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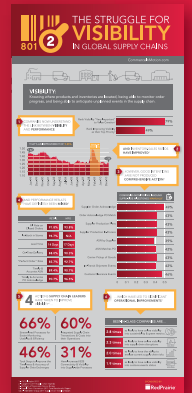
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\*Sources: CSCO Insights 2011, Aberdeen Group

# SUPPLYCHAIN

## MANAGEMENT REVIEW

Cover by  
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### FEATURES

#### 10 Sustainability is Free—The Case for Doing the Right Thing

More and more companies now recognize that creating a sustainable supply chain is more than just the right thing to do—it's a requisite to business success. Sustainability today resembles the quality movement of three decades ago. As with quality, there was initial resistance to "going green." But it soon became apparent that the benefits were far too great to ignore.

#### 18 Innovation Sourcing—The Suppliers' Perspective

This article explains how leading companies are engaging in innovation from a unique perspective—that of their suppliers. The research examines the strategies and approaches that should be put in place to accelerate and realize supplier innovations that lead to competitive advantage.

#### 26 Is Your Top Team Undermining Your Supply Chain?

Managing a global supply chain involves tough organizational challenges that promise only to intensify as operations expand and become increasingly interconnected. Key among those challenges: getting functional groups to understand their impact on one another so that they can collaborate. To bridge the organizational gaps that often divide their senior managers, McKinsey research finds, companies need to successfully address three main areas of collaboration tension.

#### 32 Follow the Leaders: Seven Ways to Procurement Excellence

The latest Assessment of Excellence in Procurement (AEP) study from A.T. Kearney confirms procurement's power to drive real money to the bottom line and value to the top line. Among the leaders who do this best, seven characteristics stand out.

#### 52 Innovative Logistics in Extreme Conditions: Lessons from Gambia

Managing logistics in developing countries presents real challenges—from poor roads and unreliable vehicles to less than ideal warehousing options. When public health is at stake, the logistics issues are even more worrisome.

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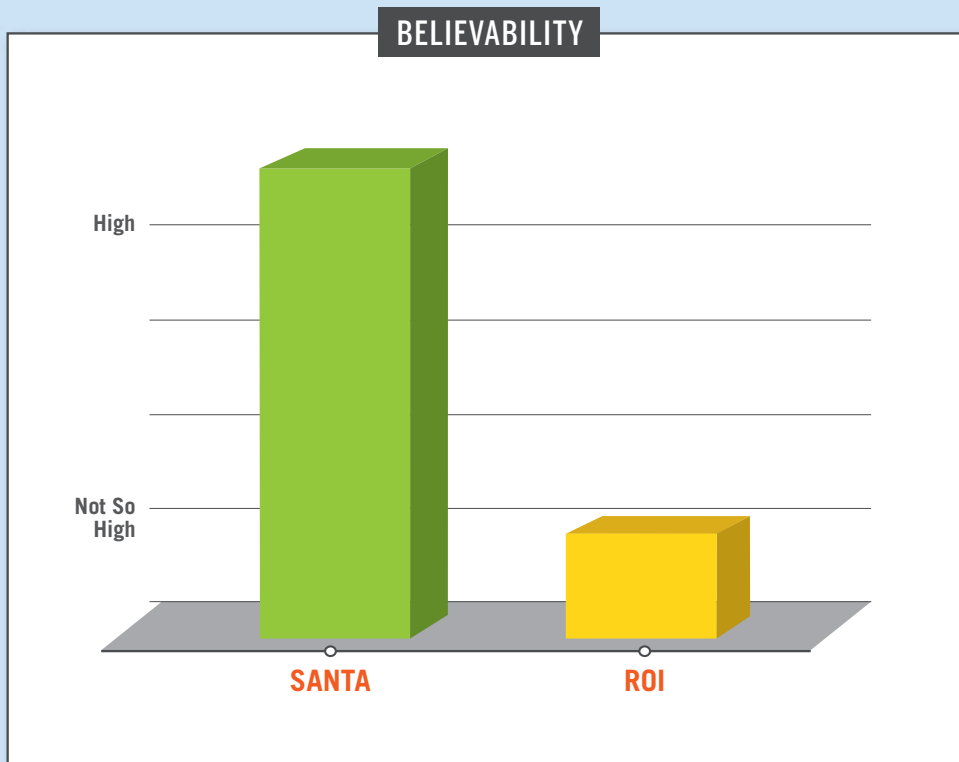
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## New Face of Innovation

**I**nnovation. It's a hard competency to come by. Can schools teach you to be innovative? Is work experience really the only way to open your eyes to what's possible? Or is the innovative spark something that lurks in an individual's DNA—and you either have it or you don't?

To be honest, I don't know the answer to these questions. But pressed to guess, I would say that innovation in a supply chain context likely involves a combination of all of these elements.

As to the single driving factor behind innovation, I would start with the individual who believes something can be done differently—and better. Typically, that individual collects like-minded people around him who also see the potential benefits of a new way of thinking. The next step that often unfolds is a formulation of a plan for moving forward on the innovation—an endeavor that almost always runs into strong headwinds because we are, after all, talking about change. Perseverance though the implementation process is the culminating step.

One of the most striking examples of supply chain innovation of the past few years follows this general scenario. It's discussed in the article on "Innovation Sourcing—The Suppliers' Perspective," written by the experts at CAPS Research. They relate how leading companies (more accurately, individuals at leading companies) like P&G, Cisco, and Whirlpool have adopted a contrary view to the age-old wisdom that innovation has to come from within—i.e., the buying company. Their perspective: Why not turn to the suppliers for product and service innovations? After all, in many cases, the

suppliers have superior technical skills and broader exposure to the market. Through their business successes the leading proponents of innovation sourcing have confirmed the value of this approach.

Innovation also can manifest itself in ways that relate more to overcoming a problem close at hand. The article in this issue on Innovative Logistics in Gambia is a great example. It's literally a life-and-death story of getting life-saving medical supplies to patients in Gambia, a small, largely rural country in West Africa.

The agency named to provide the needed medicine and services—Riders for Health—quickly realized that the existing logistics infrastructure was not up to the task. Most problematical, the motorcycles relied on to deliver the medicine and services were constantly breaking down or out of service altogether. What was needed? Innovation. Riders introduced a fleet management system that emphasized preventive maintenance for the motorcycles and operator training to handle routine repairs. Another key element was the introduction of a single type of heavy-duty motor cycle (vs. the multiple models that had been in place), thereby minimizing parts proliferation and simplifying the maintenance process.

Innovation has worked in the Gambia situation and in supplier sourcing. Surely, there must be innovation opportunities in your organization as well.



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## S&OP: The Linchpin Planning Process

***Sales & Operations Planning provides the key connection between strategic planning and operational execution. It's a critical factor in how well a company achieves its business objectives.***

Once advised an MIT graduate student who was conducting research comparing the Sales and Operations Planning (S&OP) processes across manufacturing industries. One day he came into my office, a little confused after interviewing a consulting firm that told him they consider strategic planning as part of their S&OP consulting services.

This perspective differed from my view that S&OP is a medium-term, tactical planning process, whereas strategic planning is a long-term planning process. Having been a consultant, I perhaps too glibly posited that this firm was including strategic planning in S&OP implementations to make the consulting projects bigger deals. In any case, whenever I discuss S&OP, I refer to this anecdote in pointing out the differences between the planning processes.

Recently, an ex-consultant countered that sometimes it is not them who add strategic planning requirements to a consulting engagement. Rather, clients sometimes add a strategic planning component to their request-for-proposal (RFP). So the consultant includes strategic planning in their proposal, often knowing it might jeopardize a successful S&OP implementation. They recognize that a heavy concentration on strategic planning will drain time and resources away from the S&OP implementation. So invariably, most consultants will downplay the strategic planning aspects of the engagement and concentrate on doing the myriad things needed to implement an S&OP process.

One other observation about the relationship between strategic planning and S&OP bears mentioning. I'm familiar with one S&OP

process team that is asked to review strategic plans; thus, they feel that their job includes strategic planning. Their perspective can be risky, too, because it often draws too much attention on long-term factors that are immaterial to consider during a medium-term S&OP process.

### Levels of Planning

In examining S&OP's proper positioning in planning, let's look at the three business planning levels and how they interplay. We start with a definition. According to wikipedia.org: "A plan should be a realistic view of the expectations. Depending upon the activities, a plan can be long range, intermediate range, or short range. It is the framework within which it [i.e., the plan] must operate."

Consistent with this definition, the three levels of planning are: Strategic (long-term), tactical (medium-term), and operational (short-term). We go into more detail into each of the three levels below. But to conceptually grasp the differences consider the planning of a family vacation that involves several days' driving distance from home.

Strategic planning addresses such issues as how to enjoy ourselves during the vacation, what roads to drive, and where to stay and eat. Responses to these issues set the strategic plan or "blueprint" for the vacation. Tactical planning deals with updating the vacation plan based on whether the trip is going according to the blueprint. Plans might change, for example, because of travel delays. Lastly, the operational planning, which is done daily, covers the actions to be followed each day.

Two major differences among planning

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levels include: (1) the “horizon,” or how far out in time the planning extends and (2) the “time buckets,” or granulations in time. Strategic plans have long planning horizons, are developed at aggregated levels, and change on an ad-hoc basis. Tactical plans have medium-term planning horizons, are more detailed, and are changed routinely. Operational plans have short planning horizons, are the most detailed, and are changed most frequently.

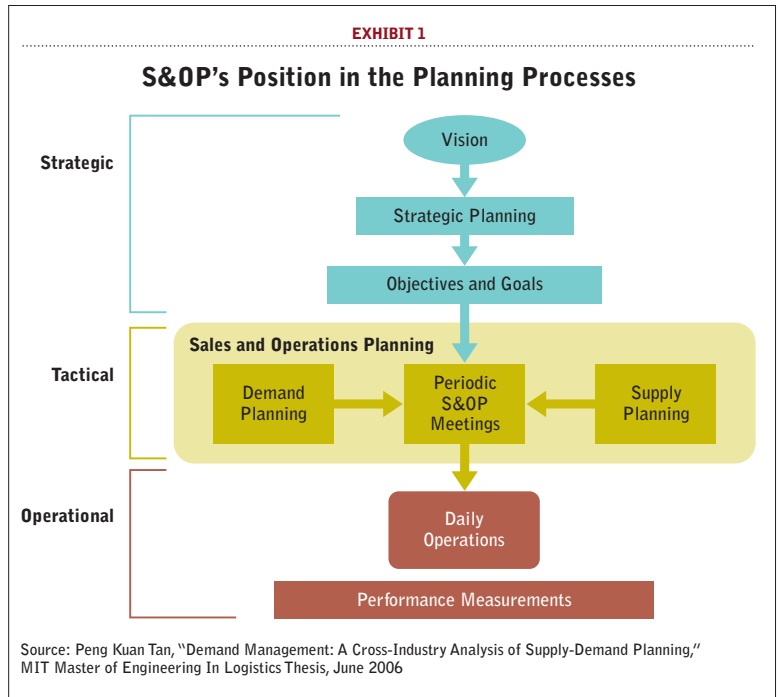
### S&OP Connects Strategy and Operations

Exhibit 1, which was developed by the graduate student I mentioned in the opening anecdote, depicts how and where S&OP fits among the planning processes. As the graphic shows, S&OP is a routine tactical planning process in which supply and demand (i.e., marketing and sales) plans are synchronized or matched. The S&OP process is guided by output from strategic planning and, in turn, drives daily operations. This makes S&OP the “linchpin” planning process, connecting strategy to execution. Obviously, this is a critical planning process for any business. The accuracy of S&OP plans invariably determines how well a company achieves its strategic operational goals and objectives.

Drilling down into each planning level we find that:

- **Strategic Planning** looks out over a long planning horizon with time-buckets in years. It involves the development of a roadmap to the future and typically has a planning horizon of from three to five years (or longer in capital-intensive industries). Strategic planning differs from other planning processes because business environments change significantly in the long-run. Macro factors alter a competitive landscape as well as a company’s markets, products, channels, and supply base. Demand forecasting has minimal use in strategic planning as the plan is developed based on a company’s “vision” of itself in the future and is driven by future scenarios of the business environment. For example, a company’s competitive vision might be to be the lowest-cost provider in the industry (such as Walmart strives to be), the most innovative (Apple, for instance), or be the highest-quality provider (a Sony objective). As part of the strategic planning process, companies develop roadmaps of the goals and objectives to be achieved over time. Performance measurements and targets are set against these objectives to gauge progress against these goals.

- **Sales and Operations Planning (S&OP)** is a routine tactical planning process that typically looks out over a six-month to two-year horizon, using time-buckets



in months and weeks. The outputs are sets of demand plans that delineate the selling, marketing, and new product launch activities over the horizon. Also, a set of supply plans are developed that delineate activities to source, supply, and manufacture goods as well as inventory them. S&OP plans are driven by demand forecasts. As shown in Exhibit 1, the matching of the demand and supply plans should be driven by the strategic goals and objectives. S&OP performance measures assess whether these goals are being met and provide feedback to the strategic planning process, helping to evaluate whether things are progressing as planned.

- **Operational Planning** typically has a one to two-week or a single-day horizon with time-buckets of days or hours, respectively. Operational planning is driven by the S&OP demand-supply plans. Outputs of the process include the schedules for various sales, marketing, and supply chain activities. For example, they might include a daily production schedule for a plant, a one-week transportation schedule for order deliveries, and a two-week schedule of customers to be called on by sales reps.

While the planning levels are unique with respect to horizons and time buckets, they need to be integrated as prescribed above to ensure that operations align to strategy. Each should be treated distinctly because each (in its own right) is important to sustaining performance. Any attempt to do two of them together within a single integrated process—such as strategic planning with S&OP—dilutes the efforts and effectiveness of both planning processes, and puts achieving strategic goals and objectives at risk!





## The Knowledge Hunter: Shoshanah A. Cohen

By John Kerr

John Kerr is a special projects editor for *Supply Chain Management Review*

Shoshanah Cohen can draw very fine lines. “In consulting there’s a fine line between being confident and being pushy and obnoxious,” she says. When she led the global supply chain innovation practice at PRTM, she excelled at being able to get up-and-coming consultants to identify and step up to that line, but not over it.

She recalls the time when, during client presentations, one young consultant who was a brilliant analyst was stymied when the clients pushed back. The consultant would just stop. She didn’t have an answer and didn’t ask the questions that would elicit good information about the client’s business problems. “So what I had her do was have the client vent—about other people, other departments, about whatever they wanted to complain about. It was like a psychiatry session. At first she was uncomfortable with it. But she became one of our best at it,” says Cohen.

The hidden gold that Cohen was looking for—and wanted her protégé to look for—was knowledge. Today, as the recently appointed director of the Global Supply Chain Management Forum at Stanford University’s Graduate School of Business, Cohen continues her hunt for knowledge. She is now setting the Forum’s research agenda for the coming years, determining the key interests of member companies and encouraging more companies to join. One of the topics at the top of that agenda: research on what it will really take to enable more businesses to develop truly green supply chains.

### Solid Operations Base

Shoshanah Cohen has a rich history of providing benefits to supply chain management. Early in her years at PRTM, she was a key member of the team that drove the development of the Supply Chain Operations Reference (SCOR) model—the Plan-Source-Make-Deliver framework that has since become an industry standard for supply chain leaders worldwide. The founding idea was to leverage PRTM’s expertise in its product development framework to do something similar in supply chain.

The task force of PRTM leaders teamed with professionals from AMR Research (now part of Gartner) and a handful of companies that were already thinking and acting along Plan-Source-Make-Deliver lines. Cohen was responsible for the “Make” step.

Cohen’s professional focus may not be so unusual for a woman today but it was not what most of her female classmates considered exciting when she earned her bachelor of science in industrial engineering from Stanford in June 1985. They had their eyes on jobs in marketing, advertising, sales, finance. “When you think about what’s glamorous when you come out of college, what I chose was not so appealing,” she says.

What was even more unusual was that she stayed on that track. “Most people try different things along their career paths, but I started out being interested in manufacturing and I’ve stayed with it,” she says.

Prior to joining PRTM, Shoshanah spent several



**The relentless pursuit—and application—of supply chain knowledge has been a career endeavor for Shoshanah Cohen.**

years at Lotus Development Corp. where she managed the manufacturing and distribution process for new products. Before joining Lotus, she had worked as an applications software engineer at ASK Computer Systems, designing and developing manufacturing information systems.

Cohen went back to school in the early 1990s, earning her master of arts in technology strategy from Boston University in June 1992. She's also earned her MBA from Harvard Business School.

But it was at PRTM Management Consulting where Cohen was to make her biggest contributions to supply chain to date. During her 18 years with PRTM—more than half that as a partner—she managed more than 75 projects focused on supply chain network design and integration, planning optimization, and operational process transformation.

One of the projects that she remembers vividly involved an electronics assembly plant that was transformed from a traditional fragmented production set-up—where operators had scant idea of their contributions to the end product—to an open system in which output per person had tripled. “The project was to totally reconfigure the factory into manufacturing cells—to give all of the operators complete visibility of the whole manufacturing process,” Cohen says. “The exciting part was that you guys are going to design this,” she had told the factory's employees.

Employees thought the notion was insane. Many complained loudly. The management team was none too happy either. But Cohen and her team persevered through eight or nine iterations of the production set-up that was designed and then tested by the workers. By the end of the exercise, every employee was completely cross-trained. They could measure their own productivity. And they were highly self-sufficient. “To teach someone to do something is very rewarding,” notes Cohen.

Cohen's influence extended through the many young consultants who came under her influence—particularly when she headed the firm's global supply chain innovation practice. She actively managed and mentored staff and junior partners, usually leading by doing. And she helped to craft worldwide plans for supply chain skills training and certification and develop training content for classes at PRTM.

Throughout, Cohen was busy

changes your planning process.”

With that in mind, Cohen contends that superior planning abilities now must be part of the suite of core leadership skills practiced by supply chain managers. These days, those abilities involve not only being able to synthesize huge amounts of information but readily draw actionable conclusions from the data.

While she concedes that the profession has made big strides, she believes there is further to go. The fundamentals

**“Supply chain leaders shouldn't assume that operations is the part they can hire someone else to do.”**

hunting for knowledge to help underscore and accelerate the firm's expertise—and reputation. She excelled at identifying and harvesting intellectual property created via client work and original research—and at disseminating it throughout PRTM. She designed, developed, and managed the firm's annual Global Supply Chain Trends study. Cohen was—and still is—a regular speaker at major industry events. And she continues to be one of the most prolific sources of new thinking in the form of articles published in a wide array of influential publications. One of the achievements she's most proud of: co-authoring the book *Strategic Supply Chain Management: The 5 Disciplines for Top Performance*.

**Global Conductors Needed**

Today, says Cohen, the locus of supply chain impact has shifted to helping companies manage at a distance, across supply chains that sprawl all over the world. She compares the top supply chain job at today's multinationals to “conducting an orchestra via satellite TV”—which calls for much more attention to and prowess in planning. “How do you deal with things you once could walk down the hall and fix?” she asks. Working at a distance fundamentally

endure: “You need to have those traditional skills of understanding how things get made and distributed around the world—what goes on ships and on planes. Supply chain leaders shouldn't assume that operations is the part they can hire someone else to do.”

In her new role furthering the vision of Stanford's Professor Hau Lee—the Forum's founder and her professor when she was an undergrad—Cohen is charged with developing and directing projects and programs to advance the theory and practice of supply chain management and to support Stanford's continued position as a thought leader in the field. There are new corporate candidates to woo to Forum membership. There are new roundtable agendas to plan and develop for Forum members and guests. There are supply chain strategy issues on which to advise corporate partners.

And perhaps most exciting of all for the new director, there is new knowledge to acquire and disseminate in partnership with a host of other schools within Stanford—public policy, law, political science, engineering, and others. For Shoshanah Cohen, drawer of especially fine lines, there is no tension between too much knowledge and not enough.



# Onsite Relationships: Challenging but Rewarding

By Chris Caplice and Dan Ryan

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Companies commonly use outsourcing as a means to lower costs or cover an area of supply chain expertise they currently lack. These relationships also bring opportunities to collaborate on ways to improve operational efficiency.

A type of outsourcing that offers these benefits and takes collaborative relationships to a higher level finds an individual or team of professionals from the vendor embedded in the client company's organization. The onsite vendor team is physically based on the client's premises. It functions like an in-house unit even though it is still part of the provider's organization.

An onsite vendor resource can come in various configurations ranging from a single liaison role to a large multi-skilled team. While this arrangement ensures tight coordination between the vendor and client firms, it does pose some unique talent management challenges for all of the involved parties.

## General Challenges

Variables including the scope of services, cultural elements, objectives, skill levels, and professionalism of both the buyer and seller companies shape this type of relationship. Both companies have a stake in the success of the onsite professional and ultimately the program.

Success starts with collaboration both before candidates are selected for this type of assignment, and throughout the engagement. The parties should keep in mind that as the relationship becomes more intimate, each organization will find itself offering an additional lens to its business. They must use this perspective responsibly and deliver value for both companies as the demarcation between the two blurs.

Given the closeness of the arrangement, it is important to agree on the relationship guidelines and expectations up front. It is equally important to have capable professionals on both sides who

are supported by respective leaderships.

Key to that support is accepting the onsite personnel as an extension of the client company's management; the vendor professional or team can become an island if the individuals are disconnected from the client's organization. When there is a lack of trust, the vendor team and its parent organization are not empowered to fulfill their dedicated roles.

Each of the three parties has unique challenges as well.

## Challenges: Onsite Professional

The onsite professional has the unique challenge of working for two organizations at the same time. He or she needs to be able to "wear two hats" comfortably and know which hat to wear when. On occasion, the objectives of the vendor and the client firm will not be aligned. In these situations, the onsite professional needs to consider the strategic and tactical implications from both sides.

At the same time, it is important that the onsite team retains its outside perspective, because a valuable part of the service is being able to view client issues with fresh eyes. It's easy for an onsite professional to absorb the culture and constraints of the client organization and thus limit the benefit of this outsider's perspective.

The vendor professional who can continue to strike such a balance will earn the respect and trust of the client, and also be considered exceptionally valuable by the vendor.

A requirement—and even a test—of the relationship will occur when the onsite team is required to make a recommendation to the client that is not necessarily in the vendor's best interest. The vendor needs to support these decisions, as they support the client and build trust.

As an example, during standard analyses of its clients' business networks, C.H. Robinson onsite teams will sometimes recommend leveraging a

pre-existing carrier relationship rather than switching to C.H. Robinson to find capacity for the client's loads. Decisions such as these are very important as they establish intent and are the foundation of trusting relationships. When preparing their staff for onsite roles, vendors should set expectations levels so that the client's interests take precedence.

## Challenges: Client Firm

The client firm also faces management and skills challenges when entering into these types of relationships. Managers must be comfortable with delegating commercially sensitive tasks to the onsite vendor team, and sharing confidential information with these professionals. The onsite unit is not a sales team; its primary role is to provide strategic and tactical expertise that delivers value for the client.

Again, setting expectations is important. The client needs to communicate at the outset the extent to which it wants to leverage the onsite team's strategic capabilities. These interactions could involve planning, operations, execution, sales, and finance strategies.

Managers in the client company should recognize that having an outside team of experts at their disposal brings tremendous opportunities for improving their own performance. For instance, the onsite personnel might identify ways to improve the supply chain that have been overlooked internally, simply because in-house managers are too close to the problem or are held back by organizational restrictions and biases.

Client company managers should be involved in the recruiting of the vendor's onsite team. These executives can define the breadth of the engagement and the degree of influence that the onsite personnel will have. Factors such as how success is to be measured, the duration of the relationship and associated milestones, transition guidelines for implementation and ending the arrangement, require the client's input. These factors will help to shape the qualities that prospective team members should bring to the table.

At C. H. Robinson we have found that a successful approach with shipper clients is to collaboratively prioritize the projects that the on-site professionals will work on and agree to the goals before day one of the engagement.

## Challenges: Vendor Firm

There are three key activities that a vendor needs to follow to sustain onsite successful relationships: develop a talent pool, support the professional while onsite, and maintain an appropriate career path for the onsite staff.

The vendor should develop their onsite talent through both formal and experiential learning. The vendor must

be aware of the varied onsite roles they will need to support across their client portfolio, and be nurturing their team through career path opportunities that develop the required skills. It should be noted that the onsite experience is extremely valuable for vendor staff members because it gives them the opportunity to see the business through the client's eyes. Helping the onsite professional understand how this experience contributes to their career opportunities is paramount to both retaining and leveraging the expanded talents of the individual when his or her onsite role is complete.

It is also advisable that the vendor select individuals for onsite teams who possess skills sets that are a notch above

**When the onsite option works, it can be extremely rewarding for both the buyer and seller—and for the teams of professionals that serve both parties.**

what is needed initially. At C.H. Robinson, we have found that client expectations tend to grow quickly and more advanced capabilities are soon required. The vendor onsite team should be staffed for the client's future service needs; not necessarily just today's.

## Going Forward

While the form and specific roles of onsite vendor teams will evolve over time, the critical leadership challenges remain the same. It is imperative that the following issues are resolved before an onsite assignment begins.

- The vendor and client need to clearly define the onsite roles and set the service expectations.
- The onsite vendor team needs to be fully informed of their role, responsibilities, and service expectations.
- The vendor needs to put strategies in place for ensuring that the onsite team stays connected to the parent company.
- The vendor needs to create and maintain a career development path for onsite professionals.

Onsite professionals need to be comfortable living with "two bosses" and able to navigate the waters between the two. The vendor firm has to be able to give their remote employees the decision-making autonomy they need while simultaneously ensuring they retain their home company perspective. The client firm has to be willing to share confidential information and to have an "outsider" make certain decisions for them. Only when all three parties are in synch can these onsite teams truly be successful.

# Sustainability is **FREE**—

## *The Case for Doing the Right Thing*

By Dale S. Rogers

*Dr. Dale S. Rogers is Professor, Logistics & Supply Chain Management and Co-Director of the Center for Supply Chain Management at Rutgers University College of Business. He can be reached at Dale.Rogers@rutgers.edu.*

**More and more companies now recognize that creating a sustainable supply chain is more than just the right thing to do—it's a requisite to business success. Sustainability today resembles the quality movement of three decades ago. As with quality, there was initial resistance to "going green." But it soon became apparent that the benefits were far too great to ignore. And done right, sustainability can be free.**

In 1979 Philip B. Crosby published the book *Quality Is Free*.<sup>1</sup> For many of us, this little book turned on a light. It contained the revolutionary idea that quality did not add cost to a product. Instead, building quality into a product or process was, at the very least, a breakeven proposition. Crosby wrote that making quality a sure thing was really an exercise of "getting people to do better all the worthwhile things they should be doing anyway." This applies to sustainability just as well. And, as Crosby said about quality all those years ago, building sustainability into products and processes is "free."

At the time that Crosby wrote *Quality is Free*, the careers of company managers usually moved through a specific function such as manufacturing or sales. In general, these individuals were not likely to have much experience with quality issues. Yet while ignorance of quality management may have been the norm in 1979, that's not the case today. Quality is woven into the fabric of most organizations. Nearly every successful firm around the globe is working to build quality into all of its products and processes.

While quality now is widely understood to be a critical competitive variable and the "ante" to play the game, sustainability does not yet enjoy that same status. But we believe that over the next several years sustainability, like quality, will become an integral part of the organization. Further, sustainability will be a critical part of every firm and every supply chain.

Creating a sustainable supply chain is a lot more difficult than just being a sustainable company. A sustainable supply chain requires several companies working in concert to deliver products and services to the ultimate consumer in a socially responsible, environmentally sound, and financially favorable manner. Sustainable initiatives need to benefit the companies that populate the supply chain as well as the key stakeholders. And in a truly sustainable supply chain, the consumer realizes that companies are working together to bring value.

This article describes the key elements that comprise a sustain-





able supply chain. We explain how all of these elements need to come together within the organization and be fully embraced and incorporated throughout the broader supply chain. It is at this point that sustainability truly becomes free.

#### **Four Elements of Sustainability**

The key elements in the sustainable supply chain are shown in Exhibit 1. Included in this model is the “triple bottom line”—a theoretical device that depicts three areas that need to be measured both internally and across the supply chain. The triple bottom line consists of the natural environment, society, and economic performance. Nike uses the triple bottom line but calls the

three areas “planet,” “people,” and “profits.” In building a sustainable supply chain, a company needs to consider its performance in all three areas, not just one.

Economic performance clearly is the main focus of most companies. Milton Friedman said that the primary social responsibility of business is to increase its profits. Clearly, a company cannot stay in business very long without profitability. However, short-term profitability should not be the only yardstick applied to a firm or its supply chain partners. They also must be measured on how well they “do the right thing” over the long term. A company needs to operate with respect to the environment and natural resources. Thinking environmentally

EXHIBIT 1

The Sustainable Supply Chain

Strategy

- Sustainability as Part of an Integrated Strategy
- Long Term View
- Productivity (Doing more with less)

Risk Management

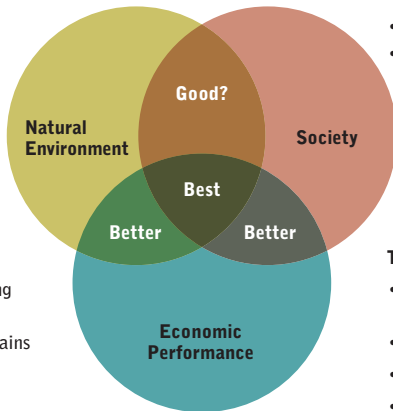
- Contingency Planning
- Supply Disruptions
- Outbound Supply Chains
- Headline Risk
- Agility

Organizational Culture

- Deeply Ingrained
- Organizational Citizenship
- Values and Ethics
- Quality Culture

Transparency

- Stakeholder Management
- Supplier Operations
- RFP/RFQ Process
- Financial Reporting
- Leadtimes to Customers



Adapted from Craig R. Carter and Dale S. Rogers, "A Framework of Sustainable Supply Chain Management: A New Theory," *International Journal of Physical Distribution and Logistics Management*, 38.5 (2008)

and using fewer resources can also lower costs in both the short run and long run.

The same holds true for social responsibility. To be truly sustainable, a firm needs to consider issues such as its role in the community and how it treats and develops employees for future success. However, these efforts should not happen without regard for the impact on profitability. A firm's intentional focus to encompass social and environmental responsibility will ultimately serve to build and solidify its profitability. Doing the right thing for employees, customers, and the community in which the firm operates makes it more likely that companies will maintain profitability. Ford Motor Company calls this relationship with employees, customers, and the community its "license to operate." Most firms have understood the importance of good customer service for several decades. What has been less clear to many is the importance of content, motivated employees, and a supportive community. To have a license to operate, companies need to operate responsibly with workers and with the community.

The sweet spot from which to operate is in the nexus of Exhibit 1—the intersection of environmental or green performance, society or social responsibility, and great economic performance. It is at this nexus that the firm and its supply chain are best positioned to thrive in the long term. Four "enablers" can help move companies toward this nexus and toward the goal of a sustainable supply chain. These enablers relate to strategy, organizational culture, transparency, and risk management.

Collectively they will move an organization toward a place where sustainability—like quality before it—is free.

**STRATEGY:  
A Top-down Approach**

Sustainability must be part of an integrated strategy. In fact, sustainability should be at the top level of strategy development. From that point, it can be infused throughout the corporation's supply chain. In the United States, Walmart had adopted such an integrated strategy. The large retailer is attempting to integrate environmental and social responsibility. Specifically, it intends to infuse a regard for the environment and social responsibility into every part of the operations of both Walmart and its suppliers. The plan is to achieve "zero waste" from all operations before 2025. While it remains to be seen if Walmart can

achieve this lofty goal, it is a central part of their corporate strategy.

The group chief executive of one of Walmart's suppliers, Patrick Cescau of Unilever, said: "We have come to a point now where this agenda of sustainability and social responsibility is not only central to business strategy but will increasingly become a critical driver of business growth... how well and how quickly businesses respond to this agenda will determine which companies succeed and which will fail in the next few decades."<sup>2</sup> The late Dr. Donald J. Bowersox coined the term "operational continuity" as a way to describe the concept of strategic sustainability. The goal of any company is to attain longevity. Through operational continuity, the firm retains the license to operate and thus can achieve the desired longevity.

In the *New Age of Carbon*,<sup>3</sup> Dr. Stephen Stokes and Kevin O'Marah of AMR Research (now part of Gartner) suggest that firms need to build a portfolio approach to strategy development. Stokes advocates addressing the firm's "Organizational Metabolism" as part of its strategy. They write, "There is no silver bullet for emission reduction or energy efficiency. Leading companies like Coca-Cola, Procter & Gamble, Dell, and Dow Chemical are adopting approaches that integrate a range of actions." The reason a portfolio approach makes sense is that no single measurement should be considered solely by itself. Instead, the firm needs to take an integrated approach to the total costs and benefits of environmental and socially responsible actions. This idea is similar to the "Total Cost

Concept” that was developed in logistics over 40 years ago.

A firm may be tempted to ask itself, How do we choose between sustainability and profitability? That is the wrong question. The two are not separate and distinct; today, companies have no choice but to embrace both. A better strategic question to ask is, How do we build in affordable sustainability that will best enhance the lasting profitability of this firm and its critical supply chains?

A sustainable supply chain strategy entails more than just taking a long-term view of the firm and its supply chain; it should also focus on increasing productivity within the supply chain. This productivity should not come at the expense of the environment or of key stakeholders such as employees and suppliers. Productivity is doing more with less. It can be accomplished by reducing costs or resources needed to operate.

### **ORGANIZATIONAL CULTURE: The Power of Example**

Mitch Jackson, Vice President, Environmental Affairs & Sustainability at FedEx, characterizes sustainability as a “team sport.” Put another way, sustainability needs to be built into the organization’s culture. FedEx looks for sustainability solutions both across departments within the company and with its customers. Sustainably thrives when everyone understands its importance and works in concert to achieve it. Jackson believes the solutions that result from the FedEx approach have been both powerful and effective.

As the FedEx experience suggests, the culture of sustainability within the organization and across the supply chain should be deeply ingrained. One historic example of sustainable SCM embedded into a culture was brilliantly on display nine decades ago at the Ford Motor Company. When Henry Ford first developed his amazing manufacturing facilities in River Rouge, Michigan, he built in many sustainable mechanisms. In 1919, he not only constructed a state-of-the-art assembly line for Model Ts, but also designed an industrial park for Ford suppliers with a “zero waste” philosophy in mind.

In addition to the assembly plant, Ford built a steel plant where raw iron ore would come in and quickly be turned into steel, which then would be moved next door for assembly into an automobile. He brought his friend Harvey Firestone into the park to fabricate tires out of Brazilian rubber. The boxes Ford specified for receipt of parts were designed so that the wood used in making the boxes could be reused for the floorboards in the car. And then, Mr. Ford used the leftover wood to start up a new business called Kingsford Charcoal. As much as possible, he worked to reduce waste.

Three days after receiving iron ore, rubber and

assorted parts, a Model T would be produced. While that achievement would be difficult to replicate today, the River Rouge Ford plant is still operating in a sustainable fashion. It remains a good example of an organizational culture that embraces sustainability.

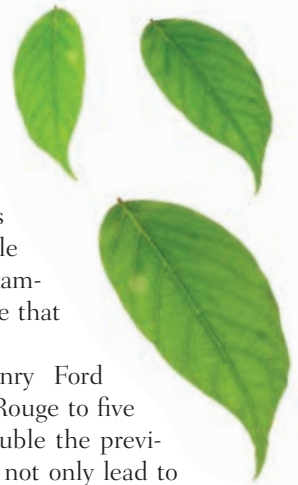
On the social side, Henry Ford increased wages at the River Rouge to five dollars per day, which was double the previous wage. This wage increase not only led to improved standard of living for the employees, but also created many new customers for Ford products.

Turning to a more contemporary example, Kenco Logistics, a medium-sized 3PL based in Chattanooga, Tenn., emphasizes sustainable practices as an intrinsic part of its overall performance. Sustainability at Kenco means greater safety through building safety and quality standards into company systems and through employee training. Building safety and security into all of its processes means that Kenco can offer its services at a reduced cost to their customers. Fewer on-the-job injuries, a healthy work environment, lower workmen’s compensation costs all translate to higher profitability. As Kenco Chief Operating Officer Andy Smith has said, building in safety and security to all of the company’s logistics processes makes financial sense as well as being socially responsible.

One final point about this critical cultural enabler: Sustainability in one organization can resonate through the supply chain. Firestone is just one example of a company that adopted the culture built by Henry Ford. Today, if a firm emphasizes careful use of resources and embraces its stakeholders in that effort, the impact on suppliers can be profound. As one Fortune 500 purchasing manager said, “I can do more to improve sustainability with one purchase order than 1,000 protestors can do with all their efforts.”

### **TRANSPARENCY: Being Visible and Accessible**

The third enabler of a sustainable supply chain is transparency. Consumers worldwide are demanding that the companies they purchase from embrace sustainability. At the same time, purchasing managers are building sustainability requirements into their Requests for Proposal. As the pressure from consumers, governmental bodies, and other stakeholders intensifies, companies have had to open up their operations to greater public scrutiny. Increasingly, stakeholders demand that corporate prac-





tices up and down the supply chain be readily visible and accessible. Greater transparency allows stakeholders to see further along an organization's supply chain. Moreover, the transparent movement of information up and down the supply chain facilitates coordination and management of manufacturing and logistical activities. So in the long run, it is simpler and less costly for a company to operate with transparency into economic, social, and environmental issues.

Transparency can help managers up and down the supply chain avoid wrongdoing that can sometimes thrive in dark corners. If supplier actions are visible to their customers it is more likely the suppliers will act

## The key strategic question: How do we build in affordable sustainability that will best enhance the lasting profitability of this firm and its critical supply chains?

appropriately. With transparency, it becomes more difficult to keep corporate wrongdoings secret.

Transparency involves not only reporting to stakeholders, but also actively engaging them. Firms can effectively use stakeholder feedback to modify operations and make them more sustainable. This input also enhances supply chain processes. When Timberland was attacked by several thousand angry Greenpeace activists about sourcing leather from burned-out sections of Amazon rain forest, they were forced to examine their supply chain in great detail.<sup>4</sup> Timberland discovered blind spots in their sourcing practices and took appropriate action to address the situation. Their transparent, honest presentation of their new sourcing processes defused a serious problem with their customer base.

Transparency can be improved through better coordination both vertically in the supply chain and horizontally across networks. For example, common auditing procedures shared throughout an industry can allow a single, effective supplier sustainability audit to be performed. This increases transparency and supplier sustainability while lowering transaction costs for both the supplier and the multiple buying organizations doing business with that supplier. To cite one prominent example, Nike instituted transparency practices throughout its contract manufacturers to ensure greater collaboration and reinforce remediation practices throughout the industry.

Finally, by illuminating blind spots, transparency in

the supply chain can reduce risk (our next topic) and smooth out bottlenecks. The bottom line: Transparency typically reduces costs.

### **RISK MANAGEMENT: Removing the “Blind Spots”**

While many folks like to believe in disintermediation, the reality is that as a supply chain matures it becomes more complex as the number of suppliers of both products and services generally increases. Managing the costs and profitability elements of a complex supply chain is difficult enough. It gets even tougher when the sustainability elements are thrown into the complex mix of suppliers. Much of the supply base in many supply chains are in countries where environmental and social regulations are less stringent (or sometimes completely ignored). Therefore, the firm whose name is on the product and its retailers vigilantly ensure that all of the suppliers are acting in socially responsible manner.

In a recent study, IBM found risk management to be the second greatest threat to global supply chains after lack of supply chain visibility.<sup>5</sup> In fact, one could look at the entire discipline of SCM in a risk management context. An argument can be made that supply chain visibility is actually part of a risk management strategy. Part of a good risk management strategy is to reduce “blind spots” in the supply chain and work to avoid supply disruptions.

In September 2011, Apple was accused of using suppliers with poor environmental records and taking “advantage of the loopholes in developing countries’ environmental management systems.”<sup>6</sup> The accusers were five different China-based nongovernmental organizations (NGOs). They claimed that Apple suppliers—not Apple itself—were guilty of environmental negligence.

Whether they are eventually proven to be true or not, accusations like these can damage a firm's reputation. Companies like Apple do not directly manufacture anything. They rely on a complex web of multi-tiered suppliers that stretch far beyond their home country borders. This makes the job of ensuring quality processes and products much more difficult. And, where there are ad hoc regulators such as NGOs in addition to the governmental regulations, managing a supply chain in a sustainable manner becomes problematic without a strategic risk management plan. Managing a supply base is analogous to tending a garden. You cannot just harvest. Rather, you have to sow the seed properly and tend to your supply chains' products and processes every day.

Risk management also includes contingency plan-

ning for supply chain events such as product recalls or end-of-life product disposition. In the United States, for example, several states are developing “e-waste” laws that govern end-of-life disposition for consumer electronic products. These laws, which carry large penalties for inappropriate disposal of items such as computers and monitors, are currently being written and refined. In parallel with this development, companies are trying to adjust their reverse logistics operations to ameliorate the increased risk of improper disposal.

Sometimes, it’s necessary to take a proactive stance with suppliers and customers. For example, a firm may have to manage forward in the supply chain to manage risk. In Europe there have been producer takeback laws in place for many years that make manufacturers responsible for products at the end of their lifecycle. For example, if a BMW is discovered at the bottom of the Rhine River, the automaker can be found responsible for the cost of removing the vehicle and any environmental damages caused. At the time of this writing there is no federal standard in the United States for e-waste. In any case, having to comply with federal regulations and the regulations of 50 states would prove to be a daunting management task.

Reducing “headline risk” is another part of a risk management strategy. If a firm or one of its suppliers operates unsafely and employees are hurt or killed, that reflects negatively on all of the entities up and down the supply chain. Similarly, unethical behavior in one node of the supply chain tarnishes the reputation of that chain’s other members. The customer must examine its own operations and the rest of its supply chain to make certain that operations are safe, business transactions are ethical and beyond reproach—and that they are not going to read about some disastrous moral lapse of

theirs in the newspapers.

In 1989, one of Nike’s suppliers was reportedly using children in one of its manufacturing plants. Although Nike itself was not guilty, the negative publicity and public review lasted a

very long time. Nike could argue that they were not guilty, yet their arguments sounded hollow because a member of their supply chain had been acting improperly. Following the incident, Nike changed the way they managed

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the supply base, so as to make certain the company would never again suffer a similar embarrassment.

Recently, commentators from all over the world have been picking apart Toyota for problems with the braking system in some of their automobiles. For Toyota, the headline risk has been devastating, and has had a clear negative impact on the automaker's sales and profitability. Toyota has gone from being the world's most

### **Sustainability should be viewed as a methodology that lets firms create shared value while improving economic conditions internally and across their various supply chains.**

respected auto company to something much less than that. Sustainability in the 21st century demands managing risk far beyond the banks of a river in Detroit as in the old Ford manufacturing model.

Headline risk reputation is a serious danger to the firm. Problems in and around the supply chain are a likely source for reputational damage. It is difficult to control all the elements of one's own organization; it is even more difficult to manage potential problems at supply chain partners where visibility is limited. This is one reason that companies such as Walmart insist that their suppliers conform to standards. They do not allow suppliers to merely tell them they are operating sustainably. Instead, they expect their supply base to achieve measurable progress on non-financial metrics. Similar to Six Sigma quality programs where conformance to standard with nearly zero tolerance is measured, conformance to sustainability standards makes it more likely that a firm's reputation will not be hurt by inappropriate supplier actions.

#### **Supply Chain-wide Adoption of Sustainability**

Once a firm has defined a structure to enable sustainability inside their organization, managers need to think carefully about how to expand that structure across critical links in their critical supply chains. Perseverance is needed here. Because most companies have many suppliers and customers it may be difficult to move to truly sustainable supply chains quickly.

In multi-tiered supply chains, complex networks are the rule. While firms may be asked to manage every link in every supply chain in which they participate, it is nearly impossible to do so. Companies must focus on

the linkages that are most critical, and also those that contain the greatest risk. The problem is, almost every node in a supply chain can create great problems if not managed carefully. Infusing transparency and sustainability into the organizational culture can help ease this problem, but key links have to be managed carefully.

Companies have to take a long-term view. In particular, they must consider potential impacts of current activities. For example, most firms build safety into their processes and are careful about managing potential legal liability. Yet they are not always as careful when thinking about the potential costs of current actions on their own future and on the future of their supply chain partners. A risk management structure that addresses

this is required. The metrics selected should go beyond simple short-term cost. Measurement structures such as activity-based costing (ABC) and total cost of ownership (TCO) can make management more effective when it comes to longer term issues.

To some extent, the "total logistics cost" concept that was introduced in the 1960s can be extended beyond costs that show up on the income statement to include potential future costs. These potential future costs can be discounted to take into consideration time and probability of occurrence. Financial risk management analyses can then be applied to include future environmental and social responsibility costs.

In the early days of the quality movement, many in the supply chain community were skeptical about building in quality to products and processes. They believed that this would increase costs beyond what consumers would be willing to pay. The automotive industry provides a good example. Automakers such as Ford, Toyota, and Honda forced their supply base to adopt new methods of measuring process conformance to specification and product quality. In the beginning, several of the suppliers complained that these new methodologies like TQC and TQM—Total Quality Control and Total Quality Management—were only going to add costs at a time when they were being expected to not raise prices. Within a short time, however, the suppliers that adopted these methodologies generally saw positive results. In some cases, the improvement in process and product quality and the reduction in costs were revolutionary. Those suppliers that were unwilling or unable to adopt these new methods often failed or ended up being acquired by companies that had seen the light.

Thirty years later, large retailers and manufacturers are



expecting their supply base to be both environmentally and socially responsible while they are managing costs carefully. These expectations often come from the very top of the organization. For instance, the leadership in companies such as Walmart, Target, Dell, and many others believe that sustainability is necessary. Walmart, for one, says that it has transformed its organization—and to some extent its public perception—around sustainability.

As in the early days of the quality movement, suppliers are often skeptical of the value of sustainability. Many suppliers, in fact, were effectively forced to adopt sustainability initiatives they initially resisted. That resistance overall has diminished in the past few years as suppliers have seen positive results such as lower operating costs. Although suppliers may have balked at the early mandatory programs required by their customers, most now see the potential in sustainability and are looking for new ways to build sustainability into their processes and products.

### **Sustainability Here to Stay**

There is much more work to be done around sustainability and the sustainable supply chain. Like quality before it, sustainability is here to stay. As companies around the world increasingly understand what the sustainability concept really means, they embrace it for themselves and for their supply chain partners. The reality is that sustainability cannot be ignored for very long if a company wants to be successful. Increasingly, companies are going to be asked to be sustainable and to incorporate sustainable ideas up and down their supply chain.

One of the clear lessons from the last few years is that sustainability is not a passing fad. It is a set of concepts and structures that will be built into successful supply chains around the world. A basic premise of sustainability is doing more with less. That is a philosophy that business must pursue going forward.

Companies should not think of sustainability as a set of trade-offs between financial gain and environmental and social responsibility. Rather, sustainability should be viewed as a methodology that lets firms create shared value while improving economic conditions internally and across their various supply chains. It is clear that where sustainability issues are concerned nongovernmental organizations are going to be a continuing part of management's peripheral vision for a long time to come. Companies cannot dismiss NGOs as being irrelevant. In a culture where there are hundreds of cable channels and millions of websites, firms are being forced to listen

to opinions that could not have been heard just a few years ago.

Companies need to move in the direction of creating shared value between supply chain partners. It is likely that private industry will take the lead in bringing businesses and other societal elements together. The real leaders around the world are not necessarily political. They are business people

## **Thinking environmentally and using fewer resources can also lower costs in both the short-run and long-run.**

that have put together a successful supply chain. Supply chain leaders need to develop principles of shared value that produce financial gain while also creating value for society. As Michael Porter and Mark Kramer said in their *Harvard Business Review* article, creating shared value is “not on the margin of what companies do, but at the center.”<sup>7</sup> Creating shared value around sustainability may well be the impetus for the next major transformation of business thinking. ☺☺

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### **End Notes**

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# Innovation Sourcing— THE SUPPLIERS' PERSPECTIVE

This article explains how leading companies are engaging in innovation from a unique perspective—that of their suppliers. The research examines the strategies and approaches that should be put in place to accelerate and realize supplier innovations that lead to competitive advantage. The eight recommendations presented here can help companies succeed at innovation sourcing—and better position them to meet the challenges of global competition.

**By Joseph R. Carter, Phillip L. Carter,  
Robert M. Monczka, and Thomas V. Scannell**

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**I**nnovation of products and services has become an increasingly important strategy to achieve competitive advantage. Cisco, IBM, Philips, Procter & Gamble, and Whirlpool, to name just a few leading companies, have identified innovation as a critical strategy that will enable their future growth and profitability.

Prominent academics C.K. Prahalad and R.A. Mashelkar<sup>1</sup> argue that, following the severe economic downturn, innovation is making a comeback as a high priority corporate strategy. However, traditional approaches to and views about innovation are changing dramatically. “Open innovation” is one strategic approach being implemented by firms across multiple industries.<sup>2</sup> Procter & Gamble popularized the open innovation approach through its “Connect + Develop” efforts, whereby it established a goal of attaining 50 percent of its revenues through external innovations over a five-year period.<sup>3</sup>

Open innovation maxims include:

- Smart people work at other companies as well as our own.
- External R&D can create considerable value and internal R&D enables capture of some of the value.



Mike Kemp

- Research does not have to originate internally for a company to profit from it.

- Those that make the best of both internal and external ideas will win.

- Companies can profit from others using their intellectual property (IP); at the same time, they should buy others' IP whenever their own business model can be advanced.

Within this changing environment, CAPS Research undertook pioneering research aimed at answering a fundamental question: *What supply strategies can be used to identify, select, and effectively collaborate with suppliers to accelerate and achieve supplier innovation?*<sup>4</sup>

The primary source of data was 77 in-depth interviews with innovation leaders in worldwide companies from the automotive, industrial manufacturing, electronics, food and beverage, and telecommunications industries as well as their key suppliers. The research focused on identifying innovation opportunities and companywide approaches to achieving supplier innovation. Extensive interviews were conducted with key leaders

representing innovation, engineering, technology, sales, product development, and purchasing from both purchaser and the corresponding supplier functions.

### **Supplier Perspectives: The Key Enablers**

Supplying and buying firms both emphasized that innovation sourcing requires the commitment of both the buyer and supplier to accelerate development of innovations. Alignment of goals, investment capability, risk/reward profiles, related capabilities, culture, and trust all have an impact on the success or failure of innovation sourcing. Though there was agreement that all of these factors were important, some disagreement surfaced regarding relative levels of commitment made and the effectiveness of strategies and processes intended to support collaborative innovation.

Exhibit 1 lists five key factors that suppliers identified as enablers of successful collaborative innovation and innovation sourcing. Each of these enablers—intellectual property ownerships, trust and communication,

EXHIBIT 1

**Critical Innovation Sourcing Enablers**

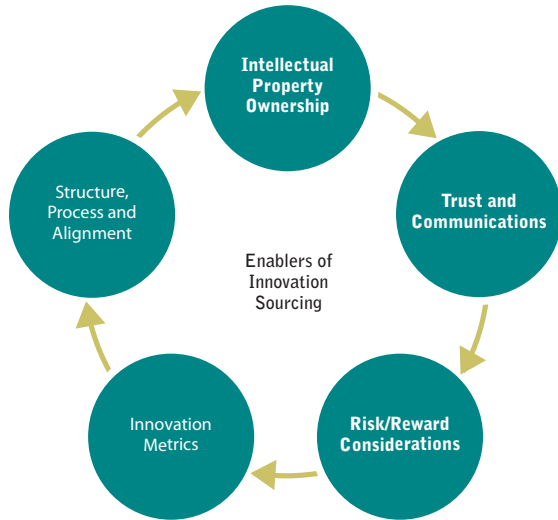
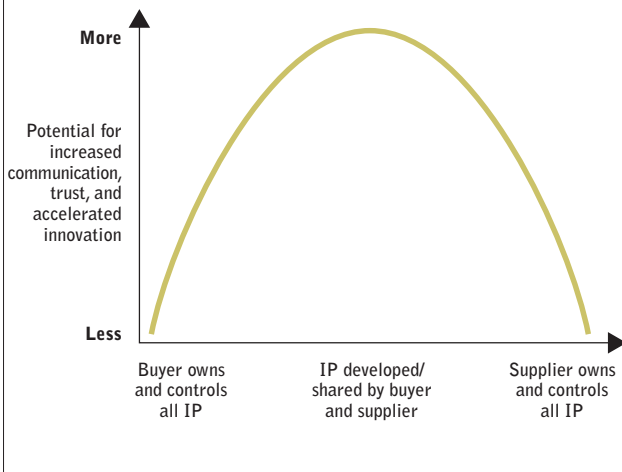


EXHIBIT 2

**IP Ownership Impacts**



risk/reward considerations, innovation metrics, and organizational structure and alignment—are discussed below.

**Intellectual Property Ownership**

Company policy regarding intellectual property (IP) ownership and how it works with suppliers to obtain IP rights and non-disclosure agreements (NDAs) affects both the degree to which suppliers provide innovations and the degree of trust and information sharing between firms. Purchasers need to make reasoned decisions about what IP is critical to their company and how much

information to share with suppliers and other third-party providers. Suppliers need to make the same decisions. Exhibit 2 depicts how ownership alternatives impact the development and acquisition of supplier innovation.

Purchasers that desire to own all IP, whether core/critical to the business or not, establish a barrier to obtaining supplier ideas and innovations. Moreover, the related efforts to document ideas and apply for provisional patents typically slow the innovation process. Further, suppliers might have a negative perception of the buyer’s attempts to control the IP, thereby limiting opportunities for trust and co-development. In cases where either the buyer or the supplier owns and controls all IP, a contractual (vs. collaborative) solution is usually the de facto option. As Exhibit 2 shows, if either the buyer or supplier already owns the IP, collaborative development is minimized and legal issues move to the forefront.

IP ownership policy is a critical part of any firm’s innovation strategy. In order for the buying company to own and control all innovation-related IP, suppliers must sign purchase agreements that give all IP rights to the buying company. Findings from our research on this practice show that:

- Suppliers were reluctant to provide the buying company with advanced innovation if it was considered “core” to the supplier. Suppliers expressed concern that they would lose sales to other potential customers by giving up the innovation. The big fear was that the IP would be “shopped around” and production business given to the low bidders. Problem is, these low bidders typically did not make the R&D investment that enabled the innovation and resulting IP.
- The IP of the innovation could be designed into “other” products of the buying company. In such cases, the providing supplier would not gain any future benefit from these products.
- Overall, suppliers were reluctant to share their best ideas with buying companies that as a matter of policy absolutely wanted to own all developed IP.

Though these all are major concerns, they can be somewhat mitigated through pre-sourcing. In such cases, production/volume contracts are negotiated to provide the innovation supplier with an agreed-to volume/time/percentage of business early in new product development. In addition, suppliers may be more likely to release IP rights if they are paid for development work, including possible financial returns on the innovation if it was used on other products. In a supplier’s mind, there is a clear tradeoff between the value of the



purchaser's business and the value of the shared IP that could be used for other products and purposes. In some instances, the value of the buyer's present and future business was deemed insufficient to generate incremental innovations where the buying company would own the IP. The innovation collaboration stalled.

### Trust and Communication

The degree of trust that exists between two companies is bilateral, based on the reciprocal behaviors and business approaches taken by each. From the supplier perspective, trust is critically important to the success of collaboration and innovation. One approach to establishing trust is based on the following basic elements:

- **Competency**—Each partner believes that the other partner has the skills, knowledge, and resources to follow through on stated plans and objectives.
- **Honesty**—A history of meaning what one says and saying what one means. No politics and games are played.
- **Fairness**—Partners are willing to share the benefits accrued through the working relationship in a fair and equitable manner.

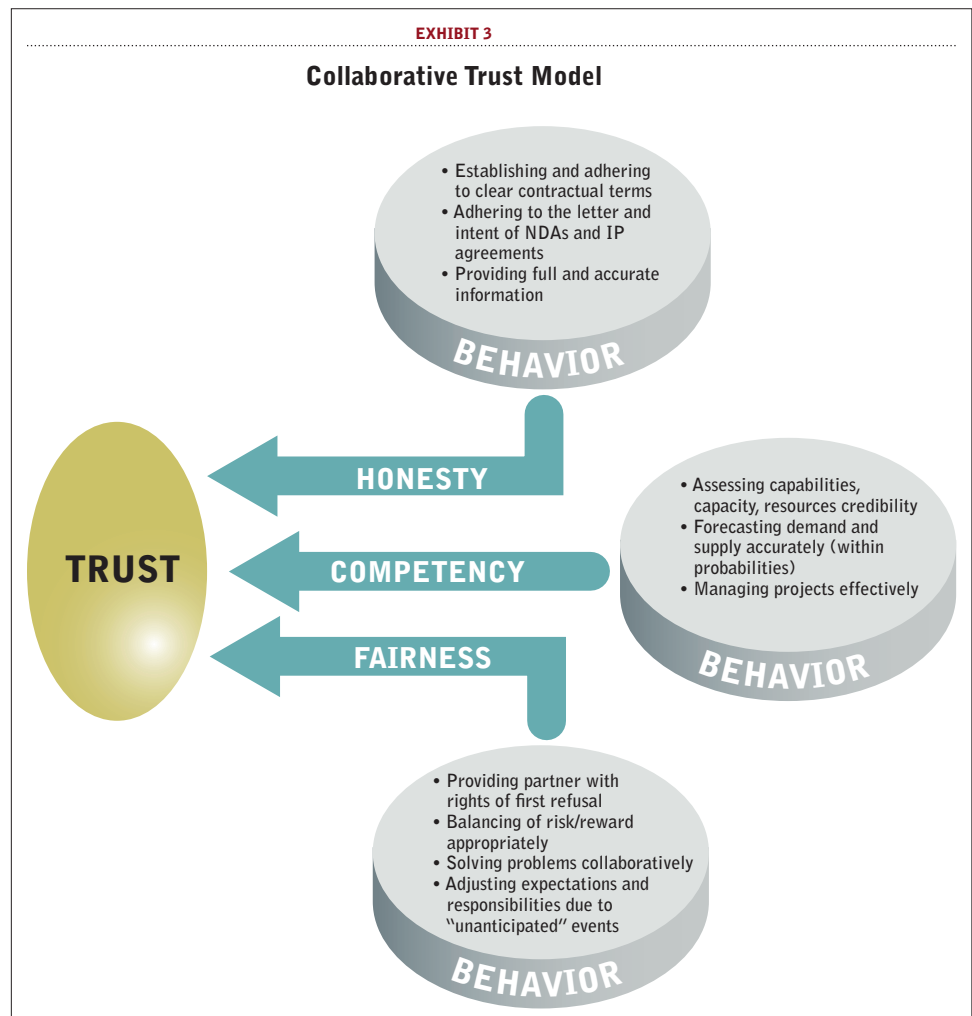
Trust between firms can increase or decrease as a result of their actions and behaviors that impact competency, honesty, and fairness (see Exhibit 3). Generally, the greater the trust between buyer and supplier, the more effective the working relationship, communications, and innovation opportunities. In other words, both the buyer and supplier believe that the other party has the capability to develop innovation, promises what is possible, and puts forth good-faith efforts to achieve those promises. Finally, both parties perceive each other to be fair and equitable in business dealings. And they share in potential problem solving in response to

unforeseen circumstances.

Our research shows that on the positive side, suppliers frequently stated that the buyers they worked with were generally honest and professional in their business relationships. In addition, they credited buying company personnel with having strong engineering and technical capabilities. Interestingly, though, some suppliers stated that while specific persons on the buyer's side could be trusted, this did not necessarily apply to "the buying company" as a whole.

Among the concerns expressed by suppliers regarding trust and communications were these:

- Inappropriate citing and references to the supplier's intellectual property. In one case, a supplier noted that the buyer distributed an RFQ that included pictures of tooling and machines from that supplier's production part approval process (PPAP).
- Switching business from a development supplier to a low-cost supplier before the original supplier can



recoup its R&D costs.

- Volume shortfalls by the buyer or capacity limits at the supplier limiting recovery of the innovation investment. This situation erodes trust even if the forecasting and estimating processes were done in good faith
- Buyers overpromising what may be achieved with an innovation, such as market penetration (volume), time to commercialization, or appropriate return on supplier investment.
- Promising a certain volume to a supplier as reward for their collaboration then insourcing production before that volume is achieved.

### Risk/Reward

The phrase “risk and reward,” although in near-universal use today, does not have a precise meaning. For our discussion, risk/reward sharing broadly defined means deciding which company will bear the consequences if events occur that negatively or positively affect the innovation project. Both the buying company and the supplier should carefully consider, plan for, and agree

## The greater the trust between buyer and supplier, the more effective the working relationship, communications and innovation opportunities.

on how upside and downside risk will be shared before starting a new innovation project. Innovation-related risks and rewards for both buyers and suppliers impact a firm’s ability and willingness to fully commit resources to a particular innovation. The research did not discover uniquely successful risk/reward strategies being applied to accelerate and achieve supplier innovations. However, we did find many views on the risk/reward approaches being used with suppliers.

One major issue is how the supplier will recoup the investment costs incurred in developing its innovation. Both buyers and suppliers recognized that the buyer cannot always take on the full technical and market risks of a project; accordingly, they understand that the risks (and rewards) often need to be shared. But without specific contract language specifying how the risk/rewards are to be shared, the supplier’s enthusiasm about making investments that could accelerate innovation for the buying company dampens. Our research found that pushing business risk onto suppliers, especially smaller ones, created an atmosphere of stress and animosity in the supplier firm.

Among other risks cited by suppliers were the following:

a lack of funding or a clear pathway to commercializing the innovation; asking suppliers to develop innovation without the ability to recoup investment costs; and requiring supplier innovation investments to be recovered over extended time periods. Fundamentally, the purchaser should explicitly recognize that some supplier innovation efforts may fail. But this does not necessarily mean that the supplier is a failure or that the supplier should be allowed to fail (as in, go out of business). Buying companies that push too much risk onto suppliers and allow them to fail gain a negative reputation in the supply community.

Another important risk/reward factor centers on the funding of supplier innovation efforts—for example, prototypes, materials, and nonrecurring engineering. This is an especially critical issue for smaller suppliers. Such funding can ensure needed resources and reduce supplier risk in pursuing further innovation. But this funding does not always need to be provided up front. Joint efforts to establish equitable product pricing and innovation returns post innovation, for example, can serve to mitigate supplier risk. Another way to reduce supplier

risk is to increase the speed of product innovation decision-making so as to accelerate commercialization and more rapidly achieve market penetration and volume targets. The research found

that time-to-commercialization was a driving factor in the supplier’s decision on where to focus its resources to accelerate innovation development.

### Innovation Metrics

Companies, academics, and consultants have long struggled with identifying appropriate innovation metrics. Commonly used measures such as percent R&D spend, sales of new services/products, number of patents, and so forth, each have their strengths and weaknesses. A full discussion of system-wide innovation metrics is beyond the scope of this article. Instead, we focus on those measures that suppliers identified as being key to successful innovation.

Buying and supplying companies agreed that collaboratively developed, quantitative, valid and reliable metrics accompanied by goals or targets are needed for successful innovation sourcing and for guiding behaviors. Such measures enable communication of innovation strategies, objectives, and priorities to strategic business units, R&D labs, supply management, and other functional areas at both supplier and buyer organizations.

At the same time, our survey respondents often

cited lack of effective metrics as a barrier to collaborative innovation. Part of the challenge for suppliers is that their customers rarely had valid and reliable innovation metrics in place. None of the buying companies reported that they had a good, or even satisfactory, set of metrics in place for supplier innovation. Though all buying companies had some internal innovation metrics and were working to improve and expand them across the supply network, few buyers had effective innovation metrics as part of their supplier scorecards, for example. If suppliers don't know how they will be assessed, how can they support innovation sourcing?

Innovation metrics need to be integrated system wide to be effective. For example, one supplier developed a corporate policy to preserve cash during the economic downturn by conducting only low-risk innovation projects. However, no metric was in place to actually measure aggregate or project-level innovation risk, so the policy's implementation level was not clear. Innovation performance measurement systems also allow for the measurement of results against expectations.

Metrics enable management to assess functional and business unit performance and to provide managers with valid, auditable measures of innovation's contribution to corporate success. Several of the companies we studied, for example, use a metric of percentage of new revenue generated by new products over the past two or three years. The companies that use this metric also had a goal in place to help judge their performance. One firm increased its goal from 10 percent to 25 to 35 percent as its performance on this metric continually improved. A particular objective of innovation metrics specific to this research is to influence and guide behavior—both internally and externally—that leads to successful collaboration with and innovation from suppliers.

A list of key metrics to support innovation sourcing from a supplier's perspective is presented below. These metrics, categorized as inputs, outputs, and process, apply to both the supplier and buyer. Regardless of the specific metrics in use, they must be carefully considered and agreed to by the impacted parties. The metrics also must be supported by data that the information technology system can readily capture and report. No metrics will be perfect. But they must be reasonably valid and reliable to motivate and drive behavior, judge results and reward performance. The metrics also need to be credible to top management and used to help drive the company's innovation decisions.

### Inputs

- Number of design engineers/design centers.

- R&D spend in total and on behalf of a particular customer, segmented by “incremental” to “breakthrough” innovation spend.

- Number of design in workshops (DIW)<sup>5</sup>, supplier councils, and so forth in which the supplier participates.
- Investment in new design and manufacturing technologies.

### Process

- Adequacy of risk assessments (subjective score).
- Adequacy of risk mitigation efforts (subjective score).
- Percent of schedules met in the NPD process.
- Number of exits from stage gates.
- Number of exits from stage gates/number of ideas entering stage gates.
- Concept-to-market cycle time.
- Number of collaborative design workshops held with suppliers.
- Amount of training for NPD.
- Number of seamless transitions through NPD process.

### Outputs

- Number of new products and services presented to the buying firm, categorized from “incremental” to “breakthrough.”
- Number of new products or services actually adopted by the buying firm, categorized from “incremental” to “breakthrough.”
- Percentage of revenue from new products and businesses.
- Development and communication of technology roadmaps, plans, and capabilities.
- Number of new patents.

Intellectual property ownership policy has strong implications for metric development and use. For example, using a metric such as patent development and ownership for the purchaser may mean less IP development at the suppliers because they fear losing control of their own IP across product lines.

### Organization Structure, Process, and Alignment

Company and supply organization structures can enhance or limit collaborative communications that accelerate and lead to supplier innovations. On the positive side, our study participants noted that supplier councils played an important role in enhancing two-way communications between buyers and suppliers. The reason: the councils provided a structured means to surface, discuss, and test innovation ideas. Another critical

factor cited in achieving product/service innovation was formal and informal engineering-to-engineering collaboration across firms early in the innovation process.

A firm's new product/service development process can either foster or hinder supplier innovation. NPD process discussions with suppliers centered on decision making, cross-functional interaction, and executive engagement should happen early in the collaborative relationship. Such discussions need to address the systems and the approaches enabling suppliers to provide innovation ideas, get them evaluated, and receive timely feedback. One of the major challenges cited here was that the information needed by suppliers to drive innovation—technology roadmaps and project tasks, for exam-

## Buyers need to take a more strategic view of sourcing innovation if they are to capture the potential that their suppliers can deliver.

ple—was often only available on a limited basis. The suppliers believed that having more detailed information earlier in an innovation project could speed up the process and reduce time-to-commercialization. One supplier expressed frustration with the uncertainty around how innovation ideas should be best provided and how they would be evaluated—even with an e-system in place to collect supplier innovations. The buying firm acknowledged during a supplier council meeting that despite the supplier portal and other mechanisms to encourage innovation sourcing, supplier solicitation and collection was the “most broken process.” The suppliers in attendance agreed.

Sometimes, the buyer and supplier dyadic structure is too simplistic to drive complex innovations. Multiple suppliers are not always encouraged to work together to achieve innovations on complementary items within the same overall component subsystem. Lack of joint design workshops, with multiple suppliers enabling rational design tradeoff decisions, was identified as both a concern and an opportunity. The study members acknowledged, however, that operationalizing such workshops is complex, given IP concerns; they felt the approach may work better for cost reduction initiatives.

The suppliers in our research pointed to a number of organizational-related challenges that hampered innovation sourcing:

- The buying company's lack of effort to foster engagement either with their suppliers or their customers to identify and facilitate valued innovations and to leverage market intelligence.

- Buyers not carefully considering supplier innovation ideas—and frequently not even responding to them.

- The buying company's inadequate communication to suppliers about their true product/service innovation priorities. Given the suppliers' limited resources, the key question they want answered is whether their efforts should focus on incremental changes, breakthrough innovations, or some combination of both.

- Buyers using a stage-gate process to effectively cancel projects at decision points rather than to make them work. This generally reflected the buying organization's risk aversion toward innovations. If there was any uncertainty at a stage gate, the buyer often would expend only a minimal problem-solving effort before cancelling the innovation.

- Lack of cultural alignment between companies around such issues as fast- versus slow-moving decision making, collaborative versus adversarial approaches to business relation-

ships, and so forth. These misalignments all impacted communication and trust.

- Lack of point persons and structured communications between buyer and supplier, resulting in project stagnation. Further, the reassignment of people to and from projects, with replacements having less insight and experience than their predecessors, limited innovation communications and disrupted project schedules.

- Too few buyer-seller touch points, including multi-level and cross-functional contacts, which impeded the innovation process. Often related to this was a bureaucratic buyer organization that was difficult to work with.

Finally, buyers seemed to place a limited emphasis on obtaining supplier innovation suggestions for existing products—even those with significant innovation and improvement opportunities.

### Eight Major Recommendations

Both incremental and breakthrough innovations are—and will continue to be—a critical component of business strategy. Increasingly, management will be looking to supply management to generate these innovations—and suppliers will be expected to play a central role in the process. It's part of a broader trend worldwide that sees companies slowly transitioning from a “closed” to a more “open” approach to innovation. Based upon the numerous interviews conducted and our research findings, the research team identified a number of overarching actions that can improve supplier commitment to collaboration in support of innovation and, hopefully, accelerate supplier innovation. Eight specific recom-





mendations emerged.

**1. The buying company needs to create clarity around its innovation needs.** The more precise the buying company is about customer product/service needs, the more effectively the supplier can commit and focus its resources. Buying companies should provide clear problem statements that are based upon formal Voice-of-the-Customer (VOC) types of information gathering.

**2. The risk/reward and IP ownership equation between the buyer and supplier must be balanced.** To the degree that suppliers perceive that they are taking significant risk compared to potential rewards, they will limit innovation investment—and thereby retard the rate of innovation development. The risk/reward balance is influenced by the degree of information transparency regarding buyers' plans, investment, and likelihood and speed of commercialization.

**3. Buying companies can accelerate supplier innovation through traditional rewards.** These include, for example, increasing business volume, sharing technology that benefits the supplier, and launching joint development efforts to capture new markets. In addition, the buying company can offer other financial incentives to reward supplier innovations.

**4. The buyer-seller relationship must be founded on trust.** Competency, honesty, and goodwill are critical trust elements. Trust should extend throughout the relationship between multiple and cross-functional touch points. Consistency of decision making that emphasizes and builds upon the trust that has been established is a key objective. In short, trust leads to better supplier innovation results.

**5. Buyers need to establish "equitable" agreements with suppliers that drive enhanced supplier innovation.** Such agreements would include risk/reward sharing and communicating a factual business case around the resource requirements, the time-to-commercialize, and the customer market opportunities. Equitable agreements are particularly important in situations where the potential risks may be high and the distribution of negative outcomes highly uncertain.

**6. An effective process for soliciting, collecting, analyzing, and acting upon supplier innovation ideas is essential.** This will drive supplier participation and accelerate innovation results. The buyer and seller need to work collaboratively to ensure effective project management across organizations and establish project personnel stability to speed potential innovation commercialization. Related stage-gate processes should be designed to speed go/no-go decision making and speed-to-commercialization.

**7. Innovation metrics that guide decision making and performance must be collaboratively developed.** These measures should be integrated across the innovation process from inputs (for example, engineering staff and capabilities, R&D spend) to processes (such as schedules met and adequacy of risk mitigation) to outputs (for example, number of new products/services presented and developed, percent of revenue from new products).

**8. Finally, the buying company should be clear about the resources to be committed in support of collaboration—as should the supplier.** This includes the number of personnel and their capabilities, commitment time, financial resources, executive engagement, and participation by key personnel. All parties need to clearly understand the connection between commitment of resources and likelihood of innovation success. When assessing supplier contribution to innovations, it's important to look beyond cost only to overall ROI.

In summary, the supplier has a unique perspective in the product and service innovation process. Having a formal innovation portal and processes for on-boarding supplier ideas is important—but it's not enough. Buyers need to take a more strategic view of sourcing innovation if they are to capture the potential that their suppliers can deliver. Specifically, firms that follow the guidelines above concerning IP ownership, trust, and communication, risk/reward sharing, structure, process, alignment, and innovation metrics, can better meet the daunting challenges of global competition through innovation sourcing. ☺☺

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## End Notes

- 1 Prahalad, C.K. and R.A. Mashelkar. "Innovation's Holy Grail" *Harvard Business Review*. July-August, 2010.
- 2 Chesbrough, Henry. "Open Innovation: The New Imperative for Creating and Profiting from Technology." Boston: Harvard Business School Press, 2003.
- 3 Huston, Larry and Sakkab, Nabil. "P&G's New Innovation Model" *Harvard Business Review*. March, 2006.
- 4 Monczka, R., Carter, P., Scannell, T. and J. Carter. (2011) *Innovation Sourcing: Contributing to Company Competitiveness*. Research Monograph, Tempe, AZ: Center for Advanced Purchasing Studies (CAPSResearch), [www.capsresearch.org](http://www.capsresearch.org)
- 5 A design in workshop (DIW) is a competition between suppliers to provide the "best" solution to a buying company in an attempt to win business. The buying company may conduct a DIW to achieve cost downs or innovations.

By Christoph Glatzel, Jochen Großpietsch, and Ildefonso Silva

**Managing a global supply chain involves tough organizational challenges that promise only to intensify as operations expand and become increasingly interconnected. Key among those challenges: getting functional groups to understand their impact on one another so that they can collaborate. To bridge the organizational gaps that often divide their senior managers, McKinsey research finds, companies need to successfully address three main areas of collaboration tension.**

**B**uilding a global supply chain to succeed—indeed, to thrive—in a world of rising complexity and uncertainty requires recognizing and tackling significant organizational challenges. Specifically, the top management team needs to understand that the decisions and activities of their company's supply chain group affect, and are affected by, the sales team, marketers and product developers, among others.

The result is a host of thorny tradeoffs. Should a company, say, move a product to a low-cost manufacturing facility to save money if that means lengthening delivery times? What if trimming the company's product portfolio to reduce manufacturing complexity and costs could stifle marketing efforts to reach new customers? When do the benefits of improved customer service warrant the additional operating expenses required to deliver it?

Supply chain, sales and marketing managers invariably view such tradeoffs through the lenses of their own responsibilities—and those perspectives often lead to disagreements or misunderstandings. Indeed, a McKinsey survey of global executives cited the inability of functional groups to understand their impact on one another as the most common barrier to collaboration for resolving the major supply chain trade-offs.

Ineffective collaboration has long been a supply chain sore spot, but its costs are set to rise drastically. If it's hard today to agree on the right response to a disruption in a supply chain, it will be more difficult still when companies deal with multiple interconnected supply chains, each possibly requiring a different solution. And consider the short- and long-term supply chain

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# Is Your Top Team UNDERMINING Your Supply Chain?





Harvey Chan

tradeoffs that executives must balance in a world where one business unit might be asked to shift its manufacturing lines to a more expensive near-shore location today to build capacity as a hedge against potential future spikes in labor or transport costs.

When the recent earthquake and tsunami in Japan evidenced the fragility of many sophisticated supply chains, it became clear that these trade-offs can have very real consequences. Many companies in the automotive and high-tech industries are still recovering from availability issues in Japan, along with missed sales and high reaction costs that we believe could at least have been partially avoided by a more systematic management of risk, as well as the tradeoffs between short-term optimization and long-term stability.

Finding mechanisms to solve these and other difficult supply chain questions will require hands-on attention from the CEO and other company leaders. The process begins when executives work together to identify places where better information sharing and teamwork will generate the most impact. Let's look, then, at three of the biggest collaboration tensions and see how companies are bridging these organizational divides to create more flexible and capable supply chains.

### **Tension 1: Supply Chain vs. Sales**

Supply chain organizations wage a constant battle against volatile demand, and for good reason. An unexpected spike in orders, for example, has expensive consequences in labor and distribution costs. Similarly, inaccurate sales forecasts can lead to stock-outs, lost sales, or excess inventory that must be sold at a discount. Sales

## **Ineffective collaboration has long been a supply chain sore spot, but its costs are set to rise drastically.**

and supply chain groups therefore devote significant energy to creating sophisticated planning and forecasting processes in an attempt to predict demand volatility—and blame each other when things go awry.

At first blush, the reasons for the disconnect may not be obvious. For example, the sales team at a luxury goods manufacturer we studied rightly claimed to have correctly anticipated a significant customer order. Unfortunately, however, the forecast did not specify the product type in enough detail. This frustrated the production team, which insisted it was not able to plan the order in a timely manner.

However, when these groups work together more closely, they can move beyond the traditional planning-cycle blame game. In fact, they can discover the root causes of volatility and ultimately begin to influence it. This approach brings tangible business benefits—often quickly. Crucially, over the longer term, the experience that groups gain from flexing their collaborative muscles heightens the ability to react quickly, and in a concerted way, to unforeseen events. That skill will be even more necessary given the increasing uncertainty in the supply chain environment. Here are two examples that illustrate the potential.

The first involves an automotive supplier whose sales teams often scrambled to meet quarterly targets that would guarantee them better performance bonuses. Customers recognized this behavior and, in some cases, were gaming the system by withholding orders until the end of the quarter to secure deeper discounts. The result was a series of supply chain headaches that included inventory build-ups at the end of each quarter, and higher warehousing costs. Worse, the additional labor costs needed to cope with the “spiky” demand, along with the expedited freight costs to meet customer service expectations, began eating at the company's bottom line.

In order to address this issue, the company's vice president of sales and its head of supply chain collaborated to shape demand into a more manageable form. One key step: substantially trimming end-of-quarter discounts and instead using a price and discount structure based on sales volumes, product loyalty, and participation in promotional efforts. The company also created new incentives to encourage sales teams to spread sales more evenly across the quarter. All these actions together reduced overall demand volatility, thereby substantially trimming the inefficiencies across the value chain.

Our second example involves a global manufacturer of consumer packaged goods. This company discovered that promotional activity in just five customer accounts drove most of its demand volatility. Although the company carefully planned the promotions to maximize revenues, its marketers hadn't thought about the impact on the supply chain. When several promotions coincided, for example, the manufacturing capacity for one product group was overbooked, resulting in stock-outs and significant overtime expenses to meet the demand. As service levels on key products dipped, the CEO became alarmed and asked his sales and supply chain executives to form a joint team and identify improvements. By staggering the promotions over several months and aligning



them carefully with baseline demand patterns, the team was able to reduce the overall volatility of demand by 25 percent.

When the company rolled out the new promotions plan, its managers identified another problem: Many customers lacked the resources to manage their order levels efficiently and therefore sporadically placed unnecessarily large orders. The company responded by bringing together its sales and supply chain personnel and working with these customers to create better ordering processes for them. In this way, it smoothed the flow of orders—a move that benefitted both parties. What's more, the moves boosted customer service levels by three percentage points in the core categories.

Situations like these are endemic in many supply chains. By tackling these problems, companies often enjoy immediate benefits while building collaborative capabilities that will be crucial over the long term in the more complex and uncertain supply chain environment of the future.

## **Tension 2: Supply Chain vs. Customer Service**

A second important tension involves the setting of customer service levels. This issue has been around for a long time, and it's one that is set to get worse as companies seek to create more resilient global supply chains. Contentious questions abound: How speedy should deliveries be? Should some customers receive orders faster than others? What levels of product availability should be guaranteed? In our experience, companies traditionally leave these decisions to the sales or customer-service functions, which often make service-related decisions without understanding the broader operational implications or costs involved.

When these groups work together to analyze the full impact of a service decision, they avoid this pitfall. That lesson was learned by a chemical company whose sales personnel were pushing its logistics team to reduce delivery times to two days, from three. The company achieved this goal, but only by using more warehouse space and labor and by loading its delivery trucks less efficiently than it otherwise would have. Together, these actions increased distribution costs by 5 percent. This came much to the surprise of the sales team, which had not taken into account the full operational implications of the new service target.

While this tradeoff might have been acceptable under the right circumstances, a closer examination by the leaders of the supply chain and sales groups revealed



that most customers didn't mind if deliveries arrived in two, three, or even five days. The real breakpoint when service was most highly valued was 24 hours. By extending the delivery window for normal orders back to three days, the company returned its distribution costs to their original levels. Meanwhile, it launched a special 24-hour express service for critical deliveries, for which it charged a premium. The move ultimately raised the company's costs slightly, but this was more than offset by the new business it generated.

As supply chains splinter and companies diversify production to hedge against uncertainty, the importance of making smart tradeoffs about service levels and speed can only grow. Companies that want to do better in this area will have to strengthen partnerships between the leaders of their supply chain, sales, and service functions.

## **Tension 3: Supply Chain vs. Product Proliferation**

Remedying some of the root causes of growing supply chain complexity will be another important benefit of enhanced collaboration in the executive suite. Consider the complexity associated with product portfolios. Sales and marketing organizations work hard to create new products, explore new market opportunities, and respond to emerging customer needs. As they do, products and variants tend to proliferate, creating portfolios with long tails of niche offerings. A consumer goods maker we know, for example, recently found that nearly one-third of the 6,400 stock-keeping units (SKUs) in its product portfolio together represented just 1 percent of total revenues.

This complexity comes at a cost; economies of scale dictate that low-volume products cost more to make per unit than high-volume ones. For the consumer-goods maker, for instance, the complexity had reached such a degree that it started damaging overall profitability, prompting the company's top team to investigate the situation more thoroughly. Subsequent analysis revealed that production costs for low-volume products were 129 percent higher than those for its best sellers.

Low-volume products also require disproportionate

effort in sales and administrative processes. And they drive up supply chain costs: A company must hold higher inventory levels to meet agreed service levels across a broad range of low-volume products than it does over a narrow range of high-volume ones. When all these extra costs are taken into account, the impact can be eye-opening. One

### **The top of the organization is the right place for most companies to begin negotiating the functional tradeoffs.**

company we studied found that 25 percent of its SKUs actually lost money.

In the face of these numbers, companies might be tempted to take an ax to the long tails of their product portfolios. Yet blind cutting based on sales figures alone often does more harm than good. Some low-volume products have benefits that outweigh their costs. Consider the chemicals manufacturer that set out to slim down its product portfolio. On closer examination, the company found that some small products (in terms of revenues) were of vital importance for some of their customers, and taking them out would have risked losing several big accounts. Instead, increasing prices turned out to be the strategically better and more profitable strategy. Only through close collaboration across functional boundaries can companies make these right decisions. Such collaboration won't eliminate the need for more carefully segmented supply chain strategies, but it should help ensure that such efforts are well targeted.

#### **What the CEO Must Ask**

The top of the organization is the right place for most companies to begin negotiating the functional tradeoffs we've outlined. But many senior management teams give precious little attention to supply chain issues. Across the tradeoffs our survey explored, for example, no more than 26 percent of the respondents said that their companies reach alignment among functions as part of the supply chain decision-making process. Moreover, 38 percent say that the CEO has no or limited involvement in driving supply chain strategy.

This is a mistake. CEOs set the agenda for their leadership teams, and it is up to CEOs to encourage and facilitate meaningful discussion of important cross-functional supply chain issues. They can do more than that—and some do. In some of the most impressive supply chains

we've seen, the chief executive promotes collaboration and performance improvement with missionary zeal. The CEO of an apparel company, for example, would always make a point, during store visits, of asking shop floor staff how the company's recent commercial decisions had affected store operations, including logistics. He would bring up this feedback in meetings with purchasing and supply chain teams and continually encouraged his managers to follow up themselves and engage with shop floor staff on similar topics.

Similarly, a global consumer goods company undertook a major effort to understand—and optimize—complexity in its product portfolio. Within a couple of months, the company's leadership group observed that the subsidiaries where local CEOs had personally gotten involved in bridging the different marketing, sales, and operations functions had achieved superior results relative to the others. In one of the subsidiaries with the highest levels of CEO involvement, 30 to 50 percent of SKUs had been eliminated with no negative effects on sales.

CEOs looking to get started can benefit from asking themselves five questions. Consideration of these questions, we have found, can help leaders begin to ferret out situations where faulty collaboration may be preventing supply chains from reaching their full potential:

1. *Is production capacity being developed in the right locations—both for today and the future?*
2. *Is the sales group doing all it can to make demand smooth and predictable?*
3. *Are customers offered the service levels they really need?*
4. *Is my marketing department calling for too many niche products that may be too costly to supply?*
5. *Are our purchasing and sourcing decisions being made with their supply chain implications in mind?*

Poor collaboration and silo thinking have long thwarted the efforts of companies to get more from their supply chains. In a future characterized by rising complexity and uncertainty, solutions to this perennial problem won't just be “nice to have.” They will be competitive necessities. ☺☺

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*This article has been adapted from “Is Your Top Team Undermining Your Supply Chain?” January 2011, McKinsey Quarterly, [www.mckinseyquarterly.com](http://www.mckinseyquarterly.com). Copyright (c) 2011 McKinsey & Company. All rights reserved. Reprinted with permission.*



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Follow the Leaders:



# WAYS TO PROCUREMENT EXCELLENCE

By John Blascovich, Alejandro Ferrer, and Bill Markham



**The latest Assessment of Excellence in Procurement (AEP) study from A.T. Kearney confirms procurement's power to drive real money to the bottom line and value to the top line. Among the leaders who do this best, seven characteristics stand out. This article gives the highlights of the study, followed by a Q&A with co-author John Blascovich on what the findings mean for supply management professionals.**

**A**.T. Kearney's 2011 Assessment of Excellence in Procurement (AEP) study finds corporate procurement functions becoming a more vital, strategic corporate player. In the past three years, 90 percent of study participants—procurement and supply management executives from more than 185 leading companies across 32 different industries—have increased procurement's role in developing and executing business strategies. At the same time, procurement leaders are extracting more benefits and using better governance to improve performance both internally and externally.

The findings are clear: Procurement has greater stature, more influence, and a wider reach than ever before.

When the AEP Study began back in 1992, procurement was primarily a back-office function—dealing with requisitions, bidding, order placement, receiving, and placement. Steadily, over the years, procurement has shifted resources toward activities that add value to the company, with nearly three-quarters of staff members now devoted to strategic activities. Procurement has also moved up the organizational ladder with nearly two-thirds of procurement functions reporting to a C-level executive today.

Let's look at how procurement has changed, reflected in the 2011 AEP findings:

**Strategic direction.** Procurement has a broader,

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more strategic mandate. Its influence and reach are at an all-time high. And its responsibilities are accepted by the broader organization. Ninety percent of study participants say procurement has a larger role in developing and executing the company's business strategy. And while still being held accountable for bottom-line efficiencies, leading procurement organizations are playing an active role in developing and executing top-line strategies for growth.

**Value-adding processes.** More companies have sourcing methodologies and processes in place, and are generally adept at using competitive supplier selection exercises to take advantage of their power in the supply base. Technology continues to play a key role in that process, with the top 13 companies in our study (all identified as procurement leaders), and two thirds of the remaining companies, almost universally using technological solutions.

The next frontier is in developing long-term category management strategies—where collaboration with key suppliers is a means to create value. This requires first understanding which suppliers are core to meeting today's business needs and achieving tomorrow's business strategies, and then engaging them to help you.

**Measurement, information and HR.** Three areas—performance management, knowledge and information, and human resources—are key to a successful procurement organization. This is where it pays to invest in new approaches to measure performance, more sophisticated technology to embed best practices, and broadened professional skills. To facilitate this, A.T. Kearney has a framework called ROSMA<sup>®</sup>, a new approach that brings much-needed clarity and accountability to the procurement function (see [www.atkearney.com/rosma](http://www.atkearney.com/rosma)).

### Follow the Leaders

As part of our study, we identified 13 companies that demonstrate consistently high levels of procurement performance, and are strategic contributors to their business. How do they stand out? What makes a procurement leader? We found seven characteristics that each share:

**1. Align with the business.** All 13 of our leaders understand that the procurement strategy must align with overall business goals. They have 85 percent alignment on average, compared to 37 percent for the rest in our study. (In determining alignment we compared 14 business goals with 30 elements of procurement strategy.) They engage more with other business functions and take advantage of supply market opportunities. The leaders go beyond the traditional areas (transportation, IT, engineering) to also engage with R&D, marketing, finance, customer support, and legal, having an impact on more than 94 percent of external spend, compared with 71 percent for the rest. As a result, the leaders were considerably more agile and better prepared to react to the 2008 financial crisis, which allowed them to save 50 percent more than the rest of our study participants in 2009.

**2. Contribute to the top and bottom lines.** The top companies consistently outperform other study participants in contribution to top- and bottom-line strategies. Roughly three-quarters of procurement leaders say

**While still being held accountable for bottom-line efficiencies, leading procurement organizations are playing an active role in developing and executing top-line strategies for growth.**

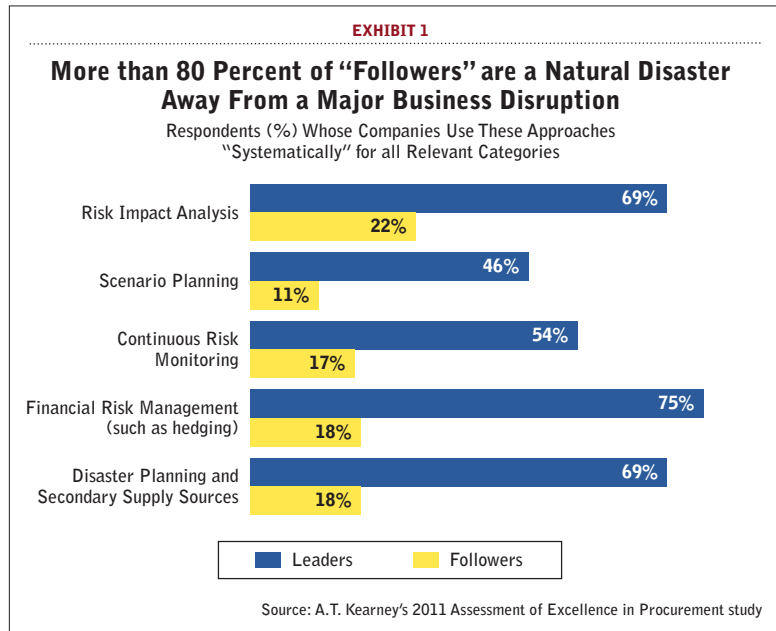
they contribute to innovation, integrate suppliers into the new product development process, reduce time-to-market for new products, and create new business opportunities with suppliers. Only one-quarter of followers perform in this way. And the leaders are twice as likely to affect the bottom line—by increasing total value to purchased goods, building synergies across divisions and business units, collaborating with other business

units and key suppliers, and improving working capital.

**3. Manage risk systematically.** The headlines of the past year have highlighted one supply chain disruption after another. Our survey finds that procurement leaders excel at managing risk. The majority use risk-impact analysis, financial risk management (such as hedging), and disaster planning as ways to protect against unforeseen threats. By contrast, just one in five followers use such a broad array of risk management activities in procurement—which means about 80 percent of companies are a natural disaster away from a major disruption. (See Exhibit 1.)

**4. Use supplier relationship management consistently.** Leaders use supplier relationship management (SRM) processes more consistently than followers. And they back up their claims—“that a structured process drives strategic value”—by pointing to improvements in innovation and growth, better managed risk, and vastly improved supply chains. They regularly serve as lead or co-lead in five areas: managing strategic suppliers, expanding the supply base into new markets, monitoring compliance and risk management, performing joint initiatives, and developing suppliers’ capabilities. (See Exhibit 2). The leaders also tend to be forward-thinking, identifying opportunities with suppliers, detailing implementation plans, and creating incentives.

**5. Tailor category strategies.** Leading procurement



organizations use more advanced toolkits—systematically employing more than twice as many methods as the followers—to tailor their approaches to each situation. A.T. Kearney's Purchasing Chessboard (see [www.purchasingchessboard.com](http://www.purchasingchessboard.com)) outlines 64 methods procurement organizations can use in dealing with suppliers. Still, there are more mountains to climb as more complex categories will require closer collaboration or even the pursuit of joint advantage with suppliers.

**6. Adopt technology.** The leaders have more control over what they spend because they have technology that allows for more visibility into spending. They also have standardized data, with 75 percent of leaders having standardized item codes for direct products and services, compared with 45 percent of followers. And 85 percent of leaders are able to track and report spending by supplier and category for virtually all areas, compared with just one third of followers. In addition, most leaders are fully automated—with real-time access to data—and are miles ahead in adopting the kinds of technology needed to support contact management and compliance.

**7. Win the "war for talent."** All 13 firms are at least three times more forward-looking and bold in their approaches to recruiting and retaining top talent. (See Exhibit 3). Most have sophisticated recruiting strategies, including establishing relationships with universities that offer leading supply chains programs and using summer internship programs. And they are more systematic in managing a more diverse and dispersed work force—using online collaboration technologies and offering part-time work and flexible hours.

## What Will Procurement Look Like in 2015?

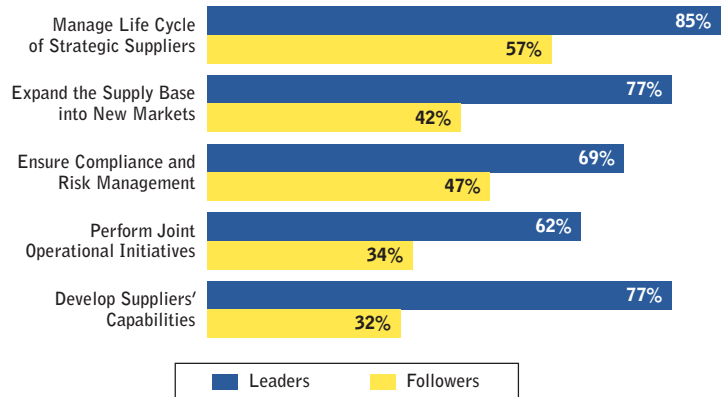
We've seen monumental change in the procurement function over the past two decades, and we expect to see that continue. What can we anticipate in the next five years?

**Emerging markets will reign.** Sourcing has skyrocketed in emerging countries in the past three years. The BRIC countries—Brazil, Russia, India and China—have

EXHIBIT 2

### Procurement Leaders Play a More Active Role in Managing Supplier Relationships

Respondents (%) Selecting "Lead or Co-lead" When Asked About Procurement's Level of Involvement in SRM\*

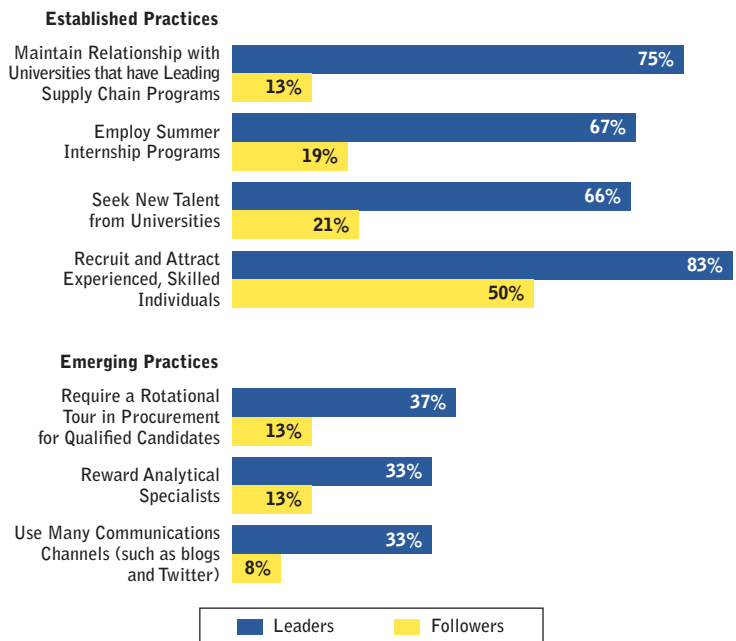


\*SRM: Supplier Relationship Management  
Source: A.T. Kearney's 2011 Assessment of Excellence in Procurement study

EXHIBIT 3

### Leaders Are Taking More Aggressive Steps to Recruit and Retain Top Talent

Participants (%) Selecting "Mostly" or "Fully" Applies



Source: A.T. Kearney's 2011 Assessment of Excellence in Procurement study

**The mantra now is performance, performance, performance.** Those that put these three words at the forefront of their supply management vocabulary can sit back and watch the results roll in.

experienced the most growth, with far more companies sourcing 10 percent or more of their spend from these locations. Among our study participants, more than half say they expect to increase their spend in China, India, and other Asian countries.

**SRM will be mandatory.** No successful company will be without an SRM strategy. Over the next three years, SRM is expected to drive 40 percent of procurement's value add. We are not only talking about today's SRM activities—those focusing on reducing total cost of ownership. We also mean the bigger and broader activities such as increasing resource utilization and maintaining flexibility in the supply base. Supply management organizations and their strategic suppliers will have to be at the forefront of innovation.

**People will have to be razor sharp.** As procurement becomes more cross-functional, procurement professionals will have to have “business smarts.” Technical skills in specific disciplines will be the price of admission, so success will depend on expertise in change management, project management, and stakeholder engagement.

**Procurement will look for “Black Belts.”** Procurement will take a page from manufacturers' play books to gain visibility into spending and processes. Why not use the principles of Six Sigma to actively manage the sourcing pipeline, validate sourcing results, and define account-

ability? Individual key performance indicators? Transparent reporting on planning and performance? All will be in play in 2015.

### **Performance, Performance, Performance**

The years ahead will be challenging. There will be more pressure from near-term economic uncertainty, long-term macroeconomic trends, and more “wild card” events to cause major disruptions. Managing supply and suppliers will be crucial.

What can we learn from the leaders? Align procurement strategy with business needs. Make sure suppliers are aboard and ready to support your strategic direction. And help eliminate unnecessary costs. Speed innovation by funding external sources of ideas and capabilities. Understand and manage the full range of supply risks before they happen. Justify investments, focus resources, and push for sky-high results. And three more:

- **Get collaborative:** Break down internal silos and bring suppliers into the company's processes.
- **Get creative:** Attract, motivate, retain and capitalize fully on the skills of the changing workforce.
- **Get connected:** Focus on technology, the kind that will fundamentally change processes, not just automate them.

The mantra now is performance, performance, performance. Those that put these three words at the forefront of their supply management vocabulary can sit back and watch the results roll in.

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**Authors' note:** The Assessment of Excellence in Procurement (AEP) Study is an ongoing research project that is open to new participants. To learn more about the study visit [www.aep2011registration.com](http://www.aep2011registration.com)

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## Insights and Lessons Learned from the AEP Study



**John Blascovich**

*Study co-author John Blascovich gives his perspective on some key findings of the 2011 Assessment of Excellence in Procurement study and what they mean for today's supply management professionals.*

**Q:** *This year's study pointed to risk management as a critical challenge for supply management professionals. What do you see as the biggest risks to supply chain continuity going forward?*

**A:** Risk is very multi-dimensional and varies somewhat depending on the company or the industry. For some, it's the long supply chains they have crafted that are at risk for disruption due to anything from a natural disaster to a political disruption or even some kind of terrorist activity. Then there's another risk, a reputational risk, that needs to be carefully managed. For example, if you aligned with a company that's either non-ethical or non-environmental or it ignores child labor laws, that can really hurt your brand. For other companies, the biggest risk might be of a regularity nature. You might be doing something in one geography that may be illegal in



another. And the rules can change at any time, affecting availability or cost. So you need to be vigilant.

Another big risk lies in consolidating your supply base to the point where you have a sole source situation, or very close to one, and you haven't planned for business continuity if that supplier should have problems. In terms of the more traditional procurement risks, this is probably first on most companies' list. But the other risks I mentioned are potentially more devastating. In particular, the reputational risk can really come out of left field and get momentum before you can get on top of it. So you want to stay in front of that.

**Q.** *In risk management, as in many other areas cited in the report, the leaders consistently do a more effective job than everybody else? What's their secret?*

**A.** There are two components to the leaders' approach. One is that they plan for disruptions in obvious touch points in the supply chain where disruptions could occur. But even at that, they can't plan for everything so they have mechanisms in place that enable them to react quickly when something happens outside of the plan. The leaders have that kind of structure across all the key category groups. Risk management is not just wishful thinking for them.

**Q.** *The AEP report stated that companies need to understand how technology can be used to change and not just automate procurement processes. What does that mean?*

**A.** There are a couple of parts to this. First, technology allows you to eliminate the manual work you had been doing—that's the automation side. A traditional RFP or online auction are examples. But beyond that, technology can add a new dimension to the procurement process. For instance, technology allows suppliers to handle so much more data. And that enables the supplier to propose their own solution, which may actually be outside of the original request but that adds great value.

Essentially, you've changed the whole dynamic of how you deal with a bid situation. In fact, there are many places along the procurement chain where having much better information and connectivity will allow you to do things you could never do before. A big part of this involves working across geographies.

**Q.** *How do you see the technology itself changing in this space, let's say three to five years out?*

**A.** The emergence of business analytics will be one big change. It's very obvious to us that the ability to address procurement challenges using higher-end

analytics that weren't broadly accessible before will be a potential game changer.

Technology is also greatly enhancing supply chain collaboration. The ability to work more virtually and independent of location is going to have a huge impact on productivity. There's an important training component to collaboration, too. At A.T. Kearney, we have a program called the Student Lab that brings in students and professors from five universities right now. It's an experiential program in which the students work on a project for a semester. Our dream is that through collaborative technology we will be able to connect students say from India and California and have them work as a team on a problem.

**Q.** *Do people need special background or training to use the kinds of analytics solutions you mentioned?*

**A.** Some specialized training is probably needed at present, but that's changing. In our own firm, for example, we're hiring undergrads with strong quantitative backgrounds and then running them through a lot of training to be proficient in analytics. We also have clients doing the same thing. But I think as analytics become more of a day-to-day part of operations, the technology will become more user friendly and will require less specialization. The basic business understanding, of course, will still be important. But the mechanics of doing it will become easier.

**Q.** *The study talked about leading companies using procurement to drive top line growth. How is that being accomplished?*

**A.** One way is through innovation. The trend in many businesses since the turn of this century has been to move more of the value chain outside of your enterprise. More and more companies are discovering that supplier innovation can become a critical part of the equation. So there are a lot of leaders who now are using the supply management function to drive innovation among their suppliers. P&G, for one, has been very public about this. And these efforts have had a positive impact on revenues.

Another way procurement is driving top-line growth is by opening up access to new markets or new geographies. This is particularly effective when you're working with larger suppliers that have expertise in a new market or region you want to enter.

To the extent that procurement can improve supply chain performance through, say, higher fill rates or consistent on-time delivery, that also adds to top-line growth. Though I will say, it's more than just the leaders focusing on these operational activities—it's just about every company these days.

**Q.** *We actually have an article on supplier innovation in this issue (see “Innovation Sourcing—The Suppliers’ Perspective”). In your view, what are the advantages of turning to your supplier for innovation?*

**A.** First off, companies are leaner now, so they don’t have the same resources to devote to innovation development as they may have had in the past. Thus, they turn to their suppliers for help here. Second, the competencies of some of the suppliers may exceed what the buying company has in house. So a supplier with broad experience gained through having clients in different industries can be a huge asset. The key is to be on the short list of who they bring their innovation to.

**Q.** *Regarding the seven success characteristics identified in the study, if you had to single out one that companies should start focusing on immediately, which would that be?*

**A.** If I had to pick the biggest opportunity, I would focus on the supplier and category management processes. I guess that technically incorporates two of our recommendations—use SRM consistently and tailor category strategies—but they are closely related. By moving beyond simple sourcing to SRM and smart category management, you can make significant gains in areas like strategic sourcing, risk management, joint initiatives, and supplier development. The leaders have demonstrated this time and again. It’s really a matter of moving from the conventional approach to SRM to one that concentrates on a value-adding relationship. I should add that metrics and scorecards play a big role in making this kind of relationship work.

**Q.** *Are there still unnecessary or unnecessarily complex activities taking place between buyers and suppliers that are draining peoples’ time and energy?*

**A.** When there’s less transparency, there ends up being a lot more back-end work, which is often repetitive and non-productive. You know, the forecast isn’t right so we have to fix it, and that sets in motion a whole lot of non-value activity—all of which could have been avoided if the supplier had the proper visibility into demand in the first place. Automation also still has great potential for eliminating unnecessary activity.

**Q.** *What steps can companies take to improve their supply and management visibility?*

**A.** We’ve been focusing on spend transparency for years now and in many places it does seem to be

getting better. That same effort has to extend throughout the supply chain. The challenge is to be able to pull together all of the relevant data—perhaps through cloud technology. So if you have the right data and the appropriate security, you can look at the whole value chain and not just at little pieces of it separately in a disconnected fashion. I don’t know that anyone has put together the total package yet, but that should be the goal.

**Q.** *The leaders obviously have strong support from their top management. But for companies who may not, what can they do to elevate the importance of supply management in their organizations?*

**A.** A couple of ways come to mind. One is to create a victory of some sort. Think of a winning idea that you can take to the COO or the CFO and say we’ve got this activity going on, it was cross-functional in nature. We looked outside the constraints we had before, and we identified this significant value for the company. Even in cases where it may not have been fully implemented, just coming up with a solid idea is a good way to whet top management’s appetite.

Another way is to network with a company that’s not a direct competitor and get some discussions going around the value they’ve achieved from supply management. This could be harder to do for some companies than others. But, executives usually listen when they hear about something great someone else is doing. And a lot of times they’ll say, how can we do that?

**Q.** *Finally, how would you characterize the business advantages that the supply management leaders have gained over others. Is it insurmountable?*

**A.** I don’t know if it’s insurmountable. The leaders certainly tend to have a cost advantage. Some of them might have an innovation advantage, because of the kinds of things we talked about earlier. It’s important to note that the leaders typically have a fairly high degree of cross functional activity. We find that this is a key enabler in transforming from a siloed view of a company to a more team-oriented perspective.

This cross-functional aspect is really critical. It tends to drive internal value in parts of the organization you never imagined. And, of course, it is absolutely essential to driving supplier value. In the most successful companies that I’ve seen, the cross-functional mindset becomes a pillar of how the company is managed. ○○



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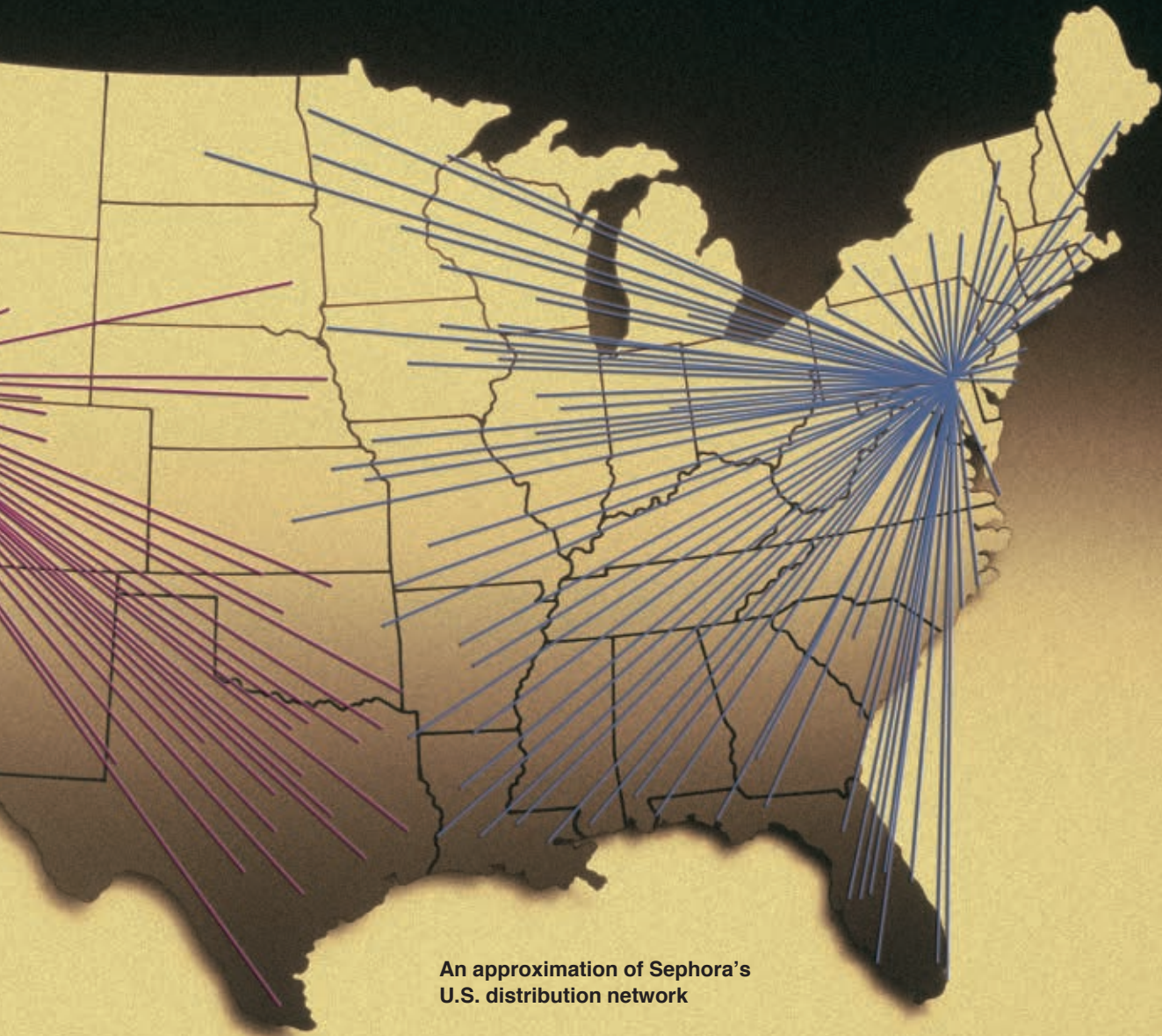


# Sephora's gorgeous network reorganization

Our warehouse/DC engineer dives into the best practices and tools that the retailer put to work in order to expand its distribution network after it became the exclusive provider of beauty products for JCPenney stores.

By Maida Napolitano, Editor at Large





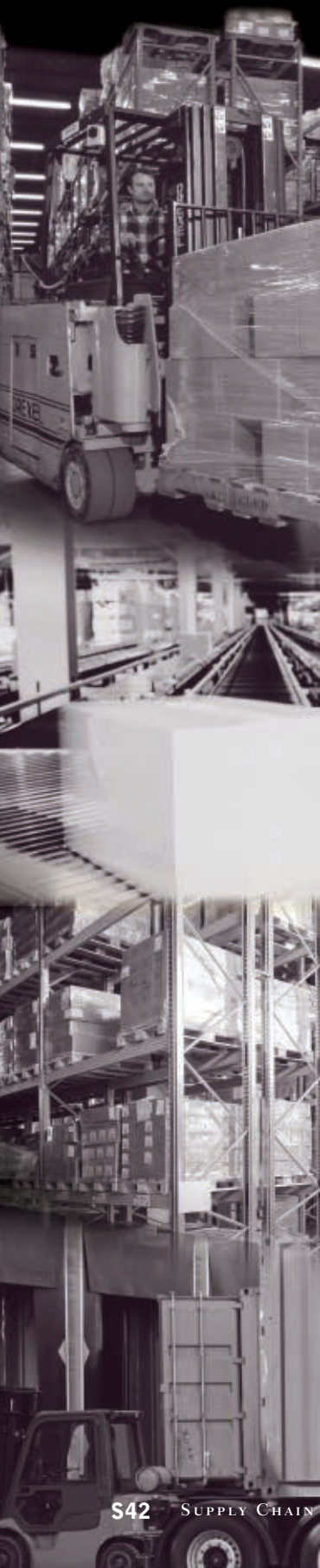
**An approximation of Sephora's  
U.S. distribution network**

**W**hen talking “beauty” at Sephora, it clearly isn’t skin deep. As a division of Europe’s premier luxury goods provider Moët Hennessy Louis Vuitton (LVMH), this retailer has carved a deep niche in the global beauty market, becoming a major presence in hundreds of retail centers across 24 countries and on the Internet.

In the U.S. and Canada, Sephora has grown to over 280 stores in a little more than a decade. Its unique open-sell store environment, staffed by a team of beauty experts, provides customers—who the company calls its “clients”—direct access to a broad range of product categories including skincare, color, fragrance, bath & body,

(CHART COURTESY OF ST. ONGE, WWW.STONGE.COM)





smile care, and hair care. Launched in 1999, Sephora.com is now one of the Internet's foremost beauty shopping sites, making it its largest North American "store" in terms of sales and selection of products and brands.

With such rapid growth over multiple channels, its logistics and supply chain team knew it needed to keep a close watch on its lone 316,000-square-foot distribution center (DC) located in Belcamp, Md. All through 2005, it periodically conducted capacity surveys with Pennsylvania-based supply chain consulting firm St. Onge to determine whether this one-facility distribution operation could continue to support such a high rate of expansion—each time, the facility seemed to hold its own.

But 2006 ushered in a new challenge for the logistics team. Sephora became the exclusive provider of beauty products for JCPenney stores across the country, offering the same

signature Sephora look in hundreds of JCPenney stores, but within a smaller footprint. For the first time serious doubts were raised on whether the Belcamp DC could support this new marketing push.

In addition, the lease for the DC was about to expire. The team was left sitting with some difficult questions: Was it best to stay in its existing Belcamp facility or should it move to a new, larger building at an optimal site? Should it open a second facility? If so, where should it be and what should its mission be?

Management needed to weigh all its options and plan the best strategy going forward. To do this, it decided to engage St. Onge in an in-depth network study aiming for a distribution network that could support its expansion while continuing to provide a superior client experience and maintaining a balance of costs.

*Continued on page S46*

## 6 tips for optimizing the distribution network

**Tip #1:** Involve high-level management. Traditionally, in many DC projects, business owners and stakeholders don't get involved until the very end when they give their approval on the overall output. But, engaging high-level management early on is a must.

**Tip #2:** Ask the right questions. A good distribution network redesign encompasses a number of key areas of the business that all need to be considered and questioned. Some critical questions that need to be answered: What are the storage and throughput capacity constraints associated within my existing distribution network? What perceived service level requirements are required for major markets being served in order to be competitive? If the delivery lead-time is changed then what is the anticipated impact on sales revenues for a given market? What are the logistics operating expenses, one-time expenses, inventory assets and capital investments required for the baseline scenario? How do these compare to alternative scenarios?

**Tip #3:** Use an effective network modeling tool. Up to a certain scale, modeling your network in house using home-grown spreadsheets and databases can get cumbersome—if not impossible. Choose one of many commercially available network modeling tools.

**Tip #4:** Perform an inventory optimization study. One of the most overlooked areas in many network designs is inventory. While adding more DCs may reduce transportation costs, it also requires you to carry more inventory—and many times this inventory is far from optimal. After the modeling tool identifies the number of facilities needed and roughly where they should be located, use algorithms to determine the right amount of inventory to achieve a specific level of service that can be customized for each of the facilities.

**Tip #5:** Make sure there is labor. Certain areas have become hotbeds for distribution primarily because of their proximity to the U.S. population. However, these popular areas that companies gravitate toward means that there could be fierce competition for the labor force. Turnover rates become high because workers would rather work down the street for another DC that's offering 25 cents more an hour.

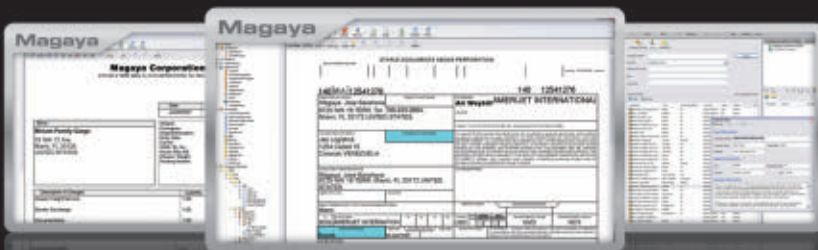
**Tip #6:** Take your time. Depending on the complexity of the network, the availability of the data, and the experience of the project team, a typical network study can take up to six months.

*—Maida Napolitano, Editor at Large*

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# Ending the Logistics Nightmare: Integrated Freight Processing Solutions Deliver Transportation and Supply Chain Cost Savings

By Jeff Carlson, Vice President, North America Trade Sales, Citi Global Transaction Services

**A**s transportation costs continue to rise, companies are under increased pressure to find ways to contain spend. A recent Aberdeen study found that fuel costs and customer demands for faster and more frequent deliveries were two of the most pressing concerns for respondents. The complexities around supply chain sourcing, due to increased globalization, was also indicated as a significant challenge facing logistic professionals looking to implement effective transportation spend management.

For many companies with global operations, maintaining a decentralized structure affords them the flexibility to operate separate business lines independently, providing a competitive edge. However, decentralization of business processes also creates significant challenges for logistics professionals who struggle to gain a clear picture of the entire company's supply chain and its related transportation costs.

Lack of visibility into actual spend information and the general inflexibility in the typically manual processes has left many logistics professionals wanting a more visibly interactive supply chain. This has led them to look for better technology and processes to reduce costs.

## **Logistics challenge: Inability to collect supply chain and financial data**

Decentralized business processes create a headache for central logistics planners because they are unable to collect the necessary supply chain and financial data needed to effectively manage transportation spend across the enterprise. Case in point, logistics executives at a large Midwestern-based, multi-national agricultural company faced a tremendous duplication of resources across the company's 50 business units. Because each unit processed their own freight payments, every subsidiary required its own controller, freight payment manager and accounts payable (AP) clerk dedicated to freight payment and analysis. This obviously resulted in enormous inefficiency.

Having diverse operations can also present technology challenges that compound the difficulties logistics professional must deal with. In the case of the agricultural company, while they did utilize a single ERP solution enterprise-wide, multiple transportation solutions implemented at each business unit meant data was being generated in different formats, which prevented logistics from making timely decisions about their over-

all transportation operations. Making matters worse, varying payment terms had been put in place with different business units for the same carrier. These payment terms varied anywhere from 15 days to 30 days, which resulted in a reduction in available working capital for the company.

The problem this company's logistics professionals must grapple with is a common one. They struggle to collect the data needed at the corporate level so they can present it to the individual business units, allowing greater collaboration in consolidating spend with transportation carriers.

## **Lessons learned from best-in-class companies**

Companies can gain key insights into the steps they must take to achieve process improvements by looking at the best practices in transportation spend management of best-in-class organizations. The Aberdeen survey found nearly half of the "best-in-class" companies have focused on improving their ability to analyze and automate true freight spend. Top performing companies have come to recognize that visibility alone isn't sufficient, and as a result are putting in place processes to better utilize spend data and optimize activities



around sourcing and payment.

Successful management of transportation spend requires companies to organize their capabilities around a centralized platform capable of handling global complexity, including multi-lingual and multi-currency functionality. By having a global, centralized platform to collect and share data across regions, divisions and operating silos, provides logistics professionals with ammunition they need to evaluate the company's extended supply chain and analyze transportation spend management data.

The Aberdeen study revealed that best-in-class companies consistently employ practices such as the automation of data collection and analysis on freight spend; collaboration and synchronization of data with carriers, suppliers and trading partners; and the tying of transportation, carrier selection, audit and payment into a single process.

### **Integrated freight processing: Automating the entire supply chain process**

Companies looking to implement the best practices of best-in-class organizations can avail themselves of today's cutting-edge freight processing tools. Highly specialized solutions, such as Citi® Integrated Freight Processing (CIFP), simplify the audit, approval and payment of freight-related expenses by automating the entire supply chain process.

Using advanced solutions such as CIFP, buyers can make what has traditionally been a highly complex freight and transportation invoice and payment process, into something far more manageable. In the case of CIFP, the solution leverages Citi's global supply chain network, which allows a company's carriers to submit invoices electronically to the bank via a secure,

online portal, at which time the system automatically conducts a prepayment audit to match pricing and other required fields to the carrier's invoice. By automating audits, time consuming, manual processes are eliminated, which in turn speeds up payments.

Once a pricing match is established, payment is then initiated by the bank and the carrier is paid electronically. However, if the pricing does not match, both buyer and seller are notified of the dispute, after which they can negotiate a resolution entirely online. To ensure corporate policies are enforced and regulatory compliance is met, audits are accompanied by a full audit trail.

Solutions such as this enable a company to authorize immediate payment to its carriers, while receiving a single, monthly bill that consolidates all freight expenses regardless of the carrier or mode of transportation. As a result, all freight transactions are consolidated into a single process across all payment methods and currencies, which enable companies to extend their Days Payable Outstanding (DPO) to the same period each month, offering important working capital advantages.

On the carrier side of the equation, an automated freight processing tool speeds invoice payment causing Days Sales Outstanding (DSO) to be greatly reduced to as little as four days after approval. For the carrier, the risk of short pay is all but eliminated since invoice discrepancies are negotiated online prior to payment approval. This type of reliable, predictable payment schedule also has the effect of strengthening the relationship between shipper and carrier.

An integrated freight processing solution can be a game changer. Accounting is streamlined with automated expense postings and alloca-

tions down to the line item without the need for manual intervention. Costs associated with billing errors, collections, late payments and account reconciliation are reduced. Ultimately, with enhanced visibility into expenses and improved collaboration between shipper and carrier, logistics professionals have more control over freight spend, which can only benefit the bottom line.

### **Delivering a more interactive supply chain**

Freight processing solutions enable logistics professionals to aggregate data at the corporate level, which can facilitate improved carrier management and more cost-effective contract terms. In many cases, the savings can be between two and five percent of a company's transportation budget.

As companies consider freight processing solutions, it is important to pick the right banking partner, in order to ensure the greatest success. With one of the largest trade networks in the world, Citi is uniquely equipped to meet clients' end-to-end needs globally. The CIFP solution is a specialized component of the bank's broader suite of working capital supply chain management solutions, helping to address the complex requirements related to managing transportation payments.

In today's challenging business environment, freight processing solutions can deliver a truly interactive supply chain, while allowing a company to dramatically improve its ability to manage working capital.

---

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To the beauty retailer, the key has always been client satisfaction. “We want to delight our client,” says Martin Flaherty, vice president of logistics for Sephora. “At the same time, we’re also looking at improving profitability, adaptability, and velocity. We want to align our resources to drive success across the enterprise.”

In the span of about 14 weeks, the project team built a model of the new distribution network, tested different scenarios using the latest

Determining the best strategy required a systematic approach, the analysis of mountains of data using the latest database and network optimization software.

software, and put together the best solution: a two-facility network with the existing DC in Belcamp and the selection of Salt Lake City as the optimal site for a second facility.

In June of 2008, Sephora opened its second DC in Salt Lake City, Utah, which has not only relieved the capacity in Belcamp, but also increased its customer service capability by being physically closer to its clients in the western half of the country, reducing its cost per unit shipped.

Over the next few pages we’ll dive into the best practices and tools that Sephora put to work to transition to a two-facility distribution network that would shrink its order cycle time, getting products to stores quicker and reducing stock-outs.

### Drawing up the plan

Determining the best strategy required a systematic approach, the analysis of mountains of data using the latest database and network optimization software, the input of experienced team members with first-hand knowledge of the business and its future trends, along with some good, old-fashioned due diligence.

And it all didn’t happen overnight. The first two months were geared towards building a baseline model that mimicked Sephora’s

current distribution network, followed by a few weeks of testing different logistics scenarios, culminating with a site-selection period of six months that winnowed the selection to the “perfect” site for the second DC. Here, the Sephora project team shares the steps to their success:

**1. Form an integrated team.** First, a project team was assembled. It was led by Flaherty and his internal logistics team and worked closely with St. Onge’s network study team led by Bryan Jensen, vice president for the consulting firm. Input from key personnel from finance, transportation, operations, information systems, and marketing departments was then periodically required to provide the data, establish assumptions, and provide direction for future trends.

**2. Understand business issues.** The entire team had to understand and agree on how Sephora did business. How did replenishment to stores work? What did the stores need in terms of service? Was there a dollar value associated with having a same day service time to its clients?

“Internal to the Sephora organization, we needed to make sure we got information, forward-looking expectations, and desires for the operation from the store managers,” explains Jensen. “That determines the boundaries in which the network analysis will examine how they might get their product to the marketplace.”

**3. Develop baseline model “as is network.”** Over a four-week period, the team collected data from different areas of the business. Some of this data included a year’s worth of transactional history for its direct-to-consumer (Sephora.com) business and its store business, inbound and outbound freight costs, warehouse operating costs, shipment volumes, and store locations. For most of the preliminary data analysis, St. Onge used SQL query tools that allow the users to manipulate massive data files.





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St. Onge then spent the next four weeks building a baseline model of the existing network. It used leading-edge software specific for distribution network optimization to bring all the above data and assumptions together. The goal was to validate the baseline model by replicating the current distribution network, applying the appropriate transportation costs and volumes, and comparing it against last year's actual historical costs. The costs determined by the model had to come within a very close one percent.

**4. Establish logistics objectives.** After the baseline model was validated, the team began to establish the objectives for the future network. According to Jensen, trying to nail down predictions for Sephora's future was the most challenging step. The team needed to understand not just the percentage growth in new stores per year, but where they were going to open these new stores as well as the plans for growth of their direct-to-consumer operation.

Would it geographically follow the store patterns and the store population throughout

The goal was to validate the baseline model by replicating the current distribution network, applying the appropriate transportation costs and volumes, and comparing it against last year's actual historical costs.

the country? Typically the standard is to look five years ahead, but Sephora also provided St. Onge with a 10-year outlook. "Clearly the further out you look the fuzzier your visions gets," says Jensen, "but at least you can understand directionally how things will trend beyond a normal five-year horizon. This can be important in a network analysis because implementing the solution can take considerable time."

**5. Identify logistics modeling scenarios.** Once growth projections and other future logistics requirements were entered into the model, the team then identified two main scenarios that they wanted to test. Scenario 1: What's the best East Coast site if Belcamp is

closed? Scenario 2: If Belcamp is fixed, what's our best second site?

For each scenario, the model was populated with statistical data regarding candidate locations. This data includes the average cost per square feet of a DC at that location and all the freight rates to and from that location. The model then rates the candidate sites and ranks them based on the cost to service.

**6. Model scenarios and evaluate.** With Scenario 1, the model was run with a clean slate to determine whether or not Belcamp was indeed the optimal site. It turned out that the absolute optimal location was just outside of Philadelphia on the New Jersey side of the Delaware River near Cherry Hill, which is only about 80 miles from Belcamp. "When you're that close you don't bother relocating for the amount of transportation costs that would actually be saved," says Jensen. Management then decided to extend Belcamp's lease.

In Scenario 2, with Belcamp fixed, the team then re-ran the model with an eye towards optimizing transportation, lead time, and expenses with a second site. "It put us in the general area of Nevada, New Mexico, Colorado, Arizona, and Utah," says Sephora's Flaherty. "From there, we reviewed a variety of secondary criteria: the demographics; the cost of doing business such as busi-

ness licenses, permits, tax credits, incentives from the state; and utility costs." In the end, Salt Lake and Reno were neck and neck.

**7. Prepare an implementation plan.** Over six months, Flaherty began the task of implementing this two-DC network solution, personally travelling to both areas, checking out different buildings, and weighing out strengths and weaknesses of each site.

"While both cities looked very promising, Salt Lake City not only optimized our transportation costs, but the local and state governments were very responsive and eager to work closely with us to ensure that our facility was brought online in the shortest amount of time



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possible,” says Flaherty. He adds how the Salt Lake City’s entire business community never wavered in its support to bring Sephora to the city along with the jobs that it offered the area residents.

### A network with benefits

It’s been three years and Sephora’s two-DC network has significantly improved its customer service cycle time. “Because I’m closer to my stores,” says Flaherty, “I could get replenishment faster, making it less likely to go out of stock on a particular item.” It has also achieved freight economies, while relieving capacity at the Belcamp DC.

Jensen points out another “priceless” advantage with the opening of this second DC. “When you have only one building, it’s a critical point

“Last year we purchased the largest beauty retailer in Brazil, and we have plans to expand Sephora into that country beginning in 2012”

—Martin Flaherty, vice president of logistics, Sephora

of failure if a fire or a flood devastates it,” says Jensen. “Having two facilities engenders a level of business continuity or additional redundancy to the network.”

And Sephora continues to grow. “Last year we purchased the largest beauty retailer in Brazil, and we have plans to expand Sephora into that country beginning in 2012,” says Flaherty. “Towards the end of this year, we will be expanding into Mexico.”

Ever vigilant, the logistics team has just completed another network study to determine the need for a third facility—and so the cycle continues.

*Maida Napolitano is an Editor at Large for the Supply Chain Group*

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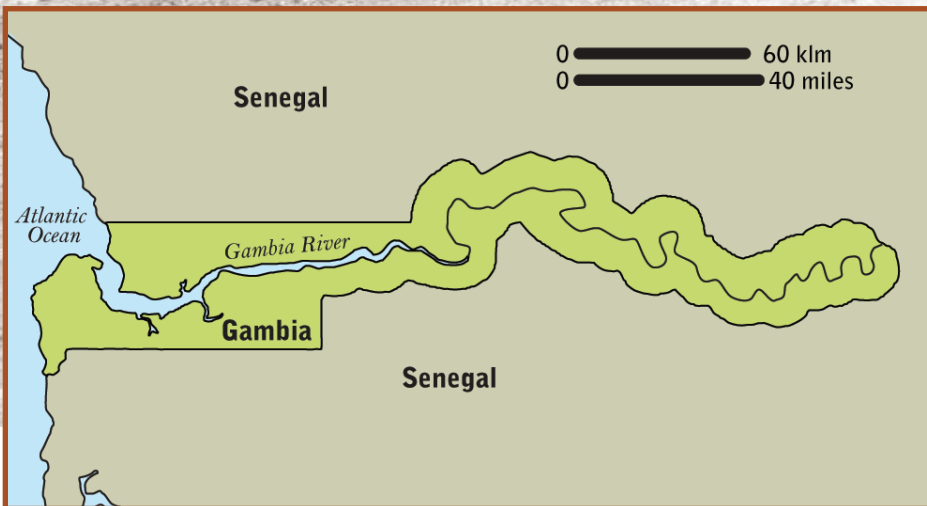
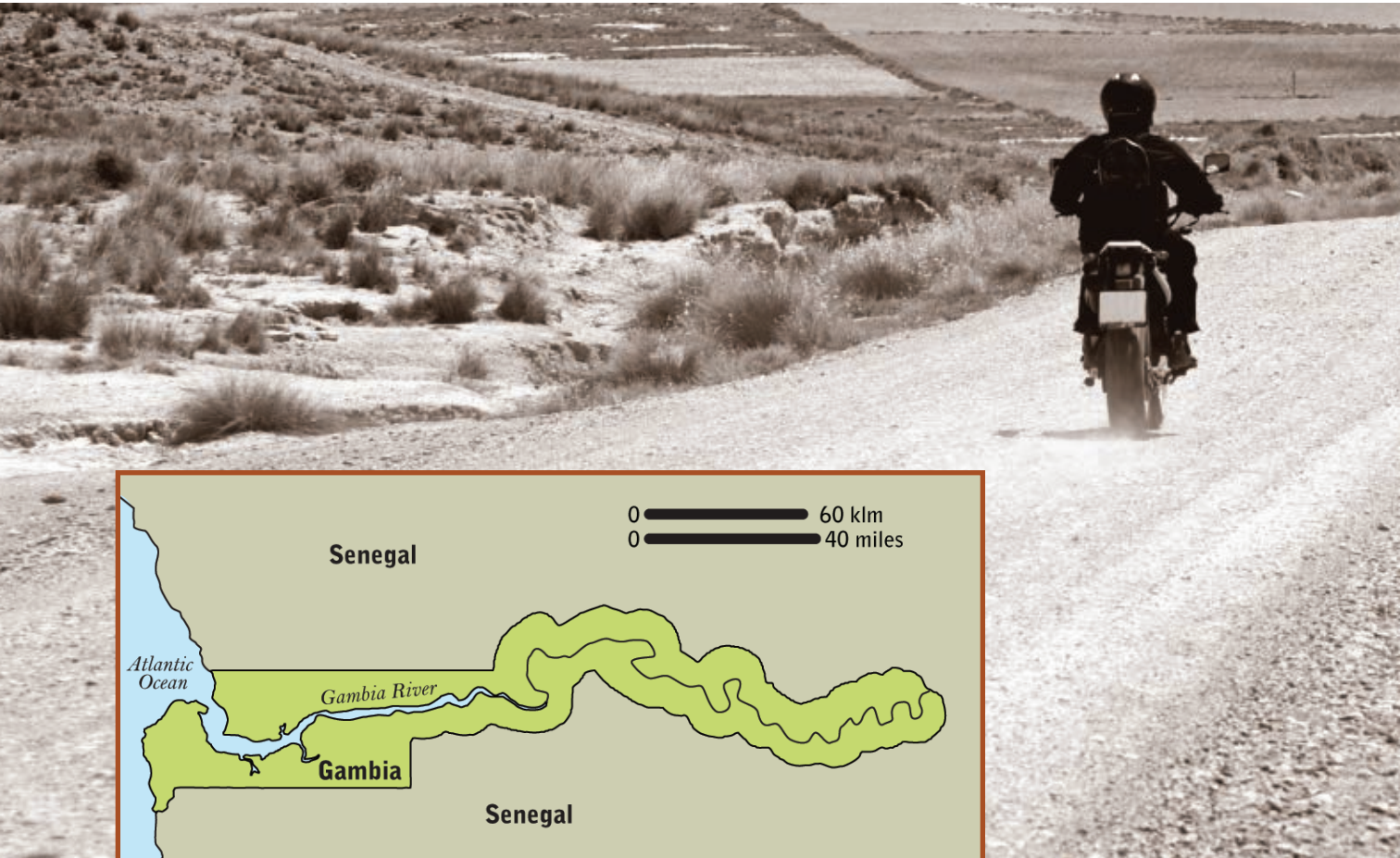
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**By Hau L. Lee, Sonali V. Rammohan,  
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**Managing logistics in developing countries presents real challenges—from poor roads and unreliable vehicles to less than ideal warehousing options. When public health is at stake, the logistics issues are even more worrisome. One social enterprise—Riders for Health—has married rugged motorcycle and vehicle fleets with innovative logistics systems to enable African health ministries to reliably deliver health care on a large scale.**





# INNOVATIVE LOGISTICS IN EXTREME CONDITIONS

## LESSONS FROM GAMBIA

**M**anyo Gibba, a health worker in Gambia in West Africa, recalls how she used to care for the 20,000 people in the 14 villages assigned to her. To get to the furthest village 20 kilometers away would take a full day on foot. “Many of the communities would not see me for a month or more,” she says.

A social enterprise called Riders for Health has transformed her work day. The organization provided her with a reliable motorcycle, taught her safe riding techniques, and showed her how to perform routine preventative maintenance. Now, she says, “My patients see me at least once a week.”

Riders for Health is a mid-sized non-profit organization based in the United Kingdom and operating in seven African nations. The organization focuses on fleet management of motorcycles and vehicles used to deliver health products and services in rural areas. The cornerstone of Riders’ approach is its “zero breakdown” technique. The approach has three elements: multi-faceted rider/driver training; regularly scheduled vehi-

cle maintenance; and local servicing of the vehicles. The overall objective is to operate fleets at the lowest possible cost for the longest possible time, even in difficult conditions.

In this article, we describe how Riders’ system incorporates the key elements of logistics—the coordination of materials, information, and financial flows—to improve the healthcare delivery supply chain. Our spotlight is on Riders’ experience in Gambia, where the non-profit has operated for more than 20 years. Over the years, Riders has produced several innovative operating models; the most comprehensive one to date, called Transport Asset Management, provides full fleet management services to the Gambia Ministry of Health.

The Socially and Environmentally Responsible Supply Chains Program at Stanford University’s Graduate School of Business is now conducting a long-term evaluation of Riders’ impact on logistics and health in Zambia. Lessons from the Riders stories are relevant not only to managers at non-profits; they represent logistics best practices that

can be useful for corporate logistics operations managers in emerging economies as well.

### **The Beginnings of the Riders Program**

In 1986, former British motorcycle racer Andrea Coleman was managing public relations for American motorcycle race champion Randy Mamola. Mamola wanted to lend his prestige to help raise funds for a children's cause in Africa. Andrea and her husband, Barry Coleman, formerly a motorcycling correspondent and feature writer for *The Guardian*, a UK newspaper, joined Mamola in raising funds through motorcycling events.

**The cornerstone of Riders' approach is its "zero breakdown" technique. The objective is to operate fleets at the lowest possible cost for the longest possible time, even in difficult conditions.**

The donations raised went to U.K.-based Save the Children, which used the funds to immunize children in Africa. Save the Children used some motorcycles to reach remote villages.

In 1988, Save the Children invited Mamola and the Colemans to witness how the money they had raised was helping a remote community in Somalia. Barry Coleman and Mamola made the visit and noticed that most of the health workers' motorcycles had broken down, making it impossible to reach people in many rural villages. In some cases, the motorcycles needed nothing more than a new spark plug. For want of simple maintenance and repairs, the two visitors realized, motorcycles were grounded and people sickened and died.

Soon after, Save the Children and the World Health Organization (WHO) asked Barry Coleman to visit Gambia to assess its fleet of 86 healthcare delivery motorcycles. Coleman found that a single Save the Children driver was keeping all the motorcycles in the easternmost province in some sort of working order, while the rest of the country's fleet was inoperable. Seeing the driver's work, says Coleman, "was a bit of an insight that a little action can go a long way." With that insight, Barry and Andrea Coleman began building Riders for Health in the late 1980s.

### **Healthcare and Logistics Challenges**

Typical of other African countries, only 19.3 percent of roads in Gambia are paved. Although major African cities

are increasingly being connected by paved roads, much of the population lives in remote communities that are accessible only by single-lane sand or dirt paths. In many African countries, only 20 percent to 30 percent of the rural population lives within two kilometers of a road. When health workers must travel over dirt roads and paths to reach patients, they face many challenges: potholes on the few paved roads that exist, bumpy, rugged dirt paths that can contribute to accidents, lack of fuel depots, muddy roads that are nearly impossible to traverse during rains, and many other issues. One Gambian health worker reported having to carry his motorcycle over his head to get through a flooded portion of a road during the rainy season.

While conducting research on Riders for Health in Zambia, our Stanford team learned about the logistical challenges that health workers face. At one health clinic, a worker reported having to walk four hours one way to reach patients in a remote village. He sometimes stumbles across an elephant on his journey, and has to run away quickly. Our own team uses motorcycles to collect data; one had a minor accident while trying to navigate the bumpy, sandy unpaved roads.

Poor road conditions are just one aspect of the logistics challenges in extreme conditions. Transportation networks—such as road and rail links—are often poorly developed or lacking; conveyances such as trucks and rail cars can be scarce. Coordination of materials flows often lacks the parallel flow of data needed to track goods and manage transactions. And the smooth and secure flow of money is at risk because, in many developing regions, banking systems are rudimentary and contract terms and conditions are difficult to uphold. It's often the case that the delivery of goods and services to underserved populations involves some combination of local government, international aid agencies, non-governmental organizations (NGOs), and other local operators.

Gambia faces additional logistics difficulties. One of Africa's smallest nations—it covers just 11,300 square kilometers—it has a unique geography. It is long and narrow, surrounded on three sides by Senegal and bordering the Atlantic Ocean on the fourth. The Gambia River flows east to west along its length. Of its population of almost 1.8 million people, 43 percent are estimated to live in rural areas.

Healthcare in Africa is also compromised. The standard of living in sub-Saharan Africa is far below that of almost

every other part of the world. Along with poor economic conditions, Africans have a much lower life expectancy. The average life expectancy for men and women is 53 years versus 78 in the United States. Among infectious diseases, HIV/AIDS, malaria, measles, pneumonia, tuberculosis, and dehydrating diarrhea are the most deadly. In 2007, 1.5 million Africans died from AIDS, 0.91 million succumbed to malaria and 0.45 million died of tuberculosis.

In Gambia, the healthcare centers in each of its six regions struggle against long odds. Healthcare workers are in short supply—as in much of Africa—and there are plenty of other bottlenecks in the “last mile” of delivering healthcare. Before the Riders program was introduced, vehicles and motorcycles broke down often and had short lives—the consequence of little or no maintenance training for staff. Additionally, it was tough to secure funding for vehicle purchase, spare parts, and fuel. It was not uncommon for a patient to be asked to pay for the fuel needed to take him or her to a hospital. According to one Gambian medical officer, sometimes medical personnel would pay for fuel out of their own pockets so that patients would not be left without transport.

### **Confronting the Challenges**

Barry and Andrea Coleman were keenly aware of these supply chain bottlenecks. They understood that viable solutions could draw the financial support of international organizations over the long term, but they knew that a self-sustaining model, where a client paid for ser-



**One Gambian health worker reported having to carry his motorcycle over his head to get through a flooded portion of a road during the rainy season.**

vices, was the ideal. Based on his findings from his visits to Somalia and Gambia in the 1980s, Barry Coleman designed and developed a program of motorcycle training and maintenance to ensure that African health organizations could utilize their vehicles over their estimated useful lives.

First, Riders introduced Interval Servicing (IS)—a program of regular scheduled vehicle maintenance that also incorporates driver and rider training. The client—in this case Gambia’s Ministry of Health—owned the vehicles, and paid on a per-service basis. However, IS did not incorporate fuel costs and therefore, when fuel ran out due to ministry budget problems, vehicles would be grounded.

To improve upon Interval Servicing, Riders developed another program, called Transport Resource Management (TRM). TRM was designed to work within the tough conditions and limited resources of many sub-Saharan African countries. Through routine inspection and the regular replacement of basic parts, significant damage could often be avoided. This program was launched in Zimbabwe in 1998 and Nigeria in 1999. TRM was launched in Gambia in 2002, and involved 44 vehicles and 41 motorcycles. TRM has a goal of zero breakdowns. The client (usually the country’s health ministry) owns the vehicles, and pays a cost-per-kilometer (cpk) fee to Riders. The fee covers maintenance and training, as with the IS program. But it also includes fuel costs and a vehicle replenishment fee so that Riders can build up funds to enable the client to purchase replacement vehicles once existing vehicles come to the end of their useful lives.

Traditionally, motorcycle fleets owned by African health organizations consist of a variety of makes and models, many of which are inappropriate for local terrain and conditions. In order to reduce the cost and complication of TRM, Riders emphasized the importance of standardizing vehicle fleets wherever possible, and recommended agricultural motorcycles. Agricultural-specification motorcycles were rugged and low-tech, making them well-suited for riding conditions in Africa. They had high mudguards, guards on the handlebars,

and a fully enclosed chain for greater protection against debris kicked up by the tires.

A central element of TRM was a rigorous maintenance program in which health workers were trained to do routine pre-ride checks every day to ensure that their motorcycles were fit for operation. The checklist included inspection of the tires, oil level, coolant level, the chain, brakes, and lights. They also made certain that nuts and bolts were tight, and they were trained to do a visual check, looking for signs of damage, excessive dirt or dust, and rocks and other debris lodged in the corners of engine, chain or tires. Once a month, a Riders-trained technician performed “outreach maintenance,” traveling to health centers to change parts that were at highest

risk from daily wear and tear.

Operations management is another critical aspect of Riders' TRM program. The program was run on a hub-and-spoke model within each country. In Gambia, the largest Riders workshop and office was based near the country's capital of Banjul. Spare parts were imported into the national office and then redistributed to smaller regional workshops. The purchases of motorcycles and spares, the inventory of parts, and the training of health workers and motorcycle mechanics were all centralized. Other processes, such as the actual replacement of parts and oil changes, are done in the field where the health care workers are based. Riders brought the maintenance parts to the workers rather than requiring them to take their motorcycles to a central office, thus maximizing the time that the workers could spend with patients.

Riders applied careful inventory management practices. Before the non-profit began work in Gambia, data on performance as well as vehicle status and usage were almost non-existent. Riders started tracking inventory usage and conducting audits of maintenance parts. It created maintenance schedules, and required health workers to complete trip reports. These data were tracked for three purposes: to ensure that maintenance is done at the right time, with the right parts being available; to enable calculation of cost-per-kilometer (cpk) and other payment measures; and to ensure appropriate vehicle use. By maintaining service records in a database on each motorcycle and gathering feedback from technicians in the field, Riders' logisticians had advance knowledge of the parts that would be required and could appropriately time inventory replenishment. Following its success in Gambia, Zimbabwe, and Nigeria, the TRM program was later replicated in Uganda, Lesotho, and several other African countries.

While TRM enabled strong materials and information flows, it was limited

with respect to financial flows: Gambia's Ministry of Health often depended on foreign aid to purchase new vehicles and motorcycles. There was clear motivation to keep vehicles and motorcycles running, even past their economically useful lives to avoid the need to find funding for new vehicles.

In 2005, Riders initiated discussions with the Ministry about an alternative fleet management system whereby Riders would lease vehicles to the government agency to avoid the complexities of owning assets. This program, called Transport Asset Management, or TAM, would improve the financial flows of the logistics system. TAM was launched in 2009 as an add-on to the existing IS program that was running at the time (the TRM program ended in 2005 with the completion of a World Bank-funded program). In 2010, the TAM fleet travelled more than 2.4 million kilometers. (Exhibit 1 compares the various transportation programs that have been implemented.)

Transport Asset Management would work much like TRM, except that Riders would own the fleet. The

EXHIBIT 1

Comparison of Transportation Models

	Unmanaged: Without Riders for Health Program	Interval Service	Transport Resource Management	Transport Asset Management
<b>Worker/Driver Training</b>	None	Inconsistent	Strong	Strong
<b>Fuel Availability</b>	Inconsistent	Inconsistent	Strong	Strong
<b>Spare Parts Availability</b>	Inconsistent and questionable quality	Inconsistent	Strong	Strongest (parts are standardized)
<b>Misuse of Vehicles</b>	High	High	Low	Lowest
<b>Vehicle Resale Value</b>	Lowest	Low	Moderate	Highest
<b>Vehicle Useful Life</b>	Low	Medium	High	High
<b>Km/Year</b>	High	High	Medium	Low
<b>Cost Control</b>	Weak	Weak	Strong	Strongest
<b>Payment Scheme</b>	Self-funded by government or government pays a private organization per service	Per-service and per-training payment to Riders	Cpk payment to Riders	Same cpk components as TRM, plus loan principal and interest
<b>Vehicle Liability</b>	Client	Client	Client	Riders for Health

Source: Riders for Health, 2010



EXHIBIT 2

Costs Included in Riders' Charges			
	Interval Servicing	TRM	TAM
Interventions (Parts and Lubricants)	●	●	●
Training		●	●
Fuel		●	●
Direct Staff (Technical Staff and Drivers)	●	●	●
Direct Management (Gambia Management Staff)	●	●	●
Insurance		●	●
Logistics		●	●
Vehicle Purchase Cost			●
Vehicle Loan Interest Cost			●

Source: Riders for Health, 2010

the entire replacement fleet outright without having to take out another loan. This is the point at which TAM will be able to run without capital support.

**Results to Date**

The Riders for Health program has been pivotal in enabling Gambia to become the first country in Africa that can fully provide all of its citizens with access to healthcare.

In 2005, an independent consultancy developed a due diligence report on Riders for Health's Transport Resource Management activities in Africa. The study found that in Gambia, annual motorcycle fleet maintenance costs per thousand people reached by health workers were 24 percent lower with Riders when compared with the costs of an unmanaged system. Cost estimates were based largely on the fact that health workers were able to reach more patients and therefore achieve better leverage from their resources. Further, health workers in Riders' TRM program were better able to make repeat visits to

Ministry's challenge was to find adequate upfront funds for a large fleet purchase. Negotiations began with the Skoll Foundation to provide an innovative credit guaranty that enabled Nigerian Guaranty Trust (GT) Bank to lend Riders US\$2.2 million to purchase the TAM vehicle fleet.

Riders realized that leasing had several benefits: The fleet and its spare parts could become standardized, and Riders would have better control over assets it owned. And the Ministry no longer had to worry about needing large sums funding every time a vehicle broke down. Instead, they paid a cpk that is now built into the costs of fleet ownership. (Exhibit 2 shows the costs included in Riders' charges under the different models.)

Financial flows should improve with the Transport Asset Management program. Riders expects that, in a few years, the second round of the TAM loan will be half the size of that in the first round. This is because the cpk also includes a replenishment fee that, over time, will enable the purchase of new vehicles outright. Five years from the start of the TAM program, the fund will have saved up about half of the total purchase cost of the TAM fleet needed. That half-size loan will still, in GT Bank's opinion, require a credit enhancement. However, for the third-generation fleet—expected to be acquired by 2019—Gambia should have the funds to purchase

patients, enabling better long-term care.

The Transport Asset Management program has achieved similar gains. Riders' own data on TAM show that 32 percent of health centers are now scheduling more outreach clinics, and that the number of outreach clinics cancelled has been reduced by 63 percent. The ongoing Stanford evaluation study should provide rigorous data on Riders' impact in the future.

In fleet management, the standard measure of cost-effectiveness of a vehicle is its cost per kilometer. Under the TAM program in Gambia, Riders charges \$0.241/km for motorcycles, \$0.807 for ambulances, and \$0.703 for outreach vehicles (ambulances and vehicles include driver costs). By contrast, in Zambia, one unmanaged motorcycle that cost \$3,000 to purchase broke down beyond repair after only 3,000 kilometers, which is not uncommon. Accounting for fuel and other elements, this motorcycle's cpk was, in effect, more than \$1.00 per kilometer. Based on Riders' experience, unmanaged motorcycles last only an average of eight months before having a major breakdown; most unmanaged vehicles last 12-15 months before break-down.

The same principles apply to other vehicles. To demonstrate the potential difference in costs, Riders has plotted the cumulative costs of running a Toyota Land Cruiser under a managed system vs. an unmanaged system. (See Exhibit 3.) The non-profit conservatively assumes that the

unmanaged vehicle does not break down for the first two years, and that the vehicle has not reached the end of its useful life during the six-year period.

### Logistics Lessons Learned

Logistics innovations such as those introduced by Riders for Health have made a significant difference to sustainable healthcare delivery in Gambia. The Riders case highlights approaches that hold promise for practitioners in healthcare and in other sectors in the many environments where logistics are especially challenging.

## What Riders has been able to achieve in Gambia can serve as a lesson for both business and non-profit logistics operations in emerging economies.

Using standard best practices can improve logistics efficiencies in extreme conditions:

- **Standardize where possible to lower complexity.** Encouraging health ministries to use only a few motorcycle models has made it easier to develop processes for riding instruction and mechanical maintenance. Standardization also brings economies of scale in the procurement of replacement parts. Further, it allows for better risk management of equipment; there is less need for safety stock of spare parts; when a spare is required, there is greater available inventory because all equipment shares the same parts. When maintenance is required on equipment, there is better availability of trained staff, and if equipment needs to be swapped

out, there is no need for new training by the end user. Southwest Airlines is an example of a company that applies the practice of standardization to the procurement and servicing of its airline fleet.

- **Use hub-and-spoke distribution for remote settings.** The benefits of a hub-and-spoke set-up are centralized information, economies of scale and risk pooling at the hub, along with decentralized control, responsiveness, and flexibility at the spoke.

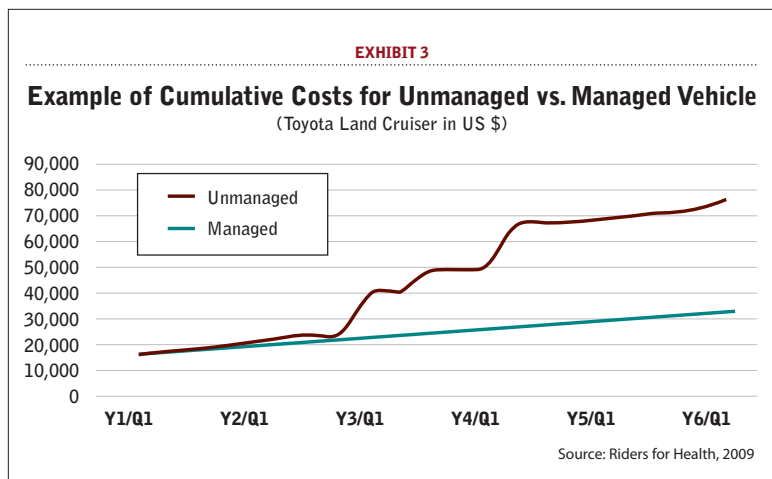
- **Outsource important but non-core operations to local experts.** Riders acted as a third-party logistics provider, which, if used properly, can be a huge benefit to the supply chain logistics of a service organization. Effectively, Riders shares the aims of the client, and can take care of critical logistics that are outside the expertise of the health ministries, freeing the ministries to focus on delivering

patient care.

- **Emphasize preventative maintenance because it is cheaper in the long term than repairing a failure.** In the short term, spending on preventative maintenance may seem more expensive than doing nothing, but it avoids the large spending typically involved with replacing expensive parts or an entire vehicle that died prematurely. And in cases where failure shuts down the delivery of a service such as healthcare, the costs can be incalculable.

- **Measure your performance in order to make informed decisions.** In Gambia, Riders collected some performance data that helped the organization showcase its impact. Having data like this has enabled Riders to gain support from other clients and expand its programs in Africa. But the performance measures used to date have not been comprehensive. Having data on cost-effectiveness, for example—which the Stanford evaluation study will collect—should help Riders make informed decisions on how best to allocate its resources in the future.

Poor transport networks and lack of economic resources mean it is not always possible to apply standard best practices; it will be important to develop a new set of best practices to coordinate material, information, and financial flows. The Riders



case points to a few innovative practices that show promise:

- **Don't underestimate simple solutions; they can significantly improve logistics operations.** In developed economies, supply chain managers focus on devising and implementing innovative technologies and processes in order to gain competitive advantage. In extreme conditions, organizations are often starting from little or nothing. Hence, the introduction of simple solutions, like a basic personal computer database or easy-to-maintain motorcycle, can significantly improve logistics operations. And, in some instances, the introduction of sophisticated solutions would not improve logistics operations due to limitations in current IT networks, local power grids, worker skill levels, and other factors.

- **Think (and act) long-term.** Because material, information, and financial flows are often poorly coordinated and inefficient in extreme conditions, the only way to quickly improve them is for an outside organization to provide a basic IT system and financial resources. But this outsourcing approach can put the long-term sustainability of logistics operations at risk if the partner does not develop the local infrastructure. For example, the outside organization may not provide a continuous financial flow—for example, a self-sustaining revenue model. Or the transportation mode used to improve material flows may be too expensive to maintain once an outside organization pulls out.

The development of local infrastructure can take years because it often requires creating partnerships between diverse organizations, building the logistics skills and knowledge of local workers, and potentially enhancing a market for a product or service. A longer-term approach may mean giving up some speed in the early phases of developing operations in order to create a more efficient and lasting logistics system.

- **Build substantive partnerships with a diverse set of stakeholders to improve financial flows and ensure long-term viability.** Adopting a long-term approach will require managers to develop substantive partnerships with different groups than they may be accustomed to working with. This is likely to include a mix of local non-profits, donors, government organizations, and corporations. Developing and managing such partnership networks isn't easy. The goals of each partner may be different, requiring managers to think about how to structure the right incentives to provide a win for

## The Riders for Health program has been pivotal in enabling Gambia to become the first country in Africa that can fully provide all of its citizens with access to healthcare.

each stakeholder. The more diverse the stakeholders, the harder this is to achieve.

While managing logistics can be quite different in extreme environments, it can work when combining standard best practices with more tailored approaches. Regardless of the practices used, logistics managers must be prepared to have a long-term mindset when developing a system, and they should embrace the opportunities to develop strong partnerships with stakeholders they may not have had experience working with. What Riders has been able to achieve in Gambia can serve as a lesson for both business and non-profit logistics operations in emerging economies. ☺☺

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A. Total no. copies (net press run)	15,575	14,505
B. Legitimate paid and/or requested distribution (by mail or outside the mail)		
1. Outside County paid/requested mail subscriptions stated on PS Form 3541	14,355	13,062
2. In-County paid/requested mail subscriptions stated on PS Form 3541	None	None
3. Sales through dealers and carriers, street vendors, counter sales and other paid or requested distribution outside USPS	211	264
4. Requested copies distributed by other mail classes through the USPS	None	None
C. Total paid and/or requested circulation	14,566	13,326
D. Nonrequested distribution (by mail and outside the mail)		
1. Outside County nonrequested copies stated on PS Form 3541	340	395
2. In-County nonrequested copies stated on PS Form 3541	None	None
3. Nonrequested copies distributed through the USPS by other classes of mail	None	None
4. Nonrequested copies distributed outside the mail	393	300
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G. Copies not distributed	276	484
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Digital Circulation	544	1,765
Total Circulation	16,119	16,270

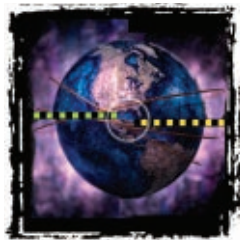
Charles Tanner (signed), Director of Audience Marketing, 9/14/11



# Driving Spend Management through Advanced Analytics

***Companies that have been successful in implementing a spend management process have done so by building a sophisticated analytical approach into their procurement and sourcing functions.***

**By Amy Still, Stacy Rhone, and Debra Rosenbaum**



Amy Still is Senior Analytics Manager, Stacy Rhone is Analytics Associate, and Debra Rosenbaum is a Director all at A.T. Kearney Procurement & Analytics Solutions. They can be reached through [amy.still@atkearney.com](mailto:amy.still@atkearney.com).

The current difficult and fickle economic landscape has served as a catalyst for companies across the globe to cut costs. One of the first steps toward this objective is a detailed

look at spending to determine how short-term and, hopefully, long-term, sustainable savings can be achieved. Similar to personal budgeting, companies examine how much, where, and with whom they are spending money to identify potential opportunities to reduce expenditures. To better understand their spend data, companies have discovered that an effective spend management process/system is critical.

This assessment is neither new nor surprising. Organizations have been working toward improved spend visibility for decades. Those that have been successful in implementing a spend management process have done so by building a sophisticated analytical approach into their procurement and sourcing functions. Analytics has now become one of the key competencies that differentiate leading procurement organizations from followers. Leveraging it to gain complete insight into spend has been a game changer for procurement. This skill is quickly becoming a prerequisite for procurement professionals as indicated by the results of A.T. Kearney's 2011 Assessment of Excellence in Procurement (AEP) Study. Participants in the study reported an average increase of 30 percent in spend analytics skills over the prior three years. (For more on this study,

see the article in this issue "Follow the Leaders: Seven Ways to Procurement Excellence.")

So the questions become, how can companies achieve optimal spend visibility? What does "good" spend visibility look like? How does analytics play into this? In order to address these questions, one must first examine the current state of spend management in most companies.

## Spend Management Current State

Though companies have identified spend management as an enabler for driving cost savings, many have yet to fully implement a spend management process that would provide them with improved "spend visibility" to identify potential opportunities to reduce expenditures and improve contract compliance. More than 80 percent of all AEP 2011 participants report that spend visibility is a moderate or major contributor to value creation—by far the largest contributor to value creation of all other process capabilities surveyed.

So where does the problem lie? The primary information source supporting many current spend management processes is some type of spend database that provides a consolidated view of the company's historical external payment data. More often than not, decision makers lack confidence in their spend data due to the manual nature of consolidation and cleansing. Multiple systems, dissimilar data architectures, ad hoc extract processes, and multiple data owners create a data landscape that is difficult to manage and analyze. Furthermore, lack of visibility and availability resulting from

a decentralized external payment landscape renders many companies powerless over their spend data.

Many different factors drive this decentralized data landscape:

- Purchasing platforms may not be integrated with payable systems, so visibility into purchase order details are not easily combined with accurate accounts payable information.

- Companies that have grown through mergers and acquisitions often maintain multiple payable systems, creating an accounting challenge even before attempting to integrate purchase details.

- Maverick spend transacted through purchase cards, wire transfers, or transportation management systems contributes complexity through the proliferation of additional platforms.

This lack of spend visibility makes companies more vulnerable to financial and operational risks, forcing them into a reactive state. Without real-time access to purchase information, contract non-compliance is difficult to identify and remedy. Lack of historical data may also negatively impact an organization's ability to develop cogent category strategies that are fact-based and to incorporate advanced sourcing techniques.

## What the Leaders Do

The leaders address these issues through an optimal spend management approach called Closed Loop Spend Management (CLSM). It consists of a centralized spend database connected to the company's purchasing, contract compliance, and performance tracking systems. CLSM encompasses the entire procurement value chain from initial sourcing and supplier selection through order and receipt, and then completing the loop with contract compliance and performance management. Within the CLSM system is a real-time centralized view of what is being purchased, from whom and at what price, and the associated contract terms, including compliance to contract terms (service level agreements, payment terms, joint process improvement initiatives, and so forth). An integrated spend management strategy combined with an appropriate level of technology investment enables the realization of greater benefit by supporting synergies throughout the procurement process.

Leveraging the visibility that a CLSM system provides, companies can repurpose efforts from manual data manipulation to higher value-add analytics. Manual processes such as tracking contract compliance by comparing information in the accounts payable and purchase order systems with paper contracts, or contracts that are not centrally stored, will no longer be required. This time can be refocused on any number of strategic activities such as

category management, supplier relationship management, and advanced analytics that will drive significant value to the bottom line.

## Moving in an Analytical Direction

An internal spend management process supports the transformation of the procurement group from a tactical to a strategic function. With that transformation, procurement is viewed as a value-creating organization by enabling faster access to better data that can be leveraged in the development of both category and sourcing strategies.

As noted previously, companies are beginning to understand the value of analytics and are investing to develop this capability. The AEP study identified that while a majority of participants keep responsibility for executing the spend analysis process with category and sourcing managers, companies are increasingly building internal business intelligence and analytics-focused teams to manage and leverage their ever-growing data volumes and develop swift, meaningful insights.

Procurement functions are also moving in this direction. Yet because they have historically not required advanced analytical and technical skills, this is often a capability gap which needs to be filled. It is essential to either augment existing groups with a dedicated analytical team, or re-evaluate the current job descriptions to equip resources with the requisite tools to enable analytical flexibility.

## Analytics and Procurement: The Next Evolution

With data growing at an exponential rate and spend management becoming increasingly complex, there are additional analytical levers that need to be activated in the procurement process. Ensuring that analytical resources are available to meet these demands is essential not only to the spend data management process, but to the entire procurement function. As the 2011 AEP report noted, "Looking ahead, performance tracking tools, business intelligence and analytics will have the most impact on procurement organizations."

The meaningful and insightful analysis garnered from data accessibility will result in exponential benefits and provide a means to showcase, as well as measure, procurement's performance. More importantly, quantifying these benefits in a way that resonates across the executive suite also will increase the strategic importance of the procurement function. Dashboards showing high-level views of current and historical trends will effectively highlight progress as well as areas for improvement to executives. Once leadership teams have visibility into the data, they will want to ensure that all insights are useful and actionable. These benefits elevate internal analytic capabilities from an afterthought to a core competency.

## Leaders Show Power of Reverse Logistics

***Best-practice companies take a structured approach to reverse logistics that pays off in terms of operations, customer service, and ultimately financial performance.***



**By Becky Partida,**  
Knowledge  
Specialist-Supply  
Chain Management,  
APQC

Reverse logistics is often considered a process that has little effect on the enterprise as a whole. Yet evolving financial, competitive, and customer pressures as well as increasingly complex environmental regulations make clear that, for an organization to meet its goals and increase profitability, it must formalize an efficient reverse logistics process.

Reverse logistics focuses on the movement and management of products returned by the customer for repair or credit. This involves authorizing the return, performing salvage activities, and managing and processing warranty claims. According to APQC's Open Standards Benchmarking in logistics, 70 percent of responding organizations have established formal returns management practices (Exhibit 1). Nearly one-third of responding organizations have no formal returns management process at all.

Most responding organizations with formal returns management practices indicate that these practices are effective to some degree (see Exhibit 2). However, 11 percent of respondents indicate that their formal returns management practices are not effective.

What guidance can organizations with extremely effective returns management processes provide to organizations with ineffective (or no) returns management practices? APQC conducted a Collaborative Benchmarking study to identify organizations that have designed and implemented efficient reverse logistics programs.

The study identified four best-practice organizations:

- Carolina Logistics Services Inc. (CLS), a third-party logistics provider.
- GENCO Distribution Systems Inc., a third-party logistics provider.
- McKesson Corporation (Pharmaceutical Distribution—McKesson Supply Solutions).
- Raytheon Aircraft Company (RAPID—Raytheon Aircraft Parts Inventory and Distribution).

The backbone of these organizations' reverse logistics programs is support from senior leadership and organization-wide involvement in reverse logistics initiatives. APQC identified 12 key practices from these organizations and arranged them in four categories: reverse logistics strategy and design; physical reverse channel and information flow; enabling processes and operating systems; and measurement, results, and continuous improvement.

### 1. Strategy and Design

APQC identified four practices related to reverse logistics strategy and design: developing awareness among senior leadership of the importance of reverse logistics; obtaining support from senior leadership with additional support by cross-functional teams; using reason codes to identify sources of product returns; and having a disposition strategy that is an integral part of the overall reverse logistics strategy.

The best-practice organizations in APQC's study indicate that their leadership appreciates the importance of reverse logistics. Being in the pharmaceutical industry presents unique challenges for McKesson in that financial losses can be incurred through mistakes in the



ordering, forward logistics, and product rotation processes. McKesson's reverse logistics strategy is therefore tied to an organization-wide goal of increasing profitability. The potential for reverse logistics to generate new value-recovery opportunities has led McKesson's leadership to recognize the value that the process provides the organization.

All four best-practice organizations supplement the senior management support with cross-functional teams. Within the four organizations, the following functions are involved in the reverse logistics process and often have members on the cross-functional teams:

- procurement;
- manufacturing;
- finance and accounting;
- sales and marketing; and
- customer service.

The members of McKesson's cross-functional teams educate other departments on how they benefit from the reverse logistics program. This helps employees see themselves as stakeholders in the reverse logistics process.

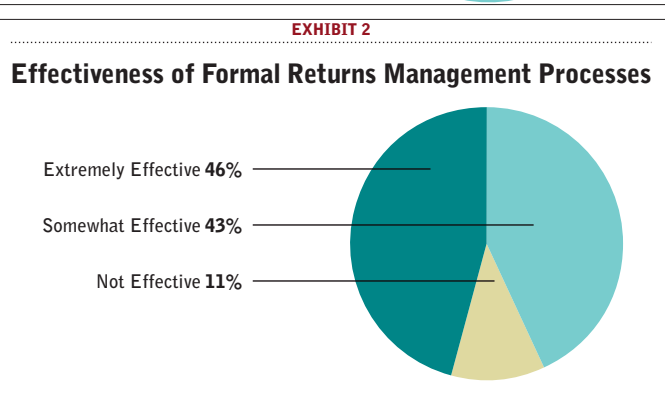
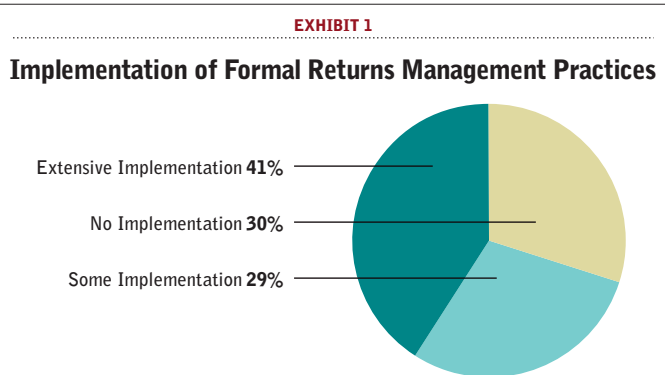
The study also found that the best-practice organizations use standardized reason codes to identify and solve problems that lead to product returns. Codes are tracked and reported to process owners who take appropriate action. For one client, CLS creates defect trees that summarize returns of products originating from specific plants. The client is then able to pinpoint problems at individual plants and take action.

The best-practice organizations have also established formal disposition strategies closely tied to broader reverse logistics strategies. A detailed set of disposition rules can improve an organization's asset recovery and reduce its inventory, which in turn reduces inventory-carrying costs and labor costs associated with product storage. Both GENCO and CLS have established virtual marketplaces that allow their clients to quickly dispose of returned products by selling them to external customers.

## 2. Physical Reverse Channel and Information Flow

APQC identified three best practices related to establishing a physical reverse channel and information flow: understanding cost in order to establish a physical reverse channel; setting accountability for returns and returns policy; and collaborating with supply chain partners.

Identifying where costs lie and the effect that certain processes have on reverse logistics results enables organizations to determine the best physical network for an efficient and cost-effective flow of returns. The best-practice organizations use cross-functional process mapping and assessments of actual process performance to design their



reverse logistics networks. For its clients, GENCO uses organizational throughput information and origin points of potential returns to identify network locations. It then considers real estate costs, transportation costs, customer locations, and area labor costs and availability to further narrow down locations. The resulting network provides an effective flow that is tailored to the client.

The organizations in APQC's study also recognize the need for clear accountability for product returns and returns policy. The best-practice organizations place ultimate accountability for returns management at the executive level. At McKesson, responsibility for the execution of return policies and processes lies with a vice president of operations at the field level. The organization also has a full-time distribution center-level employee responsible for reverse logistics. Prior to the establishment of this position, employees were unsure of whom to contact regarding returns issues, resulting in loss of productivity and opportunities to maximize return asset value.

Collaboration with supply chain partners helps organizations avoid unnecessary product returns, solve problems, and maximize asset recovery—this ultimately leads to improved profitability. McKesson's reverse logistics group works with multiple reverse distributors to establish returns programs catered to specific types of customers (e.g., retail, institutional, and government).

### 3. Processes and Operating Systems

Three best practices related to enabling processes and operating systems were identified in APQC's study: integrating reverse logistics systems and processes with those of supply chain partners; establishing visibility of returns information throughout the reverse channel; and eliminating silo activities.

The best-practice organizations have integrated their reverse logistics systems and processes with those of their supply chain partners, allowing them to establish returns management initiatives that benefit all stakeholders. Traditional reverse logistics operations blindly manage the processing of returned products because they focus on warehouse activities that take a reactive (rather than proactive) stance toward returns. Both CLS and GENCO have Web-based systems for their clients that provide organization-wide visibility of the reverse supply chain. These

## The practices of the four best-practice organizations highlight the importance of obtaining support for reverse logistics initiatives from senior leadership and the importance of making the entire workforce stakeholders

systems allow their clients' warehouses to be prepared for returns, which results in more efficient use of labor.

The organizations report having standardized processes in place organization-wide to support reverse logistics initiatives and eliminate silo activities. McKesson was motivated to adopt this strategy through experience with its previously segregated organizational structure. This prior structure resulted in problems when individual units established conflicting goals and objectives. McKesson now aligns department goals with enterprise goals regarding reverse logistics so that departments remain focused on the standardized processes.

### 4. Measurement, Results, Continuous Improvement

APQC's study yielded two best practices regarding measurement, results, and continuous improvement: establishing targeted and visible key performance indicators (KPIs), and aiming for continuous, sustainable improvement.

To ensure the success of their reverse logistics initiatives, the best-practice organizations tie KPIs to enterprise goals. The data for these indicators is visible to the entire organization, continuously assessed, and upgraded as

needed. APQC has identified logistics KPIs for its Open Standards Benchmarking assessments. KPIs that can apply to an organization's reverse logistics program include:

- Total cost of the process "plan inbound material flow" per \$1,000 in revenue.
- Inventory carrying cost as a percentage of average annual inventory value.
- Return processing cycle time in days.

CLS provides its clients with a system tool to monitor the performance of their reverse logistics processes. The tool provides illustrations of daily performance and other data so that the clients can quickly and easily track KPIs.

All of the best-practice organizations indicate that their reverse logistics activities are effective or extremely effective in reaching their goals. The organizations indicate that standardized processes, innovative practices, and changed or improved practices/processes contribute most toward reaching enterprise goals.

The organizations also recognize the importance of maintaining training, feedback, and incentives programs throughout the enterprise to ensure continuous and sustainable improvement of their reverse logistics programs. CLS focuses on training and motivating quality-minded employees. Employee performance data is used to determine employee feedback, compensation, and incentives. By establishing a culture focused on quality, the organization reduces costs and improves reverse operations for its clients.

### Real-world Roadmap

APQC's Collaborative Benchmarking study on reverse logistics took a close look at a diverse group of organizations to determine key practices across industries. The practices of the four best-practice organizations highlight the importance of obtaining support for reverse logistics initiatives from senior leadership and the importance of making the entire workforce stakeholders in the reverse logistics process. The examples in APQC's study provide real-world strategies for organizations that have yet to implement a formal returns management process or do not consider their returns management process to be effective.

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