

Schwab.com

Managing the Transition

In January 1998, the Charles Schwab Corporation was contemplating changes in the relationship between its brick-and-mortar business and its highly successful Internet trading unit. In less than two years, Internet trading had grown from nothing to account for more than 40 percent of Schwab's transactions. Customers liked the low online commissions, but since commissions accounted for more than half of the company's revenue, the growth of Internet trading challenged Schwab's existing business model.

The first sign of trouble came when customers began complaining about Schwab's two-tiered pricing scheme. In an effort to limit cannibalization, Schwab restricted the services available to customers who traded at its \$29.95 online rate. Internet-only customers received e-mail support and one phone call a month with additional calls billed at \$5 each. Traditional customers, who could trade and get assistance over the phone and in Schwab's branch offices, paid around \$65 for Internet trades.

While the Internet rate for traditional customers represented a 20 percent discount off standard commissions, they complained Schwab was forcing them to choose between price and service. At the same time, Schwab estimated that removing the restrictions on \$29.95 Internet trades would cost the company \$125-\$150 million in lost revenue.

The pricing question was part of a larger set of questions involving the organization of Schwab services. A central issue was what Schwab should do with its branch offices now that online trading was taking off. Under one scenario, rapidly dropping online commissions signaled a continuing price war (Exhibit 1). If investors could find all the resources they needed online, Schwab's 272 branch offices were likely to become more of a liability than an asset. Under another scenario, the integration of an increasingly sophisticated Web site with the face-to-face resources of its branch offices could help Schwab win customers from the larger full service brokerages (Exhibit 2).

Transition Options

The challenges Schwab faced in aligning its Internet and brick-and-mortar channels parallel those faced by an increasing number of retailers. Their responses can be grouped into three general categories: separate channels, integrated channels and a move to completely virtual retailing. Barnes & Noble (<http://www.barnesandnoble.com>) illustrates the separate channels approach. By minimizing interaction between its channels, Barnes & Noble sought to reduce cannibalization of its existing operation as well as other potential organizational conflicts. Maintaining separate channels may also make it easier for the Web channel to form outside partnerships or set the stage for a spin-off later on. One downside is that a separate Web channel is not able to leverage the capabilities of the brick-and-mortar organization as well as an integrated channel.

Recreational Equipment Inc. (REI) (<http://www.rei.com>) provides an example of an integrated channel. The outfitter gives brick-and-mortar customers access to extensive product information on the firm Web site through in-store kiosks and uses the data from online purchases as a tool in evaluating the feasibility of new store locations. A successful integration of brick-and-mortar and Web channels can deliver more value to both kinds of customers. But the costs of merging legacy accounting systems with the Web and revamping distribution to efficiently deliver both micro shipments to households and large shipments to stores can be substantial.

Egghead software (<http://www.egghead.com>) serves as an example of a brick-and-mortar retailer that decided to pursue the virtual route. Unable to compete with category killers like Best Buy, Egghead closed its brick-and-mortar storefronts and began selling completely off the Web. A strong brand name, Web savvy customers and the ability to inform purchase decisions online through demos and reviews all enhanced Egghead's potential to compete successfully without brick-and-mortar stores.

Schwab's Transition

The decision of which approach to pursue and how to implement the transition typically involves a combination of new technologies, strategic and operational issues. This case shows how the Matrix of Change, a tool for managing the change process involved in business reengineering, can serve as a useful framework for identifying and responding to such challenges.

The body of the case addresses Schwab's position in January 1998, while Appendix A gives an overview of the Matrix of Change. Applying the Matrix framework to Schwab's strategic options should help clarify the tradeoffs Schwab faced. Once these tradeoffs are identified, the Matrix can serve as a guide to addressing operational challenges involved in implementing the transition towards the chosen strategic objectives.

Schwab History

Charles Schwab founded the company bearing his name in 1971. Following the deregulation of brokerage commissions on May 1, 1975, Schwab focused on providing knowledgeable self-directed investors with low-cost execution services. Firms that followed this strategy of unbundling of trade execution from information and advice were referred to as discount brokers. Discount brokers' charged commissions that were typically half those of full-service firms.

Discounters benefited from a growing population of informed investors who had access to an increasing variety of financial information in newspapers, magazines and on cable television. They also benefited from the growth of 401(k)s and similar self-managed contribution programs. Discounters share of retail brokerage commissions grew steadily from 1.3 percent in 1980 to 14.5 percent in 1994. Discounters share remained around 14 percent from 1994 through 1997, a period of significant overall growth. (Exhibit 1)

Schwab's success as a discounter was generally attributed to the company's use of technology to lower costs and offer superior service, heavy spending on advertising and the development of a significant branch office network. Innovations included: fully-automated telephone trading (1989); regional call centers that handled the majority of customer questions (1990); SchwabLink (1991), a proprietary electronic interface that extended Schwab's back-end services to independent fee-based advisors; and Mutual Fund OneSource (1992), which eliminated transaction fees for no-load mutual funds.

Schwab emphasized a professional approach in a segment that had at one time been characterized by a "bucket shop" mentality. Schwab's computer system provided staff in its phone center and branch offices with instantaneous access to customer accounts and company practices. In contrast to the full-service model of one-to-one relationships between brokers and their clients, Schwab's model de-emphasized personal relationships in favor of standardized service. At the same time, Schwab held staff accountable for service by randomly sampling 10% of its customers and tying bonus to customer service ratings as well as assets under management. Outspending competitors on technology, communications and marketing, Schwab had achieved a 55% share of the discount market by the end of 1997.

The Rise of the Deep Discounters

Schwab was not alone in its use of technology to lower trading costs. In the early 1990s, companies that had previously offered back-office services to discounters began to sell services directly to investors. Known as deep discounters, firms like E*Trade typically operated without the support services of branch offices and phone centers. With their lower cost basis, deep discount firms were able to offer trades at even lower commissions (typically \$40-\$60 a trade vs. \$80 to \$100 for discount brokers). Lower commissions attracted more frequent traders. The higher frequency of trades coupled with significantly lower overhead costs provided deep discounters with approximately twice the operating income per account of discount firms. (Lal, et. al., p. 10)

As the deep discounters began to claim more of the low end of the market in the mid-1990s, Schwab began to broaden its mission. Schwab expanded internationally, acquiring ShareLink Investment services in the United Kingdom and opening branches in Asia. It also began to develop new investment tools, products and services. Many of these offerings were targeted at new investors, a segment that had grown from 5% of new Schwab customers in 1987 to 50% in 1997. According to Schwab's 1995 annual report, the company defined its vision in the first twenty years in terms of transactional brokerage and custody services. Now, the company saw a need for change: "The changing needs of our customers demand that we continuously strengthen our existing services and broaden and extend our vision. Beyond transaction and custody, we must now also develop relationships offering a more extensive range of help and guidance and an expanding array of financial services."

The Emergence of Internet Trading

Schwab's experimentation with online trading began with the DOS-based *Equalizer* in 1985. A succession of early online systems attracted a small following, but never broke into the mainstream. In late 1995, a Schwab research group developed a program that could take an order from a PC, route it through Schwab's back-end systems and mainframes and send a confirmation back to the PC. CIO Dawn Lepore showed the program to Charles Schwab, who immediately recognized its significance. Within weeks, Schwab had organized an independent team to develop the software as a greenfield project. In March 1996, the company launched its initial pilot with 100 clients drawn from a list of customers who had called to ask about online trading. The rollout that summer was an unqualified success. Relying only on word of mouth, Schwab achieved its first year target of 25,000 Internet customers in the first two weeks.

The Significance of the Internet

Internet trading significantly lowered the costs of trade execution. According to industry sources, the cost of processing an Internet trade was approximately \$5. Low entry costs encouraged a rush of new entrants, including startups, existing discount and deep discount brokerage firms, banks and mutual fund companies. The number of firms offering online trading had grown from 18 to 60 in the past year. As a result the price of online trades dropped precipitously.

The Internet also changed the rules of the game by dramatically increasing the ability of firms to deliver information. Research reports and other financial information that had once been offered only by full-service firms became widely available. Increasingly sophisticated financial planning tools could be found online, blurring the lines between information and advice. At the same time, the ability to execute simple trades and provide news and other basic financial information were becoming commodities.

The Branch Offices

In addition to being the early leader in Internet trading, Schwab had an extensive brick-and-mortar operation in its branch offices. Schwab's emphasis on building its branch office network was an outgrowth of Charles Schwab's belief that investors want to know where their money resided and that they could speak face-to-face with brokerage representatives. By the end of 1997, Schwab had 272 branch offices in 47 states and estimated that 70% of the U.S. population lived within 30 miles of one of its branches. Schwab leased the space for its branch offices, generally under five or ten year terms.

Branch offices played a key role in generating new business with approximately 70 percent of new accounts opened in the branches. About half of Schwab's customers visited a branch in 1997 with affluent and active investors tending to visit more frequently. The presence of the branch offices, coupled with Schwab's brand image built up from years of higher than average spending on advertising, meant that Schwab enjoyed significantly lower customer acquisition costs than many of its competitors.

Piper-Jaffray estimated that the cost of acquiring a new customer for Schwab remained around \$100 in 1997, compared to \$150-\$200 for E*Trade and \$300-\$400 for Ameritrade.

Evolution of the Branch Offices

The role of Schwab's branch offices evolved in response to the company's emphasis on using technology to lower trading costs and provide more efficient service. Until Schwab introduced its regional call centers and automated phone trading in the early 1990s, branch office staff spent much of their time entering trades and responding to customer questions about their accounts. From 1991 to 1997 trade volume handled by the branch offices decreased from 40% to 5%. In 1995, Schwab moved operational activities out of its branches and reduced staffing from 10 to 20 representatives per branch to 7 to 10. To a significant degree, these cuts were offset by the expansion of the branch network, which more than doubled from 120 to 272 offices between 1990 and 1997.

The change brought a new look and feel to the branches. Transaction terminals were replaced by PCs and space for client meetings. Branch staff relied on the Schwab intranet for information on company practices. The role of branch staff shifted to customer orientation, education and investment counseling and marketing to follow up on leads generated by the regional call centers. Schwab replaced some branch office staff and encouraged others to develop more specialized expertise in areas such as retirement or college planning.

The Emergence of Internet Trading

Branch office staff served as the front line for investor education, which had always played a significant role in Schwab's sales strategy. Providing these services involved a mix of handholding and information. While handholding required human contact, much of the information, such as models for asset allocation and retirement planning, could be delivered over the Internet. As a group, Schwab's customers were receptive to technology, 70% had computers and 50% had online access.

Schwab anticipated that the growth of online trading could be seen as a threat by branch staff. Early on, the company began sending e-mail to the branches keeping them up to speed on the importance of online trading to the company. Branch and phone center staff were given Web access and encouraged to log on. Branch office and phone staff, as opposed to technical staff, were made responsible for helping traditional customers with online trading.

Still, there was grumbling that the electronic brokerage staff was getting all the money and the nicest offices. If Schwab decided to remove its restrictions on online trading and absorb a hit in revenue, more grumbling could be expected from an anticipated dip in the company's stock price. At the end of 1997, approximately 40% of Schwab's stock was owned by employees (20% by Charles Schwab and 20% by others).

The Regional Phone Centers

As a way of handling transactions at a distance, the Internet was preceded by Schwab's regional phone centers. In 1990, Schwab established four regional call centers in Indianapolis, Denver, Phoenix and Orlando. By calling a toll free number, customers could place orders 24-hours a day, 7-days a week (except major holidays). Most of these trades were handled by an automated system that included speech recognition and operated in four languages: English, Spanish, Mandarin and Cantonese. Customers received a 10% discount off standard commissions for telephone trades.

Call centers also handled calls to the branch office that were placed outside business hours or when representatives were busy. According to Schwab, nearly all calls were answered within three rings or one minute.

In addition, the regional call centers served as a home base for teams of Schwab service representatives who worked with branch office staff and the independent fee-based advisors connected through SchwabLink.

The Effects of the Internet on the Regional Call Centers

Schwab believed that its regional phone centers complemented the Internet. Customers could make routine trades over either the Internet or the automated phone channels without the assistance of Schwab staff, greatly increasing Schwab's ratio of trades per employee. While customers might select the Internet as a primary channel, phone trades were a convenient option for when they were traveling or away from their computers. Also, because trading volume is highly variable, having more than one automated channel increased the probability that customers could get through during peak periods, such as a market crash.

Since Internet traders were unconstrained by geography, serving the new channel placed a premium on models designed to accommodate a decentralized network of operations. Schwab had already developed models in which teams of phone center representatives provided support to branch office staff and independent advisors at a distance. A similar structure could potentially be developed to provide more comprehensive services to selected groups of Internet customers in the future.

The Independent Advisor Network

In 1991, Schwab began reaching out to independent fee-based advisors through a service called SchwabLink. Fee-based advisors charge clients a flat fee based on the size of their assets, presumably leading them to give more impartial advice than brokers who rely on commissions.

Under SchwabLink, advisors outsourced all transaction, record keeping and statement preparation tasks to Schwab's computerized system for a fee based on the number of transactions and the size of customer assets. Schwab retained the customer account and assets and better utilized its system capacity. In return, outsourcing the paperwork

allowed independent advisors to handle more accounts. Schwab assigned representatives in its phone centers to provide independent advisors with further support.

In 1995, Schwab added a referral service called Advisor Source. Advisors paid a quarterly fee and received referrals from Schwab branch offices. By 1997, Schwab branches were referring more than \$1.7 billion in assets, a number that was growing at about 50% quarter-to-quarter. According to Linnet Deily, president of Schwab Institutional Services for Investment Managers, the quarterly fees were set at levels that didn't cover the costs of the program. The profit lay in getting independent advisors to park more assets with Schwab and in helping to retain customers who might otherwise leave for a full service brokerage as their assets accumulated.

By the end of 1997, the Schwablink network included more than 5,300 independent advisors, or approximately one-third of all those in the U.S. The amount of assets they managed had doubled in the past two years, to \$106 billion or approximately 30% of Schwab's total assets.

The Effects of the Internet on Independent Advisors

In 1997, Schwab introduced SchwabLink Web, an updated version of its software for financial advisors designed around a Web interface. Yet it was unclear what effect the Internet would ultimately have on Schwab's independent advisors. Since their fees were tied to assets, the immediate effects of change in trading channel could be assumed to be negligible. In the longer term, more clients were likely to rely on the Internet to keep track of their assets and run simple analyses. To the degree that this self-education saved advisors time, the Internet could help them serve a larger client base. On the other hand, more sophisticated Internet-based analytical tools created some risk that a portion of their clientele might decide that they could forgo advice after all. From an advisor's perspective, it seemed most likely that the Internet would both raise the bar in terms of the level of service needed to justify their fee, while providing them with more alternatives for providing that service.

Internet Investors

Even by Internet standards, Internet trading had grown unusually quickly. Forrester research estimated that the number of Internet accounts doubled in 1997, from 1.5 million to 3 million. That made online trading the third fastest growing application on the Internet, behind only e-mail and pornographic sites. For investors, the Internet offered both lower trading costs and access to an unprecedented amount of information.

Compared to the US population of investors, Internet investors were more likely to be male and more likely to be under 35. These differences paralleled those reflected in computer usage statistics. In other respects, the two groups appeared to be demographically similar, as shown in surveys such as the Securities Industry Association's Trends Online (<http://www.sia.com/publications/pdf/trendsonline.pdf>). Yet the needs of Internet traders varied, which provided the basis for segmentation schemes, such as the one offered by Gomez Advisors (Exhibit 3).

Although degree to which Internet trading would attract full-service customers was uncertain, some were clearly interested. A Paine Weber customer survey found that 8% of its customers had already opened online accounts, while some 30% said they planned to in the next year. Schwab saw greatest growth potential in the 50% of the US population it defined as "validators," investors who usually knew what they wanted, but sometimes needed reassurance. Validators typically used full-service firms, but Schwab thought some might switch if it could develop the right mix of services.

Internet research firms expected strong growth in Internet trading. For example, Forrester research predicted that there would be 20.4 million online accounts by 2003 (1999 prediction). Yet current growth rates could not be sustained indefinitely. Much of the initial growth spurt came from existing customers opening Internet accounts. Also, many observers predicted that the flow of new investors, which made up 50% of Schwab's new customers, would decline sharply in a market downturn. In addition, there was a question of the degree to which the rise of self-directed investors was a bull market phenomenon. Many full service firms predicted customers would return as soon as it became more difficult to pick winning stocks.

Schwab's competitors

Schwab's early lead in Internet trading developed in large part from its strength as a discount broker. Leading discount brokers, like Schwab and Fidelity, had built national brands and made large fixed investments in technology that helped them provide consistent, cost-effective service. Schwab's major initiatives in the early 1990s, such as regional call centers, automated phone trades and the back-ends of its Mutual Fund One Source and Advisor Source networks all created significant economies of scale. The degree to which these investments had lowered costs was dramatic. In 1992, \$100 in Schwab customer assets generated \$1.14 in revenue and \$.92 in expenses. Five years later, revenues were down to \$0.65, while expenses had dropped to \$0.52.

Price-based competition

The Internet lowered the barriers for new entrants, such as deep discount brokers, Internet-only firms and banks. In addition to low startup costs, capacity could be increased incrementally by adding more servers. By January 1998, deep discount and Internet-only firms with a lower cost basis were driving commissions to new lows. Schwab had already lost a percentage point of market share in the previous quarter to these low priced competitors and some were even creating special units to handle the conversion of Schwab accounts. Deep discounters were exploiting a vulnerability, since any attempt on Schwab's part to match their sub-\$15 commissions would almost certainly entail significant cuts to its branch office and phone center infrastructure.

Schwab's response was to hold its price at \$29.95 a trade and introduce new Internet services, such as MarketBuzz, a informational source that provided market highlights, financial news and links to finance-related Web sites, and the Asset Allocation Toolkit, which extended Schwab's financial planning templates to the Web. Schwab was betting it

could maintain an edge in services that would justify a premium price, particularly among clients who valued one-stop shopping and goal oriented financial planning.

Full-service firms

In January 1998, full-service firms accounted for only 2% of online trades. Yet they had the technological expertise and national brand recognition that were likely to make them major players if they decided to enter the market. Full-service firms also had the most affluent customers, the best research analysts and through their role as underwriters, significant control over the market for initial public offerings. Morgan Stanley Dean Witter had the advantage of owning online broker Discover Brokerage Direct.

Competition among Internet trading firms was still in its emerging stages. Divisions between deep discount, discount and full-service firms were becoming increasingly blurred. As time went on, firms would get a better sense of the degree to which the Internet alone could meet investors needs and the degree to which firms could differentiate themselves based on their interface and Internet services. The Internet's major shortcoming was in providing advice, although Internet-based planning tools and informational resources could complement the advice of a broker. Defining the right mix of services to compete effectively in this space could well form the basis for significant competition between full service and discount firms in the future.

Building Your Matrix

In the 1997 letter to shareholders, Charles Schwab wrote of being more than one-third of the way towards a long-term goal of serving 10 million households and attracting \$1 trillion in customer assets by 2005. Technology had blurred the lines between financial services firms to the point where Schwab set its sights not on conquering the discount market, but rather on increasing its 3 percent share of the country's investable assets in banks and brokerages.

The average age of a Schwab customer was 47, compared to 57 for the full service firms. As baby boomers edged closer to retirement age, their preferences would play a large role in defining the most successful brokerage model for the future.

Over the past decade, strategic use of technology had helped Schwab make a number of significant changes in its business model. The development of its regional phone center and the intranet that connected the phone center to the branch offices gave rise to a multichannel service model that lowered costs while providing more consistent and accessible service. Extension of its internal network to independent advisors through SchwabLink and AdvisorSource, allowed Schwab to enter the market for advice. Implementing each of these innovations meant achieving a balance between new technology, strategic goals and work practices.

As a greenfield experiment, Internet trading proved to be an overwhelming success. But now Schwab faced the challenge of aligning its Internet channel with its brick-and-mortar business.

Getting Started

In deciding which model would be right for Schwab, you will want to consider some of the tradeoffs involved in choosing between separate channels, integrated channels and a virtual organization. Some of the potential advantages of separate channels and integrated channels are given in Exhibit 4. Sorting through these factors may help in focusing your strategic goals.

Next, you will use the Matrix as a tool to better understand Schwab's current situation. A partially completed sample matrix is provided in Appendix 5. Using your assessment of Schwab's strategic goals, challenges and opportunities, transform the sample matrix into a matrix that supports your chosen strategy, illustrating the challenges and opportunities inherent in the transition. An initial list of Schwab practices provided in Exhibit 6 may prove helpful. The sample matrix is intended to serve merely as a starting point from which you should add and modifying practices and interactions to support your interpretations and objectives.

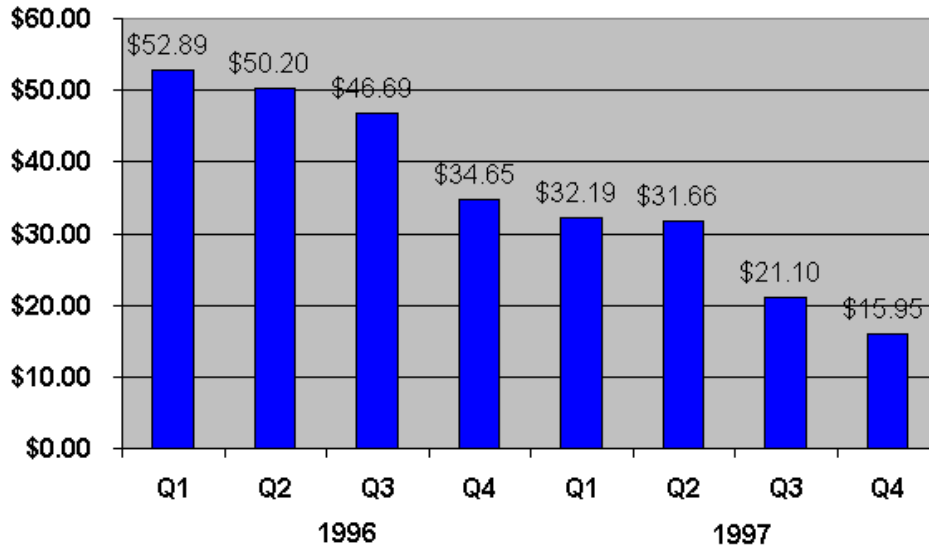
After building your matrix, consider generating and evaluating proposals to further enhance your strategic advantage. For example, consider a plan under which Schwab would offer advice directly to customers. Would this be a good idea? If so, how should it be developed? The Matrix can be used to either outline the development of such a proposal or show why it might prove unfeasible. Current competitive developments can serve as good source of proposal ideas.

In developing and analyzing your Matrices, you should address the following types of questions:

- **Feasibility:** Does the set of target practices constitute a coherent and stable system? Is the transition likely to be difficult? How much difficulty are competitors likely to have in copying successful groups of practices?
- **Sequence of Execution:** Where should change begin? How does the sequence of change affect success? What role have previous changes played in setting the stage for the next steps? How are proposed changes likely to affect future options?
- **Location:** Schwab developed Internet trading as a greenfield experiment. Was this the right choice?
- **Pace and Nature of Change:** How quickly should change occur? Should it be incremental or radical? Which groups of practices, if any, must be changed at the same time?
- **Stakeholder Evaluations:** Have we considered the insights from all stakeholders? Have we overlooked any important practices or interactions? What are the greatest sources of value?

Exhibit 1

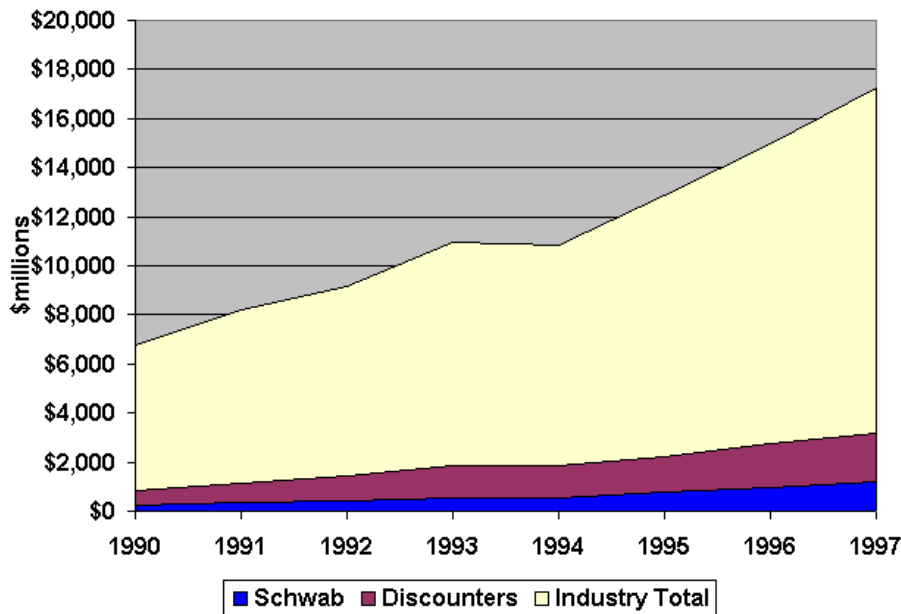
Average Commission per Trade Charged by the Top 10 Online Trading Firms



Sources: Credit Suisse First Boston, Barrons

Exhibit 2

Brokerage Industry Commissions in the 1990s



Sources: Charles Schwab, Securities Industry of America

Exhibit 3

Online Trader Profiles

Hyper-Active Trader

Low cost trading, a simple interface, and fast execution are crucial to this market junkie. Their trading is so frequent, they do not even want to re-enter their password on every order.

Serious Investor

This data-hungry investor is an active trader who values high-quality information, investment tools, and research. What they want is help deciding what to buy -- in one integrated, easily accessible place.

Life Goal Planner

This investor is interested in trading mutual funds for long-term growth and wants tools for financial planning and portfolio optimization. A stable financial services provider is more important than the latest in technical analysis.

One-Stop Shopper

This convenience-minded consumer wants a comprehensive package of financial products -- stock trading, mutual funds, credit cards, bill payment, and checking. Breadth of offerings and ease of use are most important to this customer.

Source: Gomez.com

Exhibit 4

Some advantages of separate channels:

- Half of Schwab's customers don't use the branches in any given year; bundling the cost of branch access into the price of a trade results in a higher cost basis than online competitors.
- A lower cost basis could help Schwab compete with firms like E*Trade that are stealing its best customers. The highest growth rate in Internet trading is among low cost services.
- Alternatives to the branch offices already exist. Portfolio planning tools on the Web provide a low cost alternative for basic financial planning services. Simple questions can be handled by regional phone center staff. Schwab's independent advisor network provides an alternative for customers who want face-to-face service. •As a way of marketing the Web site, branch offices have a high overhead. Other strategies, such as strategically placed kiosks, investing seminars, etc. might be more cost effective.
- Schwab may want to reduce the size of the branches as more customers trade online. This would be easier if the future of the Web site is not tied to the branch offices.

Some advantages of integrated channels:

- Customer feedback indicates a demand for both Web trades and access to face-to-face and phone channels.
- Branches play an important role in signing up new customers.
- Coupling Schwab's proven customer service infrastructure to the Internet site is likely to give Schwab a service advantage in Internet trading, at least until full service firms enter.
- Older, higher value customers might not be as Internet savvy and could use help getting online from the branches.
- Face-to-face service provides peace of mind that is important for many investors.

Exhibit 5

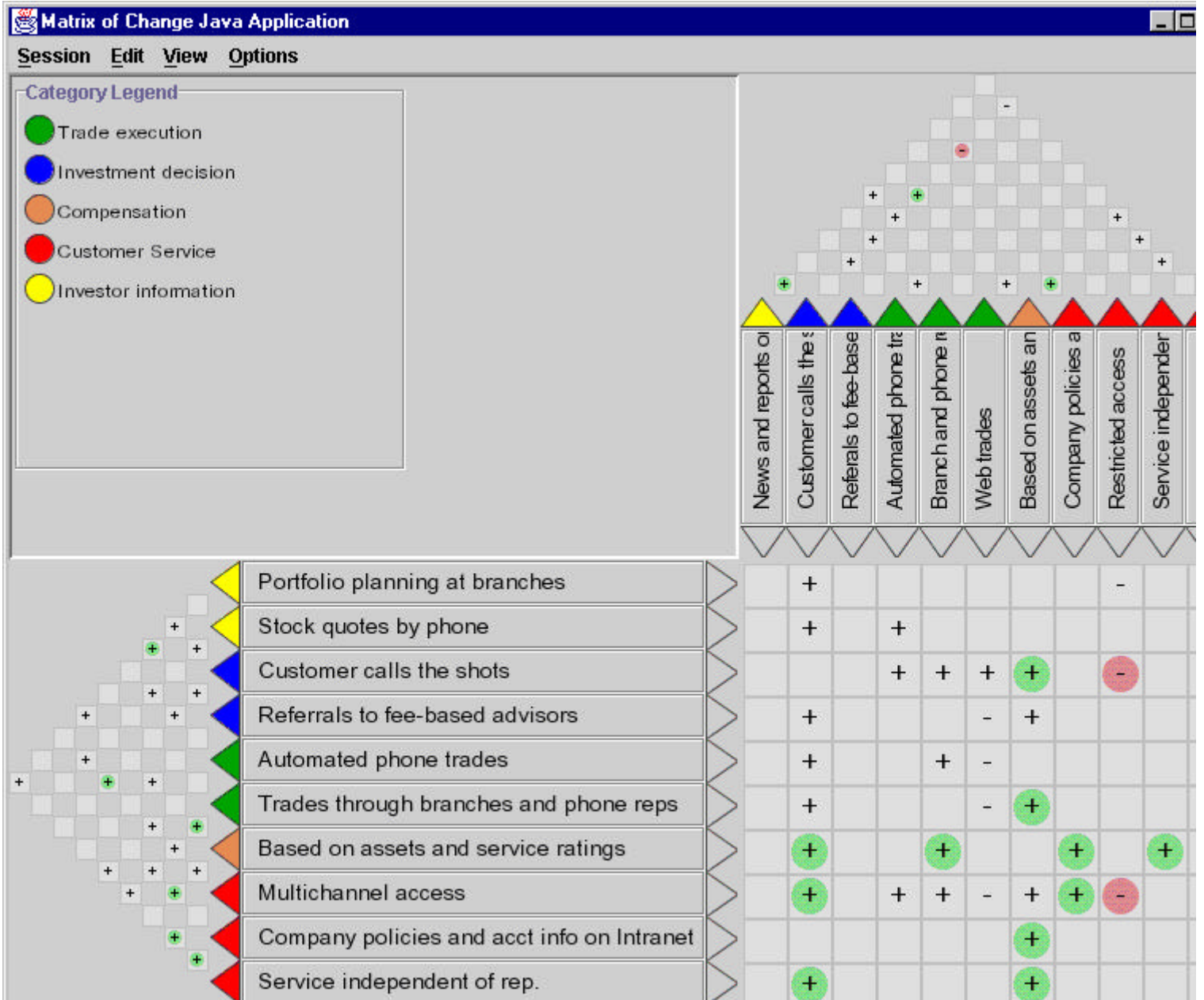


Exhibit 6

Sample Schwab Practices

Regional Call Center

Takes calls (less than one minute wait)

Access info on intranet (account, Schwab procedures if needed)

Answers question or refers to branch office/AdvisorSource for face-to-face

Trained to listen for customer cues in making referrals

Teams of reps work as liaisons with branches

Other reps work with independent advisors

Branch Offices

Sign up, orientation of new customers

One-on-one standardized planning: 401k rollovers, college, retirement planning

Makes referrals to Advisor Source for more complicated planning

Recent focus on specialized training - 401k rollovers, college, etc.

SchwabLink Advisors

Charge clients a flat fee based on assets

Use Schwab back end for account management

Assets maintained under Schwab

Not required to use Schwab services, but often recommend them to clients "virtual salesforce"

Company-wide practices

Compensation is never tied to commission

Intranet makes all client account info available to Schwab reps

Bonuses for employees that deal with the public are tied to assets under management and customer service ratings.

Service ratings from customer surveys (10% polled); results are tracked back to employees that served them.

Appendix A- The Matrix of Change

I. Motivation for the Matrix of Change

The motivation behind the Matrix of Change comes from research that suggests many of the difficulties organizations have had with change management stem from an inadequate recognition of the interdependencies among technology, practice and strategy. The latest technology, incentive system, product line or decision-making structure is almost never implemented in isolation. Rather, managers must plan a system that takes into account and coordinates interactions among all the components of a business system. In some cases, interactions with the new technology or practice can create a virtuous cycle of positive feedback that amplifies even small steps in the right direction. In others, interactions can lead to interference that may negate the potential value of an innovation, or even make things worse. Because new organizational paradigms eliminate time, space and inventory buffers as operations become more tightly coupled, ignoring such interdependencies is becoming increasingly risky.

The Matrix of Change focuses attention on these critical interactions among business processes. By bringing them to light, it contributes to an understanding of such issues as how quickly change should proceed, the order in which changes should take place, whether to start a new site, and whether the proposed systems are stable and coherent.

The Matrix was originally applied at a medical products manufacturer where it provided unique and useful guidelines for change management. Further information can be found in *The Matrix of Change: A Tool for Business Process Reengineering* (<http://ccs.mit.edu/papers/CCSWP189/CCSWP189.html>).

In this case, you will be applying the Matrix as an assessment tool in developing a strategy for aligning Schwab's Internet channel with its brick-and-mortar operations. As strategic scenarios take shape, application of the Matrix highlights potential gains from complementary sets of practices while identifying potential conflicts before they develop. An overall assessment of the Matrix will provide guidelines for the pace, order, location and stability of changes.

II. Applying the Matrix of Change

The Matrix of Change system consists of three matrices and a set of stakeholder evaluations. The matrices represent:

1. The current collection of organizational practices
2. The desired collection
3. A transitional state that bridges these two.

Stakeholder evaluations provide an opportunity for persons within the firm to state the importance of these processes to their job activities.

Matrix Construction

Matrix construction then proceeds in four steps:

1. Determine which business practices matter the most for achieving business objectives.
2. The Matrix highlights interactions among these practices and possible transitional difficulties from one set of practices to another.
3. It reveals process interactions that can provide guidelines for the pace, sequence, feasibility and location of change.
4. It encourages various stakeholders to provide feedback on proposed changes.

Step 1: Identifying critical business processes

The first step is to list existing goals, business practices, and ways of creating value for customers. Current practices are then broken into constituent processes suggesting how they are accomplished. A process is a "structured, measured set of activities designed to produce a specified output...a specific ordering of work activities across time and place, with a beginning, an end, and clearly defined inputs and outputs." (Davenport, p. 5) A second list is then compiled describing new or target processes.

Identifying the most important processes can be quite difficult, but certain guidelines can help. A key to success is "starting with the end in mind," that is, identifying the purpose or business objective of change, whether it is organizational learning, market share, flexibility, customer satisfaction, or something else.

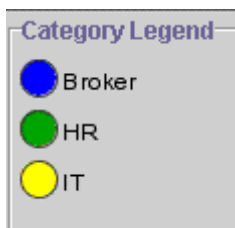
Step 2: Identify System Interactions

After describing existing practices, a horizontal triangular matrix is created to identify complementary and competing practices. Complementary processes reinforce one another so that doing more of one increases returns to the other. Competing processes work at cross purposes. A grid connects each process in an interference matrix, and at the junction of each grid plus signs (+) designate complementary and minus signs (-) competing processes. A green circle around the (+) represents a strongly complementary process and a red circle around the (-) represents a strongly competing process. A blank space indicates a neutral interaction.



In the example above, tying the broker's compensation to commission strongly reinforces the broker's interest in recommending securities to a client. However, the practices of having brokers share client information on the Intranet and tying brokers compensation to commissions are strongly competing, since sharing the information would be likely to cost a broker a sale. The interaction between sharing client information on the Intranet and a broker's ability to make recommendations is regarded as neutral. While in theory, the relationship might be positive, in this situation good information just wasn't being shared.

The color coding to the left of the process description reflects the practice group to which it belongs. Practice groups are useful because it is not uncommon to uncover practices that reinforce each other in one part of the organization yet conflict with those in another area. In this example, practices have been classified into three groups as indicated by the legend shown below.



An analogous process develops a vertical triangular matrix for target processes.

The plus or minus values for each cell can be derived in a number of ways. Often, once the practices are classified, the values become self-evident. In other cases, formal models and theory provide guidance. Theories of ownership, for example, suggest that decentralizing data management can boost quality levels in systems users control themselves (Alstytne, Brynjolfsson and Madnick) and operations management models suggest task processing in parallel adds more value when inputs have higher variance (Harrison & Loch, 1995). In some cases, empirical data will suggest the existence of complementarities or substitution effects, and formal statistical analysis can identify clusters of practices which tend to co-exist. Surveying key personnel is also an effective way to gain insight into both perceived and real interactions.

Step 3: Identify Transition Interactions

Next, the team constructs the Transition Matrix - a square matrix combining the horizontal and vertical matrices which helps determine the degree of difficulty in shifting from existing to target practices. The advantage of the transition matrix is that it shows the interactions involved in moving from existing practices to the goal state.



In the example above, the firm is contemplating changes aimed at encouraging brokers to share client information with a team. These involve changing the commission structure and the format for the organization of client information on the intranet. The matrix of pluses (+) in the target matrix indicates that the set of practices, if achieved, looks stable. However, the minuses in the transition matrix point out some of the difficulties the firm might be expected to encounter. In particular, changing the commission structure in this case looks like a tough sell, but one that is likely to prove crucial to achieving the change. If it is achieved, sharing client information on the Intranet would be reinforcing in the transition.

So in this simplified example the firm might weigh the costs of changing commissions and make both changes together if it decides to carry through on its plan. Before doing so, however, it would want to revisit its list of crucial practices to look for other dynamics that might come into play and survey the stakeholders for their reaction and insights.

Step 4: Survey Stakeholders

Just as listening to the "Voice of the Customer" is essential to building a better product, listening to the "Voice of the Stakeholder" is essential to building a better process. The step of surveying the stakeholders often uncovers interactions and sources of value that were previously hidden.

The Matrix of Change includes a triangle to the right of each practice for a stakeholder importance rating. Stakeholder ratings are based on a Likert scale ranging from "2" (most important) to "-2" (least important). Revisiting our example, we see that under current practices brokers gave compensation tied to commissions a "2" and sharing information on the Intranet a "-2." In this example, implementing the intranet alone has left the brokers underwhelmed. The target practices have all received "1" ratings, indicating some potential support for a change.

III. Analyzing the Matrix

Following development of the Matrix, it can be analyzed to provide insights into the following types of questions:

- **Feasibility:** Do the target practices constitute a coherent and stable system? Is the current set of practices coherent and stable? Is the transition likely to be difficult?
- **Sequence of Execution:** Where should change begin? How does the sequence of change affect success? Are there reasonable stopping points?
- **Location:** Are we better off instituting a new system in a greenfield site or can we reorganize the existing location at reasonable cost?
- **Pace and Nature of Change:** Should the change be slow or fast? Incremental or radical? Which groups of practices, if any, must be changed at the same time?
- **Stakeholder Evaluations:** Have we considered the insights from all stakeholders? Have we overlooked any important practices or interactions? What are the greatest sources of value?

Feasibility

The sign, strength and density of interactions are important for determining process coherence and stability.

A system with numerous reinforcing relationships is coherent and therefore inherently stable, while one with numerous competing relationships is inherently unstable. If a target state has too many negative relationships, the project will be unstable and must be reevaluated.

The density of relationships provides insights into whether practices are loosely or tightly coupled. A target state with few relationships, whether stable or unstable, is loosely coupled, while one with many relationships is tightly coupled. Loosely coupled practices require less coordination, while tightly coupled practices require more coordination.

A transitional state dominated by interfering relationships indicates a high degree of instability. "This offers a fundamental explanation for the difficulty found in business process reengineering: when faced with new practices that conflict with current operations, well-intentioned local managers seeking to optimize their piece of the system will consciously or unconsciously undermine change by pushing the system back towards its initially stable state. From a local perspective, each manager's resistance appears sensible and even efficient, but from a global perspective structural change becomes almost impossible." (Brynjolfsson, et. al, 1997).

The insights the Matrix of Change can provide into the feasibility of a change also suggest that the Matrix may provide insights into the level of difficulty a competitor is likely to face in copying specific groups of practices. While certainly not foolproof, this technique can be applied in the Schwab case to gain a better understanding of the challenges Schwab's full-service competitors face in responding to growth of Internet trading.

Sequence of Execution

Practices that oppose other existing practices are the easiest to eliminate. Yet this approach may render the remaining system even more entrenched and difficult to change. Since stable systems generally have few opposing practices, another alternative is to start removing practices that have no inherent effect on other practices.

On the target side, practices that complement existing ways of doing business are the easiest to implement. This technique can be used to build a bridge from one system to the next, particularly when a practice has numerous complements in the new state. However, it should be avoided if new practices strengthen old habits in ways that make dismantling the old regime even harder.

Practices that support a large number of other practices must be handled with great care. Such "linchpin" practices can be inserted to help lock several new practices in place or they can be removed to unlock several old practices.

The larger the blocks of reinforcing practices, the more difficult they are to change. The hardest changes involve the installation of new practices that oppose the greatest number of existing practices. In fact, large new blocks may be impossible to install before the opposing practices are removed. One strategy is to dismantle these competing practices beforehand. Another alternative is to lay a foundation of complementary new practices before making any attempted change. Having support in place helps keep employees from reverting to old habits.

The presence of large blocks also suggests that change should stop only after a block has been completely removed. Reducing the pressure to change when an interlocking block is only partially dislodged can allow old practices to roll back into place, undoing the work and wasting resources.

Extended over a longer time horizon, the theory underlying analysis of the sequence of change may also be useful for evaluating a firm's options for realizing future states. With hindsight, we can see that some of the most successful Internet retailers, such as Dell and REI, are companies that previously created sophisticated groups of processes for serving customers at a distance. These groups of processes could be thought of as options for developing a successful Internet channel that these companies were able to exercise once a sufficient number of customers appeared online.

Location

Since the density of interfering relationships in the transition matrix indicates how disruptive proposed changes will be, increasing interference indicates a greater need for isolation. Sometimes a fledgling change project needs to be shielded from bad habits. Natural tendencies toward local optimization will push the system towards an initially stable state as long as opposing practices remain.

Greenfield issues relate to attitudes as well. A transition matrix with more densely interfering relationships may indicate a greater need for changing mental models. For particularly radical or frame-breaking change, an outside change agent may be essential for helping people see processes differently. Managers may also need to be replaced because they are too closely tied to former ways of doing business. Also, the change is expected to leave a group particularly worse off it is often best to address this early.

Pace and Nature of Change

For implementation planning, it is worth distinguishing between the pace (gradual or rapid) and the nature (incremental or radical) of change. Occasionally, radical change may best be spread over several episodic steps, especially if resources are locked in place and initial conditions resist change. On other occasions change is an all or nothing

proposition. A halfway solution may lead to wasted resources, organizational exposure or even failure.

Three factors help to determine an appropriate pace: task interdependence, organizational receptiveness to change and external pressure. The first, task interdependence concerns how modular and how serial the essential steps are, that is the divisibility of the organizational process. Segmenting tasks into blocks reduces the scope of change and the coordination problem that must be managed at any given time. The pace of change within blocks must be rapid; the pace of change between blocks may be slow. Thus the speed of removing parallel components of an interdependent block may be more important than the serial speed of the whole change process.

The transition matrix, by showing interference, suggests how radical a change must be. A transition matrix with little interference suggests incremental change, while a matrix with significant interference suggests radical change.

The culture of an organization indicates its receptiveness to change. An organizational culture that supports experimentation and risk taking permits phased adaptation to unfamiliar processes. Phased adaptation can be particularly advantageous when a change has to migrate through several parts of an organization, since later groups can learn from the early adopters. However, phased adaptation is unlikely to be successful in a culture that punishes failed experiments.

External pressure is the third factor. In some cases, an external crisis will dictate rapid change for an organization that would otherwise be more culturally disposed towards a gradual pace. In an organization with a history of opposition to change, transition times should be minimized and the articulation of an external threat may help set the pace.

Stakeholder Evaluations

Stakeholder evaluations help anticipate responses to change by providing information on support for, indifference to, or hostility toward proposed changes. If employees give an existing practice low marks, they are likely to support a change. Conversely, if they do not support a change they are likely to give an existing practice high marks. Gaining their support may require new incentives.

While the transition matrix indicates the degree of process interference and the need to break mental models, the evaluations measure the alignment of incentives. Negative values in the target ratings section indicate a need to either cooperate and better align incentives, to increase the pace and avoid drawing out resistance or to isolate factions whose interests oppose the change.

High variance among stakeholder evaluations indicate different priorities and a fragmented strategic vision. With different priorities, stakeholders will tend to work at cross-purposes during implementation. If high variance is present in the stakeholder

evaluations, an organization may want to focus on defining and articulating a more uniform vision early in the change process.

The very act of decentralized decision-making - asking workers for their values and then taking them seriously - can have a positive effect on the change process by giving employees a sense of ownership and responsibility.

Determining Net Value Added

Once key differences in stakeholder evaluations have been addressed, a simple mechanism gives an indication of which changes will ultimately add the most value. The formula $\text{Target Value} - \text{Existing Value}$ gives an approximation of the net value to be gained by changing practices. This assumes that all units are the same and that practices with no counterpart are paired with a value of zero.

Net value added provides a useful complement to the Matrix of Change, but it can be misleading if used in isolation. Principles of net value suggest which changes are important, but principles of coherence suggest which sequences to adopt. The sequence of changing practices affects not only how soon any given payoff may be realized but also the cost and feasibility of changing other practices.

As a result, it is useful to think in terms of alpha and beta benefits of adoption. Alpha benefits are realized immediately, while beta benefits refer to subsequent gains achieved through "setting up complementaries in the adoption of future practices." (Croson, p. 32) Beta benefits also come from "learning by doing other things." In the process of learning to operate with fewer layers of management, an organization may also learn the process of distributing responsibility.

"The greatest benefit of the Matrix of Change may be that it forces management to make explicit the practices and interactions that are implicit in the old, new and transition systems. Recognizing and defining the nature of the problem can be 80% of the battle, but without a tool for clearly sorting out interactions among principles, much of change management is relegated to intuition and politics. Once the elements of the Matrix of Change have been identified, the most effective strategy may become self-evident." (Brynjolfsson, et. al, p. 17). h

The Problem of Prediction in Complex Systems

Of course, even the most detailed list of practices will not capture the myriad of unarticulated rules, procedures, technologies and cultural mores that exist in any organization. As a result, it is important to keep in mind that unexpected barriers may surface in the midst of a change.

The Matrix of Change offers two forms of assistance in dealing with complex systems. The first is that the Matrix design process can be revisited as often as necessary. The second is help in reshaping mental models. To the extent that the matrix can help shift

mental models even part way from implicit to explicit parameters, it can improve the chances for success. Explicit mental models create the opportunity for managers to develop interventions that realign the system towards the intended goal.

While it may never be possible to "manage the magic" of a perfectly function system, the Matrix provides a simple way to initiate debate on critical changes, helps identify multiple interactions and uncovers at least some of an organization's hidden assumptions.