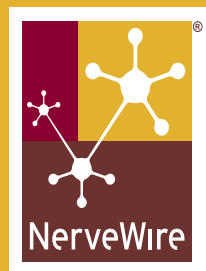


COLLABORATIVE COMMERCE: COMPELLING BENEFITS, SIGNIFICANT OBSTACLES

A NerveWire, Inc.
research study on the
business impact and
barriers of integrating
the business processes
and information systems
of companies with their
trading partners



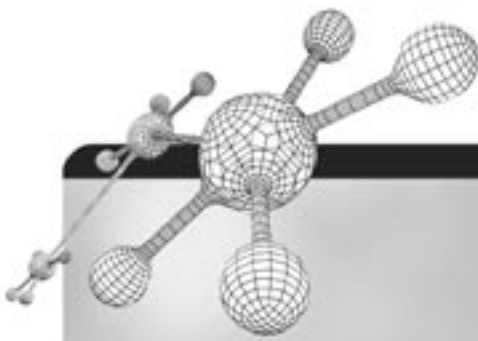
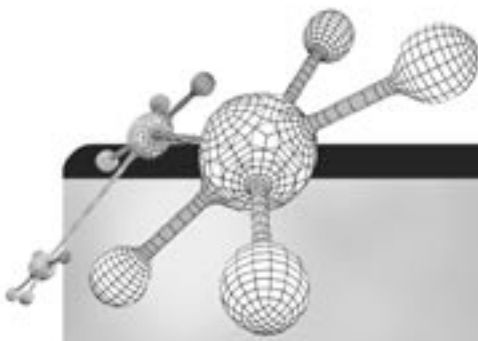


Table of Contents

Executive Summary	3
Study Background: The Renaissance of E-Business	5
The Current State of Collaborative Commerce ..	8
The Business Impact and Benefits of Collaborative Commerce	13
The Focus of Future Collaborative Initiatives: Business Processes and Key Technology Investments	18
Obstacles to Collaboration	21
Overcoming the Barriers: Lessons from the Leaders	23
Key Steps for Ensuring Success and Maximizing Results	28
Research Methodology and Demographics	30



Study Results at a Glance

- *"E-business" is not dead; it's alive and well and creating measurable value, in the form of "Collaborative Commerce"*
- *Collaborative Commerce is the use of Internet technologies to integrate a company's core business processes with those of its customers, suppliers and business partners*
- *Companies with high levels of Collaborative Commerce have cut costs and cycle times significantly, increased revenue and new product and service introductions, and achieved other major business benefits*
- *Most of the companies studied have only achieved low levels of collaboration, and have generated modest performance improvements*
- *The biggest obstacles to Collaborative Commerce include overcoming distrust and internal functional "stovepipes" that prevent companies from being integrated internally*
- *Getting past the obstacles requires overcoming distrust and organizational "stovepipes," validating the benefits with customers, creating a blueprint to guide the business process and systems integration, and devising a strategy for gaining and keeping the support of key collaboration partners*

Highlights

- **For some leading companies, Collaborative Commerce is enabling major reductions in costs and cycle times, and increases in revenue, quality and customer retention**
- **But most companies are not collaborating closely with their trading partners**
- **Several barriers to collaboration loom large: overcoming distrust among trading partners and dealing with the lack of intra-company integration**

Executive Summary

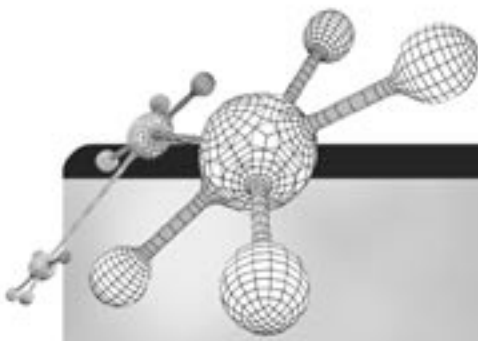
"E-business" is not dead. Despite the burst of the Internet bubble, and the long list of dot-com failures, many companies are realizing fundamental business value from the Internet. The most innovative firms, many of whom were once thought to be the "dinosaurs" of the Internet age, are some of the largest and most established firms on the globe. But, in contrast to the early experience of e-business, this generation of e-business leaders is gaining real business value from their innovations — measured in increased profits and revenue.

In particular, today's e-business leaders have woken up to the Internet's potential for synchronizing operations with customers, suppliers and business partners. Using Internet technologies, they are closely integrating the way they develop new products, manage and distribute inventory, market and sell, and manufacture goods.

This kind of e-business activity is increasingly referred to as Collaborative Commerce. Leading companies such as Dell Computer, Wal-Mart, Daimler-Chrysler, Nestle and CIGNA have launched Collaborative Commerce initiatives with great expectations — and, often, eye-opening results.

In fact, a NerveWire research study conducted in the first quarter of 2002 has found the business impact of Collaborative Commerce to be significant. From an extensive survey of 162 North American companies, we found that the business benefits of collaboration increase significantly with greater degrees of collaboration. Companies operating at the highest levels of Collaborative Commerce have increased revenue on average 40%, reduced costs 30%, slashed cycle-times by 37% and boosted customer retention 35%. Companies generating these kinds of results more typically are in the high-tech manufacturing, financial services and telecommunications service industries.

Yet few companies to date — only 14% of those we surveyed — have very high levels of Collaborative Commerce and are generating those kinds of benefits. In fact, the vast majority of companies operate at low or moderate levels of Collaborative Commerce, and has much lower benefits. These companies tended to be



in such industries as energy, industrial manufacturing, and public institutions. Most continue to give suppliers, customers and business partners limited online access to select information on products and services, the status of orders, and other data. In fact, a significant percentage still largely interact with outside parties through the traditional means of meetings, phone calls, faxes, and the mail.

What holds companies back from collaborating more closely with one another? Our research found that the most significant barriers are not technical ones. In fact, the No. 1 issue that companies struggle with is lack of trust — that is, gaining the confidence of other organizations that sharing of proprietary information won't be abused. In addition, firms struggle with overcoming functional "stovepipes" in a company. Many companies had yet to integrate their own disparate operations, a fundamental building block for integrating themselves with outside entities.

In fact, our data shows that integrating a company's internal business processes and systems is critical to external integration. Companies with the highest levels of Collaborative Commerce (and greatest business benefits) are much more integrated internally than companies with low degrees of collaboration.

Other major hurdles include getting parties to agree on goals and determining the appropriate allocation of the costs and benefits of collaboration; creating a plan or "blueprint" to guide the integration of business processes and systems; and getting an experienced team to manage the initiative.

Yet despite those hurdles, Collaborative Commerce looks like it's here to stay. North American companies are planning collaborative initiatives in core business processes, particularly those relating to customer acquisition and retention (i.e., marketing, sales and service). And to increase their levels of collaboration, they are looking at a number of key technologies. At the top of the technology priority list are security tools and design collaboration software. Companies with low

levels of collaboration plan to pursue email and online chat technologies, while those at the higher levels of external integration have their sights set on such technologies as supply chain management, online portals and Internet content management systems.

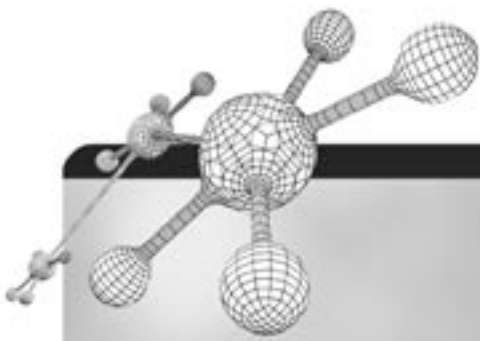
To leverage such technologies, managers spearheading Collaborative Commerce initiatives must succeed at five key tasks:

1. *Focus on business areas where the return is most compelling*
2. *Establish executive sponsorship to champion the program and assemble a seasoned team*
3. *Create a business and technology blueprint that defines your vision in concrete terms*
4. *Develop a stakeholder management strategy early in the process and keep it at the forefront of the program*
5. *Implement the program in short, phased initiatives that deliver ROI to all stakeholders quickly*

Report Credits

This research study is the product of many people in and outside of NerveWire. The company would like to thank the following for their help:

- The executives who took the time to fill out our extensive online survey and companies that granted us in-depth interviews on their collaboration experiences
- NerveWire research team members including Brian Bouren, Sanjiv Gossain, Patricia Harnan, Veronica Zanellato and Jeff Mehlman
- The Bloom Group, who helped us design and execute the research
- *InformationWeek* magazine, which invited its senior IT and business readers to participate in the online survey



The Renaissance of E-Business

Not so long ago, many business and technology publications predicted the pending demise of the “dinosaurs” of the business world. Prevailing wisdom predicted that large, established companies wouldn’t outmaneuver the venture capital-backed, dot-com entrepreneurs operating “e-businesses.” Overnight Internet start-ups predicted that they would quickly outflank industry icons in everything from selling books and pet food to distributing groceries and greeting cards. Or so the thinking went.

In the new century, most of these e-businesses have tumbled to earth like misguided rockets, depleted of the venture capital fuel that had once boosted them to atmospheric heights. “E-business” – a term used on many dot-com business plans as a “new and improved” label – soon became equated with “dead business.”

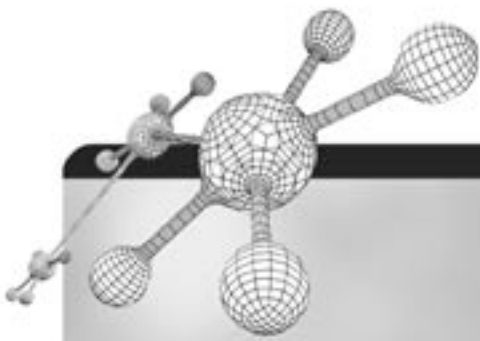
Not so fast. “E-business” is taking on new meaning, this time with substance and real business return associated with it. However, now it’s those established, larger companies that are setting the rules and using the Internet to their advantage. And they’re leveraging Internet technologies not so much to create whole new electronic businesses, but more often to dramatically improve their existing brick-and-mortar operations.

One form of e-business that has been receiving lots of attention involves linking a company electronically to its customers, suppliers and business partners. Increasingly referred to as “Collaborative Commerce” or sometimes “Inter-Enterprise Integration,” it has generated executive attention, both in the boardroom and the computer room.

The evidence to date on the benefits of Collaborative Commerce is compelling. Dell, for example, has used tight electronic links with suppliers and customers to squeeze out competitors in the commodity-like personal computer business. With \$30 billion in sales and a 14% global market share, Dell interacts with more than 80% of its suppliers through the Internet and 40,000 business customers through its “Premier Pages” Web site.¹ Dell says a key financial metric – return on invested capital (ROIC) – jumped from 34% in 1996 to 294% in 2000 after the company linked itself to suppliers through the

Highlights

- The term “e-business” is taking on new meaning, in particular to connote how companies are collaborating electronically with customers, suppliers and business partners to improve business performance
- Several forces are driving companies to higher levels of collaboration, especially globalization, the Internet, regulatory changes, and increasing specialization and outsourcing of key business processes
- Research focus is sorting out fact from fiction around Collaborative Commerce: How integrated are companies with their trading partners? Do high levels of external integration measurably improve the way these companies operate? How do companies overcome the tall barriers to integration?



Internet.² And while the rest of the PC industry had a disastrous 2001, Dell's operating expenses dropped to 10.2% of revenue in the fourth quarter, an all-time low for the company. Other PC makers just can't compete anymore on price.³

As CEO Michael Dell has said, "Manufacturers can no longer afford to treat suppliers like vendors from whom every last ounce of cost-savings can be wrung. Nor can we treat customers simply like a market for products and services at the best possible prices. Instead, we need to treat both suppliers and customers like partners and collaborators – together looking for ways to improve efficiency and value across the entire spectrum of the value chain, not just in our respective businesses."⁴

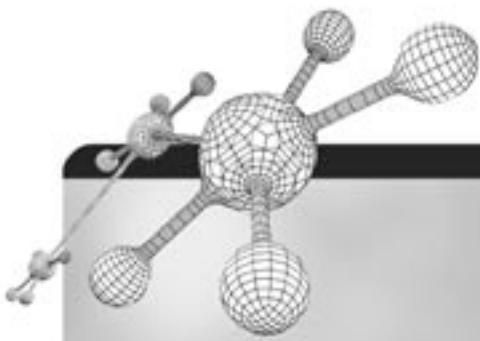
The financial services industry – a tightly knit business long perceived as one in which relationships were exercised in person rather than through computers – has actually been a hotbed of Collaborative Commerce. Large American banks now syndicate the majority of their loans through a new Web site that streamlines the work of the participants (banks, lawyers, investors, and others) in this document-laden, time-intensive process.⁵ A Web site that Principal Financial Group's residential mortgage unit launched in the spring of 2001 to dramatically improve interactions with more than 500 "correspondent lenders" (mortgage companies that in turn sell their mortgages to Principal, which then services those loans) helped the firm increase volume last year five-fold to \$28 billion. As of December 2001, 65% of the business that correspondent lenders conducted with Principal was through the Web site,⁶ which automatically provides lending partners with such details as what's delaying a loan. Where mortgages are a commodity product – the prices don't vary greatly from lender to lender – the ability to compete on speed is crucial. As an executive at one Principal lending partner, American Federal Mortgage, put it, "When a vendor offers other efficiencies, you're going to direct more of your business to them."

This Study's Focus: Sorting Fact From Fiction

As with any trend that could create a market for billions of dollars in new technologies, reality usually falls far short of the hype. Given all the fanfare surrounding Collaborative Commerce, NerveWire wanted to provide clarity on a set of core questions:

- To what extent are companies integrated with their trading partners?
- Which industries are leading and which are falling behind in Collaborative Commerce?
- Which business operations are integrated with external parties?
- What are the key impediments to Collaborative Commerce and how are companies addressing them?
- What technologies are considered crucial to collaboration?
- What tangible business benefits are companies getting from integrating their business processes and systems with those of trading partners?

These questions guided our research. The rest of this report discusses the research results, our analysis of the findings and NerveWire's recommendations for overcoming the barriers to successful Collaborative Commerce.



What's Driving Companies to Collaborate?

Large companies have turned to e-business and Collaborative Commerce to respond to profound forces of change. One is globalization, which has been accelerated by the Internet. The continued entrée of powerful companies into all the world's regions means that products must be developed faster and manufactured cheaper, services marketed and sold more effectively and less expensively, and nearly every critical business process must match whomever possesses the world-class standard.

But globalization isn't the only accelerant of Collaborative Commerce. The increasing trend of specialization and outsourcing is playing a major role as well. Twenty years ago, computer companies such as IBM and Digital Equipment Corp. manufactured and assembled most of the parts they needed themselves. Today, companies like Dell and Gateway outsource most of those components to other manufacturers and simply assemble the parts.

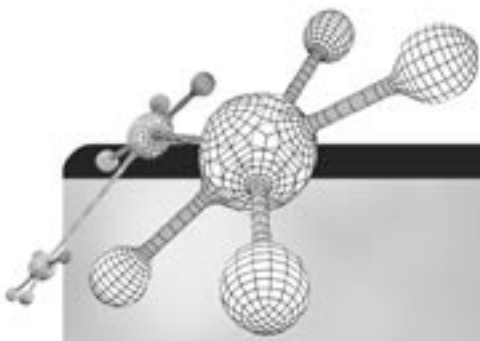
Cisco Systems Inc. has taken this kind of "virtual integration" (as distinguished from vertical integration in which companies own more of the means of production, sales and delivery) to a whole new level. Over the last five years, the communications equipment provider has grown from \$6 billion to \$22 billion in revenue by contracting out an ever-larger amount of product and component manufacturing. In essence, Cisco got larger by getting smaller. How? In part by creating a Web-based technology platform, the Cisco Connection Online, for its suppliers, partners and customers. By giving suppliers and contract manufacturers real-time sales data, the company lowered inventory levels by 4% in three months. Information technology is the glue that has kept Cisco's extended network together.

Whether the driver is globalization, strategic partnerships or some other factor, for many companies Collaborative Commerce is here to stay. "B2B collaboration has emerged as the defining concept in these very early years of the auto industry's second

century," said John Waraniak, executive director of e-business speed at Johnson Controls Inc., an \$18 billion auto parts supplier, at a recent industry conference presentation. "All companies that don't know how to collaborate or don't have collaborative tools and technologies are simply going to be beaten by those who do. It's as simple as that, as profound as that, and as complex as that."⁷

The Internet-enabled collaboration of multiple companies is only beginning. With an increase in standards for technologies and rules for conducting e-business, experts such as NerveWire's James Herman foresee a sea of change in the fundamental structure of industries. They predict a shift from traditional industry value chains in which companies sequentially turn raw materials into finished products, to global "Value Webs" in which companies can plug into an electronic network of providers and "rent" the manufacturing, marketing, product development and other capabilities they need quickly from the specialists who do it better, faster and cheaper.⁸

How soon this future will come will depend on just how rapidly that standardization happens – and how quickly companies overcome the sizable organizational and technological obstacles that stand in the way. With this study, we hope to shed light on some of those obstacles, as well as the benefits of Collaborative Commerce and e-business.



The Current State of Collaborative Commerce

A reader of business and technology publications over the last five years might conclude that most companies are tightly integrated with their suppliers, customers and business partners. The hype about Collaborative Commerce – fanned by technology suppliers and, yes, consulting firms – has been deafening.

By surveying a large number of companies across industries, we wanted to explore whether the hype was justified. First, our survey of 162 North American companies shows that far fewer companies are highly integrated with their suppliers, customers and business partners than one might expect. And even industries such as financial services and high-tech manufacturing, while having higher levels of Collaborative Commerce than others, on average are not greatly integrated.

To measure just how integrated companies are with outside parties, we asked survey respondents to indicate which of four levels of external integration best characterized the majority of their interactions with other entities? These four levels differ in several ways: a) whether the parties give each other continuous access to online information, b) whether actions taken by one company (e.g., placing an order) to trigger an action in another company (e.g., producing a product) are done manually or are automated, and c) the degree to which activities in each party are eliminated or shifted from one party to the next because the transactions are automated.

Thus, we created the following scale (see Figure 1 for definitions of each level):

- *Level 1: Minimal external integration*
- *Level 2: Moderate external integration*
- *Level 3: High external integration*
- *Level 4: Very high external integration*

Our survey data shows that across industries, the average level of integration is less than moderate (1.82 on the scale of 1 - 4).

Highlights

- **Most companies are not highly integrated with suppliers, customers, and business partners – in fact, on average most of their interactions are at the level of viewing each other's information online or exchanging information online, but with limited ability to change each other's databases**
- **The high-tech manufacturing, financial services and telecom service industries have higher degrees of Collaborative Commerce than others**
- **As a whole, businesses are not significantly more externally integrated with outside parties in any of four core business processes: manufacturing, order fulfillment, product development, or customer acquisition and retention (marketing, sales and service)**

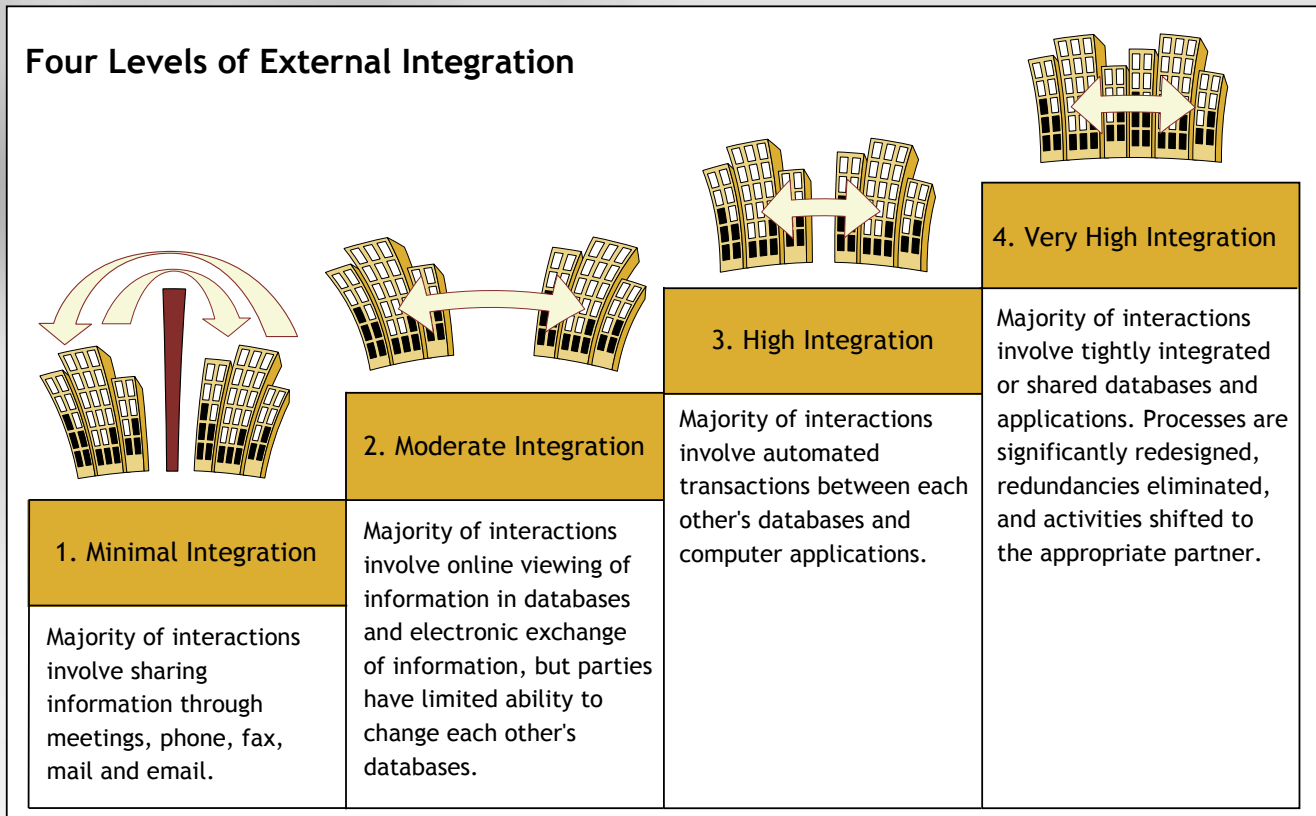
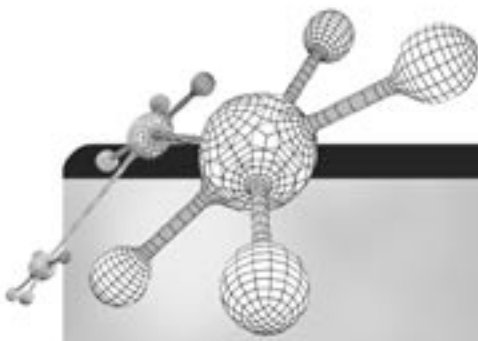


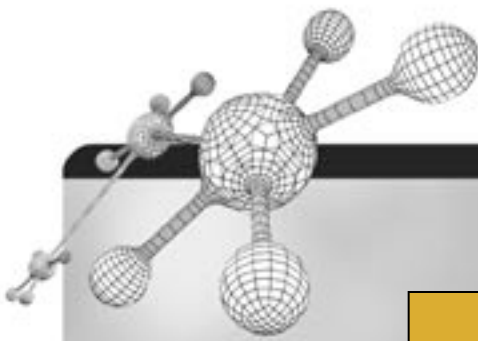
Figure 1

Because the type of interaction with suppliers, customers and business partners can vary greatly depending on the specific function or organization within the company, we asked survey respondents to indicate the level of external integration in four key areas of their business:

- *Manufacturing – including in-bound logistics, procurement and production (“operations” for financial and other service companies)*
- *Order fulfillment – distribution, order management, accounting (service delivery in financial services)*
- *New product development – engineering, design, development and testing*
- *Customer acquisition and retention – sales, marketing and service*

Our research found that, on average, companies are not extensively integrated with suppliers, customers and business partners in any of the four core areas of their businesses. Only 14% attain a “very high” level of external integration (which is referred to as level 4) in any of the four key business areas we asked them about. This level of Collaborative Commerce is more likely to be found in order fulfillment (i.e., connecting with distribution partners such as wholesalers and retailers), than it is in manufacturing or product development.

At the highest level of Collaborative Commerce, a company is tightly integrating its databases and computer applications with those of suppliers, customers and/or business partners – or in fact is sharing the same database and application with those outside parties. This kind of technology integration typically allows companies to eliminate redundant activities between the firms involved. For example, manufacturers and retailers can work from one sales forecast rather than



Respondents reported different levels of Collaborative Commerce in four areas

Level Of External Integration in Key Business Areas (% of Total Respondents)				
Functional Area	Minimal	Moderate	High	Very High
Manufacturing/Operations	44%	39%	14%	3%
Order Fulfillment / Service Delivery	32%	45%	18%	5%
Customer Acquisition	37%	46%	13%	4%
New Product Development	44%	38%	15%	2%

Figure 2

multiple forecasts (see Nestle Purina case study on page 27). Eliminating such redundancies gives trading partners the opportunity to redesign and streamline their business processes, shifting activities to the party that is best able to perform them.

A greater number of companies, although still a minority, reached the third level of Collaborative Commerce (“high” external integration) with their trading partners. In these companies, the majority of their interactions with outside parties are automated transactions between companies’ databases and computer applications. An example of this would be a manufacturer’s MRP system automatically triggering purchases with suppliers’ ordering systems, without manual intervention phoning in and confirming orders. In the four business areas surveyed, between 13% and 18% attain this level of integration for the majority of the interactions with their trading partners (see Figure 2).

The clear majority of firms surveyed indicate they are at level 1 or 2, minimal and moderate. And only slight differences exist in the level of external integration for each of the business areas. For instance, in calculating the average degree of external integration on our scale of 1 - 4, the order fulfillment processes of companies are only marginally more externally integrated (an average level of 1.94) than customer acquisition and retention (1.83), manufacturing/operations (1.77) or product development (1.75) (see Figure 3).

High-Tech Manufacturing and Financial Services Industries Have Higher Levels of Collaboration

Despite the low levels of Collaborative Commerce as a whole, there are some striking industry differences. Three industries – high-tech, financial services and telecommunication services – have much higher average levels of external integration than the survey respondents as a whole (see Figure 4).

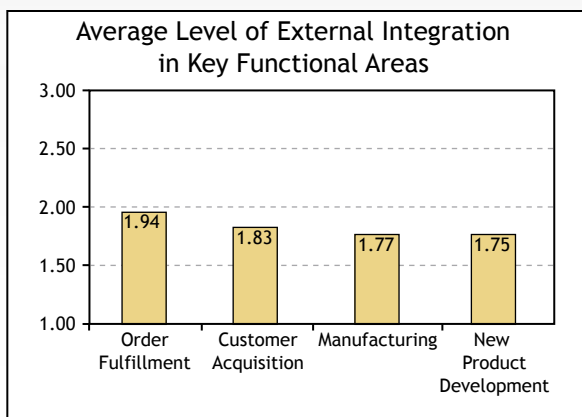


Figure 3

In financial services companies, the business processes of service delivery (2.44) and operations (2.31) have the highest levels of Collaborative Commerce. A number of forces are driving these companies to synchronize their operations and systems with customers, suppliers and business partners. Specifically, in the area of customer acquisition and retention, a major driver of Collaborative Commerce is the desire to sell customers a wide range of products and services. Typically, no one financial service company can provide offerings that fulfill all of the financial needs of a business or

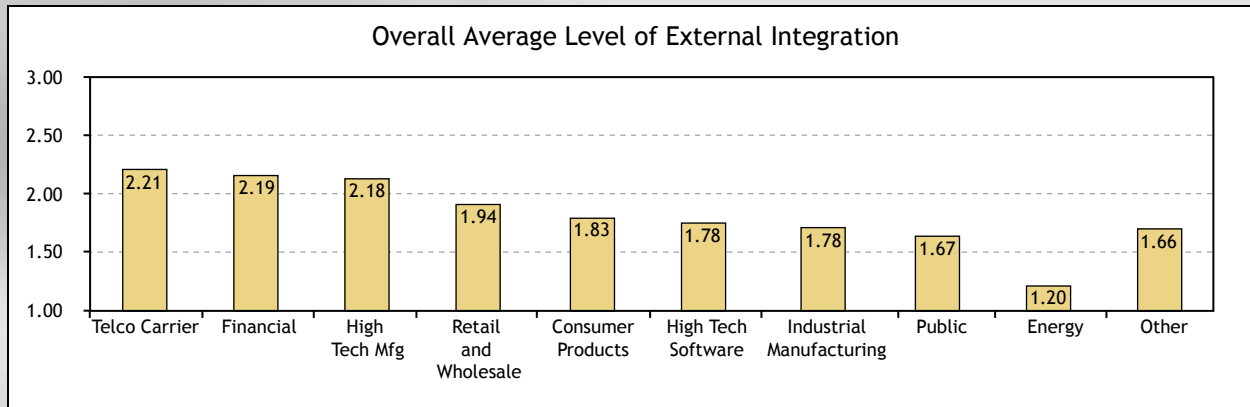
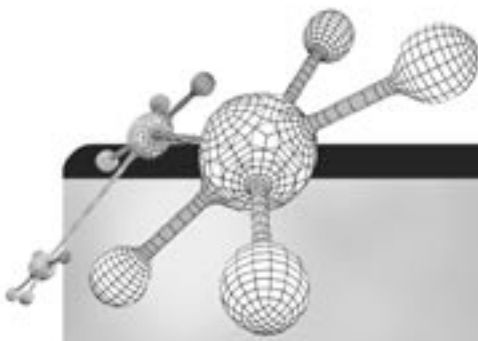
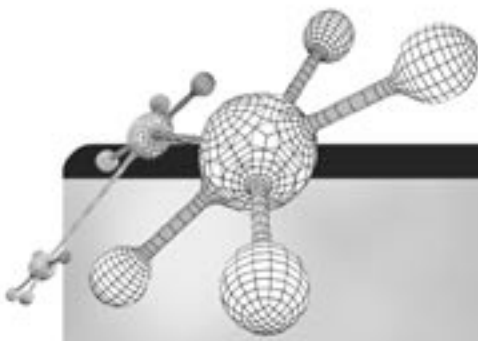


Figure 4

consumer. Thus, financial services companies often resell financial products of other companies. Examples of this distribution strategy include research, mutual funds and insurance. This model requires significant levels of collaboration in product design, customer acquisition and service delivery.

In high-tech manufacturing, firms report higher levels of Collaborative Commerce in order fulfillment (2.30) and customer acquisition and retention (2.30). In an industry driven by innovation, reducing time-to-market with new products is crucial and is one of the largest drivers of Collaborative Commerce. Reducing product development time requires manufacturers to work closely with suppliers to root out inefficiencies in the part design, engineering and test processes. The high-tech makers we surveyed have an average collaboration level of 2.10 with suppliers and other partners in product development.

Once a new product is ready to be sold, high-tech producers must then market and sell these products in lock step with resellers, original equipment manufacturers (OEMs) and other channel partners. In this business area, high-tech manufacturers report a 2.10 level of external integration. Finally, once these orders are secure, high-tech companies must work to reduce the time required to deliver orders to customers, a process which requires synchronizing manufacturing and distribution schedules with those of third-party dealers and distributors.



Collaboration in Equity Securities Lending Unites Major Wall Street Firms

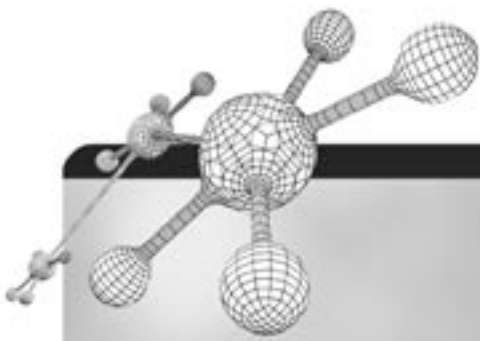
A major collaboration effort on Wall Street is in the early stage of driving results. Ten of the world's most venerable financial institutions are launching a global, electronic platform that will streamline and automate a critical and largely manual process: securities lending transactions.

The companies have been working on the platform since early 2001 and expect to begin operations in the spring of 2002. The venture is aimed at improving the practice of lending and borrowing stocks. NerveWire has been helping the consortium to assess and build consensus on the business model, and to design and build the business and technology platform.

Investors primarily borrow securities to support short selling, where the investor (such as a hedge fund) bets that the price of a stock will decline, borrows the shares from a lender and sells them in the hope of buying those shares later at a lower price. Borrowers usually phone or fax their requests for securities to a broker/dealer, who locates the stock (typically owned by big institutional investors such as pension or mutual funds). The broker/dealer then borrows the stock from the owner, typically through an agent (such as a custodial bank). Then the broker/dealer lends the stock to the borrower who made the initial request.

To date, these interactions have been largely manual (especially for securities that are difficult to find), relying heavily on phone and fax communications. Automated linkages between counter parties have been "point-to-point," meaning that with no industry standard each link could be uniquely implemented, resulting in little re-use and high support costs. In contrast, the new platform offers a "hub-and-spoke" model - i.e., any party that integrates into the platform by definition will have accomplished the technical integration with all other present and future parties. The platform will enable a party to initiate orders to multiple counter parties simultaneously. For example, a borrower will be able to locate a stock from multiple lenders through one request, rather than requesting from each lender one at a time.

That will shorten the time it takes to locate the securities. In addition, once the parties agree to the terms, the new system will issue a "shared trade ticket" to each party's trading and settlement systems. This shared trade ticket will reduce the number of failed trades in the settlement process and thus significantly reduce downstream costs and financial risks associated with such discrepancies.



The Business Impact and Benefits of Collaborative Commerce

Reaching high levels of Collaborative Commerce requires vision, commitment and considerable resource investment. Even at the most basic level, these projects require energy and resources. In early stage efforts, industries have found that creating simple standards for terminology, technology protocols for exchanging data, and other basic details to be an enormous undertaking. For example, it has taken years for the grocery manufacturers and retailers to establish standards by which they could improve the way they forecast and fill consumer demand. As companies move to higher levels of collaboration, the investment in time and resources required grows proportionately. Thus a fundamental question must be addressed: Is Collaborative Commerce worth the effort?

Our data reflects experience from companies at all four levels of Collaborative Commerce and provides a strong base upon which to understand the business benefits available as companies advance to higher levels of collaboration. We asked survey respondents to tell us what benefits they have achieved in their business area with the highest level of external integration. To have the data on which we could make broad comparisons, we asked survey respondents to report their benefits, not in terms of absolute dollars, but rather in terms of percentage increases or decreases in seven key business measures of Collaborative Commerce:

- *Revenue*
- *Costs*
- *Cycle time (the time it takes to accomplish a business process)*
- *Quality (reduction in defects or errors)*
- *Headcount*
- *The number of new products or services introduced to market*
- *Customer retention*

Highlights

- **Companies at the highest level of collaboration achieve major revenue gains, cost and cycle-time reductions, quality improvements, and increases in customer retention**
- **The business benefits of collaboration generally go up with higher levels of external integration – especially at the fourth level**

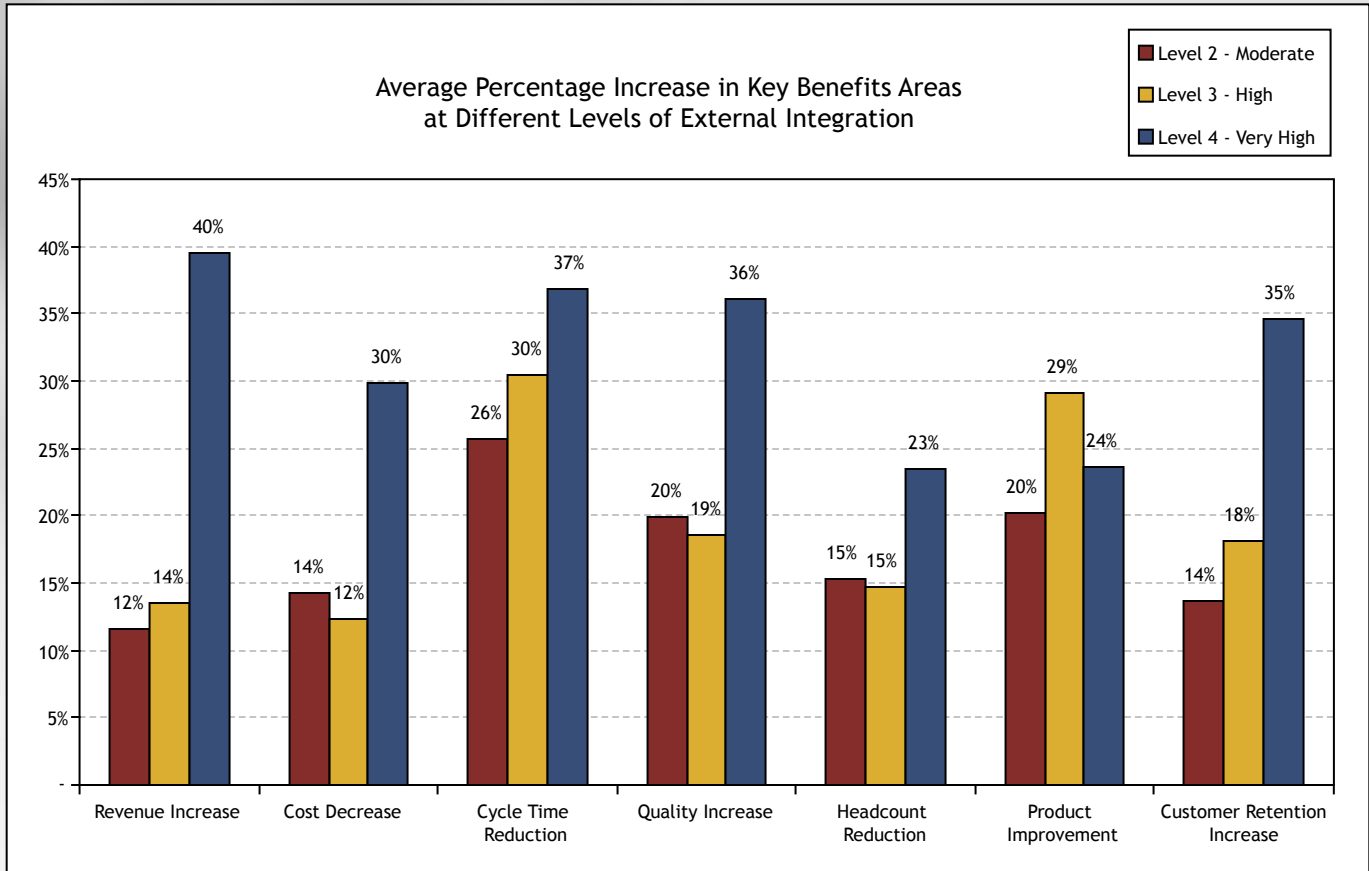
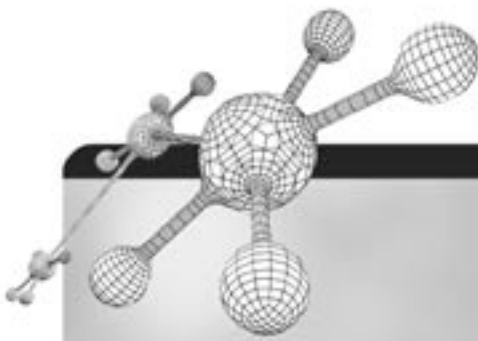


Figure 5

Overall, moving from the first to second level of collaboration generates impressive benefits (see Figure 5). On average, companies at level 3 generate greater benefits on four of the seven metrics than companies at level 2. The most significant companies that attain the fourth level of collaboration enjoy substantially higher percentage increases in revenue, customer retention and quality improvement. In addition, they have significantly greater decreases in costs than the other surveyed groups.

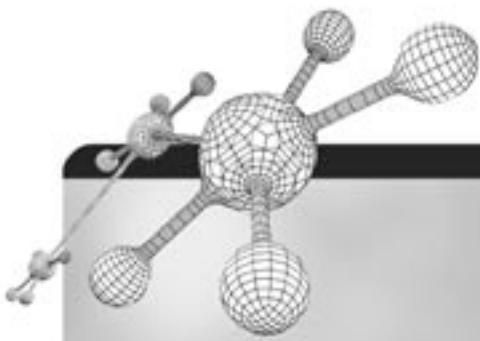
Level 2 - “Moderate” Integration

Letting customers, suppliers and business partners simply view a company’s information online – whether product information to customers, manufacturing schedules to suppliers, engineering drawings to product

development partners, and so on – appears to have a significant business impact. The companies that reach this second level of external integration reduce their cycle-time an average 26% and cut costs by 14%.

Level 3 - “High” Integration

Companies that achieve the third level of external integration generally achieve even greater results. At this level, most of their interactions with customers and trading partners are automated transactions between databases and computer applications. That is, these companies take people out of such activities as sending orders to suppliers or confirming orders with customers. These companies outperform those at level 2 in such metrics as revenue gains, cost reductions, quality improvements and headcount reductions. On average,



revenues rose 14%, cycle-time fell 30% and costs 12%, quality improved 19%, and customer retention increased 18%.

Level 4 - "Very High" Integration

Level 4 companies – those firms whose integration includes tight linkage of business processes and technology – report order-of-magnitude improvements in operating and financial performance. The average revenue increases – some 40% – are about three times those attained by companies at levels 2 or 3. Cost reductions at level 4 are 2½ times the average of those reached by companies at level 2. Cycle-time decreases and customer retention increases are about twice the average of level 2 companies.

Cost reductions can be so much greater because at this level of integration companies remove activities that duplicate those performed by customers, suppliers and business partners. Dramatic reductions in cycle-time to fill orders, invent and develop new products, manufacture or procure supplies can be achieved as well when the same activities aren't being performed twice.

The Impact of Collaborative Commerce on High-Tech Manufacturers

The benefits of collaboration in this industry are sizable. The average improvements that high-tech manufacturers report at their highest level of integration (for some, a level 2, others a level 3, and a few a level 4) are as follows:

- *Increase in new products to market: 26%*
- *Cycle-time reductions: 24%*
- *Revenue increase: 16%*
- *Cost reduction: 14%*
- *Quality improvement: 15%*
- *Headcount reduction: 14%*
- *Customer retention increase: 12%*

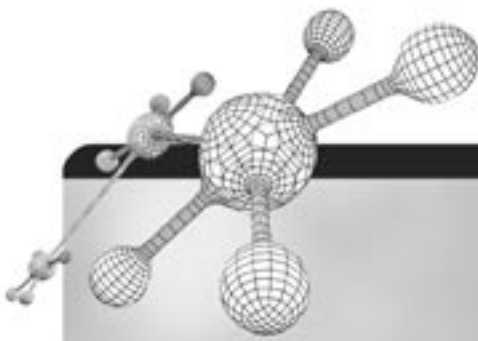
How Financial Services Companies Boost Performance Through External Integration

Financial services companies report similar benefits from Collaborative Commerce. The largest is in cycle-time reduction (39%), followed by a (27%) rise in the number of new products/services taken to market, cost cuts (20%) and quality improvements (also 20%). Financial service firms report a 15% average increase in customer retention rates and an 11% reduction in headcounts from achieving their highest level of collaboration. At an average of 6%, revenue improvements from collaboration are less impressive.

Improvements in Each Business Area

We also analyzed the survey data on business benefits achieved in each of the four critical business areas we surveyed (customer acquisition and retention, manufacturing/operations, order fulfillment/service delivery, and new product development). The findings reflect considerable insights in benefits achieved by companies that reach the highest level of external integration (level 4) in each of the four business areas:

- **Customer acquisition and retention:** Companies at the highest collaboration level in this area enjoy an average of 65% revenue increases and 35% gains in customer retention (see Figure 6). Here much of the value derives from closer, more efficient and more leveraged relationships with the customer. For example, at CIGNA Corp, the \$19 billion employee benefits and financial services company, significant strides have been made to leverage collaboration to provide one-stop shopping to customers. Early in 2002, the firm announced a partnership with Yahoo to let 16 million health care and retirement plan customers use the Internet to improve customer service.⁹ Consumers will be able to choose doctors, review claims, order drugs, shift 401(k) assets and perform other tasks online. Some \$300 million of the company's \$800 million IT budget is earmarked for such Collaborative Commerce initiatives.



“If employers have a stronger bond with their employees, that builds a stronger bond between the employers and us,” David Gordon, CIGNA senior vice president of E-commerce, told one publication.¹⁰

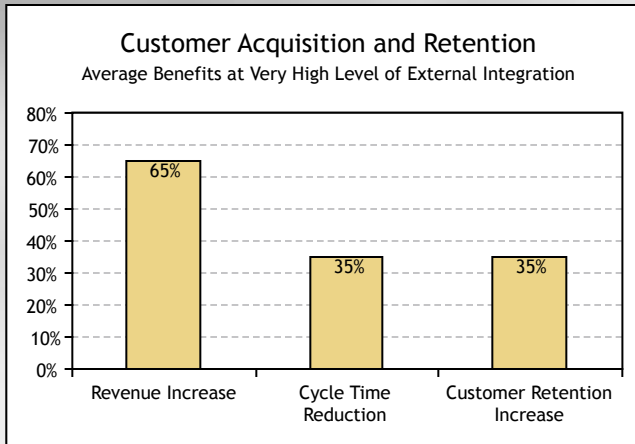


Figure 6

➤ **Manufacturing/operations:** Companies that reach a level 4 in collaboration in this area on average cut cycle times 30% and costs 9% (see Figure 7). Johnson Controls Inc. (JCI), a major auto parts supplier based in Milwaukee, WI, believes Collaborative Commerce and modular automobile design are the two lynchpins of mass-customized cars. To help automobile makers further cut the time it takes to deliver a custom order, which has fallen by 50% since 1999 to 35 days, the company has synchronized manufacturing and product development processes with companies like Chrysler. The company’s electronic links with its own suppliers and with Chrysler enable it to build a cockpit for the Jeep Liberty in about three hours – a module with 200 possible combinations. Some 900 modules are constructed daily and delivered just in time to Chrysler.

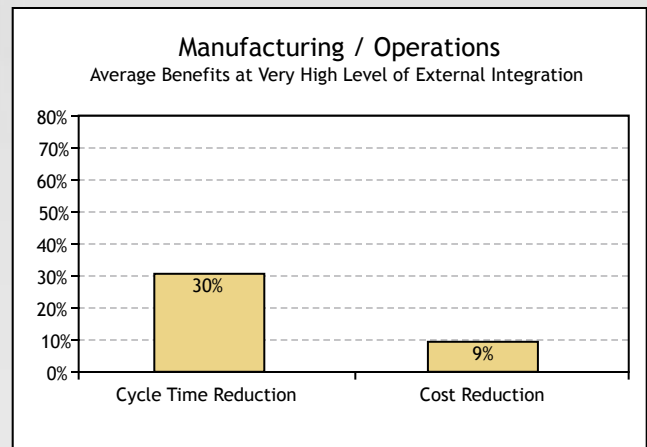


Figure 7

➤ **Order fulfillment:** Companies attaining a level 4 in this area enjoy 23% average cost reductions, 26% declines in cycle time, and 25% improvements in quality (see Figure 8). Package delivery giant United Parcel Service (UPS) is a case in point. After the September 11 terrorist attacks, a UPS Logistics system (called Global Tracker) that is linked to customers’ computer systems quickly pinpointed which shipments should be pulled from pallets delayed by the reduced number of flights and bottlenecks at customs offices. By shifting these critical shipments to UPS Express, the company was able to speed their way through customs.¹¹

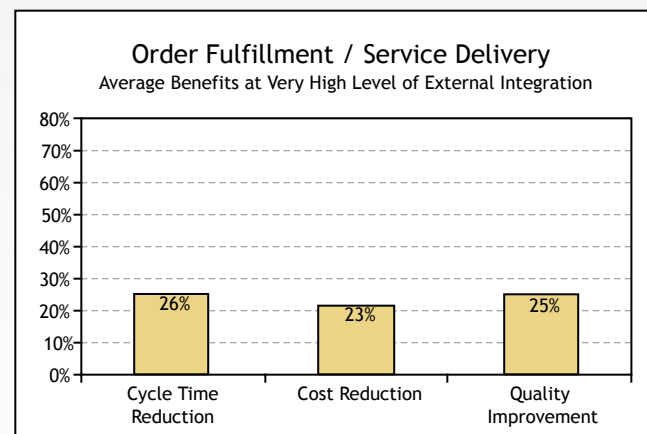
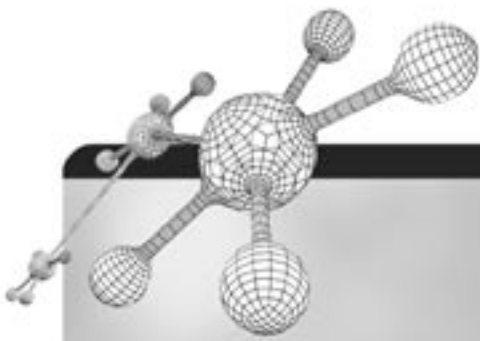


Figure 8



➤ **Product development:** Companies that are highly integrated with their product development partners report dramatic improvements. On average, they compress cycle times 80%, increase the number of new products or services they took to market by 53%, and cut product development costs 55% (see Figure 9). They also boost new-product revenues an average 75%. JCI has slashed by more than a third the time it takes to develop dashboard controls, steering wheels and other interior auto parts for such customers as Daimler-Chrysler through collaborative design software.¹² The Thermo King business unit of Ingersoll-Rand also provides an example of the benefits of collaboration in product development. The company expects collaborative design software to connect 13 worldwide offices with suppliers to dramatically reduce defective products and warranty claims in half, or more than \$7 million a year. By slicing design and development time of refrigeration systems for trucks and other vehicles, Thermo King product developers can do more product testing online and work out bugs.¹³

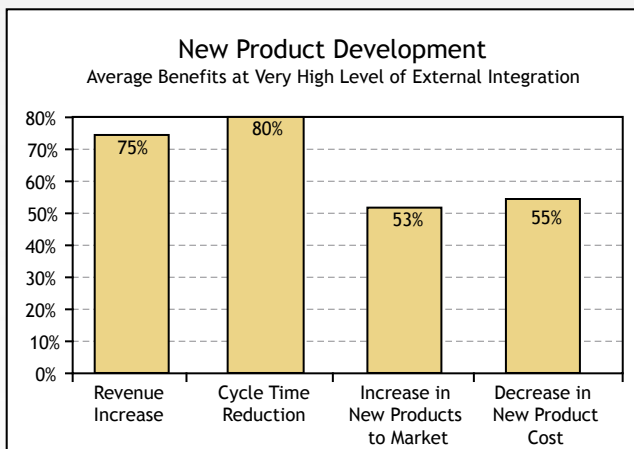
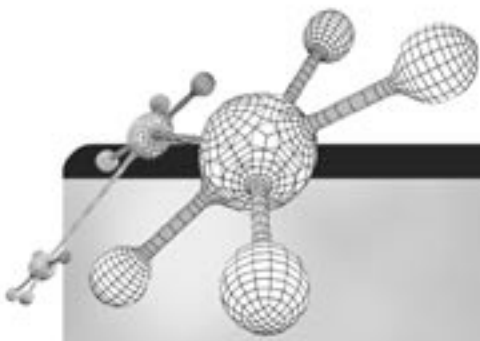


Figure 9



The Focus of Future Collaborative Initiatives: Business Processes and Key Technology Investments

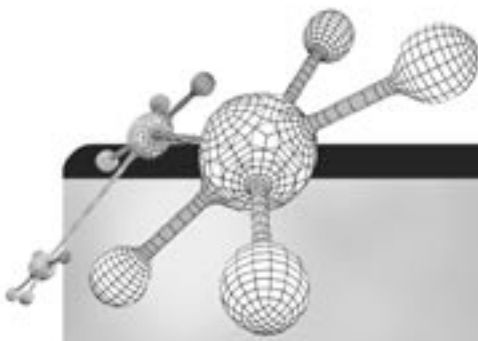
Without information technology, companies like Dell, Nestle Purina, and Wal-Mart would never have reached their vaunted levels of Collaborative Commerce. Without such tools as collaborative planning and forecasting software, design collaboration software, or even simple email, they would not have achieved major reductions in costs and cycle times, and dramatic improvements in revenue from bringing products and services to market faster and more efficiently than their competitors. The impact of having improved visibility from information distributed to suppliers and partners in real-time or near real-time is unequivocal. The message: Without information technology, Collaborative Commerce would rely on the more traditional means of partnership such as handshakes, memos, mail and meetings.

In fact, these tools were sufficient when the pace of business was slow, competition was local or national, and customers had lower expectations. There is still a key role for personal, "high-touch" connections in driving Collaborative Commerce. But sole reliance on these methods is hazardous given that competition is global, customers' expectations are higher than ever, and business increasingly operates in real-time.

Our survey respondents indicate plans to invest heavily in information technology over the next two years to become more integrated with business partners. This spending is based in the survey findings reflecting the gap between where technology infrastructure is today and where it needs to be to support collaboration. When asked the extent to which their current information systems would support the level of external integration targeted over the next two years, 23% of respondents said their systems couldn't support targeted collaboration either at all or very well. Some 41% said their current systems could only "somewhat" support the level of integration they aspire to. Only 3% said their systems could fully support their Collaborative Commerce goals.

Highlights

- Technologies critical to Collaborative Commerce include security tools, design collaboration software and supply chain management systems
- A high percentage of companies will focus their collaborative technology investments in linking their marketing, sales and service operations to outside parties over the next two years



Critical Technologies: Security and Design Collaboration Software

If the majority of companies need new technologies to increase collaboration with customers, suppliers and business partners, what specific areas of technology do they plan to leverage? We asked companies to rate on a scale of 1 - 5 (1=not a priority, 5=highest priority) the importance of 20 technologies to their collaborative initiatives over the next two years. We further broke down their responses according to the highest level of collaboration that they had reached in any business area.

Heading the list for companies at all four levels of collaboration are security tools. This is not surprising considering that collaboration requires substantial sharing of proprietary information with customers, suppliers and channel partners. This sharing assumes the ability to protect and direct data carefully and specifically.

After security tools, some real differences in technology focus appeared, based on the level of collaboration achieved (see Figure 10).

Companies at the lowest level of collaboration put heavy emphasis on email and chat software, as well as design collaboration systems. Companies at level 2 said design collaboration and email/chat technologies are their second and third most important collaboration technologies (after security tools).

In companies that reach the more elevated levels of Collaborative Commerce, design collaboration software finishes second to security tools. They also see supply chain management, Internet portals, and Internet content management systems as critical.

In other words, companies at the lowest levels of collaboration are focused on installing technologies considered to be the foundation for elementary levels of Collaborative Commerce – email, fax and phone. As they increase their collaborative capabilities, technologies such as design collaboration software, portals and supply chain software become critical.

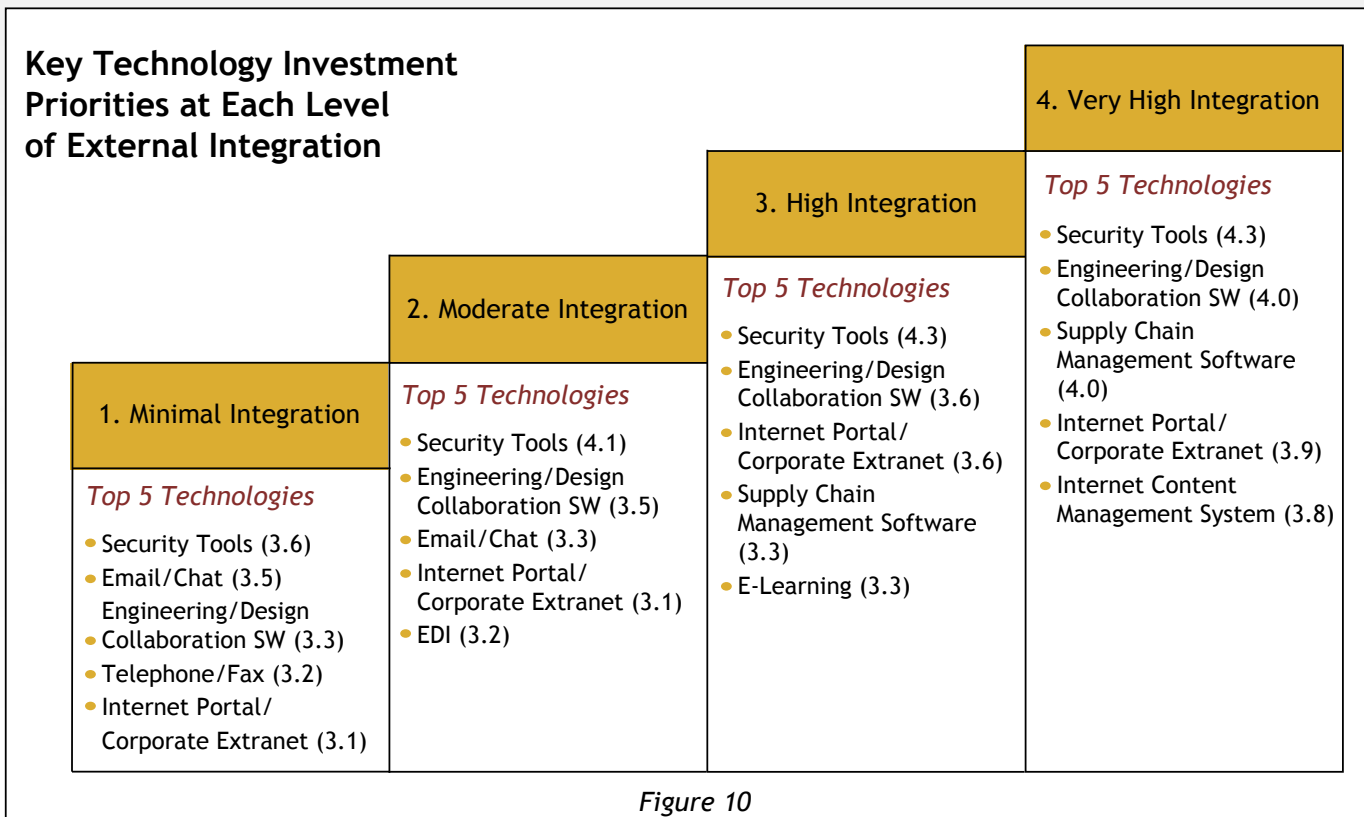
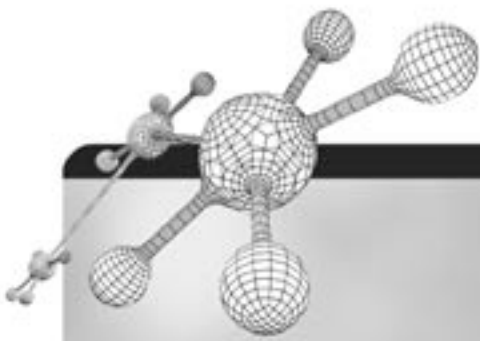


Figure 10



Future Collaborative Technology Investments Point To Customer Acquisition and Retention

Most companies are in the early stages of using information technology to integrate their operations more closely with those of their customers and trading partners. Although some industries operate at higher levels of Collaborative Commerce in certain business areas, the survey population as a whole is not significantly more integrated in any one of the four business areas we studied.

But will that trend continue in the near term? Maybe not. To understand whether companies will focus their Collaborative Commerce initiatives in any of the four core business areas that we studied, we asked survey respondents which area would receive the largest amount of technology investment over the next two years to increase their level of external integration. One area stood out: customer acquisition and retention (see Figure 11). Nearly half the respondents said this area (which comprises marketing, sales and service) would receive the greatest amount of collaborative technology investment. None of the other three areas is close (with order fulfillment, the second-most frequently mentioned area, coming in at 21%).

Why will companies make collaborative technology investments in marketing, sales and service processes a priority over other core business areas? One explanation is that in the current economic downturn, most companies are concentrating on generating revenue and keeping the customers they have. The high-tech industry, both hardware and software, is one that finds it difficult to sell new products at the unprecedented clip of the late 1990s, when demand far outweighed supply. Other industries are feeling similar pressure for revenue and growth.

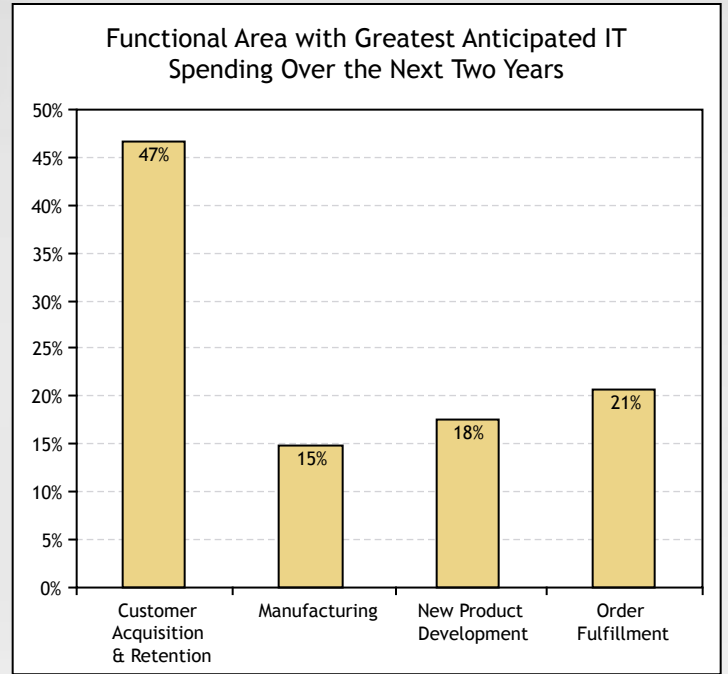
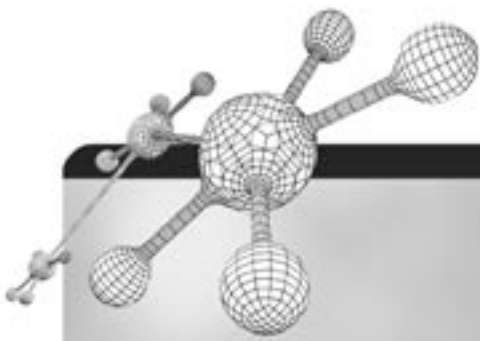


Figure 11



Obstacles to Collaboration

Based on the survey data, case studies and the growing volume of evidence of companies ranging from PC maker Dell and discount retailer Wal-Mart to DaimlerChrysler and hospital supplier Owens & Minor, the benefits of synchronizing key business processes and information systems with customers, suppliers and business partners are both real and substantial.

But the challenges to attaining high levels of Collaborative Commerce are just as real and substantial. The fact that only 14% of the companies are able to reach the fourth level of external integration in any one of the four business areas we surveyed demonstrates just how difficult it is for companies to reach outside their four walls and integrate business processes and systems with other companies. The reality is that the clear majority of companies are still primarily conducting business the traditional way. If they are doing business online, most are not going beyond letting suppliers, customers and business partners merely view information.

For the majority of companies, the walls haven't come down. In effect, they've built windows into those walls for customers, suppliers and business partners to peer through.

So exactly what stands in the way? Is the problem largely technical – that is, about the complexities in linking the disparate systems of different companies? Ironically, although technical complexities may be sizable, the survey respondents indicate that technology is not the biggest barrier to Collaborative Commerce. In fact, human barriers – overcoming distrust among parties, getting past the functional stovepipes within companies, agreeing on how to share costs and benefits – loom much larger (see Figure 12).

Highlights

- **Companies face sizable challenges to achieving high levels of Collaborative Commerce**
- **The most significant challenges are not technical but human barriers - overcoming distrust among trading partners and internal organizational "stovepipes"**
- **Companies must be internally integrated to achieve high levels of external integration**

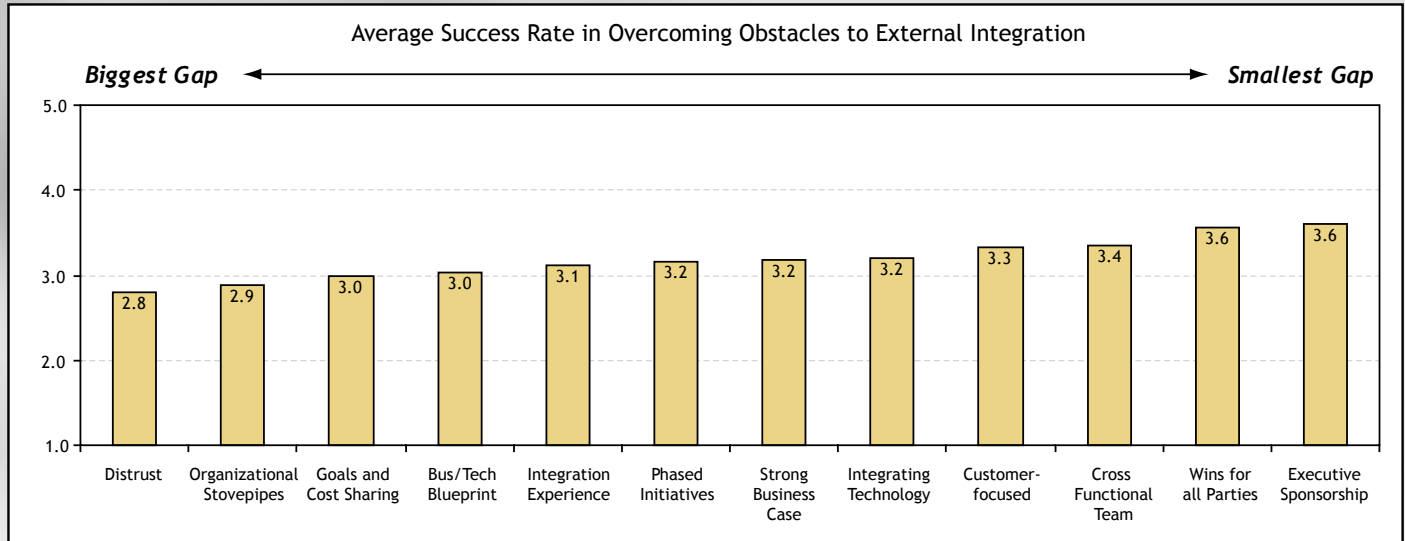
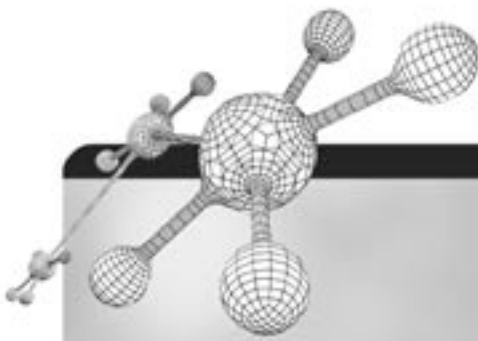


Figure 12

In trying to understand which obstacles are most formidable, we asked our survey respondents to rate on a scale of 1-5 their success in addressing a list of 12 common barriers to Collaborative Commerce. The barriers on which the companies report the least success in overcoming can thus be viewed as the most difficult. The top five are:

- *Overcoming distrust in sharing proprietary information among the parties (only 25% of the respondents say they are "successful" or "very successful" at this)*
- *Overcoming internal functional "stovepipes" (only 22% are successful or very successful)*
- *Getting all parties to agree on goals and how to share costs and benefits (26% are successful or very successful)*
- *Creating a business and technology plan or architecture "blueprint" to guide the way companies should integrate their business processes and information systems (29% are successful or very successful)*
- *Getting an experienced team to lead the Collaborative Commerce initiative (38% are successful or very successful)*

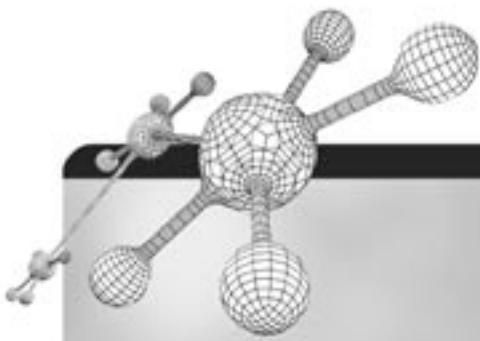
How Trust Hinders an Insurer From Synchronizing With Agents

The experiences of an insurance and financial services company illustrate the barriers of trust and executive sponsorship to Collaborative Commerce. The company already does a significant amount of marketing for its independent agents and brokers, including staging financial seminars for prospects.

However, the company would like to take on more of the processing and insurance renewal work from its independent agents. The business benefits to doing this are lowering costs and boosting customer retention. The whole process could be streamlined if independent agents submitted online insurance applications to the carrier.

Seems like a win-win situation. But many independent agents are resisting it. Some view such electronic linkages as a way for the carrier to take control of the end customer, a perception that the company is trying to overcome. Ultimately, one executive says, the only way to overcome the issue "is to prove we're not going to poach their customers."

Even some senior managers at the company haven't fully bought into the idea of using technology to link closely with agents. The perception is that this is a "relationship business," says one executive, and that interacting through technology might detract from those long-standing relationships.



Overcoming the Barriers: Lessons from the Leaders

Looking at another comparison of our surveyed companies evidences the critical need for companies to overcome the barriers to collaboration (see Figure 13). When we compare how successful companies are with driving through the challenges outlined in the previous section, some striking patterns emerge. To understand the impact of these barriers, we compared companies based on their level of integration – one set had reached the very highest level of Collaborative Commerce; the other set had attained the lowest level of collaboration. The contrast was striking. The “leaders” greatly outperformed the “laggards” on all 12 challenges. The leaders successfully met eight of the 12 challenges (i.e., they averaged 4 on the 1-5 scale). In comparison, laggards had little or moderate success in overcoming any of the barriers.

The gap between companies at high and low levels of Collaborative Commerce was particularly wide on overcoming the organizational stovepipes, creating a business and technology blueprint, focusing on customers, integrating technology, and gaining executive sponsorship. Based on our research and consulting work, we present some approaches to addressing those issues, as well as the issue all respondents had the least success with – overcoming distrust among the parties.

Reducing Distrust Among Would-Be Collaborators

Allowing customers to view product information on the corporate Web site is not likely to give executives sleepless nights. But giving customers access to sales forecasts, or suppliers access to promotional plans, is liable to set off fears that competitors will have access to proprietary data. Yet this kind of real-time, online sharing of vital operational information is essential if companies and their trading partners are to remove huge costs, cycle times and errors from an industry demand and supply chain.

Highlights

- **Leaders in Collaborative Commerce are much more successful than laggards at overcoming key barriers, including getting around organizational stovepipes, creating a blueprint to guide business processes and technology, and focusing on customers**

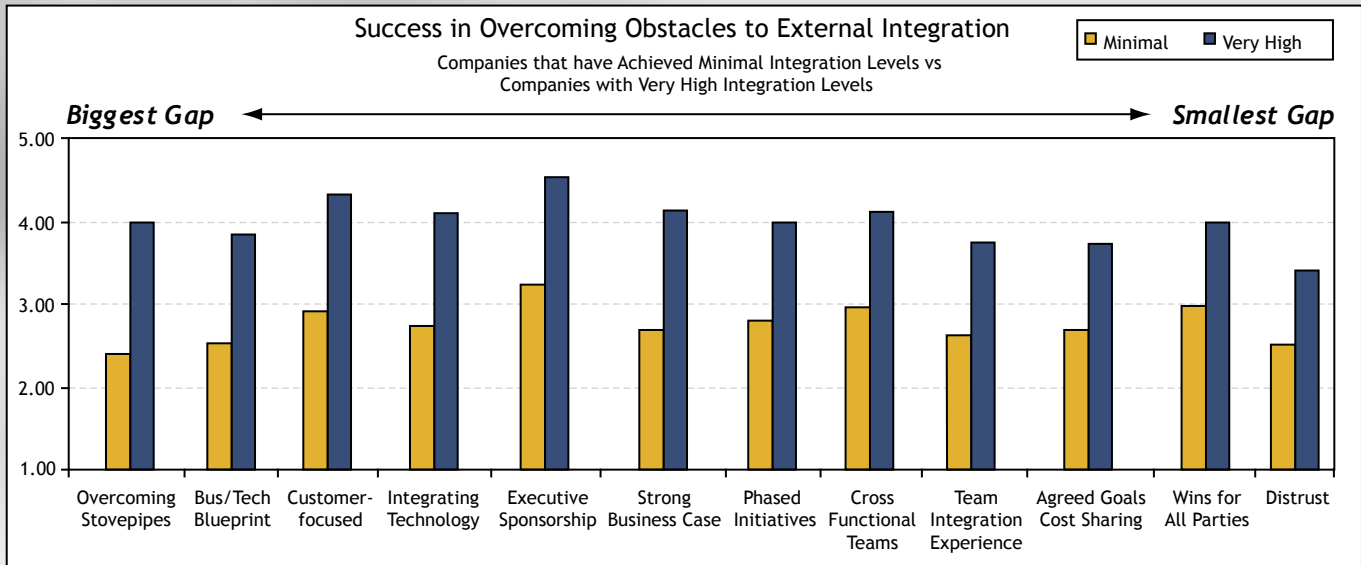
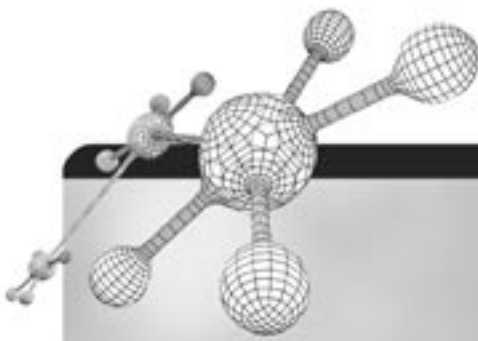
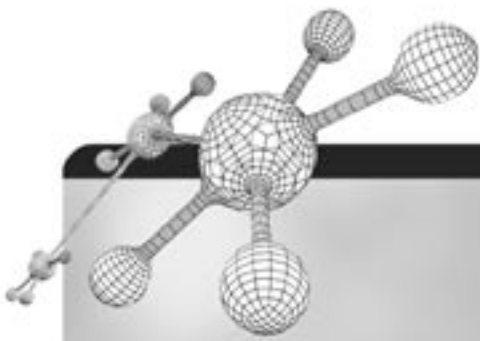


Figure 13

The findings reflect the fact that most companies haven't gone past this barrier, with three-quarters reporting only some, little or no success in overcoming it. Johnson Controls has found such fear to be the biggest barrier to Collaborative Commerce. "It's literally facing your fears as a company, and as a person, of collaboration and what you give up," John Waraniak told a conference audience last year. "You have to use that fear to energize the innovation and leadership – not to paralyze the action – and it's a fine line."¹⁴ Yet even Waraniak recognizes that certain proprietary information must be closely held. He believes posting supply chain information on public e-marketplaces like Covisint in the auto industry will find few takers. That is why Johnson Controls is constructing its own Web site for trading information with customers and suppliers.¹⁵

The issue of trust isn't just about leaking proprietary data. It's also about whether actions taken by one party will be to the detriment of another. The Nestle Purina case illustrates this well (see case study on page 27). To get retailers to collaborate in Order Fulfillment and let Purina manage its inventories, the company had to convince customers they wouldn't get stuck with excess product from Purina trying to meet monthly or yearly sales quotas.

How should companies deal with the trust issue? One way to reduce the risk of letting proprietary information fall into competitors' hands is by focusing Collaborative Commerce efforts on just a few suppliers or customers. Owens & Minor, a \$3 billion health care products distributor that has gained significant benefits from collaboration, focuses these initiatives on 10 suppliers that comprise the majority of sales.¹⁶ Gaining the trust of one other company is far easier than doing it with multiple organizations. And once the initiative has proven its value – and overcome the worst fears – other companies' levels of distrust are likely to fall.



Overcoming the Organizational Stovepipes: The Case for Integrating Internal Business Processes and Systems

The importance of overcoming organizational stovepipes appeared in answers to another question in our survey. We asked companies how much their internal business processes and systems were integrated to support their current level of external integration. Specifically, we asked them to indicate their level of "internal integration" on a scale of 1-5 (1=none, 2=minimal, 3=moderate, 4=high, 5=very high). We then analyzed how companies answered that question at each of the four levels of external integration. In other words, how internally integrated were companies that were only able to attain a level 1 in external integration, versus the level 4 integration leaders? The outcome: Companies at levels 3 or 4 of external integration were far more internally integrated than companies at levels 1 or 2 (see Figure 14). Companies at level 1 of Collaborative Commerce had an average level of internal integration between "none" and "minimal." In contrast, companies at a level 4 of Collaborative Commerce had a much higher degree of internal integration, falling between moderate and high internal integration.

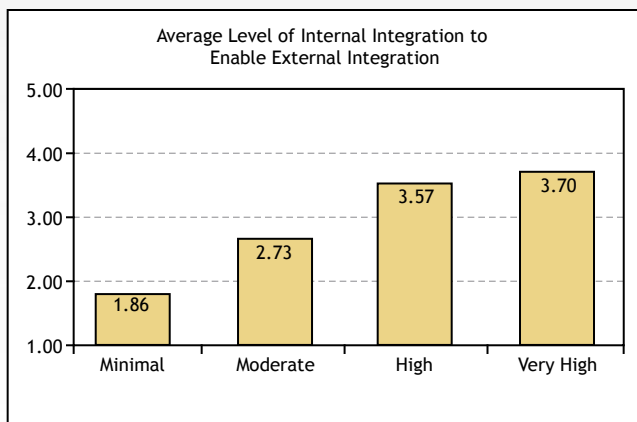


Figure 14

Merrill Lynch and Comerica Bank: Integrating Internally to Integrate Externally

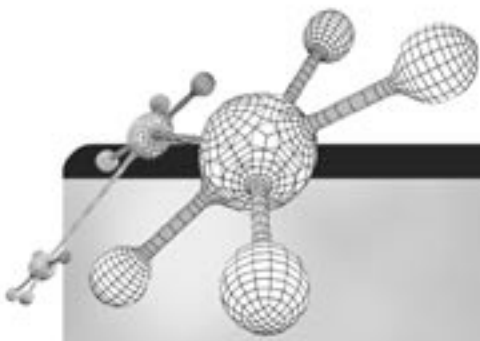
The experiences of two financial services companies demonstrate how external collaboration between financial institutions and their customers dramatically increases the need for internal processes and systems to be integrated.

Merrill Lynch & Co., the largest U.S. stock brokerage firm, has several initiatives in its U.S. Private Client (USPC) Group to integrate internal processes and systems. The group, which provides wealth management and advisory services to individual investors, as well as small and mid-sized businesses and employee benefit plans, is integrating hundreds of databases across 5,000 computer servers to create a single view of all the relationships it has with each customer. In turn, that will help Merrill advisors better service their clients by bringing the full range of the company's products and services to the financial planning process. A second initiative is focused on making life easier for customers of Merrill's USPC group. Due to the diversified services provided by the company, many of their customers have multiple online accounts.

NerveWire is helping Merrill Lynch build a single sign-on function that will allow customers to log on once and get access to all the disparate systems they are authorized to use. That, of course, will improve customer service. And it also will cut call center costs (many customers forget their ID's and passwords) and reduce the costs of maintaining multiple online security systems.

Comerica Bank, a Detroit-based financial institution, has found an increasing number of customers that want to deal with the institution through the Internet. One critical component of high-quality, Internet-based self-service is letting banking customers conduct all their banking business with Comerica through one Web site and one sign-on.

However, financial product groups at Comerica traditionally have been independent, with their own systems and databases. NerveWire is helping the bank integrate these systems and databases together. The initiative will not only simplify things for customers; it will make it much easier for Comerica to cross-sell products over the Internet.



This data underscores the importance of internal integration efforts as a foundation for Collaborative Commerce. Many firms are approaching this challenge under the umbrella of enterprise application integration (EAI) initiatives. These firms are focusing much of their efforts on accessing and directing information from disparate systems. Until now the benefits of EAI have largely been anecdotal, but the data supports a strong correlation between internal and external integration. It also amplifies the need to approach these EAI projects not as strictly infrastructure projects, but as business integration efforts driven by well-defined business needs.

Creating a Business and Technology Blueprint

Most businesses have been designed to work best within the four walls of the enterprise. As a result, their basic business processes and technology architectures are not necessarily suited for extension outside the company. Significant work is needed to redesign the processes and restructure the technology to support this new business environment.

The first step on the journey to prepare an organization for Collaborative Commerce is the development of a blueprint or “architecture” that lays out the process and technology design. Survey respondents identified that the leaders did this well, while the laggards had difficulty or did not recognize the importance of creating an architectural roadmap. These roadmaps include an integrated vision of the individual participants’ business processes, as well as a clear view of the process and technology connections the firms must make to one another. Successful firms involve key external customers/partners in the process of creating the blueprint, and implement it jointly. By doing so, the findings indicate, firms will increase the likelihood of success by recognizing and incorporating the requirements of each participant.

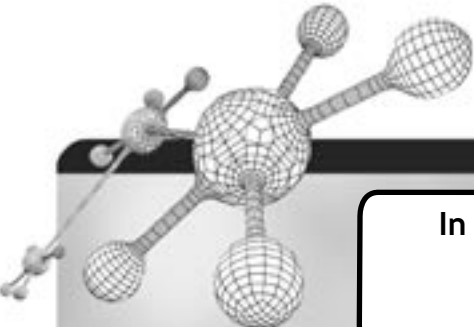
Focusing on Customers

In looking for ways to make dramatic improvements in the way they work together, it’s easy for companies that are collaborating to overlook the ultimate customer. As many businesses have learned to their peril, not addressing the needs of the customer can be a fundamental flaw in its strategy. However, leaders such as Cisco have shown that a strategy that begins with the customer can be the foundation of success. Cisco’s home page and their Cisco Connection Online customer portal is the centerpiece of its strategy, as customers can place orders, get customer service, receive upgrades, and perform a whole host of tasks that boost the productivity of Cisco and its customers.

Leaders focus their processes and business requirements on customer needs. Dell and Cisco have shown that the shift from a “build and sell” model to a “build to order” model starts with the customer.

Gaining Executive Sponsorship

Successful internal process reengineering and system integration initiatives have always required senior executive sponsorship to overcome the natural resistance of organizations to change. Collaborative Commerce programs are no exception, as the survey indicates, and in fact may demand even greater leadership and executive support than past internal initiatives. To achieve such sponsorship, leaders must focus on the specific, tangible business benefits of these efforts, and participants across collaborating organizations must understand and support those benefits. Thus, experience indicates that investment in a detailed business case, with leadership buy-in, is worth the time and resources it may require. Such foundation building will be critical in sustaining momentum through challenging periods of creating alignment and overcoming the organizational challenges indicated in the findings.



In the Grocery Business, Nestle Purina Takes Collaboration With Retailers to the Next Level

Collaborative Commerce in the \$460 billion U.S. grocery industry has taken several forms, one noteworthy version of which is "vendor-managed inventory." In VMI, a grocery manufacturer takes on the role of monitoring the sales and supply of its products at a retailer, and places the merchant's replenishment orders. The benefits: More accurate forecasts of supply and demand, fewer "stock-outs" in the stores, less inventory for retailers and higher sales for manufacturers.

Since the mid-1990s, Ralston Purina Co. has been in the forefront of such Collaborative Commerce initiatives. And a collaboration initiative Purina launched 1½ years ago with a major retailer to create and use one jointly determined sales forecast has raised the benefits of collaboration even higher. But the years it has taken to get there vividly illustrate how much the barriers of distrust and lack of internally integrated systems prevent companies from collaborating.

The company, renamed Nestle Purina PetCare since its acquisition last December by Swiss giant Nestle S.A. for \$10 billion, is the world's largest pet food producer. Back in the mid-1990s, the \$3 billion, St. Louis-based Ralston began working with supermarket chains and other retailers to manage their inventory, receiving daily sales information from retailers through electronic data interchange (EDI). "We found that we could add value to our customers by reducing inventory, increasing service levels and taking some burdens off of them," says Don Mowery, director e-business at the Nestle subsidiary.

By having current, unfiltered sales information and the responsibility for keeping warehouses stocked, Purina ultimately helped retailers reduce the number of stock-outs on store shelves. But the collaboration made one other significant change: It freed up retail employees from the time-consuming work of managing inventories and issuing purchase orders to manufacturers. Those people were also in charge of "managing the category" — i.e., looking for ways to increase the volume of pet food their stores sold through better promotion, merchandising, shelf layout and product mixes. By taking away the administrative work of keeping shelves stocked, Purina enabled retailers to concentrate on boosting store sales.

And boost sales they did. When Purina began managing retailers' inventory for its products, it typically generated sales increases that were three times greater than those of retailers managing their own inventory, Mowery says.

Today, the company manages retailers' inventory on more than 50% of its business (on a dollar basis). But getting there has been anything but easy for Purina and the rest of the consumer goods industry. The biggest hurdle is trust. "It comes back to that every time," Mowery says. "And unfortunately, it's not something you can overcome immediately."

When Purina first broached the idea of managing retailers' inventory in 1995, the reservation that Mowery heard most often from retail executives was one of getting stuck with too many unsold goods when Purina salespeople had to reach their monthly or year-end quotas. Another fear was having promotional plans and other information leaked to competing retailers.

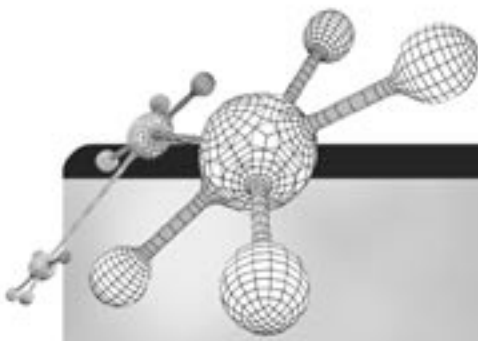
These concerns were overcome gradually when the company proved itself. "We just had to show that it was not going to happen. Your people have to have integrity and continually demonstrate it." Meeting pre-established goals on inventory and sales levels also increased trust.

At the end of 2000, Purina took VMI to the next level with one major retailer, who Mowery declined to name. The two companies are using just one system — a Web-based application owned by the retailer — to check sales data and make forecasts. "Because we are in their system, we are also seeing their forecast," Mowery explains.

Having one jointly developed sales forecast has had significant implications. One forecast means that both Purina and the retailer can focus on the tasks required to achieve that forecast rather than waste time trying to rationalize separate forecasts. Both parties can thus spend more time ensuring that in-store promotions and merchandising plans actually get done — the actions that ultimately drive store sales. "When we sit with a retailer and plan a display-type promotion, if the retailer has 100 stores, not all of them will be laid out the same way," Mowery says. "They don't have the same space, the same number of aisles, the same number of 'end caps' for display, and so on." Ironing out those details for just one retailer with hundreds of stores is an enormous amount of work.

The result has been a "significant difference" in sales — over and above the sales increases that traditional VMI has generated. In fact, Purina's sales growth at this retailer is greater than the retailer's overall sales growth, and greater than the growth of the entire pet food category.

Heartened by the business benefits from knitting together key business processes and information systems with customers, Purina is rolling out this program to other retailers.



Key Steps for Ensuring Success and Maximizing Results

This research echoes much of what we have seen from our consulting work. From the research data and our experience in consulting with leading, Global 1000 companies, we believe that the benefits of Collaborative Commerce are tangible and significant, that leaders are beginning to reap the rewards of collaboration today, and that there is significant opportunity for firms to take advantage of the experience of early innovators.

The survey results point to the opportunities and the challenges in leveraging Collaborative Commerce to create real return for your business. Those challenges should not be underestimated. Primary amongst them, the human factors must be addressed as we learn to do business in fundamentally different ways. In addition, the study findings point to the need to focus on business process and technology, and develop a blueprint to ensure that real business value is achieved and critical technical requirements are met.

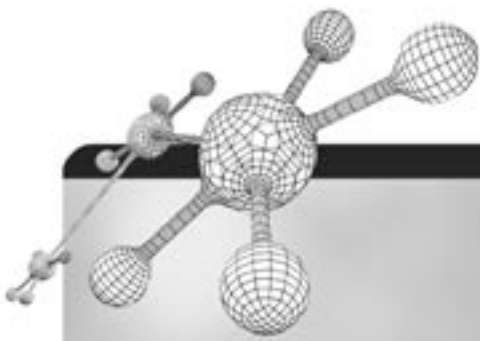
As firms prepare to accelerate their progress in Collaborative Commerce, a set of “Lessons Learned” should be considered. These lessons, gathered from our research and consulting work, will help position these initiatives for success.

1. Focus on business areas where the return is most compelling

The business value of collaboration is compelling, but unlike other initiatives, the highest returns will be felt as your focus moves closer to the core of your business – creating revenue opportunities, deepening your relationship with customers and driving productivity through closer relationships with suppliers. You will have the best success by being focused. It is very easy to try and achieve too much, and then under-deliver. It may be that at the beginning, as you ready for external collaboration, your initiatives will be focused on internal integration. Whichever areas you choose, they must be business case-driven and prioritized.

Highlights

- Focus on business areas where the return is most compelling
- Establish executive sponsorship to champion the program and assemble a seasoned team
- Create a business and technology blueprint that defines your vision in concrete terms
- Develop a stakeholder management strategy early in the process and keep it at the forefront of the program
- Implement projects in short, phased initiative, that deliver ROI to all major stakeholders quickly



2. Establish executive sponsorship to champion the program and assemble a seasoned team

As we have learned from the leaders, Collaborative Commerce initiatives require senior business sponsorship from a business executive who will benefit from the initiative, such as the CEO or a business unit general manager. The IT group needs to be on board but can't be carrying the charge. The initiative needs to be a joint effort between business and IT, driven by a team of seasoned, well-respected people who must commit a significant amount of time to the effort.

3. Create a business and technology blueprint that defines your vision in concrete terms

Business processes must be redesigned to support a new way of working with trading partners. Technology systems must be modified to enable information to be shared externally, and systems to be integrated. A blueprint, or "architecture," ensures that the infrastructure will support the business ambition, and can be designed to drive the future process and technology changes in incremental steps, toward the vision. This blueprint should be market-led and informed by the needs of the customers. These are the critical elements of the "architecture," which forms the foundation upon which an agile, adaptable business is built. As companies look to outsource or work with partners more on activities they had previously done within their company, having a single, common definition of the interaction between them – not multiple versions of "reality" – is crucial. A business and technology blueprint forms the basis for that common definition.

4. Develop a stakeholder management strategy early in the process and keep it at the forefront of the program

Unlike an initiative to integrate business processes and systems within a company, the parties in a Collaborative Commerce program participate on a "voluntary" basis. That is, no company can automatically command the

others to stay the course unless it has tremendous channel power. Thus Collaborative Commerce initiatives are characterized by massive consensus-building and stakeholder management exercises. Specific goals and benefits must be established for each customer, supplier and/or business partner that is part of the effort. The chances of keeping all parties on board can be improved dramatically by building in and delivering the first set of benefits to all within six to nine months after starting.

5. Implement projects in short, phased initiatives that deliver ROI to all major stakeholders quickly

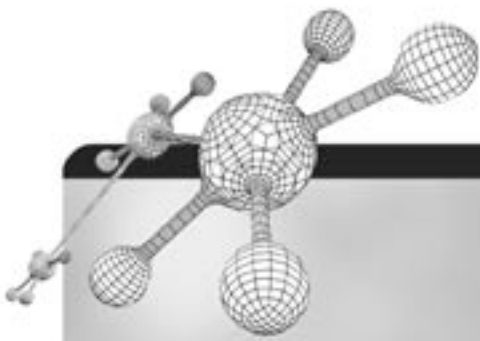
Today's business environment requires a focus on fast ROI. The days of two-year projects are no more, and each phase should be six to nine months. It is important to phase your initiatives by prioritizing business benefits and allowing for reprioritization between phases.

Summary

"E-business" is not dead; it's alive and well -- creating measurable value in the form of Collaborative Commerce. The results of our study on Collaborative Commerce clearly indicate that the business impact of integrating a company's business processes and information systems with those of its customers, suppliers and partners can be substantial. The benefits include significant reduction in costs and cycle times, increased revenue, and faster new product/service introductions.

But despite the advantages, the barriers to Collaborative Commerce are significant. Most companies studied have only reached low levels of collaboration, and have generated modest performance improvements. The biggest obstacles to Collaborative Commerce include overcoming distrust and internal functional "stovepipes" that prevent companies from being integrated internally – a prerequisite for effective external integration.

Getting past the obstacles requires creating a business and technology blueprint to guide the way businesses should collaborate and finally, assembling an experienced team to lead the Collaborative Commerce initiative.



Research Methodology and Demographics

NerveWire, Inc. launched a study on Collaborative Commerce in North American companies in early 2002. The research approach was designed to both collect quantitative data across a large representative sample of companies as well as qualitative data from a smaller sample of companies to probe the benefits and challenges to Collaborative Commerce.

With the help of our research partners, The Bloom Group, NerveWire designed an online survey instrument and then mailed it to approximately 10,000 senior IT and e-commerce managers in large companies. Additionally, we partnered with *InformationWeek magazine*, which promoted the survey to the senior IT and business executive subscribers of its online newsletter.

Over a 90-day period, 162 executives completed usable surveys. Survey respondents were a mixture of information systems-related managers (47% were CIOs, CTOs, VPs of e-commerce or directors/managers of IS) and business managers (43%). They worked in a range of industries, with the largest industry responses from high-tech software and high-tech manufacturing, industrial manufacturing and financial services (see Figure 15).

48% of respondents were mostly from large companies (more than \$250 million in annual revenue) or business units of large organizations (see Figure 16).

The research team also conducted in-depth interviews with several companies. In addition, extensive secondary research was conducted on companies that had talked publicly about their Collaborative Commerce initiatives.

This research report contains the data generated by those research activities and NerveWire's analysis of it.

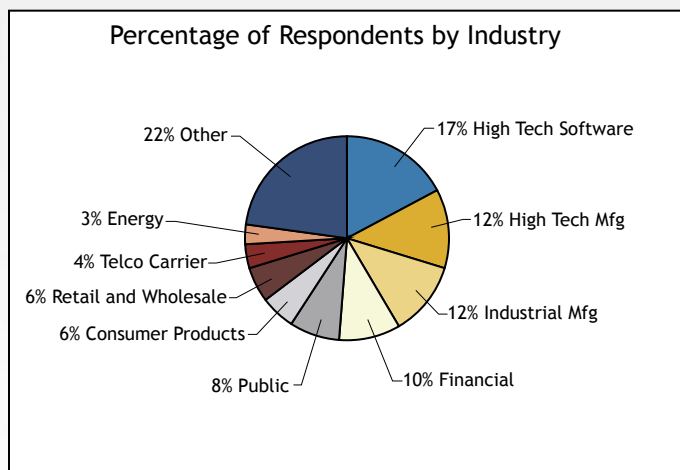


Figure 15

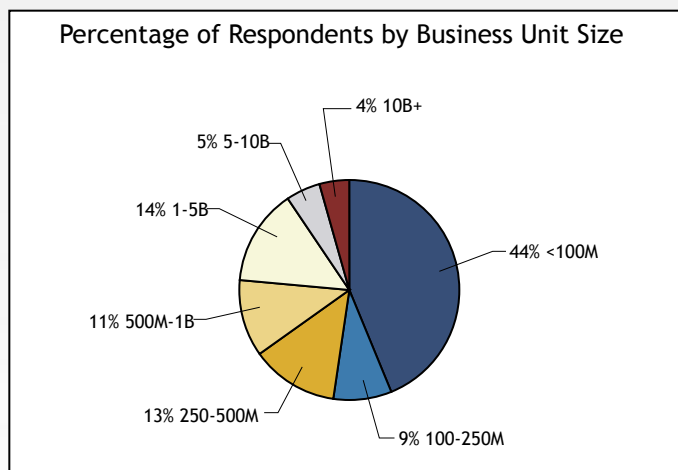
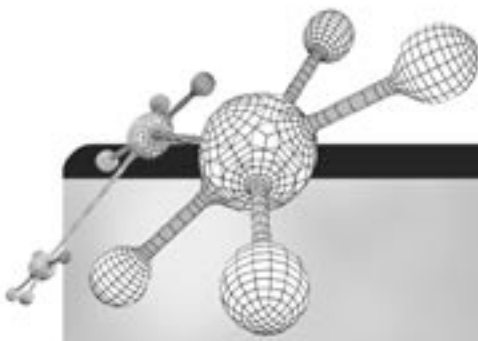


Figure 16



(Endnotes)

¹ Michael Dell speech, "The Internet Advantage – Operating Principles for an eSociety," at the FutureFocus Conference, Feb. 7, 2001, in Copenhagen, Denmark. http://www.dell.com/us/en/gen/corporate/speech/speech_2001-02-07-cop-000.htm

² Michael Dell speech, "Growing with the Internet: Worldwide and Direct," Boston, Mass., Nov. 3, 2000.

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⁴ M. Dell with C. Fredman, "Direct from Dell: Strategies That Revolutionized an Industry," p. 221, HarperBusiness, 1999.

⁵ D. Kirkpatrick, "Beyond Buzzwords," *Fortune*, Mar. 18, 2002.

⁶ Principal Financial Group press release, January 2002.

⁷ From a presentation by John Waraniak at the Line56Live conference, Dec. 18, 2001.

⁸ James Herman, "Global Value Webs," *Supply Chain Management Review*.

⁹ CIGNA press release, Jan. 9, 2002, "CIGNA teams with Yahoo! Enterprise Solutions to Help People Better Manage Health Care and Retirement Plan Needs Online."

¹⁰ Steve Konicki and Marianne Kolbasuk McGee, "Collaboration's Still Kicking," *InformationWeek*, Dec. 24, 2001.

¹¹ Ibid

¹² Steve Konicki, "Groupthink Gets Smart," *InformationWeek*, Jan. 14, 2002.

¹³ Steve Konicki and Marianne Kolbasuk McGee, "Collaboration's Still Kicking," *InformationWeek*, Dec. 24, 2001.

¹⁴ Waraniak presentation from Line56 conference.

¹⁵ Christopher Koch, "Motorcity Shakeup," *Darwin* magazine, January 2002.

¹⁶ Marianne Kolbasuk McGee and Chris Murphy, "Collaboration is about more than squeezing out supply chain costs," *InformationWeek*, Dec. 10, 2001.

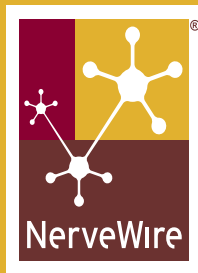
About NerveWire

NerveWire, Inc. is a management consulting and systems integration firm focused on Collaborative Commerce. We help Global 2000 clients in the Financial Services and High Tech industries integrate their customers, channels, and suppliers to attain new levels of shareholder value.

Based in Newton, Massachusetts, with locations in Minneapolis and New York, NerveWire has 200 employees. NerveWire has been named to the Red Herring 100 as one of the top 50 privately held companies that represent the future, and to the Computerworld Top 100 emerging companies for 2002 for our ability to target inefficiencies and lower operating costs for clients.

Through NerveWire's work in strategy and planning, business and technology architecture, and systems integration, we continue to develop a strong practitioner's view of what is currently hype, what is reality, and where the market is headed.

For more information about NerveWire, please visit www.nervewire.com, email us at sales@nervewire.com, or call us at 1-TO-NERVEWIRE (1-866-378-3947).



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