The Future of e-Business

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PREFACE

A mythic aura surrounds the soar and swoon of the “new economy.” The scale was breathtaking, illusions abounded, and the forces at work seemed at once powerful and elusive. As the bubble inflated, many felt that information technology, and the Internet in particular, would “change everything”. Today, with the bubble burst and the technology sector in shreds, more than a few believe that IT changed scarcely anything at all. The truth, of course, lies somewhere in between. But where? Who will capture the economic benefits that the Internet creates? Will the entire value end up going to customers, or will companies be able to reap a share of it? What will be the Internet’s impact on industry structure? Will it expand or shrink the pool of profits? And what will be its impact on strategy? Will the Internet bolster or erode the ability of companies to gain sustainable advantages over their competitors? What effect did IT really have on companies and their ability to compete? What holds the future? Who needs e-Business and why? And most important, what can managers learn from it all?

The objective of this paper is to illustrate that many of the traditional (“offline”) business will have to use the Internet in one way or another to remain competitive in today’s global environment. It will also show that, contrary to common believes, businesses can be successful when using the right business models and strategies. I will use as an example the case of E-Trade and compare it to Schwab (both companies operate in the electronic discount brokerages market).

In the first two chapters we will have a look at the definition and on the different types of e-Businesses. In the third Chapter we will focus on the advantages of e-Business for Information Management and Value Creation. The fourth chapter will focus on Change Management and the resulting e-Transformation. Chapter five will focus on e-Business strategies and the mistakes of the past. We will focus in chapter six on the e-Business influence in the value chain and later in chapter seven I will outline the e-Business limits. Chapter eight includes the E*Trade case study and finally I will conclude this paper.

CHAPTER I: INTRODUCTION

1.1 e-Business Definition

E-Business (electronic business) is, in its simplest form, the conduct of business on the Internet. It is a more generic term than eCommerce because it refers to not only buying and selling but also servicing customer, empowering internal processes and collaborating with business partners. It therefore also impacts management, marketing and sales, operations, and legal aspects of operating a firms business.

1.2 Brief History

IBM, in 1997, was one of the first to use the term when it launched a campaign built around the term. Today, many corporations are rethinking their businesses in terms of the Internet and its capabilities. Companies are using the Web to buy parts and supplies from other companies, to collaborate on sales promotions, and to do joint research. Exploiting the convenience, availability, and global reach of the Internet, many companies, both large and small have already discovered how to use the Internet successfully

CHAPTER II: OVERVIEW OF THE BASIC E-BUSINESS MODELS[1]

Business models are perhaps the most discussed and least understood aspect of the web. There is so much talk about how the web changes traditional business models. But there is little clear-cut evidence of exactly what this means.

In the most basic sense, a business model is the method of doing business by which a company can sustain itself - that is, generate revenue. The business model spells-out how a company makes money by specifying where it is positioned in the value chain.

Some models are quite simple. A company produces a good or service and sells it to customers. If all goes well, the revenues from sales exceed the cost of operation and the company realizes a profit. Other models can be more intricately woven. Broadcasting is a good example. Radio, and later television, programming has been broadcast over the airwaves free to anyone with a receiver for much of the past century. The broadcaster is part of a complex network of distributors, content creators, advertisers (and their agencies), and listeners or viewers. Who makes money and how much is not always clear at the outset. The bottom line depends on many competing factors.

Internet commerce will give rise to new kinds of business models. That much is certain. But the web is also likely to reinvent tried-and-true models. Auctions are a perfect example. One of the oldest forms of brokering, auctions have been widely used throughout the world to set prices for such items as agricultural commodities, financial instruments, and unique items like fine art and antiquities. The Web has popularized the auction model and broadened its applicability to a wide array of goods and services.

Business models have been defined and categorized in many different ways. This is one attempt to list the basic categories of business models discussed in the table below:

The Brokerage Model (B2B, B2C)

- Market Makers: Bring buyers and sellers together and facilitate transactions
- Brokers play a frequent roles in B2B, B2C, or C2C markets
- Make money by charging a fee for each transaction it enables (Examples: E-Trade, Schwab)

[1] Author Analysis

The Auctions Model (B2C)

- Bring buyers and sellers together and facilitate transactions
- Make money by charging users by published items and by charging a fee for each transaction it enables (Example: E-Bay)

The Advertising Model (B2C)

- Represents an extension of the traditional media broadcasting model
- Banner ads (in different sizes) and Keyword ads (often CPC Search Engines) may be the major or sole source of revenue for a website *(note: many website businesses failed by relying only on this source of income; some low cost operating (niche) players survived)*
- Different approaches for charging the ads apply: CMR (by impression), CPC (by click), CPA (by registrations) (Example: Yahoo – 85% of income still based on ad revenues)

Infomediary (B2B)

- Collecting and selling data about consumers and their buying habits
- Offer users free staffs in exchange for detailed information about their surfing and purchasing habits
- This model relies on User Registration data and statistics

The Merchant Model (B2C)

- Consists of wholesalers of goods and services
- Sales may be made based on list prices or through auction
- Used by a) click-and-mortar (Example: Amazon) and b) brick-and-mortar companies as extension of traditional sales channels (Example: Barnes and Noble)
- Pure Online Companies often compete focused solely on price (destructive form of competition)
- Make money by each item sold to visitors (profit margins often very low)

The Manufacture Model (B2B)

- Allow manufactures to reach buyers directly and thereby compress (shorten) the distribution channel
- Results in efficiencies, improved user service, direct (faster) communication, and better understanding of user preferences (Example: Dell Computer)

The Community Model (B2C, B2B)

- Based on user loyalty
- By having users who visit continually offers targeted advertising, Infomediary, personalized or specialized portal opportunities

The Subscription Model (B2C)

- Users pay for access to these type of websites or to access premium content within a special section of the site
- High value-added (unique) content is essential (Example: Wall Street Journal)

The Affiliate Model (B2C)

- Provides purchase opportunities wherever people may be surfing; it does this by offering financial incentives (in the form of percentage of revenue) to affiliated partner sites (Example of Affiliate Site for Amazon, Google: Proxyelite.org).

CHAPTER III: THE USE OF E-BUSINESS FOR INFORMATION MANAGEMENT AND VALUE CREATION

The need to capitalize on information[2]

Today's firms compete in a fast changing global business environment. Staying ahead of competition is getting harder each day. Companies have to extract more value from what they have. How can this be accomplished? Cutting costs is a double edged sword. Companies need to be lean to succeed. But they need to invest to innovate, to evolve, to compete and to lead.

Klaus Schwab, President of the Davos World Economic Forum, observed recently, "We have moved from a world where the big eat the small to a world where the fast eat the slow."

Companies' management has to ask: What is the only thing we have that our competitors do not have? What can we invest in that our competitors cannot replicate? The answer: *information*. The new value proposition for sustainable long-term growth is to capitalize on the information the firm has about its customers, suppliers and partners.

As the world gets closer connected so does competition. Competitors can copy each other. Virtually every industry is commoditizing. As much as many companies would like to believe that their product is superior and/or unique, the reality is that the differences between one product and a competitor's is a nuance a customer may not even discern. But if a company is able to use the information it has and the competitor hasn't to enhance the value proposition for their customers, then it has something competitive for the long term.

[2] Autor Analysis

The relationship between IT and data, the Internet and its drivers[3]

With the increased use of IT and particularly the Internet the data companies have at their disposal and the need for fast interchange and analysis of it has grown. Companies can own and easily store the information they need. All data is available for collection. If firms are not collecting and analyzing all the information they have, then the competitive gap will only widen. In many industries data volume is doubling every eight to twelve months. The accretion of data increases exponentially every year. Today's companies find themselves in an information age. The single fastest growing resource in every business is data. Companies have to take advantage of its extraordinary value.

Several major forces drive this phenomenon:

- Cumulative volume of historical data
- Addition of new clickstream data
- Access to a broader range of demographic data
- Mergers and Acquisitions
- Interconnected networks: WAN (Example: Internet), LAN, EDI
- Increased granularity in customer and transaction detail

Many companies suffer because information is hoarded in scattered silos, fragmented by division, department, region and a host of other organizational categories. Siloed information breeds inconsistency, which in turn leads to fatal inaccuracy and hinders the execution of any strategy. Some companies hemorrhage profits every year as a result. Needless to say, this approach to information is bad for productivity. Not only that, inconsistency leads to a slow, but steady, erosion of a company's credibility among its customers, suppliers and eventually the market.

Fragmented information sources means inferior information compared to the big picture of complete information. When the same information is available to everyone who needs it, it represents a trusted single version of the truth. The information is usable and valuable.

[3] Autor Analysis

Because every activity involves the creation, processing, and communication of information, information technology and e-Business models have a pervasive influence on the value chain. A firm has to consider three key areas of business and the strategic opportunities of effectively used information: the customer relationship (CRM), the logistics of supply chain and price management, and financial and management reporting.

Customer

Leveraging a company's information capital enables it to achieve a holistic view of its customers. For example a bank customer with a mortgage, credit card, checking account and money market account should be treated as one customer, not four. The customer, consciously or not, assigns a value to being known and understood. And the company realizes higher returns because it is better able to serve its customers. Understanding the total profitability picture of each customer enables it to set effective strategies to increase that profitability. To achieve this task companies have to rely on information technology. CRM software has to be used to be able to communicate with clients 24/7. The data has to be analyzed in real-time and it has to be centralized where the firm's different departments can request and use it.

Supply Chain Logistics

Information is essential to achieving a multidimensional view of a company's business. Knowing in real-time the detail of shipments in progress, production levels, pricing, sales and inventory will put us closer to the market. A firm can take control of the business process, anticipate problems before they occur and manage the future. Superior logistics adds up. Controlling operations often means making difficult decisions quickly and adjusting strategy in real-time to avoid bleeding revenue. This can only be achieved with an integrated digital network between the suppliers communicating in real-time.

Financial Reporting

Financial and management strategy is a continuous process of information gathering, analysis and decision-making. Established goals, plans and strategies need to adapt to

changes. Knowing what was, what is and what if means firms are flexible enough to respond to the unexpected. To be dependable requires being adaptable. Better insight into a company's business also means better oversight. What the market trusts, the market rewards.

Each of these profit opportunities is leveraged by having a single version of the big picture - one complete view of the customer, of the supply chain, of finance and management. Current information must be linked to historical information and both must be equally accessible. Managing the future, avoiding surprises and creating value require access to rich information from across the company and through time.

Customers are more than a series of unrelated transactions. Each is an accumulation of all the transactions they have ever had. Logistics can only be mastered when past performance and future capacity are looked at together. Financial performance is empty of meaning if it contains only one snapshot of a particular moment in time and a backward-looking metric at that.

How to unlock the value of our information capital is the most important strategic challenge facing firms today. Each of these information sources is a piece of the puzzle. Integrating the information using information technology and communication networks across the company is the first important step.

E-Business is a perfect complementary tool to achieve this task. By communicating through the Internet firms can accomplish transactions between suppliers and business partners at lower costs and in real-time. Communication is wider spread, faster and includes lower costs then traditional methods (which offers particular advantages to Transnational Enterprises). Marketing campaigns can be more effective and customer data can be retained in one central place. Coordination of processes will be smoother and faster.

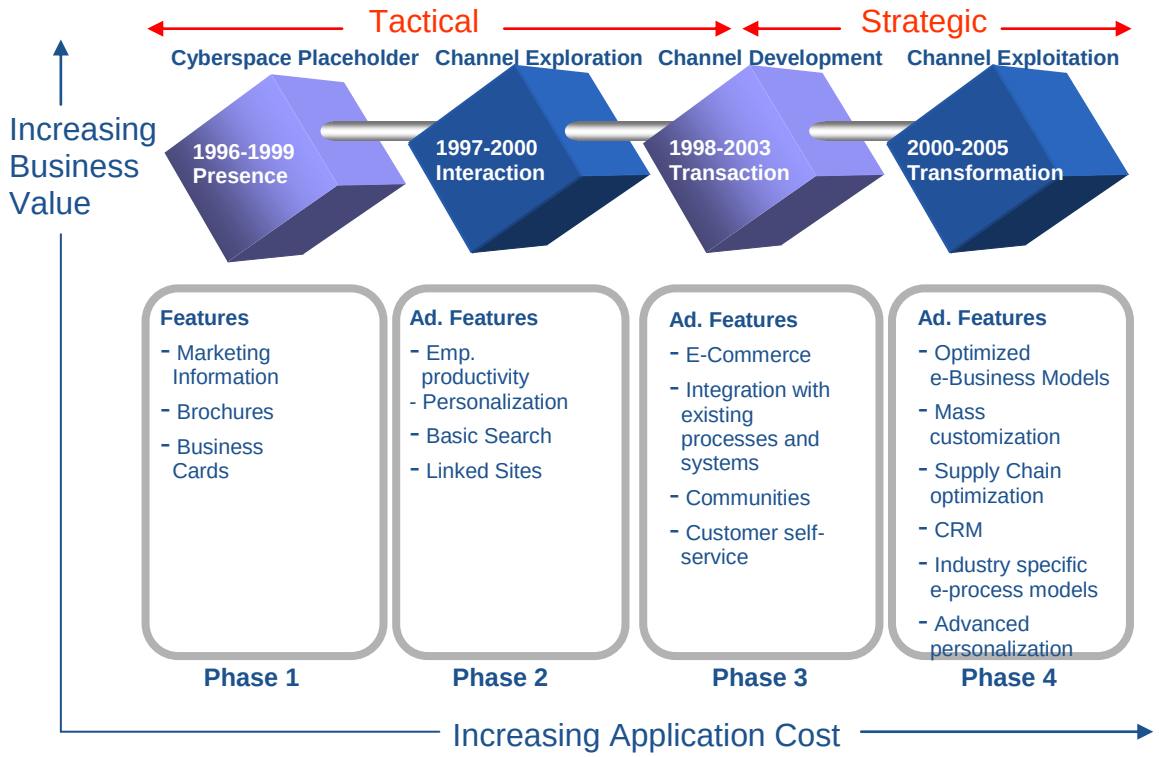
CHAPTER IV: THE NEED TO CHANGE - CHANGE MANAGEMENT AND E-TRANSFORMATION

E-Business and Change Management Issues[4]

E-business in organizations is linked with the Internet and the growth in the use and application of computers. The identification and establishment of strategic opportunities of e-business for the firm will lead to an understanding of the innovation and its justification for improved business, competitiveness and customer service.

Companies need to consider in their strategic *planning cycle* to incorporate the pace of technological change, an informational power base for access, control and manipulation of critical information instead of a positional power base and the *core focus to be on customers rather than the factory and production of goods*. The focus of e-business strategy hast to vary according to the evolutional stage of e-business. The focus will transform from selling channels (sell-side e-commerce) to value-chain integration (buy-side e-commerce) and creation of value networks.

[4] Author Analysis



Companies compete on cost and customer-focused performance factors such as quality, delivery reliability, design lead times and flexibility. E-business processes allow for increased accuracy, flexibility and uniformity, making a firm's operations more competitive by increasing productivity, decreasing costs and leading to increased market share. It also enables a company to respond quickly to customer demand and evaluate e-business benefits as strategic opportunities.

'Change management' is the process of managing the effective implementation of organizational strategies, ensuring that permanent changes in goals, behaviors, relationships, processes and systems are achieved for business advantage[5]. Successful organizational change requires sophisticated planning, design, communications and implementation management, with continuous stakeholder involvement[6], and it needs proactive planning and implementation. A failed change can create poor morale, lack of

[5] Bridges, W. (1991). Managing transitions—Making the most of change. *Addison-Wesley Publishing Company Inc*, Massachusetts, 2–35.

[6] Bryson, J., & Anderson, S. (2000). Applying large-group interaction methods in the planning and implementation of major change efforts. *Public Administration Review*, 60(2), 143–163.

credibility, customer irritation, competitors' advantage, and resistance to further change. Change management requires an understanding of all the points of impact, a system view; meticulous planning and scheduling, and excellent communications and HR management[7]. The new e-business technologies necessitate not just the reengineering of existing processes but also mandate design, development, and deployment of fundamentally new ways of conceiving and executing business processes. Senior executives in every organization thus confront a central challenge: how to transition from traditional business methodologies into e-business transformation and how to manage the change successfully. According to Gartner Group, 80% of all e-business downtime incidents are caused by problems not due to failure of IT processes but to poorly executed changes. It is important to understand just how challenging change has become for technology teams. E-business applications now rely on an incredibly complex chain of elements, each of which must be in good working order and well-behaved in relation to every other element in the end-to-end chain for the whole thing to work. These elements include network hardware, servers running various operating systems, highly "componentized" software across multiple tiers, diverse types of web content, security systems, storage devices, processes, people, applications and more.

E-Transformation

Several trends in the marketplace are already pointing to the signs of e-transformation, all of which are focused on allowing businesses to get to the customer faster, with more velocity and more value. E-transformation involves changes in how a company does business, how it enters new markets, how it communicates across the enterprise, and how it deals with suppliers[8]. Above all, transformation is about customers - changing the means by which companies find, sell to, service, and communicate with them. In a recent Information Week Research survey of 300 IT executives, the most common "transformational" initiative under way at their companies was interaction with customers. An e-transformed company is a company that has implemented a combination of aggressive deployment of e-business enablers to change business and

[7] Buchanan, D., & Badham, R. (1999). *Power, politics and organizational change: Winning the turf game*. London: Sage Publications.
[8] Budhwani, K. (2001). Becoming part of the e-generation. *CMA Management*, 75(4), 24–27.

supply-chain components. Examples of e-transformation are everywhere. Auto manufacturers are bringing on-line processes to a sales culture that has never been before. Many companies are offering on-line access to their products and services and offering self-service applications. Airline industry is bringing IT to bear on virtually every aspect of its customer experience.

E-transformation not only helps companies to hack away at the intermediaries between them and their customers, but also to reward and reinforce the links that are delivering new and different types of values to customers. Companies undertaking e-transformation are concurrently applying value management principles, reengineering their core business processes, and implementing enabling e-technologies - all with the intent of developing and implementing innovative business models. E-technologies provide the opportunities to build new business models but do not assure their success. To stay ahead, the e-transformed company will need to continue to implement innovation. The e-transformation strategic direction will provide the high-level description of new business concepts and the required modifications to the existing business model, organizational capabilities and infrastructure, and method of interaction with customers and external partners[9]. At its core, e-transformation is about breaking down walls - internal walls between business and IT and between other company functions - but even more radically, walls between what is inside and outside the company. The Internet, of course, offers an unprecedented vehicle to do that for customers, suppliers, and business partners. But it is not just about opening doors with extranets and customer self-service web sites. It is about a new mind-set -- opening the company to new partnerships and new ideas from unexpected sources. The Process-Technology-People (P-T-P) approach describes the operational behavior of organizations, in how an organization's business processes interact with each other, with the processes of its customers and suppliers, and with other external business processes. This simple, yet powerful framework is based on the fact that the processes are performed by people using relevant information systems applications and technologies. The interaction

[9] Schuh, G.,Mueller, M., & Tockenbuerger, L. W. (2002). Successful change management from strategy to transformation: Results of an EC project. *International Journal of Manufacturing Technology and Management*, *4*(1,2), 90–95.

between business processes occurs, in fact, via the interconnection of applications and technologies, and via the cooperation of people. Thus the change management framework is divided into five different dimensions. The e-transformation model based on Process-Technology-People (P-T-P) Model is presented below (*for graphic please see PowerPoint Presentation*).

Technology Infrastructure

- The organization has high speed integrated communication systems, servers, and other software components in place
- The organization has a facility to access its web sites linked to back-end systems
- The organization has a secured interactive web site with dynamic content and it is integrated with back-end systems

Applications

- The organization has integrated enterprise-wide business systems incorporating applications such as CRM, ERP, Knowledge Management, etc.
- The organization has fully functional e-commerce website providing facility for placing, follow-up and tracking of orders, electronic delivery of services and online banking
- The organization's web site functions comprise handling customer enquiries and feedback, dynamic product/service catalogues, news forum, etc.

Business Processes

- The core business processes link with other processes and share information across all functions
- The organization's web site is promoted actively and is widely used by customers, suppliers and other external users

People or Employees

- The people are well informed, fully involved in change process
- Employees are given requisite skills to handle new processes
- Employees are given sense of job security and conducive environment is created for team work

Management

- The organization management is committed to pursue enterprise-wide integration of the IT systems, processes and people
- The organization has appropriate levels of security protection, firewalls and encryption for data protection
- The organization's policies, procedures and processes are well documented and kept up to date

The competitive environment is becoming increasingly more challenging, while at the same time, the complexity of doing business continues to increase at a parallel pace. The turbulence that has resulted from all this has forced organizations to become more fluid and agile than ever before. Unfortunately, traditional change approaches are incapable of accommodating all of these dimensions[10]. As companies race to transform their businesses into e-businesses, they are discovering that the transformation process is not always straightforward. An e-business connects critical business systems directly to customers, employees, suppliers, and distributors via the web to improve time to market, access a broader base of customers and suppliers, improve efficiency, and reduce costs. To achieve these benefits, existing businesses must transform their traditional business processes with e-business applications.

[10] Arena, M .J. (2002). Changing the way we change. *Organization Development Journal*, 20 (2), 33–47.

CHAPTER V: STRATEGY AND E-BUSINESS

By the start of the Internet boom in the 1990's many have argued that the Internet renders a company's strategy obsolete. Now after the bubble burst it becomes clear that the opposite is true. Because the Internet tends to weaken industry profitability without providing proprietary operational advantages, it is more important than ever for companies to distinguish themselves through strategy. The winners will be those that view the Internet as a *complement* to, not a cannibal of, traditional ways of competing.

Many analysts assumed that the Internet changes everything, rendering all the old rules about companies and competition obsolete. That may be a natural reaction, but it is a dangerous one. It has led many companies, dot-coms and incumbents alike, to make bad decisions - decisions that have eroded the attractiveness of their industries and undermined their own competitive advantages. Some companies, for example, have used Internet technology to shift the basis of competition away from quality, features, and service and toward price (Example: Online Retailers), making it harder for anyone in their industries to turn a profit. Others have forfeited important proprietary advantages by rushing into misguided partnerships and outsourcing relationships. Until the year 2001, the negative effects of these actions have been obscured by distorted signals from the marketplace. Now, however, the consequences are becoming evident. We need to see the Internet for what it is: an enabling technology - a powerful set of tools that can be used, wisely or unwisely, in almost any industry and as part of almost any strategy.

The Internet tends to alter industry structures in ways that dampen overall profitability, and it has a leveling effect on business practices, reducing the ability of any company to establish an operational advantage that can be sustained. *The key question is not whether to deploy Internet technology - companies have no choice if they want to stay competitive - but how to deploy it.*

The Internet per se will rarely be a competitive advantage. Many of the companies that succeed will be ones that use the Internet as a complement to traditional ways of

competing, not those that set their Internet initiatives apart from their established operations. That is particularly good news for established companies, which are often in the best position to meld Internet and traditional approaches in ways that buttress existing advantages. But dot-coms can also be winners - if they understand the trade-offs between Internet and traditional approaches and can fashion truly distinctive strategies. The Internet and the resulting e-Business make strategy more essential then ever and not less important as some have argued.

In thinking about economic value, it is useful to draw a distinction between the uses of the Internet (such as operating digital marketplaces, selling toys, or trading securities) and Internet technologies (such as site-customization tools or real-time communications services), which can be deployed across many uses. Many have pointed to the success of technology providers as evidence of the Internet's economic value. But this thinking is faulty. It is the uses of the Internet that ultimately create economic value.

So how can the Internet be used to create economic value? To find the answer, we need to look beyond the immediate market signals to the two fundamental factors that determine profitability[11]:

• *Industry structure,* which determines the profitability of the average competitor; and

• *Sustainable competitive advantage,* which allows a company to outperform the average competitor.

Potential profitability can be understood only by looking at individual industries and individual companies.

E-Business and Industry Structure

The Internet has created some new industries, such as ISPs, On-line Auctions and Digital Marketplaces. However, its greatest impact has been to enable the reconfiguration of existing industries that had been constrained by high costs for communicating, gathering information, or accomplishing transactions.

[11] M.E. Porter

Whether an industry is new or old, its structural attractiveness is determined by five underlying forces of competition: the intensity of rivalry among existing competitors, the barriers to entry for new competitors, the threat of substitute products or services, the bargaining power of suppliers, and the bargaining power of buyers. In combination, these forces determine how the economic value created by any product, service, technology, or way of competing is divided between, on the one hand, companies in an industry and, on the other, customers, suppliers, distributors, substitutes, and potential new entrants. Although some have argued that today's rapid pace of technological change makes industry analysis less valuable, the opposite is true. Analyzing the forces illuminates an industry's fundamental attractiveness, exposes the underlying drivers of average industry profitability, and provides insight into how profitability will evolve in the future. *The five competitive forces*[12] *still determine profitability even if suppliers, channels, substitutes, or competitors change.* Because the strength of each of the five forces varies considerably from industry to industry, it would be a mistake to draw general conclusions about the impact of the Internet on long-term industry profitability; each industry is affected in different ways. Some of the trends are positive. For example, the Internet tends to dampen the bargaining power of channels by providing companies with new, more direct avenues to customers (disintermediation). The Internet can also boost an industry's efficiency in various ways, expanding the overall size of the market by improving its position relative to traditional substitutes.

Please see PowerPoint Graphic for analysis on Internet and IT Influences on Industry Structures

E-Business and Competitive Advantage

If average profitability is under pressure in many industries influenced by the Internet, it becomes all the more important for individual companies to set themselves apart from the pack - to be more profitable than the average performer. The only way to do so is by achieving a sustainable competitive advantage - by operating at a lower cost, by commanding a premium price, or by doing both. Cost and price advantages can be

[12] M.E. Porter, Competitive Strategy

achieved in two ways. One is operational effectiveness - doing the same things your competitors do but doing them better. Operational effectiveness advantages can take myriad forms, including better technologies, superior inputs, better trained people, or a more effective management structure. The other way to achieve advantage is strategic positioning - doing things differently from competitors, in a way that delivers a unique type of value to customers. This can mean offering a different set of features, a different array of services, or different logistical arrangements. The Internet affects operational effectiveness and strategic positioning in very different ways. It makes it harder for companies to sustain operational advantages, but it opens new opportunities for achieving or strengthening a distinctive strategic positioning.

Operational Effectiveness

The Internet is arguably the most powerful tool available today for enhancing operational effectiveness. By easing and speeding the exchange of real-time information, it enables improvements throughout the entire value chain, across almost every company and industry. And because it is an open platform with common standards, companies can often tap into its benefits with much less investment than was required to capitalize on past generations of information technology.

But simply improving operational effectiveness does not provide a competitive advantage. Companies only gain advantages if they are able to achieve and sustain higher levels of operational effectiveness than competitors. That is an exceedingly difficult proposition even in the best of circumstances. Once a company establishes a new best practice, its rivals tend to copy it quickly. Best practice competition eventually leads to competitive convergence, with many companies doing the same things in the same ways. Customers end up making decisions based on price, undermining industry profitability.

Today, nearly every company is developing similar types of Internet applications, often drawing on generic packages offered by third-party developers. The resulting improvements in operational effectiveness will be broadly shared, as companies

converge on the same applications with the same benefits. Very rarely will individual companies be able to gain durable advantages from the deployment of “best-of-breed” applications (Exception case: E-Trade).

Strategic Positioning

As it becomes harder to sustain operational advantages, strategic positioning becomes all the more important. Without a distinctive strategic direction, speed and flexibility lead nowhere.

Having a strategy is a matter of discipline. It requires a strong focus on profitability rather than just growth, an ability to define a unique value proposition, and a willingness to make tough trade-offs in choosing what not to do. A company must stay the course, even during times of upheaval, while constantly improving and extending its distinctive positioning. Strategy goes far beyond the pursuit of best practices. It involves the configuration of a tailored value chain - the series of activities required to produce and deliver a product or service–that enables a company to offer unique value. To be defensible, moreover, the value chain must be highly integrated. When a company’s activities fit together as a self-reinforcing system, any competitor wishing to imitate a strategy must replicate the whole system rather than copy just one or two discrete product features or ways of performing particular activities.

The Six Principles of Strategic Positioning[13]

To establish and maintain a distinctive strategic positioning, a company needs to follow six fundamental principles.

First, it must start with the *right goal:* superior long-term return on investment. Only by grounding strategy in sustained profitability will real economic value be generated. Economic value is created when customers are willing to pay a price for a product or service that exceeds the cost of producing it. When goals are defined in terms of volume or market share leadership, with profits assumed to follow, poor strategies often result.

[13] M.E. Porter, “What is Strategy?”

The same is true when strategies are set to respond to the perceived desires of investors.

Second, a company's strategy must enable it to deliver a *value proposition,* or set of benefits, different from those that competitors offer. Strategy, then, is neither a quest for the universally best way of competing nor an effort to be all things to every customer. It defines a way of competing that delivers unique value in a particular set of uses or for a particular set of customers.

Third, strategy needs to be reflected in a *distinctive value chain.* To establish a sustainable competitive advantage, a company must perform different activities than rivals or perform similar activities in different ways. A company must configure the way it conducts manufacturing, logistics, service delivery, marketing, human resource management, and so on differently from rivals and tailored to its unique value proposition. If a company focuses on adopting best practices, it will end up performing most activities similarly to competitors, making it hard to gain an advantage.

Fourth, robust strategies involve *trade-offs.* A company must abandon or forgo some product features, services, or activities in order to be unique at others. Such trade-offs, in the product and in the value chain are what make a company truly distinctive. When improvements in the product or in the value chain do not require trade-offs, they often become new best practices that are imitated because competitors can do so with no sacrifice to their existing ways of competing. Trying to be all things to all customers almost guarantee that a company will lack any advantage.

Fifth, strategy defines how all the elements of what a company does *fit* together. A strategy involves making choices throughout the value chain that are interdependent; all a company's activities must be mutually reinforcing. A company's product design, for example, should reinforce its approach to the manufacturing process, and both should leverage the way it conducts after-sales service. Fit not only increases competitive advantage but also makes a strategy harder to imitate. Rivals can copy one activity or product feature fairly easily, but will have much more difficulty duplicating a whole system of competing. Without fit, discrete improvements in manufacturing, marketing, or distribution are quickly matched. Finally, strategy involves *continuity* of direction. A company must define a distinctive value proposition that it will stand for, even if that

means forgoing certain opportunities. Without continuity of direction, it is difficult for companies to develop unique skills and assets or build strong reputations with customers. Frequent corporate “reinvention,” then, is usually a sign of poor strategic thinking and a route to mediocrity. Continuous improvement is a necessity, but it must always be guided by a strategic direction.

Strategic errors of the past

Many of the pioneers of Internet business, both dot-coms and established companies, have competed in ways that violate nearly every precept of good strategy. Rather than focus on profits, they have sought to maximize revenue and market share at all costs, pursuing customers indiscriminately through discounting, giveaways, promotions, channel incentives, and heavy advertising. Rather than concentrate on delivering real value that earns an attractive price from customers, they have pursued indirect revenues from sources such as advertising and click-through fees from Internet commerce partners. Rather than make trade-offs, they have rushed to offer every conceivable product, service, or type of information. Rather than tailor the value chain in a unique way, they have aped the activities of rivals. Rather than build and maintain control over proprietary assets and marketing channels, they have entered into a rash of partnerships and outsourcing relationships, further eroding their own distinctiveness.

For example when company start to outsource some parts of their business, they tend to make it more generic. They tend to lose control over it. They tend to pass a lot of the technology, particularly on the manufacturing or service delivery side, to their suppliers. That creates strategic vulnerabilities and also tends to commoditize your product.

While it is true that some companies have avoided these mistakes, they are exceptions to the rule. By ignoring strategy, many companies have undermined the structure of their industries, hastened competitive convergence, and reduced the likelihood that they or anyone else will gain a competitive advantage. A destructive, zero-sum form of competition has been set in motion that confuses the acquisition of customers with the building of profitability. Worse yet, price has been de-fined as the primary if not the sole competitive variable. Instead of emphasizing the Internet’s ability to support

convenience, service, specialization, customization, and other forms of value that justify attractive prices, companies have turned competition into a race to the bottom.

Internet architecture, together with other improvements in software architecture and development tools, has turned IT into a far more powerful tool for strategy. It is much easier to customize packaged Internet applications to a company's unique strategic positioning. By providing a common IT delivery platform across the value chain, Internet architecture and standards also make it possible to build truly integrated and customized systems that reinforce the fit among activities.

To gain these advantages, however, companies need to stop their rush to adopt generic, "out of the box" packaged applications and instead tailor their deployment of Internet technology to their particular strategies. Although it remains more difficult to customize packaged applications, the very difficulty of the task contributes to the sustainability of the resulting competitive advantage (Example: E-Trade).

Implementing a successful E-Business Model Strategy

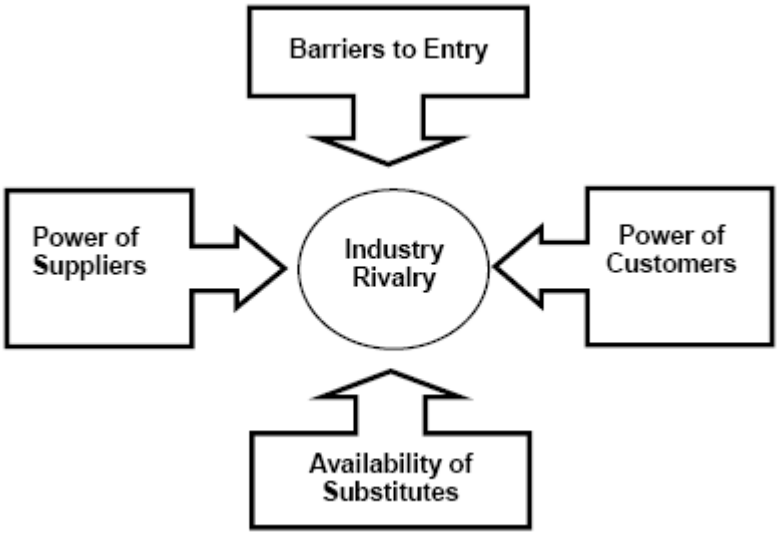
Many existing models do not work well for businesses that have a mix of traditional and e-business components. These types of hybrid businesses are often referred to as bricks-and-clicks, or mouse-and-mortar companies. The Internet and the growth of e-business are changing the rules of distribution, sales, industry boundaries, relationships, and competencies, providing small and medium-sized businesses the same opportunities previously available only to large corporations. In addition to the new opportunities, e-business also poses new challenges. Channel competition, brand erosion, and life cycle compression require strategies that have yet to be developed.

The main reason why management tools fail is owing to a *lack of alignment* with the corporate strategy. These management tools are often adopted in isolated regions of the company, with little regard to the intended strategic direction of the organization. For example, if a corporate strategy focuses on driving customers into a successful retail store chain, it doesn't make sense to sell your products online at a discount. If the

products you produce usually get to your customers through a successful channel market, you would be undercutting (cannibalize) the channel by selling online.

Businesses that have failed to align their activities with their strategy have experienced severe consequences, such as reduced profitability, loss of competitive advantage, and even bankruptcy.
A number of strategy models have been developed to help analyze organizational and business issues in a company, and to determine an effective strategic plan.

a) Competitive Analysis Model[14]



How Competitive Forces Shape Strategy

The Model examines the influence of five specific forces on competition:

1. Barriers to entry

If the barriers to enter the industry are low, threat to existing competitors that new firms will enter the market is increased. These new competitors will fight for a share of the market and often acquire substantial resources from the industry.

2. Power of suppliers

[14] M.E. Porter

Suppliers want to charge the highest possible prices for their products, leading to a power struggle between firms and suppliers. The advantage is held by the side with less to lose when the relationship is terminated. For example, a supplier that sells a unique product to many customers holds a strong position. On the other hand, a supplier that produces most of its output for a single customer is in a weak position, especially if there are substitute products available from other suppliers.

3. Power of buyers

Similar to the power of suppliers, buyers can be powerful if they can dictate prices. This can occur when there are many suppliers and only a few buyers.

4. Availability of substitutes

Companies must assess the potential threat posed by substitute products and be aware that these threats do not always come from traditional competitors. For example, postal services compete with couriers and even fax machines.

5. Industry rivalry

All of the above converge in the fifth force, rivalry. As a result, firms may choose to compete aggressively, coexist, or cooperate in a close alliance. The direction that a firm chooses depends on the relative strengths and weaknesses of the factors involved. For example, it is often the threat of substitutes that leads to the formation of strategic alliances.

Note: While this approach gives an analysis of the current industry, it does not address new entrants that may come into the market with different assumptions about the industry and market orientations. Industry structure is not fixed but rather is shaped to a considerable degree by the choices made by the competitors.

b) SWOT Analysis

A SWOT analysis evaluates the strengths and weaknesses of the organization and the opportunities and threats to the organization in the industry. It is often used as a basis for strategic planning.

Strengths and weaknesses are internal components of an organization and can be difficult to identify. Often, organizations themselves simply do not understand their own strengths or weaknesses.

Opportunities and Threats are external. Organizations must find opportunities to leverage an advantage over the competition and identify potential threats to their own business. Identifying threats can be a problem, as they often come without warning.

SWOT analysis is a useful technique but the questions used during the analysis phase must be carefully structured to ensure that the resultant strategy is based on sound information.

Note: This model, too, does not address opportunities and threats that are based upon a new set of business assumptions that involve technology and the Internet. Industry structure is not fixed but rather is shaped to a considerable degree by the choices made by the competitors.

Resource Based View

The Resource Based View (RBV) of a company builds on the above strategies but takes a wide view of all the resources available. RBV recognizes that companies are not all alike - they have different experiences, skills, and cultures. A company will succeed if it has the necessary resources. These may be physical items, such as buildings, telephones, or computers. Or they may be intangible items, such as ability, knowledge, and/or intellect.

Developing a Strategic Plan

A strategic plan aligns an organization's goals, values and activities, to create a sustainable competitive advantage. It focuses on the long-range goals of the business and defines how the goals will be reached. Strategic plans include the definition of missions, visions and objectives, which provide the basic direction and focus of the organization.

When developing a strategic plan, a firm needs to answer these questions:

• What business is the company in?

• What should be the geographical scope of the operations?
• What are the research and development goals?
• How should products be sourced?
• Where are the organization's weaknesses?
• Where are the organization's strengths?

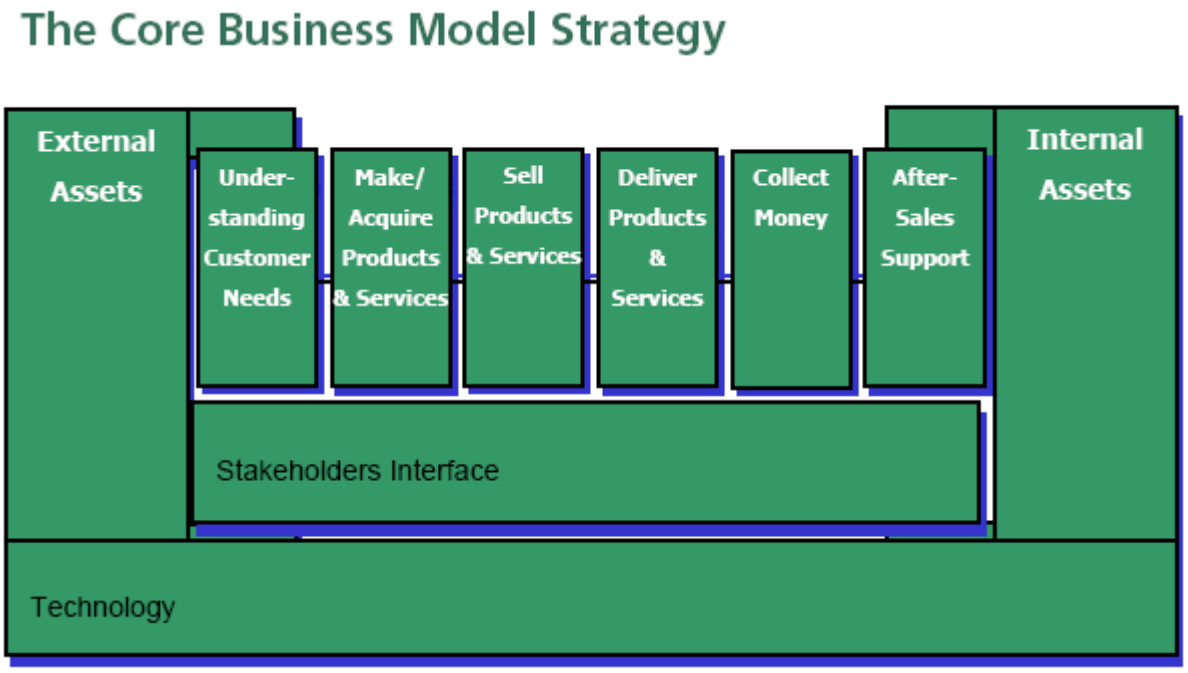
Bridging the Gap between Traditional and Pure-Play Models

An increasing number of businesses are finding that in order to optimize their business offering, they can no longer rely solely on traditional business models, or on the existing pure-play strategies. These businesses have become hybrid companies that borrow strategies from both model types.

A "Pure-Play" E-Business Model dictates that a business' primary mode of operation is via the Internet. This includes matters of order processing and remediation. In the e-business world, pure-play companies are decreasing, as they discover that the Internet alone cannot effectively sustain every level of their business delivery. For example, Amazon.com began with a pure-play model, but because this model did not effectively support the company's buying and distribution process, Amazon eventually opened its own bricks-and clicks distribution centers to increase efficiency.

A Business Web is an elaborate network of suppliers, distributors and customers that conduct business via the Internet and other electronic media. A business web is the generic model for wealth creation in the digital economy and is quickly replacing traditional corporate models of the industrial economy. The industrial economy was characterized by mega corporations that were directly involved in every aspect of the business process, from product creation and sales, to product distribution. Business webs challenge every aspect of this traditional approach to business. They are rapidly emerging as the new corporate form, characterized by businesses coming together to create value for customers, and wealth for shareholders.

The **Core Business Model** tries to overcome the limitations of the traditional and pure-play models, to bridge the gap between them, and to develop a sustainable competitive advantage in the Internet economy.



Classic business models do not fully address the unique advantages and challenges presented by the Internet. The Core Business Model (CBM)[15] is a new business model specifically designed to assist companies in developing their e-business strategy.

The Core Business Model exploits existing assets (both tangible and intangible) to maximize productivity, or they are leveraged into new opportunities through carefully planned deployment using technology.

The model asks what intangible assets a firm holds in several key areas, including:

• The firm's understanding of its customer requirements
• How it makes/acquires products or services
• Selling its products or services
• Delivering the products or services
• Collecting money from customers

[15] Author Analysis, and Acton Consulting Analysis

• And providing after sales support (if applicable)

These key areas make up the core business process of most companies with varying degrees of activity in each of the areas. The main advantage of the Core Business Model is its ability to provide a cross functional view of the elements that comprise your business, and assess the Internet-enablement potential of each.
The Core Business Model makes the following assumptions about a business:
• It will remain in its current lines of business
• It wants to lever existing investments
• Information delivery is important
• It wants to produce a model for sales channel coexistence

Best practices associated with web-enabling each step of the business process will be examined along with some specific requirements of each step.

Understand Customer Requirements

Companies can gain a better understanding of their customers' requirements by creating interactive web sites where customers can offer advice on product or service design and delivery. Techniques such as online surveys or the analysis of clickstream data are quick and easy ways to obtain feedback directly from customers.

Make or Acquire Products or Services

Some companies have implemented their own online procurement system to manage the purchase of everything from pencils to computers. Rather than completing paper requisitions for office supplies, employees choose items from a web catalogue, which is electronically sent to approve vendors. This method allows the company to capitalize on volume purchases and to find the best deals available.

Sell Products or Services

As with any business, to sell a product or service on the web, firms need an edge. The 24 hour a day, 7 day a week access provided by the Internet is not enough. Companies

have to provide additional services or added value, such as comprehensive after sales support.

Some types of goods are ideal for selling over the Internet; others are less suitable. For example, Amazon.com aims to make book buying fast and easy. Most people buy books based on the information contained on the jacket, or after reading a book review. Or, they may simply like the previous work of the author. Because all of this information can be displayed effectively on an e-business site, selling books over the web works well. Other products offer a greater challenge. How would a firm sell made-to-measure suits, for example? People buy goods over the Internet if there is an advantage, such as convenience, cost, or speed. But they still need to know what they're buying. This is one important reason why the combination of an online and traditional retail outlet works well. Customers can view information online and then visit the retail store, or they can check out the goods on display in the store and then buy online.

Deliver Products or Services

Dell Computer Corporation provides an excellent system for customers to check the status of their orders. The Dell system provides an increased level of support while reducing the costs. Using the Internet, customers check the status of their orders by specifying order and verification information. Like all Internet-based services, the system is available 24 hours a day.

Single or multiple orders can be tracked to obtain information, such as:

- Build-to-order status
- Estimated shipping date
- Carrier shipping status

Collect Money

In order for a company to find a suitable online payment system that effectively meets its business needs and the needs of its customers, there are a number of things to consider, including technical issues, cost, security, and tax implications. Currently, the

two most popular methods of online payment for consumers are credit card payments, and micro payments. Even though credit card payment is the ruling method of payment on the Internet today, it is not suited for every kind of online transaction.

Provide After-Sales Support

Customer support is instrumental to the long-term success of any business. Often firms focus on customer acquisition, which costs substantially more than customer retention. Because of this, the tactic of replacing dissatisfied clients with new ones does not support long-term growth. It's important to keep in mind that people who do business over the Internet are inclined to expect service 24 hours a day. In addition, they expect to get at least the same quality, speed, and effectiveness of service that they would if they walked into a store, or placed an order over the phone. Regardless of the type of e-business, effective customer service is marked by certain characteristics. For example, an after-sales support system should strive to solve customer problems, while anticipating difficulties before they arise. Effective customer support also provides customers with quick responses to their concerns, and gives them the ability to track the status of product orders.

External & Internal Assets

In the Core Business Model, the steps within the business process need to be leveraged with respect to the external and internal assets of the company. Internal assets include not only tangible resources, but also intangible resources such as an employee's skills and knowledge. External assets include all other resources available to your company. For example, if a firm has a co-branding relationship with another company it is an external asset. In the Core Business Model, these assets are exploited to provide additional products or services, enhance efficiency, or build customer loyalty through the careful use of the Internet. A key aspect of the Core Business Model is that existing assets are leveraged, not damaged, by web-enabling your business.

Stakeholders Interface

Stakeholders in a company can include anyone who has an interest in the success of the business. This may include customers, shareholders, and employees. In the Core Business Model, the interface between stakeholders and the company, along each step of the business process, is examined to focus on the advantages technology can offer. For example, the Internet might be used to facilitate communication between the company and its customers, shareholders, and employees. The Core Business Model also addresses the interface between stakeholders and a company's assets. For example, communication with potential employees or business partners might be facilitated using web technology. By posting desired employment traits or partnership criteria on a web site, the company could facilitate a dialogue with valuable resources that you might otherwise never have begun.

Technology

In every phase of a firm's business process, the potential use of primarily Internet technology is analyzed. However, the analysis should also include other potential enablers, such as:

- Intranets
- Virtual private networks (VPN)
- Voice Mailbox Systems (VMB)
- Private Branch Exchanges (PBX)
- Personal digital assistants (PDA)
- Telephony systems such as interactive voice response (IVR)

The distinction between different types of technology, however, is becoming blurred. For example, cell phones now provide access to the web. With the growth in the convergence of technologies, these distinctions will continue to dissolve.

Summary

It is important to develop a strategic plan that includes Internet related goals or objectives. Having strategic goals or objectives that clearly define your organization's

Internet or web enablement goals will ensure that they do not conflict with the existing strategy. The Core Business Model assists firms to implement the Internet strategy while still meeting the current practices of the firm.

CHAPTER VI: E-BUSINESS' INFLUENCE ON THE VALUE CHAIN

The basic tool for understanding the influence of information technology on companies is the value chain - the set of activities through which a product or service is created and delivered to customers. When a company competes in any industry, it performs a number of discrete but interconnected value-creating activities, such as operating a sales force, fabricating a component, or delivering products, and these activities have points of connection with the activities of suppliers, channels, and customers. The value chain is a framework for identifying all these activities and analyzing how they affect both a company's costs and the value delivered to buyers. Because every activity involves the creation, processing, and communication of information, information technology has a pervasive influence on the value chain. The special advantage of the Internet is the ability to link one activity with others and make real-time data created in one activity widely available, both within the company and with outside suppliers, channels, and customers. By incorporating a common, open set of communication protocols, Internet technology provides a standardized infrastructure, an intuitive browser interface for information access and delivery, bidirectional communication, and ease of connectivity – all at much lower cost than private networks and electronic data interchange, or EDI.

Some applications involve moving physical activities on-line, while others involve making physical activities more cost effective. But for all its power, the Internet does not represent a break from the past; rather, it is the latest stage in the ongoing evolution of information technology[16]. Indeed, the technological possibilities available today derive not just from the Internet architecture but also from complementary technological advances such as scanning, object-oriented programming, relational databases, and wireless communications.

To see how these technological improvements will ultimately affect the value chain, some historical perspective is illuminating. The evolution of information technology in business can be thought of in terms of five overlapping stages, each of which evolved out of constraints presented by the previous generation. The earliest IT systems automated discrete transactions such as order entry and accounting. The next stage

[16] M.E. Porter and V.E. Millar "How Information Gives You Competitive Advantage"

involved the fuller automation and functional enhancement of individual activities such as human resource management, sales force operations, and product design. The third stage, which is being accelerated by the Internet, involves cross-activity integration, such as linking sales activities with order processing. Multiple activities are being linked together through such tools as customer relationship management (CRM), supply chain management (SCM), and enterprise resource planning (ERP) systems. The fourth stage, which is just beginning, enables the integration of the value chain and entire value system, that is, the set of value chains in an entire industry, encompassing those of tiers of suppliers, channels, and customers. SCM and CRM are starting to merge, as end-to-end applications involving customers, channels, and suppliers link orders to, for example, manufacturing, procurement, and service delivery. Soon to be integrated is product development, which has been largely separate. Complex product models will be exchanged among parties, and Internet procurement will move from standard commodities to engineered items.

Internet Applications used in the Value Chain

Firm Infrastructure

- Web based, distributed financial and ERP systems
- Online investor relations (e.g., live chat, information dissemination, live broadcast conference calls)

Human Resource Management

- Self-service personnel and benefits administration
- Web-based training
- Internet based sharing and dissemination of company information
- Electronic time and expense reporting

Technology Development

- Collaborative product design across locations and among multiple value-system participants
- Knowledge directories accessible from all parts of the organization

- Real-time access by R&D to online sales and service information

Procurement

- Internet-enabled demand planning, real-time available-to-promise/capable-to-promise and fulfillment
- Other linkage of purchase, inventory, and forecasting systems with suppliers
- Automated “requisition to pay”
- Direct and indirect procurement via marketplaces, exchanges, auctions, and buyer-seller matching

Inbound Logistics [Part of Web distributed supply chain management]

- Real-time integrated scheduling, shipping, warehouse management, demand management and planning, and advanced planning and scheduling across the company and its suppliers
- Dissemination throughout the company of real-time inbound and in-progress inventory data

Operations [Part of Web distributed supply chain management]

- Integrated information exchange, scheduling, and decision making in in-house plants, contract assemblers, and components suppliers
- Real-time available-to-promise and capable-to-promise information available to the sales force and channels

Outbound Logistics [Part of Web distributed supply Chain Management]

- Real-time transaction of orders whether initiated by an end consumer, a sales person, or a channel partner
- Automated customer-specific agreements and contract terms
- Customer and channel access to product development and delivery status
- Collaborative integration with customer forecasting systems
- Integrated channel management including information exchange, warranty claims, and contract management (versioning, process control)

Marketing and Sales

- Online sales channels including websites and virtual marketplaces
- Real-time inside and outside access to customer information (Intranet), product catalogs, dynamic pricing, inventory availability, online submission of quotes, and order entry
- Online product configurators (product customization)
- Customer-tailored marketing via customer profiling (demographics, interests, etc.)
- Push Advertising
- Tailored online access
- Real-time customer feedback through web surveys, opti-in/opt-out marketing, and promotion response tracking

After Sales Service

- Online support of customer service representatives through e-mail response management, billing integration, co-browse, chat, “call me now” feature, voice-over-IP, and other uses of video streaming
- Customer self-service via websites and intelligent service request processing including updates to billing and shipping profiles
- Real-time field service access to costumer account review, schematic review, parts availability and ordering, work-order update, and service parts management

CHAPTER VII: THE LIMITS OF INTERNET TECHNOLOGY

While Internet technology can do many useful things today and will surely improve in the future, it cannot accomplish everything. Its limits include the following:

• Customers cannot physically examine, touch, and test products or get hands-on help in using or repairing them.

• It cannot create atmosphere which may be important in some businesses to support the image or brand (Example: Starbucks “Living Room Atmosphere).

• Knowledge transfer is restricted to codified knowledge, sacrificing the spontaneity and judgment that can result from interaction with skilled personnel.

• The ability to learn about suppliers and customers (beyond their mere purchasing habits) is limited by the lack of face-to-face contact.

• The lack of human contact with the customer eliminates a powerful tool for encouraging purchases, trading off terms and conditions, providing advice and reassurance, and closing deals.

• Delays are involved in navigating sites and finding information and are introduced by the requirement for direct shipment.

• Extra logistical costs are required to assemble, pack, and move small shipments.

• Companies are unable to take advantage of low-cost, nontransactional functions performed by sales forces, distribution channels, and purchasing departments (such as performing limited service and maintenance functions at a customer site).

• The absence of physical facilities circumscribes some functions and reduces a means to reinforce image and establish performance.

• Attracting new customers is difficult given the sheer magnitude of the available information and buying options.

CHAPTER VIII: ELECTRONIC FINANCIAL SERVICES – "THE E*TRADE SUCCESS STORY"[17]

Introduction

We are witnessing huge growth in the share of the population that is investing in the stock market. Investment varies from low risk and low growth stocks and funds to high risk and high growth stocks and funds. The intermediaries that enable this process of investing in stocks and mutual funds are significant beneficiaries of this trend in the populace. These intermediaries range from firms that advise customers on their investment choices and execute their choices (full service brokerages), to those that simply execute the orders of their customers (discount brokerages).

This analysis focuses on the discount brokerage industry and E*Trade in particular. This industry sector is analyzed in detail using Porter's (1985) framework for industry competitive analysis. In the subsequent section, the considerable impact of information technology on the trading process is studied. In an effort to understand the discount brokerage industry better, two firms - Charles Schwab Inc. and E*TRADE Inc. - have been compared regarding the differences in their strategy and business model. Charles Schwab has a hybrid business model that includes physical presence via its 295 offices and an on-line presence (http://www.schwab.com). E*TRADE has a pure on-line presence (http://www.etrade.com). In this industry, E*TRADE is usually considered the innovator while Charles Schwab is often categorized as a fast follower. The analysis focuses on particularly on E*TRADE and in the subsequent section, the companies are compared to bring out salient differences and the potential impact of these differences.

There are takeaways from this study of the discount brokerage industry that can be applied to an online business model in virtually any industry. An elaborate network of exclusive alliances is a very effective entry barrier in the on-line domain. Economies of scope, scale and volume are critical business drivers in the electronic medium. Moreover, keeping overheads low via effective use of information technology could be a catalyst for success that many companies lack.

[17] Author Analysis

Industry Overview

With the increasing focus on saving for retirement and the increase in stock ownership plans for corporate employees, the securities and financial services sector has captured the attention of the public. More than forty percent of US households now hold stocks. The full service and discount brokerage sectors are a significant component of the industry that helps enterprises and individuals manage and grow their assets. This segment also includes asset managers such as Fidelity Investments and the Vanguard Group, which manages mutual funds while offering asset management services to individuals and families. Most investment banks and brokerages, as well as many consumer banks offer asset management services to wealthy individuals. Full service firms provide expensive and extensive advice for their clients and execute their orders for the purchase or sale of stocks, bonds and other securities. Market leaders include Merrill Lynch and Morgan Stanley Dean Witter and Co. Discount brokerage firms simply execute orders that they receive from their clients for nominal trading fees. Market leaders include Charles Schwab and Co., Inc. and E*TRADE Inc.

Charles Schwab and E*TRADE, both have a strong on-line presence. They do, however, differ in their strategy, structure and the manner in which they go to market. This case study will highlight these differences and try to predict the trends that are likely to emerge in this industry.

Analysis of the Discount Brokerage Industry

In order to understand the potential of an industry, and in particular, which players are likely to benefit, it is useful to conduct a competitive analysis of the industry. We use Michael Porter's (1985) five forces framework to analyze the on-line industry better. Porter argues that the key components of an industry competitive analysis are the power of suppliers to the firms in an industry, the power of customers, rivalry between existing players, the potential of new entrants, and the existence of substitute products or services. We examine each of these in turn.

Supplier power

There are three major categories of suppliers to on-line brokerage firms. These include providers of IT infrastructure, providers of the software required to operate these sites and to provide functionality to its customers, and the information services that will eventually provide content to the brokerage firm's websites. Once an on-line brokerage decides to commit to a company (or companies) for IT infrastructure - computer systems and networks - these companies that supply this back-end infrastructure can be reasonably certain that the on-line brokerage will likely remain a customer for some time since future equipment will usually have to be compatible with the existing architecture. Generally speaking, brokerages either commit to platforms such as those offered by Sun Microsystems and Microsoft for their server software needs and companies such as Cisco for their telecommunication or network needs. The same dependencies can be attributed to the software vendors. Major categories of software include system software that ensure that the various components of the infrastructure in place communicate with each other, interface software which provides a user-friendly interface and front-end, and back-office systems that provide the core functionality of these businesses. The more important software suppliers are Oracle, Microsoft, Sybase and AOL Netscape. This makes them fairly powerful. However, given the competitive nature of these technology businesses, a customer can often turn to competing companies. While this may entail substantial switching costs, it does limit the power of any single technology supplier. Another set of influential suppliers consists of firms that provide financial information to the brokerages such as Business Wire, Reuters and Associated Press. However, Securities and Exchange Commission reporting requirements and the large number of companies that provide financial information make it unlikely that any information provide can exert significant power over a brokerage firm.

Buyer power

At the present time the market for on-line discount brokerages is very fragmented. The typical customer is educated, middle to upper middle class with respect to income level, and generally makes informed decisions. The takeaway from such a profile is that individually, customers or tend not to wield power in this industry, but can be quite

powerful as a group. It is worth emphasizing that the switching costs for an individual customer to move from one brokerage house to another are quite low giving the individual customer a large set of options. Moreover, the existence of chat rooms and other discussion forums on the Internet make it relatively simple for individual customers to share their opinions with each other, and to organize groups that can collectively express their opinions to the brokerage firm.

Rivalry of existing players

The on-line discount industry consists of four or five large companies and numerous boutique brokerage firms that provide focused services to particular segments of the market. The biggest players in this industry sector are Charles Schwab, E*TRADE, Waterhouse Securities, Ameritrade and Datek. These large firms account for 57% of the on-line discount brokerage business and the boutiques catering to niche markets account for the other 43%. The industry is highly competitive with the large companies engaging in fierce competition between themselves and with the boutiques for market share. This results in the consumer getting a bigger share of the surplus. Notably, one trend in the past four years has been that boutique firms have increased their market share at the expense of the bigger players.

New Entrants

The on-line market is constantly evolving and new entrants to this market are continually emerging. Despite fairly high sunk costs, the lure of the visibility of Internet-based businesses attracts more entrants all the time. At this time, most new entrants are focusing on particular segments of a fragmented market. For example, Jack White and Co. concentrates on clients based in Southern California, and specifically, San Diego. Another likely entrant is a full service brokerage firm. Several of these firms have or are considering spinning off a division to focus on the on-line industry. This new entrant has the loyalty of its existing customers, existing value added services such as investment research, and the monetary backing of firms with existing and ongoing revenue streams. On the other hand, these competitors are constrained by existing channels and pricing models that can result in a sharp decrease in revenues if they compete with discount

brokers on price. In fact, in order to avoid direct price competition with discount brokers, several full service brokers are adopting asset-based fee structures in lieu of transaction fees. Yet another source of competitors are those companies that have established their core competency in other on-line businesses, have a large customer base, and are attempting to expand their businesses into new industries. Examples include portals such as Yahoo Inc, ISPs such as AOL, and perhaps even Microsoft who could also enter the fray. These companies bring a large customer base to the table and possess a comprehensive understanding of their on-line preferences and behaviors. It is conceivable that these or other companies could enter the discount brokerage industry by catering initially to their loyal customers and then eventually cut into the customer base of other existing market players. Moreover, new technologies continue to be introduced making it possible for new entrants to leapfrog existing competitors who may have invested in less flexible architectures. Witness the recent efforts of the brokerage industry to reach customers through a variety of information appliances such as the Palm (from 3Com Corporation), not just those that are Internet-based.

Substitutes

Clearly, full-service brokers are substitutes for discount brokers. In theory, existing customers can take their business to full service brokerages, though this is unlikely because of the higher cost of dealing with full service brokers. Customers could also begin trading between themselves in new on-line marketplaces thus disenfranchising the brokerages but this is also unlikely given the high costs associated with authenticating and verifying trades, maintaining the required ownership and registry databases, providing custodial services, and complying with SEC regulations. Companies could stop selling shares (at least for new issues) via brokerage firms and go directly to the customer (company-to-customer transactions). This is also somewhat unlikely, given the economies of scale, scope and volume that brokerages have achieved.

<u>Conclusions from the Industry Analysis</u>

Based on the above analysis, I would like to highlight what I believe to be the key competitive features of the on-line brokerage industry. High fixed costs and low variable

costs characterize the on-line discount brokerage business. Clearly, supply exceeds demand, and in an intensively competitive environment, margins come under tremendous pressure. Unsurprisingly, margins are low in this industry. Given the economics of the business, and in particular, the economies of scale and scope inherent in the technology, market share measured by trading volume becomes a critical success factor. Correspondingly, the size of the customer base and trading frequency are key business drivers. Scalability of systems is vital to the survival of the on-line brokerage firms. Trade volumes are constantly increasing. Newer and better technology is being rolled out constantly. A company needs to think strategically when committing to a particular technology solution. These technologies must be such that they can be easily upgraded and enhanced to offer new capabilities. Technology can by itself become a source of competitive advantage as evidenced by E*TRADE selling its architecture to companies in other countries. Further, in a rapidly changing technological environment, new entrants may have opportunities to leapfrog an incumbent's service offerings using new technologies without having to worry about compatibility with previous technological solutions, a feature that an incumbent would have to maintain. Moreover, as the marketplace is still young and continues to evolve, customer preferences are changing. In an industry where a customer's switching costs are low, it is imperative for incumbents to understand changing customer needs and concerns and incorporate them in the service offerings if they are to maintain long-term viability.

Early movers have significant advantages. Since barriers to entry such as technology platforms, regulations or customer switching costs are limited at best, those who enter the market early must create network effects to act as a barrier to entry for late entrants. They can do so by leveraging their customer base to create virtual communities, by developing exclusive alliances with content providers, or by implementing technological and process innovations that can be protected with intellectual property laws. Moreover, brand recognition is established early and is often sustainable as evidenced by E*TRADE and Amazon.

Impact of Information Technology on the Discount Brokerage Industry

This section will compare the traditional trading process to that available via on-line brokerages.

The Traditional Trading Process

To buy or sell a NYSE-listed security through the traditional method, an investor calls his/her stockbroker to place an order. The investor's order is then phoned or transmitted electronically to the NYSE trading floor. The floor broker receives the order from booths that are located along the perimeter of the trading floor. The booths house electronic screens that display the investor orders. The floor broker then goes to the specialist trading post that handles the stock that the investor wants to trade. All floor brokers who have orders to buy or sell the same stock gather around the trading booth. Floor brokers make bids and offers to sell or buy stock using an open outcry to attract the participation of interested parties. Once the highest bid meets the lowest offer, the specialist executes a trade. After the specialist executes the trade, the brokerage firms send confirmations to the buyer and seller. The completed execution is sent to the consolidated tape, which displays the trade to the global financial community. The brokerage firms send written confirmations of the trade to the buyer and seller within three business days. The buyer settles his/her account by submitting payment within three working days. The seller's account will be credited the proceeds of the sale minus commissions associated with the sale within the same three day period.

The New Trading Process

Over the last few years, discount brokerages have become very popular with investors willing to conduct their own research and make their own investment decisions. These brokerages offer lower commission rates on trades than full service brokerage firms, but they do not provide (proprietary) security trading advice or in-depth analysis of their client's investments. The Internet takes the service capabilities of discount brokerages one step further with on-line investment capabilities. On-line investing allows users to submit a trade transaction (either buy or sell a stock) over the World Wide Web. Depending upon the knowledge base of the individual investor, and the opportunity cost

of his/her time, on-line brokerages may be a good way for them to trade securities. With its vast array of resources, the Internet is a great medium for investors to obtain information on financial markets, on numerous investment vehicles, and information on individual stocks.

"Investing is an activity dominated by information and transactions, not the physical delivery of product…
As such, it is a bit business -- prime territory for electronic delivery"

The first step in the process of on-line trading is to establish an account with a broker offering online trading. Once the investor decides to place a trade, the user simply logs on to the brokerage's Web site using a unique log-in ID and password. The investor may place a trade at any time of day, and on any day of the week. Note that the actual trade may or may not take place outside of regular market hours, however. Once connected to the broker's Web site, the user fills out an electronic form specifying the details of the transaction, such as the number of shares to be traded and at what price. From this point, the acquisition of the stock is conducted in an identical fashion to that of the traditional trading process. All investor account information is available on-line; order status, existing positions, account balance and margins are some of the details available. The status of orders placed by customers can be checked on-line or by email.

Internet-based services allow discount brokerages to improve customer service while actually reducing the labor costs associated with providing it. In reality, customers are now executing tasks like obtaining stock quotes or verifying balances, tasks that were previously carried out by brokers. On-line brokerages are able to do this by profiling their customers accurately; understanding the needs of these customers and then investing in technology that cater to these needs cost effectively. The concept behind the move to Internet based trading reflects a move towards empowering the customer. Specifically, the Internet has facilitated the unbundling of the services that an investor may want, such as research, advice and trading. Not only does on-line trading dramatically increase the availability of the brokerage firm to its customers cost effectively, it allows a

customer to obtain these services from a variety of service providers rather than from a single provider, usually a full-service broker. Consequently, even investors who want investment advice may choose to use on-line trading from a discount brokerage while securing investment advice elsewhere.

In the financial services industry, a company that decides to establish an on-line presence then needs to develop an Internet strategy. The strategy for the Internet endeavor must be aligned with the company's overall strategy. In particular, a company must clearly identify the market segment that is likely to be attracted to its on-line services and that which is likely to prefer traditional services. The Internet strategy therefore encompasses the demographic and geographic segments of the customer base that the company is catering to, the level of functionality that is likely to be provided on the web site and the number of "hits" or volume of transactions that it would like to support. This is essential because the net strategy has implications for the core competencies of the company.

E*TRADE Inc.

E*TRADE has been on the forefront of innovation in the discount brokerage industry for many years. It was founded as a service bureau in 1982, providing on-line quotation and trading services to Fidelity Investments, Charles Schwab, and Quick & Reilly. E*TRADE Securities, Inc. was launched as the original all-electronic brokerage in 1992 and began to offer on-line investing services through America Online and CompuServe. Then, with the implementation of the website, www.etrade.com, in February 1996, demand for E*TRADE's services increased exponentially. In October 2002, E*TRADE was named the #1 on-line investing site in the world by Lafferty Information and Research Group. E*TRADE accomplished a compounded annual growth rate in new accounts since October 1994, of 114%. The profit margin stands currently at 16.5% well above industry average of 14.1%[18]. Transactions over the Internet represented 95% of the company's September 2003 transaction volume.

E*TRADE Financial Corporation is a focused company. It is a global financial services holding company that offers a range of financial products and related services primarily

[18] Source: MSN Money Central

through its subsidiaries. The Company serves retail, corporate and institutional customers, principally under the E*TRADE FINANCIAL brand, providing brokerage, banking and lending products through electronic delivery channels, including the Internet. Its business is organized into two segments, Brokerage and Banking. Brokerage services, including advanced trading platforms, options trading and streaming quotes are based upon proprietary transaction-enabling technology and are designed primarily to serve the needs of self-directed investors. The Brokerage Segment generates revenues primarily from commissions and margin lending. Primarily through E*TRADE Bank, the Company offers a full suite of commercial banking products and services. The Banking Segment earns interest from its diversified interest-earning assets and produces fee-based income. It offers automated order placement and execution, along with a suite of products and services that can be personalized, including portfolio tracking, Java-based charting and quote applications, real-time market commentary and analysis, news and other information services. These services are provided 24 hours a day, seven days a week via a variety of electronic channels. E*TRADE's proprietary transaction-enabling technology supports highly automated, easy-to-use and cost-effective services that empower its customers to take greater control of their investment decisions and financial transactions. E*TRADE's services can be categorized into four related offerings – trading, market and financial information, portfolio and account management, and cash management services.

Trading services include fully automated stock, option and mutual fund order processing via personal computer or touch-tone telephone, including voice recognition. Customers can directly place orders to buy and sell NASDAQ and exchange-listed securities, as well as equity and index options, and mutual funds through the E*TRADE automated order processing system. E*TRADE supports a range of order types, including market orders, limit orders (good-till-canceled or day), stop orders and short sales. Account holders receive electronic notification of order executions, printed trade confirmations and detailed statements.

Market and financial information services include free access to quotes on security prices, market data such as market indices, active securities, and largest gainers and losers. Customers can create their own personal lists of securities for quick access to

pricing information. They can also choose to be alerted when there is breaking news on a specific company, or when the price of a security attains a specified level.

Through its alliances, E*TRADE also provides immediate access to breaking news, charts, market commentary and analysis and company financial information. Upon placing an order, the customer is provided with a real-time bid or ask quote at no extra charge. For $30 per month, individual investors can obtain unlimited market data. The company's Web site provides links to other business and financial Web sites, including the CNN Financial Network and the EDGAR database, which provides access to SEC filings of public companies.

Portfolio and account management services include on-line access to customers of all portfolio assets held at E*TRADE, including data on the date of purchase, cost basis, current price and current market value. The system automatically calculates unrealized profits and losses for each asset held. Detailed account balance and transaction information includes cash and money fund balances, buying power, net market portfolio value, dividends paid, interest earned, deposits and withdrawals. Brokerage history includes all orders, executions, changes and cancellations. Tax records include total short-term or long-term gain/loss and commissions paid. Customers can also create "shadow" portfolios to include most financial instruments a customer is interested in tracking—for example, assets held at another brokerage firm. These shadow portfolios can include stocks, options, bonds and most mutual funds.

Cash management services provide customers with the ability to send payments through the mail, federal wire system or the Internet. E*TRADE provides free check-writing services with no minimum through a commercial bank and is exploring the expansion of these services. Through its strategic relationship with National Processing Company, it has expanded its cash management offerings to include electronic funds transfer via the Internet and an automatic deposit program to allow scheduled periodic transfers of funds into customers' E*TRADE accounts. It also allows un-invested funds to earn interest in a credit interest program or to be invested in one of five money market funds. These services are offered to consumers through a broad range of electronic gateways, including the Internet, touch-tone telephone, including voice recognition, on-line service providers (America On-line, AT&T WorldNet, CompuServe, The Microsoft

Network and Prodigy), interactive television and direct modem access. All records are maintained on one centralized system, so that customers have access to current account information regardless of which gateways they are using. E*TRADE is continually striving to increase the functionality of its services, as well as to offer new services that enhance customers' on-line investing experiences. Its services are aimed at giving consumers increased control of their personal investments by providing a direct link to the financial markets and to financial information through a personalized user interface.

The company's ultimate aim is to provide customers with the ultimate market account comprising end-to-end banking and other financial services for the customer. To this end, E*TRADE has pioneered many innovations. These include consolidating no-load mutual funds into a brokerage account, selling mutual funds on the web, assembling buyers and sellers of mutual funds in private transactions away from the funds, allowing retail investors to split the spread on NASDAQ stocks and trade like institutional investors, and providing immediate hedging opportunities in commodities.

Strategy and Structure

E*TRADE is committed to being the lead-edge innovator for on-line financial services, and simultaneously providing high levels of customer service. To this end, E*TRADE has developed alliances with Internet access and service providers, Internet content providers, providers of home and on-line banking services, and electronic commerce companies. To date, E*TRADE has concentrated on securing alliances with Internet access, on-line service and content providers. The aim of these strategic relationships is to increase its access to on-line consumers, to build and enhance brand-name recognition and to expand the products and services the company can provide to its on-line customers. This network of alliances also serves to create barriers to entry that would make it difficult for new entrants to compete directly with them. While a majority of the Company's customers access its services directly through the Internet, direct modem access or touch-tone telephone, many use on-line service providers such as AOL, AT&T WorldNet, CompuServe, The Microsoft Network and Prodigy. Strategic relationships with such service providers allow E*TRADE to access a greater number of

potential customers and allow the on-line service providers to offer their subscribers a broader range of service options. For example, E*TRADE has a nonexclusive agreement with AOL to place E*TRADE in its on-line brokerage area, giving its large subscriber base access to E*TRADE's Web site. It also has an alliance with Microsoft Corporation to integrate E*TRADE's online investing services into the Microsoft Investor on-line trading area of The Microsoft Network. Customers can also download information from their brokerage account into applications like Microsoft's Money and Investor Portfolio Manager. Likewise, the company has entered into an agreement with Yahoo! that provides direct access from the Quotes area of Yahoo! Finance to E*TRADE's Web site. Similar alliances have been developed with PointCast and AT&T. E*TRADE has arrangements with SinaNet to reach Chinese speaking investors in the United States, and with the Fourth Communication Network to reach customers in hotels. Combining the popularity of Internet investing with a full range of banking services, E*TRADE and Banc One Corporation have established co-branded Web sites to market each other's financial services. In addition, E*TRADE offers a co-branded credit card through First USA, the credit card subsidiary of Banc One. A strategic relationship has also been created with Intuit, Inc., to allow customers to download E*TRADE account information into the Quicken Software. In addition, users can directly access E*TRADE's Web site from Quicken and the Excite Business and Investing channel by Quicken.com. Content such as news, quotes, charts and fundamental data help provide investors with the information necessary to make investment decisions. E*TRADE has developed partnerships with leading content providers to fulfill customers' information needs and help drive transaction volume. An example of this includes an arrangement with BASELINE Financial Services to provide customers with access to a wide array of investment fundamentals, First Call earnings estimates and historical prices on over 6,500 stocks.

Briefing.com provides free real-time market commentary and analysis to E*TRADE customers. E*TRADE has entered into a revenue sharing agreement with INVESTools that provides its customers with direct access to 25 brand-name research reports and newsletters plus stock screening tools on a pay-per-use basis. Quote.com provides current news and quote lookup features. Customers are also provided with news

provided from Reuters News, PR Newswire and Business Wire. IDD provides E*TRADE customers with access to mutual fund profiles and two types of screening tools (Quick Fund Search and Advanced Fund Search) within the E*TRADE Mutual Fund Center. InUnity Corporation provides customers with access to electronic prospectuses for funds offered within the E*TRADE Mutual Fund Center. Morningstar, Inc., provides performance information and proprietary “star” ratings on mutual funds within the E*TRADE Mutual Fund Center. The company has also entered into a revenue sharing agreement with MSNBC Business Video which provides E*TRADE customers with direct access to exclusive audio and video segments at a preferred customer discount. E*TRADE is expanding into new international markets via alliances with companies in key markets. These alliances enable it to capitalize on these relationships, by providing market knowledge, contacts and local understanding. Nova Pacific Capital Limited provides on-line investing services to customers in Australia and New Zealand under the E*TRADE name and VERSUS Technologies, Inc. provides on-line investing services to Canadian residents. Given the importance of technology as a key component in maintaining market leadership in the Internet arena, E*TRADE has developed partnerships with leading technology providers support its products and services with up-to-date features and offer the best solutions for customers. For example, National Processing Company provides E*TRADE’s customers with the ability to initiate funds transfers from checking accounts at third-party institutions into their E*TRADE accounts over the Internet. E*TRADE incorporates Neural Applications Corporation’s Java-based intelligent process optimization solutions and data management systems into its Java-based charting and quote applications. Telesphere Corporation provides real-time market data on some internationally traded securities in addition to data on domestically traded securities.

Use of Information Technology

The E*TRADE engine is a proprietary transaction-enabling technology that automates traditionally labor-intensive transactions. Because it was custom-tailored for electronic marketplace use, the E*TRADE engine provides customers with efficient service and has the added advantage of being scalable and adaptable as usage increases and

service offerings are expanded. Moreover, the design of the E*TRADE engine and related software is multi-tiered allowing for rapid expansion of network and computing capacity without interrupting service or requiring replacement of existing hardware or software. E*TRADE's core technology allows for standardized processing across multiple gateways. The primary components include a graphical user interface (GUI), the interface server that connects the customer to the processor, and the automated transaction processor. The GUI environment is based on Netscape's Secure Enterprise Server and can be accessed by individuals utilizing the major web browsers – Netscape Navigator or Microsoft Internet Explorer. E*TRADE's GUI connects to the interface server through a bank of Sun servers. These "gateway servers" provide for load balancing and offer immediate scalability. Access is restricted through the use of secured network servers and routers. The interface server's primary function is to provide access to an efficient, standard transaction processor from all gateways. The server technology enables communications through multiple platforms and allows different platforms to communicate with each other. The core of the E*TRADE engine is the automated processor, designed to provide the highest degree of automation for all E*TRADE transactions. The automated processor is designed to rapidly read data, process transactions and transmit information to multiple locations. Over 85% of its transactions are processed without any manual intervention. E*TRADE uses a combination of proprietary and industry standard security measures to protect customers' accounts. Customers are assigned unique account numbers, user identifications and trading passwords that must be used each time they log on to the system. The company relies on encryption and authentication technology, including public key cryptography to provide the security and authentication necessary to effect the secure exchange of information. Touch-tone telephone transactions are secured through a personal identification number ("PIN")--the same technology used in ATMs. A second level of password protection is used prior to order placement. In addition, the company has an agreement to provide digital certification and authentication services for electronic commerce through its alliance with VeriSign, Inc.

Reinventing Schwab

Though Charles Schwab is still the nation's largest discount broker, competition and a changing landscape have forced it to evolve. Gone is the single-minded pursuit of the average investor in favor of a new identity as a full-service brokerage.

Charles Schwab became a powerhouse because of its innovations. Then again, the company had a new focus: providing low-cost, quality services for retail investors. During the 1990s, Charles Schwab Corp. veered from its focus, entering a variety of new segments, such as services for the “ultra wealthy” (with its purchase of U.S. Trust).

The transaction-based, low-cost structure remained intact, but the acquisition of US Trust and the implementation of the tiered Schwab Personal Choice program highlighted a new commitment to also provide comprehensive wealth-management services to affluent clients - a strategy inconceivable a few years earlier. To be sure, there is still a targeted effort to reach the low-cost crowd, especially considering recent commission reductions, but a quick glance at Schwab's website reveals a desire to trap bigger game: college funding, asset management, retirement and estate planning, and trust accounts. Schwab's foray into the full-service arena has left the company vulnerable to attack from both sides. Unable to differentiate by either price or service, it has been undercut at one end of the spectrum by online discount brokers while it is waging war at the other end on foreign terrain against entrenched industry heavyweights such as Merrill Lynch, Morgan Stanley, and Citigroup's Smith Barney.

At the present, the company is trying to unwind the wayward diversification spree, and the company’s namesake, Charles Schwab is leading the charge. One example is the recent sale of Soundview to UBS AG. Here are his comments regarding this transaction:

"Given the current market environment, I have come to the conclusion there is not enough synergy between SSCM and our core businesses to justify our continued investment in the capital markets arena," said Charles R. Schwab, Schwab Chairman and CEO. "In addition to improving our overall profit margin and return on equity, our exit

from capital markets reinforces our strategic focus on individual investors and independent financial advisors. We are moving the company forward on a solid financial foundation that includes a strong balance sheet with over $4.5 billion of stockholder equity."
Mr. Schwab concluded, "A primary objective of this transaction is to establish a relationship that assures our clients will receive the same superior trade executions they have come to expect from Schwab, and we are very pleased to partner with UBS to that end."

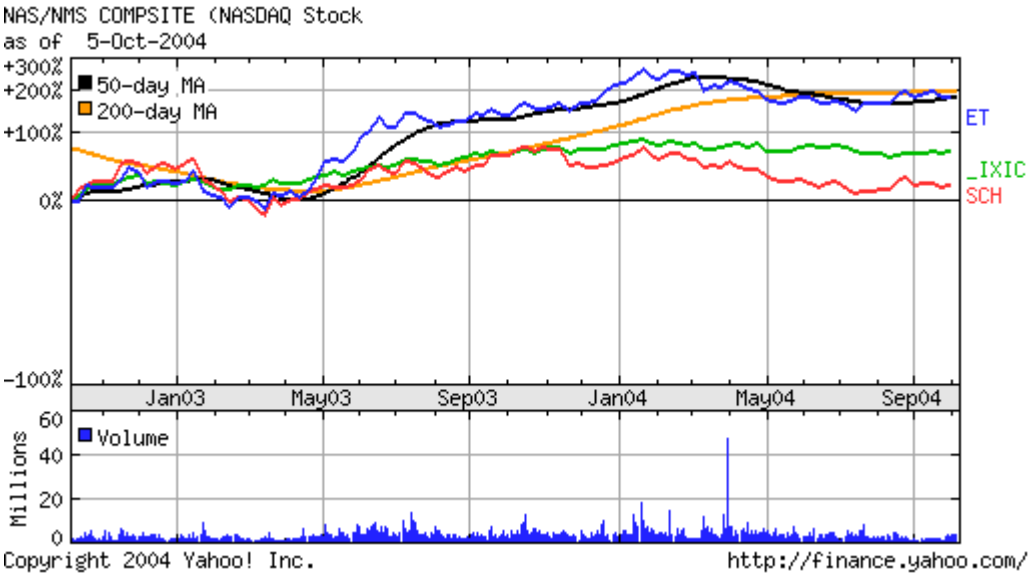
Clearly, the future for a discount broker at the upper end of the commission scale was muddled. Management was forced into making some difficult strategic decisions, in the process, abandoning a cardinal principle upon which the firm was founded: no advice. The core philosophy was tossed aside - along with a commitment to serving the average investor - as the company overhauled its operations in search of a new identity as a full-service broker.

The firm at present not only has to deal with disinvestments to better focus on its core competencies and related businesses, it also is facing a price war for some time. In 2004 Schwab already announced two separate price reductions which are intended to make Schwab more competitive in what has become an intensely competitive filed that includes companies such as E*TRADE, Ameritrade, TD Waterhouse and Fidelity Investments. Schwab also reduced the rate on broker-assisted trades and trades made through the company's automated phone service, and eliminated quarterly service fees associated with its Schwab Independent Investing Signature service.

Schwab's actions serve to highlight the value of competitive advantage and the nature of the service. For example, online auctioneer eBay been able to raise auction fees due to its strong brand and lack of competition. Similarly, coffee retailer Starbucks recently announced its own price hike. Competition is growing for a service in which Schwab isn't appreciably any better or worse than its key competitors. What's more, further diminishing Schwab's advantage is the fact that investor resources are also improving

considerably through the ease of obtaining information on websites such as Yahoo! Finance and The Motley Fool. Adding that together, and it is competition that determines Schwab's lack of pricing power. And as the latest price reductions show, that lack of pricing power comes at a cost of overall profitability.

The Results - Firm Level Comparison: E*Trade vs. Charles Schwab



The 2 year period chart illustrates E*Trades performance compared to its competitor Schwab, and the Nasdaq Composite Index. E*Trade over performs Schwab by almost 200% and the Nasdaq Composite Index by more then 100% over the same period of time.

E*TRADE: Focused on Core Competencies, Related Businesses, Proprietary Technology, Customer Service, Global (responsible) Expansion, Successful Alliances. The Company has cost advantages to several of its competitors including Schwab and presents higher profit margins than the industry average.

Charles Schwab: Diversified into too many businesses and thereby was losing its focus on its core competencies and related businesses. The company maintained for several years an uncompetitive commission structure through which the firm lost clients to competitors. As the latest price reductions show, that lack of pricing power comes at a

cost of overall profitability. The firm was unable in the past to differentiate by either price or service. Schwab needs urgently to obtain higher profit margins by reducing costs. If the company will be successful in reinventing itself remains to be seen in the future.

Case Analysis Conclusions

The information and financial services industries are characterized by rapid technological change, changes in customer requirements, frequent new service and product introductions and enhancements, and emerging industry standards. The introduction of services or products embodying new technologies and the emergence of new industry standards and practices can render existing services or products obsolete and unmarketable. The future success of a competitor in this space will depend, in part, on its ability to develop leading technologies, enhance its existing services and products, and develop new services and products that address the increasingly sophisticated and varied needs of its prospective customers. Discount brokers must respond to technological advances, emerging industry standards and practices on a timely and cost-effective basis.

The costs of owning and operating a commercial website in financial services are fairly expensive. The cost to a new entrant is very steep. For the early entrants, this is a sunk cost. Thus, intense competition is very much a reality in the on-line world. To succeed in the face of such competition, companies need to have economies in scope, scale and most importantly volume. Economies of scale help offset recurring costs such as upgrading of infrastructure. Since customers want integrated financial offerings, it is the goal of most financial services firms to provide for every financial need of the consumer ranging from 401K plans to savings accounts to money market accounts at one site. This requires economies of scope. A network of alliances developed with on-line partners can be an effective strategy to offset the absence of other barriers to entry. These alliances can act as a deterrent to new entrants who can find market penetration to be a monumental task.

CHAPTER IV: CONCLUSIONS[19]

E-business is an innovation that modern day organizations cannot do without. It is based on technology, evolves with technological developments, digitizes and automates business processes, is global and leads to improved competitiveness, efficiencies, increased market share, and business expansion. E-businesses models include business-to-business, business-to-consumer, government-to-government, government-to-business, government-to-consumer and numerous other models. Technological developments applied to e-business results in new issues in the organization, in dealing with business partners and customers, and in dealing with new laws and regulations as well as automated processes. Conducting business electronically is a change from traditional ways of doing things, resulting in large-scale transformation to existing business. To attain business efficiencies from e-business, it is imperative that organizations effectively manage the e-business environment, and all associated changes. E-business applications have resulted in new ways of dealing with customers and business partners, automated business process application of new regulations and technologies, round-the-clock business hours, reduced number of employees, continuous monitoring of technology and information, electronic payment and data processing, an elevated need for security and privacy of information, and totally new ways of doing things. The change from traditional business to electronic business is not one of degree but of a kind that requires powerful and effective management. The issues discussed above are important for all organizations for successful management of change.

Companies have to learn from their past mistakes and instead of concentrating on maximizing revenue and market share at all cost by pursuing customers indiscriminately through discounting, giveaways, promotions, channel incentives and heavy advertising, they should start (again) to focus on profits. The Internet is transformational in some respects, but many traditional sources of competitive advantage remain intact. The Internet is not disruptive to most existing industries and established companies. It rarely

[19] Author Analysis

nullifies important sources of competitive advantage in an industry; it often makes them even more valuable. And as all companies embrace Internet technology, the Internet itself will be neutralized as a source of advantage. Robust competitive advantages will arise instead from traditional strengths such as unique products, proprietary content, and distinctive physical activities. Internet technology may be able to fortify those advantages, but it is unlikely to supplant them. It is necessary for managers to realize that the Internet has to be integrated into a firm's overall strategy rather then to be managed separately.

There are also some very real dangers to interconnected networks and therefore to the future of e-Business. Several issues have to be analyzed such as privacy, security and censorship on the web. The use of email for example enabled companies to communicate in ways that where 25 years ago unthinkable. But this technology also leads to another phenomenon, called SPAM mail. Having employees sort out important mail from SPAM mail actually decreases productivity instead of increasing it. Chile had for example a productivity loss in 2003 of 30.000.000 Dollars which has been directly attributed to SPAM mail[20]. Also Trojan horses, Viruses and Worms are another real threat to interconnected companies, threatening entire digital infrastructures.

Coming to this papers end I would like to cite Michael Porter when asked by a Business Week reporter about what will happen next to the Internet Economy:
"We're very short of workers of any kind and particularly highly skilled scientists and engineers. So ways of bolstering the efficiency of people, such as the Internet, are important. I just hope companies will heed the message not to think of this as an operational efficiency tool but as a way to reinforce your own distinctive strategy. That's the way to turn it into an advantage rather than just something you have to do to be in the game. It will create a lot of change in the way business is done, and that change is not complete. The real issue is how do we use the technology for competitive advantage? That's where people missed out. I think it would be very unfortunate if in the

[20] Report in "24 Horas" of Chile's National TV Channel "TVN" on September 22, 2004

bungling of the application, companies today lost sight of the ultimate importance of the technology."

…and Schumpeter's view on innovation and competition in an ever changing business landscape:

Innovation by the entrepreneur, argued Schumpeter, led to gales of *"creative destruction"* as innovations caused old inventories, ideas, technologies, skills, and equipment to become obsolete. The question, as Schumpeter saw it, was not *"how capitalism administers existing structures,... [but] how it creates and destroys them."* This creative destruction, he believed, caused continuous progress and improved standards of living for everyone.

Schumpeter argued with the prevailing view that "perfect" competition was the way to maximize economic well-being. Under perfect competition all firms in an industry produced the same good, sold it for the same price, and had access to the same technology. Schumpeter saw this kind of competition as relatively unimportant. He wrote: *"[What counts is] competition from the new commodity, the new technology, the new source of supply, the new type of organization... competition which... strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives."*

GLOSSARY

24/7

The operation of a site or service 24 hours a day, seven days a week.

A

Acceptable use policy

(AUP) An acceptable use policy outlines the conduct expected from a computer user. Businesses, schools, and ISPs create AUPs to prohibit spamming, piracy, pornography, and other inappropriate/illegal uses.

ADSL (Asymmetric Digital Subscriber Line)

A technology that allows more data to be sent over existing copper telephone lines.. ADSL supports data rates of from 1.5 to 9 Mbps when receiving data (known as downstream rate) and from 16 to 640 Kbps when sending data (known as upstream rate).

Affiliate marketing

Affiliates include descriptions, ratings, reviews, or other information about another firm's product on their web site. In a pay-per-click model, affiliates receive a commission each time the client loads the seller's page. In the pay per conversion model, affiliates only receive commissions on qualified prospects or click-throughs that result in a sale.

Algorithm

An algorithm is like a recipe; it provides a set of steps, or formula, to solve a particular problem. Search engines, for example, use an algorithm to rank web sites.

ARPANET

The ARPANET was the first name for the Internet, which was developed in 1969 by the United States Defense Advanced Research Project Agency (ARPA). At that time, the wide-area network (WAN) was used strictly for military and research purposes.

ASP (Application Service Provider)

In essence, ASPs provide a way for companies to outsource some of their information technology needs (e.g., logistics, joint billing, digital asset management, online payment processing, online sales). You lease the use of your
ASP's software applications instead of building the software from scratch. Consider your home phone line, for example. You pay for access to a telecommunications network that someone else has built.

Authentication

The process of identifying an individual usually based on a username and password.

B

B2B (Also B-to-B and business-to-business e-commerce)

Business-to-business e-commerce refers to the exchange of services, information and/or products between businesses via the web. B2B e-commerce accounts for the lion's share of sales online. (Compare with B2C e-commerce.)

B2C (Also e-tailing, B-to-C, selling online)

Business-to-consumer e-commerce refers to the exchange of services, information and/or products from a business to a consumer via the web.

Backbone

Refers to the part of the Internet that handles the major traffic and employs the highest transmission speeds. At one point, the Internet was actually called the M-Bone.

Back end

All of the processes and components that happen behind the scenes (e.g., database management system, server, server-side applications).

Bandwidth

The amount of data that can pass through your Internet connection in a fixed period of time. Usually measured in bits per second (bps). Sometimes referred to as "pipe".

Banner ad

Rectangular ads often seen on web sites. Banner advertising remains a popular revenue model on information portals and e-commerce sites. Limited site traffic and click-throughs on many sites have led to mediocre success. Banner ads continue to evolve, particularly in terms of sizes, location on page, and interactivity (e.g., banners developed

in Flash). Some sites will also display banners that are targeted for a particular user's interests.

Bookmark

If you see a web site you like, bookmark it! Your web browser will allow you to bookmark a site, or save the site's address, so you can easily visit the page at a later date.

Brick-and-mortar

Refers to a traditional "brick-and-mortar" retail location, as opposed to a pure play or "clicks-and-mortar" retailer.

Broadband

A type of data transmission in which a single medium (wire) can carry several channels at once. Cable TV, for example, uses broadband transmission.

Brochure ware

A basic web site that acts as an online brochure. Typical web content includes contact information, product/service overview, company information, a site map, privacy policy, and a FAQ section.

Buy-side application

An online venue where one buyer buys from many sellers, frequently through reverse auctions or request for quote applications For example, the City of Red Deer might set up a buy-side application on their web site to post tenders or
Request for Proposals (RFPs) and receive competitive bids from multiple suppliers.

C

Cable modem

Cable modems are designed to operate over cable TV lines. Because the coaxial cable used by cable TV provides much greater bandwidth than telephone lines, a cable modem can be used to achieve extremely fast access to the World Wide Web. Cable modem speeds range from 500Kbps to 30Mbps. There is considerable difference in speed between a modem that operates on telephone lines and a cable modem. For instance, compare a standard modem that operates over telephone lines at about

56,000 bits per second to the slowest (first generation) cable modems, operating at 500,000 bits per second; there would be a difference of 444,000 bits per second.

Cache

Pronounced “cash”. Cache basically refers to short-term computer memory for fast data access. Browsers can hold entire web pages or graphics in cache, so the web page loads more quickly.

Certification authority (CA)

A trusted third-party organization or company that issues digital certificates used to create digital signatures and public-private key pairs. The role of the CA in this process is to guarantee that the individual granted the unique certificate is, in fact, who he or she claims to be. An individual wishing to send an encrypted message applies for a digital certificate from a Certificate Authority (CA). The CA issues an encrypted digital certificate containing the applicant's public key and a variety of other identification information. The CA makes its own public key readily available through print publicity or perhaps on the Internet.

CGI (Common Gateway Interface)

A specification for transferring information between a web server and a browser. Web forms often use CGI to interface with a back-end database. CGI enables users to receive dynamic content based, as opposed to static HTML pages.

Chargebacks

A fraudulent purchase online will result in the credit card company charging back the purchase amount to the customer’s card. The merchant is responsible for a chargeback fee and for the loss of the merchandise.

Clicks-and-mortar

Clicks-and-mortar retailers sell products online and also have a physical, brick-and-mortar location (e.g., Chapters.ca).

Clickstream analysis

Data analysis of the path a visitor takes through your web site, including the pages that were viewed, the amount of time spent on each page, and the sequence in which the pages were viewed.

Click-through rate

Percentage of people who view a web page, click on one of its banner ads, and load the advertiser's site.

Client-side applications

Scripts or programs that are embedded in a web page and run on the client computer.

Co-location

A server, usually a web server, that is located in a facility dedicated to web hosting, which include a secured cage or cabinet, regulated power, dedicated Internet connection, security and support. Most co-location facilities offer high security, including cameras, filtered power, fire detection, extinguishing devices, multiple connection feeds, and backup power generators.

Content management

Software that enables businesspeople to create and maintain the content on their web site through template-driven pages, such as the home page, about us pages, product catalogue, and contact pages.

Cookie

Cookies are messages that a web server transmits to a web browser so that the web server can keep track of the user's activity on a specific web site. Cookies are used to collect demographic information, personalize the user's experience, and to monitor advertisements.

Countermeasures

A physical or logical procedure that recognizes, reduces, or eliminates a potential Internet security threat.

CPM

An Internet advertising pricing metric that equals the dollar amount paid to display 1000 ad impressions. An impression refers to the display of an online ad.

CRM (Customer Relationship Management)

CRM entails all aspects of service and sales interactions a company has with its customer. CRM often involves personalizing online experiences, help-desk software, and e-mail organizers.

Cyberlaw

Body of law that deals with the Internet. Cyberlaw includes areas such as copyright, intellectual property, e-contracts, jurisdiction, defamation, privacy, software piracy, domain names vs. trade-marks, and other issues.

Cybermall

Equivalent of an online mall. Like traditional malls, merchants lease space to sell their products/services. Cybermalls often provide clients with payment processing, product display, and security features, plus the infrastructure needed to add, modify, and delete products, manage orders, and maintain a storefront.

D

Data mining

Looking for hidden patterns and relationships in data to predict future behavior.

Database Similar to an electronic filing system, a database is a collection of information organized for quick access. Databases are organized by fields (single piece of info), records (complete set of fields), and tables (list of records).

Deep linking

A web link to a page on a web site other than its home page. Some companies oppose this practice, because of lost revenues due to visitors bypassing the advertising on the home page.

Digital certificate

An attachment to an e-mail message or data embedded in a web page that verifies the identity of a sender or web site.

Digital signature

A digital code that can be attached to an electronically transmitted message that uniquely identifies the sender.

Disintermediation

The concept of removing intermediaries or middlemen (i.e., agents, distributors, retailers, wholesalers) and selling directly to customers.

DNS (Domain Name System)

An Internet service that translates domain names into IP addresses. For example, the domain name www.cbsc.org translates to 192.197.183.45. Both addresses will take you to the same web site. But it's much easier for us to remember a word than a string of four numbers.

Domain name

A name that identifies one or more IP addresses (e.g., www.e-future.ca). There are several domain name suffixes, called top-level domain names (TLDs), such as: .gov (government agencies); .mil (US military); .org (not-for-profit organizations);
.com (commercial businesses); .net (network organizations) A URL includes the protocol to be used, plus the domain name (e.g., http://www.e-future.ca). The HTTP protocol fetches a web page.

Dot-com (.com)

Often used to refer to an online retailer or Internet business and may have a negative connotation due to the highly publicized dot-com crash in 2000.

Download

Downloading refers to copying documents or files from the Internet or a network server to your computer. The opposite of download is upload. If you have a web site, you need to upload files to your web server to make them available on the Internet.

DSL (Digital Subscriber Line)

DSL technologies allow data to be sent over copper, telephone wires.

Dynamically generated

Refers to web content that changes each time it is viewed, based on user preferences, geographic location, time of day, previous pages viewed, or search criteria. The opposite of dynamically generated content is static web content.

E

E-business (Electronic Business)

The use of the Internet to facilitate the buying, selling, or exchanging of products and services. E-business extends beyond selling online and impacts management, marketing and sales, operations, and legal aspects of operating your business.

E-business plan

An e-business plan, like a traditional business plan, maps out your business's strategy. Your e-business plan will pay more attention to the electronic aspect of your business: Describe the purpose of your e-business Analysis of your target market, industry, and competition. Map out your implementation plan Include all relevant revenues and expenses (e.g., software, hardware, staffing, training, set-up fees). Indicate your e-business partners. Outline your logistics and fulfillment, marketing, and operations strategy

E-cash (Digital Cash)

The electronic equivalent of paper money or coins that enables the secure, anonymous purchase of low-priced items over the Internet.

E-commerce

E-commerce and e-business are often used as interchangeable terms. E-business is a broader term that refers to all areas of your e-business strategy—from marketing, finance, and legal issues to sales—while e-commerce refers exclusively to the transactional component.

EDI (Electronic Data Interchange)

Exchange of computer readable data in a standard format (e.g., purchase orders, invoices, confirmations, bills of lading) between business partners. EDI has been around for almost 30 years in the non-Internet environment. Well-known retailers, such as The Home Depot, Toys R Us, and Wal-Mart use EDI as an integral element of their business strategy.

EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport)

EFT (Electronic Funds Transfer)

Electronic transfer of account exchange information over secure private communication networks.

E-learning

Use of the Internet to enhance teaching and learning styles. E-learning allows for collaboration, personalized learning options, distance learning, and self-study.

Electronic data interchange (See EDI)

E-mail (Electronic Mail)

Messages that are sent from one user to another (or multiple recipients) via e-mail programs (e.g., Microsoft Outlook, Eudora, Mail). There are also web-based mail services like AOL, Hotmail, Yahoo, and literally hundreds of others.

E-marketing

E-marketing is the promotion of a product, company, service, or web site online. E-marketing can include a variety of activities from online advertising, e-mail marketing, search engine optimization (improving the ranking of web sites on search engine results) to online networking.

E-marketplace

A system that enables multiple buyers and suppliers to interact and transact online.

Encryption

Translation of data into a secret code. To decrypt and read an encrypted file, you need to have access to a secret key or password.

E-procurement

Online purchasing of goods and services through a web interface.

ERP (Enterprise Resource Planning)

Business software that integrates all facets of a business, including planning, manufacturing, sales, and marketing. As businesses grow, functional silos and incompatibilities between systems develop. ERP software helps break eliminate these silos.

E-tailing Selling products or services online.

Extranet

A secure extension of a company's intranet that allows business partners to access specific company data. A username and password would be required to gain access to

information, such as training manuals, pricing and promotional materials, and operations plans.

E-zine

Internet magazine.

F

Firewall

Hardware or software that prevents unauthorized users from gaining access to a private network. The firewall acts almost as a traffic cop that examines and blocks messages that do not conform to the local security policy.

Flash

Have you seen animated graphics or cartoons on the Internet? Chances are they were built using Macromedia Flash, a vector-based animation technology. To view Flash files, users will need to download the free Flash plug-in for their browser.

FTP (File Transfer Protocol)

For a web site to be available on the Internet, you will need to plan, design, and program the web site and then transfer the files to a web host's server. FTP is most commonly used to download files from a server or upload web pages and documents to a server.

G

Gateway

A gateway computer determines the best path for data to travel on the Internet.

GIF (Graphic Interchange Format)

Pronounced "giff" or "jiff". A compressed bit-mapped image format that supports 256 colors. Scanned images and illustrations are commonly saved as GIFs. JPEGs are the image format of choice for photos on the Internet.

GUI (Graphical User Interface)

Pronounced "goo-ee". The GUI is the interface with which the client interacts. The GUI would include the navigation, buttons, graphic display, layout, design, and functionality.

H

Hacker

The term hacker was originally coined to refer to computer enthusiasts. In the late 1980s, however, the media used the term to describe anyone who broke into a computer system without permission.

Hit

The retrieval of any item, such as web pages or graphics, from a web server. Hits are a poor measurement of web traffic. For example, if you load a web page that has five graphics on it, the site would record six hits (five graphics and one page file). It gets a little more complicated because you may actually be storing these graphics in your Internet cache, which means you wouldn't have requested any files from the web server. Unique visitors, visitor sessions, file downloads, and average user session length provide far more useful data.

Horizontal portal (Also called a hortal, horizontal marketplace, and horizontal exchange)

A marketplace that sells products and/or services that can be used in several industries such as office supplies and MROs (maintenance, repairs, and operations items).

HTML (Hypertext Markup Language)

A simple scripting language used to create web pages. HTML defines the structure and layout of a web page by using a variety of tags and attributes (e.g., Bold tags).

HTTP (Hypertext Transfer Protocol)

The Internet protocol responsible for transferring and displaying web pages. Through HTTP web servers and web browsers are able to communicate with each other.

Hyperlink

An HTML tag that allows you to click on some text or an image and link within the document or to another document or web page. Hyperlinks are the most essential ingredient of the World Wide Web.

I

ICANN (Internet Corporation for Assigned Names and Numbers)

The non-profit corporation that was formed to assume responsibility for the IP address space allocation, protocol parameter assignment, domain name system management,

and root server system management functions previously performed under U.S. Government contract by IANA and other entities.

Integration

Refers to how well your web site integrates with legacy (old), database systems, financial systems, your offline strategy, your corporate culture, and proprietary third-party software and application service providers (ASPs).

Intellectual property

Intellectual property refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce.

Intellectual property issues associated with e-business include technology and content transfer licensing, copyright, trade-marks, domain names, trade secrets, and patents.

Intermediaries

A third party between sellers and buyers (e.g., retailers, wholesalers, distributors, agents).

Internet

A self-regulated network connecting millions of computer networks around the globe.

Internet auction

There are several types of online auctions: English: Items sold to the highest bidder (also called ascending-price auction or open-outcry auction) Dutch: Bidding starts at a high price and drops until a bidder accepts a price (also called descending-price auctions). Popular for perishable food items Sealed-bid: Bidders submit their bids independently. The first (first-price sealed-bid auction) or second highest bidder wins (Vickrey auction) Yankee: Seller offers multiple identical items with a minimum bid. Winners pay the exact price of their winning bid.

Internet directory

Collection of data organized by topic (e.g., painters, universities, e-business providers, and so on). The key difference between getting listed in a directory or search engine is the human interaction. To be listed in a directory, you would request a listing and someone would approve it. Search engine, on the other hand, send out web robots to index and categorize millions of web sites.

Internet marketing (Also e-marketing and IM)

Marketing deals with the 4 Ps of your business: product, price, place, and promotion. Add an Internet element, and you're involved in Internet marketing. Internet marketing can offer lower costs, increased tracking and measurability, 1:1 marketing (mass customization), and more interactivity. Here are some common e-marketing topics: Search engine marketing; Banner advertising; Permission-based e-mail marketing; E-newsletters; E-zine advertising; Affiliate marketing; Viral marketing; Online PR (publication relations) & media relations

Internet presence

An Internet presence is a combination of: a well-designed web site; ongoing site promotion; use of the Internet as a communications; medium with your customers; use of web tools and applications (e.g., e-mail)

Internet registrar

Usually not-for-profit organizations that operate top-level domains. CIRA.ca, for example, is the Internet registrar that operates the dot-ca (.ca) top-level domain.

Interoperability

The ability of software and hardware on different machines from different vendors to share data.

Intranet

A computer network operated within a single company or organization. An intranet's web site usually shares information on operations, marketing, accounting, projects and initiatives, and client databases. Access is limited to company employees or others with authorization.

IP address (Internet Protocol)

IP by itself is something like the postal system. It allows you to address a package to be sent to another computer connected to the Internet.

ISDN (Integrated Services Digital Network)

High-grade telephone service that uses the DSL protocol to send voice, video, and other data over digital telephone lines or normal telephone wires. ISDN supports data transfer rates of up to 128 Kbps.

ISP (Internet Service Provider)

A company that provides you with access to the Internet for a monthly fee. If you have a modem and an account with your ISP, you will soon be browsing the web, sending e-mail, and buying online.

IT (Information Technology)

Broad subject related to managing and processing information within a company. IT staff include network administrators, database developers, web developers, consultants, security experts, and other computer professionals.

J

JPEG (Joint Photographic Experts Group)

Pronounced “jaypeg”. JPEG is a lossy compression technique that can reduce file sizes to about 5% of their original. This is the most common file format for pictures on the Internet. See also GIF.

L

LAN (Local Area Network)

A small network of computers usually confined to a single building. Files can be shared through LANs, as well as peripheral devices, like laser printers and scanners. Several LANs can be connected via telephone lines, and you’ve got a WAN (wide area network).

Localization

The process of adapting your web site for a particular country, taking into account local dialect variations, business and cultural practices, and other factors.

M

META tags

A special HTML tag that provides information about a web page. Unlike normal HTML tags, meta tags do not affect how the page is displayed. Instead, they provide information such as who created the page, how often it is updated, what the page is about, and which keywords represent the page's content.

Middleware

Middleware acts as the glue between two different applications. It connects two different applications and passes data between them.

Mobile commerce (Also m-commerce)

E-business in a wireless environment. For example, you might access resources such as stock quotes, directions, weather forecasts, and airline flight schedules through a wireless laptop or telephone.

Modem

A modem is a device that enables your computer to send and receive data over telephone or cable lines. You will need a modem to get connected to the Internet.

MRO (Maintenance, Repair, and Operations Supplies)

Indirect materials, such as light bulbs or office supplies, used by most businesses in relatively small quantities.

N

NDA (Non-Disclosure Agreement)

A contract that restricts the disclosure of confidential information or proprietary knowledge under specific circumstances. Non-disclosure agreements are often signed by companies discussing a potential partnership or by new employees.

Network

A group of two or more computers that are linked together. Computers on a network are sometimes called nodes. Computers that allocate resources for a network are called servers.

Nonrepudiation

Verification that a transaction occurred. This prevents people denying a transaction's validity or its existence.

O

One-to-one marketing (1:1 marketing)

A highly customized approach to offering products and services that match the needs of a particular customer.

Open source

Software that can be downloaded and modified free of charge.

Operating systems (OS)

An operating system is the master control program of the computer. All programs must “talk” to the OS in order to run. It provides the user interface needed to adjust system settings, recognize input from the keyboard and mouse, and send output to the display screen. There are single-user OSs, such as DOS, Windows, and Mac OS X, as well as multi-user network operating systems you may have heard about like Windows NT, UNIX, and Linux.

Opt-in e-mails See permission-based marketing.

Order fulfillment

All of the processes and systems required to deliver a product or service to a customer after the order has been received.

Outsourcing

The hiring of another company to take care of part of your business processes (e.g., payroll, legal, web development, design, and order fulfillment).

P

P2P (Peer-to-peer)

Technology that connects client computers directly with other client computers. It enables sharing and exchanging of information. It differs from client-server technology, where servers are dedicated to serving client computers.

Payment gateway

Internet payment gateways process real-time credit card transactions and act as the middleman between your e-commerce server and your Internet merchant account (bank account). Why do they exist? They exist because credit card processors will not allow individual merchants to access their systems through the Internet. They do not permit this because of security issues. Credit card processors only permit companies whose software has been "certified" to access their systems.

PDF (Portable Document Format)

PDF files preserve document integrity, reduce file sizes, and are platform independent. Text and graphic files can be converted to a PDF file through Adobe Acrobat.

Plug-in

A software module that adds a specific feature to a larger program. For example, you can get free plug-ins for your browsers to display PDF files, video, and sound files. Examples of popular plug-ins include Acrobat Reader, Flash Player, and QuickTime.

POP (Post Office Protocol)

The protocol responsible for retrieving e-mail from a mail server.

Pop-up ad

An ad that appears in its own window when a user opens or closes a web page.

Port

Think of a port as a door. Personal computers have ports that allow certain types of information to pass through. For example, web communications are usually carried out via port 80.

Portal

Gateways to the World Wide Web. Users can do their searching, navigating, and other web-based activities from a portal (e.g., MSN.ca, Yahoo.ca, Altavista.com)

Privacy

The right to control access to one's person and information about oneself.

Privacy policy

A policy related to the collection, use, and disclosure of personal information collected in the course of business.

Programming languages

Computer languages instruct computers to perform specific tasks. Usually programming languages refer to high-level languages, like C, C++, Perl, and others, as opposed to low- level machine languages. There is also an important distinction between scripting and compiled languages. Compiled languages (e.g., C, C++, Java, C#, Visual Basic, FORTRAN) run faster, because they're precompiled to computer language. These languages may take longer to debug and compile. Scripting languages (e.g., Perl, PHP, ASP, Python, JavaScript, and VBScript) are server-side scripts that are interpreted to machine code on the fly. They're great for web development, maintenance tasks, and

programs that need to be tested frequently. Markup languages (e.g., HTML, XML) define the structure and layout of a web document by using a variety of tags and attributes.

Proprietary software

Commercial software whose source code cannot be modified. Proprietary is the opposite of open source code. Open source code and architectures allow for products from different companies to be mixed and matched more easily.

Protocol

A set of rules that determines how two computers communicate with one another over a network.

Proxy server

A firewall that communicates with the Internet on behalf of a secure internal network.

Public-key encryption (PKI)

Also known as an asymmetrical key encryption. With this type of encryption, a pair of encryption keys are used—a public key and a private key. The public key is made available to anyone who wants to send an encrypted message to the holder of the private key. The only way to decrypt the message is with the private key.

Pure-play

A pure-play e-retailer (or e-tailer) sells products exclusively online and does not have a brick-and-mortar location.

R

ROI (Return On Investment)

Profit or cost savings realized on a financial investment. An ROI calculation is sometimes used along with other approaches to develop a business case and determine whether to proceed with a project or not.

Router

Computer that determines the best way for data packets to reach their destination on the Internet.

S

Scalability

A popular buzzword that refers to the ability for a hardware or software system to start small and grow to meet future demands.

Screen resolution

Refers to the sharpness and clarity of an image. For monitors, it refers to the number of dots (pixels) that can be placed side by side on a screen (e.g., 800 x 600 screen resolution is capable of placing 800 dots on 600 lines). With printers, the resolution refers to the number of dots printed per inch (dpi). Graphics for web sites should be saved at 72 dpi, while graphics for your desktop printer can be saved at 150-300 dpi.

Seal of approval

There are various seals of approval related to security, privacy, and business reliability. For example, the Better Business Bureau Online (www.bbbonline.com) has a privacy and reliability seal program for businesses.

Search engine

A program that searches for web sites and documents on the Internet based on search terms.

Sell-side application

An e-marketplace with one seller and multiple buyers.

Server

A computer that allocates resources for a computer network.

SET (Secure Electronic Transaction protocol)

A standard that enables secure credit card transactions by verifying that buyers are who they claim to be through the use of digital signatures.

Shopping cart

An electronic commerce utility that keeps track of selected items for purchase and automates the purchasing process.

S-HTTP (Secure Hypertext Transfer Protocol)

An extension to the HTTP protocol to support sending data securely over the World Wide Web. Not all Web browsers and servers support S-HTTP. S-HTTP is designed to

send individual messages securely, as opposed to sending anything securely between two computers (See SSL).

SMTP (Simple Mail Transfer Protocol)

A protocol for sending e-mail messages between servers. Most e-mail systems that send mail over the Internet use SMTP to send messages from one server to another; the messages can then be retrieved with an e-mail client using either POP or IMAP.

Source code

The source code consists of the programming statements that are created by a programmer and then saved to a file. Once source code is compiled, it is often referred to as object code, which can be read by the computer.

Spam

Unsolicited, bulk electronic junk mail. Typically spam is generally e-mail advertising sent to a massive mailing list or newsgroup.

Spider (Also search bot, web robot, webcrawler)

A program that scours the Internet and indexes millions of web sites for search engines, jumping from web link to web link.

SQL (Structured Query Language)

Standardized query language for requesting information from a database.

SSL (Secure Sockets Layer)

A protocol developed by Netscape for setting up a secure connection between a client and a server and transmitting any amount of data securely.

Supply chain management

The process of using the Internet as a tool to collaborate more closely with suppliers and other participants in the supply chain and to improve products and processes.

T

T-1

A dedicated phone connection supporting data rates of 1.544 Mbps. A T-1 line actually consists of 24 individual channels, each of which supports 64 Kbps.

T-3

A dedicated phone connection supporting data rates of about 43 Mbps. A T-3 line actually consists of 672 individual channels, each of which supports 64 Kbps. T-3 lines are used mainly by Internet Service Providers (ISPs) connecting to the Internet backbone and for the backbone itself.

TCP/IP (Transfer Control Protocol / Internet Protocol)

The set of protocols that provide the basis for the operation of the Internet. The TCP protocol includes rules that computers on a network use to establish and break connections. The IP protocol determines the routing of the data packets.

TLD (Top-Level Domain)

The last part of a domain name (e.g., .com, .ca, .net, .org, .gov).

Trojan horse

A program hidden inside another program or web page that masks its true purpose. Trojan horses are usually destructive.

U

UECA (Uniform Electronic Transactions Act)

E-commerce legislation based on the United Nations' Model on E-Commerce.

Unique visitors

Unique visitors are counted using visitor IP addresses, domain names, or cookies on a daily basis.

UNIX

A popular multi-user, multitasking operating system (OS) developed in the early 1970s. UNIX is portable, flexible, and powerful and is the leading operating system for workstations.

Upload

To transmit data from your computer to a network or web server. If you want a web page or document to be available on the Internet, you need to upload it to a web server.

URL (Uniform Resource Locator)

A complete web site address (e.g., http://www.e-future.ca) including the protocol to be used (HTTP) and the domain name.

Usability

Ease-of-use of a company's web site.

USENET (User's News Network)

A worldwide bulletin board system that allows subscribers to read and post articles within over 14,000 forums, called newsgroups.

V

Value chain

A value chain is a high-level model of how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers. E-business presents several ways to reduce inefficiencies in business processes and to improve the value chain.

VAN (Value-Added Network)

A value-added network (VAN) is a third-party service organization that provides a variety of services for businesses that want to do business using EDI. Most importantly it provides the communications link between EDI trading partners.

Vertical portal

An e-marketplace or exchange whose members are in one industry or segment (e.g., steel, agriculture, electronics).

Viral marketing

Word-of-mouth advertising in which customers promote a product or service without cost to a company.

Virus

A piece of code that attaches itself to a host and, once activated, propagates itself. Viruses may act maliciously and disrupt your network operations. It is recommended to purchase an anti-virus program and update your virus definitions frequently as a first level of defense.

VPN (Virtual Private Network)

A network that combines encryption, authentication, and protocol tunneling technologies to provide secure transport of private communications over the public Internet. Most enterprises rely on third-party companies to host their VPNs.

W

W3C (World Wide Web Consortium)

The W3C develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential. W3C is a forum for information, commerce, communication, and collective understanding (www.w3.org).

WAN (Wide Area Network)

Computer networks that are connected securely over great distances.

WAP (Wireless Application Protocol)

A secure specification that allows users to access information instantly via handheld wireless devices such as mobile phones, pagers, two-way radios, smart phones and communicators.

Web (Short for World Wide Web)

Often the terms web and Internet are used interchangeably. The web, however, is the system of Internet servers that support HTML pages and links to other documents. You can access the web by getting an Internet connection and using a web browser.

Web hosting

The placement and maintenance of a web site on a server.

Web server

A computer that is connected to the Internet and that stores files written in HTML that is publicly available through an Internet connection.

WML (Wireless Markup Language)

An XML language used to specify content and user interface for wireless devices

Worm

A computer program that replicates from machine to machine across network connections, often clogging networks and computer systems as it spreads.

WWW (See World Wide Web)

WYSIWYG (What You See Is What You Get)

Pronounced “wizzywig”. A WYSIWYG application displays text and graphics on the screen exactly as it will appear when the document is printed, or in the case of web pages, when the document is published to the web

X

XML (Extensible Markup Language)

XML allows designers to create their own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations if common tags are used.

BACKGROUND

MBA UGM Courses:

- Management Information Systems (Robert T. Plant)
- Strategic Administration (L. Llanos)
- International Strategic Management (A. Briones)
- Transnational Management (D. Kujawa)
- International Business (D. Kujawa)
- Applied Marketing in Europe (H. Schramm-Klein)
- Supply Chain Management (E. Caldentey)

External Sources:

- Several Porter Publications
- Other sources displayed at the footer of the corresponding page