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Faisal Hoque
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PART 1

The e-Enterprise

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1 From Net Commerce to e-Enterprise

I don't think there's been anything more important or more widespread.... Where does the Internet rank in priority? It's No. 1, 2, 3, and 4.[1]

—Jack Welch, Chairman & CEO, General Electric

When Jack Welch makes the Net his top business priority you can be sure that the Internet and Net-based business have taken the critical step from possibility into reality. In fact, General Electric and countless other Global 2000 companies are quickly investigating and applying the newest Internet technologies. These companies seek to gain and retain competitive advantages in new and evolving markets through highly adaptive Net-based enterprises. Everywhere you turn, both the mainstream and business news media are focused on the Net Revolution. Both alluring and critical reports about the Web, the Information Superhighway, and Internet ventures abound.

The Net is the backbone for the new digital economy that is radically changing business models around the globe. These new business models have become differentiators that redefine market winners and losers. No one is safe from the changing tide. Past critics of the Internet have said that it's a gadget for hobbyists and computer geeks—not a valuable tool for business. It's all hype, they said. As evidence they pointed to the astronomic market capitalization of so-called Internet stocks. They said that conventional enterprises are safe from these over-publicized startups. Put simply, they were wrong then, and

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they're wrong now. As *Business Week* says "You are Merrill Lynch when Schwab.com comes along. You're Barnes & Noble when Amazon.com hits big. You're Toys 'R' Us when eToys shows up."[2]

For some companies, the Net Revolution may have begun a new era of unrivaled prosperity. For others it has probably begun a descent toward extinction. The Net Revolution, however, isn't just about setting up shop on the World Wide Web. Instead, it's about realigning business models around global, dynamic value chains by leveraging Net technologies to survive, to compete, and to succeed.

A spring, 1999 survey of cross-industry manufacturers conducted by AMA Research and Ernst & Young revealed that 50.9 percent of the 766 respondents currently use some form of e-Commerce in their business activities. In addition, 92.3 percent of the respondents that were identified by the overall survey results to be "ultimate manufacturers" reported that they are using e-Commerce.[3] The forms of e-Commerce that were surveyed include: 1) Supply management/buying/auctioning 2) Internet order, status, and availability tracking 3) Placing Internet orders with suppliers and 4) Accepting Internet orders from customers. The survey also showed that the average percentage of manufacturing revenues presently attributable to e-Commerce initiatives is 8.6 percent, however, that figure is projected to increase to 27.1 percent in five years. Among the "ultimate manufacturers," average revenues from e-Commerce are currently cited at 15.1 percent of total revenues, jumping to 34.4 percent in five years.

This survey clearly shows that Net commerce has already begun to touch both internal and inter-organizational business processes in every part of the enterprise. These processes form the heart of "what the business does." On the supply side, they include essential inter-organizational activities such as material, repair and operations procurement, and logistics. Internally they include manufacturing and distribution. On the demand side they include internal activities such as order entry and external activities, and catalog management and customer care functions among others.

The frightening reality, however, is that many of these initiatives are destined to fail. According to META Group, "By 2000, corporations will waste from $35 to 40 billion of the money spent on IT

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services due to providers whose services underperform or do not perform at all."[4] The analyst firm Gartner Group predicts that "By the end of 2001, over 70 percent [of companies] will have failed to plan a coherent approach to electronic business, leading to a significant loss of competitiveness. These e-Business failures will be a result of disconnects between the CEO, operating/line of business units, and IT departments around the strategy to create new competitive advantages and the technology required to implement this strategy."[5]

This book is about defining the next generation enterprises that will undergo the transformation from e-Commerce to e-Business to e-Enterprise. Many business leaders refer to this transformation as "e-Transformation" and to e-Enterprises as "clicks and mortar." These organizations will leverage their existing asset bases with Net business models. This book postulates that there is a coherent operating model you can adopt that embraces the unique competencies of your business. Using this model, you can successfully plan and execute your own e-Enterprise strategy. It is about the convergence of business and technology that is critical to achieving success in creating e-Enterprises.

According to the analyst firm META Group, for companies aspiring to stave off threats and achieve sustained success from their investments in Net technologies, it will be necessary to integrate business architecture and information architecture into enterprise architecture, and the business technologist will play a critical role in overcoming the barriers and constraints of doing so.[6]

This book is designed to help business people understand the technology architecture needed to implement the desired business model, and to help technologists gain an understanding of business architecture. It is meant to bridge the gap in understanding between business leaders and technologists. The effective outcome of the relationship between these two camps will determine which companies will succeed in the next few years.

This book will not teach you how to become the next Amazon.com. Instead, it will teach you how your company, no matter what industry you compete in, can approach the Internet from the standpoint of converging your company's Net business model with your existing real assets. It will prescribe a method of doing so that will provide you with

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the building blocks to win and win again. These building blocks are meant to provide an operating model that should be explored for your particular e-Initiatives. It should be made clear that it would be impossible to have a complete discussion of all aspects of this operating model in just one volume. Instead, this book attempts to introduce the most important concepts as your road map to the future.

Before I launch into the how to's of this operating model, it is important that you understand fully the evolution of Net commerce. You should also understand the nuances of business-to-consumer (B-to-C) and business-to-business (B-to-B) models and applications, and how they are converging. It is the convergence of these models and applications that form the underpinnings of an e-Enterprise, the entity that will dominate the digital economy.

In this chapter I will introduce the transformation that Net commerce has undergone in its brief history. I also will discuss what the future holds for it and the business implications associated with that. Chapter 2 will introduce you to e-Application models and how the Internet has fundamentally altered the traditional value chain model. Chapters 3 and 4 will explore in greater detail the B-to-C and B-to-B e-Application models, respectively.

You will be introduced to an operating model for building e-Enterprises in Chapter 5, including a close examination of five key stages: strategy/vision, processes, applications, architecture, and reusable repository. Chapter 6 will explore in detail business and technology architectures, and Chapter 7 will introduce the concept of defining common business components to create reusability and speed. In Chapter 8 you will learn about technology components that enable e-Applications.

From Brochureware to e-Enterprise

There remains a great deal of confusion about what exactly electronic commerce means. For many corporations, it is still associated with Electronic Data Interchange (EDI), an established standard for corporations to transact business in the form of standardized electronic

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messages sent over private networks. To the general public, the term e-Commerce is frequently interchangeable with Internet commerce, Web commerce, or I-Commerce, all of which refer to buying and selling on the Internet, or more specifically the World Wide Web. Even many of the technologically illiterate, for example, would now recognize that purchasing a book from Amazon.com or a video cassette from Reel.com falls under the umbrella of e-Commerce. Both of these narrow associations, however, fail to convey the magnitude to which electronic devices, computers, and networks have redefined and will continue to redefine business as we know it.

The fact that even industry experts shy away from pigeonholing e-Commerce into any particular niche speaks volumes about the wide range of its potential. According to the Association for Electronic Commerce, e-Commerce is simply "doing business electronically."[7] By this definition almost any business activity—from a simple telephone call to a complex EDI message exchange—can be categorized as e-Commerce. CommerceNet, an industry consortium of companies that "use, promote, and build electronic commerce solutions on the Internet",[8] includes in its definition of e-Commerce "the use of internetworked computers to create and transform business relationships. It is most commonly associated with buying and selling information, products, and services via the Internet," CommerceNet continues, "but it is also used to transfer and share information within organizations through intranets to improve decision-making and eliminate duplication of effort. The new paradigm of e-Commerce is built not just on transactions but on building, sustaining, and improving relationships, both existing and potential."[9]

This book will provide a fresh perspective of what electronic commerce means. I refer to the evolution of commerce over the Internet as Net commerce because despite its relatively short history, Net commerce has in fact evolved into different phases, so to speak: Brochureware, e-Commerce, e-Business, and e-Enterprise. I define each phase according to the business models and e-Application categories associated with it. You will see as I drill down from those business models and e-Application categories that there exists various e-Application functionalities. Here I will briefly introduce each of

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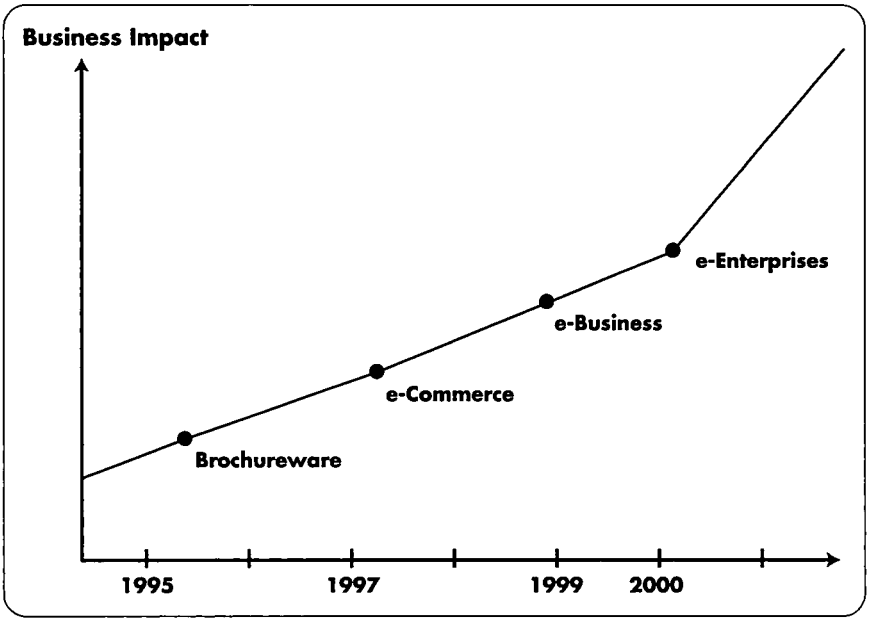

FIGURE 1.1

the phases and their associated business models and e-Application categories and functionalities.

As Figure 1.1 depicts, the emergence of these phases has occurred only over the last five years. It is important to note that the date indicated for each phase is the begin date and there is no end date associated with any phase. In fact, these eras may actually overlap in the greater business world, so that while some companies are operating in the Brochureware phase, other companies may be operating in the e-Business phase. A few leading firms are already integrating different phases' business and e-Application models in a cohesive fashion. These companies will be known as e-Enterprises.

Brochureware

Despite the early technological limitations of the Internet, companies were quick to recognize the value of the Internet and the World Wide Web in particular as a medium to reach out to customers around the

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world. In almost no time at all, the Net became a key medium for global marketing that provided a low-cost repository of product and service information. According to Forrester Research, by the end of 1995 some 34 percent of Fortune 500 companies had established a Web presence. Only a year later, this figure had risen to nearly 80 percent.[10] Today, it is difficult to find a corporation of any size that isn't yet on the Net.

Most first-generation sites consisted of little more than static documents and simple multimedia. Customer interaction was often limited to reading text and viewing pictures. Actual transactions and customer interaction were still conducted over traditional media such as phone or fax. These information repositories are commonly described as brochureware in reference to their similarity to conventional print publications, and are presently considered a primitive and largely inefficient use of the unique resources of the Internet.

e-Commerce

Initiatives in the e-Commerce era have focused on consumer applications that allow transactions and interaction between the company and the consumer over the Internet. Most of the successful online ventures have been pure Net plays—a brand new business model designed specifically for the purpose of buying and selling to consumers online. With the invention of new B-to-C business models for selling to and servicing consumers over the Internet, several e-Application categories supported by many different application functionalities have emerged. The dominant ones include e-Tailing and Consumer Portals, Bidding and Auctioning, Consumer Care, Customer Management, and Electronic Bill Payment (EBP).

Many successful e-Tailers and Consumer Portal companies have nearly become household brands. There's CDNOW, Planet RX, MS Expedia, and Amazon.com to name a few. Some of the common e-Application functionalities utilized by these ventures include online catalogs, personalization, advertising, shopping carts, and online communities. Brand name Bidding and Auctioning companies such as eBay, Priceline.com, and Onsale all use similar functionalities such

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as online catalogs, bid boards, account management, and notification applications.

Companies known especially for their Consumer Care and Customer Management abilities over the Internet, such as eToys, E-Trade, and Reel.com all utilize functionalities that enable personalization, self-service, immediacy, and information. e-Application models used by such companies as MCI Worldcom and AT&T, which allow consumers to pay bills electronically, utilize bill consolidation, analysis and reporting, payment processing, and integration functionalities.

The e-Commerce era can further be defined by the culture of hype over ".com mania," where the existence of the technology itself is the catalyst for activity over the Net. The e-Commerce era is characterized by content-aggregation business models that focus on the consumer and that have organizations that are driven by the founders and are typically managed from situation to situation. In the B-to-C e-Commerce world, the most important factors impacting a company's success are the company's abilities to successfully brand its .com initiative(s), to market to each consumer individually, to personalize the information and transactions for each consumer and to create a community environment that welcomes consumers back again and again.

e-Business

Initiatives in the e-Business phase have focused on business-to-business applications that allow transactions and interaction between the company and its business customers and partners over the Internet. Most successful B-to-B ventures online have been those developed by well-established bricks-and-mortar companies seeking process improvement. As with the e-Commerce phase, there are unique e-Application categories and functionalities associated with e-Business. For example, Virtual Marketplaces, Procurement and Resource Management, Extended Value Chain, and Customer Relationship Management (CRM) applications are frequently used e-Application categories found in e-Business.

Cisco Systems, General Electric, and Dell have all successfully developed Virtual Marketplaces, which include catalog, buying tools,

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integration, and payment option functionalities, among others. Common functionalities used by MasterCard, Chevron, and General Motors for their Procurement and Resource Management e-Application initiatives include request for information, request for proposal, requisitioning, purchase orders, payment, and supplier management. Corporations that have developed successful e-Applications aimed at extending their value chain include Federal Express, TransAmerica, and GE Capital. In doing so, they have utilized demand and supply planning, logistics, and production planning functionalities. Finally, to develop successful CRM e-Applications, notable firms such as Hewlett Packard, Dell, and General Motors have utilized self-service, solution-center, personalization, and account management functionalities.

The e-Business era is characterized by initiatives that are proactively focused on the organization's core competencies and whose business model is oriented toward process aggregation. Organizationally, an e-Business czar is often appointed to "make it happen" for the company and it is brought about in a process-driven fashion. Accepted technologies serve as the driver of these initiatives.

For e-Business initiatives to be successful, there are a number of factors that must be considered when developing and launching the initiative. For instance, creating the right processes and being able to improve upon and integrate them is of utmost importance. Additionally, having agile applications and the ability to integrate applications and data is also necessary. Furthermore, the organization must be structured in a way to support the business model of the e-Business initiative, and there must be a means of overcoming political obstacles in order to achieve success.

e-Enterprise

So far we have reviewed B-to-C and B-to-B e-Application and business models, and have been introduced to some companies that are presently making use of them.

We also see that there is a convergence happening among companies who find that their markets contain both business-to-consumer and business-to-business segments. These companies are implementing

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