

**Using E-Business Strategies  
to Drive Value Chain Transformation**

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E-Business | E-Commerce | Knowledge Strategy

IT Strategy/Strategic Change Practice

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## Using E-Business Strategies to Drive Value Chain Transformation

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### **Summary**

E-Business offers a market changing opportunity to market-leading global enterprises whose function and viability is in large part driven by supply chain strategies. In sharp contrast to service-oriented electronic companies that provide value to customers directly in an e-commerce scenario, these enterprises lead or occupy a key part of a vast supply network through which they, along with the other members of the chain, provide end customers products.

Most supply chains 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.

The speed and degree to which an enterprise is electronic will enable it to execute more processes than its competitors and be connected to more networks: since e-business dramatically lowers transactional costs within the supply chain, it can finance the enterprise's rapid expansion. This may well drive the vast success of the few at the expense of the many: as intricate electronic networks are formed, selection factors will be driven in large measure by an enterprise's e-business competence.

### **The Adoption Curve**

I use the concept of an adoption curve to describe the path to transformation 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 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.

*This paper builds out the MCS e-business roadmap, thereby giving a more complete picture of what is actually involved in the transformation process.*

## Orientation

This paper builds on MCS’s mandated e-business roadmap. It offers a studious yet cursory description of the process that an enterprise can undergo to achieve its transformation via the supply chain. By no means does it attempt anything resembling a methodology; however, it builds out the roadmap, thereby giving a more complete picture of what is actually involved in the transformation process.

## Structure and Definitions

- **Transformation Stages:** are defined by the MCS “Industry Transformation” graphic as four: an e-commerce channel, value chain transformation, industry transformation and convergence. These stages form the structure of the paper.
- **Industry Overviews:** occupy the same pages as the accompanying transformation graphics for each stage (four in all). They describe the status of the enterprise and of its market at the onset of each transformation stage as well as a broad explanation of the market transformation in context.
- **Strategic Action** (Process Detail Tables): given the four stages of transformation indicated in the graphic entitled “Industry Transformation,” strategic action defines most of the steps that the enterprise must undertake to achieve that stage.
- **Tactical Action** (Process Detail Tables): drills down from strategic action into a fair amount of detail. This aims to put the reader “in the driver’s seat” as s/he envisions the change.
- **End State** (Process Detail Tables): a succinct description of most of what must be achieved to transition to the next stage of transformation.

## User’s Guide

This paper has been designed for several types of reading. Here are suggestions:

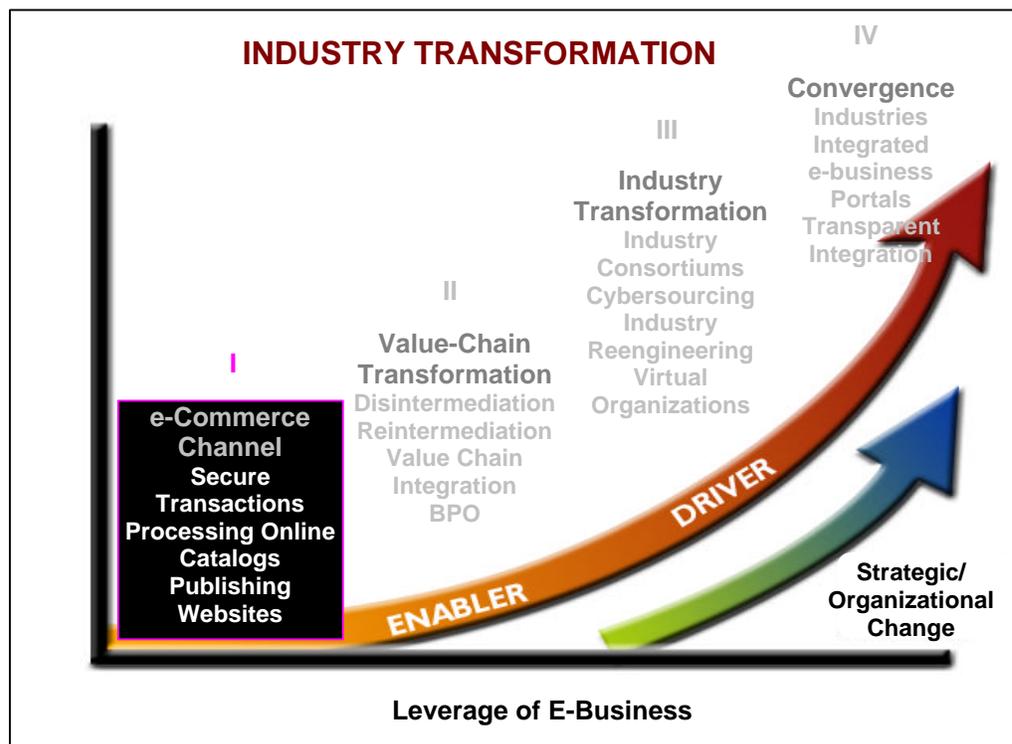
- **High level, quick read:** read the industry overviews and study the industry transformation graphic.
- **High level, with some detail:** in addition to the high level, read two columns within the process detail tables: Strategic Action (first column) and End State (last column).
- **The works:** add in Tactical Action, and you will get it all!



The launch of an e-commerce site can mark the debut of a learning process that will see the transformation of the company into an electronic enterprise.

### Stage I: E-Commerce Channel Overview

**The Enterprise**—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, such as product or service information and security and e-commerce software that gives customers the confidence that their transactions will be safe. To some extent, the e-commerce site is often accompanied by a remake of the corporate website, which is relaunched to reflect the company’s entrance into e-commerce. The launch of an e-commerce site can be very significant for an organization: for some, it represents a “See, we can do it, too” attitude, while for others it marks the debut of a learning process that will see the transformation of the company into an electronic enterprise. For business to business enterprises, the e-commerce site is often an extranet that is accessible via the Internet but only by the company’s most valuable customers and suppliers. Depending on the company’s customer focus, the site might be totally open, in which case it would be an e-commerce website accessible via the Internet.



**The Market**—Executing the launch of an e-commerce site will often give an enterprise a competitive advantage, depending on the market in which it operates. As of May 1999, e-commerce sites are still fairly rare in many industries; rarer still are e-commerce sites that are effectively integrated with the enterprise’s legacy business processes, most sites having been launched with an experimental attitude. If the effort has a solid strategy that makes use of the enterprise’s traditional competitive strengths, it stands to add considerably to market position. During implementation, success is largely driven by: 1) the organization’s understanding of the e-commerce site’s Unique Selling Proposition relative to its competitive direction, 2) the dedication of proper resources, 3) determination and organizational will, and 4) an acceptance of culture change.

Rarer still are e-commerce sites that are effectively integrated with the enterprise legacy business processes, most sites having been launched with an experimental attitude.

I—E-Commerce Channel: Process Detail

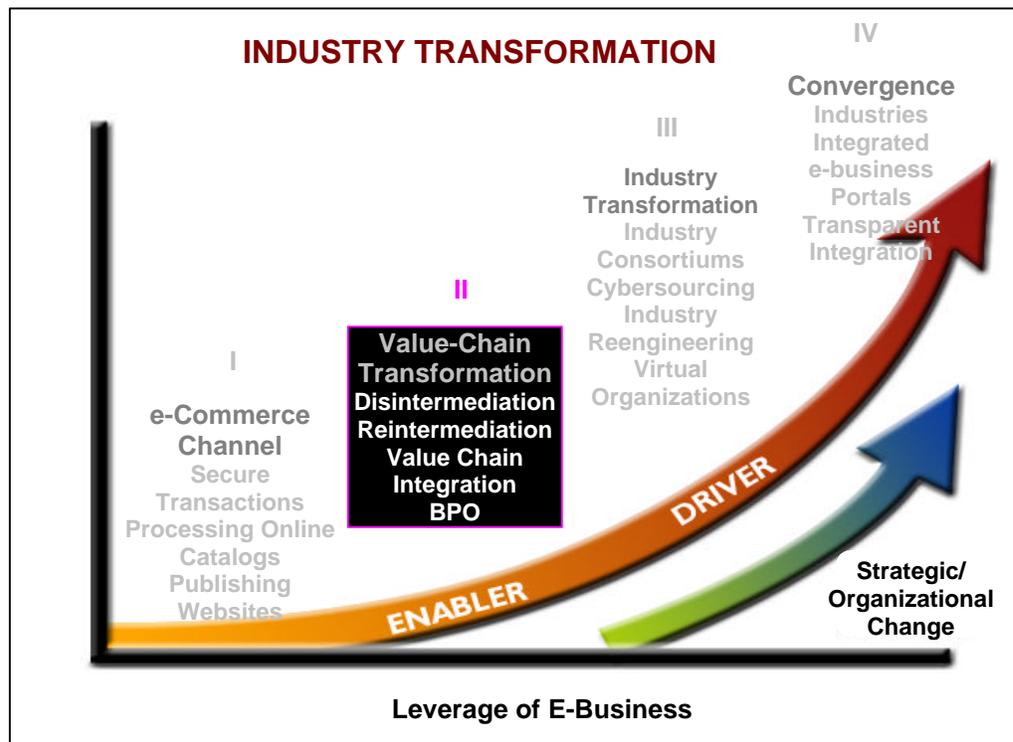
Theme: Experimental Customer Focus		
Strategic Action	Tactical Action	End State
<ul style="list-style-type: none"> <li>• Conduct e-business readiness assessment                             <ul style="list-style-type: none"> <li>– Future state</li> <li>– Current state</li> </ul> </li> <li>• Create e-business adoption strategy                             <ul style="list-style-type: none"> <li>– Includes e-commerce strategy</li> </ul> </li> <li>• Plan basic extranets for strategic customers and suppliers                             <ul style="list-style-type: none"> <li>– Sites have only basic hooks into internal ERP system, if one is in place</li> </ul> </li> <li>• Explore implementation of online catalog system to be used for procurement</li> <li>• Launch website to provide basic corporate information</li> </ul>	<ul style="list-style-type: none"> <li>• Build corporate website                             <ul style="list-style-type: none"> <li>– Write marketing communications (hereafter marcom) plan: detail site goals, integrate with other marcom criteria</li> <li>– Select creative agency or hire/develop internal resources</li> <li>– Organize cross-functional team to make content decisions and maintenance plan</li> <li>– Procure hosting/network services, internally or externally</li> <li>– Develop and launch site</li> </ul> </li> <li>• Build extranets                             <ul style="list-style-type: none"> <li>– Create team to identify channel conflict issues, assess risks and make recommendations</li> <li>– Select creative agency or hire/develop internal resources</li> <li>– Conduct corporate network architecture and performance audit, and benchmark best practices to ensure extranets' smooth integration within corporate network                                     <ul style="list-style-type: none"> <li>• Deliverable is a detailed network development plan and schedule required to deliver robust services demanded by extranets</li> <li>• During this stage, often best to outsource hosting and network resources   <ul style="list-style-type: none"> <li>– Select network provider/develop internal engineering personnel, including hardware and services</li> </ul> </li> </ul> </li> <li>– Organize cross-functional team, including customer personnel, to make content decisions and maintenance plan</li> <li>– Develop cooperative customer/supplier network engineer relationships: colaunch extranets; capture best practices</li> <li>– Negotiate/execute legal agreements: information sharing, privacy and performance</li> <li>– Procure hosting/network services, internally or externally</li> <li>– Develop and launch sites</li> </ul> </li> <li>• Online catalog system                             <ul style="list-style-type: none"> <li>– Organize cross-functional team to determine: product list, initial pricing, communications plans, revenue/volume estimate, development requirements</li> <li>– Write marcom plan: detail site goals, integrate with other marcom performance criteria</li> <li>– Select agency or hire/develop internal resources</li> <li>– Procure hosting/network services, internally or externally</li> </ul> </li> <li>• Develop and launch site</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy: detailed strategic plan for e-commerce and growth to Stage II</li> <li>• Accountability: dedicated teams forming to manage e-commerce site and processes with initiatives to integrate all relevant organizational processes</li> <li>• Scope:                             <ul style="list-style-type: none"> <li>– Pilot created for highest value customers, with scheduled plan to roll out to other customers</li> <li>– Product e-commerce roll-out scheduled</li> </ul> </li> <li>• Integration: corporate website thoroughly integrated with e-commerce and regularly co-developed/co-planned</li> <li>• Partnering: reevaluation of vendors underway to invite to participate in strategizing for Stage II</li> <li>• Other: Chief Knowledge Officer (hereafter CKO) search underway to prepare for Stage II, under supervision of CEO</li> </ul>

Stage II: Value Chain Transformation Overview

**The Enterprise**—The enterprise matures considerably, in the e-business sense, during Stage II. By now, 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, and the industry feels the impact of e-commerce through changes in the value proposition. A major change is the realization by the executive team that

Customers have become accustomed to the new level of immediacy and service that e-commerce offers, which changes in value propositions.

this market is much more dynamic and surprising than anything previously known. Creating a professional cadre of knowledge workers assumes paramount importance, and strategic planning becomes a core business process conducted by many rather than few due to the degree of change on the value chain. Of course the changes in the value chain represent enormous opportunities for those players that can understand and respond to them ahead of the pack, and insight about customers, business processes, market players and employees as they go through the changes together is the basis for competitiveness. Therefore, a knowledge team leads a thorough analysis of the value chain with two aims in mind: to understand the value chain in the context of e-commerce and to create a process for continuous value chain monitoring going forward. This understanding usually takes the form of creating an extranet that links the enterprise with its key suppliers and customers. During Stage II, the extranet's scope is limited to the enterprise and its immediate significant others.



**The Market**—During Stage II, several entities within the enterprise's market have gone through learning experiences with e-commerce and, most significantly, customers' expectations have begun to change. Many players have begun to realize that e-commerce has transitioned from competitive advantage to the price of admission. Some of the e-commerce activity has enabled customers to begin to think about new ways of conducting their businesses. The traditional supply chain might be perturbed, and disintermediation often appears as a result of the change in customers' expectations and their embrace of new processes. Reintermediation follows, with traditional processes being performed in new ways, often by different players. The traditional intermediaries between customers and providers either perish or find new ways to add value within the value chain.

Many players have begun to realize that e-commerce has changed from a competitive advantage to the price of admission. Customers to conduct their businesses differently.

## II—Value Chain Transformation: Process Detail

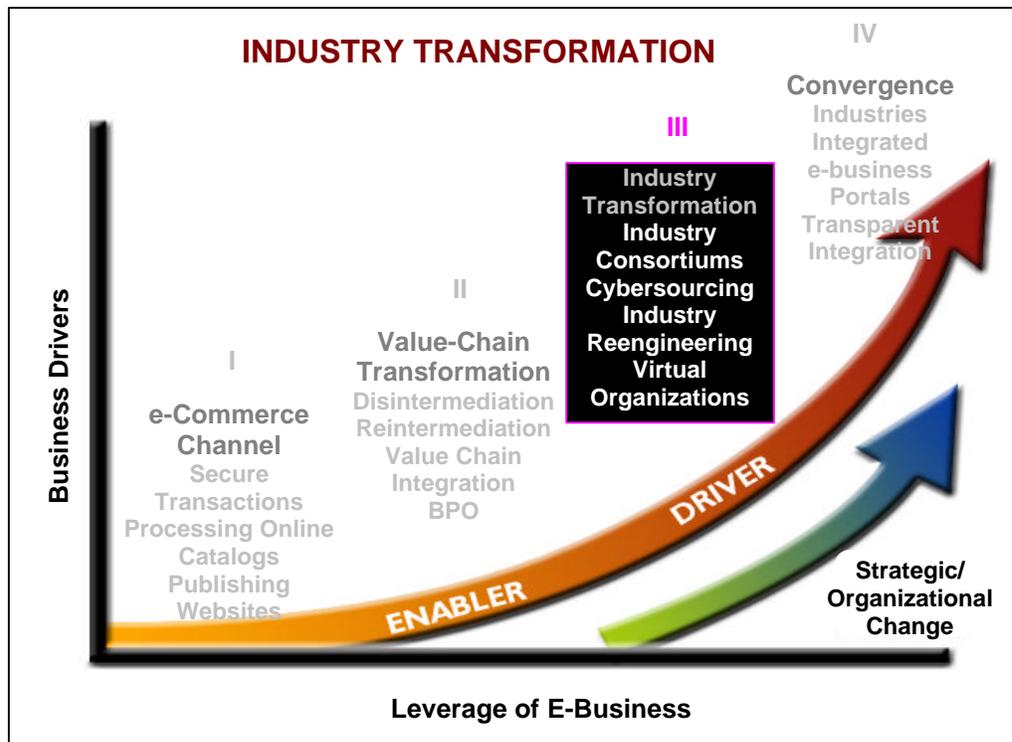
### Theme: Immediate Supply Chain

Strategic Action	Tactical Action	End State
<ul style="list-style-type: none"> <li>• Form corporate knowledge strategy</li> <li>• Perform value chain analysis                             <ul style="list-style-type: none"> <li>– Includes market analysis, both industry and e-business</li> <li>– Understand economics of each point in the value chain</li> <li>– Determine effect on value drivers                                     <ul style="list-style-type: none"> <li>• Margin</li> <li>• Revenue</li> <li>• Working capital</li> <li>• Capital Expenditure</li> <li>• Competitive advantage period</li> </ul> </li> <li>– Develop e-business value propositions at each stage of the value chain</li> </ul> </li> <li>• Set priorities for implementation based on value driver assessment</li> <li>• Create virtual value chain extranet, tying together outsourcers, suppliers, customers and manufacturers</li> <li>• Begin outsourcing non-core functions</li> </ul>	<ul style="list-style-type: none"> <li>• Corporate knowledge team                             <ul style="list-style-type: none"> <li>– Appoint high-level executive to own knowledge processes and take advantage of business functions (finance, information, marketing, service) at the speed of e-business market development                                     <ul style="list-style-type: none"> <li>• Consider CKO search, or appointing strategy executive at least 1/2 time to own knowledge function and build processes and team(s)</li> <li>• Scope of knowledge processes should include strategic customers and suppliers</li> </ul> </li> </ul> </li> <li>• Perform rigorous value chain analysis                             <ul style="list-style-type: none"> <li>– Create team to perform analysis                                     <ul style="list-style-type: none"> <li>• Give required access to organizational strategy bearers</li> <li>• Including suppliers and customers will transition relationships up several levels and lead to durability</li> </ul> </li> <li>– Produce project plan                                     <ul style="list-style-type: none"> <li>• Determine scope and purpose of value chain analysis, including data points from all parts of value chain</li> <li>• Consider option of building internal team to conduct ongoing value chain analysis</li> <li>• Consider purchasing or outsourcing effort in light of need for ongoing value chain analyses</li> <li>• Hold debate on project plan, and capture best practices to leverage in later across organization, ongoing value analyses (to be performed internally or via outsourcing)</li> </ul> </li> <li>– Perform analysis as function of plan, and share findings openly among participants</li> <li>– Develop e-business value propositions via value chain</li> <li>– Consider packaging select knowledge from value analysis &amp; sharing with strategic suppliers/customers</li> <li>– Make decision, both internally and among suppliers and customers, about importance of ongoing value analysis: where will it live and how will it be done?</li> </ul> </li> <li>• Implement strategy as function of value drivers</li> <li>• Execute redesign of business processes within enterprise                             <ul style="list-style-type: none"> <li>– Create team to own project planning and implementation</li> <li>– Begin integrating internal ERP system with extranets to facilitate data exchange with strategic partners</li> </ul> </li> <li>• Create and launch virtual value chain extranets: expand to suppliers, outsourcers and other vendors                             <ul style="list-style-type: none"> <li>– Refer to network audit/best practices conducted above when creating extranet development plans; provide any missing analysis as basis for decision making</li> <li>– Co-create extranet development/operations plan with relevant suppliers, customers and partners</li> <li>– Select network provider/develop internal engineering personnel</li> <li>– Design/develop/purchase networking hardware/services</li> <li>– Organize cross-functional team, including customer personnel, to make content decisions, maintenance plan</li> <li>– Negotiate/execute legal agreements: information sharing, privacy and performance</li> <li>– Develop cooperative relationships with customer/supplier network engineers                                     <ul style="list-style-type: none"> <li>• Coplan/colaunch extranets; capture best practices</li> </ul> </li> <li>– Select agency or hire/develop internal resources</li> <li>– Procure hosting/network services, internally or externally</li> </ul> </li> <li>• Develop and launch sites</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy: detailed value chain analysis done, with in-depth understanding of e-business value proposition and prioritized implementation plan with aggressive schedule</li> <li>• Accountability                             <ul style="list-style-type: none"> <li>– CKO in place; dedicated teams forming to manage e-commerce site and processes with initiatives to integrate all relevant organizational processes</li> <li>– Teams partner e-commerce professionals with legacy process owners in place, with transition plan in place</li> </ul> </li> <li>• Scope: suppliers and customers well integrated within virtual supply chain, which is the focus of the business</li> <li>• Integration:                             <ul style="list-style-type: none"> <li>– ERP partially integrated with extranets, enabling select extension of enterprise</li> <li>– Reorganization underway to transition marketing, service, sales, purchasing to e-business model</li> </ul> </li> <li>• Partnering: numerous functions outsourced; trial period underway to determine eligibility for sharing strategic planning</li> </ul>

The enterprise knowledge team now looks to share knowledge outside its immediate value chain neighbors; it has learned that knowledge equals market power and influence.

### Stage III: Industry Transformation Overview

**The Enterprise**—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. During Stage III, it looks to play an active role in the community by showing its leadership in a collective effort to overhaul the industry. Included in this effort are customers, suppliers, strategic partners, professional service providers and new players such as infomediaries. The enterprise’s knowledge team has transferred “knowledge about knowledge” to most functions of the enterprise and now looks to share knowledge outside the company and its immediate value chain neighbors because it has learned that knowledge equals market power and influence. A highlight of Stage III is the enterprise’s leadership in communities, which are groups of customers, suppliers or other market player that form to exchange knowledge on a certain topic.



**The Market**—Stage III sees profound changes on the industry and on how it does business. Depending on the industry, the overall value proposition may have changed significantly; certainly the ways in which customers, providers and other players interact have changed considerably. Because many players have attained a high degree of electronic interconnectedness, the concept of “virtual enterprises,” which are formed to create a product or service and disbanded after the product or service becomes outmoded, begins to become a reality.

The overall value proposition may have changed profoundly; certainly the ways in which customers, providers and other players interact have changed considerably.

### III—Industry Transformation: Process Detail

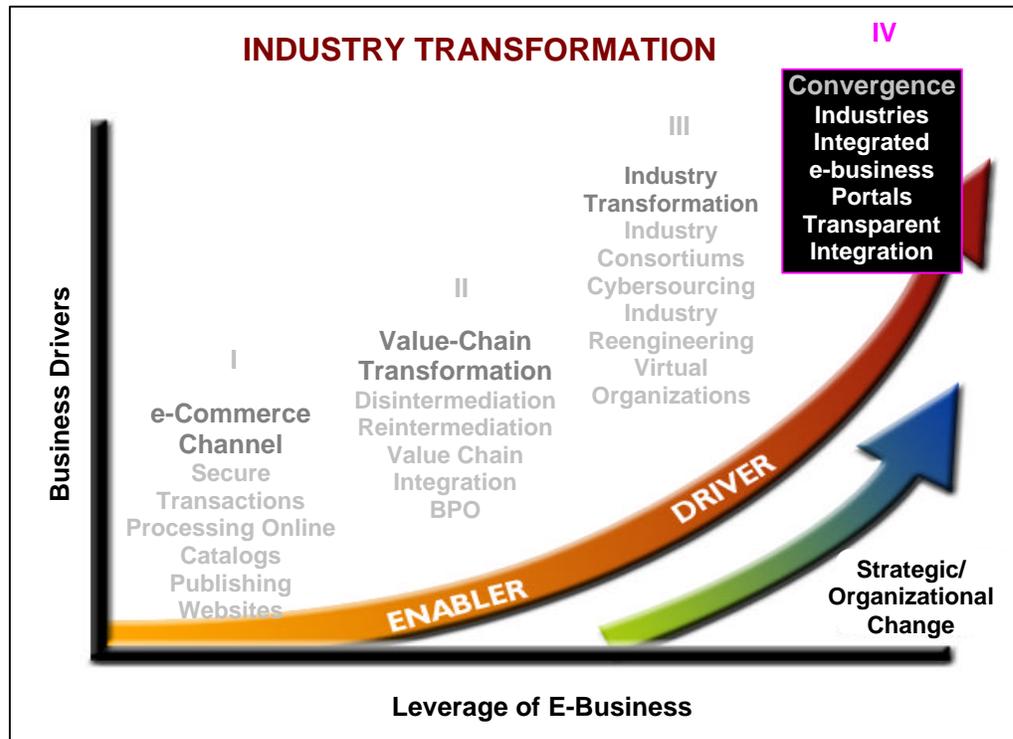
Theme: Wired to Electronic Community, Industry-wide Focus		
Strategic Action	Tactical Action	End State
<ul style="list-style-type: none"> <li>Assess core competencies and strategic objective within the industry</li> <li>Develop criteria to assess strategic partnerships and consortia</li> <li>Redesign processes that extend past immediate value chain</li> <li>Form supplier-customer-partner communities to manage issues, inventory, shipments and schedules in real time (using chat, forums, etc.)</li> <li>Attach knowledge and dialog to transactions</li> <li>Form <i>knowledge</i> communities with customers and suppliers to get feedback on products and delivery performance</li> </ul>	<ul style="list-style-type: none"> <li>Core competence/strategy assessment                             <ul style="list-style-type: none"> <li>Knowledge team creates implementation plan to integrate enterprise into industry communities where appropriate</li> </ul> </li> <li>Evaluate existing relationships and processes, and make decisions regarding retention, phase-out and selection of suppliers, customers, alliances and partners                             <ul style="list-style-type: none"> <li>Select partners for outsourcing non-core processes                                     <ul style="list-style-type: none"> <li>Include “knowledge quotient” and e-business expertise in selection criteria</li> </ul> </li> </ul> </li> <li>Execute redesign of business processes: extend past customers and suppliers                             <ul style="list-style-type: none"> <li>Integrate internal ERP system with extranets in order to unbridle data exchange with strategic partners</li> </ul> </li> <li>Lead formation of communities                             <ul style="list-style-type: none"> <li>Establish accountability for community formation, and tie success to team performance evaluation</li> <li>Enterprise knowledge team accountable for selecting and sharing enterprise knowledge in order to form communities</li> <li>Community formed for end customer demand forecasting</li> <li>Product/service development community launched</li> </ul> </li> <li>Knowledge aggressively used as value-add to transactions, seen and leveraged as key differentiator                             <ul style="list-style-type: none"> <li>Focuses on showing customers how to use the product to best effect</li> </ul> </li> <li>Knowledge exchange fostered through partnership with customers: emphasizes how to apply product/service so that customer gets best effect and enterprise has ideas for new products/services</li> </ul>	<ul style="list-style-type: none"> <li>Strategy: detailed implementation plan in place to grow enterprise activity and leadership in consortia that extend beyond core business</li> <li>Accountability:                             <ul style="list-style-type: none"> <li>Knowledge management core competency within enterprise</li> <li>Extensive recognition given to company leaders who take leading roles in industry groups</li> <li>Accountability defined to coalesce relationships with partners to enable end-customer demand forecasting</li> </ul> </li> <li>Scope: enterprise business processes thoroughly integrated within activity with industry groups, consortia; product/service development activity grows out of communities</li> <li>Integration:                             <ul style="list-style-type: none"> <li>ERP integration enables extended enterprise among select suppliers and customers</li> <li>Marketing, service, sales, purchasing, operations and IT managers have dual accountabilities to enterprise functions and consortia activity</li> </ul> </li> </ul>

### Stage IV: Convergence Overview

**The Enterprise**—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. While Stage III saw the enterprise extend itself electronically to integrate a more complete set of players that were involved in producing its value chain, Stage IV will go even farther. It will take the form of alliances with companies that may be quite unrelated to the enterprise except that they probably will have complementary—although separate

*The next step will be creating linkages with enterprises that may not have related products but will have complementary customer relationships.*

and related—offerings. Combinations and alliances will undoubtedly produce some interesting effects on the market. Another key indicator of Stage IV will be the integration of all players along the enterprise’s now-extended supply chain with a focus on the end customer’s demand signals. Of course, this will serve to reduce the amount of “inventory” within the supply chain as the industry will move toward a “build to order” model. Previously, each partner in the supply chain looked to the other for the demand signal, which added considerable resistance to the demand signal as it got distorted along the supply chain. In Stage IV, each focuses on the end demand signal, and JIT operation will be the order of the day. Of course, this will have been made possible through the extensive linking of processes using web applications.



**The Market**—Stage IV will see the enterprise electronically grow itself past its extended group of suppliers and partners built during Stage III. The next step will be creating linkages with enterprises that may not have related products but will probably have complementary relationships with customers. Where virtual enterprises will have existed during Stage III to create and market products or services focused on a customer segment, Stage IV will see cooperative delivery of products or services that may be in disparate categories but that will add value by virtue of their coordination and integration with the customers’ businesses. There will be a high degree of integration between players involved in delivering the value proposition to customers. In Stage II, integration was limited to sharing basic information necessary to implement e-business processes; in Stage II, cooperation was focused on a product or service category; here, strategic planning, product launches and new businesses will be the subject of knowledge sharing.

There will be a high degree of integration between players involved in delivering the value proposition to customers.

**IV—Convergence: Process Detail**

**Theme: Portals to Vendor Group Communities: Multi-industry Focus**

Strategic Action	Tactical Action	End State
<ul style="list-style-type: none"> <li>• Grow leading relationships within industry consortia</li> <li>• Set industrywide standards for e-business interaction</li> <li>• Develop industrywide portal</li> <li>• Demand forecasting from customer's customer</li> <li>• Competition on community level</li> <li>• Joint R&amp;D, product development, forecasting, capacity planning</li> </ul>	<ul style="list-style-type: none"> <li>• Establish accountability/standards for activity with industry consortia                             <ul style="list-style-type: none"> <li>– Based on understanding of enterprise's USP with respect to industry, decide what knowledge/role enterprise will adopt within the industry as a whole</li> </ul> </li> <li>• Establish accountability for portal creation and management                             <ul style="list-style-type: none"> <li>– Create and implement incentive plan</li> </ul> </li> <li>• Create and support team whose purpose is to manage relationships, contracts and knowledge sharing among partners                             <ul style="list-style-type: none"> <li>– Portals house vast networks of vendors that form "category killer" sites that serve "customers of one"</li> </ul> </li> <li>• Demand forecasting team adds value by coordinating production with all others along supply chain to improve service and reduce costs</li> <li>• Marketing and e-commerce professionals form tight relationships with counterparts within the portal                             <ul style="list-style-type: none"> <li>– High competition with other "super portals" for highly desirable customers</li> </ul> </li> <li>• At this point, it's difficult to tell where the enterprise starts and ends because it's so wired</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy: electronic enterprise thoroughly involved in several portals that sell and service products and services in cooperation with complementary vendors</li> <li>• Accountability                             <ul style="list-style-type: none"> <li>– Knowledge management core competency taken for granted within enterprise; rolled out to portal relationships</li> <li>– Company leaders take the lead on forming portals and industry groups</li> </ul> </li> <li>• Scope: enterprise conducts most of its business within cooperative groups of customers, suppliers, vendors and consortia via portals</li> <li>• Integration: enterprise conducts business, charitable activities and government activities through involvement with communities</li> <li>• Partnering: spans portal partners, government, arts organizations and news organizations</li> </ul>

**Acknowledgements**

I am indebted to my colleagues, David Jones, Rohit Reddy and Chris Bauschka, who provided invaluable input and structural ideas for this paper while we were on a project together. It could not have been written without them.

**For More Information**

This paper discusses at a high level a consulting approach used by PricewaterhouseCoopers in its e-business consulting practice. Should you be interested to learn more about how we apply these concepts to client work, I would invite your inquiry as follows.

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