and broader and to include more international perspectives as well. Synthesizing the growing body of literature to develop a clearer view of the longer-term implications can be beneficial not only for business but for decision and policy makers in every area of endeavor.

**Table 1: New Internet Business Models**

MODEL	CORE COMPETENCY	EXAMPLES
Virtual storefront	Online retail sales of goods and services. Distribution of products and services through traditional means.	Amazon.com
Online auction	An electronic exchange for sales of merchandise through a bidding process.	e-Bay.com
Online service provider	Provides service and support for users of electronic products, such as computer hardware and software.	PCSupport.com
Reverse auction	Buyers submit a bid to multiple sellers to purchase goods or services at a buyer-specified price.	Priceline.com
Transaction broker	Buyers can view rates and terms, but the primary business activity is to complete the transaction.	E*Trade
Digital product provider	Purchase and delivery of digital products, such as software, photos, and music, online.	PhotoDisc.com
Marketplace concentrator	Consolidates information about products and services from multiple providers. Buyers can research, compare products, and sometimes purchase online.	ShopNow.com
Information broker	Main value is in the information they provide, such as product, pricing, technical specs, and availability data. May facilitate transactions.	Travelocity.com
Content Provider	Markets information online. Revenue is generated through some combination of user fees, providers' fees for listings, or advertising.	Wall Street Journal Interactive
Online Exchange	Bid-ask system where multiple buyers can purchase from multiple sellers.	Covisint
Portal	Provides a customizable Web access point, along with specialized content, search, and other services.	hongkong.com

<sup>1</sup> U. S. Department of Commerce, *Digital Economy 2000*. Washington, D.C.: U. S. Printing Office, June, 2000, p 5.

<sup>2</sup> U. S. Department of Commerce, *Digital Economy 2000*. Washington, D.C.: U. S. Printing Office, June, 2000, p12.

<sup>3</sup> Enos, Lori. Report: B2B Still Driving E-Commerce. *E-Commerce Times* (December 11, 2000). Quoted in Kenneth Laudon and Jane Laudon, *Management Information Systems: Managing the Digital Firm*, 7<sup>th</sup> Edition. Upper Saddle River, NJ: Prentice Hall, Inc., 2002. p110.

<sup>4</sup> Lai, Vincent S. Intraorganizational Communications with Intranets. *Communications of the ACM*, 44, 7 (July 2001), 95-100.

<sup>5</sup> Evans, Philip and Wurster, Thomas S. *Blown to Bits: How the New Economics of Information Transforms Strategy*. (Boston: Harvard Business School Press, 2000) p30.

<sup>6</sup> Evans and Wurster, p33.

<sup>7</sup> This impact of this factor is discussed in many sources including Tapscott, Kanter, Evans and Wurster.

<sup>8</sup> See for example Evans and Wurster, Tapscott, Thurow.

<sup>9</sup> Evans, Philip and Wurster, Thomas S. *Blown to Bits: How the New Economics of Information Transforms Strategy*. (Boston: Harvard Business School Press, 2000) p15.

<sup>10</sup> Thurow, Lester. *Building Wealth: The New Rules for Individuals, Companies, and Nations in a Knowledge-Based Economy* (New York: HarperCollins, 1999).

<sup>11</sup> Kanter, p7.

<sup>12</sup> Kanter,p149.

<sup>13</sup> Kanter,p152.

<sup>14</sup> Kanter,p160.

<sup>15</sup> Kanter, Rosabeth Moss. *E-volve!: Succeeding in the Digital Culture of Tomorrow*. Boston: Harvard Business School Press, 2001. p6.

<sup>16</sup> Kanter, p28.

<sup>17</sup> The topic of virtual organizations was one of the key themes that emerged from the February 2001 *Organization of the Future Conference*, presented by The Conference Board and the Peter F. Drucker Foundation for Nonprofit Management and sponsored by Booz-Allen & Hamilton. [http://www.bah.com/welcome\\_pages/0301/index.html](http://www.bah.com/welcome_pages/0301/index.html).

<sup>18</sup> Evans, Philip and Wurster, Thomas S. *Blown to Bits: How the New Economics of Information Transforms Strategy*, Harvard Business School Press, 2000. [www.hbsp.harvard.edu](http://www.hbsp.harvard.edu)

<sup>19</sup> Tapscott, p21.

<sup>20</sup> Evans and Wurster, p72.

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- <sup>21</sup> Alliance for Converging Technologies, Interactive Multimedia in the High Performance Organization: Wealth Creation in the Digital Economy, *Report on State of the Art*, 1995, p1.124-1.126.
- <sup>22</sup> Evans and Wurster, p39.
- <sup>23</sup> Tapscott, et al, p22.
- <sup>24</sup> Evans and Wurster, p65.
- <sup>25</sup> Evans and Wurster, p.221.
- <sup>26</sup> See authors such as Tapscott, Thurow, Evans and Wurster.
- <sup>27</sup> Tricoll, David and Lowy, Alex. "Joined at the Bit: The Emergence of the E-Business Community." Chapter 1 in Don Tapscott, Alex Lowy, and David Ticoll, Editors. *Blueprint to the Digital Economy: Creating Wealth in the Era of E-Business* (New York: McGraw-Hill, 1999).
- <sup>28</sup> Evans and Wurster, p.19.
- <sup>29</sup> Evans and Wurster, p.19.
- <sup>30</sup> Tapscott, p.4.
- <sup>31</sup> Tapscott, p33.
- <sup>32</sup> Kanter, p.18.
- <sup>33</sup> Kanter, p18.
- <sup>34</sup> Tapscott, Don, Lowy, Alex and Ticoll, David. *Blueprint to the Digital Economy: Creating Wealth in the Era of E-Business* (New York: McGraw-Hill, 1998) p3.
- <sup>35</sup> Tapscott p6.
- <sup>36</sup> Regan, Elizabeth A. and O'Connor, Bridget N. *End-User Information Systems: Implementing Individual and Work Group Technologies* (Englewood Cliffs, NJ: Prentice-Hall, 2001) Chapter 17 online at [www.prenhall.com/regan](http://www.prenhall.com/regan).
- <sup>37</sup> See [http://www.bah.com/welcome\\_pages/0301/index.html](http://www.bah.com/welcome_pages/0301/index.html). for more information.
- <sup>38</sup> Laudon, Kenneth C. and Laudon, Jane. *Management Information Systems: Managing the Digital Firm*. Englewood Cliffs, NJ: Prentice Hall, 2002.
- <sup>39</sup> Lynch, Patrick D., Beck, John C. and Wade, Mitchell E. *Intimate Devices: The Secret to Unleashing Mobile Commerce*.
- <sup>40</sup> See recent articles in *Communications of the ACM*, for example, such as Lam, Calvin K.M. and Tan, Bernard C.Y. The Internet is Changing the Music Industry (44,8) (August 2001). the January 2001 volume (44,1) featuring a series of articles on e-democracy, and the May 2001 volume (44,5) on Digital Libraries.
- <sup>41</sup> The Dawn of E-Life, *Newsweek* Special Report (September 20, 1999) between page numbers 41 and 42.
- <sup>42</sup> Kanter, p9-10.
- <sup>43</sup> Woolner, Paul. "The Alliance for Converging Technologies." Chapter 5 in Don Tapscott, Alex Lowy, and David Ticoll. *Blueprint to the Digital Economy: Creating Wealth in the Era of E-Business* (New York: McGraw-Hill, 1998).
- <sup>44</sup> Kanter, p107.
- <sup>45</sup> Kanter, p.106.
- <sup>46</sup> Kanter, p16.
- <sup>47</sup> Kanter, p17.
- <sup>48</sup> Kanter, p195.
- <sup>49</sup> Kanter, p196.
- <sup>50</sup> Kanter, p197.
- <sup>51</sup> Kanter, p197.
- <sup>52</sup> See for example VanScoy, Kayte. The Hiring Crisis: How to find, keep, and motivate employees in the new economy—and steal the best ones from your competitors. *Smart Business*, July 2000.  
<http://www.zdnet.com/smartbusinessmag/stories/all/0.6605.2577897-1.00.html>
- <sup>53</sup> Kanter, Rosabeth Moss. *Commitment and Community* (Cambridge, MA: Harvard University Press, 1972).