the Interconnected Business

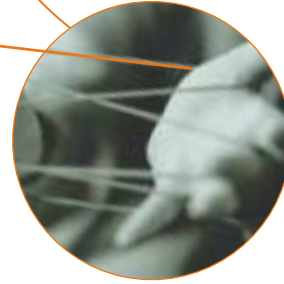thriving in a collaborative and customer-driven economy

Microsoft
Business
Solutions

At the heart of all dynamic economies resides a network of interconnected markets. To gain competitive advantage, companies must strive to reinvent themselves, becoming increasingly agile as they gain greater visibility into the systems, processes and people across the supply and demand chains.

The Interconnected Business
thriving in a collaborative and customer-driven economy

The Interconnected Economy

"We live surrounded by the end products
of thousands of connections. And in every
moment that goes by, more connections are made."

James Burke, historian and author, *Connections*

at the heart of all dynamic economies resides a network of interconnected markets. Within those markets are additional networks of inter-linked companies that pulse with information as interactions and transactions are conducted around the clock and around the globe. Look closer still into a single company, and one finds yet another network of collaborative information sharing as divisions, departments and employees pursue value-creation opportunities. To gain competitive advantage, organizations must consistently strive to reinvent themselves, becoming increasingly agile as they gain greater visibility into the systems, processes and people across the supply and demand chains.

Where we are

Business begins and ends with demand. In today's customer-driven economy, one thing that prevents a company from being reduced to a commodity is the insight the company has into the actual needs of individual customers—insight that its competitors do not have. Understanding how higher visibility into demand can take the supply chain to greater levels of cost-saving efficiency, and how a clearer window into supply can optimize demand, is the competitive battleground of the next decade.

Companies must identify how to achieve higher levels of integration between the supply and demand chains internally and among partners, suppliers and customers. The purpose is to meet incoming demand in an efficient and lucrative manner, tightly shaping supply processes around that demand to drive real impact. At all levels, connections are the key, from the supplier's supplier to the customer's customer and all points in between. The more synchronized these connections become, the more power they have to drive up productivity, drive down cost and accelerate the growth of value.

At one level this is nothing new. Supply Chain Management (SCM) tools and systems have helped seize efficiencies and wring nearly every conceivable cost out of planning, manufacturing, distributing and delivering finished goods to the end user. Somewhat later, Customer Relationship Management (CRM) arrived, helping firms build profitable relationships with customers through the creation and dissemination of actionable customer insight. Along the same track, Enterprise Resource Management (ERM) solutions that align a company's internal processes from financials and human resources to payroll and information management have emerged, bringing much of today's business technology landscape into focus.

Where we're headed

As the interconnected economy continues to take shape, however, the independent deployment of SCM, CRM and ERM strategies and technologies will likely hinder growth and in some cases, may inhibit it. The reasons are straightforward. Without an efficient and predictable means of producing and delivering products, a company cannot follow through on the promises that must be upheld if a customer relationship is to be a profitable one. Conversely, the efficiency and cost-effectiveness of a supply chain cannot be fully optimized without greater visibility into demand.

the challenge?

For the most part, SCM, CRM and ERM matured independently.
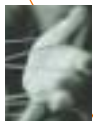
The evolution from chain to network

If companies are to achieve continuous improvement, maximize existing investments and excel in the interconnected economy, the systems, processes and people associated with supply and demand must be better woven together. The concept of integration to create a "value chain" is a long-standing one, but the notion of a linear value chain will fall away as interconnections occur. The next decade will witness the emergence of *value networks* where interactions and transactions happen simultaneously among multiple entities.

"It's no longer just about supply—it's about creating value for customers, the company and its suppliers," argue David Bovel and Joseph Martha in their book *Value Nets.* "Nor is it a sequential, rigid chain. Instead, it is a dynamic, high-performance network of customer/supplier partnerships and information flows." In the 2001 *CIO Magazine* article, "The Cost of Secrecy," Dr. Hau Lee, Director of Stanford University's Global Supply Chain Management Forum, agrees. "Customers are going to demand more and more from your supply chain," states Lee. "If you are late because your distributor is late, your customers will go to a competitor whose distributor isn't late. That is more than company-to-company competition. We're going to see supply-chain-to-supply-chain competition. If one link suffers, the whole thing suffers."

This level of interconnection is becoming increasingly attainable. Innovative customer strategies and change management programs, networked computing and communication technologies and leading companies are setting the stage for the interconnected economy. In particular, Extensible Markup Language (XML)-based Web services now make it possible for companies to share information and exchange data much more fluently than before.

Web services increase the "permeability" of companies by synchronizing previously incompatible data and applications. This includes not only the integration of independent Line of Business (LOB) applications, but also the interoperability with Electronic Data Interchange (EDI) formats and more traditional EDI transports such as Value Added Networks (VANs). The result: SCM, CRM and ERM solutions can be integrated and the people and processes located at various points on the supply and demand chains can be connected both internally and outside the four walls.

When done correctly, interconnection can also be attained cost effectively. The keys to keeping Total Cost of Ownership (TCO) down are focusing on core competencies, matching technology investments with those competencies and allowing innovative technology to become the backbone of a scalable, interconnected business.

One step at a time

This is not an overnight revolution. For the most part, it is a process of evolution punctuated by technological change and bursts of innovation. Companies are no longer being asked to make a revolutionary break with the past. Instead, they are being called upon to make sensible investments in the present and future. Executives expect compelling returns on their investment in new solutions. They require a low TCO and smart integration with key vertical and custom systems. Executives expect these decision criteria to be aggressively met; but, for their part, they must be prepared to make the incremental and forward-looking investments necessary to capitalize on the interconnected future.

Our purpose here

What forces are driving this shift to the interconnected economy? What does a disconnected versus an interconnected business look like? How can TCO be kept to a minimum? What benefits and ROI can be attained? These are the key questions on the minds of decision makers looking to capitalize on the customer-centric and collaborative economy, and they are the focus of this white paper.

The Disconnected Business

Companies have only just begun to realize the benefits that will arise as they strengthen their internal and external connections. At this point, however, most firms remain largely disconnected, restrained by organizational silos and boundaries, truncated business processes and disparate information systems. To better understand why this is the case, we need to start with a basic look at the fundamental forces of business and how companies have been able to optimize them to this point.

Laying the groundwork

Broadly speaking, the supply chain involves the direction of the flow of goods and materials from suppliers, through various production sites, and ultimate delivery to the end user. SCM strategies and technologies are all about maximizing efficiency and reducing cost at every turn: inventory control to avoid expensive holding costs and carrying charges associated with overstocks and stockouts; complex logistical and transportation planning to optimize time to market while minimizing delivery cost; statistical models and purchase histories designed to help planners more accurately forecast production runs, etc.

The demand chain encompasses the customer (whether B2B or B2C) and all of the customer-facing entities and processes involved with identifying and meeting customers' requests, specifically marketing, sales and service. Companies now interact with customers over multiple channels. In many cases, they are also required to provide around-the-clock informational, transactional and service capabilities.

CRM strategies and technologies fill a significant business need here. Where SCM largely revolves around cost reduction and efficiency, CRM primarily revolves around revenue generation. CRM helps companies efficiently deploy their customer-facing resources. The goals are to clearly identify and capture demand, recognize valuable customers and utilize relevant and actionable customer data to generate ROI by retaining high-margin customers and diverting valuable resources away from under-performing ones.

Typical Supply and Demand Chain

Supply Chain
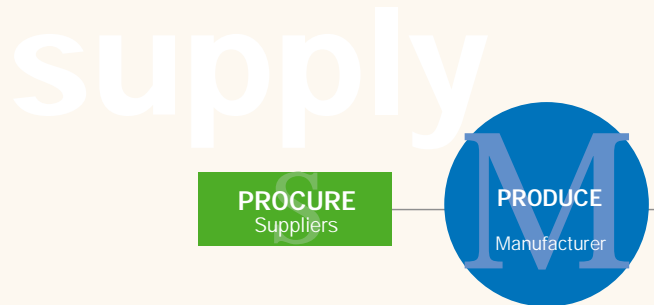
supply

| PROCURE | PRODUCE |
| Suppliers | Manufacturer |

Demand Chain

demand

SEGMENT CUSTOMERS   CREATE VALUE PROPOSITION

So what's the problem?

For the most part, SCM and CRM matured independently and without proper connection to ERM systems. As a result, the strategies and technologies—and subsequent workflows, business processes and cultures—falling under supply and demand developed along divergent trajectories as well. This does not mean that, by themselves, SCM and CRM initiatives have not had extremely positive impacts. In fact, it's quite the contrary. SCM, CRM and ERM have made substantial, positive impacts across all company

The typical supply chain involves the direction of the flow of goods and materials from suppliers, through various production sites, and ultimate delivery to the end user.

DISTRIBUTE
Distributor

SELL
Retailer

SERVICE
Manufacturer, Retailer

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INTERACT
Retailer

SELL
Retailer

**SERVICE**
Manufacturer, Retailer

sizes and verticals. Each solution has injected pockets of efficiency and greater productivity, and continued investment in these areas attests to this. The problem is, independent deployment can only take an organization so far.

Thus interconnection mandates integration of the technologies, systems and processes associated with these areas. The negative impacts of not doing so in the coming decade can be substantial and will only become more evident as the interconnected economy pushes companies to achieve higher visibility along the entire supply and demand chains.

CASE STUDY APCO

Interconnection Helps APCO Worldwide Boost Its Bottom Line 3%
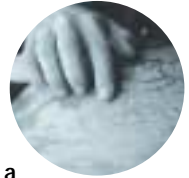
APCO Worldwide, a global public affairs and strategic communications firm, sought a unified view of its operations in order to enhance productivity and profitability. Headquartered in Washington, DC, APCO has 23 offices in 11 countries worldwide and annual revenues of $46 million.

APCO's dramatic growth over the past decade resulted in a disconnected enterprise that had difficulty meeting client expectations and maintaining internal controls. Until recently, the company shared a mainframe-based, financial accounting system and used a PC-based project management system to track time and expenses and generate invoices. Most reports were created manually due to limitations in the project management system.

"The fact that everything had to be entered at least twice created the potential for errors," says Chrystal Kern, Chief Financial Officer for APCO Worldwide. "Delays and mistakes in moving information between the two systems often caused billings to go out late or to become overdue without anyone knowing." APCO needed a global accounting system that bridged cultural, language and statutory requirements. "When we got the details, it was clear that Microsoft Business Solutions was the only company that would meet our overall requirements," Kern says.

The integrated operations solution allows APCO's employees to log into a secure Web site from anywhere in the world and submit time and expenses. This eliminates re-entry of time sheets, which helps keep budgets current. Enterprise reports can be generated on any project, practice group, or office and in any currency. APCO plans to allow managers to access reports over the Web and make data instantly available to clients via an extranet.

By eliminating client write-offs and reducing older account receivables, APCO's bottom line increased by 3%. "The cash savings in the first year alone amount to 40% of the entire cost to develop and implement the system worldwide," says Kern.

the cost?

Disconnections frustrate the customer and force the firm to engage in unprofitable transactions.

Everyday business, chronic problems

The countless operations that occur when interacting and transacting with suppliers, manufacturers, distributors, customers and internally among various departments, systems and employees all contribute to the cost of doing business. Valuable time is lost and cost rises when activities and data are unnecessarily duplicated (causing errors on top of errors) and disparate systems, departments and companies fail to communicate. "Any time there is a break in the process it is indicative of a problem," explains Dr. Katherine Jones, Managing Director, Enterprise Business Applications with Aberdeen Group. "The impact of all those broken processes is really quite immense in terms of lost productivity."

Take demand planning at widget and gadget maker Company A. At Company A, demand planning traditionally involves a relatively small group of employees. They create statistical forecasts based on product sales history, purchase histories of customers, competitor performance, current economic conditions and, more often than not, instinct. Often, however, their visibility into the sales pipeline is limited and communication between the sales and production departments (much less among its partners and suppliers) is minimal. The only people with a clear understanding of the statistical forecasts end up being the planners themselves.

The absence of more accurate, real-time visibility into customer demand ripples out across Company A's entire supply and demand chains, increasing cost and inefficiency. The Master Production Schedule (MPS) is based on inaccurate forecasts because the planners were looking solely at last quarter's purchase data rather than communicating with the sales force and other partners to better anticipate demand.

For example, let's say Company A produced 105,000 widgets for the month rather than the 85,000 that were needed. The reason: A long-standing customer decided to scale back its standard order due to a seasonal sales drop; vital information that the sales agent may have had but was not communicated to the production side, which continued to procure materials from suppliers. The overstock proves costly as widget holding costs roll up. Meanwhile, marketing teams have to divert resources to launching campaigns in an effort to reduce excess widget inventory.

On the demand side, the impacts can be similar. In company A's case, the worst words that a gadget sales agent can utter to the customer are, "I'll have to get back to you." With no visibility into inventory availability and possible ship dates, the salesperson pushes through a retailer's order for 12,000 gadgets anyway. As it turns out, this represents 3,000 more gadgets than the standard order and Company A does not have the available stock to meet the demand. Thus the delivery window provided by the sales agent is incorrect since Company A has to procure the materials from partners needed to make more gadgets then overnight the remainder of the order at added expense. Meanwhile, the customer becomes frustrated and begins pricing gadgets with Company A's competitors.

Disconnections like these create inefficiency, customer churn and cost. Without clear visibility into inventory, pricing, production schedules and other supply chain information, sales agents and Customer Service Representatives (CSRs) cannot quickly and accurately address customer and prospect needs, leaving money on the table. When interactions with partners and suppliers aren't synchronized, demand planning and forecasting remain a guessing game. All told, the full benefits of CRM, SCM and ERM go unachieved, companies are unable to deliver on their promises and, in some cases, engage in transactions that are unprofitable for the firm.

"We have our reasons"

The obstacles to interconnection can be identified. For example, only during the last three to five years has marked progress been made in more accurately identifying and influencing the demand signal. Primarily through

CRM, the incorporation of customer-based practices across business models is starting to take hold. Companies are focusing on the customers most valuable to the organization and cost-intensive call centers are quickly becoming revenue-generating contact centers. Still, key lessons regarding customer-focused implementations have only recently come to light.

One missing link is how companies define what they want to do with CRM in the first place. Technology, though vital to success, is not a panacea. In fact, much of the failure around CRM results from companies' inability to manage technological implementation in conjunction with strategy, a focus on process and a commitment to change.

Moreover, tailoring a service or product to profitably meet customer demand is a very sophisticated level of relationship management; and when companies get to that level, connecting the supply and demand chains becomes more critical than ever before. For example, if companies look to CRM simply to tailor communication or offers, it is not necessary to get the supply chain or ERM systems involved. But the goal is profitable customer loyalty, not targeted marketing. To get there, it is imperative to have a cost efficient way to drive the back end of the company, which makes for a much more powerful business model.

Though CRM systems offer significant value when used in isolation, they can be optimized when further integrated with supply systems and ERM solutions. Greater system synergy will limit costly errors caused by employees manually re-keying important transaction or distribution data, for example. Customers will also be more empowered. Visibility into product availability, delivery dates and more accurate order tracking are just the beginning.

Different side, same coin

Another obstacle to interconnected business is how companies interact and transact with partners along the supply chain. This is an issue that SCM systems alone have not yet properly addressed. Typically, one company may use various forms of data transfer depending on which partner it is talking to, such as EDI, physical mail or local or long distance fax. Often one dominant player in the chain will dictate how other players will communicate, forcing others to

CASE STUDY MAAX Spas

An Interconnected MAAX Spas Cuts Manufacturing Costs and Raises Customer Service Levels

MAAX Spas manufactures hot tubs under various brand names, including Coleman Spas, Elite Spas, Savannah Spas and California Cooperage. The company has multiple distribution channels, from big-box retailers such as Home Depot to over 400 dealers throughout North America and Europe.

The company needed improved manufacturing and financial systems to easily integrate information from three separate manufacturing facilities located in Arizona, British Columbia and Toronto. Prior to its effort, MAAX Spas' three plants utilized two or three independent, non-integrated systems each. In the past, redundant order entry, data errors and overlapping systems all contributed to lack of communication between supply and demand personnel, unnecessary operating cost and lost revenue by not placing the right product in the right dealer's hands at the right time.

Microsoft Business Solutions has made a significant impact at MAAX Spas. Real-time access to manufacturing information is proving a powerful way of strengthening dealer relationships and driving growth. The technology has allowed MAAX Spas clearer visibility into where its products are at each stage of the manufacturing and delivery process. Dealers can now track the status of manufacturing orders, pick up a pocket PC and check available inventory or track the status of open parts orders at any time.

New manufacturing and financial tracking systems have improved gross margins, reduced costs and saved time by eliminating data-entry errors. Manufacturing efficiency and tighter inventory control are driving higher capacity utilization as each plant approaches efficiency levels in the "100%" range. Just as significant, MAAX Spas can keep the promises it makes to its customers. "We can manage the expectations of the end users," says Bill Conati, Manager of Information systems for MAAX Spas. Based on its insight into available stock, the company can make commitments to its clients "and be assured that [the product] is going to be there for them."

the plan?

New strategies and practices are bringing supply and demand systems together.

adapt. These "market makers" may levy a fee (a percentage of the invoiced price, e.g. 10%) if a shipment arrives late, or charge fees for transacting over a non-preferred channel. Others require partners to respond within 10 or 20 minutes regarding the availability of stock and shipment dates.

Today and tomorrow

How have the problems associated with disconnection been addressed so far? In recent years, companies have taken significant steps to automate various functional activities. Articulated earlier, some have invested in SCM, taking steps to more effectively manage suppliers and partners. Others have invested in CRM, concentrating their efforts on automating sales and customer service processes. Still others have focused on ERM systems to manage a wide range of internal processes. "Right now, some companies are attempting to integrate from the inside out, while others are trying to integrate from the outside in," articulates Robert Anderson, Research Director at Gartner.

In conjunction with these investments, there has been some progress in bringing supply and demand systems and players together. The list of new strategies and technologies—not to mention their accompanying acronyms—can be dizzying. A few of the most innovative include Configure to Order (CTO), which allows customers to build or "configure" deliverable products, such as computers and automobiles, online. The objective: Provide clear visibility into product information, inventory, production schedules and delivery dates. CTO is designed to empower customers while allowing for more efficient, make-to-order practices and lower inventory.

Vendor Managed Inventory (VMI) is a method of optimizing supply chain processes by which the manufacturer regulates supplier inventory levels. Typically using EDI or the Web, manufacturers gain visibility into suppliers' inventory data and generate the purchase orders. The benefits include tighter inventory control and downstream visibility into distributor sales and stock levels along with more accurate and timely point of sale data.

Radio Frequency Identification (RFID) involves the use of transponders to track the flow of goods along the entire chain. Attached to the products themselves, the transponders can be scanned remotely, even when located inside other packaging. Bar code technology remains a preferred and proven method of tracking products as they make their way to end users. In time, however, RFID will offer cleaner communication of important information, error reduction and strengthened service levels.

Finally, Supply Chain Event Management (SCEM) is designed to help companies flexibly adapt to constantly changing business conditions, particularly in terms of conducting and completing transactions. What if on Tuesday the distributor requests 1,000 tennis rackets to be delivered in three weeks, but the next day asks for 500 now and 500 at the original date? What happens if there is an unexpected work stoppage due to a labor strike or inclement weather? Real-time alerts can be sent via email, screen pop, mobile phone, etc., that inform the recipient(s) of delays, order changes, potential stockouts and so forth. The projected benefits are adaptability to evolving needs and conditions, less "firefighting" company-wide due to an ability to troubleshoot problems before they occur, and rising revenue and decreasing cost by increasing the velocity of the supply chain.

The near and far of it

While some of these practices have yet to reach their promising potential, it is too early to tell for others. To be sure, individual examples of success can be found; but truly connecting supply and demand processes, systems and people within and between companies has yet to fully mature. Consequently, on their own, some CRM- and SCM-related solutions have not generated the benefits associated with integration or fully met the high expectations that companies set.

An obvious but important factor why independent systems are not living up to desired goals is that companies did not take steps to better integrate disparate systems at the outset. Much of this is due to timing. Simply stated, different solutions were deployed at different times. Another primary reason: the business case simply was not compelling. To integrate would likely incur significant cost without tangible return since the strategies, processes and technologies of interconnection had not yet matured. That is rapidly changing, however, and companies need to determine how to deploy new technologies to seize long-term sustainability. To understand why, we need to examine the forces driving the interconnected economy and compelling disconnected companies to tap into it.

The Progress of Process

A host of new strategies and technologies are helping companies more tightly integrate supply and demand.

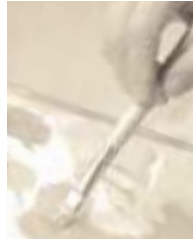| PROCESS	DESCRIPTION	BENEFITS
Configure to Order (CTO)	Customers can configure products to match their individual preferences. They gain visibility into product information, inventory, production schedules and delivery dates.	Customers are empowered with knowledge about both the product and process. They can order exactly what they want, while enabling a more efficient workflow and lower inventory for the supplier.
Vendor Managed Inventory (VMI)	The manufacturer is able to maintain suppliers' inventory levels and generate purchase orders.	Tighter inventory control, clearer downstream visibility into distributor sales and stock levels and more accurate point of sale data.
Radio Frequency Identification (RFID)	Transponders are attached to a product to monitor its progress through the supply chain and even beyond the point of sale.	Real-time information on each specific item tightens the supply chain, cuts lost inventory and strengthens service levels.
Supply Chain Event Management (SCEM)	Companies can flexibly adapt to supply chain issues by using technology such as email and mobile phones to receive and respond to real-time alerts.	The ability to troubleshoot problems before they get out of hand increases the velocity of the supply chain, improving revenue and decreasing cost.

The Forces of Change and Opportunity

the boundaries within and among companies are beginning to dissolve. Organizational, functional and system silos are giving way to dynamic networks that span conventional boundaries, extending and enhancing business processes. "Streamlining cross-company processes is the next great frontier for reducing costs, enhancing quality and speeding operations," writes Michael Hammer in the *Harvard Business Review*. "It's where this decade's productivity wars will be fought. The victors will be those companies that are able to take a new approach to business, working closely with partners to design and manage processes that extend across traditional corporate boundaries. They will be the ones that make the leap from efficiency to super-efficiency."

What is driving this seismic shift? What are the key forces that are compelling companies to act? The most visible forces behind interconnection are heightened customer expectations, intensifying competition and empowering technology.

Heightened expectations

Customer expectations are high and rising. This is as true in the B2B arena as in B2C. Companies expect their suppliers and partners to know them intimately, enabling an increase in value and reduced cost. Firms also expect precision in how products, services and materials are produced, shipped and delivered to end users. Finally, these organizations will ultimately favor those trading partners capable of actually strengthening their overall operations.

Heightened expectations require com-

panies to excel beyond core competencies. Yet this does not mean organizations should take on unnecessary resources and cost in an effort to become all things to all players. Rather than trying to take on peripheral responsibilities, firms should collaborate with partners who can take these responsibilities on more productively and affordably. In this way, collaborative relationships with the important players along both the supply and demand chains will help firms meet the rising expectation levels.

John Hagel, business consultant and author of *Out of the Box*, calls this approach "leveraged growth." It is the ability to mobilize resources, capabilities and assets on one's own behalf without assuming ownership of them. It enables companies to magnify the value of their own assets and those of others in an agile, focused and collaborative way. It has the potential to reduce risks associated with fixed assets and rigid capabilities, while expanding the dimension of service that one can provide to a customer. According to Hagel, "This approach begins with the realization that ownership of business assets is not always necessary to support growth."

Intensifying competition

In the wake of deregulation, globalization and other trends, we have seen the intensification of competition throughout all industries. In fact, industries no longer fit into neat little packages. Competitors can emerge from unexpected places. Competition drives companies to innovate and improve efficiency, or it drives them to commoditization, disappointment and, ultimately, outright failure. This well-recognized process is accelerating quickly in recent years.

In recent years, competition has intensified as customers' purchase options have increased. They have more access to competitor information, alternate pricing and multiple channels than ever before. Customers increasingly make their choices based on a range of capabilities and offerings, many of which cannot be managed or performed by a single organization. Defection of even the most long-term customers is just a click away.

The best way to combat defection is to provide a holistic

the future?
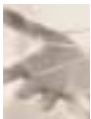
Tomorrow, interconnectivity will be a mandate for survival.
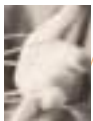
customer experience by optimizing the product and customer lifecycles. This means building strong customer relationships at the front end and collaborative relationships with suppliers and partners at the back end. Otherwise, it will become increasingly difficult to meet customer demand and match—much less exceed—the value of competitors' offerings.

More often than not, organizations continue to compete on price rather than build high-margin, profitable relationships with their best customers. This will change as the interconnections between supply and demand take shape. Vertically integrated companies will give way to emerging value networks. In time, value networks will compete with other value networks.

Empowering technology

Despite some of the disappointments and unmet expectations of technology in recent years, the promise of new customer value creation and extended collaboration remains very much alive. Put another way, technology is the enabler behind the interconnected economy.

The technologies of interconnection continue to weave their way into the fabric of companies, industries and economies. Though the widespread benefits of several of the processes—RFID, SCEM and VMI in particular—have yet to fully materialize, the technology needed to facilitate adoption and optimization is falling into place. Time will tell as these more focused approaches tie into CRM, SCM and ERM solutions.

However, the collaborative, interconnected economy will be driven by XML-based Web services platforms designed to integrate CRM, SCM and ERM solutions internally and allow for fluid data transfer and communication between companies. The goal is to permit information (regardless of channel) to freely pass—in real time—between formerly independent departments and external players.

More importantly, the promise of Web services is ushering in this level of integration and collaboration cost-effectively. Moving beyond EDI, Web services offer more opportunities for cost-friendly, efficient inter-company interaction and transaction as well as more value capture opportunities, an important topic we will visit later in the white paper.

CASE STUDY OLDCASTLE PRECAST

Growing Manufacturer Oldcastle Precast Saves Millions and Reduces Inventory Turns

Headquartered in Auburn, Washington, Oldcastle Precast primarily grows its business by acquiring smaller companies. As a result, the concrete product manufacturer regularly faces the challenge of integrating other firms' disparate IT systems and processes. With 800 users, the company's legacy ERP system was functioning, but it was quickly reaching its limitations and lacked the long-term viability necessary to support the firm's growth strategy.

"Most of the companies we acquire are smaller, with less focus on the IT aspect," says Bob Quinn, CFO, Oldcastle Precast. He adds, "Our business wasn't broken, and we didn't want to have to break it to comply with a new implementation. In essence, we needed to replace a good working tool with a better one and not change ourselves in the process."

In order to support future expansion, Oldcastle Precast needed a solution to fulfill basic business needs, including production and general ledger, while having the flexibility to customize business processes. The company also needed a reliable system that was easy for newly acquired companies to learn and use. Microsoft Business Solutions was the answer, which enabled Oldcastle Precast to significantly increase employee usability as a result of 100% Windows compliance. Oldcastle Precast now provides multi-lingual and multi-currency capabilities for easy adaptation, and can integrate all aspects of its business processes into newly acquired companies, saving significant amounts of time and money.

Today, Oldcastle Precast can seamlessly integrate with current and acquired sites, while retaining the flexibility to customize functionality as needed for reporting and analysis purposes. Bill of material accuracy has increased with lower waste and shrinkage. This alone has resulted in $10 million of savings per year. With real-time inventory, IT turns have increased by .5 turns and leveraged group buying has resulted in an annual purchasing savings of $7.5 million.

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the journey?

Companies must intelligently invest in new solutions to meet the requirements of an interconnected economy.

Thus, powerful technological innovation is permanently altering the landscape of possibilities. The improved interconnection of supply and demand processes internally and externally is fast becoming an attainable business reality. Addressing the experiences and lessons learned from the recent past, new solutions have emerged that are designed to provide clear investment returns, lower cost of ownership, rapid implementation, ease of use and successful integration with existing systems. New business software solutions increasingly reflect the specific needs, concerns and spending requirements of not only the largest companies, but all dynamic, growth-minded companies that contribute so heavily to the overall success of the economy. In this way, new technology plays the dual role of driver and key enabler of the interconnected economy.

The emergence of these enabling technologies creates fresh opportunities and new business challenges. While the pressure to invest in unproven, "silver-bullet" technologies has subsided, the imperative to continue down an evolutionary IT investment path backed by a strong business case and ROI proof points remains clear. Companies must intelligently and diligently invest in new technologies and business solutions in order to generate the gains that the interconnected economy will require. To not do so will invite significant risk as rising customer demand, competitor advancement and technological innovation takes place.

New Technology: Driver and Enabler
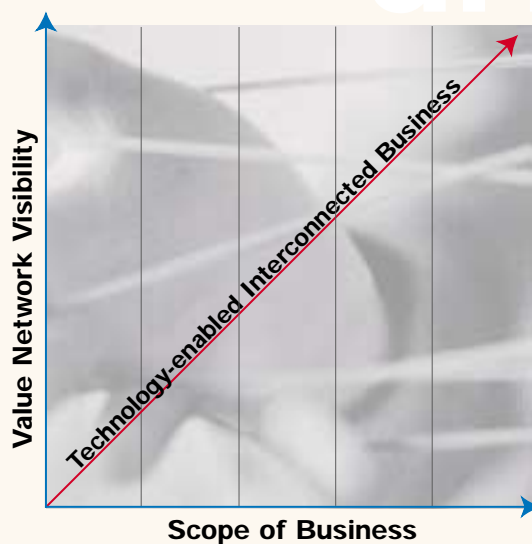
Customer expectations, competition and new technology are forcing firms to interconnect. This may limit visibility as the scope of business widens.

But technology plays the dual role of enabler and driver. As the backbone of value networks, technology will allow clear visibility even as the scope of business widens.

The crystal ball…short term

Heightened customer expectations, intensifying competition and empowering technologies are all combining to compel disconnected companies to forge new relationships and processes across traditional supply and demand chains. Despite pockets of progress, most organizations across verticals and sizes have yet to realize this interconnected opportunity.

As a result, persistent questions are sitting in the back of executives' minds: Are my marketing, sales and service departments connected to production or do they operate independently of one another? How do I cut down on inaccurate forecasts and planning through better insight into demand? How do I better communicate with my partners and suppliers? How can I better collect and act on demand insight to plan, produce and deliver products? Can I better engage customers to drive more retention revenue? Am I able to capture and process orders across multiple channels?

From prediction to reality

Questions like these run through the minds of most decision makers. Yet these questions may also sit on the periphery. But this will inevitably change. "Companies will have to react quicker to the full demands of customers in order to profitably maintain their loyalty," explains Gartner's Anderson. "It's going to come fast and furious. They will have to respond rapidly and be efficient in order to maintain their margins."Agility and adaptability in real time will become paramount to achieving success.

To capitalize on this opportunity, it will be necessary to build more integrated systems that recognize, address and automate the process linkages between the back-end (internally or with partners and suppliers) and the front-end (customer-facing). Indeed, the interconnected future will depend on not only the internal integration of ERM, CRM and SCM systems, but also the collaborative connections to the many external systems of partners, suppliers and customers. Exploring what that interconnected future will look like—and further articulating what role technology will play in enabling that vision—is the subject of our next section.
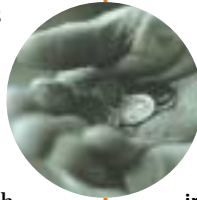
CASE STUDY Zagat Survey

Tighter Inventory Control and Order Tracking Helps Zagat Survey Unify Its Face to the Customer

Zagat Survey produces guides to dining, travel, shopping, golf, movies and other leisure activities. The company, which was launched in 1979 with the New York City Restaurant Guide, produces approximately 45 titles covering more than 70 cities worldwide.

In an effort to generate higher productivity and efficiency levels, Zagat Survey sought greater visibility across several areas, including inventory control, order trafficking and electronic commerce. As the company expanded in recent years, its existing business management package lacked the ability to monitor outsourced manufacturing processes, control inventory and traffic sales orders from receipt to fulfillment. Additionally, the company needed a system with budget control capabilities, enhanced financial reporting and an online order entry system. Zagat Survey resorted to using shared spreadsheets, which were inconvenient and often inaccurate.

Following an on-time and on-budget 10-week implementation period, Zagat Survey turned to Microsoft Business Solutions to connect back-end and front-end systems and processes. The results were greater functionality and efficiency to online order processing on the front end and improved financial reporting and inventory control at the back end.

The online ordering capabilities included in the solution immediately began to increase the efficiency and service level of the ordering processes. Zagat Survey is now open for business 24 hours a day, 365 days a year. Additionally, the solution makes it possible for customers and front-office personnel to quickly check the status of an order at any step along the way. On the back end, the e-commerce module has eliminated redundant data entry, as orders are automatically entered in the sales order module and are available for immediate processing. This seamless workflow has helped unify Zagat Survey's face to the customer, increased the speed of order processing, eliminated the risk of error and allowed for the smarter allocation of resources.
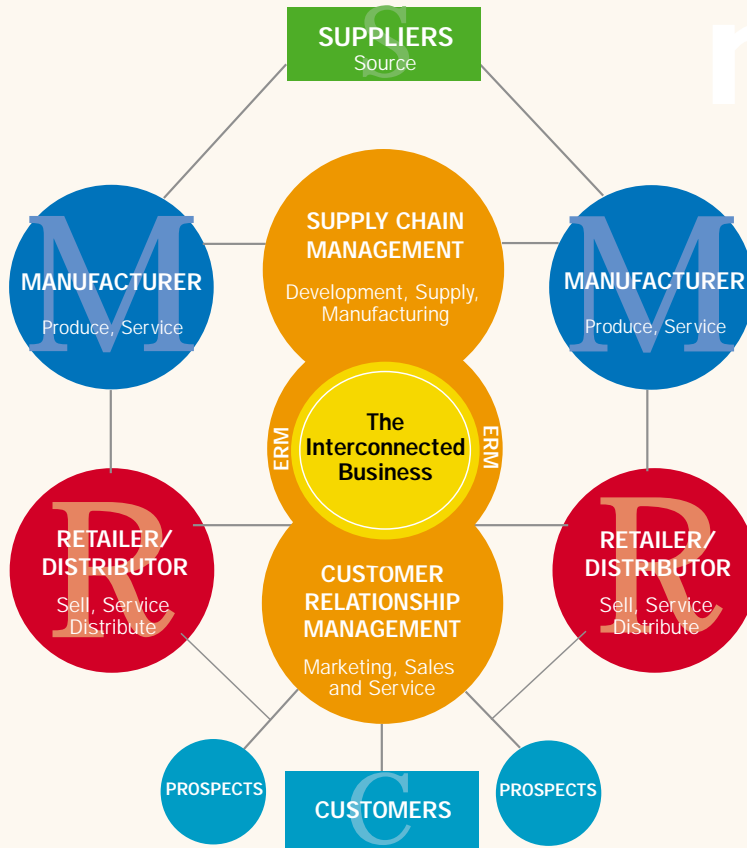
The Interconnected Business

n 1937, Nobel Prize winning economist Ronald Coase wrote "The Nature of the Firm," an influential paper explaining that companies tended to keep activities in-house due to high "transaction costs." This challenge persists even today, but the cost of interconnection is decreasing as new technologies emerge.

New and existing forms of communication have sparked high levels of interaction and transaction between suppliers, manufacturers, distributors, retailers and customers. Groundbreaking technologies have allowed companies to tailor their products or services to the demands of individual customers or small groups of customers. Profitable relationships with the important players along the supply and demand chains are now possible.

The supply chain and the demand chain no longer have to be isolated. The demands that are made for a product

The Interconnected Value Network

SUPPLIERS
Source

MANUFACTURER
Produce, Service

SUPPLY CHAIN MANAGEMENT
Development, Supply, Manufacturing

MANUFACTURER
Produce, Service

ERM

The Interconnected Business

ERM

RETAILER/ DISTRIBUTOR
Sell, Service Distribute

CUSTOMER RELATIONSHIP MANAGEMENT
Marketing, Sales and Service

RETAILER/ DISTRIBUTOR
Sell, Service Distribute

PROSPECTS

CUSTOMERS

PROSPECTS

An interconnected business sits at the core of the value network that brings together suppliers, partners and customers, by obtaining clear visibility across the formerly independent supply and demand chains.

Shown here are the players, their core functions and how the interconnected business uses integrated SCM, ERM and CRM and Web services solutions to facilitate information sharing throughout the value network. In this way, more fluid interactions and transactions can take place among multiple entities, allowing the interconnected business to readily identify and act on value opportunities in real time.

can actually ripple back into the supply chain decisions that are made in producing the product. The production process can take place much closer to real-time demand. In the next decade, these chains will evolve into *value networks* where interactions and transactions are happening simultaneously among multiple entities. Companies will be able to capture orders faster, plan and execute procurement and production more efficiently, allocate inventory more intelligently, utilize assets better, cut transit costs and complete the loop by boosting fill rates and fulfilling customer requests quickly. Profitability goes up as independent operation gives way to an interconnected supply and demand network that creates value for the most important asset any company possesses, the customer.

Identifying the infrastructure, the external perspective

The technological backbone of the value network will be Web services platforms that enable cross-company interconnection by integrating multiple data formats. Web services synchronize incompatible data and applications, allowing information to pass more freely among companies. Transaction information, production schedules, delivery schedules, inventory levels and order status will be shared more often and with more clarity. As a result, the people and processes located at various points on the supply and demand chains can be connected.

Web services overcome one of the major obstacles to creating the value network: the cost of integrating the different formats of data exchange. They translate the data from EDI, VANs, email, phone, Web and direct mail into a single format that permits firms to send and receive the data in an automated fashion. This is a marked step forward to current methods of data transfer since most companies will deal with many different partners via any one of the formats above; and in many cases, one large player will dictate which format will be used and when.

Charting the ROI

Ronald Coase's prognostication of "transaction costs" inhibiting collaboration was indeed visionary. Only now is the cost of doing so being successfully challenged by

CASE STUDY THE BELL GROUP

Jewelry Industry Supplier The Bell Group Connects Disparate Systems and Raises Order Fill Rate by 20%

The Bell Group, based in Albuquerque, New Mexico, is one of the largest suppliers to the jewelry industry, serving over 125,000 customers. Started by Saul Bell over 50 years ago, the company provides jewelers all over the world with tools, equipment, raw materials and packaging. Looking to strengthen its competitive edge, The Bell Group recognized a need to both improve operational processes as well as its relationship with customers. Yet, multiple, non-integrated systems and applications made it difficult to quickly access information, resulting in high labor costs and data "bottlenecks."

To enable internal connections between the supply and demand chains, the company sought to integrate its multiple operational systems. The firm chose a unified system that included manufacturing, CRM, financial and order processing modules, so employees in all departments could more quickly and easily access customer and supply information. "By implementing a full Microsoft Business Solutions system, we have been able to streamline processes and reduce related costs," says Andrea Hill, Partner and Director at The Bell Group.

The true benefit of the integrated system was well illustrated at a recent industry trade show. Customers were able to purchase products right at the show while agents could access real-time inventory and view customer orders. As a result, agents could immediately offer customers substitute merchandise for out-of-stock products.

The Bell Group now experiences profitable growth at a level that they were previously unable to achieve. The company's order fill rate increased by 20% while technical support inquiries from customers decreased by 33%. The company's future plans include providing Web access to the system for the 29 international dealers associated with the company, enabling The Bell Group to improve its service to channel partners and increase direct sales internationally.

The Role of Web Services

A Web services model such as Microsoft .NET overcomes one of the major obstacles to creating the value network: the cost of integrating different formats of data exchange. They translate the data into a single format among players, thereby reducing error and lowering cost.
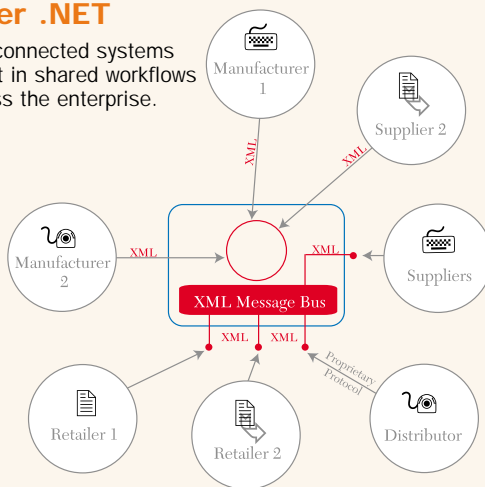
Before .NET

Miscommunication exists, resulting in unwanted workflow dead-ends and disparate systems.
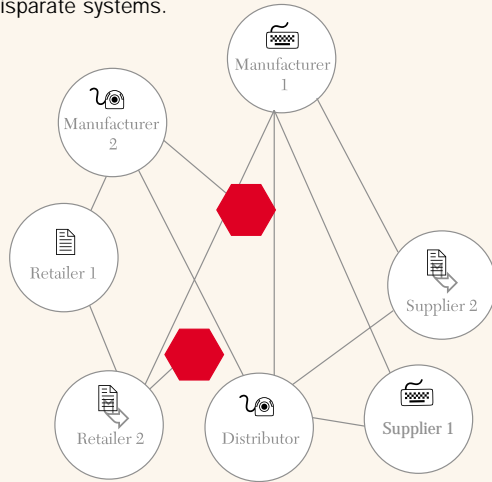
After .NET

Interconnected systems result in shared workflows across the enterprise.

KEY

long distance fax

edi-electronic computer (PDA)

physical mail

computer/email

local fax

technological innovation in the form of Web services. The shift to advanced interaction and the integration of applications software (both internally and externally) promise to deliver a powerful return on investment.

But exactly how does this roll up into ROI? To gain some insight into how this would play out, consider the following scenario: A B2B parts manufacturer has purchased one software module (for five users) that provides access to a collaborative, Web-based network designed to enable interactions between its trading partners at a cost of $3,500. The company also subscribes to the accompanying network management service for an annual fee of $1,375.

Let's say the manufacturer has 100 trading partners, generating 40,000 transactions (invoices, purchases orders, etc.) annually. What happens if 50% of these transactions are shifted to the collaborative network? Immediate benefits result. First is a reduction in long distance fax, EDI, physical mail and other methods of communication and collaboration. Labor costs also would be reduced by an estimated 20% as a result of reduced error rates, data entry and paper shuffling. Under this simple scenario, the new platform would reduce annual transaction costs (pegged at $26,062 under the status quo) by $5,477.

In this manufacturer's case, when initial investment costs, annual subscription costs and reduced labor costs are taken into account and compared to existing costs, the ROI comes to 427% with a payback period of less than a year. Moreover, as evidenced by "The ROI of Web Services" model on page 19, this number grows as additional data transfer occurs over the network. In real terms, collaborative interaction and transaction over the Web services model pays off.

Application fluency, the in-house perspective

While facilitating more fluid data exchange and external collaboration, the Web services model also allows for applications to integrate. Historically, software solutions were designed to interact with people, not other solutions. Thus attempts at solution integration are often piecemeal, almost always costly and only mildly successful.

This in turn greatly inhibited the communication needed for intra- and inter-company collaboration. Need to link

The ROI of Web Services

Start-up costs	License Fees	Initial Costs						
Module license fee		$2,000						
Named user license fees	300	$1,500						
Number of named users	5							
Total initial investment (module & named users)		$3,500						
Hourly wage of average user		**$10.00**						
Number of trading partners		100						
Number of transactions per trading partner/year		400						

On-going transactional costs — Transactions	Trans. by medium	No. of Trans.	$ per Trans.	% Transactions on MBN				
Total transactions per year		**40,000**		**0%**	**25%**	**50%**	**75%**	**100%**
Via long distance fax	25%	10,000	$0.10	$1,000	$750	$500	$250	—
Via EDI	5%	2,000	$0.15	$300	$225	$150	$75	—
Via physical mail	15%	6,000	$0.37	$2,220	$1,665	$1,110	$555	—
Via other more expensive method	1%	400	$10.00	$4,000	$3,000	$2,000	$1,000	—
Via other free method (email, local fax, etc.)	54%	21,600	—	—	—	—	—	—
Costs based on % Transactions on MBN ($)								
Annual transaction cost for legacy transactions				$7,520	$5,640	$3,760	$1,880	—
Annual labor cost for non-MBN transactions	5	mins/trans	$0.17	$33,333	$25,000	$16,667	$8,333	—
Annual labor cost for MBN transactions	4	mins/trans	$0.17	—	$6,667	$13,333	$20,000	$26,667
Annual MBN subscription		$1,375		$1,375	$1,375	$1,375	$1,375	$1,375
Total annual costs				**$42,228**	**$38,682**	**$35,135**	**$31,588**	**$28,042**
Savings					**$3,547**	**$7,093**	**$10,640**	**$14,187**
Return on Investment								
Average customer lifecycle (years)		3						
Net Present Value					$9,673	$19,345	$29,018	$38,691
Payback period (years)					1.09	0.54	0.36	0.27
Return on Investment					276%	553%	829%	1105%

This worksheet illustrates the Return on Investment (ROI) that can be captured by transferring different percentages of transactions over a Web services platform such as Microsoft Business Network (MBN), which automates how businesses connect with their customers, vendors and other partners. In the example above, a firm that conducts 50% of its transactions over MBN would see an (ROI) of 553%. *Note: These are sample costs and benefits, thus individual figures may vary.*

a partner's accounts receivable system to the two applications you recently duct-taped together? Looking to provide your sales and customer service teams with reliable shipping and delivery information? Want to know if the materials order you recently changed was received and updated properly by your partner? Until now, this level of visibility simply was not feasible due to the inability of disparate applications to integrate and share information. Nor did it make good business sense to tackle the problem due to exorbitant integration costs.

Web services make it more natural for application software to come together. Today, business applications continue to run at multiple tiers: database tiers, application tiers and presentation tiers. These solutions run on the back end as well as the desktop. The Web services model connects independently running applications using XML along with Internet Protocol (IP) and Simple Object Access Protocol (SOAP).

This shifts the focus from individual applications, Web sites and devices to constellations of computers, devices and services that connect and work together. Along with the integration of data formats to enable more open communication, the Web services platform brings application fluency as well, enabling the infrastructure of the value network to take shape. The complexity and expense of having to configure and integrate separate solutions will go down as Line of Business applications are folded in to the platform. For example, CRM systems will provide insight into product integration, pricing information, quotes and orders, all of which can pass between the ERM back end and into existing SCM solutions via Web services architecture. SCM data showing how much product is available and when it's available can be given to sales, service and marketing to create revenue opportunities.

Painting the interconnected picture

Supported by the technological infrastructure above, companies will begin to engage the interconnected economy. How will this play out in everyday business? To obtain a clearer picture, it's helpful to think of the primary attributes of an interconnected business. As part of a larger and collaborative value network, the interconnected company will:

1. Empower customer-facing employees
with supply insight

Many of the insights generated by a CRM program allow a company to better align its most costly resources (whether front or back office) with its most valuable customers. This is by no means an overnight transition; but it is the next step in the ongoing evolution of customer initiatives within the emerging interconnected economy.

The goal is to empower customer-facing departments (sales, service and marketing) with the information they need to meet the right customers' needs quickly, efficiently and cost-effectively. Let's start with a look at sales. This time, it's Company B, a retailer that sells the gadgets and widgets manufactured by Company A. Imagine Company B's sales agent is in a conference call with a customer. This particular customer is a long-standing buyer, but a recent

Tightly Integrated ERM, CRM, SCM
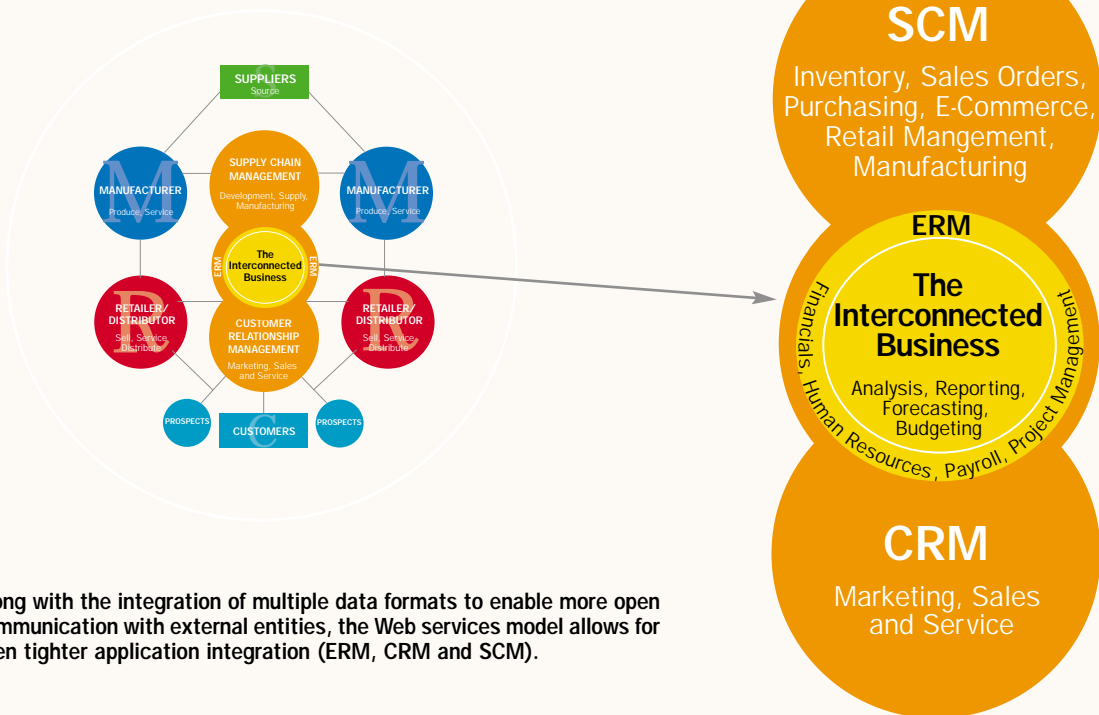
Along with the integration of multiple data formats to enable more open communication with external entities, the Web services model allows for even tighter application integration (ERM, CRM and SCM).

CRM analysis shows that he has the potential to increase his value to Company B since many of his additional purchases are made with a competitor. While recording the customer's standard 5,000-widget transaction, the sales agent suggests 5,000 gadgets to go along with the widgets makes good sense.

As if on cue, the customer says he already has a gadget supplier. But, armed with a laptop, the sales agent can check Company A's gadget inventory levels while at the same time shoot out multiple Requests for Quotes (RFQs) to other suppliers as well. She generates a quote on the spot while drawing on the gadget catalogue, inventory availability, current marketing promotions and pricing lists. Thus the agent meets the customer's needs in real time and challenges competitors. Backed by a clear window into inventory and delivery, she can also confidently provide the customer a delivery date.

On the service side, an interconnected Company B has additional advantages. For example, following the new gadget purchase, the customer calls the contact center with an installation problem. Immediately, the customer service rep pulls up the customer's profile that reflects the recent purchase along with an overall transaction history, service records and previous interaction log. The rep also has access to gadget product information from the manufacturer.

With a clear understanding of the customer's needs and profile, the customer service rep can address the problem on the spot. Aware of the installation issue, the rep also suggests a gadget toolkit that will allow the customer to troubleshoot any future problems. The rep confirms the item is in stock then connects to the ERM system to conduct a credit check. Already armed with a customer's account information, the rep can process the purchase right away without asking the customer to repeat any information. The customer wins because the problem was solved quickly, and Company B wins due to increased revenue from a cross-sell opportunity processed in real time.

ATP, CTP and beyond
By bringing back-office information (internally or from partners and suppliers) to the front office, customer-facing employees can even move beyond incorporating the cur-

rent efforts of Available to Promise (Is the product in stock?) and Capable to Promise (If the product is not in stock, how long will take to obtain it and get it to the customer?). In time, the interconnected company will be able to determine whether it is profitable to transact with and serve that customer in the first place.

Known as Profitable to Promise (PTP), organizations will have the ability to make accurate decisions on whether to go the extra mile for an individual customer based on that customer's overall value to the firm. If a company knows which 20% of its customers make up 80% of its business, it can begin to effectively allocate resources to that key group.

Customer value can be assigned according to a number of metrics and qualitative criteria, such as length of relationship, average spend, transaction history, product portfolio, credit history and frequency of interaction. PTP will take the integration of supply and demand to the next level by incorporating sophisticated customer valuation data with clearer visibility into production and inventory, then placing that insight in the hands of customer-facing employees. Companies will be able to deliver on the promises they make at the front end while acting with confidence since they are serving those customers deemed most valuable to the firm.

2. Streamline operations based on clearer insight into demand
Despite significant progress in SCM over the last two decades, the processes of procuring materials, producing goods and ultimately delivering those goods to end users will become more refined as interconnected value networks coalesce. Connected by Web services platforms, CRM, SCM and ERM are enabling this transformation. Simply put, a better idea of what customers will buy, how much they will buy and when will set the stage for

the goal?

To empower customer-facing departments with information to meet the right customers' needs.

improved efficiency, greater productivity, better agility to adapt to changing business conditions and the creation of surplus working capital. This will play out in many processes across the entire network, including order management, procurement, demand planning and forecasting, logistics and inventory control.

who's valuable?

The interconnected company will determine whether it's profitable to serve that customer in the first place.

As an example, let's revisit Company A's demand planning process. Discussed earlier, the manufacturer creates forecasts for widgets and gadgets based primarily on product sales history. The history shows the company sold 250,000 widgets last year, which becomes the basis for demand planning into the following year. What the planners don't know is that 20,000 of the sold widgets were directly related to a campaign by Company A's largest retail partner. The impact: forecasts are too high and the Master Production Schedule and Materials Requirements Planning (MRP) are inaccurate.

But what if the demand planners could immediately call up historical information around widget sales history? SCM, CRM and ERM systems could connect, permitting collaborative demand planning since widget forecasting can now be based on related information around the numbers, such as product campaigns by retail partners or up-to-date visibility into a weighted pipeline. Aware of these variables, Company A's planners know to scale back the forecast from 250,000 to 230,000, thereby avoiding the costs of procuring unnecessary materials, production time and widget overstocks.

Lead management is another example. Often, leads are not adequately shared among the back and front offices of one company, much less among suppliers and partners. If and when they are shared, the information around the leads is typically not robust enough. To better streamline supply around demand, production departments and partners need to know all the activities against those leads:

probability to close, purchase history of the customer, anticipated order size, estimated value of the customer to the firm, etc. For example, a retailer's CRM system could be wired to automatically connect to a central system so that whenever a lead is generated by an advertising campaign or on the Web, the information can be immediately routed using XML to a partner's CRM system. Collaboration of retailer, manufacturer and supplier all combine to keep customers satisfied and loyal.

3. Minimize Total Cost of Ownership

Technology should make doing business simpler, not more complex; and regardless of company size or vertical, organizations need to be able to expand technologically and interconnect without enormous price tags. As companies invest in new business solutions to strengthen their place in the value network, they need to consider the relevant benefits they can expect to generate—both direct benefits such as lower communication costs, reduced number of employees for an existing task, etc.—and indirect benefits such as faster customer response times, enhanced sales performance, better visibility into inventory or reduced error rates.

Central to investment in the interconnected era is one's recognition of the importance of integrated systems and solutions. If the costs of managing this integration are prohibitive, one stands to invest poorly. It makes good sense to invest incrementally, implementing, integrating and building on the momentum of one's prior successes. Think big, act small then reap the benefits. Over time, the small steps combine to make a much wider, positive impact.

That said, a number of questions reside in the minds of most decision makers: How do I set clear goals and project plans and stick to them to avoid scope creep and budget

overruns? How can I avoid scrapping existing technology and make the most of previous IT investments? How do I know what functionalities I need? How do I avoid additional, unforeseen expense down the road? What are the best ways to successfully avoid the adoption problem? These are the questions that must be properly addressed before any investment in the interconnected economy is made. There are several best practices that can help address these issues.

Identify strengths

The first is to know your core competencies and calibrate technology investments to support them. For example, Company A knows its strength lies in manufacturing widgets and gadgets and selling those to retail companies for resale to end users. Company A also knows who its best retail customers are. Thus, to use technology wisely and keep TCO down, Company A decides to roll out a CRM solution to empower the 10 sales agents who have relationships with those valuable retailers. The CRM solution can be tied to existing back-office data and systems, thereby giving sales agents insight into product availability, delivery dates and credit histories along with purchase histories and service records.

Or take Company C, a distributor. Its core strength—and consistent challenge—is operating as efficiently as possible, moving products to and from multiple points at the lowest amount of expense. Company C's customer base is vast and the distributor engages in thousands of transactions each year. Currently, it uses multiple formats of data transfer to conduct these transactions, but they are not streamlined. As a result, the distributor finds itself tracking down faxes for one customer, using EDI for another and shuffling through Web portals for a third. The re-keying of information, duplicate entries, high error rate and the level of resources needed to conduct business cut into profitability. To meet the challenge, Company C turns to a Web services model to organize its data transfer formats and gain higher visibility across its thousands of annual transactions. Company C saves time and money by reducing errors and doing more with less.

CASE STUDY McBRIDE ELECTRIC

Greater Access to Critical Data Boosts Customer Satisfaction at McBride Electric

The customer base is a company's most important asset. Thus profitable relationships built on strong customer data are a strategic imperative for long-term survival. Recognizing the need to better collect and manage customer information, San Diego-based McBride Electric embarked on a CRM initiative that has since allowed the company to deliver high-quality service to meet rising customer expectations.

McBride Electric is one of the largest privately held, multi-service, multi-state, electrical contractors in the U.S., offering a variety of services in the electrical, data cabling, lighting and emergency power areas. For 50 years, McBride Electric has consistently differentiated itself in the market for electrical services through superior customer service and now reaches customers across six states. Not long ago, however, the company's customer service efforts were hampered by a solution unable to store customer information from all 14 of the company's locations and provide a way to act on existing data. In addition, the company's 35 salespeople maintained their own customer databases, so data wasn't always accurate.

McBride Electric needed a better way to track customer data and help customer-facing employees provide the level of customer service the company saw as critical to ongoing success. Today the company relies on Microsoft Business Solutions CRM to get it done. McBride Electric now maintains all customer data in one location; and through integration with the back office, access to vital sales and customer information is readily available. Employees can view and update a wealth of customer data, including contact information, account, sales or order information and share that information across teams and departments.

Integrating the CRM solutions with the email system and a Web browser has made McBride Electric more agile since customer-facing employees can anticipate and meet customers' needs. It all rolls up into improved customer service and higher customer satisfaction result due to greater access to information across the organization.

the strategy?

Invest incrementally, building on the momentum of one's prior successes.

Rather than incur the expense of company-wide implementations and shaping the organization around the technology, these companies intelligently deployed technology to accentuate what they do best. For Company A, it's all about bringing its core products to its most valuable customers; for Company C, it's all about increasing margins by cutting the cost of interacting and transacting with a vast customer base. In each case, cost-efficient interconnections can take place.

Match technology to needs

A second important element is to base technology needs on business needs. Prioritize pain points according to core competencies then deploy technology to improve upon what you do best. The fact is, all that glitters is not gold, and a host of bells and whistles is not likely to make the efficiency or productivity difference. It sounds simple, but there is no shortage of war stories about expensive implementations that create problems and expense rather than adequately addressing the initial challenges set out in the first place. Think of it as the 80-20 rule of technology investment: To keep TCO down, identify the 20% of functionality that meets 80% of the company's needs.

For these reasons, a single solution that is scalable is often superior to a best-of-breed application. Even the best laid plans have gone awry when firms try to integrate two applications that were not designed to communicate. The best technologies grow with organizations, not hamper them. A single, scalable solution is designed to do just that, and it can drastically reduce TCO over time. Companies do not have to "reinvent the integration wheel" by hiring consultants or integrators to help IT staff learn how to bring together a host of disparate solutions from different vendors.

Utilize new tools to enhance existing ones

Business solutions should not require companies to rip out their existing platforms and sacrifice previous investments. Instead, they should enable companies to maximize those investments through smart integration. Companies also are seeking pre-integrated solutions based on the same business logic and process foundations that multiply the value of any and all modules, applications and platforms. This is true regardless of company size or vertical.

To keep TCO to a minimum—and get the most mileage out of previous IT investment dollars—new technologies should be able to expand upon and enhance existing tools. Naturally, companies do not want to invest in systems that are overly complex and difficult to use. They want solutions that are attuned to existing workflows and facilitate productive business processes. Building on existing platforms and applications, they should be intuitive and familiar. For example, if a sales agent keeps key customer information in an email system, a CRM solution should tie into that email tool. Or, if inventory planners use a specific spreadsheet application to assess inventory levels, the chosen SCM solution should be able to tie into that tool.

This will help solve adoption problems as well. By tying in new technology to existing, employees can see the benefits more clearly and are inclined to use the new solution. The adoption rate will increase since the new technology will help the salesperson sell more productively and the inventory planner plan more accurately.

Conclusion: Seizing the Moment

the emerging economy is one of interconnection where companies must address customer demands in increasingly sophisticated and responsive ways. They must also actively collaborate to reduce costs, increase productivity and deliver the full range of value that the market now expects. And the interconnected economy is fast becoming a reality.

The interconnected business is one that will build increasingly powerful linkages to its suppliers, partners and customers, enhancing end-to-end business processes that flow within and beyond their own four walls. It will strengthen the connections between systems, processes and organizations. It will also differentiate itself through a focus on core competencies, capitalizing on the resources and assets that already exist beyond its immediate boundaries. The interconnected business will understand the new dynamics of the era and capitalize on them to great effect.

For most organizations, the opportunities ahead will be seized through steady and perpetual advancement as opposed to the "radical change" of the recent past or the "analysis paralysis" and "frozen feet" that are more common today. The sensible approach to new technology lies in making diligent and incremental investments, then building on the momentum to realize the payoffs of a wider, more expansive strategy.

Executives should expect measurable and predictable returns on their technology investments. But other opportunities are less predictable. The interconnected economy is accelerating the pace of change even as it gives us more opportunity to thrive on it. While we cannot know ahead of time where this change will lead, we can build strategies that recognize the power of interconnection to lead us to grander heights. ◼

"**Change almost always comes as a surprise because things don't happen in straight lines. Second-guessing the result of an occurrence is difficult, because when people or things or ideas come together in new ways, the rules of arithmetic are changed so that one plus one suddenly makes three. This is the fundamental mechanism of innovation, and when it happens the result is always more than the sum of the parts.**" James Burke

Glossary

ATP (Available to Promise)

ATP refers to the amount of stock that can be promised to a customer based on insight into current inventory levels, forecasting and scheduling. ATP can empower customer-facing employees by allowing visibility into the uncommitted portion of a company's available stock and planned production, allowing for more accurate order promising.

CRM (Customer Relationship Management)

CRM strategies and technologies are designed to help organizations build profitable relationships with customers through the collection and dissemination of actionable customer insight across the company. CRM assists in recognizing valuable customers, efficiently deploying customer-facing resources and capturing ROI by retaining high-margin customers and diverting resources away from under-performing ones.

CTO (Configure to Order)

Configure to Order is a process by which customers can build or "configure" deliverable products, such as computers, clothing or automobiles online. The objective is to empower customers with visibility into product information, inventory, production schedules and delivery dates while allowing for make-to-order practices and lower inventory.

CTP (Capable to Promise)

CTP is similar to but more complex than Available to Promise since it goes beyond checking available stock, forecasts or production scheduling. CTP can extend outside of the internal organization and into supplier schedules, capacity and planning to see if the supply chain is capable of meeting a proposed order.

EDI (Electronic Data Interchange)

The process of transferring data between and within companies electronically, instead of by more traditional, paper-based formats. EDI is similar to email, except that an agreed upon format is used for a particular type of document, such as a purchase order form, which allows software to automatically process it and generate subsequent documents on an ongoing basis.

ERM (Enterprise Resource Management)

ERM strategies and technologies are designed to help organizations integrate, coordinate and quantify resources from disparate areas within the company, including financials, human resources, payroll, project management, analysis and reporting, forecasting, budgeting and consolidation.

PTP (Profitable to Promise)

Moving beyond ATP and CTP, PTP allows for accurate decisions on whether to go the extra mile for an individual customer based on that customer's value to the firm. PTP will take the integration of supply and demand to the next level by incorporating sophisticated customer valuation data with clearer visibility into production and inventory, then placing that insight in the hands of customer facing employees. Companies will be able to deliver on the promises they make at the front end while acting with confidence since they are serving those customers deemed most valuable to the firm.

RFID (Radio Frequency Identification)

Radio Frequency Identification involves the use of transponders to better track the flow of goods along the supply chain. Attached to the products themselves, the transponders can be scanned remotely, even when located inside other packaging. RFID is intended to clarify the communication of information, making for a tighter supply chain, reduced errors and strengthened service levels.

SCEM (Supply Chain Event Management)

Supply Chain Event Management is designed to help companies flexibly adapt to constantly changing business conditions, particularly in terms of conducting and completing transactions. Real time alerts can be sent via email, screen pop, mobile phone, etc. that can inform the recipient(s) of delays, order changes, potential stockouts, etc. The projected benefits are adaptability to evolving needs and conditions, less "firefighting" due to the ability to troubleshoot problems before they occur and raising revenue and decreasing cost by increasing the velocity of the supply chain.

SCM (Supply Chain Management)

Supply Chain Management strategies and technologies are designed to help companies maximize efficiency and eliminate cost through better management of planning, manufacturing, distribution and delivering finished goods to the end user.

TCO (Total Cost of Ownership)

TCO represents that amount of investment and expenditure needed to purchase, implement, deploy and support a technology solution. TCO typically takes into account initial and ongoing costs, including licensing, software, hardware, consulting, training and personnel for ongoing support.

Value Chain

The value chain represents the integration of the formerly independent supply and demand chains. Within the value chain, the links of demand and supply come together to form one, continuous and integrated chain from raw materials supplier to the end user.

Value Network

The value network is the next generation of the value chain. Business does not move in a linear fashion, thus the collaboration among partners, suppliers and customers will not take place in a linear fashion. Moving beyond the concept of a linear chain, the value network will contain interactions and transactions occurring simultaneously among multiple entities.

VMI (Vendor Managed Inventory)

Vendor Managed Inventory is a method of optimizing supply chain processes by which the manufacturer regulates supplier inventory levels. Typically using EDI or the Web, manufacturers gain visibility into suppliers' inventory data and distributor sales and stock levels. The benefits include tighter inventory control in addition to more accurate and timely point of sale data.

XML (Extensible Markup Language)

XML is the source code behind Web services platforms. XML increases the "permeability" of companies by synchronizing previously incompatible data and applications. This includes not only the integration of independent Line of Business (LOB) applications, but also the interoperability with Electronic Data Interchange (EDI) formats and more traditional EDI transports such as Value Added Networks (VANs).

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