

**Critical Success Factors for Business-to-Consumer E-business:
Lessons from Amazon and Dell**

by

Le Kha

Bachelor of Science in Computer Science
Texas A&M University, 1989

Submitted to the Sloan School of Management
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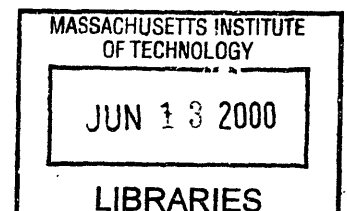
Certified by _____

Henry Weil, Senior Lecturer
MIT Sloan School of Management
Thesis Supervisor

Accepted by _____

David Weber, Director
MOT Program

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Abstract

The Internet has becoming an increasingly important channel for both business-to-consumer and business-to-business e-commerce. It has changed the way many companies do business. Every day, more and more companies worldwide are being linked electronically. But the success rate in terms of profitability for these startups is low. This thesis focuses on business-to-consumer aspect of e-commerce. My research is to study the models from a set of online merchants and see how these companies translate their companies' e-business vision into reality. What are the critical factors these online merchants considered as they transform their companies into an e-commerce? This thesis identifies the key success factors of this technology strategy and model as well as helps understanding to what extent this success can be replicated in other markets and industries.

Through detailed case studies on Amazon and Dell, we will analyze their strategies and identify the success factors that make them unique to thrive on this competitive landscape of the Digital Economy.

Thesis Supervisor: Henry Weil

Title: Senior Lecturer

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Critical Success Factors for Business-to-Consumer E-business: Lessons from Amazon and Dell

Introduction

Dell says it does more than \$10 million a day in sales over the Internet, roughly \$300 million a month. That's 20 percent of its total revenue. Cisco reported sales of \$2.83 billion in the most recent quarter, 73 percent of the company's sales are done through its Web site.

Why are Dell, Amazon and Cisco so successful doing business over the Web? As we will see later in the case studies, these companies are not just competing on price. Amazon illustrates the lesson of successful Web selling: Online merchants must continually reinvent themselves in this fast-changing medium.

This thesis focuses on business-to-consumer aspect of the e-commerce and identifies the success factors that are crucial to companies doing business online. Why are some companies successful at e-commerce while others flounder? What are businesses that are solving customer problems doing differently? Who are making money on the Internet, and what have they done differently from those who have failed? These success factors being practice by Dell and Amazon may seem obvious, trivial, intuitive and common sense in some case. However, as trivial as you may think, successfully applying these key factors to your business takes a tremendous amount of resource, investment and expertise.

How this thesis is organized

There are five parts to this thesis. Part I covers the impact of the Internet, issues confronting the big companies (e.g. why big companies are slow in response to change?) and reasons why online merchants facing tough time.

Part II presents the success factors if you are serious about competing in the Digital Age. In short, what makes some companies successful in the digital economy? The following success factors are derived from researching over two dozens online merchants in various industries (e.g. Mothenature, Drugstore, eToys, Virtual Vineyard, Cozone, Webvan, Streamline and Furniture). In addition, I spoke with management and executives from Mothenature, Streamline, Kozmo, MyPoint, Silknet, MarketSoft, Webvan and Dell about issues confronting their businesses, marketing challenges, business models -- what they understood about what their customers needed and what they had done to respond to those customers' spoken and unspoken needs.

1. Start with speed
2. Integrate the Web into the core of what the company does. Rethink your business model. Focusing on how to facilitate the Internet capabilities with your company's core expertise that may lead to the creation of new business? Implementing this vision is hard. The work requires a visionary leader. It requires a great deal of investment. It requires alliance and partnership.
3. Focus on how the company adds value for its customers. For example, Dell concentrates on streamlining all the business processes that impact the customer.
4. Convert a "click-stream" into purchases.
5. Make it easy for customers to do business with you.

6. Focus on improving customer's experience across channels of interaction. Do not just focus on the Internet. You need to consider all the different ways customers interact with your companies: phone, face-to-face, e-mail, PDA, and kiosk. Whether the customer helps himself to information over the Web or the phone, that information must be accessible.

It is difficult if not impossible to write a case study on every site I have studied. However, throughout Part II of the thesis, I will use these sites as examples to compare and contrast when discussing the key factors. Part III presents steps and issues that need to be considered before taking your business online. Part IV of this thesis describes my personal view of the ongoing development of the Internet.

In Part V, we will analyze Amazon and Dell in greater details and see how these companies integrate the Web into the core of what the companies do and how they evolve their e-business strategies and technology infrastructures.

The objective of the thesis is to analyze and identify a number of critical success factors and a framework worth consideration by dot-com startups. I select these companies because they are the ones I feel best illustrate the critical success factors that this thesis emphasizes. Amazon and Dell (icon of the Digital Age) have done a great job of making it easy for customers to do business with them. This is not to say that other companies have done a poor job.

While none of the sites achieved excellence across all areas, these on-line commerce stars show us many outstanding practices in how they apply success factors. They 1) focus how company

adds value for its customers; 2) foster customer loyalty by engaging customers and delivering personalized content; and 3) make it easier for customers to do business with them.

Before we begin, let me define a few terms that will be referred to in this thesis. E-commerce and e-business are not the same. We define e-commerce as buying and selling over digital media. E-business, in addition to encompassing e-commerce, includes both front-and back-office applications that form the engine for modern business.

I. Impact of Internet

This section introduces the World Wide Web today. As exciting as it is, the world of E-business contains problems as well as opportunities. In this section, we will address the most commonly cited areas of concern among established companies using the World Wide Web: the so-called cannibalization, active inertia and channel conflicts. Based on the experiences of early adopters, we will show how the Web's real potential is different from what we once thought it was and examine the reasons e-tailers face tough time.

The internet has revolutionized the way companies do business. E-business offers companies fundamentally new ways to expand the markets in which they compete, opportunities to streamline their corporate business processes to deliver products and services more efficiently, and new innovative channels to attract and retain customers. Market conditions constantly change as new competitors enter markets with new business models. Customer loyalty is fleeting, as customers are just one click away from switching to competitors. Customers can hop from merchant to merchant seeking the best buys. Internet comparison-shopping services offered by Yahoo! Inc., CNET Networks, Evenbetter.com and mySimon.com and others make it easy to scan book, compact disk and computer prices on multiple sites. DealPilot.com (comparison service for books, videos and music) is impressive. It lists results by total price, including tax and shipping. Competitive advantage and product lifecycle is short, as traditional barriers are rendered irrelevant by the technological advances. Internet dramatically speeds up the pace of business, making markets far more transparent.

More importantly, the Internet has brought about an unparalleled business opportunity that otherwise would not exist. For examples, the Web makes it possible for companies to sell excess inventory or to hold live auctions for just about everything. J. C. Penny Co. offers auctions on its Web site, to sell overstocked items from its 1,150 department stores and catalog. Companies often need to sell excess inventory at greatly reduced prices. But if customer flocked to the lower prices, it could obliterate their normal retail price structure (e.g. Ralph Lauren may not want to announce that his goods are available on the cheap at the outlet mall).

The Internet creates a new business frontier, full of rapid change, risks and opportunity. Start-ups and new companies appear every day. Companies such as MarkSoft, Silknet, Kana, and Insite Market Technology provide software and tools to help online merchants to better manage their inventory, optimize gross margin, and help plan purchases, all of which would not have existed have it not been Internet.

Internet also allows new kind of business, "digital age middlemen" that otherwise would not be possible. Examples of this kind of business ranging from consumer service providers like Lending Tree (a mortgage service that arranges for different lending institutions to compete for the borrower's business) to business transaction facilitators such as FreeMarkets Online (a bidding service for companies seeking industrial supplies). Other examples include GE Trade Web (helps smaller companies access opportunities to reach new customers) and priceline.com (a service that lets buyers name their own price for a variety of items such as airline tickets, hotels and loans).

The fact that there is now a new sales channel that has never before existed creates an indisputable challenge to traditional businesses. The Internet makes it possible for new entrants to redefine an industry. Internet-based stock trading, for example, redefined the discount brokerage business; online music and book sales sites are redefining retailing for these products.

Internet will not replace off-line retailing. Wal-Mart and Costco are not going to disappear anytime soon. On the other hand, the Web will fundamentally change customers' expectations about convenience, speed, comparability, price, and service. From the smallest company to the largest enterprise, the Internet has forced virtually every business to reconsider the way it operates and rethink its business model. Internet can affect virtually any industry -- groceries, electronics, automobiles, books, music, industrial components and garden supplies are actively being sold on the Web.

Managers can't afford to avoid thinking about the impact of e-commerce on their businesses. At the very least, they need to understand the opportunities available to them and recognize how their companies may be vulnerable if rivals seize those opportunities first. To determine what opportunities or threats are there out in the business world, managers should focus in a systematic way what the Internet can allow their companies to do.

First Wave of E-Commerce

First wave also refers to as the 'web presence' phase, where companies established a web presence. In this section, we will look at the impediments that hinder big companies from moving their business online. We then examine the challenges that online retailers are facing.

Big and established companies face many challenges in the first wave of e-commerce. Top challenges for the big companies are: 1) reluctant to cannibalize the core business, 2) active inertia (complacency and denial), and 3) channel conflicts

Reluctant to cannibalize the core business

As we see e-commerce has touched almost every industry. The pressure is on the established companies to think through the competitive implications. Many incumbents have to make radical changes -- mindset, new business model, human side of information technology (IT), organizational structure, new strategy and some might even have to cannibalize existing business or channels if they are going to compete with the new entrants.

For example, Encyclopaedia Britannica became the victim of the digital age and a victim of its own success. The lesson, make your business obsolete or someone else will do it for you, was told and retold in countless management books. Britannica unwilling to cannibalize sales of its 32-volume set sold for \$1,600, when Microsoft decided to get into encyclopedia business.

Microsoft put the content on the CD, Encarta, and sold to users for \$49.95 (in some case bundled free with PCs). Britannica executives did not feel Microsoft's entrant to encyclopedia business as a threat. They judged that they had the world's best content and Encarta (licensed from Funk &

Wagnalls encyclopedia) was an inferior product. The firm failed to see the computer was its real threat. When the threat became obvious, Britannica decided to offer on-line subscription for \$120 per year or a CD version for \$200, which was still four times higher than Encarta. On-line subscriptions attracted very few customers and sales continued to slide. Ultimately, the firm was sold to a Swiss investor in 1996; the company disbanded its door-to-door sales force of 110 agents. Britannica's failure demonstrates how drastically the new economics of information can change the rules of competition, allowing new entrants to obsolete your product and your source of competitive advantage as supreme brand and sales force. Likewise, management at CompuServe (founded in 1969, introduced its first online service in 1979 with double the number of customers AOL had) failed to react to the emergence of the Web as a competitive threat. CompuServe floundered by trying to cling to the vestiges of the past and watched helplessly as the number of its subscribers fell as competition escalated.

On the contrary, Egghead closed all its retail outlets in 1998 and became an online emporium. This reflects a need to rethink the company's entire business. The software business is intensely dynamic and competitive, and the company's shift is no guarantee of success. New sweeping changes such as the ability to rent software online are likely to further redefine the competitive environment, and there is no guarantee that Egghead will survive. The lesson is Egghead realized that it needed to do business in a radically different way and took action.

Fortune magazine considers the following companies have done a superb job in cannibalizing their business. Fortune calls it "The Cannibals We Like Most".

Table 1: Fortune Table

<i>Company</i>	<i>Cannibal</i>	<i>Why We Like It</i>
<i>Bank One</i>	Wingspanbank.com	A completely virtual bank, Wingspan's cost structure lets it offer more attractive rates than its parent. Twelve-month CDs pay 4.97% at Bank One, 5.70% at Wingspan.
<i>Charles Schwab</i>	Schwab.com (originally e.Schwab)	Discount brokerage established a separate unit, e.Schwab, which subsequently ate Schwab. An inspiration for all would-be cannibals, and the only clear-cut success story of its kind to date.
<i>PetSmart</i>	PetSmart.com	Pet-supply chain partnered with Internet incubator Idealab to create a stand-alone Internet company. By retaining only a 49.9% stake, gave spinout a free hand to compete against physical stores.
<i>Romac International</i>	Kforce.com	Huge staffing company is courting Wall Street's wrath as it radically Webifies.
<i>TMP Worldwide</i>	Monster.com	An advertising agency once focused on print recruitment ads, TMP is now firmly in the maw of its interactive division, anchored by the fast-growing job board Monster.com.

Active Inertia

Donald N. Sull,¹ an assistant professor of strategic and international management at London Business School coined the term 'active inertia', which describes managers who tend to follow established patterns of strategies and the path that led them to success in the past. Active inertia is among the reasons that established companies are slow in response to dramatic environmental shifts, incorrectly anticipate competitors' moves, or miss strategic opportunities. When revenue increases, stock price soars and number of employees multiplies, managers believe that they

¹ Why Good Companies Go Bad." Harvard Business Review, July-August 1999

have found a way to run their business. Hence, they spend time and energy to refine the formulas that have led them to their initial success. Active inertia led managers to believe that they have the right products, and dominate the customers and market share. Market and technology are changing rapidly in today's e-commerce environment. Many successful companies in the past became the victims of their own success because they failed to see the shifts from the old (ways of doing business and competing) to the new, and the magnitude of the threats from the new entrants. Philip Anderson, an associate professor, teaches Internet strategy at the Tuck School of Business at Dartmouth said, "Big companies have the hardest time figuring out that the wind is changing. It's easy to fix mistakes but terribly difficult to change what made you a success."

Complacency and denial are among the top reasons that well-established companies cannot respond quickly to changes. Complacency often afflicts precisely those who have been the most successful. They are not organized and structured to deal with dynamic changes. Virtually every successful company attempts to maintain viability and profitability of its existing business in spite of the change in every dimension of its business environment. Some are in a state of denial. They like to remain in their comfort zone and avoid growth prospects that do not align with their distinctive core businesses. They have been trained to concentrate on improving products, increasing market share and growing revenue. It is hard to convince conservative companies or corporate IT leaders to experiment or to change their business models. They often want to see financial data where none exist and proof that the changes are promising before they commit to any action. So they spend millions on old stuff to be safe. What these companies do not understand is that, in a business environment of increased competition, the need for

competitive differentiation is greater than ever, and complacency will not lead to increased market share. Sticking in your comfort zone could lead to business failure. Railroad industry denied that people prefer air transportation to railcars. The lesson from railroad industry is that not taking technological change seriously can lead to extinction.

Next Computer System is a case in point. While Steve Jobs was busy with his Next Computer System, the outside world was changing. Jobs never considered PC industry was his competitor because PCs did not have a friendly graphical user interface (GUI). At the time of the development of Next computer system, the competition he had in mind was Mac not PC. Jobs was caught off guard. Microsoft persistent efforts with Windows changed the PC environment by the time the Next computer system emerged. And with hundreds of computer manufacturers flocked to supply PCs, these PCs became far more affordable than the Mac.

The lesson is that managers need to think of any change in their environment as a blip on the radar screen. You have to monitor the radar screen even if you can't tell what that blip represents at first but you keep watching radar scan after radar scan, looking to see if the object is approaching, at what speed, and what shape it takes as it comes closer.

It is hard to predict which technology will capture the market. No one can predict the future with good degree of certainty. To hedge their technology bets many companies are active in many new e-business ventures, embracing e-commerce and Internet. Intel, like everyone else, is only guessing at how telecommunications, computers, software, broadband Net access, and wireless technologies are going to converge. Hence, Intel has been invested and diversified in many

businesses -- information appliances, communication products, networking business and Web hosting services. Its recent acquisitions are all geared toward new technologies that Intel does not dominate.

Entrenched companies have found it more difficult than others to let go of the "good old way" and are sometimes less nimble than newcomers. To thrive, they will need to find ways of eliminating excess baggage. "Technology, competition and businesses are about creating changes for other businesses," said Andrew Grove.² So the ability to recognize when something is changing in a big way (i.e. Internet), to recognize that the winds have shifted and to take appropriate action before you wreck your boat is crucial to the future of the company. You need to ask yourself what technologies have and will impact your business and customers.

"Challenging the current state of affairs ensures that you don't get too wrapped up in your success." Said Michael Dell.³ Do you see new technologies emerge? In short, companies must be able to spot trends quickly. You need to understand the technology trends and know the technology your company is betting on.

So what are the new trends today? What is going to be different the next five years? Internet will be the most obvious one. With more than 60 millions people connected in less than ten years, the Internet has become more than just sales or distribution channel. It enables the integration of information, contents, networks and business applications. As a result, growing number of consumers conduct business the Web, such as buying products, trading securities,

² The author of the book "Only the Paranoid Survive".

³ The author of the book "Direct from Dell".

paying bills, and purchasing airline tickets. Clearly, the Internet is starting to affect every facet of our lives both in personal and business.

You need to be able to differentiate fads from trends. Fads catch on quickly, spread and then die quickly. In contrast, trends often start slowly and spread like wildfire as mass-market takes off. Trends tend to last five to ten years. The Web is a great example of a trend. It started slowly in 1989 in a remote lab in Switzerland and with the advent of the Mosaic browser, burst onto the mass market, taking everyone by surprise. Did you identify the Web as a major trend in 1992?

Most if not all of the major telecommunication companies failed to act early on the cellular phone technology development. Nokia (instead of other established telecommunication companies) turned out to be the initial player in the wireless industry. As a manager, your ability to comprehend core trends will improve your chances of better grasping the opportunities facing your company. Take a moment to look at your competitors' Web sites -- what can you offer that your competitors cannot? Do this every week. This is the only way your are going to stay ahead of the game.

Other trends are wireless applications, multi-channel integration (computer and voice recognition), convergence of sales and service (customization, personalization and integration), agent technology and infrastructure convergence (voice, data and video).

In summary, companies need to adapt to change, react quickly and continuously, innovate ceaselessly and take on new strategic imperatives faster than their competitors. You want to be

in the high ground when the competitors are still in the valley. In other words, managers need to have a good sense of what is going on -- both within the technology and around your industry.

Channel Conflicts

The cannibalization issue can be more complicated if companies do not own the distribution channel. New companies have no existing value chains to protect and so can set up their businesses in ways that take advantage of the Internet. But companies that deal through others to reach end customers will need to weigh the importance of protecting existing relationships with the distributors and partners that account for most of their current revenue against the advantages of establishing future strategic positions and revenue streams. This is the most difficult issue that large, established companies face in making decisions about engaging in Internet commerce.

Compaq and IBM faced this dilemma -- channel conflict. Compaq depends on its resellers for almost 75% of its sales. It was not easy for Compaq to sell online; doing so would jeopardize the company's long-standing relationship with its resellers. Indeed, when Compaq launched its direct sales program (DirectPlus), the company's sales fell immediately the following month because its resellers were angry and referred customers to HP hardware instead. Compaq sort of backed off selling computers on the Internet because resellers were irked. Airlines like Lufthansa, British Airways, and KLM face a similar dilemma. They have been slow to promote direct sales over the Internet because they fear a backlash from the travel agents they have been relying on.

Levi-Strauss is another great example that relationship with distributors can also turn into shackles. Levi's retailer partners objected the company to sell on line and demanded that Levi to

pull its products from its Internet site. Levi did not want to antagonize its retailers and confirmed that it would quit direct sales on the Web after Christmas and leave selling its clothing online to third parties such as J.C. Penney and Macy.com. Levi followed its retailers' demands was unprecedented in its company history. Here we can see even company with strong brand as that of Levi, which never had to grant geographic exclusivity for its product to its partners, was confronted by Internet channel conflict.

Ask to see if the distribution chain in your industry like to consolidate and if you should take the initiative to make that happen. It is easier to set up a web site but it is difficult to create a web-based business model. One thing is certain: whatever the changes play out in individual industry, they will unquestionably affect companies' relationships with their customers and the value propositions for many companies in the foreseeable future.

So, should companies such as Compaq, IBM and Levi back off selling directly on the Internet?

Extensive research and studies have shown that established companies depend on resellers and distributors have no choice but move forward. "Compaq just got to bite the bullet and take six months of low sales," says Lester Thurow, professor of management and economics at MIT.

Clayton Christensen, professor at Harvard Business School, said. "If companies try to manage the health of their distribution channel won't end up on top. Damm the resellers and full speed ahead." As Rajesh Chandy, marketing professor at the Universities of Houston puts it:

"Cannibalize before there is nothing of value left to cannibalize." "Show me a business that's not on the Internet, and I'll show you a business that's out of touch with the future," Dell said.⁴

⁴ Nancy Weil, "Michael Dell explodes 'net myths"

Even Merrill Lynch and Morgan Stanley Dean Witter finally launched ambitious online trading initiatives. Should your company do business online? Evidence overwhelmingly indicates that traditional companies such as Merrill are at a disadvantage when a disruptive technology like the Internet blasts through. Knowing that online initiative could cannibalize Merill's core business, Merrill has no choice but to move aggressively.

Not only did Amazon's success force Barnes & Noble and Border to set up sites on the Internet, but also prompted other retailer giants, including Wal-Mart to go online sooner than they might have planned. Most retailers are selling online. The message is clear. "In five years time, all companies will be Internet companies, or they won't be companies at all," said Andy Grove, the Chairman of Intel.⁵

In his book, "The Innovator's Dilemma", Christensen suggested that the only way to survive is to set up a separate company to cannibalize the parent. Bank One and Charles Schwab both set up a separate entity and compete head-on with the parent company. "It hurts at first. But it sure beats extinction." Jerry Useem said.⁶

Internet Retailers Face Tough Time

Companies that have established their Web presence in the first-wave of e-commerce are facing tough time and struggling to survive -- cutthroat competition, high customer acquisition cost, low conversion rate and customer loyalty.

⁵ "The Net Imperative," The Economist, June 26, 1999

⁶ "Internet Defense Strategy", Fortune Magazine, September 6, 1999

Most of the e-tailing stocks that have recently gone public (such as Pets.com Inc., Buy.com Inc. and VarsityBooks Inc.) are trading below their IPO prices. Shares of the online pet supply store Pets.com, Value American, CDNow and Mothenature, for instance, hover around \$5 a share. For all the double-digit, single-day gains that initially made these Internet retailing stocks famous, it seems that their subsequent drops to the downside were almost as large (see Table 2).

Table 2: E-Commerce firms trading below their offering price*

<i>Company</i>	<i>IPO Date</i>	<i>IPO Price</i>	<i>4/12 Price</i>	<i>% Change</i>
Value America	4/99	\$23	\$ 3.00	-86.96%
Fashionmall.com	5/99	\$13	\$ 3.00	-76.92%
SmarterKids.com	11/99	\$14	\$ 2.75	-80.36%
Barnesandnoble.com	5/99	\$18	\$ 8.81	-51.06%
Musicmaker.com	7/99	\$14	\$ 3.19	-77.21%
CDNow	2/98	\$16	\$ 4.13	-74.19%
AutoBytel	3/99	\$23	\$ 6.50	-71.74%
Autoweb.com	3/99	\$14	\$ 5.50	-60.71%
1-800-Flowers.com	8/99	\$21	\$ 5.50	-73.81%
Cyberian Outpost	7/98	\$18	\$ 6.75	-62.50%
Pets.com	9/99	\$48	\$ 5.75	-88.02%
Beyond.com	6/98	\$ 9	\$ 3.19	-64.56%
Peapod	6/97	\$16	\$ 2.81	-82.44%
Streamline.com	6/99	\$10	\$ 4 7/8	-51.25%
Webvan	11/99	\$15	\$ 5.50	-63.33%
Mothenature.com	12/99	\$13	\$ 2.56	-80.31%
Drkoop.com	6/99	\$ 9	\$ 2.56	-71.56%

* Based on closing price as of 4/12/2000

Even more terrifying is that many of the e-tailing pioneers -- including Drugstore.com Inc., eToys Inc., Value America, and the software store Beyond.com Corp. -- are trading at a fraction of their highs for the year. Some are running out of cash, and increasingly they are seen as questionable business. The question being pondered by most online retailers is not so much when if they ever going to make profit. The questions are what went wrong and why they are in so much trouble.

Reasons Internet Retailers Face Tough Time:

1. Costs of conducting business online was overlooked initially such as hefty spending on advertising to draw traffic and acquire customers. Even Amazon found it needed to increase advertising spending beyond what was planned last holiday season to spread words that the firm is no longer just a bookseller.

Despite heavy investment in brand building (many e-retailers spent \$2.2 million for a 30-second slot during Super Bowl), most consumers still do not know the difference between a Cyberian Outpost and a CyberStores.com, or Pets.com and Petstore.com.

2. There are fulfillment problems. On top of exorbitant ad spending, many of these online stores did not realize that they still have to build warehouses even though they do not need physical stores. Many retailers did invest in infrastructure and web processing but not warehouse. Toy R Us Inc., for example, was unable to fulfill some orders, but the firm offered \$100 in store gift certificate to make up for the problems. Most of the delays were at companies that focused only on site development and didn't look at inventory issues or hire enough people in their warehouses. Amazon spent billion of dollars to build its distribution centers last year. There are many pieces you need to build before you can make money online.

Getting an online retail site up and running is not cheap. Forrester estimates the cost of building an Internet storefront from scratch ranges from \$2 million to \$41 million in the first year.

Ongoing costs range from \$2 million to \$49 million.⁷ The breakdown of the cost is as follows:

1. **Core commerce functionality.** This includes the hardware, software, Internet connections, technical and executive staff.
2. **Content.** Product pictures and knowledge base to help customers try out products.
3. **Guided selling.** New technologies such as collaborative filtering and configurators.
4. **Marketing and business development.** This includes promotional costs such as on and offline advertising, portal deals and sponsorships.
5. **Presale customer service.** Marketing departments must offer customer service capabilities to close sales.

The data in the Table 3 shows the cost breakdown for a basic transaction site with 250 transactions per day.

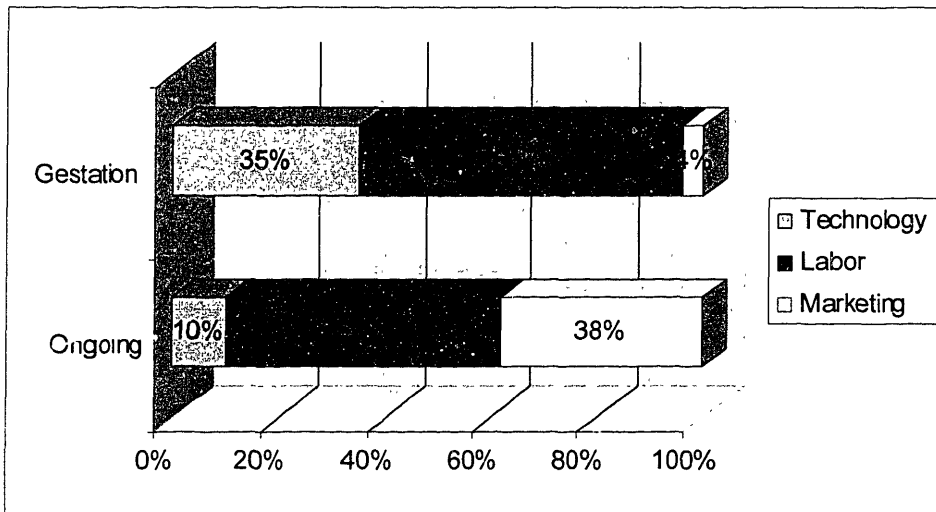
⁷ Evie Black Dykema, David M. Cooperstein and Donnie Young, "Ringin' Up Web Store Costs," Forrester Report, August 1999

Table 3: Cost breakdown by functionality (\$ thousands)

Cost by functionality (\$ thousands)	Gestation	% of total	Ongoing	% of total
Core commerce	841	47%	528	27%
Content	359	20%	72	4%
Guide selling	175	10%	24	1%
Marketing	305	17%	1,037	53%
Presale customer service	107	6%	284	15%
Total	\$1,787		\$1,945	

Source: Forrester Research, Inc.

Figure 1: Cost breakdown by operation



Source: Forrester Research, Inc.

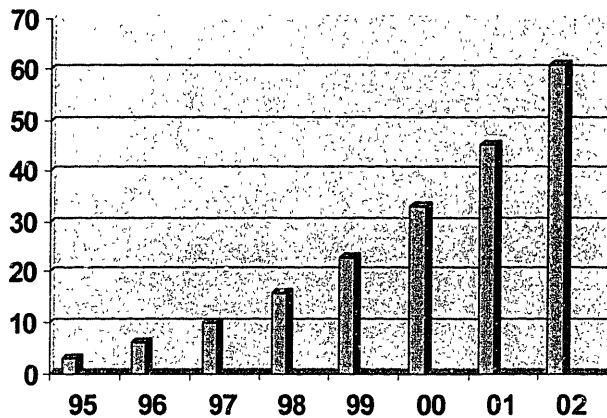
Table 4: IT spending for year 2000

<i>IT by Industry</i>	
<i>Breakdown of U.S. IT spending for 2000:</i>	
\$55.6B	Financial services
\$52.4B	Process manufacturing
\$30.1B	Discrete manufacturing
\$32.0B	Retail distribution
\$16.9B	Wholesale distribution
\$19.8B	Health services
\$17.7B	Federal government
\$10.5B	State and local government

Source: Computer Economics INC., Carlsbad, California

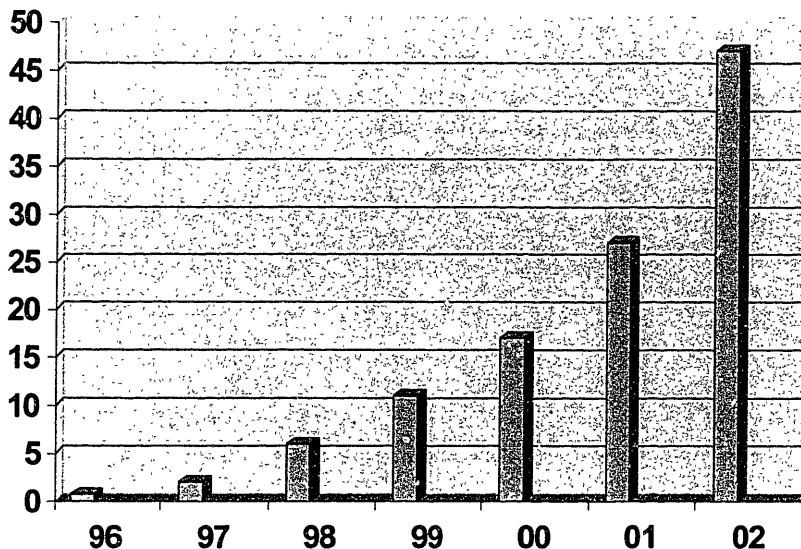
In the midst of so much confusion, one thing that appears to be certain, is the continued growth in overall e-tailing sales. Forrester Research projects online retail sales will grow to \$184.5 billion in 2004 from \$20.3 billion in 1999.

Figure 2: Estimate number of online shoppers in millions



Source: Jupiter Communications

Figure 3: Estimate total online shopping revenues in billions



Source: Jupiter Communications

So what makes companies successful? This is the topic of the next section.

II. Critical Success Factors

As we have seen in previous section, there are many misconceptions about conducting an online business. This section illustrates the key success factors that online retailer must consider seriously in order to compete in the digital economy. The critical success factors are:

- 1) Start with speed
- 2) Integrate the Web into the core of what the company does
- 3) Focus on how the company adds value for its customers
- 4) Make it easy for customers to do business with you
- 5) Focus on improving customer's experience across channels of interaction
- 6) Convert a "click-stream" into purchases

Start with speed

To succeed, a company must start with speed as an explicit goal, which is as important as the other central goals that define a company's activities. In the emerging economy, the importance of speed takes on a broader meaning than simply being first to the marketplace. Early entry into the market increases the likelihood of capturing a premium price and establishing a strong market share. Speed must integrate into all aspects of a company: its decision-making process, its training, its attitude toward risk and failure, as well as its management style.

In an era where there is a constant initiative to enhance, to improve, to stay one step ahead, companies that have mastered the ability to act quickly will have a distinct advantage. They will learn more because they will find ways to experiment more. In addition, they will find low-cost ways to quickly enter markets, assess their relative competitive strength, and in some cases be smart enough to exit quickly.

Speed can be a competitive advantage, either in being early to market or in being faster than your competitors in whatever you do. As the saying goes in Silicon Valley, "Speed is God, and time is the devil."⁸ Companies can use Internet to gain a competitive edge by increasing the speed of their activities and ultimately the speed with which they can provide services or products to the customers. Consequently, speed triggers mergers and acquisitions.

Unrelenting competitive pressures, intense competition and the rapid speed of innovation mean even the largest company cannot keep up with every sector of the market and customer demands are outpacing any single company's ability to keep up. So the acquisition of small start-ups with innovative technology can accelerate or replace internal product development. For example, to match speed at which the market was developing, Cisco began buying all the different pieces of technologies such as routing, remote access and switching that the firm could not develop fast enough internally. Table 5 below provides you an idea the number of companies Cisco has acquired from December 1, 1999 through February 16, 2000. Intel acquired twelve companies in 1999 for a total of \$6 billion. Mergers and consolidations are occurring in other fast-changing industries as well, like telecommunications, financial services and health care (Table 6 shows some of the megamergers).

⁸ John Hagel III and Arthur G. Armstrong, "Net Gain", Harvard Business School Press.

Table 5: Recent Cisco Acquisition (December 1, 1999 through February 16, 2000)

Company	Technology	Acquisition Costs
Growth Networks Inc.	Internet service provider switching fabric	\$355M
Altiga Networks	Enterprise virtual private Networks	\$567M*
Compatible System Corp.	Virtual private network service provider	*
Pirelli Optical Systems	Optical networking	\$2.15B
Internet Engineering Group LLC	Optical networking	\$25M
Worldwide Data Systems Inc.	Consulting and engineering services for data and voice networks	\$25.5M
All are privately held companies except Pirelli, which is a unit of publicly held Pirelli SpA		
*Combined cost of Altiga and Compatible Systems		

Source: Computerworld

Table 6: World Biggest Mergers

Date	Company	Value
Apr. 2000	Vodafone Airtouch and Mannesmann	\$180 billion
Jan. 2000	AOL and Time Warner	\$155 billion
May 1999	AT&T and MediaOne	\$ 56 billion
Jan. 1999	Vodafone and AirTouch	\$ 55.5 billion
Dec. 1998	Exxon and Mobil	\$ 77 billion
May 1998	SBC and Ameritech	\$ 62 billion
Apr. 1998	Citicorp and Travelers created Citigroup	\$ 70 billion
Apr. 1998	NationsBank and BankAmerica	\$ 60 billion

Another reason for companies to embrace merger and acquisition is when companies fail to realize the technology trend. Telecommunication companies have had to spend billions to buy their way into the game when they realized that they missed the technology trend and failed to act early on two of the biggest technology developments: cellular phones and the Internet. Nokia (not other established phone companies) turned out to be the "king" of the wireless industry.

Sometimes merger is ignited by the quest to remain as a leader and to expand business by enlisting from other companies such as Charles Schwab, Yahoo! and eBay. Charles Schwab

acquired U.S. Trust Corp. for \$2.7 billion, which gives Schwab access to wealthy clients and gives U.S. Trust access to more advanced technology. Likewise, PlanetAll acquisition added more than 1.5 million members to Amazon.com customer base.

Yahoo! and eBay's merger talk were launched in the wake of the merger between AOL and Time Warner, which prompted Yahoo to re-examine its strategies and whether to extend its reach into other corners of the online business. If successful, the merge would boost both companies' presence in electronic commerce, combining eBay's global trading community with Yahoo's expanding online offerings. Yahoo's large online traffic would help drive traffic to eBay's Web site, and the two could find significant cost savings. In addition, Yahoo's expanding global audience would make it easier for eBay to establish a stronger international presence.

A number of book publishers have also entered the merger fray. For example, Bertelsmann A. G. acquired Random House then merged with Bertelsmann's Bantam Doubleday Dell Publishing Group to create the world's largest English-language publisher. Pearson P.L.C. acquired the Putnam Berkley Group Inc. for \$336 million to create Penguin Putnam Inc. News Corporation merged its HarperCollins Publishers unit with the Hearst Book Group, a \$180 million acquisition that made HarperCollins the largest publisher after Random House.

As we can see, some companies use merger and acquisition as a part of their growth strategy. The objective of these companies is to build economies of scale in anticipation of a technology-driven transformation of the industry. The bigger players can better leverage new technologies and gain the scale to resist threats to their positions.

The integration of the Web into the core of what the company does

Online businesses are beyond putting up billboards on cyberspace and hoping customers will somehow get to your site. In an effort to determine how to build your business online, you need to rethink your business model and Internet strategy. You should consider the following questions as you plan to take your business to Internet:

1. How the Internet can be used to market and sell your existing products or services?
2. How can I use the Web and the Internet to build interactive relationships between prospects, customers, resellers, employees and suppliers?
3. How to facilitate the Internet capabilities with your company's core expertise that may lead to the creation of a new business?
4. By establishing an Internet channel, would costs reduce and service level increase?
5. How can I use the info I have about individual customers to make it easier for them to do business with me?
6. What is your business model (cost elimination, sales revenue, information trading, subscription or advertising model)?

For instance, Walt Disney did not clearly plan its Internet strategy; they tried to be all things to all people and they ended up being nothing to anybody. After spending \$500 million on advertising Go.com (its Web portal) still struggles to find a unique identity online. Go.com was supposed to serve as the center of Disney's network of sites. The firm's broad Internet strategy, weak branding effort, slapping the Go.com logo all over the Disney assets without saying what stood for, was regarded by many industry analysts as an imitation to Yahoo and America Online. According to the figures from the online research firm Media Metrix, Disney's assorted Web site ranks sixth with 21.3 million visitors in December. That was so far behind AOL and Yahoo.

Table 7: Number of visitors

Company	# of Visitor in December 1999 (million)
American Online	53.8
Yahoo	42.4
Microsoft	40.5
Go.com	21.5

Source: Media Metrix

Disney executives found that being No. 6 in the aggregated Web portal is not good enough. They decided to exit the all-purpose Web portal and refocus on entertainment, leisure and lifestyle -- areas tied to Disney's core business (movie, theme park and television).

The old GO portal failed because of a lack of a clear focus in product, execution, and marketing. GO's failure also carries a message for other portals: being everything to everybody in the digital economy is fruitless.

Evan I. Schwartz, author of Digital Darwinism, urges managers and executives to reexamine their business models. Running an e-business takes more than just putting the catalog and listing products on the web. Schwartz comments how company such as Peapod -- online grocery did not do quite as well as its competitor, Streamline.com, because the firm was running an e-business with a traditional business model. Peapod failed because the firm was just a delivery boy for the big supermarket chain. It lost sight of what its main mission of providing the ultimate life-simplifying solution to customers. Peapod's business is to deliver groceries. This means customer must be home to accept the delivery. Waiting at home for the delivery does not enable the time saving that the busy people want.

What is the strategy of your Web site? Many companies do not have a Web site strategy. Table 8 shows the responses from 387 companies participated in the survey, including retailers, consumer goods manufacturers, wholesales and distributors. As we can see from Table 8, nearly one third of the companies participated in the survey do not have a strategy.

Table 8: Web Site Strategy

What is the primary strategic purpose of your Web site?	
33%	Gain competitive advantage
31%	No strategy
19%	Competitive parity
13%	Other
4%	Don't know

Source: Deloitte & Touche LLP, San Francisco
 Base: 387 companies surveyed, including retailers, consumer goods manufacturers, wholesalers and distributors.

A strategy for your company's Web presence is a cornerstone for transpiring your company in this e-commerce business environment. Revenue is only one measure of a site's success. You can have a successful site that generates little revenue, so long as it answers the purpose for which it is designed. Maybe that purpose is brand recognition, promotional presence (Disney.com and Hilton.com, Procter and Gamble has sites for a number of brands, such as <http://www.olean.com> & www.sunnyd.com) or enhancement of customer confidence or online support of your brick-and-mortar. For example, Ragu does not attempt to sell its products over the Internet. Ragu uses the Internet to get feedback from its customers and to increase brand awareness.

Focus on how the company adds value for its customers

Online merchants must have speed, best price, rapid delivery and customization to thrive on this fast-paced economy. Business will constantly be moving to develop service that adds value in the face of new developments and increase customer base. Performing the transactions online, at a lower cost, isn't nearly enough. One must add tremendous value, inventing new features and services that smooth out the process and lead to a new surge in buying and selling. In other words, market leaders must find new ways to delight their customers.

As more and more companies are going online, companies have to do more than just offering more selections or competing on price. Companies have no competitive advantage if they just compete solely on price and product selection because competitors can easily imitate.

In fact, a new survey from the Wharton and Columbia University Business Schools shows that most consumers care less about online comparison shopping. According to Peter Fader, an associate professor of marketing at the University of Pennsylvania's Wharton School, average user searches for items on just 1.1 book sites, 1.3 CD sites and 1.8 travel sites during an active month of shopping. (The researchers combed data from 10,000 households compiled by measurement firm Media Metric.) Fader said, "The results of the survey indicate users are more interested in convenience. Consumers just want to get the job done and move on."

Why do customers buy from you? Timothy DeMello founded the Streamline.com, offering products from groceries, pet food and supplies to services such as dry cleaning, shoe repair, film processing, bottled water delivery and video rental among others. Streamline.com's customers

are dual-income households in suburban households in the greater Boston area. He segments the market and operates mainly in Boston and Washington, DC, and has moved into Chicago with its purchase of Scotty's Home Market.

DeMello's business model was not to sell groceries over the Internet. He set out to study what exactly the customers needed by studying a very specific target market. DeMello does better than his competitors (e.g. Peapod, Homerun and Netgrocer) because he offers a solution that embraces consumers and tells them how much better their daily lives will be. DeMello knows the market and his customers; he has found a niche to thrive on.

Unlike Streamline.com, Peapod's business model requires customers must be home to accept delivery. But waiting at home for the delivery does not meet the customer's objective to save time. The lesson here is clear. Serving your customers is as important as how well you serve them.

Amazon.com is a great example that consistently using technology to add value and service to customers. For example, Amazon.com was the first commercial site to use "collaborative filtering" technologies, which allows the customers to see recommendations from other who have bought the product, "1-click ordering", "shopping cart", "purchase circles", "Friends and Favorites", "book review", "hard-to-find books", and "recommendation center". When you choose a book, Amazon will automatically list the related titles based on the purchase patterns of other customers. The form of recommending combined with a customer database serves as intelligently cross-selling products.

In analyzing a potential initiative, it is important to keep in mind that the competitive environment is not static. Instead of depending on customer loyalty, company should be adding value that will differentiate its site from other sites (the next topic that I will discuss).

Focus on creating the best experience for customer segment you are serving

It is important to know which customer segment you are serving so that you build a better site (more comprehensiveness). You can't stand for something if you chase after everything. Eventually, you need to turn profitable. Different customers bring in different revenue streams. Therefore, it is important that you identify your most profitable customers and create the best experience when serving them. As Schwartz⁹ puts it, "Price is not the primary factor for success in e-business. Successful companies are those who keep forcing shifts in the market and actively defining the evolution of the marketplace." "We have found that pricing is only one-third of our customers' decision-making process; the other two-thirds represent service and support." Michael Dell said.⁸

American Airlines' Web site was first designed to serve its most profitable customers -- 32 million AAdvantage frequent flyers. They are profitable because they are educated travelers who require less handholding than the occasional travelers do and they fly frequently.

Wells Fargo Bank focused on its high-net-worth customers when it redesigned its call center operations. Wells understood that it was important to create the best experience for this segment

⁹ Evan I. Schwartz, "Digital Darwinism": 7 Breakthrough Business Strategies for Surviving in the Cutthroat Web Economy

⁸ Michael Dell , "Direct from Dell"

of customers to transfer funds, redeem bonds and invest in money market funds with a single phone call.

Besides enhancing existing relationship, the need to retain customers is still of primary concern to most businesses. Several studies document that the average company loses half its customers every five years, and that it costs five to ten times to acquire new customers as it does to keep an existing one.

Customers' needs are different. One-size-fit-all philosophy doesn't work. Again, segmentation is crucial to improve retention and generate revenue by selling more to existing customers through cross-selling and up-selling. To improve customer retention and better serve the customers, companies need to develop and manage customer relationships via technology with sale and service integration. To stem the defection tide, you need to monitor some key information such as why they defect? What do all the customers defected have in common?

For example, by tracking the key information on customers who defected, Wells Fargo Bank discovered that its customers defected because they were moving out of Well's banking service area. As a result, Wells Fargo offered on-line banking services. On-line banking service allows Wells Fargo Bank to reduce its defections by 50 percent. Customers who would change banks when they moved no longer did so.

Charles Schwab is another example. Schwab, the No. 1 U.S. discount and Internet broker, acquired day-trading firm CyBerCorp for \$488 million. It also acquired U. S. Trust, a money

management firm, for \$2.9 billion in stock. Schwab realized the company is losing market share from the day traders as well as its affluent customers. Schwab is fighting both customer retention and technology wars. U.S. Trust acquisition enables Schwab to compete better with Merrill Lynch and Morgan Stanley Dean Witter for high-net worth segment of customers. The move enables Schwab to offer high-end investment advice and trust services to its existing wealthy customers (keep them from going to the competitors). The CyBerCorp deal is to help Schwab win over active traders because the firm has better software to process stock orders.

Web site differentiation is another important factors. Travel information, city weather and directory information is readily available on many sites. Many search and directory portals offer information and listings such as movies or restaurants. But users are not locked in to any one of these sites because other portal sites provide the same commodity information. If you were in the portal business, what would you do to give your customers a good reason to keep coming back to your Web site? In other words, how can you differentiate your site from the clutter?

One way to differentiate your site is to localize content to grab users and customize to the affinity of those users. Therefore, Web sites must segment types of customers according to both affinities and segmentation to create consumer loyalty and the potential for highly targeted advertising and commercial sales

Online retailers, portal and newspapers can build affinity. For instance, newspapers can reply on their particular market segment to build an affinity (e.g. older adults in southwest Florida as www.sunline.com does extremely well or sites that target teens segment such as www.bolt.com

and www.mtv.com). Booksellers can address customers' affinities by showing entertainment listings that tied to certain books.

Think about which customers you want to target and which ones you want to keep from defecting. And use technology to serve them and retain them. Pursuing a value added and value bundles can be applied not only to the online grocery or book-selling business but nearly all business that can be conducted over the Web.

Make it easy for customers to do business with you

Form alliances and partnership to provide one-stop shopping. The Internet makes it possible for companies to create new, formerly impossible solutions that help to build their existing business. With Internet it is relatively easy to create alliance with other businesses in such a way that both you and your customer benefit. The key is to make it virtually effortless for the customer to buy all of the products or service at the same time. Why force customer to interact with someone else in an area related to your product?

AutoByTel (originally designed to simply sell cars) offers an excellent example of product extension for one-stop shopping. The company first affiliates itself with dealers who would offer the desired car at the best price. To turn the process of buying car into one-stop shopping, Auto-By-Tel helps customers with their insurance needs by partnering with an existing prominently car insurance provider, AIG. Partnership is just one more weapon in the company's fight to remain an industry leader. GM, \$160 billion carmaker, announced e-GM, which provides customers with one-stop electronic shopping and billing for GM cars, mortgages, car financing

and other products and services. e-GM integrates front-end Internet sales and service systems with back-end supply-chain and manufacturing systems. Another example is travel industry where you buy tickets, book hotel and make car reservation all at once.

The main advantage of Dell direct model is that it allows Dell to build what customers order. But for this model to work there must be perfect synchronization with Dell's suppliers and partners. Dell has relationship with local parts suppliers, resulting in just in time part deliveries, low inventories, and low costs due to consistently falling prices.

Amazon.com uses acquisitions, alliances, and strategic partnerships to grow sales, improve services and bring in new customers. Two acquisitions have given Amazon.com a presence in Europe. Amazon.com acquired Bookpages Ltd in UK and the site previously owned by ABC Bucherdienst in Germany. Partnership and strategic investments in Pets.com, Greenlight.com and Living.com have given Amazon.com more lines of products to sell.

Amazon.com is a great example that allows others to build their success around its own success. "Touch as many nets as you can and maximize the opportunities of others."¹⁰ The firm has become a Web landlord, lending space on its site to others such as Drugstore.com and greenlight.com. "When confronted with a fork in the road, if all things are equal, go down the path that makes the opportunities of others plentiful."⁹ Jeff Bezos, founder of Amazon.com, has used acquisitions, alliances and strategic partnerships to expand his business, bring in new customers and add new services.

¹⁰ Kevin Kelly, "New Rules for the New Economy: 10 Radical Strategies for a Connect World"

Other examples are Wal-Mart and Yahoo. Yahoo has forged relationships with big Internet-access providers like AT&T, which manage a large portion of the Internet's infrastructure. Yahoo thus freed to concentrate on attracting customers, gathering data on them, and connecting them with both advertisers and merchants. Wal-Mart signed deals with order processing expert Fingerhut Business Services Inc. and bookseller Books-A-Million Inc. Both know how to distribute individual orders straight to customers' homes – a far different proposition than shipping in bulk, which is Wal-Mart's expertise.

The notion of forming alliances and partnerships to promote sales is not new. Software and semiconductor companies form alliances and partnerships for years.

RealNetworks (RN) is a streaming-media software company based in Seattle, Washington. The firm is pioneer and leader in the delivery of real-time audio and video contents over the Internet. RN's streaming products enable multimedia content developers to stream both video and audio contents over the Internet and Intranets to end-users. End-users can view the contents with the RN's software, known as RealPlayer.

RN has formed numbers of partnerships and alliances to ensure that its product works well when integrated with hardware and software products bought from others. For instance, RN partners with Microsoft to ensure RealPlayer and RealSystem products work in Windows 95 and Windows NT platforms; partners with Sun Microsystems to ensure that its products operate smoothly in Unix environment. Moreover, RN partners with technologies companies (such as

Red Hat, Sony, Adaptec, FastForward Networks, Virage, and PanAmSat) to create combined services to broadcast audio and video clips.¹¹

Intel fosters relationships with multiple vendors and suppliers to reduce supplier power and to reduce the threat that would reduce demand for microprocessors the same way RN does to ensure the products run smoothly across various platforms and integrate well with other software applications.

Focus on improving customer's experience across channels of interaction

To compete in the fast-changing environment created by the Internet, success depends on the product and service you are providing to your customers as well as on how you make it available to your customers. This means companies need to have their systems and information well integrated throughout the company to provide and build strong customer relationship and leverage knowledge.

Today, bricks-and-mortar is not the only channel available for customers. There are many access alternatives -- Web, direct dialup, PDA, phone, email, fax and kiosks. With all these service channels proliferating, customers are demanding multi-channel service integration. In other words, customers need to be able to call in or log into any area of a company, immediately be recognized, and have their requests or purchases processed smoothly.

Even with all the hypes around the convenience of the Web, I find that booking a flight using a travel agent or by calling the airline directly, I cannot see record of that reservation when I log

¹¹ MCI and Progressive Team Up; Microsoft to Acquire Vxtreme, The Wall Street Journal Interactive Edition, August 10, 1997

onto the Web site. Similarly, if I purchase a ticket on the Web site but call in to make a last-minute change in my itinerary, service representative cannot bring up the reservation I made on the Web.

Recently, I found a ticket on Travelocity Web site and decided to purchase the ticket. But I had question about the departure time, so I called U.S. Airways. After we went through a long list of questions, she told me that her system did not show the ticket I was referring to and suggested that I buy the ticket on the Web. This was very annoying. Customers want seamless experience. Whether the customers book travel themselves or call airline on the phone or use travel agent for any part of the itinerary, all the information should be accessible to the customers or travel agents or customer service representatives who may need to access or change it.

Second Wave of E-Commerce

Short-term "Strategy"
Quickly move business
to the Internet



Long-term Necessity
Integrated, multi-
channel touch points

Source: Deutsche Banc Alex Brown

Even though many companies are quickly moving their businesses online, for the business to survive the second wave of e-commerce, companies must treat the Internet as one of many communication channels and seamlessly connected and leveraged by all other channels.

Companies should not think of front-end and back-end process separately. Instead, companies need to build a tightly coupled enterprise and highly integrated multi-channels (see figure below). E-business solution (platform) is in the center of the triangle, meaning your business is the intersection of the Web, customer and transaction.

E-Commerce
(The Web)

**E-biz
Solution
(Platform)**

Transaction
Enterprise Resource Planning (ERP)

Customer
Customer Relationship Management (CRM)

Lacking Integration: technological snafus and poor processes can turn business away. Back-end process has been a problem for many online shopping sites. The problem often is poor integration between the Web systems and the legacy systems for order processing, shipping and other back-end functions, usually because the systems are built and maintained by different groups in the company. Many companies spend billions of dollars on application software and still do not have the information they need to run their businesses well! The reason is that they lack integration across applications -- most application software automates some tasks, but not the entire processes. Clearly, the problem facing companies is how to integrate enterprise applications for seamless flow of information.

Company cannot simply duplicate existing retail operations or switch the mail-order model online and expect it to run. For example, companies need real-time inventory control (so customer knows whether an item is in stock). Companies need to integrate their Web sites and their back-end systems, the heart of their operations: inventory management, order processing, financials, automated call distribution, interactive voice response, e-mail order confirmation and customer service. Many companies spend time and investments at the front end (Web interface) but neglect the importance at the back end, where orders are processed. Fulfillment is such a critical factor of customer retention. Therefore, company needs to emphasize on customer satisfaction all the way through the transaction.

There are increasing number of dropped shopping carts and decreasing rate of satisfaction with online shopping as a result of users having difficulty completing e-commerce transactions.

Jupiter Communications survey stated that 40% of online shoppers were more likely to purchase

if they were able to receive some form of live interaction (Table 9 shows only 3% of major e-commerce sites offers a live 'help' button). In this situation, live interactions with sale representatives at call center are necessity. Many Internet companies are either building or enhancing their call centers to complement the level of online service now being provided. For example, Amazon.com has rapidly grown its call center operation to nearly 700 people. Dell adds call centers in India.

Table 9: Survey of online sites

<i>Instant Solution?</i>
In a recent survey of 125 online sites, more than half never responded to e-mailed customer service inquiries, took more than five days to reply or failed to offer an e-mail address at their site.
Only 3% of major e-commerce sites offer a live "help" button

Source: Jupiter Communications Inc., New York Net Effect Systems, and North Hollywood, California.

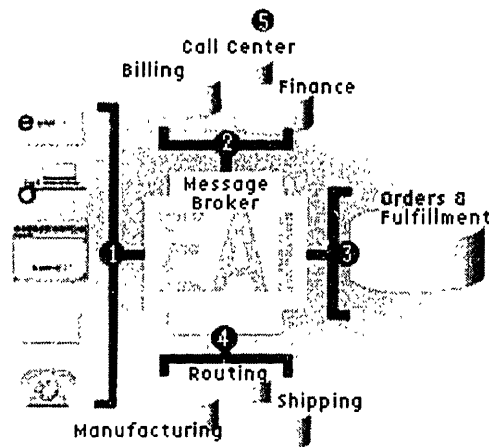
According to the latest survey of 51 most prominent Web shopping sites from Sigma/Micro Corp. (Indianapolis-based e-commerce software company) showed that 61% provided no product availability information, 71% offered no ability to check an order's status, and 55% provided no e-mail acknowledgment of an order.

It is important to have robust connections between a Web site and the back-end systems with an integrated inventory and ordering system that give online shoppers real-time information about product availability. Moreover, service representatives at a call center should have real-time access to Internet orders and offer live help to shoppers online (Figure 3).

If Internet and call center application are integrated (Figure 3), sales representative at call center will notice that a customer on the telephone dropped a shopping cart worth \$5,000 during a Web site session two days ago. The sale associate can then offer assistance required to complete that transaction and present the same cross sell offers that would have been presented had the customer continued with a Web-based procurement. If call center and Internet had not been integrated, the sale representative will not be able to leverage the real-time customer information; a major sales opportunity would have been lost. This incident would be repeated until such channel integration took place.

To support multi-integrated channel environment, there must be a single mechanism for collecting and storing customer data, analyzing the customer data and executing events based on such analysis to drive interactions that encourage customer loyalty. This means there must be a single business rule engine that recognizes who the customer is, what channel the customer came through, what the value of that customer is, and what the most appropriate action to take, given the customer's value and recent interactions. If the company has a single business rules engine that leverage a common database, then it is easier for it to deliver cross-sell and up-sell offers to customers. The problem is that many companies currently have each of these channels operating in separate silos, with disparate customer databases that do not talk to each other and different business rules driving interactions based simply on whatever channel of communication the customers decided to use. Successful companies of the future will be those that can provide superb service and sales to customers irrespective of the communication channel.

Figure 4: Enterprise Application Integration



Source: Computerworld

How does integrated business process work?

1. Customer places order via Web site, mail, fax or phone.
2. Customer information is distributed to other application databases for validation (credit).
3. Once the validation is done, the order is forwarded to orders fulfillment for picking and packing the requested items. Packing slips are generated and forward to manufacture.
4. Fulfillment returns status and shipment information to the order-entry system and call center.
5. Call center needs shipment information and real-time access to Internet orders so that customer representative can offer help to shoppers online.

Convert a “click-stream” into purchases

Getting your site on the Web and building awareness was only half the battle. Converting a “click-stream” into purchases is essential to generate revenue. To convert the click streams into purchases, you need to understand customer decision-making process as well as why conversion rate is low on your site. Conversion rate is only 0.5% to 3% of the Web site visitors. In actual stores, 10% to 50% customers buy if they visit. Why conversion rate is so low on the Internet?

Table 10: Reasons people are not buying online

Reasons for low conversion rate	
Fear of hackers	21%
Lack of products	16%
Can't see the products	15%
Must reveal personal information	13%
Poor design site (navigation)	8%
Companies' reputation	6%
Afraid of money or merchandise getting lost	6%

Source: World Research

Take a moment to critique your site. Do customers find it easy to move around? Is it clear from the start what your business is all about?

User-friendliness and strong navigation do wonders for repeat visits. You must also have strong content – nothing is worse than a site that looks "pretty", but offers nothing more than a catalog of what the company sells. Strive for interaction with your prospective customers. Be sure your site also has a clear cut and easy-to-find privacy policy. Any time you begin to ask for personal information about a person, you're potentially dealing with a privacy concern.

- **User interface (easily learned):** Sites that are easy to use (navigate) have high conversion rates.¹² The contrast is also true: sites that are confusing, where it is not obvious to the consumers how to proceed have low conversion rates. Web navigation should be easy for all visitors.

¹² Conversion rate measures the number of visitors who come to a particular Web site within a particular period divided into the number of people who take action on that site (purchase, register and so on).

- **Performance:** Sites that are extremely slow, or those that exhibit errors or time-outs, will always have low conversion rates. No magic here--customers simply will not tolerate poor performing or buggy sites. This leads to abandonment, which leads to lower conversion rates.
- **Convenience:** Convenience means how you make a better shopping experience for your customers. These frequent users value convenient sites. The best example of a convenience feature is Amazon's "one-click" service, which a user finds a book or product, presses one button, and waits for the order. All other information (name, address, and credit card) is automatically filled in from a previous registration. Convenience unquestionably enhances conversion rate.

In the following section, we will walk through a Web site to illustrate how eToys incorporates these design elements in its interface. Snapshots of eToy's site can be found in Appendix A. Gomez rates eToys highest in 'Overall Score', which includes ease of use, customer confidence, on-site resource, relationship services and overall cost.

eToys offers the home-based customer a choice from a sampling of toy suggestions based on age and gender. Its recommending system is like a friendly clerk walking you through the store. Customers can choose recommendations that are developmentally appropriate and can be geared toward being educational; as a result, the buyer actually feels virtuous. Customer can select ways to broaden and then narrow their search (example is on the next page). They can browse the virtual aisles by specifying their interests: dolls, puzzles, or award-winning toys. To the customers, there is little that's more confusing than figuring out what to do with one's money.

eToys.com

Where great ideas come to you

[home](#) [help](#)
[my eToys](#) [shopping cart](#)

TOYS

BABY STORE

BOOKS

SOFTWARE

VIDEOS

MUSIC

VIDEO GAMES

[toysearch](#)

[shop by age](#)

[toy recommendations](#)

[toy brands](#)

[toy categories](#)

2 WAYS TO SEARCH

quicksearch

go

toysearch™

search by age, category, and price!

shop eToys by age

[0-12 months](#)

[1 year](#)

[2 years](#)

[3 years](#)

[4 years](#)

[5 years](#)

[6 years](#)

[7 years](#)

[8 years](#)

[9-12 years](#)

toy recommendations

[Bestsellers](#)

[Fantastic Finds](#)

[200 under \\$20](#)

[Award Winners](#)

[Toys for Special Needs](#)

[From the Movies](#)

[Popular Characters](#)

[Classic Toys](#)

[Sales & Savings](#)

[Feature Shops](#)

[Last-Minute Gifts](#)

ideas & activities

[Idea Center](#)

[Rosie's Readers](#)

[Oppenheim Activities](#)

play



Shopping at eToys is 100% safe - guaranteed

FEBRUARY..

fantastic finds



Come take a look at the best toys you've never heard of

Whether they're flying solo or hanging with Mom or Dad, we've got toys and ideas that maximize kids' playtime

the



Looking to build a model? The eToys Hobby Shop has a ton of kits, plus plenty of tips to get you started.

200
treasures
under \$20

BBBOnline
RELIABILITY
PROGRAM

Verified
Merchant
guarantee

VISA
eToys.com
prefers Visa

1. Intuitive and consistent navigation using tabs; clear concise topic headers; follows basic fundamental visual protocols
2. User control of process so the users can quickly get to the topic without being forced through a linear path
3. Search facility with various levels of capability (from simple to advanced)
4. Accountability and reassurance of safety on shopping at eToys
5. Good basic flow of pages with a tabbed page for each category of product; links are also grouped by easy-to-use categories
6. Recommendations (shopping support)
7. Legible images and text and good uses of colors schemes and coordination

eToys provides valuable recommendations to consumers without asking the name of the prospective customer -- one of the six forms that eToys uses to communicate trustworthiness, "limited information requests" (ask for only necessary information). eToys conveys trust in the design of its site through familiar references build-in to the visual communication and recognizable brand names. Furthermore, under 'Help' section, eToys provides "Guided Tour" to new visitors and clearly states detailed information regarding security, cookies, payment methods, shipping options and accountability (return policies). 800-service number for customer service is readily accessible.

It is not only the navigation but also the effective visual layout that conveys the ideas and the purposes of a site. Clarity of the presentation and design give customers the feeling they know that they can purchase products when they get to the site. eToys effectively uses navigation as a tool not only to communicate trustworthiness but also to influence customers' perception that eToys Web site meet their needs.

Useful features such as the following have helped to make eToys a favorite site among the online shoppers:

- Battery alerts during checkout.
- Plenty of ideas and recommendations.
- Toys for Special Needs area really separates eToys from its competitors.
- Toysearch (TM) - Two ways to Search (quick search and search by price, age or category).
- Birthday Reminders.

Here are my overall thoughts about eToys Web site

- Layout (notebook tabs) is easy to understand. eToys designs a truly kid-friendly toy site.
- Good use of the client area by dividing the space into columns of related information. Some nice graphics and animations in addition to the uses of well-known icons/logos (e.g., the logos for PlayStation, Nintendo 64, etc.)
- Allow both graphical and text links to accommodate users with different connection speeds.
- No logon required until the point you place an order.
- Good ways to categorize the links. For example, under the book category, there are links group by "book recommendations", "books by age", "book popular series", "books by subject", and "book search". Similar approach is used for other categories as well.

Strong branding, user-friendliness and strong navigation Web site only does half the job -- drive traffic to your site and keep them. The other half of the job is to convert surfers into purchasers (keep them from falling off the site). Success e-tailers will be those companies that use the data they collect on constantly shifting customer tastes (e.g. Furniture.com, Amazon.com and Virtual Vineyard). It is a learning relationship that involves interacting with the customer customizing. You need to know what they shop for, what they like and anticipate what customers need next from you.

Sites success cannot be judged by using hits and page views. Measurement by hits and number of pages viewed fails to provide the insight needed to steer online efforts. Analyzing web surfers' behavior can pinpoint why surfers are not buying. Andrew Brooks, president and CEO of Furniture.com Inc., found that a high number of visitors were interested in sofas costing \$700 to \$1,100. But they decided not to buy when they learned the delivery time would take up to four months. So Brooks addressed this problem with the designers to come up with new couches that can be delivered within three weeks of an order. The site conversation rate has gone up more than double.

Transaction database may only provide who bought from you before. However, beyond that you might not have enough information about purchase and repeat purchase behavior such as the number of visits made to each page, the amount of time spend looking at each page, and what pages a user returned to during subsequent visits.

Information and knowledge about your customers are essential to rapid growth. You need to know more than just the basis – income bracket, preferred magazines and demographic. You need to analyze the data thoroughly to find out -- how many visitors just spend time on the first pages, what section of the site (tour, book review, tasting chart) received a large volume of traffic, suggesting to you that these are important “stops” on your site.

In addition, it is important to track and analyze the data in a greater detail to find the usage patterns that correlate with purchasing. For example, do visitors who took a vineyard tour or looked at suggestion of what wines went with particular foods are more likely to make a purchase than others who skipped these items?

All of these mean companies need to integrate its front-end system with back-end office that address the entire customer relationship and take a close look at their customer interface and service processes. New competitive conditions require integrated applications for survival.

Businesses today need to automate a much broader process, cover cross-functional business such as customer management that often cuts across many departments and pulls together more information from more places than in the past.

Despite the need of analyzing data to improve conversion rate, many companies are not mining customer data. The table below shows how companies use customer data.

Table 11: How companies plan to use the information they have assembled on their customers

	1999	2001
Marketing	18%	52%
Customer Service	16%	48%
Sales	16%	34%
Process Improvement	2%	22%
Fraud Detection	10%	14%
Product Development	4%	10%
Don't Use Data	72%	0%
Don't Know	0%	18%

How companies expect they will benefit from their wealth of customer information

	1999	2001
Increase Revenue	20%	74%
Cut expense	16%	34%
No Impact	72%	0%
Don't Know	0%	20%

Source: Forrester Research Survey of 50 of the 1,000 largest U.S. Companies

Table 12: Tools you need for mining data

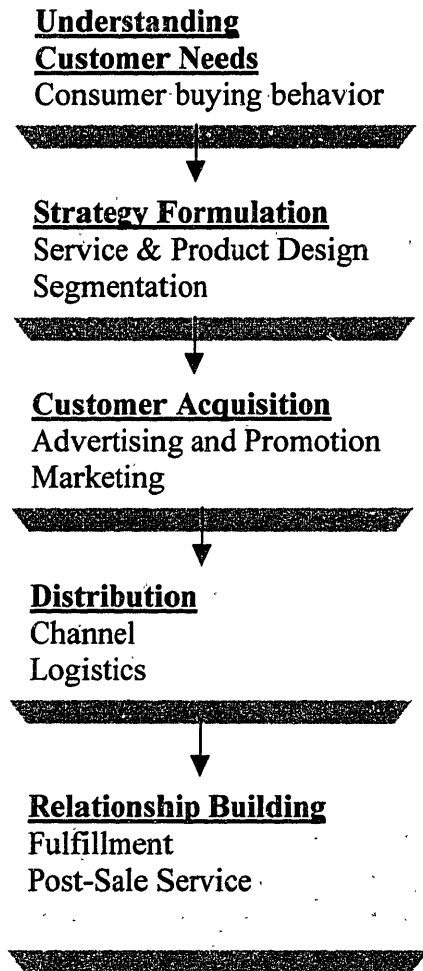
<i>Tool</i>	<i>Company</i>
Managing Customer Contact	Siebel, Pivotal, Silknet, Vantive
Customer Service	Brightware, Chordiant, NewChannel, HNC
AD Targeting	AdKnowledge, Doubleclick, 24/7, Flycast, Matchlogic, Engage
E-Mail	Direct marketing Responsys.com, Annuncio, Digital Impact, Post communications
Data Analysis Engines	Epiphany, Manna, MicroStrategy, Blue Martini
Supply Chain and Logistics	Manugistics, i2, Nonstop Solutions, VIT

Source: Computerworld

III. Getting Ready for E-Commerce

This section is a primer for doing business on the Internet. Here, we lay out some basic principles to keep in mind before going digital.

Figure 5: Steps and issues that need to be considered for conducting business online



Understanding Customer Needs

Understanding customer means we have to think like customers and think about the basic needs (needs rather features). The keys to understanding customers' needs are to know whom you're selling to. For example, Streamline.com sells to suburban dual-income households with children and who have more money than time.

According to Patricia B. Seybold,¹³ "The real secret of success in e-commerce today revolves around customers." She advises companies to start by focusing on their customers and figuring out what the customers' desires and needs. James Anderson and James Narus said, "Gauging and communicating what your products and services are worth to customers has never been more important."¹⁴ Another way to look at customer service is to looking at your products or services through your customer's eyes.

For example, if you were to build a Web site, you need to understand what the customers will want to see, want to ask, and want to get out of the experience. In other words, encourage e-mail feedback, sort through purchase histories to learn customer preferences, conduct live focus group. If you try to view your services and products through the eyes of your customers, you will see what is required of (or missing from) your Web site. Better yet, ask your customers directly, "If you were able to do business with us via our Web site, what sort of functionality would you like to see?" For example, Amazon site is built with visitor experience in mind. Customers go to Amazon.com for its wide product

¹³ Author of the book, "Customers.com": How to Create a Profitable Business Strategy for the Internet and Beyond

¹⁴ "Business Marketing: Understand What Customer Value", Harvard Business Review, Nov. - Dec. 1998

selections, its easy-to-navigate site, its excellent use of e-mail for marketing and customer service, and its skill at tailoring product recommendations to individuals.

Dell solicits customers' impressions of new and redesigned products by recording their experiences in a usability lab. During a new product's development cycle, for example, the Personal System Group will invite customer to the lab. A customer might be asked to connect speakers to a new PC. Employees film each customer and then conduct an extensive interview. From these exercises, Dell has learned a lot about servicing low-tech issues such as many customers found it difficult to install certain software. Dell responded by redesigning the software setup screens.

Strategy Formulation

- ❑ ***Service and Product Design*** - Any business must know what product features would fulfill customer needs. Dell is a case in point. Dell's business revolves around its direct model – rapid, mass-customization of a quality complex product at a price that conveys value using an extremely short channel. A thorough understanding of the customer's desires is a necessary ingredient for this model to be successful. This understanding is translated into the products and services available through dell.com. The site converts selling into a service, letting its sophisticated customers select exactly what they would like at a time that is convenient to them and then letting them track the progress of their order.

Another example, Dell builds a better box and shipping box in respond to a disgruntled customer who was one of the many who had been invited to the Dell's usability lab to test

the length of time needed to get a new PC up and running. While unpacking a Dell Dimension tower, customer struggled with the shipping box. He became so frustrated that he picked it up and turned it upside down. The tower fell to the floor. Although the purpose of the test was to learn how long it took a customer to install a computer, seeing someone destroy a tower was so startling that Michael Dell quickly decided to redesign the box and its packing materials.

Known for Dell's phenomenal success with mass customization and for possessing the most advanced IT infrastructures, PC giant is, in some cases, adopting a surprisingly low-tech approach when it comes to getting closer to its customers. From this exercise, Dell's interest in making it easier to unpack a new computer becomes part of its Customer Experience strategy, which puts the customer at the heart of everything the company does. Ultimately, the goal is to take what you learn about your customers and move into closed-loop marketing where you can customize marketing offers.

❑ **Segmentation** - It is unlikely to have one market that fits all the consumers. Differences in consumer preferences and needs are the primary reason for segmentation. If preferences and needs vary and we can design service to fit a subset of these heterogeneous preferences, we can create additional utility for customers in that segment. This means service provider can charge higher price and earn additional profit because consumers are willing to pay more for service tailored to their needs than for one designed to fit the average preference. Segmentation as a strategy offers other benefits as well. It may reduce competitive pressure when competitors do not offer service or product tailored to a particular segment's needs.

Segmentation can be used to identify market changes that represent either a future threat or opportunity. For example, constantly look at and segment the business to better understand the available opportunities allow Dell to realize that there was a market somewhere in between large and small customer groups that had its own special needs. As a result, Dell split the education segment in the U.S. into K-12 and higher education markets, because each segment has different products and service requirements. Dell never would have developed its market for midsize customers had it stuck with its original configuration of large and small customer groups.

Segmentation also enables company to see the growth rates, profitability and market share in each segment. Segmentation allows Dell to realize an amazing thing -- its retail business was not making money, even though Dell was successfully selling PCs via the retail channels. Dell took a hard look at the data then looked closely at how the firm could change the product mix to improve profitability. Dell still could not find the profit core. Dell decided to exit retail business after it had been in for four years.

Markets can be segmented in many ways (i.e. lifestyle factors, product-use patterns or geography). Often a profile of typical customer attributes is used to define a segment. The important point about market segmentation is to select among market segments the particular targets of opportunity that are best suited to your company. Things need to be considered when making market segmentation are: the strengths and weaknesses of the competitors and their positions in the market; the company's objectives about that particular opportunity and potential of demand growth. Levi's is a case in point. Levi

segments its market into five quadrants: mainstream, utilitarian, classic independent, trendy casual, and price. In the automobile industry, for example, Alfred Sloan out competed Henry Ford by segmenting the mass market based on sociodemographic factors and putting in place a distinct car company -- Cadillac at the high end, then Buick, Oldsmobile and so on.

Dell Computer is another example. Dell segments its customers into transactional and relationship segments. Dell Premier Page gives customers a customized, segment-of-one marketing interface, while creating customer lock-in for Dell. It is difficult to think of any markets (except pure commodities) where segmentation strategies are not practiced. Thus, managers must be skilled at recognizing and exploiting segmentation opportunities. The goal is to segment the market for the purpose of achieving maximum profits.

After you define your customer segment, the next question to ask is who you are. The advantage gain by Dell's longevity is the significant customer base it has already established in this arena, with all of the accompanying customer information. This knowledge is a powerful tool to sustain competitive advantage – and it is increasing daily. Competing with Dell in direct channels is not merely creating a Web site. Dell has the entire infrastructure behind the scenes to support its deep knowledge about its customers. This is knowledge that Dell has leveraged in the past and is learning how to leverage further with narrower product market segmentation, maximizing its competitive advantage.

Customer Acquisition

❑ **Advertising and Promotion** - Advertising is to open the door, get the information out.

Part of the advertising goal is to get the brand into consumers' consideration set. The objective of advertising is to get repurchase to make money, and know what the measurement tests are. Where customers hear about your product, and whether customers recall the ad with the right product. Despite heavy investment in brand building, most consumers still do not know the difference between Pets.com and Petstore.com. Computer.com, for example, spent \$3 million of its seed funding on 30-second ads before and during Super Bowl game. The firm generated 2,200 hits per second at its peak. But the traffic fell to the range of 200-300 hits per second two days later.¹⁵

For example, Luxury e-tailer Ashford.com spent 70 percent of its revenues on advertising during the quarter that ended in December and posted a loss of \$19 million in the third quarter. In contrast, brick-and-mortar competitors like Gucci on average spend 8 percent of revenues on advertising.¹³

Advertising can create exposure, awareness, knowledge, and preference. However, advertising might not do trial and repeat. Advertising involves needs to conduct customer analysis, market analysis, and competitor analysis. The importance and reasons to do customer analysis is to know the gaps between customers' expectations and their perceptions of what a company is delivering. This information provides direction about

¹⁵ Dawn Kawamoto, "Dot-Commercials: sites spend billions on ads, but will they get their money back?", CNET News, Feb. 21, 2000

where improved quality of products will have the greatest impact on customer satisfaction; this is why customer analysis is crucial.

❑ ***Using Customer Knowledge for Pull Marketing*** - Information capture represents the most dramatic power on the Internet that is still largely untapped (see Table 11). Online retailers can gather information from its customers in the course of everyday business. By tracking and analyzing ordering patterns and click streams, e-tailers (such as Furniture.com and Amazon.com) can develop deep insight into its customers and use the information to drive product and service development.

Consider Dell Computer, it has a highly responsive supply network that pulls inventory based upon real customer orders rather than pushing product based upon forecasts. Each custom-designed order shows exactly what the consumer desired. Dell can extract critical design insights by tracking how transactional and relationship customers configure products. With this superior information, Dell can get its suppliers to respond to customer trends faster than the competitors. Amazon.com uses information it gleans from customers to create value-added services such as suggestions about books that a particular reader might enjoy.

Distribution

❑ ***Channel*** - Few online merchants have truly built strategies that bring together the power of call centers with that of the Web. Integrated customer service, sales and support is still a long way for many companies. Dell has demonstrated how powerful integrated channels can become.

Let's take a look at Dell Computer. Dell does not have retailers to worry about. Dell is able to use Internet as a channel to reduce time spent by sales associate on administrative tasks. Going online has increased selling time by decreasing operational activities 67%, permitting fewer sales staff and higher quotas.¹⁶ Physical distribution has been enhanced by dell.com for the customers by providing up to date order fabrication and shipment information. Information during the web transaction acts as a feedback loop to enhance Dell's ability to improve information flow to the customers. In other channels, this information is not so easily captured, so quickly learned, or so quickly actionable.

- ❑ **Logistics** - In addition to building distribution centers, e-tailers need to integrate the technology and enable work to flow automatically from one application to another -- from order entry to credit check to accounting to inventory. Execution is as important as strategy formulation. Marketing, engineering, manufacturing and finance departments must all work together and integrated seamlessly.

Again Dell is a good example. Dell built an organization where it can achieve integration across all functions. Dell works with partners such as Intel, Microsoft and logistics companies, the field service organizations, disk drive and CRT manufactures as well as internal personnel (from frontline operation in sales, service, and manufacturing to finance, marketing, engineers that back them up). Dell treats its suppliers as part of company, by sharing information on everything from customer feedback to product

¹⁶ V. Kasturi Rangan and Marie Bell "Dell Online" HBS Case Study

features openly with its suppliers. Bringing suppliers into Dell's business virtually has become a key component of Dell's success.

Relationship Building

❑ ***Fulfillment*** - As we see from the early section, there are fulfillment problems. Many retailers invest in infrastructure and Web processing but not fulfillment process.

Although the Web model avoids the need for physical store, fulfillment and distribution centers don't just go away. Amazon.com, which now sells much more than books, built seven sophisticated, and huge warehouses across the nation in 1999. Set realistic expectations for customers prior to placing order. This means online retailers should provide buyers with product availability and time-to-receipt (if the product is even in stock). To provide convenience for customers, ordering process, fulfillment and service must be integrated seamless from buying, online order tracking to consumer delivery (end-to-end logistics). In addition, online merchants must notify customers with up-to-date information about order arrival.

A highly integrate of the customer, the Web (front-end process) and transaction (back-end systems) is key to serving the customer seamlessly. This strategy is well executed by Amazon.com. Seamless buying and fulfillment will play a major role in retaining customer loyalty. You cannot grow a business by relying on outsiders to deliver your products. Online retailers still need to have their own warehouses in order to control fulfillment quality, deliver top-flight customer service, and trim the steep cost of outsourcers. Realizing this, Amazon's goal is to improve order fulfillment and shipment

speeds. Amazon uses integrated packing and shipping system via an online connection to the order management system. This system monitors the in-stock status of each item ordered, processes the order, and generates warehouse selection tickets and packing slips. End-to-end logistics integration enables Amazon.com to turn its inventory much more frequently than its competitors.

Retailers must go beyond standard UPS and FedEx delivery and offer customers a selection of carrier service and a choice of delivery cost and time -- whether customers want to receive their products in the next day or in the next hour. Following Amazon's lead with Kozmo.com for 1-hour book delivery. Barnes & Noble is experimenting with same-day delivery for Web customers in urban areas. On March 14, FedEx launched its own premium-delivery service, offering scheduled and evening deliveries to meet the residential market boom fueled by the Web purchases. Many companies are rushing to span the so-called "the last mile" -- the final distribution leg linking Web to the customer's doorstep. Companies such as Kozmo, Urbanfetch and Pink Dot use fleets of bike messengers to deliver videos, books, and convenient items (snacks, water, juice, ice cream, magazines, household products, toiletries, etc.) to consumers within an hour, with no delivery charge and no minimum order. Online grocery, Webvan, delivers groceries and nonprescription drugs to customers' doors, by its fleet of vans, within a 30-minute window.

The existing model where customer pays for shipping and waits for 3-7 days to get the order just does not cut it anymore. In the Internet Age, instant gratification is

increasingly expected. From food merchants to booksellers, they all face a stark choice: Conquer the last mile, bundle up and speed up.

- ❑ **Post-sale service** - Make post-sale service simple. Firm must make it easy for customers to return merchandise if they change their minds. For example, Victoria Secret provides self-service process by which customers can pickup and drop-off merchandises. Self-service process provides an efficient way for firms to restock the returns into available inventory. Researchers at Resource Marketing in Columbus, Ohio (www.resource.com) conducted a study on 45 consumer Websites in various industries (technology, apparel, entertainment, and cosmetics). Of the 45 sites tested, only one-third of online retailers with bricks-and-mortar would accept returns at the store and few than ten sites had prominent guarantees offering full refunds to unsatisfied customers.¹⁷

¹⁷ Jodi Mardeich, "The Web Is No Shopper's Paradise", *Fortunate Magazine*, November 8, 1999

IV. What Next?

We leave the immediate past and look toward the future. This section highlights some technologies that are now emerging, but these technologies will become increasingly important in the next wave of e-commerce.

The Internet Shakeout

In recent weeks, shares in business-to-consumer space have taken a drubbing because of intense competitions and persistent losses. There are emerging concerns that the market is overcrowded and overvalued. Industry watchers are now predicting a business-to-consumer shakeout. As a result, stronger players will buy out the smaller companies in a mass consolidation.

The convergence of traditional retailers and Internet start-ups is the next wave in business-to-consumer e-commerce. Consumers are looking for more ways to shop. For example, customers like to have options of either ordering a new shirt online then picking it up at the nearest store or placing the order over the phone, having it delivered and returning it to the store if it was the wrong size. Retailers addressing this are moving in the right direction. This is an important convergence transaction and part of what is going to be a massive trend for online and offline businesses.

A number of retailers are gearing up to combat Amazon.com by trying to create a seamless shopping experience both on and off the Web. Eddie Bauer has done a good job at combining retail, catalog, and store shopping. The Gap is also moving in that direction. Other well-established retailers such as Wal-Mart and Macy's are trying to leverage not only their brand

names, but also the convenience of being able to shop online and pick up items at the store or to shop online and return merchandises at the store. Barnes & Noble has finally realized that its only chance to beat Amazon.com at its own game is to use its bricks-and-mortar advantage.

Intelligent Software Agent

The Internet has becoming an increasingly important channel for both business-to-consumer and business-to-business e-commerce. Even though information about products and vendors can easily be accessed on the Web, and orders and payments can be dealt with electronically, a person is still needed in all stages of the buying process. Buying and selling software agent technology will diffuse in a few years.

Software agents are personalized and continuously running. For example, a company needs to order paper supplies can have agents monitoring the quantity and usage pattern, launching buying agents when supplies are low. The buying agents automatically collect information on vendors and products that fit the needs of the company, evaluate different offering, make a decision on which vendor and products to pursue, negotiate the terms of transaction, place orders and make automated payments. Other examples would be agents to conduct intelligent searches or to help users find news, reports and useful sites based on stated preferences.

Speech Recognition

The rapid growth of the Internet has already changed many aspects of our lives -- from the way we shop and gather information to the way we communicate with family and friends. The next big thing will be voice (replacing keystroke and mouse clicks). Over the next year or so, talking

Web sites will become common. The ability to offer speech as well as text and graphics on a Web page is at the core of the emerging m-commerce and voice-enabled e-commerce (v-commerce) market. At the heart of talking Web sites are two technologies. The first technology is advanced speech recognition (ASR) systems, with which users can speak normally and the ASR software is designed to understand various ways of saying the same thing. For example, "Take me to Amazon or I want to go to Amazon." The second technology, text-to-speech (TTS) software, converts computer data into speech.

Speech could be the next gateway to the Internet. Intel has developed an intelligent e-commerce Web server that people can talk to. Motorola has developed the Mix (Mobile Information Exchange) concept, which will enable mobile users to access information held on their PCs or on the Internet using voice commands. Speech could be used to guide consumers through the purchasing process or greet visitors with spoken welcome message as they log on to the site. As users click through (or "navigate-by-voice through) the pages, the audio element tells visitors about the products the site offers.

From E-Commerce to Wireless

In the future, more people will be accessing the Internet via mobile phones, smart phones, personal digital assistants (PDA), network appliances or other portable devices than via PCs. For example, if you are driving in a car, it is easier to get traffic reports, stock prices or driving directions from a mobile phone than from a laptop.

In Finland, mobile commerce has already become a part of every day life. Finns can pay for a soft drink from a vending machine or buy CD simply by pressing a few buttons on their mobile phones. In Norway, subscribers to a cinema service can find out what is showing on local screens and pay for their tickets using their mobile phones.

Citigroup has rolled out its mobile phone-based banking services, E-Citi, to customers in Hong Kong and Singapore. Customers can pay bills, trade stocks and access their accounts using mobile phones, smart phones or PDAs.

The potential is huge, given the explosive growth in mobile phone use predicted during the next few years. More mobiles are likely to be linked to the Internet than personal computers by 2003. Big payment card organizations such as Visa and MasterCard are jumping in this area. Visa has team up with Nokia and MeritaNordbanken, the Finnish-Swedish bank, to test payments using bank details stored in mobile phones. An announcement of an alliance among Nokia of Finland, Ericsson of Sweden and Motorola of U.S. are planning a m-commerce standard that would allow safe credit card payments using mobile phones.

Many of today's m-commerce services use short messaging system, which allows up to 160 characters to be sent over a mobile phone like e-mail. Wireless application protocol (WAP) will broadening the range of services. M-commerce is still in its infancy. For this grand vision to diffuse, it requires a shift in customer attitudes and perceptions. This means people have to be comfortable with the idea of buying over their mobile phone.

Changing Technology

Affordable bandwidth is growing exponentially, at a rate even faster than what Moore's Law¹⁸ might suggest. New technologies, such as DSL, ISDN and cable-modems now make it possible for the everyday home user to access and enjoy download-on-demand music. Similarly, storage costs are falling dramatically, even as PCs or other storage devices come equipped with ever higher-capacity memory modules. Together, these two trends are democratizing technologies such as MP3 that were once limited to research centers, academic institutions or other institutions with dedicated facilities and resources.

Motion Picture Experts Group-1 audio layer three, or MP3, offers highly compressed, high-quality audio files that can be distributed over the Internet. MP3 is a file compression format invented in 1991 by a German research firm, the Fraunhofer Institute, which squeezes songs to one-twelfth the size of an audio CD file. MP3, originally developed for broadcast uses, eventually found its way onto the Internet as the ideal way to send music files back and forth.

From a consumer standpoint, MP3's compression format offered a more efficient, accessible and customizable way to enjoy music. Its compressed format allows music to be downloaded more rapidly; more music can be stored in a compressed format, and its unprotected format enables users to self-select only what they want (rather than having to *pay* for an entire album of largely unwanted music). Downloaded MP3 music is also portable via MP3 players (unlike first-generation technology, such as streaming audio) and can be updated and changed as desired.

¹⁸ Moore's Law: Every eighteen months, processing power doubles while cost holds constant. Every eighteen months, you can get twice as much power for the same price, or the same power for half the cost.

Conclusion

The Internet is creating fundamental widespread changes in the world of business. Comparison shopping, the breakdown of geographic boundaries, the increase in direct sales, and the incessant need for speed -- all as a result of the Internet -- have led to vast changes. The Internet is pervasive. It threatens to undermine existing companies and to cannibalize existing businesses. In many ways, e-commerce is still in its infancy today, and many hard lessons are still being learned. There is no single competitive variable stand on it's own. These things have to be consistent strategies and integrated (the Web, the transaction and the customer).

Top business sites have a lot in common. Leading business-to-consumer e-tailers from manufacturers to booksellers operate on a common set of fundamentals that build strong customer relationships. The Internet offers a whole new way to establish and build relationships with your customers. Online retailers have reams of data they can use to map shoppers' behavior, including affiliate links, search terms, and data on abandoned shopping carts. Sites must parse this information to formulate hypotheses explaining why people come to the site, what they want to buy, and the reasons they do not buy at all. No companies will transform itself by simply going on the Internet. It is not enough to have a well-designed Web site. Successful companies will be those who know how to interpret what their customers are telling them via e-mail and mouse clicks.

These top-tier online retailers are anything but stand-alone. They integrate with key systems and processes (i.e. order processing, logistics, accounting, marketing and sales) to ensure quick and accurate services. Changes such as item pricing, item availability or customer credit history can

be seamlessly incorporated into the customer's Web shopping experience and allowed for greater accuracy of data without duplication of entries. The goal is to make it easier for your customers to do business with you. According to Jim Sterne,¹⁹ "Making your company easier to do business with you is today's great competitive edge." Exploiting the Internet properly is becoming a necessary condition for success. The future will belong to those companies that learn to exploit the Internet in order to make themselves more efficient, to serve their customers and to design and deliver better products.

The drivers of the first wave of the e-business revolution have been largely dot-coms and start-ups. Big companies have been slow to jump on the Internet bandwagon. This is partly because large and established companies had a difficult time overcoming the notion that they would cannibalize their core business if they conduct their businesses online. Lately, it has become clear to big companies that e-commerce is a complementary retail channel. One year ago, the wisdom went, bricks-and-mortar retailers could not afford to go online. Today, the case can be made that pure player might served well by a multi-channel approach that includes physical stores. As a result, more and more bricks-and-mortar retailers gradually came around to embracing it. The counter attacks are well under way and gathering momentum. The second wave of e-commerce will be likely to be driven by big companies when e-business becomes part of mainstream commercial practice.

The second wave of e-commerce calls for intelligence, automated applications at both front and back-end systems. The future of Internet business will be customer-centric. Computing has shifted from the traditional client/server model to an anywhere, anytime model. This means that

¹⁹ Jim Sterne is the author of "Customer Service on the Internet": Building relationship, increasing loyalty & staying competitive.

a company must provide customers with multi-channels access, including PC, telephone, fax, e-mail, handheld device, kiosk, mobile phones and smart phones. Companies should reach out to customers wherever and whenever they want to buy across channels and platforms. Within the next few years, an increasing number of customers will expect major retailers to offer ordering over the Internet, bank accounts to be fully online, and publishers/media companies to offer all kinds of additional services to their readers through Internet portals. Online Retailers should adopt technologies and strategies that accommodate unforeseen competitive forays and customer demands. As we discussed the lesson from railroad industry in the early section, if company does not take technological change seriously can lead to extinction.

Compared with the situation two years ago, the Internet is already taking its place as a core tool in everyday business life. The changes are so powerful that it is both exciting and terrifying. It is no longer a question of how to get there as quickly as possible. To survive, many companies will need to change radically and adopt new ways of doing things and operating business. In order for the firm to survive, the company's approach to products, people and technology all must change.

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Appendix A - Snapshots of eToys' Web Site

1



2

1. Clear, coherent metaphors (e.g., shopping cart)
2. Leverage of other brands and cross-linked with business partners
3. Source creditability/brand names and Trusted brand image

toy brands

Well-known Brands:	Specialty Brands:
<u>Barbie</u>	<u>Breyer</u>
<u>Erector</u>	<u>BRIO</u>
<u>Estes</u>	<u>Discovery Toys</u>
<u>Fisher-Price</u>	<u>Eden</u>
<u>LEGO</u>	<u>Lamaze</u>
<u>See 75 More...</u>	<u>See 75 More...</u>

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shopping tips

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[How to Shop at eToys](#)
[Search Tips](#)
[Shop by Stores](#)
[Shop by Age](#)
[Feature Shops](#)
[eToys Recommends](#)



my eToys

[Gift Registry](#)
[Wish List](#)
[Birthday Reminders](#)
[My Account](#)

3



gift giving

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[Gift Certificates & Coupons](#)
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ordering



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1

shipping and returns



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[International Shipping](#)
[Order Tracking](#)
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2

additional topics



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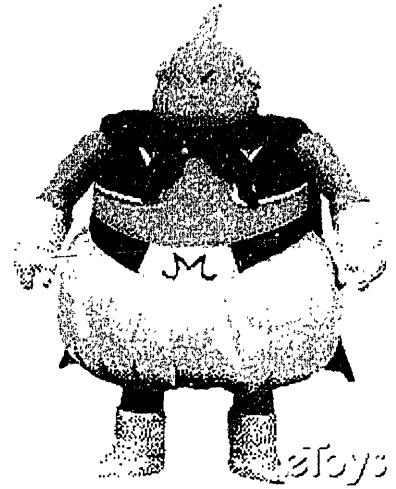
4

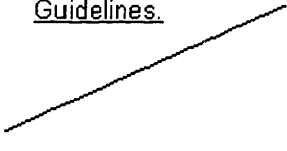
1. Easy ordering and payment mechanisms
2. Return policy is clearly stated and readily accessible to customers (accountability)
3. Customizability – allow personalizing gift registry, wish list and birthday reminders via “my eToys”
4. 800 service number to a real person in Customer Support


Write your comments on: 

Dragonball Z: 5" Figure (Series 4) - Mr. Boo Write your thoughts on

We'd love to hear your comments on this item! This is your chance to share your opinions with fellow eToys shoppers and help them make better buying decisions. Write your comments--good and bad--about this product, and we'll post them on the site for the world to see. For more specific instructions, read our [Comments from Kids & Grown-ups Guidelines](#).




1 

1. How do you rate this product? (1 through 5, 5 being best) Rate it 

2. Enter a headline for your comment.

3. Comment on this product.
(For example, What age is this product best for? What makes it good or bad? If you're not sure what to write, read the [Comments from Kids & Grown-ups Guidelines](#) for more ideas.)

2 

1. Collaborative filtering which allows the customers to see recommendations from others who have bought the product
2. Allow users direct input/posting to eToys and the information would be used in collaborative filtering

Appendix B - Sticky Sites

Top 10 Internet sites ranked by average minutes per user per month

EBay	125.5
Etrade	66.5
Microsoft sites	66.0
Yahoo sites	64.6
PointCast	57.2
USA.Net services	57.2
Uproar	47.3
Mpath Interactive	46.2
Schwab.com	43.9
Excite network	33.7

Source: Media Metrix

Top E-Commerce Sites Leave Huge Room for Improvement

Analysis of Top 50 Sites

- 4% provide personalized offers - in 1 case; buyer opted out
- 53% asked buyers if they would like information about related products/promotions
- 16% sent follow-on eMail offer within 30 days
- 25% recognized buyer as a repeat customer
- 2% allowed buyer to schedule purchase reminder eMail

Source: IDC/Rubric

Appendix C - Tools and Applications for E-Commerce

<i>Tool/Application</i>	<i>Purpose</i>	<i>Leading Players</i>
<i>Collaboration tools</i>	There are two forms of collaboration tools: chat and teleweb. Customer clicks on 'help me' or 'call back' button, and a rep calls the customer while the customer is still on the Web page.	Weblinc, eShare, Servicesoft, Active Touch, netDialog
<i>Content management</i>	It is an infrastructure application, which allows the company to manage the rapid growth in the size of company Web sites	Vignette, Eprise, Documentum and Interwoven
<i>Personalization engine</i>	To deliver relevant content to users to make site visit engaging. To provide cross-sell/upsell opportunities.	Pure plays: Netperceptions, RightPoint, Data Sage Bundled (content management): Vignette, Eprise Bundled (commerce server): BroadVision, OneSoft, Interworld
<i>E-Marketing</i>	To automate the execution of marketing program through e-channels	RightPoint, MarketSoft, Siebel System, Rubric, Allegis, and Connectify

V. Case Study: Amazon.com

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Amazon.com, Inc.

www.amazon.com

“A map of the Amazon River shows its tributaries spreading out like ever-grasping fingers, and a map of Amazon.com’s reach within the online world would look pretty much the same.”

–Hoover’s Company Profile

Introduction

In this case study, we will analyze an on-line retailer, Amazon.com. Even though Amazon.com serves many customers: suppliers (authors, publishers, independent publishers), small merchants, and consumers, this case will focus mainly on the consumer side, meaning how Amazon.com serves its consumers. First, we will take a quick look at the company’s history and see how it evolved over the last four years. This will give us a sense of where Amazon.com stands. We will then look at Amazon's strategies and see how well Amazon.com uses the Internet, partnerships and technology to grow its business and manage customer relationship. In the last section, we will look at the financial results and some of the challenges Amazon.com is facing, then make recommendations on Amazon's future strategies and draw conclusion.

Amazon entered into many new businesses beyond books (e.g. toy, music, auction, and video), hence; there is no historical data in these new businesses to benchmark. As a result, Amazon's overall revenue and customer count are the metrics we will use to measure the company's success.

Company Background

Jeff Bezos, a hedge fund manager at D. E. Shaw, came across a site projecting annual Web growth more than 2,300%. This demand inspired Bezos to pursue opportunity in on-line retailing. He launched Amazon.com, headquartered in Seattle, in 1995. The firm went public in 1997. Bezos owned about 41% of the company and another 10% was accounted for by members of his family. Amazon began by selling books. It has since expanded into selling music CDs, videos, DVDs, computer games, toys, greeting cards and consumer electronics.

Amazon.com depends on wholesale distributors like Ingram, Baker, & Taylor, and independent publishers, music and video companies for the stock it sells (sell all, by few business model). Currently, Ingram provides over 50% of Amazon.com's book titles and Barnes threatened to acquire it in 1999.

In order to get people to its site, Amazon.com has spent considerable sums to get its name into the marketplace and build brand awareness. This money has gone into several initiatives, including: building partnerships with search engines like Yahoo; purchasing banners on portals like AOL; creating a variety of offline promotional activities; paying participants in its Associates Program; and continuing innovation on the site itself. Amazon.com is a brand built on the quality of its service.

Amazon.com expanded in Europe by buying two on-line booksellers, Bookpages in Great Britain (www.amazon.co.uk) and Telebook in Germany (www.amazon.com.de). The company also bought Jungle, which provides services that help consumers comparison shop on the Internet,

for \$180 million, and it paid \$90 million for PlanetAll, a web-based address book, calendar and reminder service.

Amazon.com conducted online auctions in early 1999, then partnered with Sotheby's to offer live auctions for rare collectibles. Later in 1999 the company launched its zShops program (more on this in later section), which allows small merchants to sell through Amazon's site. The store pays \$9.99 monthly fee, plus 1.25% to 5% commissions to access Amazon's 16.9 million customers.

The company has been aggressively expanding beyond its core book-selling business. Amazon.com's entry into video business is just the beginning of its expansion. Last holiday season, the firm launched a "gift idea" store, which allow customers' search for gifts by personality type.

Early this year, the firm announced its expansion into home products by taking 18 percent stake in living.com, an online seller of furnishings. It took a 5 percent stake in Audible Inc., a provider of spoken-audio services for download and playback on computers or mobile devices; and Greenlight.com, an auto dealer.

Amazon's Strategies and Key Success Factors

Since Bezos launched Amazon.com, he has used acquisitions, alliances, and strategic partnerships to grow sales, improve services and bring in new customers. Amazon.com searches for new markets that value its technological applications. After Amazon.com had established itself as the largest bookstore on the Web, it expanded its business to music, electronics and videos. And added pharmaceuticals through hotlinks to Drugstore.com, pet supplies, home improvement products, electronics, greeting cards and groceries.

Two acquisitions, Junglee and PlanetAll, have given Amazon.com a presence in Europe. Junglee has provided the firm with the capability to do comparison shopping on the Web while PlanetAll could potentially become a reminder service for Amazon.com to prompt customers to buy gifts. A partnership with drugstore.com has given it another line of products to sell.

Amazon.com has signed exclusive multi-year agreements with AOL.com, Yahoo, Netscape, GeoCities, @Home Network and Alta Vista. The firm also signed selling agreements with over 100,000 independent sites. Under these agreements individual site select books for their visitors and is allowed hotlinks directly to Amazon.com site. Amazon.com handles care the logistics, order fulfillment and provides weekly sales reports via e-mails.

Amazon.com recognized the need for a presence beyond America and launched two web sites in Europe by purchasing sites previously owned by ABC Bucherdienst in Germany and Bookpages Ltd in UK. Through its existing relationship with Yahoo, Amazon.com signed an agreement with Yahoo that makes Amazon.com the premier book merchant for Yahoo's world sites --

Canada, Australia, Japan, Korea, Asia, Denmark and Ireland. Agreement with Yahoo gives Amazon.com hotlinks on every Yahoo sites around the world.

Key factors to Amazon.com's success are as follows:

1. Know the market and industry

It is important to know your customers. Bezos studied the book market before choosing it as starting place for Amazon.com. But more importantly, he understood the Internet. This know-how is Amazon's advantage over Barnes & Noble and Borders. Amazon.com has had the advantage of being on the Internet first (first-mover advantage). Bezos saw an opportunity that even others in the book industry failed to see. Business Week observed: "What Bezos understood before most people was that the ability of the Web to connect almost anyone with almost any product meant that he could do things that couldn't be done in the physical world such as sell 3 million books in a single store."

2. Focus on how the company adds value for its customers

Bezos knows that it's easy for competitors to cut price, so he has built his business on value-added services. Amazon's success in selling books has been its unmatched user-contributed content reviews and its exercise of total control of the customer experience. Amazon is betting that the firm can take advantage of the Internet to be more than network efficiencies type business, growing to provide other types of services (music, video, home improvement and auction). Other services will link back to them faster than their competitors can duplicate, and so the value of the combined services will enhance Amazon's competitive advantage.

To improve customer service and help consumers find anything whether at Amazon.com or other sites, in August of 1998, Amazon.com acquired Junglee for \$180 million. Junglee has a tool to help customers find products on the Web. In order to implement the matchmaker recommendation capability, the firm bought NetPerception, intelligent agent software. Book Review and Recommendation Center give repeat visitors specific suggestions based on their previously demonstrated interests, their favorite authors and their past purchases from Amazon.com. This last service relies on the cookie technology, and this provides the personalized attention that is increasingly important in the cyberspace.

People wonder what value does a virtual bookstore add besides a small discount. Reasons for shopping online from Amazon.com versus bookstore are many. Namely, Amazon.com can be a good place for students to search books of related topics for their projects.

Amazon.com is a terrific place to search for books in foreign languages or out-of-print. The firm provides tremendous amounts of information about its products -- editorial contents in the form of reviews, interviews, excerpts, purchase circles and related recommendations made for deeper exploration of the site. Furthermore, Amazon.com provides information for those who can't remember a book or video title or are looking for a sound but don't know exactly what they want.

3. *Develop Unbeatable Logistics*

The service chain that builds customer loyalty to amazon.com includes not only use of the Internet as a sales channel but also mastery of distribution channels to provide safe and quick delivery and minimize the risk of competitors acquiring Amazon.com's suppliers.

Management is focused on making the operating model more efficient and reaching profitability. Many on-line retailers such as Wal-Mart and others use third party logistics companies to fulfill orders taken on the Web. However, Amazon.com has decided to do its distribution in-house. The executives feel Amazon.com can control customer satisfaction by handling the order fulfillment in house. Last year, Amazon.com has built a network of seven distribution centers throughout the nation: Seattle, Washington; New Castle, Delaware; Reno, Nevada; Coffeyville, Kansas, St. Louis, Dallas; McDonough, Georgia; Minneapolis and Kentucky. Amazon.com still relies on United Parcel Service (UPS), FedEx and U.S. Postal Service for actual deliveries.

Each distribution center (DC) is equipped with the latest material-handling technologies. For instance, each distribution center has a pick-to-light system, which uses a terminal display mechanism to guide a worker through the picking and packing process; frequency technology is used to direct workers to warehouse locations via radio signals; and voice technology, which allows computers to communicate instructions to workers.

Distribution centers also maintain a pick profile for the fast-selling items. Its warehouse management system (WMS) system has information on the velocity, length, width, height and turnover rate of each stock-keeping unit in the building. Amazon.com maintains and develops its homegrown WMS.

4. *Make it easy for customers to do business with you (grow with the Best)*

Bezos buys what he needs or partners with another business to grow Amazon.com. Each new acquisition or partnership means bringing more visitors to Amazon.com's site. The purchase of Exchange.com increases Amazon.com's selection of rare, hard-to-find books, antiquarian, used books and over three millions hard-to-find recordings and music memorabilia for sale and auction.

Small businesses in many industries (e.g. music, wine, book) have problem getting into traditional distribution channels because they do not sell enough quantities or lack of funding to advertise their products. Internet changes the competitive landscape and levels the playing fields; thereby Amazon.com launched Advantage Program in early 1998 to provide tools to ensure small publishers' books appear prominently on Amazon.com's web site. Amazon scans independent publishers' book jackets, and helps them add title information such as table of contents and author. Advantage Program provides faster book availability from independent publishers and more products listings on Amazon site.

In addition, Amazon acquired PlanetAll for \$90 million, a web-based contact and schedule management service. PlanetAll acquisition added more than 1.5 million members to Amazon.com customer base. Contact database of PlanetAll helps Amazon.com to keep its customer shipping addresses current and at the same time helps Amazon.com to reduce its dependency on portal traffic and improves customer experience with the express checkout.

Table 13: Recent Partnerships

	What Amazon Gave	What Amazon Got
Living.com (2/2/00)	Purchase 18% stake with warrants for further 9% (unspecified amount).	\$145 million over 5 years or \$29 million annually.
Audible Inc (2/1/00)	\$20 million for a 5% stake	\$30 million over 3 years or \$10 million annually.
Drugstore.com (1/25/00)	\$30 million to increase its stake from 26.7% to 28% (1.07 million shares). Amazon has invested \$75 million in Drugstore.com to date.	\$105 million over 3 years or \$35 million annually for a tab on Amazon's site.
Greenlight.com (1/21/99)	\$25 million for a 5% stake with warrants for another 25%	\$82.5 million over 5 years or \$16.5 million annually.
Ashford.com (12/1/99)	Amazon will give \$10 million for inventory expansion	Ashford gave Amazon a \$16.5% stake or 7.1 million shares to be listed on Amazon's site for 13 months.
NextCard Inc. (11/15/99)	Nothing	\$150 million over 5 years or \$30 million annually.
Total Annual Value		\$120.5 million

Source: Company report

5. *Continue to innovate*

Another success factor is its ability to innovate. "Amazon.com is a retail company, but it is also a technology company", said Saunders.²⁰ And it is that which has made Amazon a leader in e-commerce. Technology enables Amazon.com to outperform established business by finding new and better ways of servicing the same market place. Bezos knows that there are no sustainable technological advantages and it has to be an ongoing strategy. Technology is a tool. What one programmer can create, another can copy so he has to keep innovating.

The firm knows how to leverage technologies it already has to identify customer needs and works to predict their needs in the future. Amazon.com keeps pace of change in the industry, not just technologies, but opportunities and new markets.

²⁰ The author of the book, "Business the Amazon.com Way: Secrets of the World's Most Astonishing Web Business".

Acquisition of Jungle, PlanetAll, Accept.com and Alexa Resource Inc. has helped the enterprise stay ahead of the technological curve. The technologies that brought along with these acquisitions allow Amazon to track customer and potential customer interests. Amazon also monitors competitive sites to determine similarities in traffic and then looks at ways to bring some of the traffic to its site.

For example, the firm launched Amazon.com Cards, decision to offer visitors to the site the ability to send free cards to friends from the web appears to be based on its observation of the growing traffic to Blue Mountain Arts web site. Recipients of the free cards must visit Amazon's web site to view the personalized message. Amazon.com leverages these visits as the opportunity to get new customers as well as keep current customers happy by offering more services. The firm continues to learn what can be done technologically to encourage more to make their purchase from Amazon.com web site. From editorial content improvement to process changes to strategic sifts, such changes are essential to counter competitive moves and continue to meet customer expectations.

From the outset, Bezos has used the power of technology, first to compete successfully against bricks-and-mortar retailers and now to outperform many of those same retailers who have chosen to expand online to compete on Bezos' ground.

Amazon.com is a customer-centric and a leading Internet retailers that knows how to utilize Internet and technologies to build its business and to improve the shopping experience by making shopping easier and more convenient. For example, the firm was the first commercial site to use "collaborative filtering" technologies, which allows the customers to

see recommendations from other who have bought the product, "1-click ordering", "shopping cart", "book review" and "recommendation". When you choose a book, Amazon will automatically indicate that "customers who bought this book also bought..." and list the related titles based on the purchase patterns of other customers. The form of recommending combined with a customer database serves as intelligently cross-selling products. I have often wondered how much this use of the customer database has raised Amazon's sales.

Another innovation is syndicated selling network. There are more than 60,000 commercial sites that help to sell books, and another 100,000 artist sites, and label sites to help sell music and video through Amazon.com. Through this network, Bezos has a cross-product program, enabling those who visit these associate sites to purchase several titles across multiple product lines from single source. In addition, almost all web search engines are members of the Associate Program. With hotlinks on each entry point and every research page, it's like Amazon.com has a store in each and every major mall in the world.

Amazon.com has made it more convenient to order books, by linking to other sites from which consumers may purchase from Amazon. The associated members would get 5-15% of the money from sales.

Financial Results

Highlight of Q4 1999 result:

- U.S. book business turned profitable and grew 66% for the fourth quarter of last year.
- Sales of \$676 million, up from \$356 million last quarter.
- Customer count increased 3.8 million to 16.9 million in the quarter. Amazon grew from 6.2 million to 16.9 million customers in one year.
- Sales per customer increased to \$116 in the fourth quarter from \$108 in the first nine months of 1999.
- Analysts estimate customer acquisition costs is \$19, up from \$10.77 the same quarter last year.

Table 14: Amazon.com Revenue breakdown by business category

Book Sales	\$311 million
U.S. Toy sales	95 million
Music sales	78 million
Video and DVD	64 million
International sales	128 million
Total	\$676 million

Source: Company report and Salomon SmithBarney

Table 15: Annual Income Statement (in Thousands)

	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
	<i>6 Months</i>	<i>12 Months</i>	<i>12 Months</i>	<i>12 Months</i>	<i>12 Months</i>	<i>12 Months</i>
	<i>Dec. 31 94</i>	<i>Dec 31 95</i>	<i>Dec. 31 96</i>	<i>Dec. 31 97</i>	<i>Dec. 31 98</i>	<i>Dec. 31 99</i>
Net Sales	\$0	\$511	\$15,746	\$147,787	\$609,996	\$1,639,839
Cost of Sales	\$0	\$409	\$12,287	\$118,969	\$476,155	\$1,349,194
Marketing/Sales	0	200	6,090	40,486	133,023	412,645
Product/Development	38	171	2,401	13,916	46,807	160,017
General/Adm.	14	35	1,411	7,011	15,799	70,353
Merger/Acquisition	0	0	0	0	50,172	330,153
Total Expense	\$52	815	\$22,189	\$180,382	\$721,956	\$2,322,362
Interest Income	0	1	202	1,901	14,053	(37,445)
Interest Expense	0	0	(5)	(326)	(26,639)	
Income before Taxes	(\$52)	(\$303)	(\$6,246)	(\$31,020)	(\$124,546)	(719,968)
Income after Taxes	(\$52)	(\$303)	(\$6,246)	(\$31,020)	(\$124,546)	(719,968)

Source: Company report

Holly Becker at Salomon Smith Barney said that the fourth quarter data indicated Amazon's new businesses were successful. Based on the Q4 99 data, Amazon's entry into new business seems to be working, U.S. books generated less than half of Amazon's sales, which is a good sign. Sales per customer increased is an indication that cross-selling is occurring. Amazon's new business grew extremely well after only one year or less in each business.

Even though the fourth quarter data indicated Amazon's new business were successful, it is still too early to tell. The reason is that it was a holiday season, meaning that it was expected that Amazon's revenue should ramp up seasonally in fourth quarter. It is indisputable that Amazon's revenue and sales per customer went up during Q4, however, I am not persuaded that Q4 number is a reliable indicator that cross-selling is occurring. There is no correlation between the dollar amount and the type of merchandise in each order.

Although the company said its U.S. book-selling division was profitable during the fourth quarter. However, I feel Amazon.com's outlook may not be as rosy as the company is indicating because book sales in the U.S. accounted for less than half of total company sales (Table 14). And many of the new businesses Amazon entered last year were less than a year, thereby, we do not have historical data for comparison to see how these businesses are growing. The new businesses do generate some revenue, but it is too early to say Q499 numbers demonstrate that Amazon is making headway toward establishing itself as the dominant Internet shopping destination site.

Amazon has been very successful in its book-selling business. Selling books alone is not enough to generate adequate returns. The firm must increase sales in other businesses such as toys,

electronics, software and music in order to increase its order economics. Amazon spent about 20% of sales on fulfillment in the fourth quarter, versus expectations of 15%, is way too high (analysts are expecting long-term target to be 7%).

Amazon must focus on reducing customer acquisition cost. Amazon.com is the seventh-most visited site on the Internet, Holly Becker said. Combined with its data mining capabilities can be the most efficiency and effective means of customer acquisition.

Table 16: Amazon.com is in the Retail industry of Services Sector

Below is a list of the 10 companies most similar to Amazon.com's market capitalization in the Retail industry listed in descending order. There are 140 companies in this industry (as of February 17, 2000).

Company Name	Market Cap (Millions)	TTM Revenue (Millions)	Profit Margin	Price 17Feb00	52 Week High	52 Week Low
Amazon.com Inc.	\$23,514	\$ 1,640	(43.9%)	\$69.00	\$113.00	\$41.00
Toys R Us, Inc.	\$ 2,835	\$11,771	3.0%	\$ 11.81	\$ 24.75	\$ 9.75
EToys Inc	\$ 1,869	\$ 131	NM	\$15.50	\$ 86.00	\$13.63
Barnesandnoble.com Inc.	\$ 1,442	\$ 202	(50.6%)	NM	\$ 10.00	\$ 9.88
Barnes & Noble, Inc.	\$ 1,346	\$ 3,191	4.1%	\$19.38	\$ 40.25	\$18.50
Borders Group, Inc.	\$ 967	\$ 2,851	2.8%	\$ 12.50	\$ 17.88	\$11.75
OfficeMax, Inc.	\$ 783	\$ 4,702	(0.4%)	\$ 6.25	\$ 12.13	\$ 4.44
1-800-FLOWERS.com	\$ 664	\$ 336	(11.0%)	\$ 10.75	\$ 23.19	\$ 8.63
PETsMART, Inc.	\$ 419	\$ 2,122	(0.4%)	\$ 3.75	\$ 10.94	\$ 2.63
Cost Plus, Inc.	\$ 365	\$ 368	4.3%	\$ 17.81	\$ 40.50	\$15.11

Source: Market Guide/ProVestor Report at Fidelity Web Site

Table 17: Amazon's Growth Rates

Growth Rates	AMZN	Industry Average	Industry High	Industry Low	S&P 500
Revenue MRQ vs. Qtr 1 Yr. Ago	131.6%	58.2%	427.6%	(93.5)%	21.8%
Revenue (TTM) vs. TTM Last Yr.	168.8%*	58.9%	457.4%	(100.2)%	19.6%
Revenue 5 Yr. Growth Rate	NM	24.9%	383.7%	(48.9)%	19.8%
EPS (MRQ) vs. Qtr 1 Yr. Ago	(295.3)%	31.4%	325.5%	(912.3)%	34.6%
EPS (TTM) vs. TTM 1 Yr. Ago	NM	27.9%	706.1%	(78.2)%	29.9%
EPS - 5 Yr. Growth Rate	NM	29.8%	152.5%	(50.4)%	21.7%
Dividend - 5 Yr. Growth Rate	NM	18.2%	25.4%	(100.0)%	8.2%
Capital Spending - 5 Yr. Growth	464.0%	23.3%	464.0%	(100.0)%	16.8%

Source: Market Guide/ProVestor Plus Company Report

* Uses recent earnings announcement data

Notes: TTM is Trailing Twelve Months, MRQ is Most Recent Quarter, NM is Not Meaningful
 NA is not available and NAR is Not Available Due to a Restatement
 Industry - retailers (Broadline)
 Sector - consumer cyclical
 Amazon.com, Inc. (NASD: AMZN)

Detailed Outlook

Sales - Analysts are expecting sales of \$2.75 billion for the full year in 2000, and \$3.93 billion for 2001.

Customers - Amazon has exceeded expectations on this metric. Analysts are expecting 1.5 million new customers in the first quarter 2000 and 7.4 million for the full year in 2000. This means Amazon.com has to end the year with 24.3 million customers.

Margin - Due to the recent partnerships (Table 1), gross margin should return to 19% in the first quarter.

Operating Losses - Analysts are expecting loss to reduce in 2000, and still expecting Amazon to break even in 2002.

Fulfillment Costs - This should be lower from 13% in 1999 to 10% - 12% in 2000.

Table 18: Amazon Key Metrics

	4Q99	1999 Actual	1Q00E	2000 Expected	2001 Expected
Sales (millions)	\$676	\$1,640	\$529	\$2,755	\$3,932
Customers (million)	16.9	16.9	18.4	24.3	31.0
Gross Margin %	13%	18%	19%	21%	22%
Sales and Marketing %	27%	25%	23%	20%	16%
Operating Loss (\$million)	(\$175)	(\$352)	(\$101)	(\$316)	(\$126)
Operating Margin %	-26%	-21%	-19%	-11%	-3%
EPS	-0.55	-1.19	-0.34	-1.12	-0.43

Source: Company reports and Salomon SmithBarney

Challenges Ahead

The previous sections have provided company background, its strategies and financial analysis. Amazon.com went public on May 15, 1997 with an initial offer price of \$18. Amazon closed its first trading day at \$23.50. Since its initial public offering, the stock has split 3 times: 2-for-1 split on June 2 1998; 3-for-1 split on January 5, 1999; 2-for-1 split on September 2, 1999. Recently, the stock is traded at \$70 range. After factoring in the stock splits, Amazon's stock price has increased more than 46 times, from \$1.50 to \$70 per share. It has 16.9 million customers²¹ and its market capitalization is \$24.1 billion (as of February 2000) – 17 times bigger than Barnesandnoble.com. Approximately 20% of its sales are from international. This does not mean that Amazon has no competition. The purpose of this section is to illustrate the competitive landscape and the risks that Amazon is facing so that we can provide recommendations for Amazon to address these strategic issues and meet analyst expectations (Table 6: Key Metrics from financial result section).

As Amazon grows, so do its troubles. The loss is mounting (Table 18). The firm is struggling in every categories of the business because competition is more intense than it was two years ago, where there were not as many on-line retailers as there are today – Amazon had cyberspace largely by itself. This section delineates some of challenges and threats confronting Amazon.com. Strategic issues facing Amazon are:

²¹ Company report and Salomon SmithBarney, by Holly Becker, February 7, 2000.

1. **Stiff competition** - the pressure being put on Bezos from competitors, direct and indirect are considerable. For examples, Barnes and Noble threatened to buy the Ingram Book Group, the largest US wholesaler to book retailers, including Amazon, and it sold 50 percent of its web operation to publisher Bertelsmann AG, thereby gaining a potent competitive advantage. Furthermore, nine major web retailers, including eToys and CDnow, joined together in an on-line mall, Shopper Connection, to better compete against Amazon. And finally, Wal-Mart, the country's largest retailer, will launch its new web site (www.wal-mart.com) later in spring.

Amazon.com faces stiff competition from off-line retailers. All the major off-line hardware chains have announced plans to begin selling online. Amazon.com is struggling in every business. In book business, for example, Amazon has to wrestle with Buy.com in addition to Barnes & Noble. When prospects visit Buy.com and search for an item, Buy.com scans Amazon.com's prices, undercut them and display the results back to the prospective customers. In auction, its clobber by eBay and Yahoo, which has 3 million and one million listings, respectively. Amazon has 140,000.

In electronic, manufacturers such as Pioneer and Sony refuse to let Amazon sell their products. Sony has a policy that only authorized retailers can sell its products on the Web. Amazon has similar problem that some manufacturers refuse to supply toys to Amazon.

2. **zShop** - a virtual mall, was launched in September 1999. It acts as a virtual meeting place for hundreds of small merchants to sell merchandises on Amazon.com home page.

"Amazon.com's goal is to build a place where people can come, find, and discover anything they want to buy. That's anything with a capital 'A', said Jeff Bezos. The "z" stands for zero. "What we're trying to do is create a shopping environment that has zero risk, zero hassles and zero products you can't find," Bezos said.

zShops' target vendors are small businesses, specialty retailers, and individuals that lack the infrastructure to manage their own online storefronts. They are the vendors who want access to 16.9 million customers, and who are seeking the added credibility of affiliation with the Amazon.com brand name. Retailer participation in zShop is completely self-service. Amazon provides tools for listing products available on its zShops homepage. However, Amazon does not screen vendors and does not limit the number of vendors in any category. Amazon does not screen or exercises editorial judgement over who can and cannot sell on z-shops, so long as they are not selling live animals or firearms, said Bezos. Currently, Amazon does not have any of the larger chain retailers participating in zShops.

Fee structure and its "A to z Guarantee" of zShops.

- Individual merchants can list up to 3,000 items for sale for \$9.99 monthly fee, plus 1.25% to 5% of revenues. Buyers will be able to shop for free.
- For a fee of 60 cents plus 4.75% cut of the sale, Amazon.com will process credit card charge on behalf of merchants.
- Optional listing features: bold is \$2.00; category feature is \$14.95; home page feature is \$99.95.

zShops initiative involves many risks - zShops seems to broaden Amazon.com's role from that of a retailer to that of a middleman. However, zshops carries risks to Amazon.com's brand name as the company does not screen merchants or handles shipping to these merchants. Even Amazon.com will compensate buyers up to \$1,000. Amazon.com's

reputation could suffer if the seller is fraudulent. Amazon.com is competing with other major players who have been running online malls -- Yahoo Shopping, Planetshoppers.com, Lycos, Excite and intershop.com. Yahoo is a direct competitor to zShops and it appears to have the same strategy objective ("the place to buy anything").

Even though there is a possibility that Amazon.com will move into an Internet shopping portal that consumers can use to purchase products that Amazon doesn't sell directly, Bezo's boundless ambition could be risky. This move can jeopardize Amazon.com's long-standing relationship with the big portals that Amazon.com has numerous deals with, and that it gets its exposure through these big portals. Bezos would not want to jeopardize these partnerships which played a big part in Amazon.com's early success and continued traffic. Furthermore, shoppers might prefer to shop at different sites for different needs because consumers believe that specialty stores often meet their needs better.

Besides the risks, there are many weaknesses in zShops. To provide a 'one-stop' shopping or a destination place for shoppers and encourage retailers' participation in zShops, Amazon must address what retailers perceive as a search weakness – the inability for consumers to search by store rather than by product. When shopping in zShops, it is difficult for consumers to know what store they are buying from. Retailers seeking their own brand identity will be reluctant to join zShops for this reason and will opt instead for Amazon's competitor – Yahoo Shopping! – Which allows stores to brand their offerings. Amazon must add, "search by store" capability to zShops.

Once Amazon has enlisted a retailer's participation, it needs to be able to maintain the relationship. It can do this by creating switching costs so that defecting to another online mall or "going it alone" is unattractive for the retailers. One way to create a switching cost is to add extra service to the "Pro Merchant Subscription" in the form of sharing demographic and purchasing behavior data with these clients. This will attract larger retail chains that have the infrastructure and the marketing to benefit from access to this data.

Amazon.com needs to manage some sort of loyalty program that would encourage consumers to keep using zShops. Yahoo Shopping offers "Yahoo points" to shoppers such as gift certificates and discounts at participating retailers.

3. **Disintermediation** - Amazon.com currently enjoys rapidly growing sales as consumers continue to adopt online shopping as a viable alternative to traditional "bricks and mortar" stores. If these threats in competition, risk in new business areas related to auction and zShops along with ballooning fixed costs and razor-thin profit margin are not enough to give Amazon headaches, the threats of disintermediation and technology certainly will impact Amazon's future growth. For example, in book business, Amazon is threatened by suppliers (publishers and authors) going direct to consumers through their own web pages. Record companies could easily do the same, bypassing Amazon altogether.

Amazon is vulnerable to disintermediation by suppliers and technology. As noted in the Barrons feature article "Amazon.bomb"²². Publishers, musicians, record labels are pursuing the direct-sell model, which bypass distributors and retailers and sell directly to consumers.

Book publisher Bertelsmann, owner of Amazon suppliers Random House, Bantam Double Day, and BMG have said that they "will sell books more like Michael Dell sells computers." Technology that offers faster and wider bandwidth through cable modem, and DSL service to download products at the point-of-need will threaten Amazon's business model. Rocket eBook, by NuvoMedia, already offers over 550 book titles available for download over the net. Microsoft and Barnes & Noble announced a plan to sell books that can be read on personal computers and handheld devices.²³ MP3 is changing the distribution model in music industry while RealNetworks is revolutionizing video, and Java is poised to change how consumers access software. Emergent technologies such as eBooks, MP3, and widespread broadband access further threaten Amazon by allowing the consumer to forego physical books, CD's, software, and videos in favor of simply buying the data directly over the Internet.

4. ***Risk of heading the wrong direction*** - what is more worrying is the possibility that Amazon may be going in the wrong direction. The Web may be ideally suited not to general stores but to "category killers".

Whether it is eToys, eBay (auctions), CDNow, Outpost (computers and software), Home Depot, Reel.com (videos) or Garden.com, they and hundreds of like-minded competitors think specialists understand their customers better and can provide superior service and lower prices than a generalist such as Amazon. By coming together in virtual shopping malls

²² "Amazon.bomb", Barrons, May 31 1999

²³ "Microsoft, Barnesandnoble.com in E-Book Pact" by Franklin Paul, January 6, 2000

organized by portals such as Yahoo and America Online can offer web shoppers a greater range of choice.

Value America sells everything from beds to computers to diapers to refrigerators to gourmet foods. The firm has been down the rough road since IPO last April. Its stock price has been dropping precipitously from \$23 (initial public offering) to \$3.53, capturing the title of worst-performing Net IPO for the year 1999. Early this year, the firm cut 47% of their workforce and narrowed the scope of business - to only selling computers, electronics and office products. By focusing on the product categories that represent the largest portion of web sales, Value America will deliver products that people are most likely to be ordering with fewer resources. Value America's downfall serves as a wake-up call to e-commerce companies that 'Niche is King'.

Recommendations

As we see problems are creeping up in every category of business Amazon.com is in. With its in-depth customer profiles, broad set of products and its superb capability to build customer relationships, Amazon.com could be a good candidate for infomediary. Being middleman, Amazon.com can make the connections for publishers who are looking for consumers or consumers who are looking for books.

Second option is to tap the teenager segment. According to study by Jupiter Communications, teenagers will spend \$150 billion on cosmetic, CDs and other consumer goods and most of them (6 out of ten) will buy at least 1 item over the Internet. Teens from 12 to 20-year-olds are the fastest growing online segment. These teens often do not possess credit cards. For Amazon to meet analysts' expectation of growing 7.4 million new customers for the year 2000, Amazon should consider signing up with teen-oriented online merchants or arranging other teen payment options such as RocketCash, which parents open pre-approved spending account with their credit cards.

Table 19: Teens on the Net

Teens on the Net
<ul style="list-style-type: none">• 19M U.S. teenagers are online, 59% of the total teen population• 67% of teens have purchased a product online in the past year• Online spending by teens will rise to \$1.23B by 2003

Source: Jupiter communications LLC, New York

The third option is to compete on the richness dimension. Amazon.com can leverage its assets and core strengths (brand name, book and marketing databases, proprietary technology, hotlinks, over 100,000 of syndicated selling network, 200,000 associated programs, partnerships and 16.9 millions of customers) to provide a 'total solution' (virtual advisor) to consumers.

For example, if a prospect customer were shopping for a vacuum cleaner, virtual advisor would collect information from the customer -- Where will you be using the vacuum cleaner (residential or commercial area)? How do feel about each of these vacuum cleaner qualities (price, performance, reliability and durability)? Based on the customer's input, virtual advisor then identifies a consideration set with models that would maximize the consumer's utility.

Amazon.com can use many of its existing assets (marketing database, search engine, distribution center and order fulfillment system) to launch this program. Virtual advisor business model could fulfill Bezo's objective for Amazon.com to be the destination place for shoppers and gives Amazon.com some boasting power as the place to go for whatever you need to buy.

Conclusion

In the months and years ahead, Bezos can expect more competitions from both online and brick-and-mortar. In the digital economy, new entrants can become worldwide players overnight, which is how Amazon.com came to existence.

Through this case study, we have seen Bezo's aggressiveness in growing his business. The company is not willing to yield any territory to potential competitors. It has made strategic investments in Pets.com, DrugStore.com, Greenlight.com and Living.com. Bezos has been expanding his business aggressively and added links to its sites, giving online purchasers another reason to visit in response to the closing gap between it and Barnesandnoble.com, the recent launch of Wal-Mart online and the alliance of nine. Amazon.com has been responded well to its competitors, for example, Barnes and Noble's threat to acquire Ingram Book Group is a case in point.

Bezos has been pushing into new frontiers. Putting off profits to get big and fast, he invested in new warehouses to offer better selections and faster service than rivals can. By opening up new stores and broadening its product lines, the company is able to increase the average customer order.

Factors contribute to Amazon's success are many, namely; strong leaders, a risk-taking attitude, the ability to move quickly, a capacity for rapid innovation, first-mover advantage and the ability to scale to reach and serve a broad customer base. The fast-changing nature of technology

makes it tough to make up lost ground--giving early leaders a big edge. Bezos understands the potential of the Internet. He takes full advantage of the Internet to let customers easily search for any book (rare, out-of-print, foreign-language books), read reams of reviews, suggest other books that people with similar purchase histories like and have purchases send to their homes with a mouse click (things a bookstore cannot do). Amazon's a superb execution skill, combined with its assets -- brand name, customer reach, operating leverage and technology capabilities has allowed the firm to remain a leader in the online retailing industry.

Markets are not static. What Deil and Amazon have learned that their business models must be as dynamic as the Web itself. As a result, strategy and capabilities must evolve together as competitors, customers, suppliers, technology and other industry factors change. For example, Amazon had to invest in distribution infrastructure to cut delivery time to customers and reduce its shipping costs. As we saw in the Dell Computer case, partnerships and alliances are very important to complement the capabilities of a company to deliver complete solutions to the customers.

Amazon illustrates another lesson of successful web selling; online merchants must continually reinvent themselves in the fast-changing medium. To remain a leader in the online retailing industry, Amazon has to continue evolving its vision, strategy, and capabilities to respond to new threats and competitions. Few of the new competitions are: Barnes & Noble's intent to form alliances with seven leading e-commerce companies (Expedia.com, Jcrew.com, L.L.Bean, Petsmart.com, PlanetRx.com, 1-800-Flowers.com and VitaminShoppe.com) in exchange for promotion on their respective sites; the practice by Barnes & Noble in accepting returns of books purchased at Amazon.com; and Wells Fargo's future plan to sell services on the web that will let

small and medium-sized businesses build online stores for \$200 installation fee and \$45 monthly web hosting fee.

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Appendix A - Top 10 Teen Sites

<i>Top 10 Teen Sites</i>	
1	<u>www.alloyonline.com</u>
2	<u>www.nsync.com</u>
3	<u>www.bolt.com</u>
4	<u>www.audiofind.com</u>
5	<u>www.cjb.net</u>
6	<u>www.mtv.com</u>
7	<u>www.ign.com</u>
8	<u>www.expage.com</u>
9	<u>www.encyclopedia.com</u>
10	<u>www.gamespot.com</u>

Source: Nielsen/Net Rating Inc.

Note: Based on percentage of visitors who are ages 12-17

V. Case Study: Dell Computer Corporation

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I. Introduction

In this case study, we will look at Dell Computer Corporation. First, I will provide an overview of Dell Computer and its competitive advantages, which are based on the Dell direct model for PC manufacturing. After this overview, we then analyze how Dell Computer uses the Internet to prosper by mastering the key success factors. In the last section, we will look at the strategic issues, make recommendations and draw conclusion.

Since Dell sells mainly to businesses instead of to consumers, it is difficult to do a side by side comparison between Amazon.com and Dell. However, I will point out the similarities and differences wherever they are appropriate. The objective of this case is to illustrate how Dell Computer leverages the Internet to serve its corporate customers, to reduce costs and to conduct its business more efficiently by mastering the key success factors. This case study will not cover PC industry analysis nor competitor analysis. We will measure Dell's success based on its revenue growth by selling online as well as other aspects of cost savings.

II. Dell Overview

Michael Dell ignited his own revolution within the PC industry by creating a company that let customers build their own computers. Dell Computer Corporation was incorporated in 1984. Dell sells computers directly to customers. The company has no dealer network at all, relying solely on mail-order catalog and order taking by telephone and fax.

In the computer industry, the costs of holding inventory are extremely high because of the rapid obsolescence of the hardware. By selling from a catalog, Dell was able to offer wide product selections without tying them.

As of October 1998, Dell maintained only about eight days of inventory of components and finished products. On the contrary, Compaq had about thirty-five days of inventory, and its resellers carried another twenty-five days. One research firm estimates that this translates into cost of goods sold being six percent lower for Dell, an enormous advantage in a low-margin, price-sensitive business.

Dell Online

Dell was able to identify the potential of the Internet and took full advantage of it. Dell realized at the early stage, that the Internet represented a world of untapped potentials. As a result, in June 1994, Dell decided to establish an early position and launched www.dell.com in response to customer demand, delivering online technical support and order status information.

Dell began selling computers online in July 1996. Customers go to www.dell.com and choose from thousands of hardware and software options to configure their dream machines. The possibilities are almost endless, with customer able to specify everything from the size of the PC's memory to the version of a software application. This is all made possible by a powerful sophisticated IT structure that integrates the company's back and front-office functions. The payoff has been impressive: satisfied customers, a significant chunk of market share and a supply chain envied by its competitors.

By December 1996, Dell was selling \$1 million per day through the Web. More than 150,000 customers visited the Dell site each week. Two months later, sales on the Web was \$2 million per day. By Fall of 1997, Dell was selling \$3 million per day on the Web. And now, it is \$40 million per day. In addition to purchase functionality (researching, configuring, pricing and ordering products online), the customers can use the Internet to check the status of their orders as they move down the manufacturing line. If a customer has questions, the customer can go to Dell's technical support page and access the same information that Dell's technical support teams use. The Internet makes the direct model even more efficient. The benefits to Dell are equally compelling.

Today, Dell (the world's leading direct computer company) builds its Web site on more than 350 Dell PowerEdge servers. Dell's Web site averages \$40 million a day online sales worldwide, which amount to almost 50 percent of Dell's total revenue. The company is applying lessons learned from its foray into general Web merchandising. By doing more than publishing its Web address, press releases and annual reports, visits to the site have grown to 250,000 unique visitors a week. The bulk of the traffic is generated by customers

seeking to tap into the 35,000 pages of technical assistance information that Dell has published on the Web.

The Internet is helping Dell shatter conventional wisdom about how computers are best bought and sold. Compaq, HP, and IBM have tried to clone Dell's direct-sales model. And they've all snatched up similar electronic tools to streamline dealings with retailers. But the new supply-chain logic demands revolutionary tactics and a rethinking of every business process, which for now elude Dell's competitors, who still rely heavily on dealers.

The Internet offered a logical extension to the direct model, allowing Dell to create even stronger relationships with customers. The Internet augments conventional telephone, fax, face-to-face encounters and gives customers the information they wanted faster, cheaper, and more efficiently. In 1997, Dell figured the company had saved more than \$2 million in telemarketing costs already. But the real value comes in using the technology to form tighter bonds with customers. The Internet can be a tool for managing relationships with customers. "Selling is just one of the things we do on the Internet. This is about overall relationship management with our customers," said Scott Eckert²⁴

²⁴ Director of Dell Online.

III. Competitive Advantage and Core Competencies

Dell's core competencies revolve around its direct model – rapid, mass-customization of a complex product at a price that conveys value using an efficient channel. A thorough understanding of the customer's desires is a necessary ingredient for this model to be successful. This understanding is translated into the products and services available through Dell.com. The site converts selling into a service, letting its customers select exactly what they need or want at a time that is convenient for them and letting them track the progress of their orders. Unlike Compaq, HP, and IBM, Dell does not have channel conflicts.

The direct-to-customer business model enables Dell to be extremely responsive. Because its computers are built-to-order, allowing it to slash inventories and keep costs low, Dell can price its product 10% to 15% less than its competitors can. As Michael Dell puts it, "We substitute information for inventory and ship only when we have demand from real end customers."²⁵ Dell takes delivery of components just minutes before they are needed. At its Austin, Texas factory, a Dell PC can be built, has software installed, be tested, and be packed in 36 hours.²⁶

Dell has a number of profound competitive advantages. First, efficient distribution process that requires minimal finished goods inventory, eliminates margins of resellers and retailers, and results in a short order-to-cash cycle. By taking credit card and payment over the Internet, Dell converts the average sale to cash less than 24 hours. By comparison, it

takes 35 days for Compaq, which sold primary through dealers, and took 16.4 days for Gateway to receive the proceeds from sale.²

Second, Dell's existing customer base, including a historical database of customers' buying habits, provides another significant advantage over competitors. This knowledge is a powerful tool to sustain competitive advantage – and it is increasing daily. Competing with Dell in a direct channel cannot be done simply by creating a Web site (more on this later). Dell has a vast behind-the-scenes infrastructure to capitalize on its deep knowledge of its customers. Furthermore, Dell is continually using customer information to re-segment the market and extract maximum customer surplus, thus maximizing its competitive advantage.

²⁵ Joan Margretta, "The Power of Vertical Integration: An Interview with Dell Computer's Michael Dell," HBR Mar.-Apr. 1998.

²⁶ V. Kasturi Rangan and Marie Bell, "Dell Online", HBR, April 1996

IV. Analyzing Dell's Success Online

In this section, we look at the key factors in Dell's strategy that are responsible for its success. Unlike Amazon.com growth strategy, Dell does not acquire as many companies as Amazon. Dell grows its business by adding new businesses that are closely related and build on one another's momentum. The desktop business, for example, is a great business. Dell realizes that desktops by themselves will not be enough to sustain the growth over a long period of time. Therefore, Dell added a series of products (i.e. servers and workstations), services (i.e. leasing, DellPlus, DellWare, Gigabuy and Asset Management), and geographies (i.e. China and South America) to its arsenal.

1. *Target the right customers (segmentation)*

Even though most companies segment by product, Dell segments according to customer needs and behaviors, meaning how customers use Dell's products. Dell has two segments of customers: corporate customers (relationship) and consumers (transactional) (Table 1). 90% of Dell's revenues comes from corporate, governmental, medium-to-large businesses and educational customers such as EDS, AT&T Wireless Services.²⁷ Although corporate customers do not have exclusive purchase agreement with Dell, it had achieved remarkable penetration of the relationship customer base, with 25% penetration of the Fortune 500 companies. In the medium and small business segment with nearly 5% penetration of the 7 million accounts.²⁸ Dell believes that customers' needs are unique and also because Dell sells directly to customers,

²⁷ "Dell Computer: Enjoying a Head Start" Red Herring Magazine, September 1997
²⁸ V. Kasturi Rangan and Marie Bell, "Dell Online"

understanding the needs of each customer allows Dell to develop products and services to better serve customers.

In addition, Direct model allows Dell to connect more closely with customers and enables Dell to understand the needs of different customers. Segmentation takes the closed feedback loop and makes it even smaller and more intimate. It refines the relationship between Dell and its customers.

Relationship with customers was a key component in Dell's success story. This was a lesson Dell learned the hard way with its entry into the retail market in the early nineties without really understanding the profitability of the segment. Dell focuses on higher end of the segment and allocates enormous resources to serve the corporate segment of its customers. Dell has teams live on-sites with its largest global customers such as Boeing, Ford, MCI, AT&T, and Nortel. The teams focus on understanding the specific needs of that customer, tailoring Dell's product and service to meet the customers' needs. For example, Dell has a team of more than thirty people onsite with Boeing. They provide everything from installation to loading the machines with specific software necessary to a particular person's job.

Table 20: Dell's Market Segmentation

<i>Market Segment</i>	<i>Buying Process</i>
Enterprise (> 18,000 employees)	Relationship
Large Corporate Accounts (2,000-18,000 employees)	Relationship
Preferred accounts (400-2,000 employees)	Relationship
Business System Div. (2-400 employees)	Transactional
Dell catalogue sales	Transactional
Federal government	Mixed
Education	Mixed
State & local government	Mixed

Source: Dell Online (HBS)

2. Focus on how the company adds value for its customers (*listen and learn*)

Winning and satisfying your customers is only half of the job, the other half is to delight your customer and not just once, but again and again. This leads to true customer loyalty, which sustains your success. The key is to engage your customers. When you engage your customers, you develop an intimate understanding of their likes, needs and priorities. You find out what is working for them and why. You can try out new ideas on them.

Focus on your customers. "Competitors represent your industry's past. Customers are your future, representing new opportunities, ideas and avenue for growth." Dell said. You have to think about the change elements that exist in business: changes in customers' buying behavior, in technology, in the existing competition. If something can be improved, someone will figure out a way to do it. That someone had better be you. Understand your customers' needs (Part III), know what they want and don't want what they like and dislike. Know what you can do to help them be more effective in their business.

Dell and Amazon.com are successful at creating learning relationships with their customers because their businesses were build on the basis of direct customer interaction. Dell solicits customers' impressions of new and redesigned products by recording their experiences in a usability lab. During a new product's development cycle, for example, the Personal System Group will invite customers to the lab. A customer might be asked to connect speakers to a new PC. Employees film each customer and then conduct an extensive interview. From these exercises, Dell has learned a lot about servicing low-tech issues such as many customers found it difficult to install certain software. Dell responded by redesigning the software setup screens.

Driving interest in customers has led Dell to create a Customer Experience Council. Its eight members represent finance, sales, product development, and manufacturing, corporate communications and IT. The purpose of the council is to track data such as the number of times a system develops problems within the first 30 days of purchase and the amount of time it takes the company to fix those systems via phone or onsite support.

Likewise, Amazon launched Amazon.com Cards, decision to offer visitors to the site the ability to spend free cards to friends from the web appears to be based on its observance of the growing traffic to Blue Mountain Arts web site. Recipients of the free cards must visit Amazon's web site to view the personalized message. Amazon.com leverages the opportunity of the visit to get new customers as well as keep current customers happy (delight the current customers) by offering more services. Amazon continues to learn what can be done technologically to encourage more to make their purchase from Amazon.com Web site.

Internet companies are increasingly expanding their turf to attract new customers.

Amazon.com, for example, has broadened its services beyond selling books. It carries videos, music, toys, software, electronics as well as auctions. It has also formed alliance with Drugstore.com Pets.com, HomeGrocer.com. Dell recognized that it needed to be more than a "pure" hardware vendor, the firm developed its own range of value-added services such as DellPlus that installed commercial and proprietary software and DellWare, a one-stop shopping service of a full range of hardware and software products. In March 1999, Dell launched Gigabuys.com, a new online superstore that offers customers 30,000 products from more than 800 companies.

Furthermore, Dell Computer has developed sophisticated customer service sites for its customers. Dell's Ask Dudley online service (natural language search engine) puts a unique spin on customer service by keeping things simple. Customers can type a question like, "I am having trouble booting my system. What do I do?" Customer will receive a response based on the key words in the question. The Ask Dudley service receives 100,000 requests per week.

3. *The integration of the Web into the core of what the company does (streamline processes that impact customers)*

Both Amazon.com and Dell embrace the Internet early and aggressively, both companies have charged the competitive landscape of our industries with a whole new cost structure and level of efficiency. Once these new levels become the norm rather than the exception, competitive value will be based on service and personalization, convenience and ease of interaction.

Price is not the prevailing factor in the connected economy. It is usually stress personalization, convenience and ease of interaction for your customers (meaning streamline processes) that impact the customers. Personalization can influence propensity to purchase. A study done by IDC shows 90% of buyers indicated personalization would increase likelihood to purchase. Bruce Judson said,²⁹ "In industries where products and prices are similar, what makes the difference between success and failure is customer loyalty and what often builds customer loyalty is attentive and intelligent customer service."

Amazon.com offers personal recommendations, which can change after every purchase and every visit, it hopes to get customers to keep coming back. Likewise, Dell provides personalization by building Premier Pages for its corporate customers. When Dell wins a corporate customer with more than 400 employees, Dell builds that customer a Premier Page. Premier Page is little more than a set of smaller Web pages, often linked to the customer's intranet, which let approved employees go online to configure PCs, pay for them, and track their delivery status--majority of Dell PCs are ordered this way every day. These Premier Pages include information, specifications, and pricing for only what that customer is interested in (personalization). These customized pages are password protected, and authorized customers are able to place orders immediately. Premier Pages offer featuring products pre-selected by the company to be bought by employees at volume discount prices.

Dell has built more than 40,000 Premier Pages for its corporate customers (i.e. Boeing Co., MCI Communications Corp. and the federal government's General Service Administration). Major customers such as Shell Oil and Boeing, who buy 1,000 PCs a week, can click on the

²⁹ Bruce Judson, "Hyperwars: Eleven essential Strategies for Survival and Profit in the Era of Online Business

site to see all kinds of information about their preferences and needs. Premier Pages provide Dell's corporate customers with a direct link into Dell's technical support and diagnostic databases. Customers can link to Dell's manufacturing facilities to find out exactly where their systems are in the build-to-order process. They can link to overnight carriers through their Premier Page to see where their systems are en route to their business. Premier Pages also tell customers which Dell models will be discontinued--and which will be introduced over the next 12 months.

The key benefit of the Premier Pages was the administrative operational support it gave to the sales representatives. With the amount of data available online, sales representatives could allocate more time to sell systems rather than dealing with operational issues such as order status, pricing configurations, etc.

Premier Pages enhance the selling process as well as better lock in customers over time. In addition, direct data exchange with customers on Internet means speed and reduced costs as well. In the market for personal computing these advantages are critical. Selling through the Web enables Dell to take customer payments directly and immediately, Dell can convert the average order to cash in twenty-four hours. Compare this to Dell's rivalry Compaq, which continues to operate through dealers. Inventories there are higher, and the average order takes 35 days to convert.

4. Integration Chains and Partnerships

"No one company can succeed by itself. We need help from our partners." Michael Dell said.³⁰ The main advantage of a direct model is that it allows Dell to build what customers order. But for this model to work there must be perfect synchronization with Dell's suppliers and partners. According to Patricia Seybold, a computer industry analyst, Dell's strength is derived from the fact that "They ... have the best connection from the end consumer all the way back through the supply chain."³¹

The Internet is blurring traditional boundaries between supplier and manufacturer, and manufacturer and customers. This shrinks time and distance to a degree never before possible. The use of the Internet as a sales channel represents only a fraction of the Internet's value to business. The real potential of the Internet lies in its ability to transform relationships within the traditional supplier-vendor-customer chain.

Instead of daily faxing alerts to warehouses telling everyone what supplies are needed, Dell has established this connection by building a sophisticated system of integrated value chains. Dell sends messages out to suppliers every two hours over the Net. So that suppliers can organize their production and delivery to ensure that Dell always has just enough of the right parts to keep the production line moving smoothly.

³⁰ Michael Dell, "Direct from Dell"

³¹ Patricia Seybold "Customer.com"

In what Michael Dell terms "virtual integration",³² the company coordinates the supply chain by exchanging information with suppliers electronically. Essentially, Dell brings suppliers into its by sharing production schedules, and other key information in a timely manner via the Internet. The entire supply chain becomes linked by information, allowing Dell to reduce response time, eliminate even more inventory, and meet changing customer needs very quickly.

In addition, Dell's suppliers have real-time access to information about Dell's orders via its corporate extranet. Suppliers can get an inside view of the Dell's inventories and production plans, and suppliers receive constant feedback on how well they are meeting shipping criteria. Now, Dell's speed in customizing and delivering products is unmatched. Inventory on hand is down to eight days versus 26 days in Compaq's case.

Dell used to have 140 different suppliers. Today the firm has reduced the number of its suppliers to around 40, which provides Dell about 90 percent of material needs. A closer partnership with fewer suppliers is a prudent way to cut costs and further speed products to market. Dell builds an organization where it can achieve integration across all functions. Dell works with partners such as Intel, Microsoft, logistics companies, field-service organizations, disk drive and CRT manufactures as well as internal personnel in sales, service, manufacturing, finance, and marketing. Dell treats its suppliers as part of its company, by openly sharing information about customer feedback and product features. Bringing suppliers into Dell's business has become a key component of Dell's success.³³

³² Michael Dell and Joan Magretta, "The Power of virtual Integration: An Interview with Michael Dell"

³³ Michael Dell, "Direct From Dell"

Philip Evans sums it well, "Instead of forecasting demand, Dell simply responds to it. Instead of directing suppliers, Dell allows them to look directly into its network and respond to the signals they see. Instead of using inventory as a buffer against uncertainty, Dell has eliminated most of the production lags that made inventory necessary."³⁴

5. *Make it easy for customers to do business with you*

The success of Dell Online also brings tremendous cost savings to Dell. There are two areas of cost savings by letting customers help themselves: service efficiency and sales force efficiency.

Service Efficiency - Each quarter Dell received about 200,000 visits to its site to check order status, logged 500,000 technical service calls and downloaded 400,000 files. Each of these transactions would have cost \$5 to \$15 on the telephone, thus representing significant savings.³⁵ In addition, Dell has saved millions of dollars a year by replacing hard copy manuals with electronic downloads. On the technical support side, uploading information electronically to technical support team before the start of the service call helps to reduce talk time associated with the call.

By making diagnostics tools available online that interactively walk customers through common problems and with increasing percentage of support activities going online, customers are helping themselves instead of calling support. This frees support technicians to work on other things. In addition, it is impossible for any technical support personnel or sales representatives to understand the breadth and depth of all the products a company

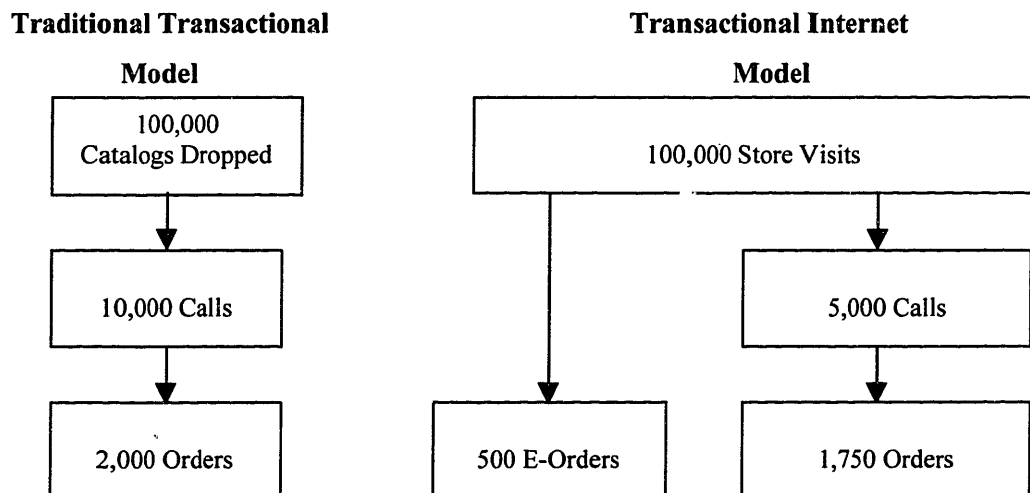
³⁴ Philip Evans and Thomas Wurster, "Blown to Bits"

offers. But it is easy to describe and explain them on the Internet and to update them as frequently as necessary.

Dell further extends richness by providing on-line technical support. Dell had developed elaborate and sophisticated decision-support software to help its own technical staff troubleshoot problems. When a customer calls Dell with a technical problem, the support engineer uses the software to identify and solve that problem. In 1999, Dell moved its tech support to the Web. Customers are now able to access the entire Dell troubleshooting system directly. "Dell offers twenty-four-hour reach and up-to-the-minute richness, and saves money by disintermediating its own service representatives." Philip Evans said.³⁶

Sales Force Efficiency - As shown in Figure 6, Internet model resulted in fewer numbers of calls to sales representatives with an overall higher close rate.

Figure 6 Economics: Direct vs. Online³⁷



³⁵ V. Kasturi Rangan and Marie Bell, "Dell Online"

³⁶ Philip Evan, "Blown to Bits: How the New Economics of Information Transforms Strategy"

³⁷ V. Kasturi Rangan and Marie Bell, "Dell Online"

As pointed out in Introduction section, Dell sells mainly to business rather than to consumers. Dell has done a superb job focusing on building relationship with its corporate customers. Everything Dell has done is geared toward making it easier for corporate customers to do business with Dell -- building Premier Pages tailored for corporate customers. Relationship with customers was a key component in Dell's success story.

Customers that it serves generally have access to computers. Having access implies the customer either owns a computer or uses one at work. Therefore, these customers are those with sufficient computer knowledge to feel comfortable shopping without the kind of assistance provided by a sales person. This arrangement has been found to be especially suitable for Dell's customers: large to small businesses, federal, state and local governments, educational institutions and sophisticated home buyers who desire either a customized product not readily available in retail channels. Dell.com essentially ignores the first time computer purchaser, with only 12% of residential. In other words, Dell does not address customers who need to touch the product and need a salesperson. Even though consumers segment is not the most profitable one, low-end consumers market is the fast growing segment in PC industry. How Dell Computer should expand its business to low-end consumer segment is the topic of the next section.

V. Strategic Issues

Despite of its success in selling online and strong position in the PC market, Dell is facing many strategic issues: 1) active inertia; 2) desktop average selling prices (ASP) continue declining; 3) and low conversion rate. In this section, we will focus mainly on how to convert browsers into purchasers. The question here is not about customer acquisition. A steady enough flow of visitors is arriving at Dell.com. Instead, the objective is to analyze ways in which the customer experience at Dell.com can be improved: e.g., how can the site be improved? Are pages built the right way? Are customers being directed properly? Does the site technology live up to its promise?

1. *Active Inertia*

Dell feels strongly about following the same strategy to continue its focus on corporate customers. Dell derives almost two thirds of its total revenue from large corporate, government and education accounts. However, large accounts spending on PCs is declining. Within U.S. revenue from large accounts grew just 23% versus 38% in the prior quarter, whereas revenue from consumer and small business customers increased 64%; and revenue from small to mid-size business increased 65%.³⁸

Based on the revenue numbers, large accounts desktop market is the slowest growing, most highly penetrated, most consolidated and most competitive portion of the PC market (see Appendix A). Given Dell's significant exposure to the large accounts desktop market, it is risky to mainly focus on large account segment. Revenue from consumer

³⁸ Richard Gardner, "Dell: Reiterate Buy With a Revised Target of \$71", Salomon Smith Barney Online. March 20, 2000

and small business is the fast growing segment even though it is not the most profitable segment. Dell must not ignore this fact; instead Dell must extend into new markets such as consumer and small to mid-sized business.

2. Desktop Average Selling Prices (ASP) Continue Declining

As Intel continues to increase the performance of its microprocessors, today's low-end desktop can provide more than adequate performance for existing software applications. Therefore, consumers and companies of all sizes are not opt for the latest PC in favor of 'low-end' PCs. This will cause a steep decline in desktop average selling prices within Dell's large accounts customer base. This point further reinforce that Dell must change its old strategy (focus mainly on corporate accounts) and expand into sub-\$1,000 market, moving aggressively into the consumer and small/mid-sized business markets, ramping sales in high-end servers and storage products. In short, Dell must diversify into new customer and geographic segments quickly to offset declining prices and increasing competition.

3. Low Conversion Rate

Even though Dell has 40 million site visits per week but less than 1% of visits result in an actual purchase. Typical visitors make an average of six visits to Dell.com before making a purchase.³⁹ Dell is concerned that its customer acquisition efforts and costs are not paying off in the way Dell had hoped. In addition, Dell is also concerned that the firm will not reach the goal of doubling Dell's lofty \$40 million online sales per day before 2001 is over unless the firm can convert more of these opportunities (visitors) into sales (buyers).

³⁹ Dell Online Clickstream Report.

Table 21 Extracting Intellegence form Dell.com⁴⁰

Enter	Number of 100	Loss %
Browse	50	50%
Configure	48	96%
Buy	1.5	75%

Source: Abhay Mehta, Director Dell Online

Basically the numbers in the Table 21 indicate fifty percent of the 100 visitors abandon the site after browsing. Only two of the remaining fifty visitors at the end of the browsing do configuration, this means Dell loss another forty-eight visitors at the configuration stage. At the end of the configuration, one and a half of the visitors abandon the site, which mean 0.5 out of 100 visitors who originally entered Dell.com site ended up buying.

For Dell, that 1/2 person is significant revenue if Dell can come up with a way to convert it to a buyer. In general, conversion rate is only 0.5% to 3% (Section II of the thesis, convert a click-stream into purchases) of the Web site visitors. To improve conversion rate, we need to understand customer decision-making process and think about what elements are not met by the site experience.

To improve conversion rate, navigation on dell.com needs to be improved, for example, start with customer need and requirements instead of configuration or guide selling (e.g. price, platform). The interface should be designed for all shoppers regardless their level of computer knowledge; made it easy for consumers to browse or to find assistance, and give first-time buyers readily accessible information about gift giving, shipping, returns and warranty without

⁴⁰ Data were given in a handout during Abhay Mehta's visit (Director of Dell Online) to our class at MIT Sloan School of Management

being forced through a linear path. The site should be built with visitor shopping experience in mind. This is one area Dell can learn from Amazon. Amazon.com is the leading consumer e-commerce Web site. Gomez rates Amazon.com highest in 'Overall Score', which includes ease of use, customer confidence, on-site resource, relationship services and overall cost.

Like online e-tailers in books, entertainment, apparel and other industries, Furniture.com can offer much wider product selections than its storefront counterparts. But breadth of selection is not the primary driver of a great furniture-buying experience. Personalization is what counts. "Customers don't want a football field of furniture," says Brooks, CEO of Furniture.com. "They want a boutique filled exclusively with the stuff they love."

Likewise, thousands of shoppers flock to Amazon.com not because of its wide product selections. Shoppers go to Amazon.com because of its easy-to-navigate site, its skill at tailoring product recommendations to individuals and its excellent use of e-mail for marketing and customer service. The site is built with visitor experience in mind. Amazon.com lets shoppers indicate whether they want to receive emails or newsletters -- which include updates on new releases, along with other information flashes. Personalization is crucial. No customer wants to receive mass e-mails.

Another alternative to reduce browsers' abandonment is personalization. International Data Corporation conducted a study and concluded that 94% of buyers are more likely to respond to offers related to purchase and interests. And 90% of buyers indicated that personalization would increase likelihood to purchase. Jupiter Communications reports that personalization at 25 e-commerce consumer sites increases new customer by 47% in the first year and revenues by 52%.

Personalized Web experience is critical even at a cost of \$50,000 to \$3 million for personalization software and hardware to store customer profiles, the cost usually pays off by the end of the first year, Jupiter Communications reports.⁴¹

For example, Dell may consider implementing virtual advisor similar to that offers by CompUSA Web site or Furniture.com. Virtual advisor can be helpful for first-time buyers or computer neophytes, who are lost on the site or cannot find what they want or simply want gift-giving. Personalization can zero in on shopper's tastes and then offer products that fit those tastes. Visitors come to dell.com with different purposes. Some visit for information gathering, price comparison, and feature analysis while others simply are lost and confused. Knowing the behavior of the visitors can help to identify what other category of prospect customers Dell should be looking for. This is what Amazon is doing by offering personal recommendations, which can change after every purchase and every visit Amazon hopes to get customers to keep coming back.

⁴¹ Robert D. Hof, Heather Green and Linda Himmelstein "Now It's Your Web", BusinessWeek, October 5, 1998

VI. Conclusion

In this case study we have examined Dell.com and its success: target the right customer segment and ability to realize business efficiencies throughout the value chain. Dell Computer's strategy was built around a number of core elements: build-to-order manufacturing, mass customization, partnerships with suppliers, just-in-time components inventories, targeting a customer of one, direct sales, market segmentation, customer service, and extensive data and information sharing with both suppliers and customers. Through this strategy, the company managed to achieve what Michael Dell called "virtual integration" in which its supply partners and customers in real time such that all three appeared to be part of the same organizational team.

Key factors that have contributed to Dell's success are: providing superior customer service, achieving high velocity on inventory (speed) and focusing on customer experience and the direct model itself, which gives Dell intimate knowledge of customer needs and suppliers capabilities. We learned how Dell.com leverages these factors by giving value to customers while decreasing costs for the company.

Dell's "configurator" software has a sustainable competitive advantage. An obvious next step will be for Dell's interface to start from needs and then guide customers to configuration to the applications being run. Dell should make its site easy, intuitive, and accessible for all customers regardless their levels of computer knowledge -- to get customer to click because she's engaged, not because she's confused.

Appendix A - PC Market Shares

Panel A: Worldwide Market Shares for Top-5 PC Manufacturers

	1994	1995	1996	1997	1998	1999
Compaq	10.0%	10.0%	10.1%	13.1%	13.8%	13.2%
IBM	8.2%	7.9%	8.6%	8.6%	8.2%	7.9%
Dell				5.5%	7.9%	9.8%
HP				5.3%	5.8%	6.4%
Packard Bell/NEC				5.1%	4.3%	5.2%
Apple	8.3%	7.9%	5.3%			
NEC	4.1%	4.8%	4.5%			
Packard Bell	5.2%	5.3%	4.3%			
Others	69.4%	69.4%	71.5%	62.4%	60.0%	57.5%
Total Units (in millions)	47.9	60.0	70.8	80.7	93.0	113.5

Sources: Computer Industry Forecasts; Dataquest; Manufacturers not in the top-5 included in "Others"

Panel B: US Market Shares for Major PC Manufacturers

	1994	1995	1996	1997	1998	1999
Compaq	10.0%	12.2%	13.1%	13.1%	16.1%	15.7%
Dell	3.0%	4.6%	7.0%	8.7%	12.7%	16.0%
Gateway 2000	N/A	5.1%	6.0%	6.8%	8.4%	9.1%
IBM	9.0%	8.3%	8.0%	8.4%	8.0%	7.2%
HP	3.0%	4.5%	5.0%	6.2%	7.5%	8.7%
Apple	8.0%	11.1%	6.0%	4.1%	4.3%	4.4%
Packard Bell	5.0%	11.3%	11.0%	6.9%		
Others	62.0%	42.9%	44.0%	45.8%	43.0%	38.9%
Total Units (millions)	18.7	22.5	26.8	31.7	34.9	43.8

Source: Computer Industry Forecasts; IDC; Dataquest

Appendix B - Dell Computer Revenue for 1999

Table 22: 1999 Dell Revenue by Geography

	<i>\$ mil.</i>	<i>% of total</i>
The Americas	12,420	68
Europe	4,674	26
Asia/Pacific	1,149	6
Total	18,243	100

Sources: Company report

Table 23: 1999 Dell Revenue by Product Category

	<i>\$ mil.</i>	<i>% of total</i>
Desktop computers	10,979	60
Notebooks	3,859	21
Enterprise systems	2,193	12
Other	1,212	7
Total	18,243	100

Source: Company report

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