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E-Business Strategy White Paper

E-Business Market Development: the Rise of the Extended Enterprise

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E-Business | E-Commerce | Knowledge Strategy

IT Strategy/Strategic Change Practice

An extended enterprise is one that leverages the potential of real-time, asynchronous communications to drive down transaction costs.

E-Business Market Development: the Rise of the Extended Enterprise

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Summary

The adoption of e-business strategy will culminate in the development of full-fledged electronic, "extended" enterprises that are connected with their partners and customers in electronic networks. This paper is a high-level discussion of how and why the extended enterprise develops while it adopts e-business strategies. It also presents critical role of knowledge in e-business and the extended enterprise.

Orientation and Definitions

Extended Enterprise Definition

An extended enterprise is one which leverages the potential of real-time, asynchronous communications to drive down transaction costs throughout its business; moreover, it tends to focus relentlessly on what it considers its core competencies, and it links with alliance, vendor and provider partners electronically to provide seamless full-service to customers without "owning" that capacity as integrated businesses have traditionally done.

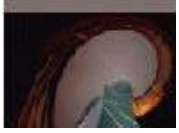
The Adoption Curve

The concept of an adoption curve, which describes the path to transformation to e-business, is useful because all industries are faced with adopting e-business strategies, which impact all business processes and add new ones. The speed and depth of their adoption of these new processes will largely drive their market position within the next few years.

In addition, the industry in which the enterprise competes has its own rate and stages of e-business adoption, and a good amount of the enterprise's strategic advantage going forward will be driven by its rate adoption compared to the industry's. Similarly, every person has an adoption curve. For more information on the adoption curve, see Appendix I.

PwC's E-Business Adoption Curve: Stages of Transformation

The stages along the Adoption Curve are defined by the MCS (Management Consulting Services) "Industry Transformation" graphic as being four: an e-commerce channel, value chain transformation, industry transformation and convergence. This paper discusses the development of the extended enterprise within the context of these stages (see Appendix I).



Realizing the most powerful benefits of e-commerce requires the introduction of its processes to the organization, not as a novelty but as a new way of doing business.

Stage I: E-Commerce Channel

Overview

In Stage I, enterprises seek to engage customers electronically, and their success rests largely on how quickly they can use strategy and systems to integrate e-commerce into their core businesses. In 1999, a typical e-commerce approach is to create a multidisciplinary team to drive the initiative, the team having as its goal to launch an e-commerce site with transactional functionality. Due to the challenge of this undertaking and to the novelty of the e-commerce model to the enterprise's functional staff, the effort is often isolated from the core business longer than required. An "isolated" e-commerce effort may achieve a satisfactory result; however, realizing the most powerful benefits of e-commerce requires a conscientous effort to introduce its processes and benefits to the organization, not as a novelty but as a new way of doing business.

Summary: The E-Commerce Channel

- **Market dynamic**: mitigate sales, service, product development and supply costs
  - Link with customers electronically
  - Prepare organization for linking with suppliers electronically
- **Approach**: experimental, consumer focus
  - Websites launched to sell products and services with focus on strategic customer segments
  - Corporate website redesigned to integrate with e-commerce initiative and prepare for growth
  - Begin organization's e-business learning and training process
  - Strategy, IT, marketing, sales, product development experiment with leveraging time and knowledge through electronic processes
- **Key opportunity**: integrate e-business activity with primary processes

Key success factors

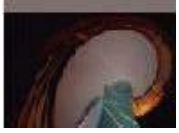
- Understanding of USP offered by e-business relative to overall strategy
- Dedication of proper resources
- Determination and organizational will
- An acceptance of culture change

Time Frame
1999-2000

Key Issues in Launching an E-Commerce Site

The enterprise's ability to develop relationships through asynchronous, electronic communications is driven by several factors, notably: insight into the websites' unique selling proposition (USP) for customer segments; proper organizational, people and financial resources; the team's ability to harness legacy systems' information, so they provide customer satisfaction. Only then can the websites deliver the desired e-commerce economics. This is a key part of the challenge of Stage I.

The enterprise's organizational and cultural approach to e-commerce, the new model and how it will unfold in the company are crucial to realizing the business value of its e-business initiative. Having a focused team and effort is important to devise and implement and e-commerce solution; however, people who have investments in legacy processes too often feel left out and threatened, and an "us and them" attitude



Legacy transactions carry a high cost, availability of information is often limited, and consistency of information is spotty.

can easily develop, introducing significant friction into the equation. Managing the adoption and change is critical to success in the medium term.

An E-Commerce Example: the Path to Self-service

For example, Exhibit A shows a call center approach used by a university. Call center personnel stand between the customer and the university's information systems. As such, transactions carry a high cost, availability of information is often limited, and consistency of information is spotty. Conversely, the human intervention by people can spontaneously adjust the customer's expectations of the transaction by bringing a tremendous variety of information to bear on the situation.

Exhibit A: The Legacy Service Model

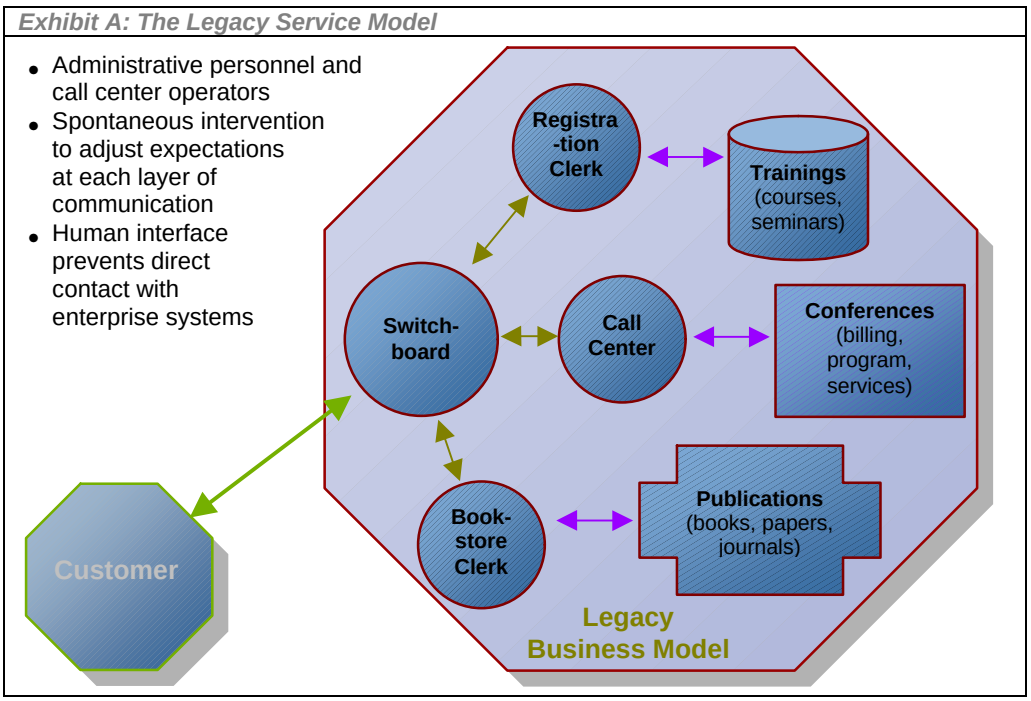
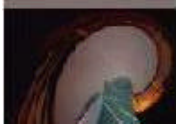


Exhibit B shows the university's new e-commerce solution for this call center. In this solution, the benefits are 24x7 availability, relatively low transaction costs and higher consistency of information. However, the lack of spontaneous intervention by call center personnel puts the onus on the design team to anticipate customers' questions and to deliver the information that can provide customer satisfaction without human intervention. For many organizations, this introduces a new level of rigor to thinking through and satisfying customers' needs.

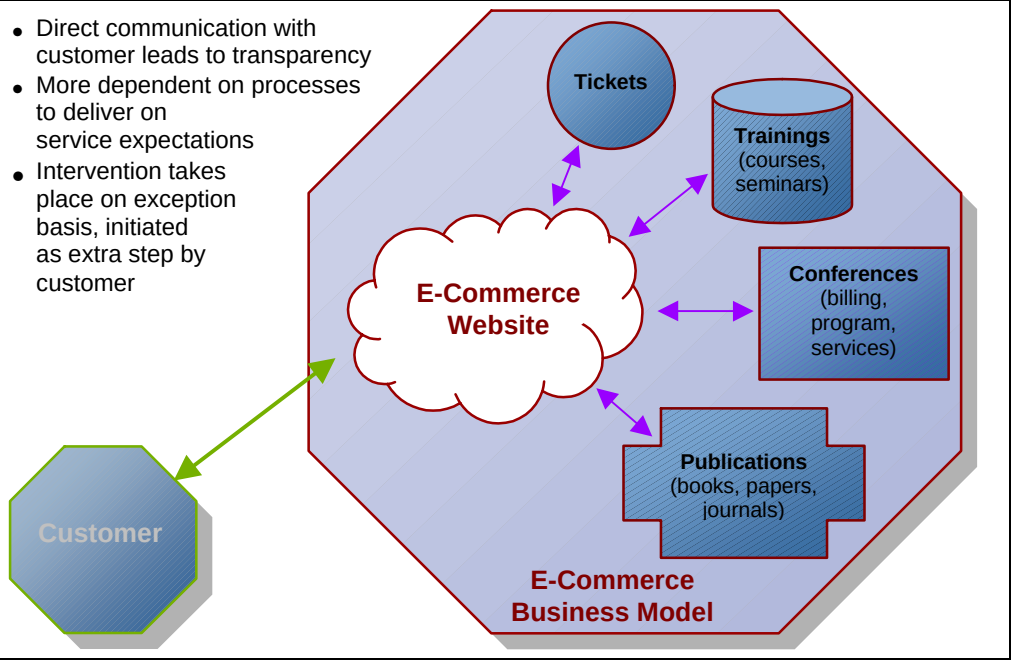
Of course, much of the website's information comes from the university's legacy IS systems for registration, bookstore sales, event registrations, etc. In fact, because e-commerce brings the customer closer, the company becomes more transparent because, in effect, the customer has an unsupervised "run of the website" whose functionality largely depends on the quality of the information available. The website is a predesigned experience for the customer, and its design sensitivity and awareness of his/her needs is very apparent. There is also significant risk because the call center staff is not there to manage customers' expectations during their experiences.



Some competitors still interact with customers via traditional means, but an e-commerce site is increasingly the minimum requirement in many industries.

Exhibit B: The E-Business Self-Service Model

- Direct communication with customer leads to transparency
- More dependent on processes to deliver on service expectations
- Intervention takes place on exception basis, initiated as extra step by customer



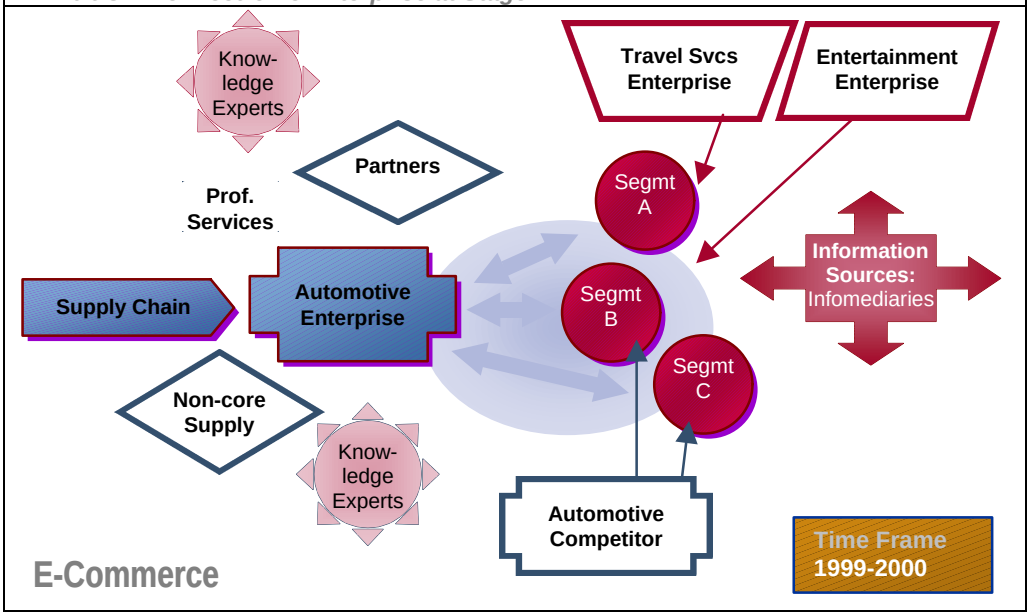
The Extended Enterprise During Stage I

Scope of Activity As shown in Exhibit C, the enterprise begins transacting with targeted customer segments, most often through an e-commerce website. Some competitors still interact with customer segments through traditional means, but an e-commerce site is increasingly the minimum requirement in many industries.

In this example, an automotive enterprise establishes a web presence and focuses on three key customer segments. These segments also have separate relationships with travel and entertainment companies and emerging infomediaries such as movie, book, travel and automotive sites. Auto competitors also have relationships, electronic and otherwise, with the customer segments. The auto enterprise has the usual relationships with core and non-core suppliers, knowledge experts and its supply chain. Knowledge experts are defined as industry experts not partial to or employed by the auto enterprise but may review the products and markets.

Firms that actively explore how their organizations can best adopt a new business model will learn more quickly and be able to apply this learning to the value chain during Stage II.

Exhibit C: The Electronic Enterprise at Stage I

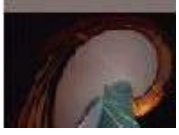


Decision Points The company's approach to Stage I will determine how fast it is able to proceed to Stage II, where it will begin e-business in earnest by applying an e-business model to its supply chain. Companies that focus on launching the site itself will not be ready to proceed to Stage II until they have mastered the necessary organizational learning required to lead their suppliers and channel down the path. Those that actively explore how their organizations can best adopt a new business model, while they are creating the site, will learn more quickly and will then be able to apply this learning to the value chain during Stage II.

Stage II: Value Chain Transformation

Overview

In Stage II, the enterprise deepens its relationship with the customer segments by providing continuously enhanced, more relevant features to them. Its ability to do this is driven by the effort to engage its chief partners and suppliers in its growing electronic enterprise. For example, linking suppliers and other relevant providers usually means some combination of increased choice to the end customer in the form of faster, more customizable product and delivery options. In so doing, the enterprise transforms its value chain by building an electronic web among its supply chain and significant others. Also note that the relationships among its "back-end" partners have become more "communal," as its web encourages its suppliers and providers to work more frequently and interactively with each other, without necessarily going through the enterprise.



As the enterprise becomes electronic, its success within its web is largely based on its knowledge of its own value proposition as well as those of its partners.

Summary: Value Chain Transformation

- **Market dynamic**: leverage growing e-business experience by engaging suppliers
  - Recognize that e-commerce no longer represents competitive advantage, it's the default setting
  - Keep ahead of customers' changing expectations based on their growing e-commerce experiences
- **Approach**: immediate supply chain focus
  - Cement partnerships with strategic suppliers quickly to engage them in e-business initiatives before your competitors do
  - Cooperative learning process required to begin tying together partners electronically
  - Seize opportunities to disintermediate entities that no longer add significant value
- **Key opportunity**: leverage e-business knowledge to customers' businesses, creating significant value-add

Key success factors

- Build knowledge team to lead strategic use of knowledge
- Gain extensive understanding of value chain
- Mandate hands-on learning about e-business processes
- Leverage learning by leading suppliers to e-business strategies

Time Frame
Late 1999-2001

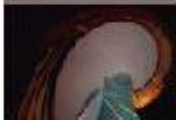
Key Issues in Engaging the Value Chain

The tactical focus of Stage II is reducing transaction costs on the enterprise's "back end"; if this is done while competitors are lagging and its development is well managed, it will give this enterprise a key competitive advantage and the power to accelerate that advantage. For example, the enterprise's success at leading the development of an electronic value chain gives it the ability to strip off elements of its business in Stage III, further diminishing transaction costs and giving it the ability to leverage its economic advantage by extending into other industries relevant to its customer segments during Stage IV.

As the enterprise becomes electronic, its success within its web is largely based on its knowledge of its own value proposition as well as those of its partners. In the electronic environment, knowledge is the chief driver of value, knowledge about the enterprise's offering to the customer as well as knowledge about its value to each partner/provider. Because the electronic environment is so fluid, opportunities to develop new opportunities and capitalize them on emerge frequently. Therefore, a key activity during Stage II is the development of a professional cadre of knowledge leaders whose goal is to make explicit and purposeful the enterprise's development, organization and leveraging of knowledge. Of course, a key tactical knowledge focus is the construction of the electronic value chain and how that process should unfold.

The Extended Enterprise During Stage II

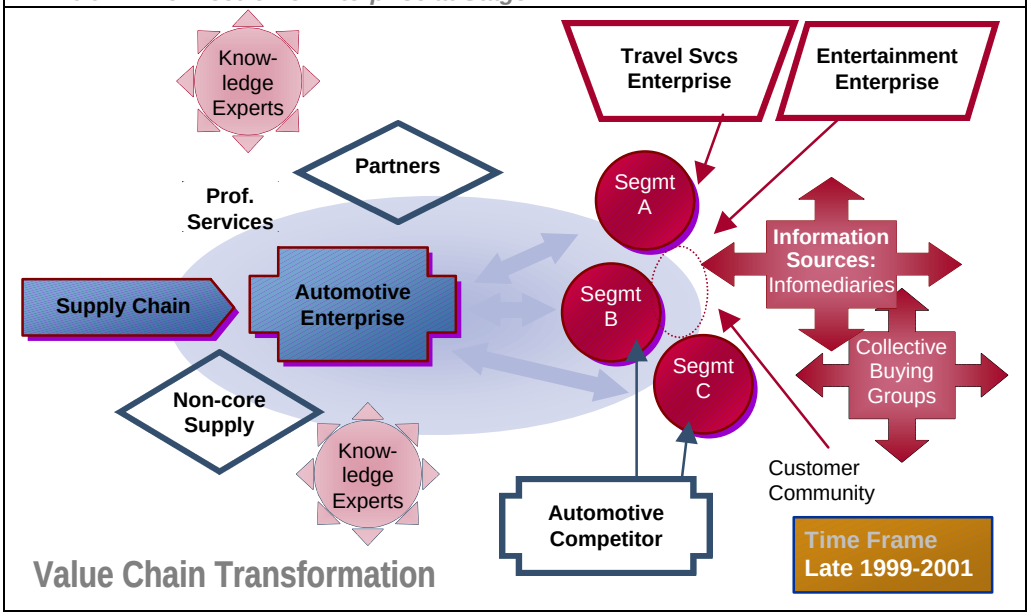
Scope of Activity In Stage II, the auto enterprise deepens its relationship with the customer segments by delivering a better, more useful experience to them; however, its focus is on transforming its value chain through building an electronic web among its supply chain and significant others. Also note that the relationships have become more "communal," as its web encourages its suppliers and providers to work more



Consciousness comes from knowledge and reflection, which must be done as a core competency, organization-wide, continuously.

frequently and interactively. Information sources are various infomediaries who compete with the auto enterprise for customer attention; two examples are AutoByTel and the Auto Channel. On the customer side, two important developments are the emergence of a fledgling customer community in which customers discuss auto and related products and services within the auto enterprise's web offering (revolutionary, indeed ;-). Secondly, collective buying groups make appearances (not yet in automotive, but in other industries).

Exhibit D: The Electronic Enterprise at Stage II



Decision Points In Stage I, the enterprise itself became more transparent to customers through the rapidity of interactions and the customers' ability to compare the enterprise's offerings with those of its peers. Stage II furthers the transparency to include key elements of the enterprise's most strategic partners and suppliers. It is impossible to overstate the importance of a strong knowledge team in the success of Stage II and subsequent stages. Because openness and increased interactions (made possible by lower interaction cost) break down barriers, they also have the potential to break down identity at many levels. The identity of a complex ecosystem like an electronic enterprise in a changing environment is made possible by consciousness—of identity and value—with all parties. Consciousness comes from knowledge and reflection, which must be approached as a core competency, organization-wide, continuously.

Enterprises will thrive in the electronic environment by being secure in their value propositions regarding customers and partners.

Stage III: Industry Transformation

Overview

In Stage III, the industry transforms as its leading players continue pioneering a new business model, one form of which is restructuring by stripping off parts of their business once considered core competencies. For example, imagine a major oil company forsaking its exploration and production business to strategic partners who do that exclusively. Imagine a moving company with no movers or trucks; these might be provided by Federal Express, the moving company having decided that its core competency is relocation assistance. In Stage III, another degree of integration will happen: inventories throughout the value chain will tend toward zero, as each member will start taking its demand signal from the end customer. E-business processes, since they enable almost any company to connect to the network at a very low cost, will push transparency to ever-increasing levels.

Summary: Industry Transformation

- **Market dynamic**: create the extended value chain
  - Integrate all elements of the value chain to touch the customer
  - Suppliers, strategic partners, service providers and customers wired
  - Enterprise knowledge team has built knowledge competency, leverages to partners and customers
- **Approach**: electronic community, industry-wide focus
  - The extended supply chain acts as one enterprise, and each link of the chain takes demand signals from the end customer
- **Key opportunities**:
  - Leverage e-business and knowledge building expertise into building consortia and electronic communities
  - Critical in maintaining leadership in market that continues to consolidate

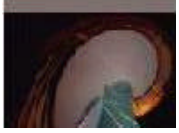
Key success factors

- Flexible, robust IT to enable linkage to all players within value chain
- E-business core competency and leadership to participate in consortia
- Leveraging e-business knowledge into communities

Time Frame
Late 2000-2002

Key Issues in Transforming the Industry by Example

In another iteration of transparency and knowledge, enterprises will thrive in the electronic environment by being secure in their value propositions regarding customers and partners. In such a fluid environment, in-depth knowledge and organized activity (processes) enable the enterprise to deliver the value. The enterprise's security enables it to interoperate with the least amount of friction possible, which also drives value. Of course, each partner must develop the knowledge of its value proposition in turn. Sharing knowledge at an unprecedented level with partners and customers requires a leap of faith in the beginning, *giving the knowledge away in a series of calculated risks*. This is in direct conflict with traditional business practice, which hoards and controls knowledge. Knowledge of not only the value proposition but also of its organized delivery will create a persistent barrier to entry for competitors.



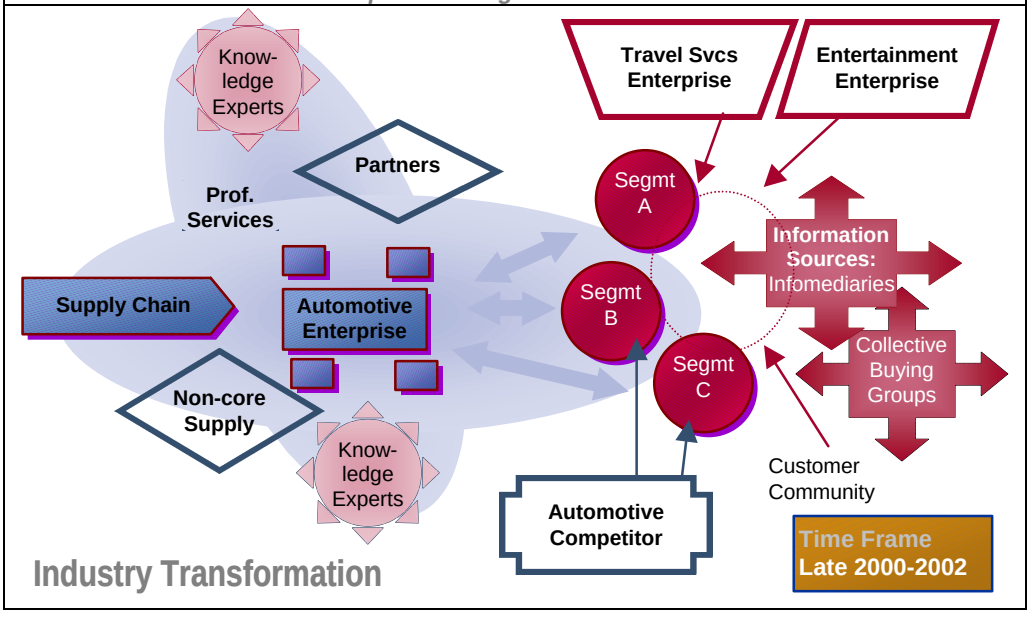
Beginning the knowledge acceleration process is perhaps the largest opportunity in e-business today.

Finally, the more the enterprise becomes knowledgeable and aware of its value proposition(s), the faster it can develop new value and integrate that value within its extended enterprise space. *In other words, knowledge is an accelerator, which creates a significant barrier to entry for competitors*. This fact also assigns tremendous value to enterprises with first-mover advantage, and beginning the knowledge acceleration process is perhaps the largest opportunity in e-business today.

The Extended Enterprise During Stage III

Scope of Activity In automotive, Stage III could take the form of the enterprise's having no ownership stake in manufacturing or distribution; perhaps it will see its core competency as knowledge of the customer's usage and enjoyment of automobiles and managing brands as a function of that. In Exhibit E, the enterprise extends to encompass virtually all partners or suppliers as well as knowledge experts, and interactions among these players continuously increase. As each member of the network becomes more secure in its value proposition, the price of interactivity will drop still further, which will be a key factor in integrating the value chain around the end customer's demand signals. For example, more products will be produced, serviced and managed on demand. The customer will order specific products, whose value propositions will increasingly be weighted toward knowledge of how the customer uses the product. Collective buying groups will prevail; they will enable groups of customers to spontaneously form collective efforts to buy and design products. In automotive, groups of customers will design and buy cars together, working with the automotive enterprise. Because the automotive enterprise will be increasingly transparent, customers will gain more knowledge about auto value and design; they will use it to customize cars in ways that are difficult to imagine today.

Exhibit E: The Electronic Enterprise at Stage III



Decision Points At this point, the concept and strategy of the knowledge enterprise are new, and organic growth of the knowledge enterprise is the only alternative in the short term; no enterprise can buy a cadre of knowledge workers who have an intimate understanding of its suite of value propositions along with its

Customers will become more demanding, which will create the opportunity for enterprises to work with customers to create value.

business processes. This is also true because the context of the e-business environment is so new. Depending on the industry, it may take considerable resources to develop information, knowledge and consciousness, and starting early is very important, especially because knowledge is an accelerator. Knowledge itself is inseparable from the processes that deliver value to customers; in fact, knowledge in based on insight about how processes deliver value to customers. As the market matures in the first decade of the twenty first century, there will undoubtedly be more fluidity as all organizations adopt some form of e-business model.

Stage IV: Convergence

Overview

In Stage IV, enterprises break the mold of "industry,"which has historically played a major role in the development of large enterprises that procure, manage and use scarce resources to create products for mass markets and leverage economies of scale. In Stage III, an unprecedented level of knowledge sharing goes on among customers, their communities and the extended enterprise. This knowledge sharing makes it economically feasible for the enterprise to focus, for the first time, not on the product, but rather on *how the product creates value in the customer's life*. Today, enterprises focus on products first; they conduct research on how customers use their products, so their marketing efforts can "make the products relevant to the lives of customers." By contrast, during Stage IV, the enterprise will leverage its knowledge of how customers live into related businesses, extending the enterprise out of its traditional "industry"into communities that focus on whatever enables them to deliver the highest value to customers, as the below example shows.

During Stage IV, other highlights are extensions from Stage III: the customers use the resources of the enterprise to create products that can meet their increasingly complex needs. Customers will become more demanding, which will create the opportunity for enterprises to work with customers to create value.

Summary: Convergence

- **Market dynamic**: extended supply chains now linked to groups of vendors who are not in the same business but who have customers in common
- **Approach**: vendor community portals, multi-industry focus
  - Unprecedented level of cooperation with partners, including strategic planning, product launches and new businesses
  - Integrate in-depth, continuous strategy/knowledge processes across all levels of the enterprise, enabling it to anticipate ultra-rapid market development and respond via key alliances
  - Outsourcing and "rapid retooling": key survival factors
- **Key opportunities**:
  - Use thorough integration all along value chain to take demand signals from end customer, attaining JIT and reducing inventory
  - Create sticky customer relationships due to responsiveness to their needs across several product areas

Key success factors

- Track record of e-business leadership among peers drives ability to score alliances
- Leverage strategy and knowledge throughout extended enterprise
- Letting customers drive enterprise processes will be required to sustain leadership

Time Frame
2001-2003

Leadership will play a critical role because customers want a leader to guide them through periods of change; energy and activity will organize around leading edge thought and action.

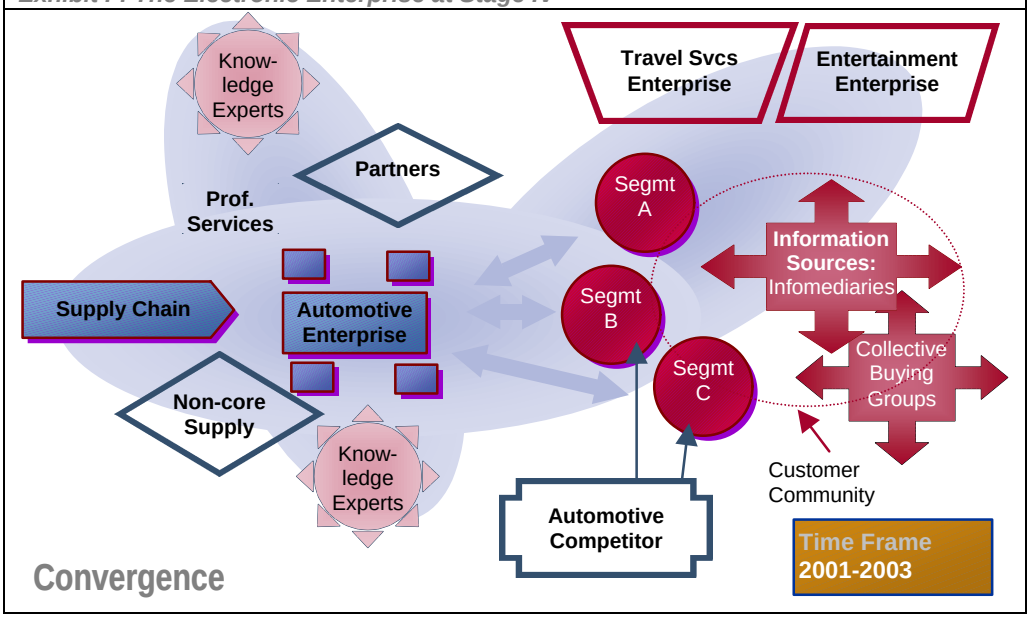
Key Issues in Transforming the Industry by Example

Mobility of knowledge, creativity and resources will be key to success during Stage IV. Leadership and visibility will also play a critical role because customers will want a leader to guide them through periods of change. In a fluid environment, energy and activity will organize around leading edge thought and action.

The Extended Enterprise During Stage IV

Scope of Activity In Stage IV, the enterprise becomes even more conscious of customers' wants and desires, based on its continuous interactions with them (for an example, see Appendix II). Assuming that one of its core competencies is knowledge of the customer segments' usage and enjoyment of automobiles, the automotive enterprise extends into travel and entertainment, which were once thought of as separate industries. Notably, the customer community has grown, both within the extended enterprise and outside of it, and collective buying groups play a major role. Note that infomediaries lie partially within the enterprise.

Exhibit F: The Electronic Enterprise at Stage IV



Decision Points Stage IV is at least two years out; therefore, decision points are not as immediate as in other stages of market development. That said, enterprises would do best to begin thinking about their products and services as customers do: as a means to an end, the end being the pure value. That will enable the enterprise to observe other "industries" differently.

As with any major widespread change in the business environment, e-business introduces much higher levels of risk and reward to the "normal" business environment.

Conclusions

No one can predict with certainty exactly how the adoption of the e-business paradigm will unfold, what its truths will eventually be or exactly what the extended enterprise will look like. As with any major widespread change in the business environment, e-business introduces much higher levels of risk and reward relative to the "normal" business environment. That said, here are some points that are true beyond any reasonable doubt and should be carefully and expeditiously considered in any enterprise's business strategy.

The E-Business Environment

- E-Business enables hyperavailability of information to anyone who has access to the "web" of activity, which enables a large number of people to make decisions based on the same information (for example, the end consumer's demand signal).
- E-Business enables connectivity between highly diverse companies (and their systems) at a very low cost and on an unprecedented scale. This provides the opportunity to coordinate heretofore disparate activities with increasing ease.
- Asynchronous communications (those not requiring real-time communications among two or more people; for example, websites and email) enable highly specific communications to take place *at a time that is of the lowest cost to each participant*.
- Connectivity and asynchronicity combine to drive down the cost of interaction and transactions, among customers as well as members of the enterprise and its partners.
- **Conclusion:** "Opening up" the enterprise to an unprecedented level of scrutiny will be a difficult reality for some business leaders to accept. The true value that the enterprise's products and services deliver to customers will be discussed openly everywhere. However, this development will be inevitable, and enterprises that resist it will be seriously disadvantaged.

The E-Business Customer

- Enterprises are becoming increasingly transparent to their customers, who have the unprecedented ability to learn in-depth information about the enterprise's products, its processes, its problems and its competitors.
- Customers of all types have a far lower cost and increased scope of interaction, which increases their ability to share their experiences with almost infinitely many other customers. This is a key element of the oft-mentioned power shift to the customer, away from the supplier (the enterprise).
- Customers will demand increasing satisfaction from enterprises, once they know that they can deliver it with e-business processes. The market will not forgive companies that ignore this phenomenon.
- Customers will demand that enterprises think of their needs first and allow them to design products and services to fit their needs. This stands in sharp contrast to the enterprise-focused model of today that enables enterprises to design products and sell them to a mass market.
- Customers will take the lead in dictating what kinds of products and services they use, and they will reward enterprises that enable them to do this most easily.
- **Conclusion:** The enterprise that creates the (knowledge) capacity to engage customers to help it to satisfy them will be far better off in the satisfaction game.

Customers will take the lead in dictating what kinds of products and services they use, and they will reward enterprises that enable them to do this most easily.

The Extended Enterprise Is a Knowledge Enterprise

- The extended enterprise is defined as a company with valid core competencies operating within a web of complementary companies that is coordinated as to present one face to customers.
- Hyperavilability of information, low interaction cost and the need to satisfy customers drives the ascendancy of knowledge, which is defined as information applied to performing an action (e.g. a business process to satisfy a customer).
- The cornerstone of creating value in the e-business environment will be creating, organizing and leveraging knowledge about how the enterprise satisfies customers and knowledge about how the enterprise interacts within its web to deliver unique value to its customers and its partners.
- The leading extended enterprises will drive their strategic planning activities into their organizations; a focus on core competencies will drive the creation of opportunities that create and deliver value. Opportunities will be more short-lived and more numerous than they are today.
- The extended enterprises that will lead their industries will be those that have unbridled confidence in their ability to create and deliver unique value propositions. Confidence will be necessary to take the risk of adopting the new model and sharing knowledge with their customers and partners at a level unheard of today.
- Confidence will stem from building a cadre of knowledge workers, an activity that will have to be pursued organically, through an individual and organizational learning process.
- Knowledge is an accelerator because it increases the enterprise's ability to learn and create more knowledge.
- **Conclusion:** There will be no extended enterprise that is not first a knowledge enterprise. Enterprises that fail to act and ignore the knowledge component of e-business put themselves at significant risk.

For More Information

Should you have questions about any of these topics or if you are interested to learn more about how we apply these concepts and principles to client engagements, I invite your inquiry as follows:

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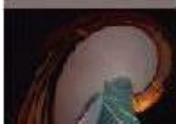
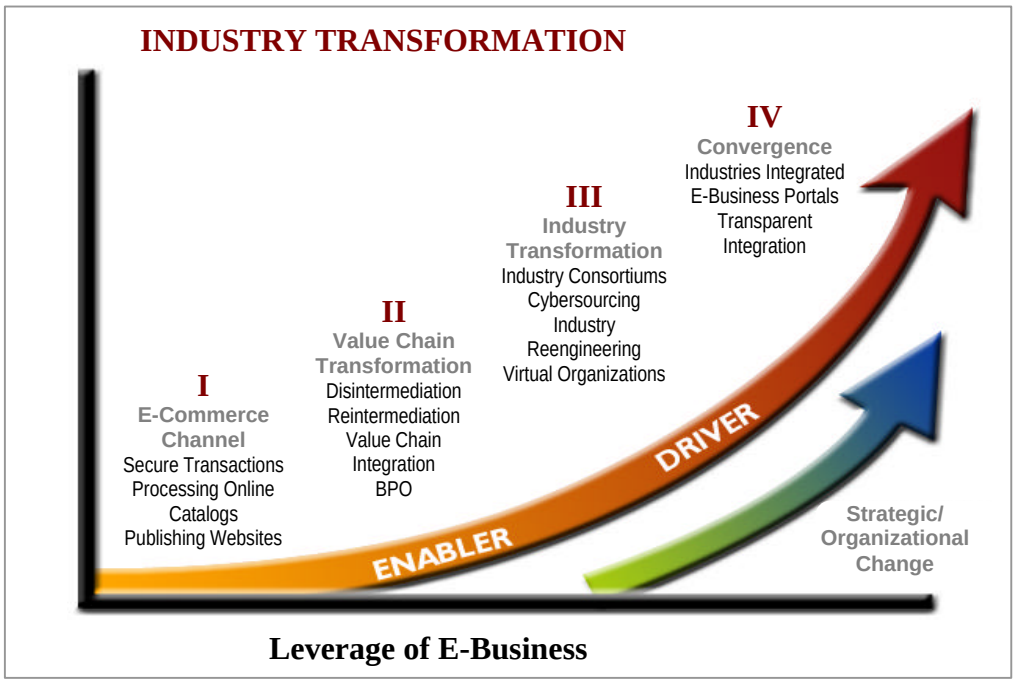
Thank you for your interest.



Knowledge is an accelerator because it increases the enterprise's ability to learn and create more knowledge.

Appendix I: The E-Business Adoption Curve Model

E-Business offers a market changing opportunity to market-leading global enterprises whose viability is in large part driven by their value chain/network, through which they deliver products and services. Most value chains today are rife with paper- and analog-dominated communications processes that represent very high transaction costs when compared with electronic digital processes. Exchanging the former for the latter, if managed correctly, sets off a complex chain of events for an enterprise that can drive it to lead its own transformation into an electronic enterprise.



Leverage of E-Business

The Stages of the Adoption Curve

Stage I is marked by the launch of an e-commerce site, which is minimally defined by conducting business transactions with secure software. In addition, the basic information to support commercial transactions must be present.

During ***Stage II***, e-commerce has ceased to be a novelty and now plays a major role in the organization's overall strategy and competitiveness. Customers have by now become accustomed to the new level of immediacy and service that e-commerce offers.

Stage III sees the enterprise extend itself electronically past its immediate group of suppliers and customers. Most of its fundamental business processes have been transitioned to an electronic model.

Stage IV will be defined by two major criteria: the creation of "service alliances" to satisfy customer demands at an unprecedented level and the "extended" enterprise's integrated attention to the end customer's demand.

For more information, see *Using E-Business Strategies to Drive Value Chain Transformation* by Christopher Rollyson (1999).

The heart of the relationship between carcar.net and the drivers of the Internet Car is an industry-strength knowledge management system and website.

Appendix II: A Ficticious Case Study of "The Internet Car"

CKO *Information for E-Business Leaders*

Special Report: Carcar.net's Internet Car

Virtual Carmaker Shows Unprecedented Convergence Between Automotive and E-Commerce

Turns Detroit on its ear

(Las Vegas, NV, February 14, 1999) Today, in a major announcement at Comdex Winter 99, carcar.net unveiled another breath-taking example of the "Internet phenomenon": an automobile that enables drivers to send emails and browse the web while they're driving, without putting anyone's life in danger ;-).

Featuring a wireless ISDN connection and a laptop-like touch screen mounted into the dash, the Internet Car enables an on the fly connection to the Internet for real-time navigation, traffic updates and travel planning, but it doesn't stop there:

> ***"I can't believe how cool this is," exclaimed Marc Andresseen, who received a test car two weeks ago. "I have a lot of the functionality in the Internet Car that I have in my office: I hold teleconferences and videoconferences, receive and reply to email and browse the web at will, all while zipping around the city or barreling down the highway."***

Wait a minute. Did I get that right? This, in 1999?

Is it a car?

The Internet Car is truly a pacesetter. Assembled by Honda in its Van Nuys plant of components from a consortium of automotive companies, the Internet Car is not branded by any carmaker. Sporting a zippy engine and drive train by Subaru and a unique body by Volkswagen, complete with its owner's URL boldly stencilled on each door, the Internet Car definitely gets you places, especially with the four-on-the-floor gearbox option.

Carcar.net projects 1999 sales of 300,000 units, all ordered through the Internet, of course. Carcar.net has no dealer network, nor does it plan to create one. The Internet Car will be jointly serviced nationally by Computer Discount Warehouse and Sears Auto Service.

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Drivers are rewarded for providing continuous usage and satisfaction information to carcar.net, which actually subscribes to the driver's "information service."

The Internet Car,*Continued*

A new meaning to "service"

As one might suspect, the heart of the relationship between carcar.net and the drivers of the Internet Car is an industry-strength knowledge management system and website. Drivers are rewarded for providing continuous usage and satisfaction information to carcar.net, which actually subscribes to the driver's "information service." For example, if a driver selects biweekly reporting, carcar.net offers to cut the Internet and phone service cost by a prescribed amount; likewise, the driver can select a reduction in "car" payments or some other option. Less frequent reporting affords the driver different choices.

> ***"We aim to transform the experience of owning a car by using the continuous, asynchronous communication that the web allows to forge a partnership with our customers," said Tom F. Buckley, Chief Service Officer. "We see our customers as partners in this venture to create more productive time in the car. They provide us real-time intelligence about how useful the Internet Car is in their lives, and we use the information to offer them new options in service and product features."***

Because there is no dealer network and each car is ordered specifically, every car owner gets exactly what he wants, as long as the feature is offered. In a somewhat unique "distribution" model, carcar.net gives new owners several options on picking up their new cars. If you want it in Internet time, you've got it. Customers who order any combination of features available can pick it up the next day by picking it up at the factory (incentives given). For those who don't mind waiting a couple of weeks, they can have the cars delivered to them in 50 urban centers at specified Budget locations nationally. In another program, the cars are delivered direct from the factory to the owner's door by company chauffeur.

Is it a computer?

> ***"At the heart of its Internet functionality is a robust voice recognition software," remarked Bill Joy, carcar.net's Chief Technology Officer. "Once a driver completes the profile, which takes about fifteen minutes, he or she can dictate emails, instruct the browser to call up URLs and a host of other things. It's really simple, yet revolutionary. I love to see the reactions of people once they go for their first drive."***

Likewise, the "car" reads email and web pages on demand (synthesized voice is quite reasonable), and it comes with a international Internet access, cellular service, a website, and software that automatically mirrors the car's hard drive on the driver's website. In fact, carcar.net, with its partners America On Line and MCI Worldcom, is an ISP par excellence. The Internet Car is being supported by a special channel on AOL and Netscape portals.

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"We aim to transform the experience of owning a car by using the continuous, asynchronous communication that the web allows to forge a partnership with our customers.

The Internet Car,*Continued*

Also on board is a full-fledged PC by Motorola. It comes with a wide range of configurations that run Windows, Macintosh, Linux or UNIX OSs. The customer also configures all software per his or her needs.

> ***"The question is, is it a car or an office?" said Anne Stuart, technology reporter of CKO Magazine, who took one for a spin recently.***

Indeed, with its attachable keyboard, touchpad and auxiliary fuel cells, the Internet Car is designed to parked and worked in for up to ten hours at a time, without running the engine. Completing the picture are:

- A unique seat in front that mimicks some of the functionality of an office chair.
- A compact printer/scanner/fax that pulls out of passenger's side of the dash, by Hewlett-Packard.
- Solid sound and lighting systems.
- An innovative, real-time security system, whose job is made easier by the fact that the PC is removable only by a special electronic key.

> ***And, yes, the default setting is that the ignition turns on the car and boots up the computer at the same time ;-) .***

CKO

***Note: The "CKO" article is fictitious, for example only. Created by Christopher Rollyson, 1999.

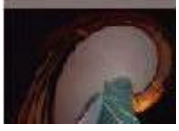
Knowledge is meta-information in that it is information organized for and applied to an action such that the action is informed and improved.

Appendix III: Reflections on "Knowledge" and Knowledge Management

Before discussing how to create and manage knowledge within an extended enterprise to create the ability to create and recreate unique value propositions, we need to define "knowledge" and explain how it is distinguished from information.

Within the context of knowledge management, "knowledge" is information that is selected and organized to enable the more effective fulfillment of a purpose. Knowledge is relevant, timely and available. It is focused on action and improvement, which is why selection and organization are critical elements. Knowledge is information about different aspects of performing an action. This definition suggests why knowledge is so difficult to deal with: it is inexorably tied to actions that are taking place in a competitive market place that is constantly changing. That makes it difficult to bottle and sell ;-).

The dynamism of the competitive landscape in which organizations operate today drives the need for knowledge management (KM). Previously, general education and "learning by example" on the job were sufficient KM techniques because work processes changed slowly, enabling time to adapt. Today, however, those techniques are outdated, and learning how to learn a process affords competitive advantage. That is KM.

However, reflecting on the definition makes clear why KM offers such potential: *"knowledge" represents the secrets of how an organization's processes are performed*. In light of this, here is an empirical definition of KM: it is the attempt to learn and articulate the best practices of performing critical processes so that the "knowledge" of experts can be leveraged to less expert people. More specifically:

> *Where* information *is a body of data*, knowledge is metainformation *in that it is information organized for and applied to the performance of an action such that the action is informed and, consequently, improved. Further, the "meta" is human insight into what it's like to be a person performing that action. This "meta" explains why knowledge is so dynamic and leverageable as well as why it is completely unlike information, which exists without the connection to a person performing a process.*