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E-Business Strategy: Key Perspectives and Trends

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ABSTRACT

E-business is at least as much about process, organizations, and management as it is about technology. One of the best practices that has been discovered is that in order for an e-business initiative to be effective, it has to be the senior management that should be driving it. Firms want many information technology (IT) initiatives to support its *strategic objectives*. The value of these initiatives rests in their contribution to a firm's competitiveness, which cannot be quantified since some benefits are intangible. This paper studies the organizational impact of e-business. This paper also compares the returns to traditional non-Internet, bricks and mortar firms from e-commerce initiatives compared with returns to the new breed of Internet firms, and the returns from *business-to-business* e-commerce with returns from *business-to-consumer* e-commerce. Finally, the returns of e-commerce initiatives involving *digital* goods in comparison to the initiatives involving *tangible* goods are examined.

KEYWORDS:

E-Business Strategy, Strategic Objectives, Strategic Positioning, Strategic Management.

INTRODUCTION

E-commerce covers the more technical aspect of electronic transactions including

Electronic Data Interchange (EDI), requests for quotes, order management, back-end database integration and so forth. But today e-commerce has become synonymous to buying and selling online, both Business to Business (B2B) and Business to Consumer (B2C). ***E-business*** is much more comprehensive; it is about the radical redesign of traditional value chains and the construction of new ones. Some of the components that are getting reshaped are: customer relationship management, supply chain management, e-procurement (both scheduled sourcing and spot sourcing), knowledge management, human resources management, management of partnerships and strategic alliances in the extended enterprise that includes customers, vendors, distributors and business partners. Many companies have a long way to go, both in their external e-business relationships, as well as their internal organization and control, in how they conduct business in general.

Many organizations are re-evaluating their *organizations strategy* in order to strategically position themselves in the "new" digital economy/world of e-business. **Strategic positioning** relates to carrying out different activities from competitors, or carrying out similar activities in different ways. (Porter, 1996). A **strategic information system (SIS)** supports implementation and monitoring of a firm's strategic plan and is based on internally developed data which already exists as well as external information obtained by environmental scanning. In contrast, a ***competitive information system*** helps execute the competitive strategy of a firm (Huff, 1985).

E-BUSINESS: KEY STATISTICS

Although, B2C will be a part of life for an estimated 49 million U.S. households by 2004, the total B2B eCommerce activity is already larger than B2C eCommerce and is growing much faster. Forrester Research projects B2B to go from $43 billion in 1998 to $1 trillion by 2003. During the same period business-to-consumer (B2C) will go from $7.8 billion to $108 billion.

The B2B eCommerce revolution includes eProcurement, B2B exchanges, and business infrastructure relationships. B2B is about connecting the existing buyer and sellers. It is not a disintermediation play. It is about intelligently implementing Internet technology to improve business processes. Bandwidth exchanges are the most common type of a B2B telecom site. There a few companies focused on selling telecom equipment online. Creating a liquid market for bandwidth has obvious appeal since sellers are stuck with excess capacity due to rapid technology improvements which lead to price reduction of approximately 50% a year. With a profusion of approximately 25 bandwidth exchanges, it is harder for any one site to generate liquidity. This may lead to some consolidation in the telecom B2B market-space.

The online B2B market across the world is increasing in value rapidly, but there are some hurdles and limitations to be met in the near future. The report, from Strategy Analytics, notes that some $800 million in online B2B sales were generated in 1999, and predicts the figure as rising to $27 billion by 2005.

ORGANIZATIONAL IMPACT ASSESSMENT OF E-BUSINESS

The organizational impact of e-business can be understood by assessing the ease of digitalisation and the uniqueness for each of the parts of the business. The less 'bittable' (e.g. ordering groceries is 'bittable' as it can be done electronically - but delivering them is not) and the more highly differentiated the product or service, the lower its vulnerability to e-business. Exhibit 1 illustrates this by using the financial services industry as an example.

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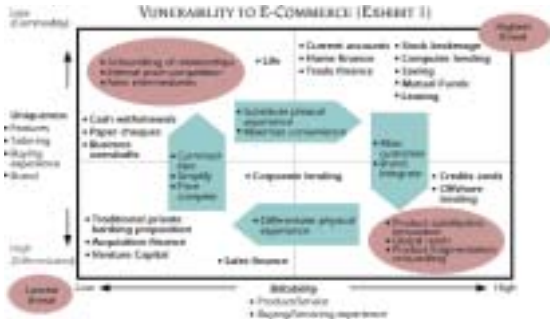
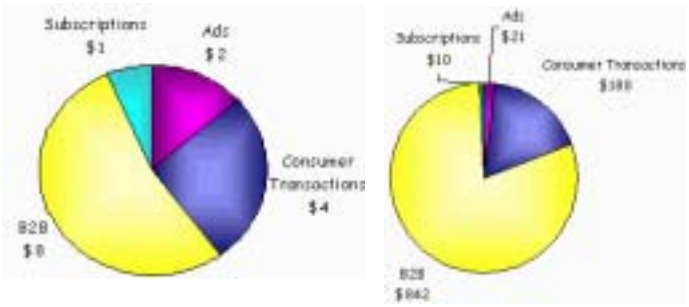


Source: Price-waterhouse-Coopers



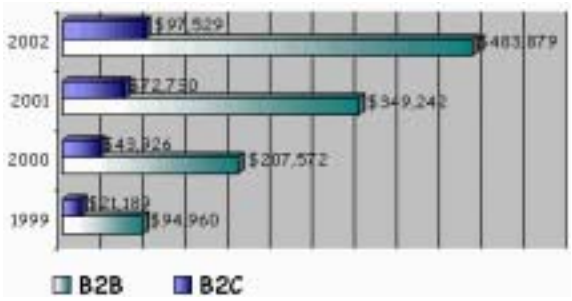
1998 *2002*

Exhibit 2: Source of Internet Commerce (billions)
(Source: Deloitte Research and Forrester Research)

Exhibit 1 demonstrates that much of a financial services company's product portfolio is highly bittable and hardly unique. Consequently, the impact on financial services organizations will be profound. This could mean that incumbent players could lose anywhere in the range of 15% of value added profit to new competitors, or as high as 80% of profit, where there will be aggressive margin/fee/balance erosion across the board driven by the mass-market penetration of Internet usage (Berryman, 2000).

The significant fact is that the impact will not be uniform across the customer base. If the financial services company loses the wrong 15% of customers it could lose as much as 80% of its profit. Their most valuable customers are already early adopters of the Internet and are at risk from Internet based competitors. These customers are being targeted because they have a high degree of discretionary spending and expect high quality customer service. To help the readers gain a understanding of the organizational impact of e-business, exhibit 2 and 3 illustrate the source of Internet Commerce (in 1998 and 2002) and the U.S. E-Commerce Forecast (conservative and aggressive outlook) respectively.

Conservative Outlook



Aggressive Outlook

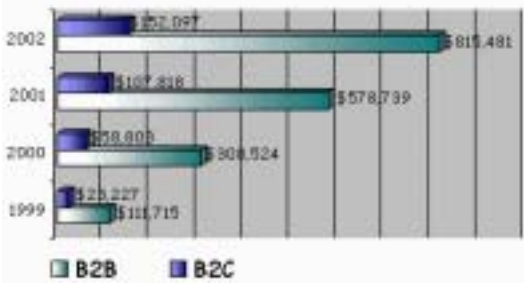


Exhibit 3: U.S. E-Commerce Forecast (millions)
(Source: Giga Information Group)

INTENT AND CONTENT OF THE NEW E-BUSINESS STRATEGY

E-Business players have distinctive capabilities in creating a new strategy and a planning cycle required to support business development for the e-business. To navigate the uncertain future, they have adopted new flexible approaches to business development. Traditional approaches to strategy development are replaced by real time experimental methods. Exhibit 4 shows the planning cycle required to support this capability. Many existing businesses find that their lumbering planning processes are not able to accommodate this new imperative. In contrast, war gaming is one powerful strategic planning technique used with clients to illustrate the range of options available, and the possible range of competitor responses.

On-line players have augmented their internal innovation capabilities with an antenna to detect innovation beyond their current event horizon allowing them to acquire and innovate new products and services in real time. Often their business units are empowered to make local decisions because the traditional command and control based organization is not able to respond effectively. Finally, they carefully select which capabilities will be developed internally and which will be sourced through alliances and partnerships.

CHANGES IN THE BUSINESS MODELS OF THE ORGANIZATIONS

There are a series of organizational and cultural hurdles to overcome. Making these changes are complex and challenging and a number of different approaches are possible. They

lay on a continuum between "inside out" transformation and "building anew" - see Exhibit 5. The "inside out" transformation (i.e. make the dinosaurs dance) involves reconfiguring the existing organization for new behaviors and capabilities, that is, in-place transformation from "bricks and mortar" to e-business enabled service delivery. The "build anew" approach (i.e. lose the baggage) taps the resources of the existing organization to build new companies with new capabilities. It uses the cash cow of the parent company to build the new and offers the opportunity ultimately to migrate and dispense with the old. The optimal approach will depend on the nature of the opportunity being explored and the state of the existing organization's value and culture.

Cases in Point from the B2B Domain

Cisco Systems (www.cisco.com) has successfully achieved business process redesign using intelligent software agents and decapitalization as its business model. Its clients include major telecommunication service providers, and most large businesses. Cisco's site is completely integrated into its manufacturing process. Outside suppliers directly fill 55% of Cisco's orders allowing Cisco to leverage both its physical and human capital by integrating outside companies into its supply chain, i.e. the "decapitalized" model, since the business model is self-financing and does not need vast amounts of physical capital. For instance, a customer order received on the Internet often gets the manufacturing process rolling within hours. Cisco believes in connecting two businesses to each other directly, in lieu of playing the intermediary role. Cisco has raised spending on direct selling and branding in order to help shift more sales onto the Web. Early movers like Cisco Systems are reportedly transacting over 90 percent of their dealings with distributors over the Internet. The opportunities in the business-to-business e-commerce arena far exceed the opportunities in business-to-consumer e-commerce.

RateXchange (www.rateexchange.com uses a marketplace business model and is one of the biggest bandwidth marketplaces with major telecommunications carriers as its clients. It differentiates itself by focusing on trading data capacity—not minutes of phone calls—and exchanging the capacity immediately. Currently, RateXchange is extending its reach globally. It needs to raise $65 million by public offering in order for its planned build out.

Telezoo.com (www.telezoo.com) also uses a marketplace business model. It allows suppliers to directly input their listings (excluding the pricing information) in its online catalog of telecom gear. This has allowed Telezoo to build a sizable database with a small payroll. Buyers benefit from an automated "request for proposal" process that gives them custom bids for any of the equipment they read about. Its clients include AT&T, Lucent and hundreds of other service providers, vendors and network integrators.

Last, but not the least, London-based Band-X (www.band-x.com) uses a marketplace business model in its diversification strategy to compete against rivals by diversifying out of plain bandwidth into other telecom-related commodities. Recent example: a market for firms renting a few hundred square feet to store networking gear. With $6.5 million in revenue in 1999, three year old, Band-X is one of the biggest bandwidth exchanges. Its clients include AT&T, British Telecom, Cable & Wireless, MCI Worldcom and Telefonica.

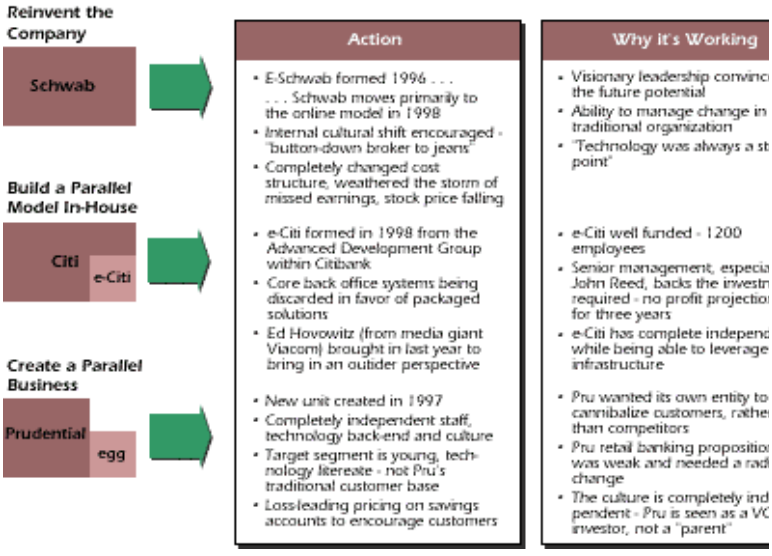
IMPACTS ON THE VALUE OF THE FIRMS BASED ON THE TYPE OF INITIATIVE AND/OR SERVICE OFFERED: A RESOURCE BASED THEORY PERSPECTIVE

From the resource based view of the firm (Conner and Prahalad, 1996; Peteraf 1993), it is examine that if the economic value of e-commerce initiatives is linked to the nature of the resource stocks of the firm: whether the firm is a conventional firm with a considerable *understanding of the market* and its customers or a one of the new breed of Internet-enabled firms with a *considerable understanding of Internet technologies*. If economic returns to e-commerce initiatives are influenced by the *type* of e-commerce *initiative* announced then we need to see whether they are business-to-consumer e-commerce or business-to-business arrangements, and if economic returns are influenced by the *type* of *product or service* involved: whether they are *digital* goods or *tangible* goods.

B2B vs. B2C

While the volume of business-to-business e-commerce *(B2B)* is currently at the same level as business-to-consumer *(B2C)* commerce online, the volume of transactions between firms is expected to grow far more rapidly. The potential for *business-to-*

EMERGING BUSINESS MODELS (EXHIBIT 5)



business e-commerce, currently projected at $1.3 trillion by 2003 is an order of magnitude larger than the $100 billion estimated for *business-to-consumer* e-commerce (Ziff Davis, Infobeads, 1999).

The e-commerce initiatives by a firm to enter into transactions in the larger *B2B* market should be more strongly related to *future profit* streams than *initiatives* aimed at the smaller *B2C* market. Further, as firms can potentially establish multiple B2B relationships, firms currently initiating B2B initiatives would have the opportunity to transfer the learning from initial B2B initiatives to become more efficient in subsequent relationships through the development of alliance capabilities (Kale and Singh, 1999). Overall, firms that enter into B2B e-commerce in the present period are thus *likely* to be positioned advantageously to *leverage* the learning from early experience/s (Conner and Prahalad, 1996) as this market grows *exponentially*.

Digital Vs. Tangible Goods

A range of e-commerce initiatives involve products such as software code, streaming real-time stock quotes and magazine/journal articles that are available in digital form for downloading or for use online by customers. For instance, a customer can pay using a credit card and immediately download software programs such as CorelDraw and Word Perfect from www.corel.com, or search the archives of BusinessWeek Online, the web site of the popular magazine, and print articles of interest for a small fee. Other e-commerce initiatives involve *tangible goods* such as CDs, books, toys, groceries and computers that can be ordered online, but need to be *physically shipped* to the customer. Thus it can be seen that there is a clear distinction between digital and tangible goods.

While e-commerce presents an opportunity for firms selling *both categories* of products, especially significant advantages are available to firms supplying *digital goods* as they can use the Internet as a medium for immediate product delivery. The use of the Internet to deliver digital goods allows firms to break free of the limitations and physical constraints imposed by tangible products such as groceries, CDs and printed magazines for delivery. For instance, an online magazine can potentially deliver individually customized issues to all its subscribers, engage its audience through hyperlinks to related content and provide readers the ability to dialogue with the author and with each other. Similar devices that enhance value of the magazine to customers are not feasible when the magazine is limited by *physical constraints* such as the number of pages and the need for large print runs with similar content. Similarly, a software firm can offer a wider range of versions of their products with different functionalities at multiple price points when selling online than when constrained by the costs of *managing* the *complexity* of delivering this variety of products to customers through *traditional channels*.

"If we are unable to increase the capacity of our systems at least as fast as the growth in demand for this capacity, our website may become unstable and may cease to operate for periods of time. We have experienced periodic unscheduled downtime. Continued unscheduled downtime would harm our business and also would discourage users of our website and reduce future revenues." (ebay's SEC Form 10-Q filing of August 9, 1999).

The relative disadvantage of *net firms* in comparison with conventional *non-net firms* is highlighted in a study by Boston Consulting Group and Shop.org that reveals that the *acquisition* and *servicing costs* incurred by net firms are nearly *twice* as large as those incurred by conventional firms (Paul 1999).

THE FUTURE OF THE E-BUSINESS

Although firms introduce some systems to reduce costs and can evaluate them in terms of their success in doing so, they want many IT initiatives to support a *firm's strategic objectives.* The value of these initiatives rests in their contribution to a firm's competitiveness, which is often non quantifiable and uncertain. A successful e-business needs to focus on: (1) better aligning IT products and services with the firm's strategic objectives, (2) delivering solutions faster, and (3) providing high-quality, cost-effective support. In effect, the e-business executives are attempting to build IT capability that would consistently allow them to identify and implement opportunities to apply IT to strategic needs better, faster, or cheaper than their competitors (Ross, et al, 1996).

Exhibit 6 shows multiple demand scenarios for both B2C and B2B organizations. This scenario driven approach can be applied to other industries just as effectively.

The report for the future E-Business industry identifies the following three cost categories that will emerge based on a site's sophistication (Diederich, 1999):

- $300,000 to $1 million to "get on the map. This site is adequate, but it is functionally behind most industry participants," the report said.
- $1 million to $5 million to "run with the pack. This site is functionally equivalent to most industry participants."

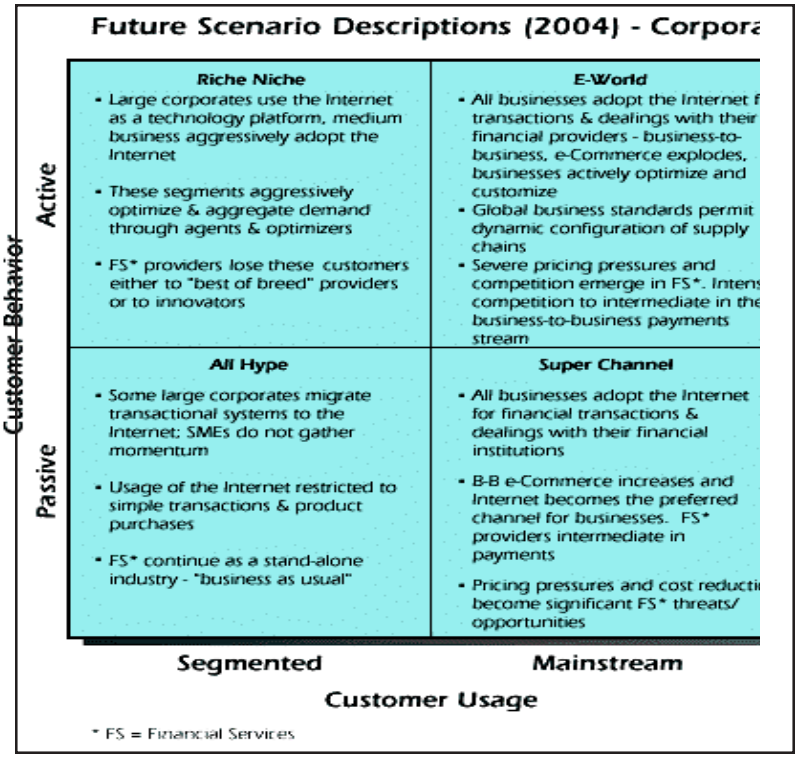


Exhibit 6: Future Scenario Descriptions of Customer Behavior and Customer Usage (Source: PricewaterhouseCoopers)

- $5 million to $20 million to achieve "market differentiator. This site raises the industry competitive bar and changes the nature of online competition."

This number will grow to $133 billion by the end of 2000, more than doubling in 12 months. The same explosive growth is also forecasted for Western Europe and Asia Pacific. According to Forrester Research, more than 43% of durable goods manufacturers will conduct business-to-business commerce over the Net, with sales reaching $99 billion. Books, music and entertainment Web sale should exceed $3.7 billion by 2001.

SIGNIFICANT E-BUSINESS TRENDS

Over the last decade, large organizations have been pushing to reduce their number of suppliers in order to have better control, collaborate more closely, and reduce the administrative costs of multiple relationships. B2B e-commerce provides the best of both worlds by preserving the intimate collaboration while allowing companies to expand their portfolio of options. Success stories involve platform-based solutions that integrate the front-end of providing the marketplace (i.e., aggregating participants, cataloging product information and providing price visibility) with the back-end processes and components such as yield management, collaboration, personalization, configuration, workflow management, ERP integration, credit approval, logistics, customer service, data intelligence, inventory management, forecasting, and catalog management. The biggest challenge is to ensure that each component is integrated and working toward a single goal.

The demand driven production is the next big push in business. Customer orders will serve as the production catalyst. Dell is the best-of-class in this category, with dramatically higher inventory turns than its competitors. GM is striving to reduce friction in its value chain as well, by producing a car in seven days direct from a customer's order. By integrating all members of the supply chain, the end demand can immediately be communicated to all supply chain members so that together they can work to deliver a good or service.

The B2B space is still in its infancy in terms of technology development and corporate deployment. B2B is a long-term play that requires solid fundamentals for delivering exceptional value by improving collaboration and reducing transactional friction among all the members in the B2B value chain.

Subscription-based revenue model provides an incentive to the user to use the B2B system as frequently as possible. Value will also be generated through lower inventory costs, more accurate forecasts, better investment decisions, more profitable pricing, reduced sales cycles, and better customer service. Therefore it will be hard to justify charging for the transaction when the true value is being generated elsewhere.

B2B is fundamentally about saving time and is thus at a 180 degree difference in comparison to B2C. Also the B2B technology is more sophisticated, the barriers to entry are greater, critical mass is more difficult to achieve and business models are more defensible than B2C. The foundation that companies have erected over the last 12 months is an important first step, the forthcoming enhancements and build-out will provide a far greater opportunity for value creation, efficiency gains and economic progress by more fully utilizing the Internet's collaborative strengths.

CONCLUSION

The move into e-business is, to a large extent, exploration of new territory. The way it will change the business cannot be fully anticipated or completely controlled. The move need not be a leap of *blind faith*, if it is a planned process based on a shared vision and the support of the key decision-makers. The best way to compete against an e-business is to become one.

Finally, the costs of establishing a web business can vary from just a few hundred dollars to many millions of dollars, depending on the scope and complexity of the site and its capacity. Managing the capacity cost equation for a growing e-business is complex and potentially expensive. From a proactive strategy perspective, entering the e-business world takes something of a leap of *calculated faith* which companies generally lack until the need to change for survival becomes obvious. Unfortunately this reactive strategy is usually late in the game. History is littered with companies that failed to adapt, allowing competitors to capture the competitive advantage. Perhaps, one of the best ways to succeed in the world of e-business is to start off with a dynamic and new e-business strategy.

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