

Demand

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Demand: Special NAED Edition

Inside this issue...

- *Payback Time for Supply Chains - by Rob Rodin, former CEO of Marshall Industries*
- *Special NAED Demand Commentary*
- *Grainger Case Study Addendum*

Welcome to this special National Association of Electrical Distributors (NAED) annual meeting issue of Demand.

As a newsletter for wholesale distributor executives, we are honored to be in Chicago for what is a veritable laboratory of distribution management strategy. While disseminating Demand at the NAED meeting, you can be certain we are on the lookout for relevant ideas that we can gather, distill and polish for you in the near future.

We hope you enjoy this special edition which features insight from Rob Rodin, former president and CEO of Marshall Industries and current Chairman and CEO of eConnections, an emerging company within the electronics distribution industry. That's all for now...we've got to get our booth set up and prepare for the show tomorrow.



Don Shula, NAED Keynote Speaker — “I read Demand every week to prepare for Sunday’s game.”

Payback Time For Supply Chains

Companies no longer compete, supply chains do. Quantifying the return from supply chain collaboration requires not only new metrics but a new way of thinking

The potential of the Internet as a tool for business success is still very real. But simply adopting the Internet as a business strategy doesn't, in itself, guarantee effective collaboration across the supply chain. Just as the Post-Internet-boom rules for optimizing supply chains continue to change, so do the measurements of their effectiveness and investment payback.

Companies no longer compete--supply chains do. Supply chains create competitive differentiation by how fast, how cheaply, and how well they deliver on customers' demands for products or services. The challenge is that for all the resources and efficiencies of individual supply-chain partners, companies lack the command and control that comes when all pertinent information is contained in a single location. The very notions of partnering and outsourcing introduce a slew of collaborative requirements and challenges.

We're beginning to see the emergence of systems and services that effectively support collaborative processes among multiple supply-chain partners, and new methodologies that effectively measure the value and return on investment of those collaborative processes. But as with any major *(Cont'd on pg. 2)*

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Payback Time For Supply Chains (cont'd from p. 1)

business change, supporting software applications and IT services are only pieces of the puzzle. To get new, useful measurements of payback from supply-chain collaboration, we need a new way of thinking about the value that such collaboration delivers.

The old organizational chart--that post-World War II construct of how business got done in a vertically integrated environment--is history. Increasingly, companies are moving toward outsourcing, contract manufacturing, and third-party logistics as short product life cycles and tight profit margins demand reduced inventories. Most companies would outsource almost everything if they could. Manufacturing is too labor- and capital-intensive to support the high margins and fast growth investors demand. By divesting themselves of these assets, companies can focus on their core competencies in product development and quickly improve their return on invested capital. Standard & Poor's reports that in the year 2000, the market-to-book ratio of the S&P 500 was six times greater than in 1981--a reflection of the declining importance of tangible assets.

So it's not surprising that the outsourcing of operations and facilities across industries rose 18% from 1999 to 2000 alone, according to a 2000 study by investment bank Bear Stearns. The same report reveals that the average electronics original equipment manufacturer would like to outsource 73% of its manufacturing, and 40% of all OEMs would like to outsource the manufacture of 90% or more of their final product, if they could do so in the context of their business.

Moving tangible assets such as factory equipment off the balance sheet and outsourcing or subcontracting processes to cut costs is all well and good, but companies can't lose sight of customer and competitive pressures. No matter what business you're in, chances are your customers demand the same three things of your product or service, or as close to these three ideals as they can get: They want it free, they want it perfect, and they want it now.

The key to supply-chain collaboration that truly adds value, and doesn't just cut costs, is information--production and customer data easily shared among supply-chain partners. Suppliers must share their knowledge of which customer relationships have the greatest lifetime value and the extent to which specific customers consistently overestimate or underestimate their need for inventory. Similarly, an original equipment or contract manufacturer can determine which suppliers most consistently deliver on time, as well as which ones offer the most competitive prices.

Through such knowledge, a company can reward partners that best contribute to its success and work with the others to bring about more mutually beneficial supply-chain relationships. Obtaining this knowledge requires that supply-chain management systems include analytics linked tightly with supply-and-demand planning, management of inventory, and requests for quotes.

Know what you don't know

"The Internet is a tool," says Intel Chairman Andy Grove, "and the biggest impact of that tool is speed." Now, more than ever, speed means the difference between success and failure, between meeting market demand and being saddled with excess inventory, between gaining the profits of a first-to-market player and offering low-margin alternatives. Yet with market uncertainty, continued compression of business cycles, and growing supply-chain complexity, companies increasingly don't know what they don't know.

Six months ago, could you have predicted what your business would look like today? What will it look like in six months? How about six weeks from now?

By sharing detailed information across the supply chain, companies can revise their strategies in hours or days instead of weeks. When supply-chain partners work through the same information system, they have clear, consistent interactions, because everyone can receive system updates at the same time.

Imagine, for example, that an Internet-based supply-chain system alerts Acme Corporation, a component supplier to Beta Manufacturing, to a problem in Acme's plant that's going to delay production of a key component for one week. The system's built-in business rules tell Acme which of its OEM customers will be affected, depending on the delivery dates. One of them is Beta Manufacturing, so the system prompts Acme on possible actions to take. The manager chooses to suggest an alternate Acme component to Beta, which is linked into the same hosted system.

Next, the system prompts Beta with suggested solutions based on built-in, (cont'd on pg. 3)

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Payback Time For Supply Chains (cont'd from p. 2)

industry specific business rules. Say Beta decides that the alternate component won't work: Beta automatically sends an RFQ for the component to its other preferred suppliers on the networked supply-chain system. If another supplier has the component, the problem is resolved. If there's simply no availability of the necessary component, Beta can use the system to alert others among its suppliers that will feel the impact, and they in turn can alert their suppliers, who can adjust their operations and forecasts as needed.

In other words, without this kind of information sharing, a five-day production delay is an unfortunate glitch that simply adds time and costs. But if all the affected partners know about that delay quickly, maybe they can work on other, more pressing needs, instead of working hard to finish and ship a component that will sit unused for five days. Even if no resolution is acted upon, at least everyone knows what's going on, so there are no surprises.

Measuring collaboration ROI

"Applications such as supply-chain collaboration, demand planning and forecasting, and E-procurement support offer the most promising opportunities for bottom-line savings," says AMR Research analyst Bob Ferrari. Most experts would agree. The challenge is quantifying ROI for these types of applications.

But that's starting to happen. Boeing Rocketdyne, the propulsion and power business unit of Boeing, assembled a team of more than 100 suppliers and partners. Collaboration among them led to the development of a low-cost, highly reliable rocket engine that used just six parts instead of the hundreds of components typical in earlier designs. The company also reduced development cycle time by half, from two years to one, and manufacturing cycle time 63%, from two years to just nine months.

Boeing Rocketdyne is a good example of collaborative payback, but there are even more quantifiable, hard-data ROI metrics in the high tech manufacturing sector. The manufacturing consulting firm Pittiglio Rabin Todd & McGrath has quantified the impact of applying supply-chain best practices. In its comprehensive Integrated Supply Chain Benchmarking Study, the firm examined the impact of the Supply Chain Operations Reference benchmarking model. SCOR was developed in conjunction with the Supply Chain Council, a consortium of 800 manufacturers and related companies, to analyze the supply-chain performance of dozens of high-tech companies.

Pittiglio Rabin Todd & McGrath found that by using the SCOR benchmarks, best-in-class companies showed significantly better supply-chain performance over competitors. For example, they filled 95% of orders from inventory, compared with a high-tech industry median of 86%, and improved annual inventory turns from a median of 2.4 turns per year to 6.9 turns. These improvements have a direct impact on companies' bottom lines. Cash-to-cash cycle times (the time between paying for materials and being paid for finished component or product the company makes) averaged 28 days for top performers, versus a 71-day median. And top performers were able to improve delivery performance while reducing their average time holding inventory to 29 days, versus an industry median of 64 days.

Pittiglio Rabin Todd & McGrath also found that total supply-chain costs for the median high-tech company ran 9.5% of revenue, while best-in-class companies' supply-chain costs were only 4.6% of revenue. Therefore, taking a company from a median performer to best-in-class on the SCOR model could result in improving the cost of managing a company's supply chain by 4.9%, translating into an annual savings of \$49 million for a billion-dollar company.

Moving from median to best-in-class means implementing a broad array of supply-chain best practices defined in the SCOR model, such as collaborative planning, direct customer data input, online visibility of all supply chain requirements, and instant replanning whenever data changes. Although achieving all those practices requires changing processes as well as IT systems, by simply using a collaborative Web-based supply-chain management system, a company could expect to achieve at least some of that 4.9% reduction in supply-chain operating costs.

Naturally, such a reduction can have a significant impact on a company's overall business performance. According to research from consulting firm A.T. Kearney, supply-chain inefficiencies can waste up to 25% of a company's operating costs. So with some companies realizing profit margins of just 3% to 4%, even a 5% reduction in supply-chain inefficiency can double profitability. (cont'd on pg. 4)

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Payback Time For Supply Chains (cont'd from p. 3)

Flash Electronics, an electronics contract manufacturer, subscribes to a hosted Web-based system for managing RFQs. The system links Flash to nearly every one of its suppliers and is designed with embedded analytics and business rules specific to the electronics industry. Results for Flash Electronics to date include an almost 50% reduction in overall quote-process time and up to a 65% reduction in quote-process time and up to a 65% reduction in quote-processing costs in two months, along with the ability to respond faster to its OEM customers and reward its suppliers for their performance.

Initial benchmarks can be used to demonstrate how to improve customer responsiveness and business operation by leveraging Internet solutions designed to ease communication and multilevel collaboration across today's extended supply chains.

By contrast, most ROI measurements today are based on traditional supply-chain models, which are designed to assess not true collaborative ROI in a hosted environment but, rather, each individual company's metrics for the payback on their own investments. New metrics for such measurements are emerging as supply-chain relationships evolve and the Net-native solutions supporting these relations are implemented more broadly. But these metrics will require a significant change in thinking.

Value, not cost

All this focus on supply-chain efficiency is important, but it doesn't address the whole picture. You can't lose sight of the customer and competition pressures to provide greater quality in your products and services. Therefore, supply chains must be prepared to make the transition from a cost focus to a value focus.

This realization first hit me after a discussion some years ago with the father of Total Quality Management movement, Dr. W. Edwards Deming. Deming, who died in 1993, revolutionized manufacturing in Japan with his evangelistic enthusiasm for measurable, quantifiable results at every stage of design and production cycles. American manufacturing quality programs that followed—such as the Six Sigma program at General Electric, Hewlett-Packard, and others—relied on many of the same principles as Deming's earlier work.

When I first met him, I expected him to have statistically analyzed and charted every possible business index. As my relationship with him grew, I had the opportunity to ask detailed questions about the tools and techniques he used to analyze every facet of business performance. One day, Deming looked at me with a curious smile and bellowed, "Don't you know the most important numbers in business are unknown and unknowable!"

I was amazed that this esteemed professor with degrees in hard sciences such as mathematical physics could say such a thing. But as I thought about it, I realized he was right. How can you measure the loyalty a customer has to a brand or the importance of trust, teamwork, and collaboration in a supply chain, or the impact of a culture on an organization?

Many attributes in a business are difficult to measure empirically, and are therefore unknown and unknowable. However, we know intuitively that optimizing internal and external communications, training our staff, and collaborating with our supply-chain partners, when done properly, will lead to less waste, higher productivity, greater market share and earnings, and a more competitive business.

At my former employer, Marshall Industries, a \$2 billion global distributor of electronic components, we were planning to install a voice-mail system several years ago. The voice-mail company representative told us the hard ROI we would enjoy. But the questions the rep couldn't answer were: Do our customers want or like voice mail? Does this approach exceed customer expectations?

So I asked another question: "What if, instead of voice mail, we trained our people to answer the phone 24 hours a day? Could the ROI justify the added staff and expense?" I wasn't sure, but I knew I didn't like the voice-mail menus and how often I got stuck in "voice-jail" systems. A person who cared, answering phones around the clock, might exceed customer expectations. Human contact would better support our global customers and reinforce the perception that we were always there. It was a question of service, commitment, and trust. It was about our brand.

The live-person program was extraordinarily successful, driving up both our customer satisfaction and the perception of our service levels. For some customers, just knowing they could call if something went wrong was enough—even if they never actually had to use the system at 3 a.m. to produce an *(cont'd on p.5)*

“Don't you know the most important numbers in business are unknown and unknowable!”

Payback Time For Supply Chains (cont'd from page 4)

outcome we could measure, such as response time or the adequacy of the problem resolution. So where are the metrics for that?

Acceptable vs. desirable

All business decisions are, or should be, made in a context. Today's competitive environment is fraught with challenges: the explosion of networked communications, product life-cycle compression, poor forecasting, and a global marketplace. We can, and will, buy anywhere, sell anywhere, and outsource anywhere. Why did Marshall's 24-hour customer-care program work? Because the world is awake, the world is connecting, and customer demands are insatiable. This context challenges classic ROI analysis, forcing us to look very closely at those attributes we believe we can't measure.

In some cases, we know how to measure acceptable results within a prescribed tolerance. We can measure spending performance against budget, the reduction in the number of transactions required to complete a process, and, of course, the gains from lower pricing from a supplier. But, for the most part, we haven't designed measurement tools to target results that are desirable, rather than merely acceptable. However when we look at ROI, we don't necessarily ask: Do we have the most desirable systems to optimize collaboration, time management, and competitive leverage across many disciplines within the company and the supply chain? The simple example of 24-hour customer care took Marshall Industries to a more desirable state. Not only did we serve the customer better, we also learned to use our around-the-clock staff to maximize the company's efficiency, leveraging every tick of the clock.

In optimizing supply chains, the same rules apply. It's not just about acceptable price targets or inventory turns but about a more desirable system that "cannibalizes" work, maximizes time, and continually improves and innovates. Measuring desirability rather than acceptability within your company is a good start, but in just about every industry, it won't be enough. That's because, as noted above, companies no longer compete--supply chains do.

Clearly, an important goal of supply chains is to reduce and eliminate steps and costs, what I call the cannibalization of work. This isn't just an ROI data point, but a permanent mandate to align with a market that always demands more and better. That's why it's critical to provide instant collaboration between suppliers and customers. With already-established connections, customizable rules, and industry-designed tools, supply-chain partners can coordinate and enhance their information, communication, and governance. The improvement on a transactional level can be measured, in many cases, with classic ROI mechanisms. The additional benefits of speed to market, vendor collaboration, flexibility, scalability, transparency, and control aren't easily measured, yet they represent the desired competitive mandates for survival.

Department A can report a component delay inside its own company, for example, and all affected department heads can come together quickly to work out a solution, whether it's the use of an alternate component or a change in manufacturing priorities. Try translating that to 50, 100, or 200 first- and second-tier suppliers. Scope--and competition among supply-chain partners--makes such a meeting impossible, and delays in supply-chain communications may take weeks to trickle down to some companies. Too little information arrives too late, resulting in excess inventory, manufacturing delays, rush-delivery charges, and missed customer commitments. And, of course, rules and behaviors must also change, depending on the business climate in play at any given moment.

Technology hasn't yet done much to help these supply chains, since most enterprise resource planning and other software packages still focus on inside-the-four-walls corporate processes. As a result, many supply-chain interactions still occur via fax or over the telephone, and the Web remains a tool for cataloging products, not delivering on the promise so avidly embraced only a year or so ago. Instead, we still see propagation delays, overlapping communication flows, poor product allocation, product shortages, shipping delays, and customer dissatisfaction.

The supply-chain community

Today's supply chains aren't just collections of companies but communities, whose participants each play an important role in bringing products to market, whether they're OEMs, (cont'd on p. 6)

"The simple example of 24-hour customer care took Marshall Industries to a more desirable state."

Payback Time For Supply Chains (cont'd from page 5)

contract manufacturers, distributors, or suppliers. Each role is necessary to the manufacturing ecosystem, and the interactions are complex, involving a range of negotiations, communications, and increasingly deeper levels of collaboration.

Trying to map out the politics, roles, and relationships of a supply-chain community is convoluted and downright ugly. Solid and dotted lines overlap and crisscross in any diagram attempting to show the relationships of multiple supply-chain partners that may participate in different tiers and that may, in fact, be the partner, subcontractor, competitor, and even the customer at different times. The nature and complexity of these roles make it very difficult to engage in open communications--and even harder to measure the benefits of supply-chain collaboration.

Boeing Rocketdyne is an example of collaboration at its best, with companies working together to innovate, cut costs, and bring products to market faster. However, history shows that the more common example consists of companies engaging in collaboration by coercion. The rules are dictated by large, powerful companies that rely on the power they have over suppliers providing products and services to them.

The traditional cost-management solution to these large buyers is to move assets, activities, and inventories to other areas in their supply chains. This may help the bottom line for the short term, but unless unnecessary costs and inefficiencies are removed, and not just shuffled around within the supply chain, the problems will return to those companies in one form or another.

"There's no point transferring your inventory to your suppliers, because then they'll have the inventory costs, and you'll see them showing up in your component prices," says Antti Ware, VP of system business at Nokia (China) Investment Co. "But if you can reduce the whole chain's inventory, then you will be very competitive."

All boats rise

Collaboration in the supply chain means that all companies work together toward common objectives, but true collaboration works only as long as businesses remain committed to the supply chain. This is especially evident in the high-tech industry, where the relationships between trading partners must be inherently interdependent to deliver innovative products to market. Everyone benefits from solutions that show demonstrable value to all parties; therefore, "all boats rise" to a new level of business integration. All supply-chain partners must work together not just in moving problems around but in reducing and eliminating them for increased productivity and quality, greater cost-effectiveness, more predictable on-time delivery, and faster time to market.

An Internet-based communications system that links supply-chain partners will need to permit supply-chain partners to send and receive data in their preferred formats, whether it's electronic data interchange, XML, RosettaNet Partner Interface Processes, or Excel. Communications also need to be integrated with core supply-chain management functions, such as demand planning and inventory management, to provide automatic alerts to partners.

But the success of any supply-chain communications system, no matter how advanced, will always depend on the willingness and ability of partners to expose their internal business processes. This relates directly to thinking about the supply chain as a community.

During the next two years, companies that effectively open their internal processes to external collaboration will grow 20% faster than those that don't, predicts Bruce Bond, VP and research manager for IT advisory firm Gartner. So any supply-chain solution communications systems must include embedded business rules, plus the ability to incorporate company-specific rules governing businesses processes--as well as when, how, and with whom those processes are shared.

Opening your processes and sharing important, timely information with your supply-chain partners is the critical first step toward measuring Professor Deming's unknown and unknowable--the real competitive differentiators that let your supply-chain community attract, retain, and satisfy its customers.

It's a complex challenge, but those who understand and act upon this competitive mandate will lead the companies that drive our economy. Of course, some organizations may choose not to do so. For them, I offer one last observation from Deming, whose brilliance did not exclude sarcasm. (*cont'd on pg. 7*)



Payback Time For Supply Chains (cont'd from page 6)

"It is not necessary to change," he once said. "Survival is not mandatory."

Rob Rodin was president and CEO of Marshall Industries and author of Free, Perfect, and Now: Connecting to the Three Insatiable Customer Demands. Currently, he is the Chairman and CEO of eConnections, a Pasadena, Calif., provider of extended supply-chain intelligence services.

NAED Demand Commentary — Takeaway Points

While many of the details of "Payback Time For Supply Chains" are more relevant to the electronics industry, there are two important points for the electrical distribution executive to take away.

- Recording and sharing various types of information with employees and customers will help you "get the right product to the right place at the right time in the most efficient way possible." In other words, get you closer to the goal of free, perfect and now. This usage of information takes on an inordinate number of forms, from gathering and internally distributing customer demand forecasts to displaying product and price updates efficiently, to tracking and presenting the ROI of value-added services.
- The manufacturing consulting firm quoted in this article clearly highlights that there is value from offering "supply-chain best practices". You can make this abstract concept real by identifying specific service offerings that can improve your customers supply chain practices and documenting the cost savings and charge for your services. For the more adventuresome reader, you might consider offering supply chain technology-related services that your customers are already purchasing from other sources. Besides offering a legitimate opportunity to earn increased profits, you know your customers' operational needs better than most supply chain information providers and can create the "desirable" experience they are seeking. For more reading material on the topic of fee for services marketing, you can consult Scott Benfield's book, *Services That Sell* (available at www.nawpubs.org).

Demand Takeaways:
 - **Share information with customers**
 - **Offer supply chain information services customers are already purchasing**



Addendum to the Grainger Case Study (Demand March 2002 issue)

Grainger Chairman and CEO Richard Keyser recently addressed research analysts, affirming Grainger's 2002 earnings projections. Keyser noted that sales processed through Grainger.com increased 37% year over year and delivered almost 10% of total U.S. sales and *still* achieves incremental sales increases of 11% from customers who were recently brought online. Sounds desirable to us.



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