



t h e n e w e - c o n o m y

t h e d e l p h i g r o u p

The new e-economy

It seems as though overnight e has become the prefix for nearly half the words in the English vocabulary and its definition the necessary prelude to every new business plan. So what is all the hype about? What is the e-economy, e-business, the e-market – e-everything?

Clearly, in times of great change there is a propensity, perhaps even an instinct, to survive by labeling everything. If the world is in chaos we can make it tidy by putting all of the chaos in its place – at least so goes the sensible person's thinking.

But in today's maelstrom of change this is a naïve and flawed approach. "A neat and tidy taxonomy will not slow down the world, free markets, or competition.

We need to understand far beyond the labels, at a base level, why the e-imperative has so radically altered our perception and the skills we and our organizations will need to survive in the coming years.

Yet the sheer magnitude of the discussion is daunting. Consider a simple question that helps to understand the scale of the

e-economy, "How many companies were involved in the last consumer purchase you made?"

Perhaps it was a trip to the local grocer, or an on-line purchase of a book through Amazon.com. You may have bought an automobile, an insurance policy, or a new home. From your perspective the participants were limited to the businesses directly interacting with you.

Yet for every simple consumer transaction you participate in an army of people and a maze of business-to-business transactions must be involved. You are the last link in a very long chain of events. These events determine the buying power, convenience and ultimate satisfaction you will experience.

While often lost among the noise and hyperbole that has surrounded the consumer side of the Internet during the past few years, it is the impact of e-business on the entire value chain that holds the greatest promise to drastically redefine the rules of the e-economy.

The e-economy is the context for this intricate chain of events. And,

like a giant perfumery that extracts a few precious drops of essence from acres of flowers, e-business is the distillery whose results are encouraging an ever increasing number of end user transactions in the e-economy.

Figure 1



In a sentence,

the e-economy represents the growing invisible network of transactions that results in business, markets, and work.

To better understand the specific forces shaping the e-economy and to describe these in the context of a white paper can be a significant challenge, which is why we have broken them down to three categories: e-markets, e-business and e-work. Yes, these too are labels and very broad ones at that. They will not stem the tide of change, yet understanding them will help you to surf it.

(In this white paper we cover the basic principles of e-business and e-markets and some of the findings from a study of over 600 global organizations embarking on e-business initiatives. A complete assessment is available in Delphi's three-volume research report: *"e-business: A Practical Perspective."*

The temptation, however, is still to focus too tightly on how these may enhance current business, market

and work models rather than to stretch our imagination beyond the envelope of our experience.

In the same way that modern airplanes changed the very notion of travel, the e-economy changes the very nature of business by collapsing not only time but permitting us to realize complexities and opportunities which once were unimaginable. Consider, for example, the notion of going back in time and explaining the concept of jet lag to a someone living in the 18th century.

Yet the greatest testimonial to the rise of the e-economy may be its ability to constantly exceed even the wildest predictions about its growth. Predictions of a Billion dollar market in the early part of the next century have turned into Trillion dollar projections nearly overnight.

As with all great change we tend to seriously understate its impact, while overstating the impact of incremental change.

What is the unseen variable that makes the e-economy such a phenomenon? Unlike many of the

radical technologies that have preceded it, from the advent of telephone, radio, and cable television to the use of EDI (Electronic Data Interchange), the infrastructure for the e-economy is already in place. There is no information superhighway to be built.

The roads for the adoption of e-business, e-markets and e-work are already well paved. And unlike the proverbial cow paths, these roadways are agile, malleable thoroughfares that respond easily to changing market dynamics. Virtually every significant aspect of the e-economy's technology framework is in place and waiting to be exploited by a free market hungry for innovative velocity and growth.

The effect is something for which mankind's technological progress has no precedent. With the innovation of every previous technological marvel an era of infrastructure building had to follow. From the wiring of the globe necessary for early telecommunication to the creation of orbital rocketry for a global satellite networks, to the evolution of

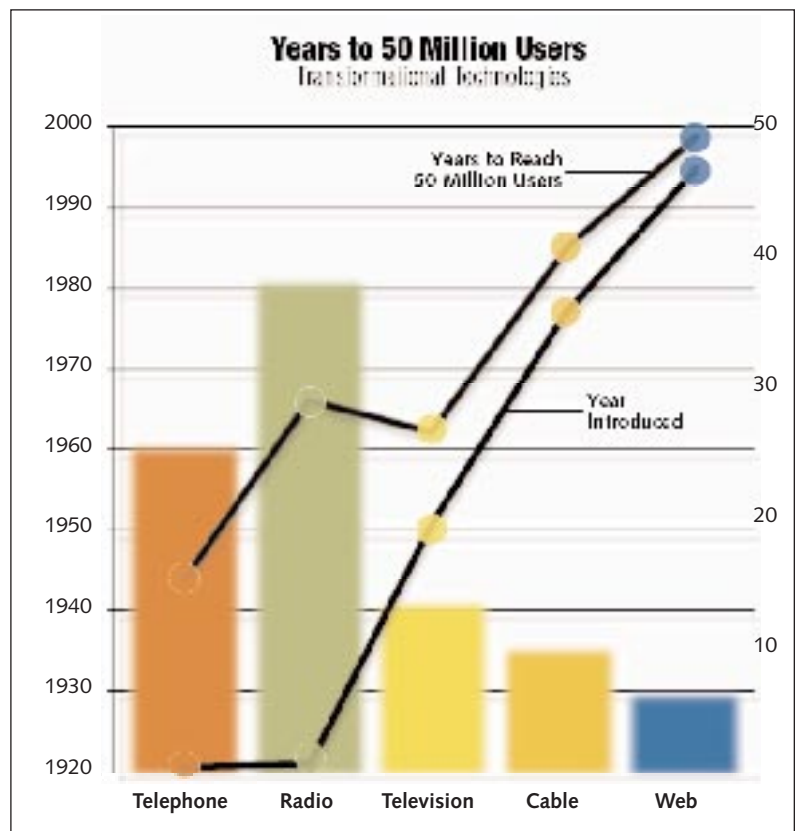
factory precision for creation of the turbine engines that power modern air transport, decades have always stood between the idea and the promise.

In the past markets turned like large boats in slow arcs as ideas were translated into a long series of innovations needed for their success. Today's markets turn on a dime as ideas take root in a superfertile infrastructure. For better or worse we have been robbed of our ability to adapt to change as individuals and as a society. Our only recourse is to respond to the new e-economy – often without even thinking.

The Benchmark of the e-economy: Years to 50 Million Users

The following table reflects the number of years it took for each successive technology to reach a user population of 50 million. (The bars show the number of years to the adoption by 50 million users [right hand scale] while the lines show when each technology was introduced and then reached 50 million users [left hand scale]) Clearly the time to market has been dropping precipitously even as the need for creating a new infrastructure has persisted. Cable Television, for example, required laying hundreds of thousands of miles of cable along with the ramp-up of consumers to purchase set-top boxes. Yet nearly the entire infrastructure needed for the e-economy is already in place – providing virtually instantaneous market penetration.

Figure 2



The seven ground rules of the new e-economy are:

- 1** Create a My.com view of the organization and its markets.
- 2** Develop a high degree of market intimacy among all participants of the value chain.
- 3** Create an asynchronous enterprise to bridge time and geography.
- 4** Build Reverse Market models that drive the organization from the outside-in.
- 5** Emphasize Return-on-Time as the principal metric of success.
- 6** Focus technology investment on 'e-business Touch Points' employment, partnering, and customer relationships.
- 7** Use lifetime valuation of customer relationships to build a new bond of trust and infomediation

The Seven Ground Rules of the New e-economy

Businesses will certainly continue to differentiate themselves in many ways but they will need to adhere to some basic ground rules in order to survive and thrive in the new e-economy.

The seven ground rules of the new e-economy are building blocks for any organization that intends to compete in the coming decades. They are both technology-based and cultural, but all are ultimately supported by specific methods.

All of these ground rules focus on increasing intimacy and collaboration between people and processes across the entire value chain. Only through increased intimacy and understanding of the processes that we inhabit can an e-business dramatically improve our work environments.

Ground Rule #1: Create a My.com view

The most profound effect of all of the structural changes which have occurred within organizations is on our ability to manage the onslaught of information and processes to which we have access.

E-workers are constantly juggling a multiplicity of priorities and tasks. The result is a constant thrashing about from project to project. The toll this takes is very personal, ultimately affecting our health and well being.

At the same time the very nature of time is changing. Significant events in our lives are paced so closely together that they are becoming indistinguishable from one another. It used to be that societal, political, and technological shifts of a transformational nature occurred several times in ones lifetime. We have seen that time frame collapse from a lifetime to a decade to the now popular internet year.

Psychologists have long known that as the noise factor around us increases our filtering mechanisms

also increase – this is a basic survival skill. Yet filtering without accompanying focus can be a dangerous proposition – the equivalent of blinders on a plow horse.

So what can be done? Can e-business help? The answer is *yes*.

If we shift our focus from the delivery of work to the coordination of work, technologies such as e-business may actually make our lives more pleasant by proving that work is best accomplished when it is integrated intimately with our lives.

E-businesses invest heavily in tools that ease this burden by helping employees, customers, and partners personalize their information and experience, in the face of ever-increasing and portable access.

This is the principle concept behind personalized portals and digital dashboards. The result is an e-business that is always sensitized to its workers, customers and partners.

***Ground Rule #2:
Develop a high degree of
intimacy***

One of the most basic problems in today's markets is the same problem that has plagued organizations throughout the industrial era -- highly specialized work forces that create a lack of intimacy. Simply put, increasing specialization in complex organizations tends to isolate workers, customers, and partners from one another, and one's knowledge of what others in the organization actually do is scant, or perhaps even non-existent. Where once the isolation was structural (i.e., built into the organizational structure of the workplace), today it is more likely that space, distance, and time are the factors that work against process intimacy.

E-businesses close the time intervals by eliminating the inherent transfer times in routing information and work from one person to another. But it's useful to note that this is not a problem that can be solved by a communications network alone, no more so than it

can be solved by the evolution from paper memos to e-mail. Electrons may travel at the speed of light, but work does not.

E-businesses go beyond networking of information alone by using sophisticated mechanisms to route work and deliver it in the fastest possible period of time. This may include using roles to route the work to a skill set instead of a specific person. In such a case, if one person, who would normally do the work, is not available to act on the work, the e-business will find someone else with similar qualifications to perform it. The key is getting the work done — not just transferring the information.

***Ground Rule #3:
Create an asynchro-
nous enterprise***

There are two fundamentally polar means by which humans communicate: synchronous and asynchronous.

Standard interpersonal communications occur in a synchronous mode. That is, when two or more people conduct a discussion, they

are able to communicate at the same time and possibly (but not necessarily) in the same place. A face-to-face meeting or telephone call are perhaps the most common settings for synchronous communication. A benefit often attributed to synchronous communication is the ability to address issues as they arise without delay.

The explosive growth in global communications technology and software for communication, including the world-wide web, e-mail and groupware, have allowed companies to take advantage of asynchronous communication; that is, the ability to communicate serially, without interaction and interruption, thereby bridging the constraints of time and distance.

In a global context, however, asynchronous communications are often associated with delays, since each party is waiting for the other before continuing the communication. For example, if a number of people are engaged in a common task using groupware, each communication may require a response

from each user. This can be especially problematic if the parties communicating are separated by several time zones.

This may seem like an insurmountable problem. After all, e-business cannot alter the laws of time and physics. But they can eliminate the fundamental obstacle in asynchronous communication, the lack of concurrence of human communication. In an e-business asynchronous communication can continue even though the people are not working on a synchronized schedule.

This is a fundamental change in the nature of communication, since a person is no longer necessarily communicating with other people, but with the process itself. It should be noted here that 'communication' in our definition requires that there be real-time interaction between the two parties. (The parties, in this case, could be any combination of person and process.) Without an automated e-business system, this can only be accomplished if two individuals are both available at the same time. E-businesses capture the

process in such a way that this communication can continue at any time. This fundamental shift from person to person, to person to process is one of the most significant aspects of e-business.

Ground Rule #4: Build Reverse Markets

The reverse markets concept is familiar to anyone who has used Expedia or Priceline.com to make travel arrangements — simply name your price and the online buying agent matches your offer with a willing seller. Known as a “reverse auction model,” here multiple sellers compete for a single buyer’s offer, rather than having multiple buyers bid for a single or otherwise finite set of available products (e.g., the traditional auction). The concept here is that of one-to-many buyer to sellers, representing a reversal from the traditional mass-market model where an individual buyer holds little leverage.

Reverse markets are not limited to simple consumer transactions, such as plane tickets and hotel

rooms, but are already a part of many business models. An increasing number of car dealers subscribe to networks where a potential buyer's profile can be evaluated by a number of potential financiers. Mortgage brokers work in a similar matter. Many buying co-operatives also create reverse markets by aggregating their members' requirements into a single job order that is then put to bid. In each case, the process of soliciting bids is facilitated through the standardization of information and the automation of back-processes such as credit verification, fee processing, and status notification.

The automated environments of electronic reverse markets create an economy of scale by allowing both parties to complete the bid process just once, thereby requiring the same effort by the buyer to solicit multiples sellers as it would only one. In the case of Priceline.com, a potential buyer specifies his price and travel requirements, which the system then translates and transmits to the selling community.

It is not difficult to imagine the potential for the resulting increase in efficiency afforded to the buyer – the effort required to research all available options, prices, and configurations would likely negate any potential cost savings his solo efforts uncovered. Nor is the buyer likely to even find a comparable deal outside of Priceline's network of sellers, who are predisposed to unload excess capacity.

These advantages are maximized in the frictionless environments these e-businesses create by establishing a lingua franca for the bid processes and an automated means for disseminating buyer information in near real-time across the community of sellers. They act as the "hub" of the reverse market, mediating the relationship between the buyer and seller.

Ground Rule #5: Emphasize Return on Time

Everyone talks about return on investment; e-businesses talk about Return-On-Time (ROT). Ultimately, success in the e-economy hinges primarily on time. One way to look at this is that in the e-economy there are two basic factors of success: time creation and time consumption.

Rather than measure how well an organization leverages its ability to produce a return on its investment of capital, ROT is a measure of how well an organization leverages its ability to generate a return on a given investment of time.

ROT assesses how innovative an organization is by measuring its ability to sustain innovation over a period of time. The higher the ROT the more innovative and competitive the organization.

For example, a company which for the past 5 years has derived 50% of its profit for each year from products that have been introduced in that same year has an ROT of

2.5. Not bad. However, a company which for 10 years has derived 100% of its yearly profit from products introduced in the last 3 years would have an ROT of 3.3. Even better.

Even a simple analysis of available public data provides a clear sense for where your organization stands in its industry relative to its competitors. For example, consider that if you are in the high technology market for integrated circuitry, at least 80% of your profit must come from products introduced in the last 24 months. If not, you are out of business.

The last thing to keep in mind about ROT is that it's a relative measure. There is no absolute measure. As with any other measure of return (return on investment, internal rate of return, return on assets, etc.) you need only do better than your competitors in your market's context to be successful.

Ground Rule #6: Focus Technology on e-business Touch Points

There seems to be limitless possibilities in any organization for the application of technology to facilitate e-business. A frequent question asked by many companies is, "Where to begin?" E-businesses typically pick from three priority areas: interactions with customers; interactions with suppliers; and interactions with its employees. We call these a company's touch-points, since they involve the intimate interface between the enterprise and its environment.

Each touch-point represents a significant area of potential process or quality improvement, and competitive advantage. Most importantly, touch-points represent areas where human interaction is often at its most intense.

Touch-points can be regarded as the periphery of an enterprise's central nervous system. As in human anatomy, it is the extremities that define the efficiency of our interaction with the world around

us. Dexterity, mobility, and adaptability depend primarily on the nimbleness of our peripheral nervous system; fingers, toes, hands, feet, arms, and legs define how well we can react to events around us. Granted, the genesis of all reaction is in the brain, but actions are not expressed there; the brain sends messages to the appropriate extremity.

In this same way an enterprise may have outstanding strategies, plans, and tactics, but they must be enabled, through actions taken to satisfy customers, educate and leverage workers, and negotiate trade with suppliers.

If the fundamental premise of e-markets is the creation of intimacy, then the technologies an e-business invests in must increase interaction at these touch-points while simultaneously streamlining the tiresome and repetitive tasks that otherwise consume time and energy.

Even a slight application of the right technology in these areas can have extraordinary impact on the company's processes.

Ground Rule #7: Use Lifetime Value to Build a Bond of Trust

Without question one of, if not the, greatest asset of an organization is customer data – buying patterns, transaction histories, packing preferences, and other pertinent data, often available only to those trusted few that have taken the time to hone a relationship with the party in question.

Yet in a business atmosphere increasingly unforgiving of confidentiality compromises, organizations seeking to leverage this asset are faced with a fundamental question: "how do we capitalize on customer and partner data without breaching our fiduciary responsibility to protect their privacy?" How do we broker trust?

The answer lies in both a pragmatic understanding of business behavior and the strategic use of technology. For obvious reasons, businesses most often care less about being targets of unsolicited sales calls than they do about risking the exposure of proprietary

information. Resolving the former is often a matter of simply establishing reciprocity – offering something of value in return for access to the buyer's information.

Establishing and maintaining the level of trust necessary to translate this information into realizable value, however, requires an entirely new approach to marketing. The term "trust" may seem to be anachronistic but it is the foundation of business valuations based on the lifetime value of customers. And as high as many of these valuations seem to be at present you have to consider if anyone really knows what the value of a lifetime relationship might be. In that context perhaps we will someday look back at even the most absurd initial valuations of these companies as being amazingly conservative.

The e-market: Power Brokers for the New e-economy

The Five Phases of the e-market's Evolution

The e-market has evolved through six distinct, yet overlapping stages of development. Each one builds on the other, bringing together an increasing number of constituencies and capabilities, and at each stage offering an exponentially greater value proposition.

As illustrated in Figure 3, these six stages are:

- 1. The Electronic Billboard***
- 2. The Virtual Community***
- 3. The Commerce Portal***
- 4. The Vertical Aggregator***
- 5. The Trust Broker***
- 6. The Time Broker***

The value proposition for each model is defined in terms of the ability to develop and maintain lasting relationship between buyers and sellers and the ability for both to translate this into economic benefit. This sets the stage for the e-business model according to two dimensions: persistence of relationship and realization of value.

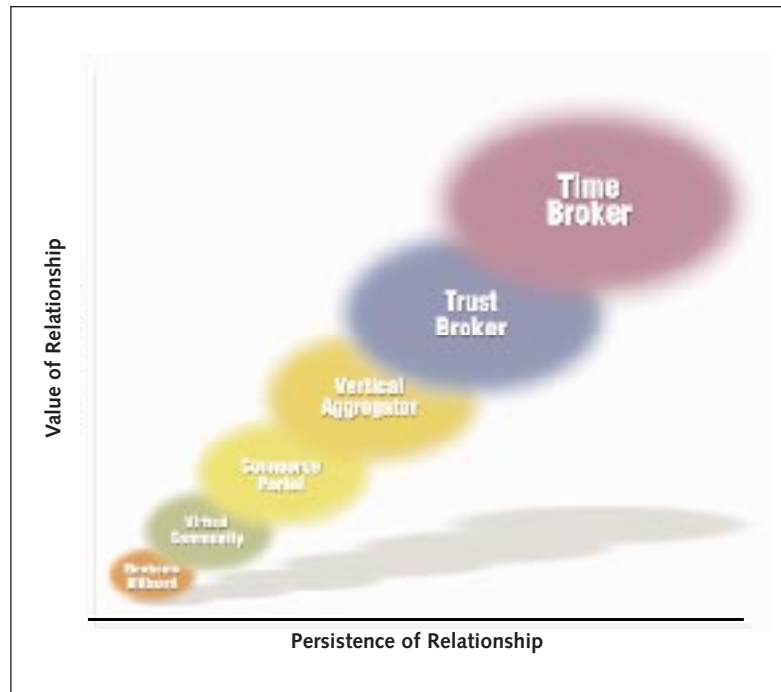
The Electronic Billboard

The first stage of e-business development is the Electronic Billboard, mirroring the traditional advertising-oriented pages of brick-and-mortar businesses. Capabilities here range from static web pages promoting specific products and companies, to more vertically oriented sites that have the capability to build a web page dynamically based on user preferences. An example of the latter is computer-industry focused C/NET.

Without any knowledge of its users, such sites are limited to the currency of “eyeballs” measured in click-throughs to constituency sites, typically paid advertisers. The advantage of this model is that it is scalable, offers the ability to address a broad range of interest, and presents a low barrier to entry by both hosts and users. The value proposition remains relatively low, however, as this model abdicates ownership of the relationship between buyer and seller.

The Virtual Community

Figure 3



Sites transitioning into Virtual Communities represent those which offer the same dynamic abilities as described above, yet extend this capability by managing profiles of users and their interests. Examples include Loopnet.com, an e-business that hosts a nationwide database of commercial real estate listings and @Brint, a collection of technology-oriented discussion groups. Also addressing the virtual community space is the set of “MyX” horizontal portals (e.g.,

MyYahoo!, MyLycos, etc.), that are adding additional features targeted to the business-to-business community, such as the ability to monitor competitors and industry vital signs.

The Commerce Portal

In contrast with the less commercial virtual communities, Commerce Portals are met with an entirely different expectation set and are not bound by the requirements for restraint of self-promotion. These sites are most often theme-oriented e-businesses that leverage the relationship building practices described within the previous models to sell a discrete set of goods and services. Examples include consumer-oriented Garden.com and Drugstore.com, whose names clearly indicate their vertical orientation, to business-focused OrderZone.com and SciQuest, distributors of industrial products and scientific instruments. These sites are the electronic equivalent of brick-and-mortar retailers and resellers, profiting from the mark-up on specific groups of suppliers' products.

The Vertical Aggregator

Where commerce portals work on a model of disintermediation, limiting the breadth of available goods and services, Vertical Aggregators act as agents of re-intermediation. E-businesses at this stage of development serve the role of "market makers" by offering buyers access to broader set of sellers. Examples in this category include Plastics Net.com and e-STEEL, dedicated to the industries indicated by their names. These sites seek to build communities around specific industries and areas of interest, then realize value by attracting an increasing numbers of buyers and sellers. They then directly benefit from purchases by either exacting a commission on each transaction or charging participants an entrance fee.

The Trust Brokers

Ground rule #7 provides the basis for understanding the role trust Brokers play. The essence of the value Trust Brokers create for the e-economy is simple: where the customer relationship is the new currency for business, trust is the new principal catalyst for transactions. This new customer-vendor ecology is built on confidence and credibility, rather than branding and promotion.

***The Time Brokers:
Beyond the Infomediary***

What is the ultimate business model for an e-economy where all of the traits we have described are present?

Let's answer that by starting with what should now be obvious to the astute reader:

"In the e-economy the greatest asset is not capital, intellect, or even innovation since each of these will reach some point of competitive parity as the tools and methods need to achieve the seven rules of the e-economy become widely available and understood. At that stage the currency of competitive advantage will be time."

But we do not mean this in the sense of faster time to market or shorter business cycles. These are well-understood concepts. What we are referring to is something well beyond these – the ability to manage, acquire, and sell time as a commodity.

As value chains continue to increase in their complexity and their interaction with each other two phenomenon will make it possible to manage, acquire, and sell time as a commodity:

1. The need to establish an economic value for time as a tradable commodity. If the efficiency of the e-market is as high as we have indicated and differentiation is low in terms of product quality, innovation, and margin, the only competitive benchmark that remains is time.
2. The ability, through time-portals, to traverse value chains and their myriad transactions across time by rolling back to a particular event or moment in time and seeing all of the context for a transaction or event. This is not just a matter of rolling back a database. In one case a large global intelligence agency is interested in being able to capture worldwide website activity in order to be able to roll the clock back to any event and view the content of the worldwide web at that instant – you can let your imagination run wild with that for few minutes. Amazingly, the technology to do this is available today.

The scenario is a difficult one for us to imagine today – not unlike the original analogy we presented of the jet age traveler conveying the problem of jet lag to his 18th century counterpart. So, as a primitive 21st century time traveler, consider what the implications might be if you could put a specific economic value on transactions based on time. We are not referring to conventional wisdom, such as an hourly rate for the work of a laborer or office worker, but instead a value for the time-based coordination of every piece and combination of pieces of a value chain based on a fundamental principle:

Increased chaos and unpredictability creates greater value of time.

In a time-based e-economy the greatest value comes from coordinating an ever increasing volume of opportunity with ever decreasing duration of opportunity.

The e-market Reference Model

Complexity vs. Efficiency

Understanding all of this requires a new framework for how e-business works – one which not only works to describe e-business but also describes its evolution from more traditional forms of commerce.

In a traditional market, an exponential increase in the number of transactions would result in a commensurate increase in the complexity of the goods and services purchase, driving an exponential decrease in market efficiency.

In a mass market where there is little distinction between available products, both market efficiency and product complexity are low. However few buyers are satisfied with this "one-size-fits-all" approach to all purchase decisions, resulting in increasing complexity among competing products.

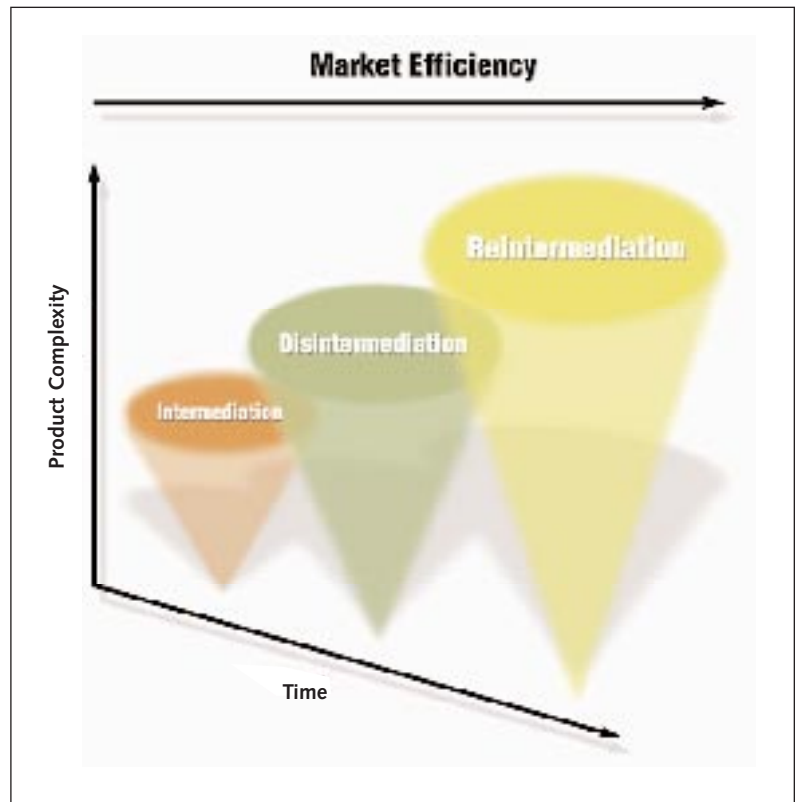
As complexity grows, so does the related set of "transfer costs" resulting from greater time spent by buyers searching and comparing purchase options, the lack of trust between buyer and seller, and a lack of standardization

of the purchase process. The result is a corresponding decrease in market efficiency.

The two first stages of e-business seek to minimize these inefficiencies by providing impartial buyer-oriented information.

While this does enable more educated buying decisions, these models still involve the hand-off of actual purchase, resulting in decentralized purchases and a lack of continuity in the procurement process.

Figure 4



Commerce portals seek to reduce the cost of doing business with multiple vendors by centralizing the procurement process, facilitating repeat buying, and automating back-end process. However, as most of these e-businesses are simply resellers of other vendors' products, they offer little to address to the issue of product complexity and instead are limited to providing what is available "off-the-shelf."

The first three stages of e-business evolution follow a model of disintermediation. Through eliminating the "middleman" and offering a buy-direct mode of commerce, the goal is to reduce the transfer costs involved with maintaining a sales force and distribution channel. However buyers are not often willing to settle for a commoditized, one-size-fits-all product, nor are they willing or able to make all purchases through a single vendor, particularly in the absence of a trusted relationship. The result is greater "switching costs" and time spent evaluating alternatives, resulting in decreased market efficiency.

It is this element of trust that most defines the reintermediated model of e-business that we believe will characterize the e-economy.

In conclusion, the e-economy will be governed by seven basic rules of business that allow organizations to build value chains with a new paradigm of intimacy and personalization. These ground rules provide the foundation for success yet their implications will stretch well beyond our current models and imagined models of simple e-commerce to support extraordinary levels of business to business market efficiency that promise to redefine our most basic notions of the e-economy.

For more information on Delphi's complete set of e-business services including a comprehensive three-volume e-business report, contact our Client Development team toll-free (800) 575-3367 or visit Delphi's e-business website at www.delphigroup.com/e-business.

The seven ground rules of the new e-economy are:

- 1** *Create a My.com view of the organization and its markets.*
- 2** *Develop a high degree of market intimacy among all participants of the value chain.*
- 3** *Create an asynchronous enterprise to bridge time and geography.*
- 4** *Build Reverse Market models that drive the organization from the outside-in.*
- 5** *Emphasize Return-on-Time as the principal metric of success.*
- 6** *Focus technology investment on 'e-business Touch Points' employment, partnering, and customer relationships.*
- 7** *Use lifetime valuation of customer relationships to build a new bond of trust and infomediation*



*For information
regarding Delphi's e-business services,
visit
www.delphigroup.com*



T H E
DELPHI®
G R O U P