

SUPPLY CHAIN

MANAGEMENT REVIEW[®]

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Climbing the Ladder



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*FreightWatch International, Supply Chain Intelligence Center: Annual Cargo Theft Report 2014.

It's Your Career: Make the Most of it

When it comes to career development, supply chain managers have to execute a bit of jiu jitsu. They're charged with finding and developing the next generation of talent while simultaneously advancing their own careers in a field that is often overlooked by senior management. The biggest challenge of all is getting their agenda in front of the Board at a time when supply chain operations are more critical than ever to an organization's success, but still largely invisible compared to sales, marketing, and product development.

This month's contributors to *SCMR* examine the career development moves you may want to consider from four different angles. First, Mary Holcomb, Allan Krul, and Douglas Thomas present ideas on how business and academia can work together to prepare today's students for the roles they will play in tomorrow's supply chains. Next up, Andrew Stein, a Caterpillar manager, details how to mentor young executives in the soft skills that are so important to getting along—and moving up—in today's collaborative work place. For readers focused on advancing their own career, Brian J. Gibson, Sean P. Goffnett, and Zac Williams tell us that it's a DIY world at most companies; they map out three routes to help you navigate your way to the top of the supply chain profession. And, Kai Hoberg, Knut Alicke, and Markus Leopoldseder lay out the steps that supply chain leaders need to take to get their agendas in front of the Board.

Of course, that's not all. As companies focus on the perfect order, meeting aggressive order cut off times, providing next day—and even same day—delivery options, and grapple with heightened customer expectations, the quality of supply chain processes is as important as the execution. Manu K. Vora offer steps any organization can follow to improve the performance and



Bob Trebilcock,
Editorial Director
btrebilcock@
peerlessmedia.com

quality of its supply chain based on research from the American Society for Quality and the U.S. Baldrige Performance Excellence Program.

Finally, what will the warehouse of the future look like? That's a question I posed to Jack Allen, senior director of logistics and manufacturing solutions for Cisco, for a special Web extra for subscribers of *scmr.com*. As a supply chain leader at one of the companies investing heavily in the Internet of Everything, I think you'll find Allen's views on the role of automation and information in the future intriguing.

Remember: It's your career—and your supply chain. We hope this month's issue will help you make the most of both.

Bob Trebilcock

SUPPLYCHAIN MANAGEMENT REVIEW

EDITORIAL OFFICES
111 SPEEN ST. (SUITE 200),
FRAMINGHAM, MA 01701-2000
1-800-375-8015

Bob Trebilcock
EDITORIAL DIRECTOR
btrebilcock@peerlessmedia.com

Frank Quinn
EDITORIAL ADVISOR

Patrick Burnson
EXECUTIVE EDITOR
pburnson@peerlessmedia.com

Sarah Petrie
MANAGING EDITOR
spetrie@peerlessmedia.com

Mike Roach
CREATIVE DIRECTOR
mroach@peerlessmedia.com

Wendy DelCampo
ART DIRECTOR
wdelcampo@peerlessmedia.com

John Kerr
SPECIAL PROJECTS EDITOR
johnkerr@ergoeditorial.biz

Jeff Berman
ONLINE NEWS EDITOR
jberman@peerlessmedia.com

Kelly Jones
PRODUCTION MANAGER
kjones@peerlessmedia.com

Subscriber Services
scmrsubs@ehpub.com

Brian Ceraolo
PRESIDENT AND GROUP PUBLISHER
bceraolo@peerlessmedia.com
Peerless Media LLC

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Illustration by
Kyu Oh



FEATURES

10 How Business and Universities are Collaborating

The talent squeeze is real. By 2022, some observers believe the demand for supply chain professionals might exceed supply by six to one. But the picture is brighter than it might appear, based on the efforts of some business leaders and academia to attract and develop supply chain talent.

20 A Practical Approach to Hardening Soft Skills

If businesses are to resolve their supply chain talent shortages, the supply chain profession has to develop its up and comers in ways that go well beyond technical proficiency. Specifically, supply chain leaders must find ways to build soft skills in their younger employees.

28 Navigating to the Top

In most professions, career success is a straight shot to the top of the ladder. For the supply chain professional, advancing is more like climbing a mountain, where a number of routes may get you to the peak.

36 Bringing Supply Chain Management to the Board

Supply chain leaders frequently deal with an executive team that lacks knowledge and interest in supply chain management. To get the required executive support, SCM needs to be better positioned in the firm. Here's a framework on how to get supply chain management on the Board agenda.

44 Link Quality Improvement to Your Supply Chain

Supply chain quality doesn't happen by accident; it's an ongoing process that requires a comprehensive plan that is intertwined with manufacturing processes and becomes a part of an organization's culture. Research from American Society for Quality and the U.S. Baldrige Performance Excellence Program offers steps any organization can follow to improve the performance and quality of its supply chain.

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Competitive Supply Chains: Excellence

Amy Chua, known as the “Tiger Mom,” has been praised and criticized for her views on raising children to be high performing. She co-wrote a book, *The Triple Package: How Three Unlikely Traits Explain the Rise and Fall of Cultural Groups in America*, based on eight successful cultural groups.

The book summarizes three traits that are most predictive of why certain cultural groups perform better: a superiority complex; insecurity; and impulse control. They raise children to believe they are good, but aren’t good enough, and are disciplined to work hard and await results. I believe that an excellent supply chain organization should possess these same traits.

What is Excellence?

During the MIT Supply Chain 2020 Project that researched the future of supply chain, we focused on future excellent supply chains. The research compared today’s excellent supply chains with non-excellent ones in order to answer the question: What is excellence? The definition needed to be reasonable and also operational to provide advice to managers looking to maintain excellence into the future.

We simply defined excellence as having a competitive supply chain. That is, a supply chain needed to be positioned to play a leading (not just a supporting) role in competing in the marketplace. It had to be recognized as a critical element in a company’s competitive go-to-market strategy, and important to winning business. The definition should have also included having a corporate culture that possesses the three traits discussed above. However, it would have been deemed as an intangible necessity and insufficient characteristic.

This column is the first of a three-part series on competitive supply chains that discusses: 1) the characteristics of competitive supply chains;

 This column is the first of a three-part series on competitive supply chains.

2) an approach to strategically aligning a supply chain; and 3) the Demand Management (DM) processes needed to enable supply chains to play leading roles.

Why Not the Gartner 25 Criteria?

My article in *SCMR* April 2006 titled “MIT’s SC2020 Project: The Essence of Excellence” discussing an excellent supply chain framework is revisited in this series. It was published a couple of years after AMR Research (now part of Gartner Inc.) inaugurated its annual list of Top 25 Supply Chains.

Most supply chain managers misunderstood the intent of Gartner’s list as the 25 most excellent supply chains. That wasn’t the intention. The companies ranked by Gartner are big and public and the list was developed to foster discussion among supply chain professionals about “the demand-driven operational and innovation excellence” of companies. Analysts point out that these are not necessarily the top-performing supply chains, rather heroes to emulate.

There are several reasons why the list doesn’t necessarily represent the top excellent supply chains. Gartner’s criteria weigh financial data and analyst/peer opinions. First, because it has limited visibility into the detailed practices of the supply chain organizations in companies, it de facto assumes supply chain plays a leading role. Second, because financials include return on assets, inventory turns, and growth, Gartner’s criteria downgrades mature and asset-intensive companies that most certainly have excellent supply chains. Third, ranking supply chains across vastly different industries is like comparing apples to oranges. And finally, relying on Gartner analysts and

Dr. Lapide has extensive experience in the industry as a practitioner, consultant, and software analyst. He is currently a lecturer at the University of Massachusetts’ Boston Campus and is an MIT Research Affiliate. He received the inaugural *Lifetime Achievement in Business Forecasting & Planning Award* from the Institute of Business Forecasting & Planning. He welcomes comments on his columns at llapide@mit.edu.

peer opinions makes the rankings grounded in perception rather than on concrete evidence.

Criteria for Excellence

Defining excellence as having a competitive supply chain necessitates using criteria for excellence that relates to whether an organization is positioned to play a leading role in a go-to-market strategy, and important to winning business. For example, if a company's strategy is to aggressively grow market share at the expense of reduced return on assets—with excessive supply chain costs and inventories—then why wouldn't the supply chain be excellent if it is perfectly aligned with the strategy?

To elaborate on this, two myths were debunked: that an excellent supply chain is part of a highly profitable company; and that it is not part of an unprofitable company. Regarding the first, Levi Strauss in the 1980s enjoyed record growth and profitability as jeans got hot and were being sold in the Soviet Union for \$100 a pair. Eventually, its manufacturing organization could not keep up with demand. Retailers, like J.C. Penney, resorted to private-label jeans because store shelves were too often bare. Levi's profitability was due to its branding, not its supply chain.

Back then, when I worked at AMR Research, we conducted benchmarking studies that compared peer companies. One of the metrics we used was order fill rate. In a CPG peer group, all companies had fill rates in the high 90 percentages, except for one well-known highly-profitable company in the 80 percentages. When asked why, it said that its brands are "so strong that we can ship anything to a retailer and it will accept delivery." While the supply chain was not excellent, it didn't need to be because branding drove financial performance.

Amazon debunks the second myth. It has spent a lot of money on its excellent supply chain because it has been building the largest unit pick, pack, and ship e-retailer. Amazon has been largely unprofitable and Wall Street analysts are still critical of its lack of focus on profitability. Amazon's strategy to focus on becoming the Walmart of the Internet has paid off as it continues to grab more retail business that leverages its excellent supply chain (regardless of profits).

Lastly during the dot.com bubble, Cisco Systems grew rapidly with high profitability. Many start-ups bought its networking and routing systems. To fulfill orders sourced from multiple locations around the world, Cisco built an excellent virtual, asset-less supply chain. The company also developed a process that seamlessly integrated hundreds of company acquisitions into its order fulfillment systems. However, when the bubble burst, Cisco was stuck with billions of dollars of inventory write-offs that seriously depressed profitability for some time. While Wall Street criticized

the company for this profit mishap, Cisco was able to recoup and get back to its old self in short order, mainly on the back of its excellent supply chain. Was it excellent during the period of depressed profits? Absolutely.

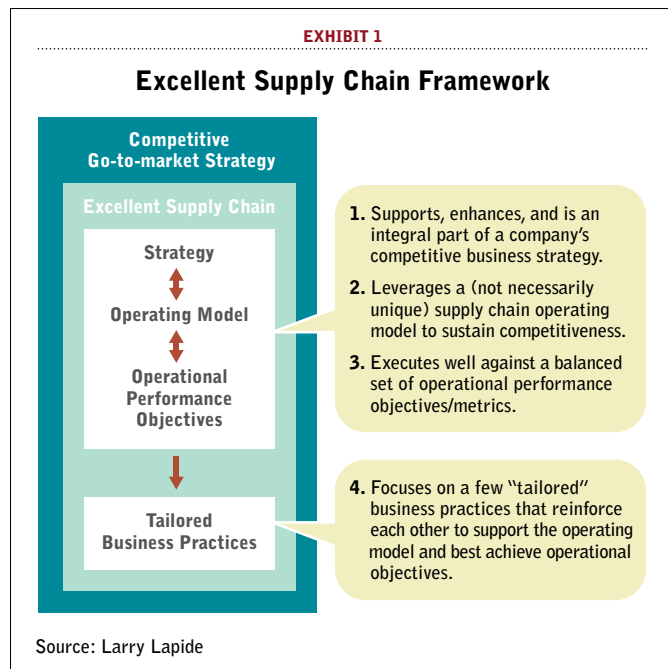
The use of best practices was also briefly considered during our research but dismissed as a characteristic of excellence. Best practices don't necessarily carry across companies within or across industries.

The Excellent Supply Chain Framework

Exhibit 1 depicts the excellent supply chain framework developed as part of the MIT 2020 Project. An excellent supply chain is shown as playing a leading role inside a competitive go-to-market strategy. The four major, tangible characteristics an excellent supply chain should have are:

1. Supports, enhances, and is an integral part of a company's competitive business strategy.
2. Leverages a (not necessarily unique) supply chain operating model to sustain competitiveness.
3. Executes well against a balanced set of operational performance objectives/metrics.
4. Focuses on a few "tailored" business practices that reinforce each other to support the operating model and best achieve operational objectives.

The exhibit illustrates that the first three need to be iteratively aligned to ensure that supply chain competencies are fully leveraged to play a leading role, in accordance with the first characteristic. After this is done, tailored business practices can be developed to enable excellence. This strategic alignment approach will be discussed in part two of this series. ∞





Connecting the Dots Between Education and Innovation

By Ken Cottrill

Ken Cottrill is the Research Marketing & Development Lead, MIT CTL. He can be reached at kencott@mit.edu.

It takes more than original thinking to be innovative. The skills and knowledge gained from professional education programs are also important pieces of the puzzle. How do these programs help supply chain professionals to be innovators?

Just ask Bindiya Vakil. Ten years ago Vakil graduated from the MIT Center for Transportation & Logistics' (MIT CTL) Master of Engineering in Logistics program (now called the MIT Supply Chain Management Program). Since then she has won acclaim as a top supply chain executive and the CEO and founder of Resilinc, a leading supply chain intelligence and resiliency analytics provider. Resilinc's supplier network connects major companies to their global suppliers and enables them to harness this supply chain intelligence for resiliency and agility.

While her master's degree is part of the broad tapestry of experience, knowledge, and skills that has enabled Vakil to become an industry thought leader, there are specific elements of the program that have been especially influential.

Eureka Moments

A decade ago there were fewer supply chain master's programs than there are today. Indeed, it was more common to study the discipline at this level under the auspices of a general MBA program.

"At the time I felt that doing a supply chain master's degree would set me apart," Vakil says. "Also, I already had a master's in finance and did not want to spend two years in another program."

Already an experienced practitioner in high-tech supply chain management at companies including Flextronics, Cisco, and Broadcom, the intense, nine-month program at MIT CTL gave her the opportunity to gain deeper domain expertise. The program was a rich learning experience on a number of levels, but Vakil recalls several "aha" moments that helped to shape her subsequent career.

The forecast is mostly wrong. Her very

first class was on demand forecasting, and it proved transformational.

"I had worked on the supply management side before coming to MIT, and we were always trying to catch up. We blamed the demand forecasters for getting it wrong. My first assignment was a demand forecasting problem and I was determined to finally get it right," she says.

Consulting with her classmates only served to make the fog denser because they were struggling to solve the problem too. Moreover, these were fellow practitioners from different backgrounds. The average age of the students was around 30, and they had worked in a wide range of industries in various capacities, including demand-side and supply-side roles and logistics management. "When we got back to class to turn in our assignments after an extremely stressful weekend of disagreeing on methodologies and answers, our professor laughed as he accepted our assignment," she recalls. "He discussed our various approaches and methodologies, and then finally said: 'Almost all of you are wrong.'"

The "aha" for Vakil, was that while forecasting is important, it is impossible to predict the real world. Sweating over the right number is not the answer, because in reality Murphy's Law often applies and the forecast is mostly wrong. When decisions are needed quickly, and the rules of the game are changing constantly, resiliency, adaptability, and flexibility are incredibly important. She learned to embrace the chaos and use it to her advantage.

Models come to life when you see the big picture. Gaining a deeper understanding of data models while she was a grad student was foundational for Vakil, given her chosen career path working with supply chain information flows.

"I learned that you are never going to model every aspect of a supply chain because you reach a point where there are diminishing returns, so you have to take a step back and capture the

most important variables and relationships,” she says.

The key is understanding the many elements that feed into a model, and how these shape the model’s output. This ability to grasp how disparate data sources interconnect and can be optimized has proven particularly valuable in her work to create the models that underpin Resilinc’s services.

Appreciating the information touch points between customers and suppliers is critically important in the design of automated data collection and analysis systems. Resilinc uses disparate data that originates in an unstructured format on the internet as well as in social media channels, news outlets, and blog articles. It connects this mass of data with semi-structured and structured sources such as customer ERP systems and supplier inputs.

Ultimately, Resilinc delivers advanced levels of intelligence about inherent supply chain vulnerabilities and exposures in a way that is easily understood and quickly actionable. A thorough grasp of managing data, information, analytics, and interconnections is foundational to successfully translating many-to-many relationships into usable intelligence.

Another key problem that Resilinc solved based on these principles also happens to be a fundamental challenge for supply chain practitioners everywhere. Supply chain management is really about information flows; however, these flows are neither standardized nor optimized. Handling requests from multiple customers for information in different formats creates a huge amount of work for suppliers. The insights Vakil gained into data connectivity helped in the development of a single, standardized data entry platform for the Resilinc network. The solution leverages LinkedIn-like information sharing concepts and is delivered on a secure, multi-tenant cloud platform. It provides suppliers with a secure, cost-effective, and simple way to share information with customers. Moreover, suppliers complete all the required responses once and approve customers’ access. The system automatically tailors the intelligence for each customer.

Understanding the relationship between supply chain data and technology also helps Vakil to keep pace with new market developments. Resilinc was formed in 2005, when some social media sites such as Twitter either did not exist or were still relatively early in their development. She is able to leverage the latest trends in cloud, mobile, and social media to solve big supply chain problems.

Focus on what matters to practitioners. Vakil has worked in supply chain risk management ever since leaving MIT. In one of her projects, she was modeling the probable impact of a major flood in a certain geographic area. In order to get the probability right, she worked with experts in insurance and actuarial companies. Vakil learned that the critical takeaway in this kind of work is not the probability

of specific locations being hit by floods. The key finding is the relative importance of one location, supplier, or part in the extended supply chain, which entity should be given top priority, and how this answer can be reached speedily.

“I took this lesson to heart,” she says. “When we started Resilinc, we really focused on what the practitioner’s day-

When decisions are needed quickly, and the rules of the game are changing constantly, resiliency, adaptability, and flexibility are incredibly important.

in-the-life looked like, and what they needed. Our solution really gets the supply chain practitioner, who is time and bandwidth strapped, to be able to answer this one question quickly and effectively.”

The Wider View

In addition to these important insights, Vakil learned a number of broader lessons during her time studying for a supply chain master’s degree that have helped her to be innovative.

The diversity of experience and the years of practical experience within her cohort is one of the most valuable benefits. “My classmates really took me to where they had been during our class discussions. We always took a step back and applied our learning to what we had all seen playing out in the real world,” she says.

Vakil adds that while she was always analytically oriented, her experience at MIT took her to the next level in terms of analytical thinking. “The class discussions put everything into perspective,” she says. “I learned to think optimally, manage within a range, and to always be flexible and pragmatic.”

This experience is reflected in the advice she offers to prospective supply chain students. “Choose programs that have a good balance between the theoretical and the pragmatic,” Vakil says. They should also offer a rich learning environment, and an important element of such an environment is a wide mix of student ages and career backgrounds.

Working in this environment also helps to prepare young professionals to manage innovation. Even though she has earned a reputation as an entrepreneur who has created a successful company, Vakil credits her team for all this success. She believes that effective leaders are self-aware; they know what they know and what they don’t know.

“People are an important asset in any company, but they are the single most important asset in a young, fast growing company like ours. Find people whose skills complement yours, tap into their passion, and channel their expertise—and then watch the magic happen,” she says. ☺☺



Concentration of Supply Chain Talent Makes Small U.S. Cities More Attractive

Shrinking labor cost gap, lower turnover rates, and proximity to customers and headquarters are among the factors driving companies to consider “second tier” U.S. locations.

Patrick Burnson is the executive editor at *Supply Chain Management Review*. He welcomes comments on his columns at pburnson@peerlessmedia.com

While the glamour cities of New York, Boston, Los Angeles, and San Francisco may continue to attract the best and the brightest, a new generation of supply chain professionals may find that “second tier” urban centers in this country are becoming increasingly popular with Fortune 500 companies.

According to new research from The Hackett Group, Inc., scores of mid-size U.S. cities and outlying suburbs now represent viable alternatives to offshore locations as well.

Researchers say this is particularly true for companies keen to consolidate finance, IT, and other global business operations. The diminishing gap in labor costs, combined with factors such as lower turnover rates, greater business knowledge, proximity to customers and headquarters, and state tax incentives makes this proposition even more alluring.

One outstanding example of a multinational giant with a need for workers capable of handling complex and higher-value processes is Verizon Communications. Over the past two years, it has been relocating business services operations domestically, thereby melding nearly 1,500 finance operations staff into two U.S. service centers.

Upstart Cities

The Hackett Group’s Global Business Services Executive Advisory program developed the research, which provides detailed

rankings for more than 30 cities across the U.S., based on a weighted mix of factors. Top 10 cities in the research are: Syracuse, N.Y.; Jacksonville, Fla.; Tampa, Fla.; Lansing, Mich.; Grand Rapids, Mich.; Atlanta, Ga.; Allentown, Pa.; Green Bay, Wisc.; Richmond, Va.; and Longmont, Colo.

Previous research by The Hackett Group has found that while off-shoring has led to a dramatic decline in the number of corporate IT, finance, procurement, and HR jobs in the U.S., the number of new business services jobs moving overseas has declined steadily over the past few years and will continue to do so, as companies reach the practical limits of the type of work in these areas that can be effectively managed in foreign countries.

At Verizon, a variety of options were considered before the company decided to consolidate nearly 1,500 finance operations staff from more than 300 U.S. locations into two service centers located in Lake Mary, Fla. (near Orlando) and Tulsa, Okla.

“By keeping our finance operations in the U.S. we’ve derived an array of benefits,” says Karan Mehra, Verizon’s director of corporate-finance restructuring. “Talent was perhaps our primary deciding factor. We wanted to make sure we could recruit the quality talent that we needed, and that we could put strong training and development in place.”

Mehra adds that his goal was to build “bench strength” to support succession plans,

so that his staff had the ability to learn new skills and develop professionally.

“We also saw a wide range of other benefits,” says Mehra. “By staying domestic, we got instant buy-in from both our clients within Verizon and throughout the finance organization itself. We have also been able to maintain complete control over our finance operations and processes, which can be difficult to do when you move offshore. And finally, avoiding extended travel times when visiting our service centers has been a significant advantage.”

Risk Examined

In its U.S. research, The Hackett Group used the same analysis technique it relied on to evaluate locations in more than 40 countries for its recent *Global Location Guide Book of Numbers Research* entitled “Optimizing Decisions on Business Services Locations.” The Hackett Group analyzed the business environment in various geographies globally based on more than 30 key indicators. Five principal dimensions were weighted and taken into consideration in calculating the attractiveness of various locations.

Economic considerations, including the cost of labor and the availability of office space, were a primary concern. Workforce makeup, including availability, quality, labor laws, and languages, were a secondary factor. Availability of both office infrastructure and other elements such as electrical supply and airports were also considered.

Overall risk was examined, including the risks of cor-

Researchers came to the conclusion that even if multinationals continue to use offshore centers, the U.S. is an essential part of almost any service delivery network.

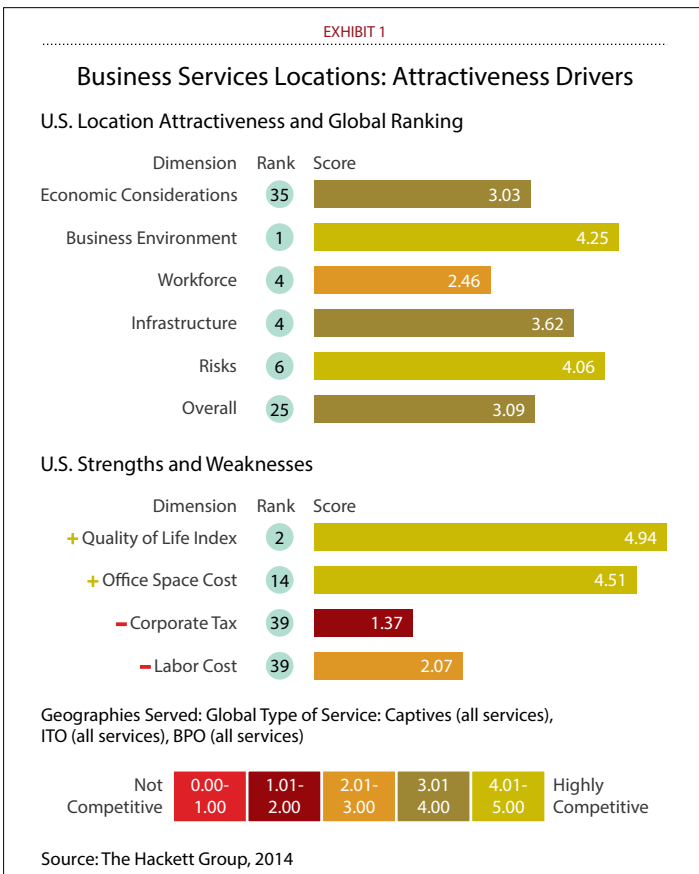
ruption and fraud, political instability, data and intellectual property theft, foreign exchange fluctuation, the potential for natural disasters, and the quality of the judicial system. Finally, the quality of the business environment was considered, including the general economic climate, level of political freedom, and overall quality of life.

“Companies are realizing that the U.S. is becoming an increasingly viable option for elements of their service delivery organization, and we’re seeing real growth in this sector, with nearly 700 U.S. centers of excellence, shared service centers, and global business services operations now up and running,” says The Hackett Group Principal and Global Finance Executive Advisory Practice Leader, Jim O’Connor.

In the report, he notes that labor and operating costs are still high in the U.S. compared to Eastern Europe, Latin America, and Asia, but the gap is shrinking. Furthermore, there are other significant benefits that may outweigh cost—including the goodwill of companies seeking to rebuild their “made in America” branding.

Researchers came to the conclusion that even if multinationals continue to use offshore centers, the U.S. is an essential part of almost any service delivery network. This is especially true for American companies, reliant on talent for complicated, knowledge-based labor or for those requiring a high level of communication with customers and internal clients, or when fast turnaround or extensive collaboration is a critical element.

“U.S. centers are also ideal for transforming, improving, and standardizing processes before they are moved elsewhere,” observes O’Connor. ∞



Supply Chain Talent Squeeze: How Business & Universities are Collaborating to Fill the Gap



The talent squeeze is real. The number of jobs is expected to grow by more than 20 percent by 2022 while Baby Boomer retirement continues to deplete the ranks of experienced supply chain professionals. Some observers believe the demand for supply chain professionals might now exceed supply by a six-to-one ratio. But the picture is brighter than it might appear. One ray of hope: The efforts of business and academic leaders to attract and develop potential supply chain leaders.

Mary Holcomb, Ph.D., is Associate Professor of Supply Chain Management in the Haslam College of Business at the University of Tennessee. She can be reached at mholcomb@utk.edu. For more information, visit mba.bus.utk.edu.

Allan Krul is Principal, Supply Chain & Manufacturing Operations, at Deloitte Consulting LLP and leads their MBA recruiting efforts. He can be reached at akrul@deloitte.com.

Douglas Thomas, Ph.D., is Professor of Supply Chain Management in the Smeal College of Business at The Pennsylvania State University. He can be reached at dthomas@psu.edu. For more information, visit www.smeal.psu.edu/mba.





**By Mary Holcomb, Allan Krul,
and Douglas Thomas**

Undersupply of supply chain management (SCM) talent has long bedeviled businesses. Since before the turn of the 21st century, a conflagration of forces have conspired to keep supply chain leaders scrambling for the people they need, including globalization, ceaseless technology development, and a perceived lack of cachet and opportunity in the nuts-and-bolts business of logistics.

The problem could well worsen over the next several years. The U.S. Bureau of Labor Statistics projects logistics job growth of 22 percent from 2012-2022, more than double the average rate of the 30 highest growth occupations. Meanwhile, Baby Boomer retirement continues to deplete the ranks of experienced supply chain professionals. Some observers believe the demand for supply chain professionals might now exceed supply by a six-to-one ratio.

The talent squeeze comes as supply chain leaders face dramatically expanding responsibilities. Many are now charged with overseeing the full span of logistical activities from sourcing to production planning to delivery and service.

Taken together, the factors above could give supply chain executives cause for despair. But the picture is brighter than it might appear, with one ray of hope coming from the efforts of business and academic leaders to attract and develop potential supply chain leaders.

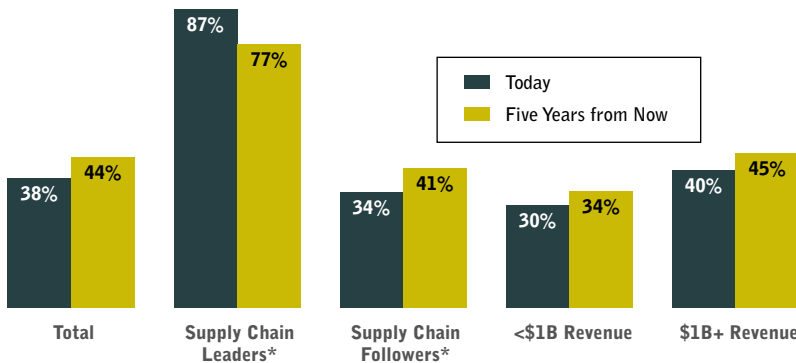
This article describes the work of eight top-ranked U.S. Master of Business Administration (MBA) programs and Deloitte Consulting to close the supply chain talent gap, highlighting curriculum innovations, globalization initiatives, and industry collaborations. We conclude with a brief look at three tactics that colleges and companies can pursue collaboratively to help fill the supply chain talent pipeline: intense case competitions, in-class curriculum innovations, and social events connecting students with supply chain professionals.

Searching for Answers

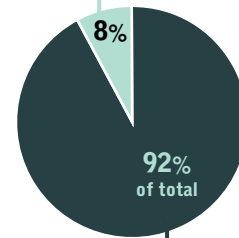
Deloitte's third annual supply chain survey, conducted in late 2014, highlighted the unease among supply chain executives over their organizations' performance in recruiting and developing talent. Amid rapid changes in supply chain activities, tools, and goals, only 38 percent of executives said they were extremely or very confident that their supply chain organization has the competencies it needs today. Less than half (44 percent) believe they will have the required competencies in the next five years (Exhibit 1).

EXHIBIT 1

Confidence that Supply Chain Organization has Competencies Required
(Percentage "Extremely/Very Confident")



SC Leaders
Rated by their executives as significantly above average on both metrics compared to other companies in their industries



SC Followers
Rated by their executives as less than significantly above average on one or both metrics

*** Identifying SC Leaders**

To identify Supply Chain (SC) Leaders, executives were asked how the performance of their company's supply chain compares to that of other companies in its industry on two metrics: (1) inventory turnover and (2) the percentage of deliveries that are on time in full.

Source: Deloitte Consulting

One likely reason for executives' reluctance to proclaim readiness is the broad and growing array of capabilities needed to operate a modern supply chain. In fact, only two of 13 supply chain capabilities identified in the survey—optimization tools and demand forecasting—are currently being used by more than half of respondents (Exhibit 2).

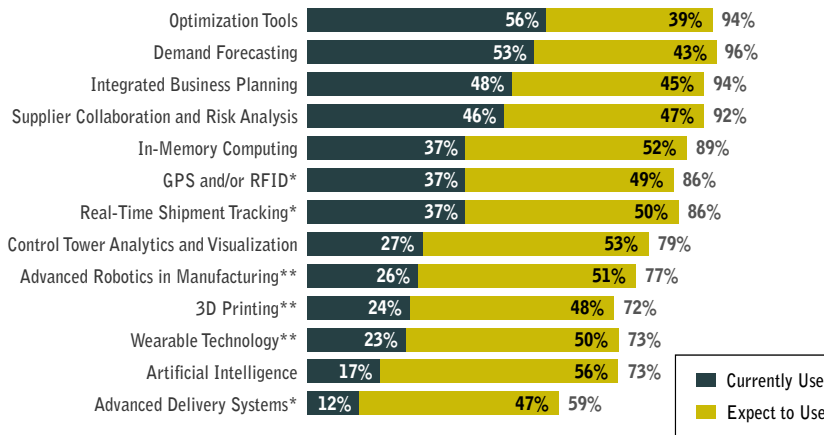
A substantial majority of respondents (73 percent) said that to meet strategic objectives it was extremely or very important to hire employees with the required technical competencies to tackle complex aspects of risk management, statistical modeling, and multi-tier management. Even more (79 percent) rated leadership and professional competencies, such as problem solving, change management, and talent development, as extremely or very important.

Asked specifically about seven attributes related to leadership and professional competence, most survey respondents considered their supply chain organization to be excellent or very good at only one: negotiating and collaborating with supply chain partners (see Exhibit 3).

Encouragingly, universities are recognizing businesses' need for talent to strengthen their supply chains and are creating specialties and programs in the field. Research conducted by AACSB International found supply chain program offerings to be the second leading area of business school curriculum growth over the 2008-2009 to 2012-2013

EXHIBIT 2

Use of Supply Chain Capabilities



Notes:

Chart is ordered by percentages for "Currently Use"

* Manufacturing and retail respondents only

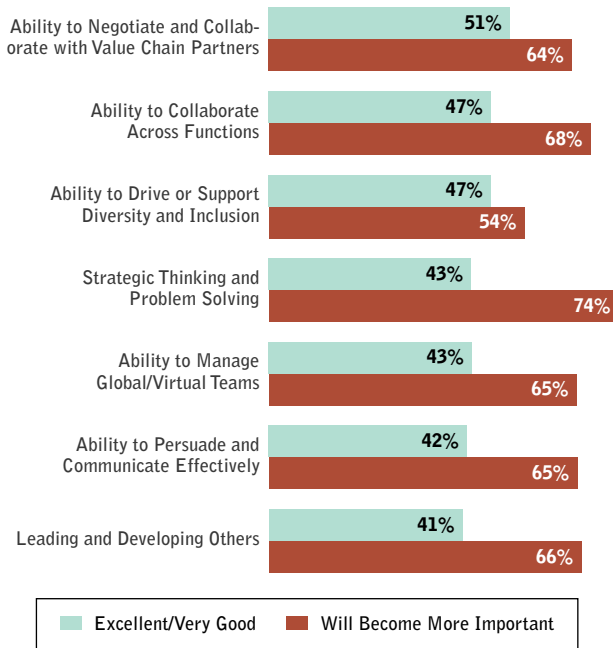
** Manufacturing respondents only

Source: Deloitte Consulting

EXHIBIT 3

Leadership and Professional Competencies of Company's Employees

(Current Performance Versus Expected Change in Importance)



Source: Deloitte Consulting

academic years. Supply chain, transportation, and logistics programs increased more than 17 percent, trailing only business ethics offerings in growth rate.

Unfortunately, the growth in demand for supply chain MBA programs is considerably less robust. The 2015 mba.com Prospective Students Survey Report found only three percent of MBA hopefuls interested in pursuing a supply chain master's program, while perennially popular graduate programs in accounting and finance were preferred by 31 percent and 28 percent of students, respectively.

Addressing the Talent Gap

MBA programs are an essential, established resource for meeting the management talent needs of businesses. The supply chain MBA, however, is a fairly new concept. Historically, graduate schools have offered logistics-focused curricula through master's degree programs in operations management and manufacturing management, with heavy emphasis on analytics and other "hard" skills.

Now, though, factors including globalization and the increasing complexity and criticality of the supply chain are elevating the function into a higher profile role. Leaders are increasingly compelled to develop the "soft" skills to communicate with C-level executives and

explain and sell the importance of the supply chain.

It was against this backdrop that supply chain faculty of eight leading U.S. graduate business schools and professionals in Deloitte's supply chain practice gathered for the first Deloitte Supply Chain MBA Roundtable discussion held in November 2014. The participating schools were:

- Fisher College of Business (Ohio State University)
- Haslam College of Business (University of Tennessee)
- Marriott School of Management (Brigham Young University)
- Rutgers Business School (The State University of New Jersey)
- Scheller College of Business (Georgia Institute of Technology)
- Smeal College of Business (Pennsylvania State University)
- Tepper School of Business (Carnegie Mellon University)
- W.P. Carey School of Business (Arizona State University)

To date, none of these schools has undertaken development of industry-specific curricula; however, several have added industry-specific content in their supply chain management (SCM) concentration.

For example, Smeal has added retail/e-commerce material to address SCM practices in this sector, and a large percentage of students in the SCM concentration at Marriott are interested in the health care industry.

The employment profiles of MBA students in the eight schools highlight the substantial potential of MBA programs as incubators for SCM talent. Most students in these programs have four-to-five years of work experience (Exhibit 4), and some are likely to be looking for new opportunities either with their current employer or elsewhere. In either case, it's an environment in which students could find SCM a promising alternative.

The forum provided the opportunity to explore the schools' efforts to evolve their MBA programs—in particular innovations in supply chain curriculum—the effects of globalization, and trends in industry-academia collaborations. For Deloitte, the roundtable offered insights that could help the organization in its ongoing efforts to develop talent for its supply chain consulting practice.

Curricular Innovations

Among key roundtable observations was the need to adjust MBA curricula to include a wider variety of classes and experiences for students. Specifically, participants

noted a need for more supply chain specialization and theory classes, as well as more electives, during the first year prior to internships. Many MBA programs have moved away from the approach of concentrating on core courses in the first year and then choosing electives in the second year. Some programs offer specialization options as early as a student's second semester.

While almost every MBA program goes through an annual cycle of assessing and altering curriculum, major program revisions are infrequent. However, four schools—Haslam, Scheller, Smeal, and Tepper—have made substantive changes in the “core,” first year portion of their program.

Students in Tepper's full-time MBA program focus on developing two critical toolkits: leadership and analytical. Administrators, faculty, and recruiters believe that this emphasis provides all MBA students a distinct career advantage. Leadership skills are fostered by industry coaches and mentors, available through the Accelerate Leadership Center. The analytical toolkit builds key capabilities critical to solving complex global supply chain problems, using tools such as economic understanding, optimization, and predictive and prescriptive modeling.

Smeal has also made curricular and other changes to augment students' analytical and leadership capabilities. The school has implemented Six Sigma courses and certification for SCM concentration students, expanded analytics, and modeling content in the concentration curriculum, and it has added enhanced retail and e-commerce content. Through its Accelerator Program, early- to mid-career Smeal alumni coach current students on industry-specific skills and career goals. Second year SCM concentration MBA students take part in a leadership experience such as being a firefighter for a day with the Fire Department of New York or participating in U.S.

Marine Corps officer training at Quantico, Va. They then prepare a reflection paper and debrief based on the experience.

Haslam has revised MBA core curriculum by dividing the first year of the program into four sessions. Each of the first three sessions ends with an integrated case competition customized annually to reflect current business issues. The fourth session concludes with Innovation in Practice presentations, the culmination of a unique seven-and-a-half week consulting project.

The MBA program at Scheller has undergone a complete review, and the school will implement a revised curriculum in the fall of 2015. Its goal is to offer students additional electives and the option to take them earlier in their study program. The revised curriculum reduces most of the core content by half, offers the core in half rather than full semesters, and front-loads the content so that most of it will be completed during the first semester.

In addition to more specialization content, offered earlier, recruiters are emphasizing the need for students to have excellent leadership and oral communication skills. During the roundtable, senior Deloitte personnel reinforced the value of supply chain managers at all levels developing the ability to “sell” their ideas to C-level executives.

Globalization

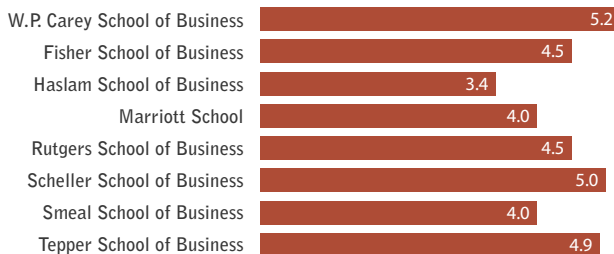
Continuing globalization of commerce heightens the need for business leaders to be culturally and globally aware. A second key takeaway from the MBA Roundtable discussion was the need to include a “meaningful” global experience to help students develop a clear understanding of the global business environment. Most MBA curricula include trips to other countries, which can range from spending a few weeks abroad to experience the culture to spending an entire semester consulting for an international client organization.

MBA students in the Fisher logistics concentration can participate in Global Applied Projects (GAP), through which they gain onsite international work experience. The team-based, real-world project integrates skills and capabilities learned during the program. The “learning by doing” experience combines a year-one spring semester international consulting and project management class



EXHIBIT 4

Work Experience of Roundtable School MBA Candidates (Average Years of Work Experience)



Source: Deloitte Consulting



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with an onsite, immersive living experience in May. Along with gaining significant global business knowledge, students attain an increased cultural awareness and understanding.

MBA programs also develop global consciousness indirectly by actively seeking and admitting students from diverse cultural backgrounds, as well as those who have lived and traveled abroad. The eight MBA programs highlighted here exemplify this philosophy, with international students accounting for between 16 percent and 39 percent of enrollees, representing 20 different countries on average.

Industry Collaboration

Another key takeaway from the MBA Roundtable was the need for greater collaboration between academia and industry. While case studies and field trips are a central part of most MBA programs' pedagogy, the focus on experiential learning is intensifying. MBA curricula are requiring students to apply what they have learned in the classrooms through mini projects with companies, pro bono work for non-profits, and advanced simulations.

Industry collaborations are a significant aspect of the curriculum at the W.P. Carey School of Business, where between 55 percent and 70 percent of incoming

Training or Education? Business and academia are asking where one ends and the other begins.

By Walter Zinn

Institutions like The Ohio State University are educating more young supply chain professionals than ever. At the same time, the business community wants new graduates who can hit the ground running and is looking to academia to become de facto corporate training departments. At times, it seems as if business and academia are speaking two different languages. When it comes to the difference between training and education, perhaps, they are. Consider the following two scenarios:

- A new version of a warehouse management system is being installed and users are having difficulty working with menus that have been redesigned. The problem is solved once users are shown how to click their way around the new menus. That's training.

- In the process of negotiating a long term partnership with a key supplier, a supply chain professional must not only be trained in things like EDI transactions and cost accounting, but must also understand issues like corporate culture, the partner's competitive environment, and how changing economic and technological conditions are likely to affect the long term health and viability of the partnership. There is no training for these issues. A supply chain education, however, equips the negotiator with the ability to make critical judgments about these issues.

Those are important distinctions. In essence, training is about making sure that an individual learns a specific skill. The skill can be the proper use of equipment or software, or mastering an existing process or technique. Training takes things at face value—this is how you do it. It brings the trainee to the same level as other individuals with the same skill. The focus of

training is on the skill itself.

In contrast, education is about personal development. The focus is on the individual. Education works because, in addition to imparting substantive knowledge, it teaches people to think broadly and critically. Critical thinking empowers one to look into the facts related to a situation and then synthesize, find patterns, and make generalizations about it. Critical thinking is crucial to dealing with uncertainty. In practice, this means the ability to foresee changes, adapt to them, or to drive them.

Critical thinking is also a key component of leadership. Leaders at all levels in the organization, from warehouse manager to CEO, must move their organizations forward within an environment of changing realities. The challenges that leaders face are seldom predictable. Leaders cannot be trained; they must be educated.

Substantive knowledge is equally an essential component of education. It teaches fundamentals that explore why something is the way it is and why it works the way it does. Take, for instance, optimization theory. Instead of learning about its underlying mathematics, could one merely be trained to use optimization software? Perhaps so, but a user educated in the underlying theory is best equipped to interpret the meaning and limitation of results, understand when and when not to apply optimization to a problem, think of new applications where optimization can be used, and actually change and improve the software when needed.

Could anyone be trained to use the new menus on the WMS? Probably, and that training could certainly be provided by an employer and take place outside of

full-time MBA students pursue an SCM career path. Through its Students Solutions initiative, the program offers businesses the opportunity to tap into students' talent and knowledge to work on projects that business may lack the resources to do in house or aren't ready to engage outside professionals. Students identify, research, propose, and implement solutions for the business under faculty guidance as part of graded coursework.

Marriott School of Management also collaborates with industry through its field studies program. MBA students can participate in consulting projects typically completed by a four-to-five-student team under the direction of a

faculty advisor. The projects frequently require students to travel abroad to fully understand the business needs in a particular country. Like many of the opportunities offered during their MBA program, this initiative allows students to develop and increase their skills across several key areas identified in the Deloitte third annual supply chain survey.

Several of the schools discussed here have supply chain management centers or forums that promote student, faculty, and industry interaction. For example, Rutgers' Center for Supply Chain Management plays a pivotal role in supporting world-class research, innovative teaching, and the integration of inter-functional

a campus setting. Could anyone be trained on the shape of supply chains of the future? Not a chance. We live in a world of unprecedented change. Currently, trucking cost is being simultaneously affected by the countering trends of higher driver cost and lower fuel cost. New fuels are being introduced and evaluated. The same is true of driverless trucks. Furthermore, consumer keenness for choices made available by omni-channels is transforming retailing. In manufacturing and distribution, 3D printing will likely affect the need to inventory items. And there will be more change coming—an unending stream it seems.

This is not to say that training does not matter. It does. There is a major role for training within a supply chain education. Value stream mapping, lean and Six Sigma, and safety stock determination are examples of skills that require training. Training can be quite complex and require talent to learn and apply. In many cases, such as forecasting, a combination of training and education are needed. One needs to be trained in forecasting techniques yet needs a supply chain education to understand the output and to interpret its meaning and business implications.

Given the distinction between training and education, should colleges become corporate training departments, as many advocate? To a limited extent, there is certainly a place for skill training at colleges. However, there are limitations that restrict the amount of training that colleges can accomplish. Training needs differ from one corporation to another and even among their internal departments. They also change over time. It is not possible to cover all of those possibilities. For those reasons, corporations should retain a role in training their employees for current jobs; either internally or through contractors. And as the business environment evolves, corporations should rely on the education of their professional staff when it is time to design new jobs for the future and to prepare for them.

In comparison, the college mission is to prepare

students for careers that go beyond their first job. A supply chain education must be broad, teach critical thinking and substantive knowledge, as well as some specific skills. In addition to supply chain courses, students take broader business curricula where they learn about fundamentals (i.e. data analytics and statistics), people (consumer and organizational behavior) and related business fields such as marketing and finance. They are further exposed to general knowledge courses such as economics, history, natural science, and foreign languages. The general knowledge courses are vitally important to broaden their perspectives and to develop an understanding of the world.

This is not a conservative manifesto for colleges to do things the way they always did. Education, including supply chain education, is changing too and colleges must adapt to be successful. Information is more available than ever and technology is making classrooms a more exciting place to learn. It is crucial to expose students to experienced practitioners who live with the changing environment every day. It is also important that students learn about the expanding set of tech tools available to practitioners. Moreover, project courses and internships have a major role in bringing together the materials learned in different courses. However, while colleges need to evolve, education will remain the centerpiece of their mission because training will never be enough.

Training is important to teach specific skills. However, organizations should hire with education in mind if they need supply chain leaders at all levels who can deal with people issues, operate in a changing environment, and steer the company into a successful future.

Walter Zinn, Ph.D., is a professor of logistics at the Fisher College of Business at The Ohio State University. He can be reached at zinn.13@osu.edu.

business disciplines. The collaboration between industry and faculty helps to address emerging issues in the field through research, executive education, and the sharing of leading practices. In addition to enriching SCM courses with real-world insights, students can earn course credit while taking on projects sponsored by companies associated with the center.

Developing the Talent pool: Cases, Classes, and Camaraderie

Supply chain executives and MBA program leaders can employ several approaches to increasing the pool of qualified SCM talent. As noted at the beginning of this article, such opportunities can include case competitions, in-class curriculum innovations, and social events.

Industry-academia collaboration can help both in building students' hard and soft skills and in educating them on the role of supply chain at all levels of an enterprise. Creating such awareness can contribute to informed career path decisions and dispel traditional notions of supply chain equating to manufacturing shop floor work. Such partnerships can help grow both the size and quality of the supply chain talent pool.

Deloitte is an example of an organization that has taken this approach. In 2010, Deloitte began recruiting directly for their supply chain services consulting practice from select schools offering supply chain as a concentration in their MBA programs. The program has grown 270 percent since its inception and today attracts dozens of top MBAs.

The organization educates students about supply chain consulting work, while collaborating with faculty and student organizations to help develop hard and soft skills through experiential learning and informal events on campus.

Experiential learning takes the form of case competitions that replicate a real-world consulting situation such as managing a project or responding to a request for proposal (RFP). The exercise can take on complex issues weaving in factors such as relationship management, conversations with C-suite, data integrity

management, and team management. The experience helps MBA students learn about the world of supply chain consultants and gain appreciation of the elevated role supply chain now commands in organizations.

Through classroom collaboration, consulting practitioners help create cases, based on their personal experiences working on complex supply chain projects, and teach alongside faculty. Along with hard technical skills gained through the exercises, students build capabilities to communicate with executives through boot camps and communications workshops.

Lastly, social events provide an inviting informal environment in which students can interact with supply chain

Industry-academia collaboration can help to build students' hard and soft skills and educate them on the role of supply chain at all levels of an enterprise.



professionals to get a “day in the life” perspective on the field. As students gain valuable insights, Deloitte professionals are able to observe students and identify those with a knack for connecting in a social environment.

Bridging the Talent Gap and Building SCM Leadership

Supply chain management professionals know that theirs is one of business's most dynamic fields. The challenge is building teams that can capitalize on the opportunity. Getting involved with the education of future SCM leaders through academic partnerships can be a powerful way to create a supply chain organization that can meet the growing demands of today's fast-paced, global marketplace. ☞☞

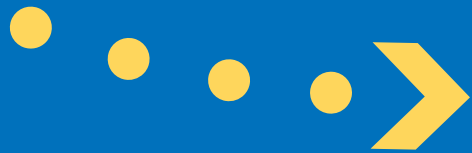
The authors wish to thank the roundtable participants for the thoughts and contributions that helped form this article: Amish Thakker, Deloitte; Joe Van Orden, W.P. Carey School of Business; Mike Knemeyer, Fisher School of Business; Tom Foster, Marriott School; Tom York, Rutgers School of Business; Manpreet Hora, Scheller College of Business; David Huff, Smeal School of Business; and Alan Scheller Wolf and Mohammad Delasay, Tepper School of Business.

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Supply Chain Talent: A Practical Approach *to* Hardening



Andrew Stein is the SPM Supervisor in the Record Accuracy Management Group of Caterpillar Inc.'s Customer Services Support Division. He can be reached at: Stein_Andrew_C@cat.com.

By Andrew Stein

You know the type: hard-working bosses who are bright, but poor leaders and terrible communicators. Their business cards are adorned with all kinds of certifications; they're logistics experts, procurement supremos, or inventory geniuses. They get stuff done! But they could get so much more done if only they played well in teams.

In short, they have truckloads of hard skills but they're pitifully short of the soft skills that are so much more necessary in today's volatile, fast-paced, globalized world.

If businesses are to resolve their supply chain talent shortages, the supply chain profession has an obligation and an opportunity to develop its members in ways that go well beyond technical proficiency. Specifically, supply chain leaders must find ways to build soft skills in their current employees—skills such as clear communication and emotional intelligence that will help improve job performance and deepen employee engagement. Here are five soft skills that matter.

Soft Skills



To some extent, their education and training have not prepared them well enough. While there is no shortage of resources for teaching and developing the technical skills required to become a supply chain professional—university programs, APICS certification, and in-house training programs—there is far less obvious support for organizations that want to enable their supply chain experts to develop skills in areas such as leadership, communication, and teamwork.

That has to change. If businesses are to resolve their supply chain talent shortages—and there plainly are

serious shortages—then the supply chain profession has an obligation and an opportunity to develop its members in ways that go well beyond technical proficiency.

But how to do that? To most managers raised on hard performance metrics, soft skills are easy to dismiss as “fluffy.” It’s not easy for leaders in any field to explain their purpose and necessity, let alone to identify and foster them in their staff. It’s especially difficult in a world that seems increasingly focused on immediately quantifiable results.

At Caterpillar Inc., we’ve had success with encouraging the development of soft skills by taking a patient, structured approach that highlights specific skills and connects them clearly to long-term payoffs for the business. In my role as a senior supervisor at Cat, I accomplish this by fielding individual learning plans (ILPs) and one-on-one coaching sessions with staff members. As I’ll sketch out below, this two-part approach requires just as much structure and effort as we put into development of our staff’s technical skills. It’s also consistent with the theme of “intentional, long-term career planning” that is championed throughout our company.

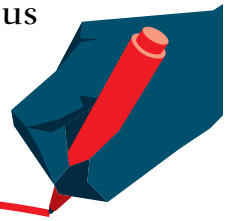
Let me give some context about our situation here at Cat. My team is responsible for implementing software that supports inventory asset validation, reverse logistics, and claims processing. We fit into a larger department that performs these functions for our worldwide network. There are nine of us in my department; some have as little as five years of experience and others have more than 30. Education levels range from a high school diploma to four-year degrees.

The concepts described in this article are the result of my 12-plus years of supervisory experience at Cat. Supervisors here benefit from a range of well-recognized training courses such as the Hay Group’s “Making Great Leaders” curriculum, as well as informal training like the monthly seminars where experienced leaders share their experiences and insights, annual employee opinion surveys, and one-on-one coaching at all levels of the organization. One-on-one coaching, for example, ties directly to the employee opinion surveys that Cat’s Human Resources department administers annually. Gallup is one of the organizations that has collected data showing that employees who have regular one-on-one contact with their supervisors have higher engagement than those who do not.

All Cat employees are actively encouraged to take

ownership of their careers—identifying skills gaps, determining their personal career roadmaps, and developing plans on how to achieve their personal and professional goals. An actively engaged supervisor is key to the development of such skills (both technical and soft).

While there is no shortage of resources for teaching and developing the technical skills required to become a supply chain professional, there is far less obvious support for supply chain experts to develop skills in areas such as leadership, communication and teamwork.



So let’s take a look at the two main elements of the approach I’ve described above, and then examine some specific soft skills in more detail.

The Value of an Individual Learning Plan

An individual learning plan (ILP) is just what it sounds like: a road map for how an individual employee can learn to improve his or her skills. Of course, a constructive ILP should focus on the continued development of both technical skills and soft skills. As a general guideline, we’ve found that two to three of the ILP goals should be technical in nature, with the rest focused on the soft skills.

The manager or supervisor must kick off the ILP initiative with an honest discussion of the gaps in the employee’s skills set, assessing current levels of capability, and gauging those against what’s needed for improved performance in the current job and what will be required for broader career development. There will be questions such as: What skills does the individual recognize in himself, and at what level? What skills does she think will be useful in the future? Where does he or she want to go with their career? And how quickly?

The soft skills part of the discussion examines factors such as composure, communication, indirect influence, and teamwork (we’ll dig deeper into these later in this article). It’s not easy to conduct such discussions, especially when there are so few markers for what constitutes excellence in those skills and when the topics can get personal very quickly. By its very nature, this exercise

tests most managers' own soft skills. Yet the discussion has to be fearless and interactive. While many of us grew up with the annual review that often involved a cursory discussion of performance, this approach requires the supervisor to closely monitor progress and to have ongoing discussions with staff on that progress.

To help make the whole exercise more objective—and less fluffy—we've found it useful to start by explaining how we define the range of soft-skill competencies, from "marginally functional" up to "fully functional." To be fully functional, we say that an individual has to display the characteristic skill on a consistent basis over time. Comparatively, "marginally functional" means that the employee displays the skill inconsistently or is unable to maintain it in the long term.

Of course, some subjectivity is always involved when using descriptives. However, at Cat we use a scale that covers the range of "minimal to no skill" up to "fully skilled." So, for example, when describing whether an employee can be "inclusive," the Cat scale lists them as "marginally functional" if they can be said to "have difficulty interacting with different kinds and styles of people." But they will rate as "fully functional" if they are seen as able to "interact smoothly and effectively with a broad spectrum of people."

This granularity helps tamp down disagreement and offset personal biases. It not only allows the supervisor to acknowledge the positives (such as an employee helping a colleague on one project) but also to accentuate the expectation that this should happen on most if not all projects all year long.

The ILP is a structured plan that should focus not only on short-term career needs but also on long-term developmental opportunities. It should include three to five goals that can be completed inside a year (short term)—objectives that focus on an employee's specific developmental needs. These might be start from scratch kinds of goals, where the individual shows marginal skill, all the way up to stretch goals where he or she already displays strong talent and is building on that base. Long-term developmental opportunities can cover the same range of goals but should span the next three to five years.

It goes without saying that the "I" in "ILP" is crucial. The plan will never be effective if it's a one-size-fits-all program. It has to be built on two tailored inputs: the employee's view of their career goals and the supervisor's



assessment of what they need to meet those goals and to benefit the work group. For example, a line worker who wants to become a supervisor should—with the assistance of her boss—take a candid inventory of the skills she already possesses that will help her move toward that goal, pinpointing the skills that need further development and identifying others she currently lacks that are necessary to becoming a good supervisor.

Here's an example of how we typically structure ILPs at Caterpillar. Let's meet Joe (not his real name, of course), a young professional with five years of experience at the company. Joe has built a good foundation of technical knowledge about basic supply chain concepts and has solid expertise in ad hoc reporting. But he's weak on the soft skills he'll need to move ahead. He has never made a presentation in public, other than a couple of sessions in a college course where he had to give a five-minute speech. He has no experience leading teams, and has spent all of his time at Cat working individually rather than as part of a team. Joe has completed the first course for his CPIM certification. He wants to become a supervisor in Cat's Record Accuracy Management department, working with the inventory validation team, but realistically, he doesn't see this in his future in the next five years.

It's clear that Joe needs to shore up his soft skills before he could be considered for a supervisor position. To help with this, my supervisor colleagues and I would recommend the following as part of Joe's ILP.

Short term:

- Participation in a Six Sigma project to build teamwork skills.
- Membership in Toastmasters to build presentation and communication skills.
- Completion of the next two modules of APICS training
- Make a presentation at the final gate review of a Six Sigma project to build presentation skills and technical knowledge.

Long term:

- Green Belt leadership of a Six Sigma project to build leadership skills.

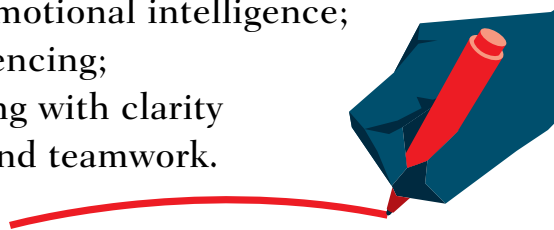
- Completion of final two modules of APICS training.

Assuming that Joe agrees with the assessment level and the proposed ILP, we would observe how he progresses in the next year and where necessary, adjust the plan by adding reinforcing goals or speeding up the completion of planned goals. By refreshing the ILP annually, we can consistently reaffirm Joe's progress or lack thereof, with unwavering assessments of his current and future needs.

Using this approach, I've helped to develop an individual who, when she first came to work for me,

There are five skills that I believe matter most in our workplace:

composure; emotional intelligence; indirect influencing; communicating with clarity and impact; and teamwork.



would write detailed e-mails that were six or seven pages long. When I'd read them, I wasn't sure if she wanted me to take action or was just informing me about the issue. Sometimes, I didn't even know if they were meant for me. But her communication skills have improved so much that she was picked to present this year at an international supply chain conference.

The Importance of One-on-one Coaching

One-on-one coaching sessions help to reinforce the ILP goals. They offer an opportunity to check on the progress of skills, provide direction, and respond quickly when there are evident shortfalls in skills. At Cat, we find that it works well to run these sessions for 30 minutes at least every other week. (It's important to have a set time.) The meetings are structured to include a candid discussion of performance. This doesn't mean sticking blindly to a set agenda; rather, it signals that performance discussions are part and parcel of the meetings.

An exception to the every other week cadence is if there has been an "epic fail"—if an employee has dropped the ball or really stepped out of line. In such cases, it's a failure by the supervisor to wait for the next scheduled coaching session; intervention should happen right away. This is imperative when a shortfall in soft skills has a significant cost associated to it—not only in monetary terms but in terms of the reputation of the

department or because of a gross violation of the company's values or broader societal values.

By the same token, strong examples of positive soft skills should be rewarded and acknowledged as soon as possible to help reinforce the behaviors. We don't wait for the big obvious examples of goodness to show up; we make sure we also reward directionally correct performance—if an employee is really trying to do a better job of communicating, for instance. Don't wait to reinforce the behavior you're looking for.

A productive one-on-one session includes a request for an update on current projects and workload, an open discussion of positive and negative examples of soft skills, and perhaps a discussion of the long-term benefits of a specific skill and how further development of that skill will help the individual in their career goals.

In one situation, I coached an employee who wanted to become a Six Sigma Black Belt, but who was not what we might call an influential person. During our coaching sessions, I explained the difference between direct and indirect influencing and laid out why indirect influence was a powerful way to convince others to take action. I would then point out opportunities where this worker could have used the technique in her current job, in an effort to get her thinking about leadership in different ways—and to help her see herself as a potential leader.

This individual went on to become a supervisor and eventually was selected as a Six Sigma Black Belt. The soft skills she developed were extremely helpful in her supervisor role and as she worked across multiple departments and with individuals at all levels within the division. Learning how to indirectly influence others helped her get noticed as a skilled leader.

Another way to look at one-on-one coaching is to think of it as an ongoing version of the ILP discussion—assuming it's done correctly, of course. These coaching sessions give the supervisor an opportunity to assess in real time what progress the employee is making, what soft skills are still challenges, and what the supervisor can do to help.

A Shortlist of Useful Soft Skills

The list of important soft skills can extend all the way from good listening to empathy and articulacy. At Cat, I have boiled the list down to five skills that I believe matter most in our workplace: composure; emotional intelligence;

indirect influencing; communicating with clarity and impact; and teamwork. I view them as “gateway” skills for helping boost an employee’s value in our company—indeed, in many organizations. Moreover, these skills should help strengthen employee engagement. Let’s review each.

Composure. In my work with junior employees, I don’t often see high levels of composure—that is, the ability to consistently control their emotions at work. Too often, they can be overly assertive in trying to make a name for themselves; they’re too vocal in every meeting, and too ready to push their own agendas ahead of others.

I had one young worker who attacked every issue with the same forceful, straightforward style. You could see others tuning her out before her point had even been made. Essentially, she was training others not to listen to her. Of course, expressing oneself with composure does not preclude being forceful; there are many times when it’s important to state your position unequivocally. But composure also means knowing when to pick your battles.

That goes for supervisors, too. Unfortunately, this young woman remained unconvinced of the merits of composure, seeing it as being untrue to her beliefs. She continued to express her opinions loudly and often. The truth is, not all coaching opportunities pay off in the short run. Supervisors must have composure too, knowing when to back off and when to re-engage. Ultimately, the employee owns their progress or lack thereof.

My supervisor colleagues and I try to coach junior staff to express themselves with composure and to take an enterprise point of view rather than approaching it “me first.” The one-on-one sessions can be a great time to do this. Supervisors can discuss the battles of the last couple of weeks and ask probing questions: “Why was this issue so important to you? Of all the issues present, what drove you to draw the line in the sand on this one? Why spend one of your bullets on that issue?” These kinds of questions can help the young employee start thinking long term and big picture.

Emotional intelligence. In *A Dictionary of Psychology*, emotional intelligence is described as the ability to monitor one’s own and other peoples’ emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior. (It’s also described as one’s



emotional quotient, or EQ.)

Emotional intelligence (EI) complements composure in that gaining awareness of one’s own emotions is essential to being able to better control them. And awareness of others’ emotions is an essential skill for any good leader. It also has practical application at all levels of the organization; it can help to read and respond to a situation in ways that defuse rather than inflame. By identifying others’ emotions, it’s then possible to dig further into where the emotion comes from. The other per-

son may be emotional because he knows the ideas being discussed will cause problems for his group, but he’s not sure how to express that clearly. Or it may simply be that he is stressed because of family or other issues external to work. This is where a “facts and data” discussion helps to clarify the emotions.

To develop EI, we’ve found that it’s best to debrief the employee following difficult meetings and to help him tune into the emotional element. The debrief leads to discussion of various “what if” scenarios that might have helped to move the meeting in a positive direction. Again, there’s absolutely nothing wrong with expressing emotion or being passionate about a subject. But there are times when being emotional will only inflame a situation. Being able to distinguish between when to and when not to express strong emotion is a key skill in other soft skills that we’ll discuss in a moment: indirect influencing and strong teamwork.

Indirect influencing. The *Harvard Business Review* has described indirect influencing as the ability to influence others over whom you have no direct control—peers, co-workers, senior staff, or staff in other departments, for example. It involves being able to get others to help you toward a goal that may not directly benefit them.

This does not preclude being directive—that is, telling others what they must do. Many bosses and naturally dominant characters find success by “directing” and unfortunately feel no need to learn additional skills. Directing can of course work well—and is essential in emergencies—but it’s not sustainable. There’ll always be someone who doesn’t feel like doing what you want. So persuasion is needed—and is a much more valuable skill over the long haul.

Indirect influencing works best by utilizing a combination of soft skills: communicating with clarity

and impact, applying composure, and leveraging teamwork. It appeals to enterprise goals rather than “me first” goals and helps establish the influencer as a strong team player, greasing the wheels for future indirect influencing.

Again, to teach this skill, the supervisor must provide the opportunities—projects, meetings, and so on—and then coach the desired behavior, reinforcing directionally

Indirect influencing works best by utilizing a combination of soft skills: communicating with clarity and impact, applying composure, and leveraging teamwork.



correct behavior as well as discrete moves. Patience is a virtue: I find that most junior staff require multiple opportunities to get it right.

Communicating with clarity and impact.

This is the skill that I find missing in most junior staff; it was certainly a big hole in my skill set in my early days at Cat. For me, the “aha!” moment came after a team-building exercise where I found my individual scores on the exercise were out of sync with those of others on the team. I realized I wasn’t making persuasive arguments and providing input that the team needed in order to make better decisions. I made it a personal goal to improve both my clarity and my impact, because it was frustrating for me (and for the team, as it happened) when I was unable to articulate an important point.

Clarity in communication can be quite difficult to coach; most people feel they are clear communicators. To get the point across, I find it helps to talk in terms of the “essential few”—the core ideas you’re trying to communicate. We all know people who tell “spaghetti stories”—bringing in far too much detail or trudging through “and then this happened” chronologies. They can’t seem to cut to the chase. They’re not putting themselves in their audience’s shoes, emphasizing the two or

three points they want to convey.

To address this, I provide one-on-one coaching tied to various forms of communication—e-mails, PowerPoint, and podium presentations to name a few. During these sessions, I’ll review a communication that was less than clear and discuss with my direct report the essential few points that I believe they were trying to communicate.

My clear, concise communication to them: brevity encourages clarity—and clarity encourages impact.

Teamwork. In some ways, this is one of the easier soft skills to begin building at Caterpillar because it’s one of the company’s five defining values. In most instances, coaching in teamwork is all about finding the right opportunities for staff to engage on teams. Supervisors need to be thoughtful about matching individuals to teams: does the employee have skills

and knowledge that will benefit the team? What can the individual learn from the team that will benefit their development? The team placement should not be based on availability alone; it’s not just about a warm body.

Teams are a great opportunity for individuals to exhibit and build the other soft skills discussed above. In my role as supervisor, I work hard to call out shortcomings in good teamwork and to publicly reward good examples.

The supply chain talent shortage won’t be resolved any time soon. So it’s imperative for managers and supervisors to do everything they can to attract, retain, and develop the talent that is available. One crucial way to do that is to focus on the soft skills of the current workforce, improving their effectiveness and deepening their interest and engagement not only in the jobs at hand, but also in the broader goals of the organization.

Development of soft skills is no overnight effort; it’s always time consuming and it’s often prickly and personally challenging for managers. But it is at least as important as development of hard technical skills, and many studies show it yields very positive returns in the long run. At the end of the day, that’s what every company’s top management and shareholders are looking for. ☺



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Navigating to the Top:

In most professions, career success is a straight shot to the top of the ladder. For the supply chain professional, advancing in the field is more like climbing a mountain, where any number of routes may get you to the peak. Here's what every up and coming professional should consider to advance their career.

Brian J. Gibson, Ph.D. is the Wilson Family Professor of Supply Chain Management at Auburn University. He can be reached at brian.gibson@auburn.edu. For more information, visit harbert.auburn.edu.

Sean P. Goffnett, Ph.D. is an Associate Professor of Marketing and Logistics at Central Michigan University. He can be reached at sean.goffnett@cmich.edu. For more information, visit www.cmich.edu/colleges/cba.

Zac Williams, Ph.D. is Associate Professor of Marketing and Logistics at Central Michigan University. He can be reached at zac.williams@cmich.edu.



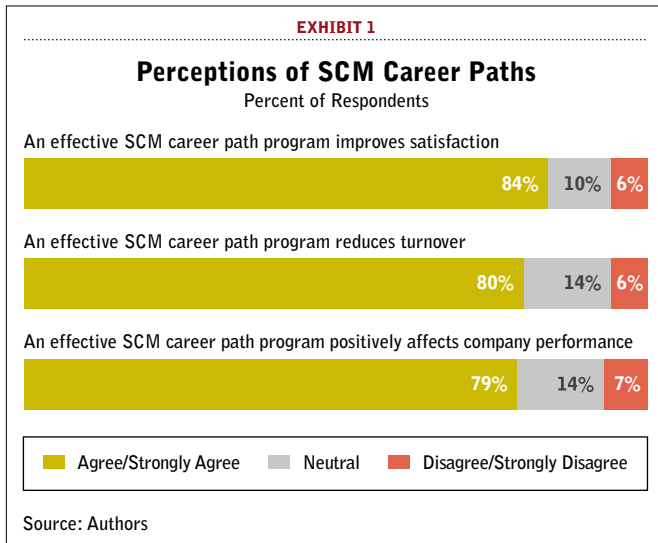


Climbing the Mountain

By Brian J. Gibson, Sean P. Goffnett, and Zac Williams

From the time most of us take our first job, we're told to climb the ladder of success if we want to get to the top. In most professions, there is a well-defined set of career rungs that lead to the top. Accountants and lawyers prove themselves as associates, get promoted to partner, and then, perhaps lead their own firms. Sales professionals often begin on the customer service desk before working their way into the field and then up to product managers, district managers, and VPs of sales and marketing. You may not make it all the way to the top of your career ladder, but the path is straight, clear, and understood by all.

That's not the case for supply chain professionals, where the path to the top is more like climbing a mountain. There is typically no single straight route to the peak. Instead, a climber can pick their way up any number of routes, with the speed and path of ascent based on the climber's skills, interests, and tolerance for risk. Like a mountain climber, supply chain professionals must work around obstacles—sometimes moving sideways and even



profession. Below, we discuss the structure and benefits of each strategy, followed by a review of essential advancement skills and the role of supply chain leaders in facilitating the ascent of the career mountain.

Career Path Structures

Career paths are very important to supply chain professionals. Accordingly, there is a strong belief in career paths among our survey respondents, with 84 percent of them agreeing with the statement: “Our organization should provide career paths for SCM professionals.” Behind this perspective is the belief that the availability of well-designed and logical career paths drives professional satisfaction and retention. Exhibit 1 also shows that as individuals progress along a career path and develop a broader base of expertise, they make a positive contribution to company performance.

Given the strong belief in supply chain career paths, you would think that companies would be motivated to develop advancement paths and provide career planning guidance. However, too often that is not the case. Exhibit 2 reveals that nearly two-thirds of our respondents’ companies take a lax, unplanned approach to SCM career path development. It is largely a do-it-yourself (DIY) venture.

As we analyzed the interview transcripts from our study, it became clear that supply chain professionals take their careers in one of three directions in this DIY environment. These career paths include: a specialist path that focuses on one supply chain function; a generalist path that crosses multiple supply chain functions; and, a path for the boundary spanner who at times crosses over to roles outside SCM. Here’s what each of those paths looks like.

backwards—to advance their careers.

Of course, few mountain climbers or supply chain professionals make it to the top on their own. Just as the mountain climber needs ropes, harnesses, and crampons, the supply chain professional must use technology tools, process knowledge, and people skills to advance. It also helps to work with a climbing guide—or mentor—who has already scaled their own peak and understands the terrain, monitors progress, and applies the brake when necessary.

Those are among the findings from our recent *SCM Talent Development* research series for the Council of Supply Chain Management Professionals (CSCMP). Based on surveys and interviews with supply chain professionals, it is clear that career paths are individually designed and highly flexible. However, we identified three distinctive strategies for advancing in the supply chain

It also helps to work with a climbing guide—or mentor—who has already scaled their own peak and understands the terrain, monitors progress, and applies the brake when necessary.



SC Specialist

A supply chain specialist (SCS) career path focuses on a primary process or function such as procurement, transportation, or fulfillment. Like the sport climber who follows a permanent path of anchors affixed to the mountain, the SCS ascends a relatively vertical career path that was created by their predecessors. The SCS must develop deep functional skills and career endurance to advance toward the summit.

Within this path, the SCS starts at the entry-level position, likely an operations role. Over time, the next move is



into an analytical role, followed by managerial roles during mid-career. The pinnacle of this career path is a functional vice president role where the individual is responsible for the strategy, spend, and oversight of the function.

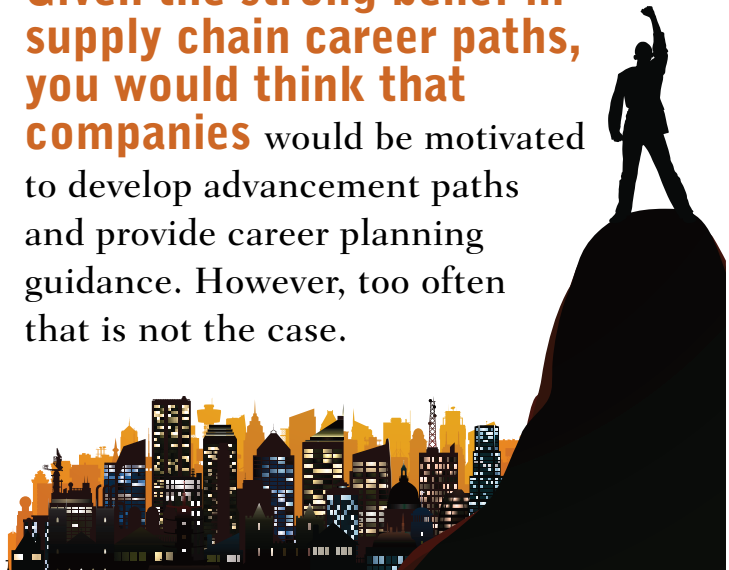
To become an effective SCS, an individual needs to learn the ins and outs of the area. Nothing within the functional process should be outside the bounds of knowledge for the SCS. For example, a transportation-focused SCS should understand the macro-trends affecting freight management planning, have intimate knowledge of internal inbound and outbound delivery costs, and provide strategic transportation insights for supply chain decision making.

Pursuing a SCS career path makes sense for an individual with a passion and aptitude for a particular supply chain function. A very task-oriented and deadline driven person would do well in managing fulfillment operations, while a persuasive individual with strong analytical skills may be better suited to the procurement area.

In addition to aligning personal strengths with professional requirements, the SCS career path offers additional benefits:

1. The specialist role offers the clearest and straightest upward path. Everyone knows the skill requirements and it is relatively easy to identify the next logical role to progress your career. It is the closest the industry has to a career ladder.
2. The SCS becomes the expert in the function. Spending an entire career in one area allows you to become very fluent in the discipline and drive innovation.
3. The SCS builds strong bonds with key resources.

Given the strong belief in supply chain career paths, you would think that companies would be motivated to develop advancement paths and provide career planning guidance. However, too often that is not the case.



Extended engagement in a function helps you establish a trusted network of reliable suppliers and service providers.

The primary downside of the SCS option is the limited prospects beyond functional leadership roles. Your upward mobility to an executive level role may be constrained by a lack of cross-functional experience and capability misperceptions. Being viewed as a “one-trick pony” is not conducive to broader career opportunities.

SC Generalist

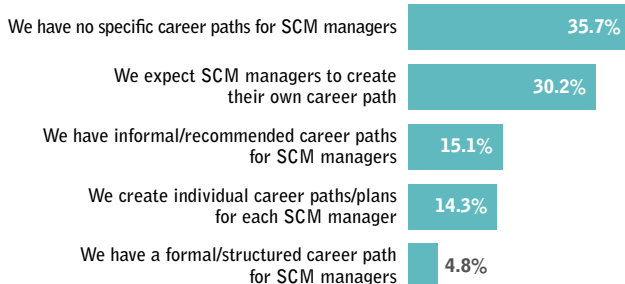
A supply chain generalist (SCG) career path focuses on gaining a wide variety of experiences by moving between functional areas and role types. Like the traditional climber who works up the mountainside using an exploratory, individualized path, the SCG takes a unique, zig-zag path that is not based on the career steps taken by other supply chain professionals. To enhance career growth prospects, the SCG must engage regularly in SCM professional development. This will help the individual build a broad knowledge base that bridges different SCM processes.

Within this path, the SCG may move from an entry-level management role into a rotational program for high potential individuals. Upon completion of the cross-functional program the individual treks through a series of mid-career managerial positions. Though the path upward may not be direct, the SCG roles do not stray outside the supply chain domain. The intended summit of this career path is a senior-level leadership role such as an executive vice president position in which the individual

EXHIBIT 2

Description of SCM Career Path Planning Activities

Percent of Respondents



Source: Authors

synchronizes the strategy and execution of supply chain processes for the organization.

Success within the SCG career path demands that you master supply chain total cost control, trade-off analysis, and supply chain finance. This disciplinary knowledge must be supplemented with broader business acumen. Skills in data analysis, risk management, talent development, and demand planning are rapidly emerging as essential SCG capabilities.

Pursuing a SCG career path is appropriate for an individual who wants to understand and drive the coordination of supply chain processes. Like the traditional climber who must think their way up the mountain and make adjustments along the way, a SCG should be an explorer who learns quickly, creatively solves problems,

and effectively manages ambiguity.

Beyond the opportunity to design your own ascent, the SCG career path offers additional benefits:

1. The generalist role allows the individual to gain a wide span of experience. Compared to the specialist path, the SCG option gives you career path flexibility.

2. With experience in multiple functions, the SCG understands the external impacts of their actions. This helps to make optimal trade-off decisions that benefit the organization (and improve your career prospects).

3. The SCG engages with a variety of supply chain leaders in multiple contexts. This visibility facilitates awareness of your skills and a wider array of advancement opportunities.

The drawback of the SCG career path is the potential for a slow, circuitous route to leadership roles. Moving from one functional area to another may require a step backward to build foundational knowledge or a lateral move to gain experience. Geographic relocation may also be necessary for advancement.

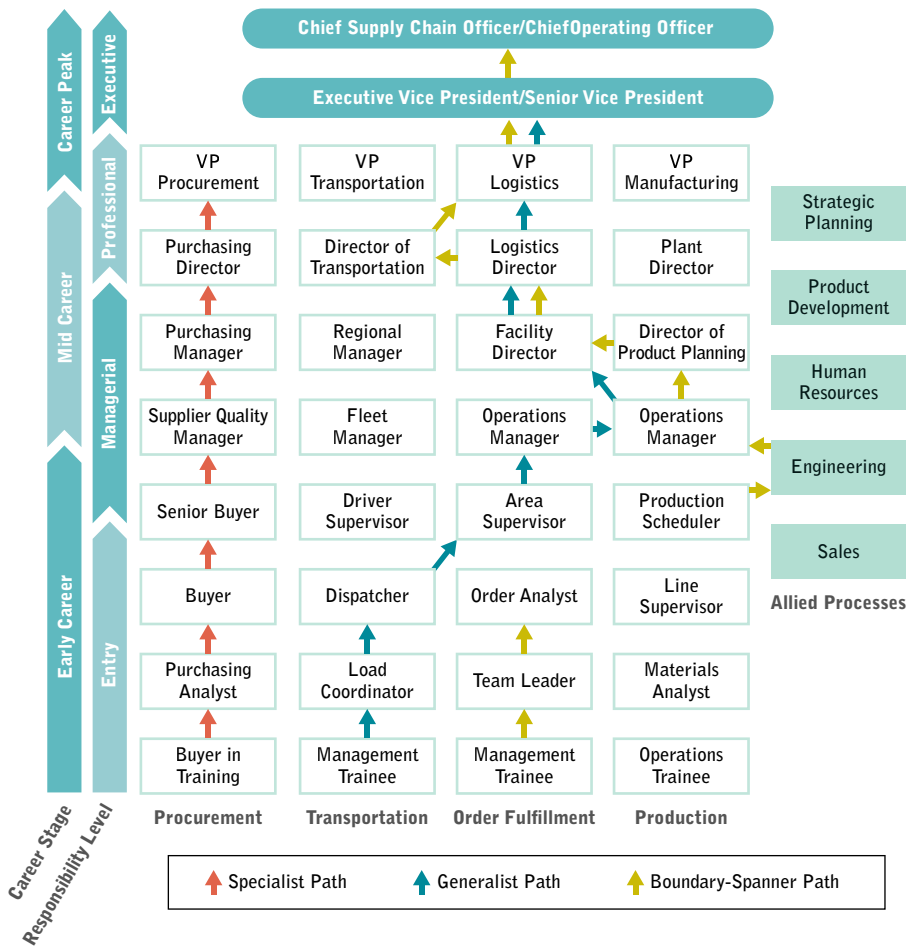
SC Boundary Spanner

The career path for a supply chain boundary spanner (SCBS) focuses on a unique blend of SCM and non-SCM experiences. Just as the expedition climber attempts the most challenging peaks, the SCBS is a career adventurer who pursues the lofty goal of ascending to a chief supply chain officer role—or beyond. This requires a custom career path with calculated risk taking and a willingness to step fully outside one’s comfort zone.

This career path shares much in common with the SCG career path. Both paths cross supply chain functions, both involve indirect paths to leadership roles, and both require a broad knowledge base that bridges supply

EXHIBIT 3

SCM Career Path Options



Source: Authors

chain processes. The noticeable difference is that, over the course of time, the boundary spanner pursues experiences beyond the SCM domain. SCBS career paths can include stints in sales and marketing, product development, engineering, strategic planning, or other non-SCM-affiliated areas of the company.

Given the varied responsibilities and skills required in these disciplines, success in the SCBS career path is not guaranteed. A boundary spanner must be confident enough to move into roles that are well beyond his or her formal training and experience. Continuous learning is essential to fill the individual's functional knowledge gaps. Part of this learning effort must foster understanding of the strategic links and trade-offs between the SCM and non-SCM functions.

Pursuing a SCBS career path is appropriate for an individual who has a multi-disciplinary knowledge base, strong skills, high career aspirations, and a tolerance for calculated risk. Like the expedition climber who invests heavily in planning the adventure, the boundary spanner must map out a logical path and engage supportive mentors who will provide valuable guidance.

Despite the potential risks, the SCS career path offers compelling benefits:

1. Companies desire leaders with a broad perspective that includes, but is not limited to, SCM. Following a SCBS career path gives you upward mobility that extends beyond SCS or SCG opportunities.
2. Boundary spanners develop a vast perspective upon which to draw in subsequent roles. When difficult decisions must be made, you will possess the required expertise to make the right call.
3. The SCBS path can lead to the C-suite. A series of roles within and outside SCM facilitated the ascension of Tim Cook to CEO of Apple Inc.

The primary obstacle of the SCBS career path is the limited availability of cross-training opportunities. Many companies eliminated these developmental assignments during the economic downturn. In these situations, boundary spanning is now largely a DIY proposition.

Each of the three paths offers a viable go-forward strategy in support of an enriching and challenging SCM career. Exhibit 3 provides examples of progression patterns across each path. The individual supply chain professional must honestly assess his or her skills, career aspirations, and passions to determine which path is the most appropriate

Similar to the training regimen of a climber preparing for a major expedition, a supply chain professional must develop a plan for professional growth and promotion readiness.



to pursue. Those individuals that actively manage their career progress, remain flexible regarding locations and assignments, and take reasonable risks will achieve the greatest success.

Skills and Experience Development

Successful mountain climbing requires more than a willing participant with shiny new equipment. It takes great planning, physical endurance, and practice to properly use the harnesses, crampons, and carabineers to attempt even the lowest risk climb. Similarly, a supply chain professional cannot step into the most challenging position and expect to thrive. Ongoing preparation is needed to drive career path progress. Valuable preparation activities include individual development plans and tailored training.

Similar to the training regimen of a climber preparing for a major expedition, a supply chain professional must develop a plan for professional growth and promotion readiness. This is established through an individual development plan. These customized guides, created by supply chain professionals in collaboration with their managers, establish detailed objectives, action plans, timetables, and performance metrics.

The action plan and timetable of the individual development plan highlight tailored training and education requirements for the individual. As the plan is enacted through project assignments, education, and development experiences, the supply chain professional gains the skills needed for professional advancement. The development activities also help the individual keep pace with the rapidly changing SCM field and contribute to organizational success.

When executed in a consistent fashion, upward mobility is enhanced. The ongoing dialogue between the

individual and manager clarifies the links between the organization's supply chain talent requirements, the individual's developmental needs, and future advancement opportunities.

Role of Supply Chain Leaders

Few of us are crazy enough to participate in free solo climbing. Regardless of the person's ability, the risks of climbing alone and without the use ropes, harnesses, and other protective gear are great. Mistakes can be fatal. Similarly, it would be ill-advised for a supply chain professional to attempt a solo career ascent. Guidance and support is needed from other supply chain leaders who have already scaled their own peak in order to avoid a career catastrophe.

One method for leadership engagement is through the development of recommended career paths to guide supply chain professionals. This is a good middle ground solution that is neither totally rigid nor completely fluid. Career path programs help leaders and the individual proactively plan and manage his or her professional growth. Ownership of the process is shared, the path upward becomes more transparent, and two-way communication of organizational and individual needs occurs. This will enhance commitment to the process and patience with career advancement speed.

The other important leadership support mechanism is career coaching. Intelligent mountain climbers work with guides and climbing partners to assure a safe ascent, as well as Sherpas to provide necessary supplies during the expedition. Likewise, supply chain leaders can assign mentors to help supply chain professionals assess their specialist, generalist, and boundary-spanner prospects. Mentors can also provide sage advice regarding the value of moving laterally or revising the route to ensure a successful career climb. Finally, these trusted advisors can effectively articulate the myth of a clean, on-sight career ascent with little planning or experience.

By aiding in career planning for both novices and seasoned professionals, supply chain leaders help individuals make productive and sustained upward progress toward their desired career peak. This provides the company with a positive return on its talent investment through long-term retention of supply chain professionals.

By aiding in career planning for both novices and seasoned professionals, supply chain leaders help individuals make productive and sustained upward progress toward their desired career peak.



The DIY Career

Despite the strong belief that supply chain career paths facilitate greater satisfaction, retention, and company performance, far too many companies force their talent into the solo climber approach—they're on their own. Individuals are expected to independently develop needed expertise, secure the right tools, and identify the best upward path. That may work fine for the hobbyist who wants a leisurely hike, but in business, this "go it alone" approach fails to provide the necessary professional development and guidance of supply chain talent.

Instead, supply chain leaders would be wise to shift from an ambiguous DIY career path approach to a more prescriptive approach that articulates the three directions covered in this article. The specialist, generalist, and boundary spanner paths provide logical climbing routes for supply chain professionals to achieve peak career performance. Within these paths are opportunities for individuals to be creative and adapt the route to specific career goals and interests.

Combining these three paths with appropriate development opportunities and coaching will give supply chain professionals both the depth and breadth of experiences needed for upward mobility. This creates a positive working environment, promotes peak performance, and facilitates talent retention. For organizations, as well as the industry, the ultimate result is a group of supply chain professionals with the necessary capabilities to ascend to future leadership roles. ☺☺

The authors would like to recognize the contributions of Robert L. Cook, Ph.D. (1947-2014) to the research. Cook served as the Jerry and Felicia Campbell Professor of Logistics and Marketing at Central Michigan University.

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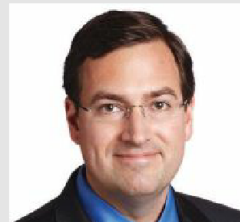
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Kai Hoberg is an Associate Professor of Supply Chain and Operations Strategy at Kuehne Logistics University. He can be reached at kai.hoberg@the-klu.org. For more information, visit www.the-klu.org.

Knut Alicke is a Master Expert in the Supply Chain Practice at McKinsey & Company. He can be reached at knut_alicke@mckinsey.com. For more information, visit www.mckinsey.com.

Markus Leopoldseder is a Director of Knowledge in the Supply Chain Practice at McKinsey & Company. He can be reached at markus_leopoldseder@mckinsey.com. For more information, visit www.mckinsey.com.

By Kai Hoberg, Knut Alicke, and Markus Leopoldseder

It's difficult for supply chain professionals to comprehend, but most of their colleagues couldn't care less about fill rates or asset utilization. For that reason, supply chain management in most companies is considered to be everything—except sexy. Supply chain managers who outline their must-win battles regularly point to initiatives like forecast improvement, master data standardization, ERP implementations, or warehouse optimization. These battles are clearly crucial for boosting supply chain performance but, at the same time, they're a hard sell to senior management. That's because the concepts and implementations are very technical, understanding interdependencies requires in-depth knowledge, and the actual benefits are difficult to judge.

Moreover, supply chain initiatives are competing for senior management's attention among many other more accessible—and sexy—topics like market entries, potential acquisitions, or new product launches. When asked for their biggest personal pains, supply chain leaders frequently mention the executive team's limited interest in supply chain processes or the benefits they provide. Even the hot topics of the day, like Big Data and reshoring, fail to raise the profile of supply chain teams, even though they have been working on these topics for many years.



to the Board

Supply chain leaders frequently deal with an executive team that lacks both knowledge and interest in supply chain management. Yet, the supply chain community all too often struggles to communicate the value it provides. To get the required executive support, SCM needs to be better positioned in the firm. Here is a framework that provides guidance on how to bring supply chain management to the Board agenda.

Of course, there are examples of successful firms that have deeply embedded SCM into their DNA and include SCM topics in Board-level discussions. They understand that SCM—if positioned appropriately and executed correctly—can make the difference between mediocre and outstanding business performance. After all, providing truly distinctive customer service or expanding into new markets is unthinkable without a world-class supply chain to support the chosen strategies. Likewise, inventory reduction is not simply a top-down target set by the financial organization; it takes a supply chain to hit those targets.

To make a true difference, the Board must understand SCM. For instance, strategic trade-offs, such as whether to focus on cost versus customer service, ultimately translate into supply chain requirements and targets. Similarly, more tactical Board decisions, such as whether to approve an important deal that requires potentially risky decisions on securing components or supplier capacity, cannot be executed without support from SCM. The supply chain team needs to create and evaluate the relevant scenarios on investments and flexibility, while the Board ultimately makes the final decision. On a more operational level, the Board needs to be aware of potential conflicts between sales and operations that demand answers if not solved at the lower levels of the organization.

At far too many firms, however, senior management still asks the SCM team to simply reduce costs or blames them for missed shipment, late deliveries, and unhappy customers. What can supply chain leaders do to overcome these misperceptions and bring SCM to the Board's agenda? To raise its profile, we have developed a framework with three key action areas that supply chain leaders should leverage to bring the topic to the Board agenda (see Exhibit 1).

First, supply chain leaders need to ensure that SCM is accepted as a trusted business partner in the company by delivering exceptional value. The function should go beyond classic cost reductions and enable revenue

EXHIBIT 1

Key Action Areas for Bringing SCM to the Board Agenda

- 1 Ensure that SCM Delivers Exceptional Value**
 - Become a valued and trusted business partner who understands the commercial requirements
 - Align the supply chain strategy and capabilities with corporate requirements
 - Contribute to revenue growth since cost reductions are taken for granted
 - Get involved in all relevant SCM decisions and ensure process discipline
- 2 Quantify the Value Provided**
 - Use key performance metrics that are relevant to the board and don't bore with operational metrics
 - Translate supply chain performance metrics into financial metrics
 - Continuously track all benefits that the supply chain functions provide
 - Create your own annual report that summarizes the success and failures of your team
- 3 Excel at Communicating the Value SCM Delivers**
 - Apply the right level of detail and focus on meaningful elements
 - Speak a simple language and don't assume prior knowledge of SCM jargon or definitions
 - Carefully explain trade-offs and customize the message to the audience
 - Identify SCM ambassadors and appoint a listening team that helps with positioning

Source: Kühne Logistics University, McKinsey & Company

growth by introducing supply chain innovations. Therefore, the function needs to fully align supply chain capabilities with the overall needs of the business and become involved in strategic decision making.

Second, supply chain leaders must quantify the value that SCM provides in a relevant and coherent manner. Selecting appropriate KPIs that are understood by the Board and commercial counterparts is essential, just as tracking all the benefits for the department's own annual report is now recognized as a best practice.

Third, supply chain leaders must speak the language of business. They need to communicate their value using terms and concepts that are accessible to everybody. In particular, using the right level of detail and explaining concepts and trade-offs to non-SCM experts will ultimately enhance the entire team's understanding of the topic.

Common SCM Misperceptions

We often hear from SCM leaders that senior management and other departments don't perceive supply chain's contributions in the intended manner. A SCM executive in the process industry recently stated that his team is "... perceived as a bunch of nerds who do complicated stuff that nobody understands. Even worse, colleagues feel that we never really deliver what is requested, and we ultimately get blamed for all of the things that go wrong."

While this seems like a rather discouraging statement, we came across several very common and similar

misperceptions regarding the position of supply chain functions in firms. In particular, employees with little prior exposure to operations often have a vague understanding of what SCM does. Frequently, SCM is still confused with classic logistics operations that focus on storing and moving goods, like warehousing and transportation. The fact that many firms have outsourced a significant portion of their logistics operations to 3PLs often leaves a blank spot. Other companies relabeled logistics functions and professionals as SCM without expanding their operational responsibilities—it's still warehousing and transportation under another name. However, SCM's scope has evolved significantly, and now includes the responsibility of managing the end-to-end value chain.

The confusion with logistics also triggers an overemphasis on reducing costs. C-level executives often associate logistics with the increasing commoditization of transportation and warehousing activities. Thus, all efforts are focused on cost cutting and containment. Little room is left for innovative activities that could provide significant value at a marginally higher cost.

An additional challenge is the high complexity of many supply chain decisions, which cannot be fully captured by outsiders; in particular, the operational and tactical decisions supply chain managers make to optimize production volumes, capacity allocations, and inventory levels are often incomprehensible to outsiders. Hence, SCM is frequently perceived as a black box that nobody can really follow.

Executives and managers in other functions are additionally confused by the technical jargon unique to the “dark art of supply chain management.” This is especially an issue if SCM does not provide the required quantities at the right time. After all, supply chain news typically only makes the headlines when something goes wrong that affects the customer, such as BMW's issues with spare parts deliveries due to IT issues or the Adidas group's shrinking market share in Russia due to an inadequate distribution center. The same is true within companies; in a world of zero defects and Six Sigma, customer fill rates of 95 percent don't sound very impressive to commercial partners, even if the SCM team is leading a heroic effort to hit that number. Instead, the 5 percent that was not

delivered on time and in full is neither understood nor accepted, and SCM takes the blame for alienated customers and lost revenues.

Ensure that SCM Delivers Exceptional Value

Moments of fame for supply chain executives are fleeting. Senior management generally doesn't care about better end-to-end planning or new supply chain risk mitigation processes—they care about results that drive top line growth or improve the bottom line. To advance to the next level, supply chain teams need to become trusted business



Supply chain leaders need to ensure that supply chain capabilities are fully aligned with overall needs of the business and become involved in strategic decision making.

partners who deliver exceptional value. Getting the basic fulfillment processes right is a fundamental prerequisite for sitting at the Board Room table. As the head of a big chemical business division emphasized: “I would love to involve my SCM folks in more decisions, but they don't really know what the business needs.”

In fact, it often feels as if sales and supply chain live in two different worlds. Far too many key account and product managers have seen supply chain managers shake their heads about the aspirations for filling customer requests. In this case, those working in supply chain need to understand the true commercial requirements and build customer intimacy—at least with their internal customers.

One way to address this is to develop supply chain talent that is cross-functional by nature and understands the needs of other departments. Best practice companies foster this through job rotation programs that shuffle people between sales, finance, and operations. The gathered insights and developed network ultimately foster better involvement of the SCM team. Creditable talents often act as first points of contact within the organization regarding all supply-chain-related inquiries.

Once it has a better understanding of customer

requirements, the supply chain team needs to align the supply chain strategy and capabilities with the corporate strategy. While managers on all levels are typically familiar with the corporate strategy, familiarity with the supply chain strategy is a different story, often because it is not well formulated or not aligned with the overall strategy.

We find a very close alignment between strategy and supply chain setup in best-practice companies where the supply chain team helps shape the strategic agenda. Cost leaders like IKEA, for instance, design their products for supply chain efficiency. Service leaders like Amazon implement technologies that enable a long tail and fast deliveries. Innovators like P&G execute excellent phase-in/out product life cycle processes. And integrators like Li & Fung carefully orchestrate a broad network of supplier and contract manufacturers.

To deploy a supply chain strategy that is in line with the company strategy, supply chain leaders must develop planning strategies and supply chain structures with a clear focus on true customer service and requirements. Based on the strategy, the supply chain team needs to derive targets and identify the changes required to deliver the strategy and execute rigorously. Most important, the strategy should be concrete (too often, it is full of superfluous information), and communicated to the adjacent functions.

Clearly, supply chain managers need to be at the forefront of cost containment by additionally boosting process efficiency, leveraging more affordable suppliers, or introducing new technologies. However, a strong focus on cost can further marginalize SCM's position in the company. High-impact supply chain teams provide additional value by enabling new revenue streams (see Exhibit 2).

By finding smart ways to customize products, enter new sales channels, or tap into new markets, these teams visibly support the top line and can argue for supply chain investments.

One example of this approach is a German market leader in heating, ventilation, and air conditioning that

EXHIBIT 2

SCM Contributions to Revenue Growth Opportunities

Revenue Opportunity	Example	SCM Contribution
Reduce Lead Time	"Attract new customers by offering short lead time"	Redefine logistics processes that enable a later order cutoff time for next-day delivery
Enable Customization	"Let customers customize their products"	Create a modular product design that gives the customer a wide variety of choices
Accelerate Product Launches	"Be the first in the market with a new technology"	Integrate R&D, manufacturing, and supply chain decisions to enter markets first with the new product
Expand into New Markets	"Enter and penetrate new markets"	Find local suppliers and create a local network that enables competitive pricing in emerging markets
Enter New Channels	"Offer products in online channels"	Create efficient warehousing, picking, and logistics by selecting the right partners for e-fulfillment
Enable Premium Pricing	"Charge a premium for unique products and services"	Ensure a constant flow of innovative products that customers are willing to pay a premium for
Provide Outstanding Service	"Deliver the best service for the aftermarket"	Enable service technicians to provide value added service based on real-time condition monitoring

Source: Kühne Logistics University, McKinsey & Company

cleverly redesigned its spare parts fulfillment process. While the obvious choice was to re-engineer the process at a lower cost, the supply chain team opted for a different approach. The new process enables customers to place their orders for next-day delivery later in the evening. This delivered a significant competitive advantage in a market where direct customers like plumbers or handymen can only order in the evening when they return from a job site. Another successful example is a construction equipment manufacturer that offers its huge variety of products with a smart postponement strategy that enables significantly shorter lead times and has triggered double-digit revenue growth.

A final prerequisite for creating value is early involvement in all relevant SCM decisions. Clearly, this is partially a chicken-and-egg problem, but supply chain teams need to provide early input for many decisions. Other functions need to understand that many supply chain issues can be circumvented by a smart product design that enables fast supplier transitions, smaller packaging sizes, and more modularized components. Likewise, promotions only thrive if raw materials, manufacturing, and logistics capacities are carefully planned, thus, minimizing stockouts while avoiding retailers' forward buying. Similar to best practices in S&OP, the supply chain team should ensure that

processes are well defined and that the involved functions enforce process discipline.

Quantify the Value Provided

If supply chain teams want a seat at the table, they must quantify the value they provide. We regularly ask supply chain leaders how they have shown their impact in the past year. Too often, their responses are either defensive or highly focused on operational metrics. There is no need to be defensive: If a team provides value, they should be proud to highlight it. However, to have impact, the message must be delivered in a language that is understood by the Board.

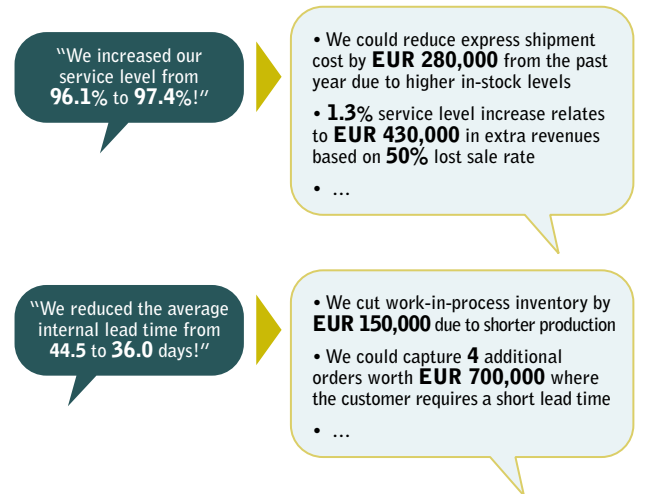
Take metrics. Top management certainly considers metrics that are based on strategic C-level objectives, such as EBIT, cash flow, new customers, or market share. Management pays little attention to operational metrics like pick rates, truck utilization, or inventory turns because it isn't obvious how they affect the bottom line. To make SCM relevant for the Board, the reported supply chain metrics must be relevant—both from a company perspective and a financial perspective.

The link can easily be made by considering the strategic supply chain dimensions of cost, service, and capital. To be effective, however, these should be focused on the key metrics that drive the business, while the rest should stay within the supply chain team. No executive wants to see monthly reports with dozens of metrics that nobody understands. In addition, it is helpful to link metrics with objectives and supporting initiatives. For example, the supply chain team of a fast moving consumer goods manufacturer has linked the customer orientation objective to the metrics of service level and customer satisfaction. The report also highlights supporting projects that aim to boost customer orientation through promotion management, customer management, and distribution processes, among others.

Translating supply chain performance metrics into financial metrics is the next vital step. Best practices include carefully developed KPI trees that gradually link operational metrics to financial metrics. Thus, potential shortcomings in supply chain metrics can be easily recognized. For example, many companies still use inventory turns as a key metric for measuring inventory performance. However, when calculating the cash-to-cash cycle time (an important financial metric) from inventories, accounts payable, and accounts receivable, it is apparent that the stock range in inventory days is a much more straightforward metric. In addition, this metric is

EXHIBIT 3

Translating Supply Chain Metrics into Financial Benefits



Source: Kühne Logistics University, McKinsey & Company

much easier to interpret for non-supply-chain experts.

If direct relationships between operational and financial metrics are difficult to justify, educated illustrations about the impact are helpful. For example, service level is another abstract metric—however, collectively judging the benefits of service level improvements can help argue the case (see Exhibit 3).

The same is true for other even more intangible improvements like master data accuracy or real-time planning. As a nice side effect, the quest for quantifying the benefits typically stimulates very fruitful and in-depth discussions within and across teams.

To provide evidence of the value that the supply chain has created, the team should continuously track all achieved benefits. Tracking needs to consider cost reductions, but it also should include revenues generated and costs avoided. In many companies, other departments are signing off on benefits to ensure plausibility. Based on the gathered data, the supply chain team can create its own annual report, which highlights its successes and provides evidence for any further discussions. To ensure balance, the annual report should also have a section on failures like late product introduction or major orders lost, which highlights the lessons learned from these occurrences.

Excel at Communicating the Value SCM Delivers

Even if the supply chain team is doing a great a job, many supply chain leaders struggle to communicate their value. Supply chain departments rarely give

themselves a mission that sticks. One exception is the German personal care company Beiersdorf, with its Blue Supply Chain Agenda: “We will deliver. Because we care.” Beiersdorf has gone so far as to say that “the Blue Agenda defines the course of our future.”

Beiersdorf, of course, does not define the rule. We have seen many frustrated supply chain managers in other companies who solved a vexing problem, only to see their commercial counterparts receive the kudos. The daily challenge of putting out fires like missed

talks: How well can the team concisely illustrate a specific problem or concept? We have all observed situations where sales has managed to secure an important customer order that requires rush deliveries from suppliers and the reshuffling of production schedules. In these situations, supply chain executives need to communicate their requirements and challenges very precisely. In particular, supply chain investment projects need to be carefully explained if they are counterintuitive. For example, why should they invest in highly automated warehouses in certain cities while

keeping manual, labor-intensive warehouses in other regions?

Too often, supply chain managers overemphasize complex and detailed topics. In all communications, it’s important to consider the knowledge base and experience of your counterpart to ensure that you don’t get lost in details or dwell on concepts that only supply chain insiders can follow. For exam-

ple, the frozen horizon in production is often not at all frozen for others, and the understanding of service levels or forecast accuracies varies widely within the firm.

The guiding principle for the supply chain team is always to avoid unnecessary buzzwords or obscure acronyms. Not every manager is familiar with ASNs from suppliers, LTL shipments to customers, or ATP inventories based on the MPS. You might impress your SCM counterparts at the supplier or customer, but internal meetings suffer if different business functions don’t speak the same language.

Further complications commonly arise because other functions are not fully aware of the classic supply chain trade-offs between inventory, cost, and service. However, these trade-offs must be carefully illustrated and understood by all departments involved. What happens if we don’t fill a customer’s rush order? What is happening to the gross margin due to overtime and more expensive raw materials? What is the impact on other customers? Consistent service and supply policies that enable process discipline might be more profitable in the long run than constant fire fighting due to last-minute orders.

While supply chain managers are in a weak position when time critical decisions are made, a carefully prepared post hoc analysis that outlines the impact of the decision within the firm could be an eye opener for the future. Consistent service and supply policies that enable process discipline might be more profitable in the long run than constant fire fighting due to last-minute



In the end, supply chain leaders must successfully interact with the other business functions and, particularly, with the executive team.

shipments and production breakdowns make it hard for supply chain managers to step back and paint the big picture that is critical for engaging the Board. Often, supply chain managers don’t have the experience to communicate with senior management because there were previously too low in the hierarchy to have done so before. At the same time, supply chain managers love to tell their stories through numbers and Excel spreadsheets. A3-format Excel printouts and the details of an ingenious new optimization algorithm rarely excite a senior manager.

Simplify, Simplify, Simplify

Common SCM challenges like S&OP, SKU rationalization, or inventory optimization are complex topics that are ill suited to a simple illustration. However, they demand a careful explanation—in particular to non-subject-matter experts. All too often, we find that both the content and delivery of important messages end up confusing, irritating, and alienating to management and business partners. In particular, senior executives who have to deal with a myriad of issues often have only a few minutes to decide on important issues that require carefully customized messages. The inconvenient truth, as Albert Einstein states, is simple: “If you can’t explain it simply, you don’t understand it well enough.”

Great supply chain leaders understand the importance of a simple and focused message. They often test their team’s understanding with napkin contests or elevator

orders. In other situations, carefully prepared analyses need to be conducted much earlier to avoid costly decisions. For example, a trade-off in product design might be the right call if reliance on an overseas supplier could trigger long lead times or high inventory levels.

The best companies invest in programs that create a company-wide awareness of the role of SCM in the organization. We have seen a variety of best practices. For example, some supply chain teams set up dedicated intranet sites to increase credibility and ensure that messages stick. Materials on these sites should be customized to inform a wider audience about relevant projects and practices. Some firms also use more interactive material. Unilever, for instance, highlights the role of the supply chain by using the rich picture of a restaurant with pantry, kitchen, and table allocation. Other activities include specific supply chain trainings for non-supply-chain staff, which promote a general understanding of SCM.

To help break the silos and overcome internal challenges, the supply chain team may identify formal SCM ambassadors and appoint a listening team. Ambassadors could be managers from other functions with relevant supply chain knowledge gained from their prior careers or those who have a particular interest in SCM. These ambassadors can spur ideas and help promote a joint understanding of the key processes and supply chain requirements in their functions. In particular, supply chain leaders who are new to a company should identify these valuable assets, which can aid in finding the right positioning for SCM in the company. Listening posts are less active but should also be consulted.

Messages that Stick

Without question, supply chain leaders add value to a company. However, in order to earn a strategic role with senior management and the Board, SCM must improve its image within the organization. To do so, supply chain leaders need to ensure that their message sticks.

First, they need to understand their position within the company. Exhibit 4 provides a checklist to identify the status quo. Next, supply chain teams have to overcome certain misperceptions or confusions that might exist about the function. We have outlined how SCM

EXHIBIT 4

Checklist for SCM Positioning in the Firm

SCM topics are frequently discussed on the Board level	<input type="checkbox"/>
SCM is present on the Board level and involved in all key company decisions	<input type="checkbox"/>
Board dashboard considers SCM KPIs as important, e.g., service level, inventory	<input type="checkbox"/>
CEO/BU head has sufficient relevant prior SCM experience	<input type="checkbox"/>
Other Board members have sufficient relevant prior SCM experience	<input type="checkbox"/>
SCM has sufficient interactions with the Board to position all key SCM initiatives	<input type="checkbox"/>
SCM is involved early enough and proactively by other functions for relevant decisions	<input type="checkbox"/>
SCM is driving all supply-chain-relevant decisions in the company	<input type="checkbox"/>
SCM drives/owns key cross-functional processes, e.g., performance management, S&OP	<input type="checkbox"/>
SCM is a valued career path in the company	<input type="checkbox"/>

Source: Kühne Logistics University, McKinsey & Company

needs to think and act as a business partner in order to deliver value, quantify this value, and excel in communicating about the value.

In the end, supply chain leaders must successfully interact with the other business functions and, particularly, with the executive team. They need to partner with the CFO—who should be the first to understand the SCM numbers. They need to closely align with the COO—who should be the first to grasp the complexity of the global supply chains and can act as an important ally. Finally, they should team up with the CSO to build an alliance for revenue growth.

Forecast improvement, master data standardization, and warehouse optimization might not be as sexy as market entry strategies, acquisitions, or new product launches. But working together, SCM and senior management can identify the top-line potential and get the budget for important supply chain investments.

7 Steps to Link

By Manu K. Vora

Manu K. Vora is the founder and president of Business Excellence Inc., a global management consulting services firm. He is a fellow of ASQ, an ASQ-certified quality engineer, and the recipient of the ASQ Distinguished Service Medal, the Grant Medal, the Hutchens Medal, the Ishikawa Medal, and the Lancaster Medal. He can be reached at manuvora@b-einc.com. For more information, visit www.b-einc.com.

In a global economy, high performing and high quality supply chains are not only essential to delivering goods on time, global companies also depend on their supply chain processes to manage the divergent expectations of customers and suppliers, to stay one step ahead of the competition, and even to protect a company's image. News of a lapse in quality, a failure to meet customer demand for a hot product, or a supplier that mistreats labor or uses banned materials can spread like wild fire across social media. Any mishap can have a devastating impact on a company's reputation as well as its bottom line.

All of this is driving companies to take a closer look at the quality management systems within their supply chains. Whether it is quality inspections during the manufacturing process, quality checks of raw materials and parts entering the factory, or an inspection before finished goods go out to customers, quality is integral to

supply chain management. However, challenges such as tight deadlines and staff turnover can make it difficult to accomplish quality goals. For that reason, global supply chain quality has to be an ongoing process that requires a comprehensive plan that is part of an organization's culture and is intertwined with manufacturing processes.

Two new global research studies from ASQ, a global network of quality improvement experts, suggest that organizations worldwide face a number of similar challenges in leadership, culture, training, and measurement that can affect success in achieving quality goals. The ASQ *Global State of Quality Research* shares a baseline study of fundamental quality and continuous improvement practices around the world with insights from 2,000 respondents in 22 countries. ASQ's *Culture of Quality* study of over 1,000 senior leaders and quality professionals worldwide offers actionable insights that supply





Quality Improvement

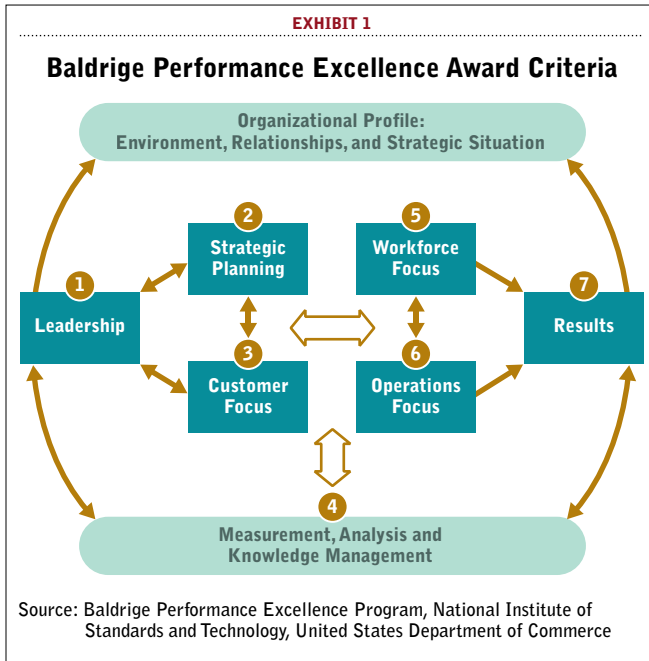
to your

Supply Chain

Supply chain quality doesn't happen by accident. It is an ongoing process that requires a comprehensive plan that is intertwined with manufacturing processes and becomes part of an organization's culture. Research from ASQ (American Society for Quality) and the U.S. Baldrige Performance Excellence Program offer steps any organization can follow to improve the performance and quality of its supply chain.

chain experts can use to identify quality gaps within their processes and bridge them.

Where else can supply chain professionals look for quality guidance? More global organizations are establishing a system of quality through the framework of the U.S. Baldrige Performance Excellence Program, which was established 28 years ago by the National Institute of Standards and Technology, an agency of



the U.S. Department of Commerce.

The Baldrige program empowers organizations to accomplish their mission, improve results, and become more competitive. Each year, winners of the Baldrige Performance Excellence Award are chosen to spotlight U.S. organizations based on their world-class performance and improvement processes.

The seven criteria that form the Baldrige framework—leadership; strategic planning; customer focus; information, measurement, analysis, and knowledge management; workforce focus; operations focus; and results—offer supply chain experts an excellent roadmap for how to incorporate quality into their own processes (Exhibit 1).

This article focuses on how to build integrated and innovative supply chains in the 21st Century by looking at the parallels between successful supply chain and quality management practices within the context of those seven key criteria and by leveraging insights from the ASQ’s *Global State of Quality Research*.

Step 1. The Role of Leadership

To promote a culture of quality in the supply chain, company leaders should support a clearly stated quality vision. That can be easier said than done: According to ASQ’s *Culture of Quality Research* study, only about 60 percent say top management unequivocally supports their organization’s quality vision and values.

ASQ spoke with executives from top organizations about these challenges. Dan Afseth, software development leader at Intuit, suspects that the disconnect is a function of relative visibility and expectations. “I think the deeper you dive into an organizational chart, the closer those people are to the details of what is happening,” Afseth said. A good way to think about this is to consider a flight to the North Pole, simultaneously polling the navigator (a quality manager) and the passenger (in this case the CEO) regarding progress.

“If I’m the CEO, I see the big picture but not always all of the details. I see we’re moving north, it’s getting a lot colder and there’s a ton of snow on the ground. To [a CEO], that looks like great progress,” Afseth said. Meanwhile, the navigator is noting the flight is “0.53 degrees off course, and if something isn’t done soon, the mission will miss its mark.” So the difference between the viewpoints, according to Afseth, “is probably nothing more than the degree of separation between precision and accuracy. If you’re close to the challenge, you see the precise changes still needing to be made—and there are a lot of them—whereas from the top, you see great progress.”

Establishing a culture of quality in the supply chain is something that must be accomplished at multiple levels, according to Jagdish Ramaswamy, president of the corporate business excellence group at India’s Aditya Birla Group, who was also interviewed by ASQ as part of the *Culture of Quality* report. “It must include the participation of not only those on the front lines, the operators, but those in the middle, and those at the top,” Ramaswamy said.

To establish strong leadership and quality vision for the supply chain, the Baldrige Performance Excellence Program framework provides a roadmap for leadership. Effective leaders must establish Vision, Values, and Mission (VVM) focused on creating a sustainable organization. The VVM acts like a True North that guides the organization via strategic direction with strong communication paths. Leaders set up organizational governance and a performance evaluation system as well as demand legal and ethical behavior starting at their own level and permeating throughout the organization. Additionally,

leaders must meet societal responsibilities and support communities where they operate.

Effective supply chain management requires strong leadership and support at the highest level of the organization. To maximize success, senior leaders should support a number of important business strategies including: advancing supply chain benchmarking and best-practice analysis to devise key metrics; creating incentives for supportive behavior; keeping up with supply chain technology and trends; eliminating cross-functional silos and factor supply chain management into business plans; and resisting short-term thinking.

Step 2. Supply Chain Strategy

Only 16 percent of U.S. firms have a documented, multi-year supply chain strategy at all, let alone a transformational strategy, according to new research from the University of Tennessee's supply chain management faculty. Yet the supply chain is a prime driver of economic profit and shareholder value, so firms must have a strategy to achieve a game-changing supply chain.

Creating a winning supply chain strategy begins with sound design and planning that supports the organization's short and long-term objectives. Following the Baldrige Performance Excellence Framework, planning should include comprehensive development and implementation phases that carefully examine:

- **Key outcomes.** In setting direction, three purposes stand out: strategic planning determines where an organization wants to go; indicates where resources are to be concentrated; and gives top priority and attention to strategic goals.
- **Guided use of resources.** Resources are typically limited, so solid strategic planning allows for sound and pointed allocation of resources—human, financial, and material.
- **Workforce plans.** These describe how your organization converts its strategic objectives into action plans. Summarize your organization's action plans and include related key performance measures/indicators.
- **Performance measures and projections.** Strategic planning allows for marking success and failure. Performance measurement or tracking of strategic objectives and action plans serve as a basis for control.
- **Anticipated modifications.** Strategic planning aims to be flexible and provide contingencies for



A culture of quality in the supply chain requires a clearly stated quality vision from leadership. Yet, only 60 percent say top management unequivocally supports their organization's quality vision and values.

uncertainty and change. (See Exhibit 2 for strategic planning process example.)

Supply chain design decisions are long term and expensive to reverse, so a number of factors should be considered, including: decisions on structure of the supply chain and what processes each stage will perform; locations and capacities of facilities; products to be made or stored at various locations; modes of transportation; and information systems.

Planning policies to govern short-term operations should consider demand uncertainty, exchange rates, and competition as well as a number of other issues, such as decisions as to which markets will be supplied, subcontracting, and timing of market promotions.

Step 3. Focus on the Customer

It might seem obvious that customer focus should be at the forefront of supply chain decision-making. But according to ASQ's *Culture of Quality*, only 24 percent of top level executives and quality professionals say their organizations are highly effective in identifying customer needs and quality expectations. The ASQ study also finds that only 16 percent of top level executives say they use big data to gauge customer sentiment and only 12 percent say that they use social media to gauge customer sentiment.

How can supply chain leaders engage customers more effectively to obtain useful insights and build relationships? Following the Baldrige Performance Excellence Program framework, supply chain leaders should strengthen their focus on:

- aggressively soliciting complaints and stress surfacing and resolving problems;
- using surveys that incorporate problem lists as well as focus groups and customer advisory boards;
- mapping the customer experience and identifying where Big Data and operational data systems can flag problems in advance;
- analyzing customer satisfaction, dissatisfaction, and engagement relative to competitors; and

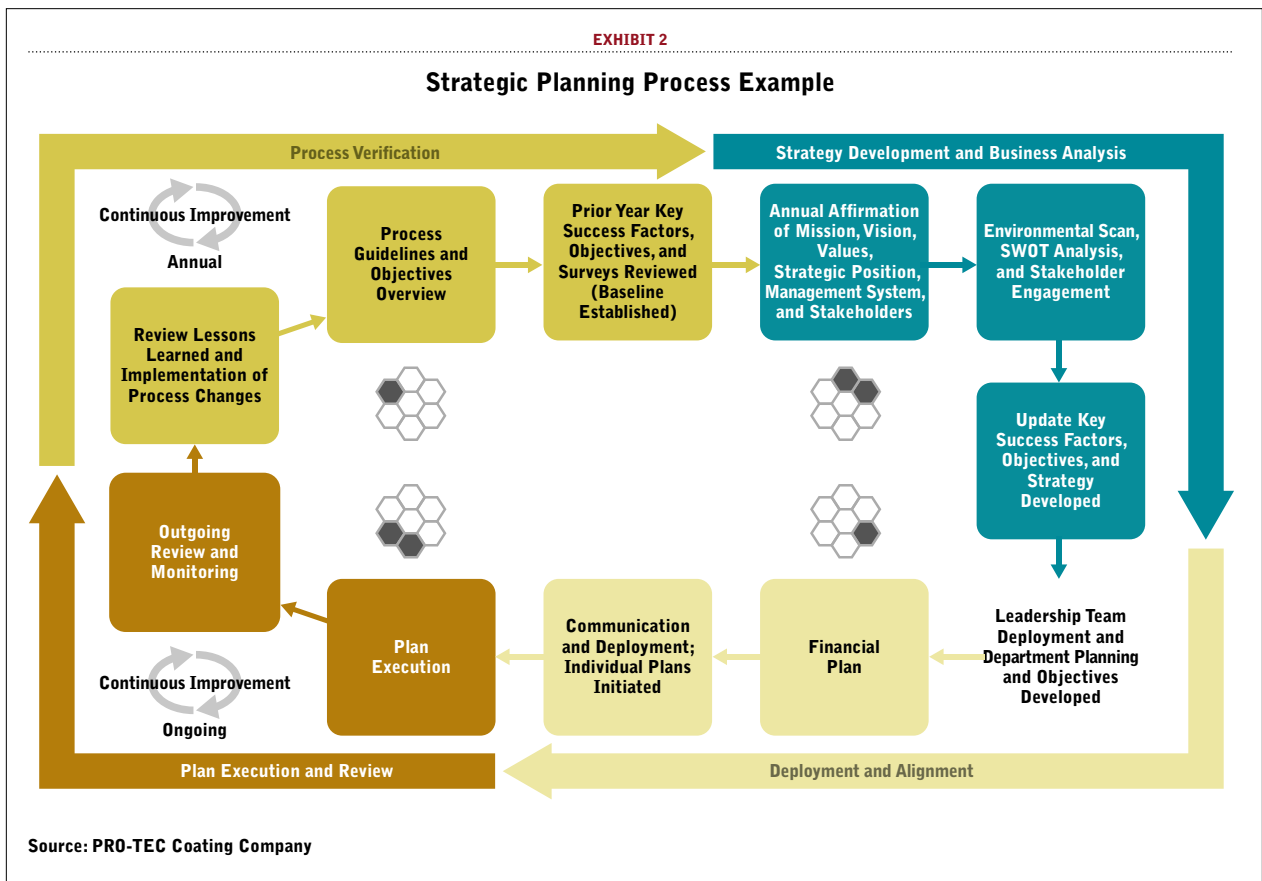
- using customer segmentation to adjust supply chain drivers including transportation, inventory replenishment, facility location, suitable sourcing, pricing, and sophistication level of information system.

In addition, supply chains should look more closely at how quality improvement helps provide better value and service to the customer. In fact, according to ASQ's *Global State of Quality Research*, in many organizations, quality and customer are two concepts that are becoming one—the “customer”—and being integrated into product or service design, prototyping, production, supply chain planning, logistics development, and delivery processes. Characteristics of a customer approach include: high levels of collaboration between the organization and the customer throughout the entire product or service life cycle; opportunities for staff at all levels of the organization to interact with customers; sharing of quality-related data with the customer on a standardized schedule (this includes successes as well as failures and the steps being taken to fix any problems); and quality is ultimately judged by the customer—not just the results of quality tests.

ASQ spoke with Thomas Joussem, an internal audit manager at Airbus, who said that while airplanes are built based on requirements, the customer is an essential component to the internal customization. “The seats are customer influenced,” he said. “The distance the aircraft can fly is customer influenced. The airlines—our customers—have significant influence on the product. But the real value comes through collaboration with the customer at critical points, starting with design, through production and logistics, and ultimately with delivery.” Joussem also noted that it’s not only about creating a customized airplane but also about providing customer input opportunities through the entire product or service life cycle.

After the design, he said: “The customer is at the assembly line doing quality checks while the aircraft is assembled. For all the stages from beginning to end, they give quality checks and clearances.” And when the product is in use, Airbus continues to solicit input through maintenance and customer service.

Supply chain management can leverage the Voice of the Customer Model (Exhibit 3) and Customer-Supplier Relationships, a Process Quality Management and



Improvement (PQMI) methodology developed by AT&T (Exhibit 4), to keep a razor-sharp focus on customers for delivering products/services to customer by meeting or exceeding their expectations.

Step 4. The Role of Information Technology (IT) and Knowledge Management

Information technology and knowledge management is helping today's logistics professionals work smarter and faster. Major software advances enable companies to optimize distribution and production planning, inventory management, warehousing, and transportation systems.

Mobile and wireless deployments and ruggedized data capture devices, such as handheld computers that track inventory, are commonplace and crucial to creating a competitive advantage. Supply chain leaders should continually measure integration of these IT tools to ensure that they are keeping pace.

From a Baldrige perspective, supply chain management professionals should consider a roadmap for IT measurement and analysis that includes:

- **Performance measurement.** How do you collect, align, and integrate data and information for tracking daily operations and overall organizational performance including comparative data and stakeholder data?

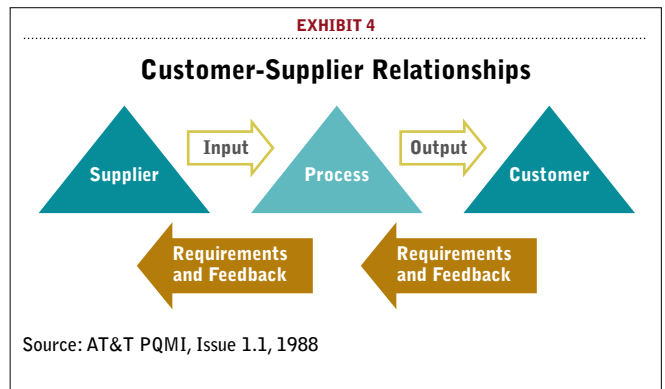
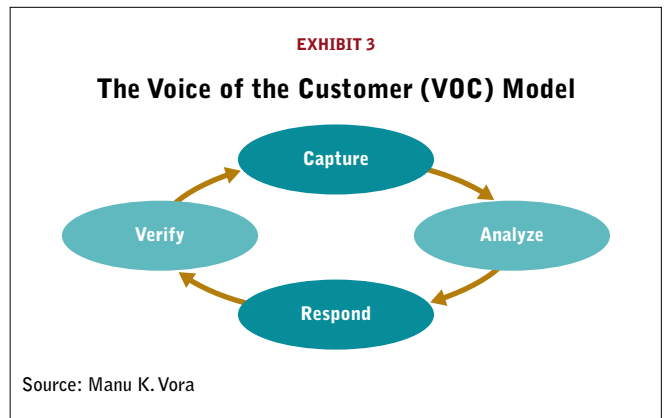
- **Performance analysis and review.** How do you review your performance and use organizational performance measures in these reviews? How do you use these reviews to assess competitive performance, financial health, and progress toward strategic goals and objectives?

- **Performance improvement.** How do you share best practices across organizational units?

- **Technology management.** How are you managing information resources and technology including hardware and software properties? Are you prepared in case of an emergency?

Companies like Amazon, Apple, and Walmart leverage information technology to the hilt to derive maximum benefits from optimizing the entire supply chain. Major social media companies like Google, Facebook, and LinkedIn exploit information technology to create shareholder values.

IT is the only supply chain driver that allows an organization to be cost effective and customer responsive at the same time. Hence, investing in state-of-the-art technology (hardware, software, and solutions) will provide maximum benefits to supply chain organizations.



Step 5. Talent Management: Training and Incentives

When it comes to hiring and training supply chain talent, CEOs need to carefully review how they can build and incentivize an effective and supportive supply chain workforce and engage staff to achieve organizational and personal success.

While training provides skills to help organizations thrive, incentives can help motivate employees to meet critical quality targets. According to ASQ's *Global State of Quality Research: Discoveries 2013* report, 88 percent of companies offer incentives to employees who meet critical quality targets. Organizations use financial awards, nonfinancial awards, informal manager recognition, honorary awards, variable compensation, or a combination of incentives to recognize employees.

Fifty-five percent of the study's respondents use informal manager recognition to acknowledge employees who meet quality-related goals, and 30 percent of respondents use financial incentives to acknowledge quality personnel. Twenty-four percent of companies use nonfinancial awards.

Not surprising, 45 percent of organizations with annual revenues of more than \$10 billion—the largest of the revenue groups surveyed—offer financial incentives to employees. In contrast, only 22 percent of organizations with less than \$100 million in annual revenues use financial incentives.

In addition to incentives, a professional development plan should be initiated for each employee and leaders should encourage their supply chain team members to take advantage of a wide array of internal training sessions as well as outside workshops and seminars offered by local universities and associations.

The Baldrige Performance Excellence framework provides parallels in workforce development that apply to supply chain managers. These include:

- Workforce capability and capacity to determine whether your workforce has the appropriate skills, knowledge to accomplish the organization's goals.
- Workforce climate and performance addresses management system performance from the perspective of compensation, rewards, recognition, and incentives.
- Assessment of workforce engagement determines formal and informal assessment methods to measure workforce engagement and satisfaction.
- Workforce and leaders development addresses training and learning opportunities for those who have been identified as potential leaders in your organization.

Step 6. Focus on Operations

At the core of successful supply chain management is the balancing act that is operations, an environment typically fraught with uncertainty based on shorter weekly and daily time horizons. Designing, managing, and improving operations requires a number of key decisions including how quality is incorporated into the process. Ultimately, the goal is for customers to get what they want, when they want it—but that won't matter if the product is broken when it arrives.

On the positive side, 81 percent of organizations say that measurable quality goals exist in their operations function, according to ASQ's *Global State of Quality Research*. In fact, some organizations are turning to the Baldrige Performance Excellence Program framework to help create quality-based operations. Here are some key questions that supply chain managers can review as part of the Baldrige Roadmap for Operations Focus.

- **Work system design.** How does your organization approach its work system design, management, and improvement? Are you capitalizing on your core competencies to create value for your customers?

- **Work process design.** How are you managing product-related and non-product business processes that are considered important to organizational success and growth by your senior leaders? Critical success factors may include innovation, research and development, technology acquisition, information and knowledge management, supply chain management, supplier partnering, outsourcing, mergers and acquisitions, global expansion, project management, and sales and marketing.

More organizations also are deploying powerful process improvement tools such as Lean (waste reduction to speed up processes) and Six Sigma (reducing process variation to eliminate defects). A more recent trend is to deploy Lean Six Sigma as a combined method to reap the benefits of both.

As organizations focus on improving operations they should also be looking at evaluating their current performance against other best-in-class supply chains. This effort requires both internal and external best practice benchmarking. It's an exercise that should lead to the establishment of relevant metrics to measure supply chain performance.

Key steps to achieving efficiency require scoping and organizing (select a process operating at peak internal efficiency and choose a partner adept at process redesign, collaboration, and quick decision-making). The next step is to redesign the targeted process with strong leadership support from both companies and then implement the redesign ("think big, start small, move fast") to deliver results and communicate progress.

According to ASQ's *Global State of Quality Research*, the organization's view of the existence of a standardized process such as ISO Standards for quality management can also improve efficiency and compliance. The study finds that manufacturing organizations are 1.5 times more likely than service organizations to use ISO Standards as their quality framework.

Step 7. Business Results

While supply chain quality is just one part of a company's overall performance, it's hard to envision a highly successful organization without it. That success is highly dependent on an approach that includes a carefully selected set of metrics used for customer information (reliability, responsiveness, and flexibility) along with internal information including costs and assets.

According to Priscilla Wisner, distinguished lecturer on supply chain at the University of Tennessee, companies need to effectively link the results of supply chain decisions to the financial goals and related metrics of the company.



These supply chain metrics are outlined in a balanced scorecard approach that includes:

Customer

- customer order response time
- customer perception of supply chain value

Internal Business Process

- value added time/total time in supply chain
- number of choices/order cycle time

Learning and Growth

- time between product finalization and customer delivery
- number of shared data sets/total data sets

Financial

- supply chain costs of purchasing, inventory, poor quality, and delivery failure
- percentage of supply chain target costs achieved and supply chain profits earned
- cash-to-cash cycle time
- return on supply chain assets

The following Baldrige Performance Excellence Program criteria are relevant for supply chain managers who want excellent business results.

Product and Process Outcomes. What are product performance and process effectiveness results that indicate how customers will view you in future interactions? Product measures might include internal quality measurements, field performance of products, defect levels, service errors, and response times.

Customer-focused Outcomes. How well has your organization satisfied your customers and engaged them in a long-term relationship? Relevant data and information includes customer satisfaction and dissatisfaction; retention, gains, and losses of customers and customer accounts; and effective complaint resolution.

Workforce-focused Outcome. What are your performance results that demonstrate how well you are creating and maintaining a productive learning environment? Measurable factors include: extent of training and cross-training; extent and success of self-direction; safety; absenteeism; turnover; satisfaction; and complaints and grievances.

Leadership and Governance Outcomes. What are the senior leadership and governance results that demonstrate how you maintain a fiscally and ethically sound organization? These include environmental, legal, and regulatory compliance; results of oversight

audits by government or funding agencies; and noteworthy achievements in these areas, as appropriate.

Financial and Market Outcomes. How do you demonstrate your financial sustainability and marketplace achievements? These measures include revenues, budgets, profits or losses, cash position, net assets, debt leverage, cash-to-cash cycle time, earnings per share, financial operations efficiency (collections, billing, receivables), and financial returns.

In addition to determining various metrics for measuring results, it is equally important to look at how these results are communicated within the organization and with shareholders.

ASQ's *Global State of Quality Research* finds that 51 percent of all respondents report quality measures across the entire organization. Sixty percent of respondents say senior leadership in their organizations receives only quarterly or annual reports. Fifty percent of frontline staff receive quality measurement reports daily or weekly.

Key Lesson Learned

Organizations derive profitability and sustain growth when they manage their supply chains flawlessly. To achieve world-class performance, organizations must focus on developing a senior leadership team that truly understands nuances of supply chain and personally engages to ensure competitive edge through effective supply chain management.

These leaders, in turn, must develop strategic directions for short-term and long-term supply chain management. They ensure a laser-sharp focus on all customers (external and internal customers) to delight them and leverage state-of-the-art technology to effectively manage the entire supply chain. They create an environment where employees across the entire supply chain work in a collaborative and cooperative fashion to delight the end customers.

Organizations will become superiorly efficient when they integrate quality management into their supply chain management practices. There is a wealth of guidance in the ASQ *Global State of Quality Research* findings and the U.S. Baldrige Performance Excellence framework criteria that can be leveraged to make global supply chains effective and efficient.

To read more about ASQ's Global State of Quality Research and Culture of Quality, visit asq.org/global-state-of-quality and asq.org/culture-of-quality. To take a self-assessment of your own organization's culture of quality, visit asq.org/culture-of-quality/assessment. ∞∞

Mastering Disruptive Change in Manufacturing

Optimization and synchronization from end-to-end among value chain partners may one day make a zero-inventory value chain a reality.

By Patrick Van den Bossche, Bernd Schmidt, Marc Lakner, and Bart Van Dijk

Patrick Van den Bossche is a partner with A.T. Kearney. He is based in Washington, D.C. and can be reached at patrick.van.den.bossche@atkearney.com.

Marc Lakner is a partner with A.T. Kearney. He is based in Berlin and can be reached at marc.lakner@atkearney.com.

Bernd Schmidt is a partner with A.T. Kearney. He is based in Dusseldorf and can be reached at bernd.schmidt@atkearney.com.

Bart Van Dijk is a partner with A.T. Kearney. He is based in Johannesburg and can be reached at bart.van.dijk@atkearney.com.



In recent years, manufacturers have been outsourcing increasingly larger pieces of their operations. Even historically sacred cows such as engineering, R&D, and product development are now commonly outsourced, as companies search for flexibility and liquidity at a time of unprecedented global competition and high economic uncertainty.

Original equipment manufacturers (OEM) may be happy to push cost and complexity outside of their company walls—and Tier 1 suppliers may be just as happy to pick up the pieces and build their own vertically integrated operations in a bid to improve their competitive positioning and gain additional margin—but there is a downside. OEMs are relinquishing control over huge chunks of their manufacturing cost structure.

Original equipment manufacturers (OEM) may be happy to push cost and complexity outside of their company walls—and Tier 1 suppliers may be just as happy to pick up the pieces and build their own vertically integrated operations in a bid to improve their competitive positioning and gain additional margin—but there is a downside. OEMs are relinquishing control over huge chunks of their manufacturing cost structure.

To keep their competitive edge, OEMs need to get back into the driver's seat and adopt a true end-to-end (E2E) perspective of their value chain—one that goes from their raw material suppliers to their end consumers and, in today's "circular economy," even to their recyclers. It's not so much about collaborating more effectively across internal functional lines or even beyond the company walls, but rather about increasing the level of synchronization, transparency, and trust among all the players in the value chain. What will distinguish the winners from the pack is that the leaders will act as "orchestrators" of their E2E value chain.

Forming the Orchestra

The first task to form a virtuoso E2E value chain orchestra is to select the right "musicians." This requires a detailed understanding of the E2E value chain requirements. One value chain setup rarely fits all the needs of today's complex business environments, where customer requirements are increasingly individualized and demand patterns tend to be highly volatile.

As value chain requirements differ from one segment to another, so too do the partners needed to make them work. The companies that are best able to work with your company in a cost-focused value chain may not be suited to participate in a chain focused on quality and service. And if your partners aren't sufficiently versatile, you may not be able to cope with changing business requirements and shifts in consumer demand, or you might miss out on cost savings, channel access, and global expansion opportunities. Even though the selection of the right partners is important enough to merit its own issue paper, it will be merely table stakes in the competitive race of the future. The main differentiating factor will be in how well you collaborate with these partners, which brings us to our second task.

Creating a Harmonious Ensemble

In order to optimize the overall E2E value chain and not just the individual pieces, it is the level of synchronization and transparency between the partners that makes the difference. Whether a company stays at the forefront will depend on the performance of the entire value chain that it operates in, so "being in it together" should govern every interaction.

Wielding the Baton

Achieving convergence, and the new level of collaboration and synchronization it implies, requires the orchestrator to step up onto the podium and dare to wield the conductor's baton. This is fundamentally different from mastering your own part of the score, and it requires a level of flexibility and willingness to assume risk that many companies are not yet comfortable with. Rather than simply focusing on purchasing and on managing internal and external supply, the orchestrator of the E2E value chain must look at the dependencies, relationships, capabilities, and competencies of all the partners. The following techniques are useful to achieve a virtuoso E2E value chain orchestra.

Implement a diligent S&OP process.

Internally, one of the key processes to foster cross-functional collaboration is sales and operations planning (S&OP). Run well, an S&OP process helps break down functional walls, facilitates information flows, and aligns all functions toward the same goal. Two elements are essential to make the S&OP process work: trust between the functions in the integrity of the process, and senior leadership support (backed by appropriate performance measures) to keep silo mentalities at bay. Once internal collaboration is working properly, key suppliers and customers can be integrated into the S&OP process and synced up. The extent to which this happens determines the difference between good and great. True supply chain convergence requires capitalizing on the entire supply chain.

Create full E2E visibility. Efficient and resilient supply chains first and foremost require strong relationships among the various buyers and suppliers, fostered by frequent and open communication to create full E2E visibility—and this means finding ways to connect disparate systems and processes and obtain and share all the critical data sets that affect the E2E supply chain. The visibility created by making those connections can help recognize when and where potential disruptions may occur, better manage them when they happen, and understand how each partner's actions affect overall E2E value chain performance—and, in consequence, each partner's financial performance. The same visibility should ideally be extended to customers too. However, integrating customers into the value chain will likely require an even more complex patchwork of communication and data exchange methods.

Measure performance across the value chain.

Finally, traditional performance measurement systems will have to be adjusted to successfully optimize the entire E2E value chain. Key performance indicators such as throughput time and inventory levels have to be measured on an inter-organizational level to find a true optimum. Tools and technologies already exist to do this. For example, the

inventory-monitoring tool Hermes, which can be embedded in SAP, offers an integrated picture across all suppliers in the value chain—provided access is given, of course.

Once the robust relationship, data exchange, and performance measurement system are in place, shortfalls against performance elements such as cost competitiveness, delivery performance, and even new product development and introduction can be tackled collaboratively. For instance, collaboration with suppliers to reduce the manufacturing

Achieving convergence, and the new level of collaboration and synchronization it implies, requires the orchestrator to step up onto the podium and dare to wield the conductor's baton.

throughput time or improve their inventory management practices can enable shorter lead times and lower stock levels.

Be Prepared

Variable demand and volatile input costs mean that manufacturing networks and, more broadly, value chains will need to be continually realigned and reassessed. As transaction costs plummet, individual companies will find it easier than ever to join one or more supply chains—and disruptions will be more likely to lead to the replacement of single supply chain elements rather than entire segments.

Thus, the traditional advantage of scale will erode, but the ability to sync up with value chain partners in collaborative networks will become crucial. Companies in any industry that want to maintain a competitive edge will need to adopt the following behaviors:

- improve collaboration within the company (for example, by bolstering the S&OP process and encouraging cross-functional collaboration);
- be transparent about customer requirements across the E2E chain and define the value chain setup based on those insights;
- replace a purely functional optimization focus with an E2E value chain perspective;
- identify strategic partners that should be taken along the journey, based on their willingness to drive the entire value chain to operational excellence; and
- strengthen the key capabilities within the organization to successfully “orchestrate” those key partners.

One day down the road, optimization and synchronization among value chain partners may even make the vision of a value chain without any inventories a reality. E2E value chain optimization can definitely take you in that direction, as long as you have the right companions. ∞

Using Dynamic Leadership to Prepare for the Future

APQC's research indicates a dynamic leadership style can help close leadership skills gaps among employees.



By Becky Partida,
Research Specialist—
Supply Chain
Management, APQC

As supply chain management becomes a more strategic function and senior supply chain professionals prepare to retire, there is an increasing need to develop strong leadership capabilities. In fact, past research conducted by APQC indicates that leadership is one of the top skills needed for a career in supply chain management. Recent human capital management research from APQC sheds light on which leadership skills are most important to develop and the development techniques used by organizations.

For its Leadership Deficit study, APQC surveyed 547 business professionals representing a variety of industries. Analysis of the survey responses shows that organizational leadership is evolving. Current business trends, including the rise of knowledge work, globalization, and the increase in Millennial workers, are leading organizations to take a more dynamic approach to leadership.

Organizations using a dynamic leadership style are non-hierarchical, meaning they have few layers of managers between the CEO and front-line employees. Employees have the authority to make decisions without having to secure approval from many levels of management. They are also rewarded for collaborating and sharing information and resources. These rewards can include positive feedback, public recognition, challenging work assignments, or compensation. Employees are not rewarded for competing individually against each other.

Dynamic leadership is a values-driven approach in that employees are discouraged from achieving business goals in ways that undermine the organization's values. APQC's study revealed that organizations with dynamic leadership see clear benefits. They report experiencing a smaller leadership skills gap and show less concern about a leadership skills shortage in the future.

According to APQC's survey results, few organizations fully embrace the dynamic leadership style, yet most recognize its importance. The research indicates that organizations with dynamic leadership enable all employees to develop leadership skills. This can be helpful for developing and retaining supply chain talent.

Leadership Skills for Supply Chain Employees

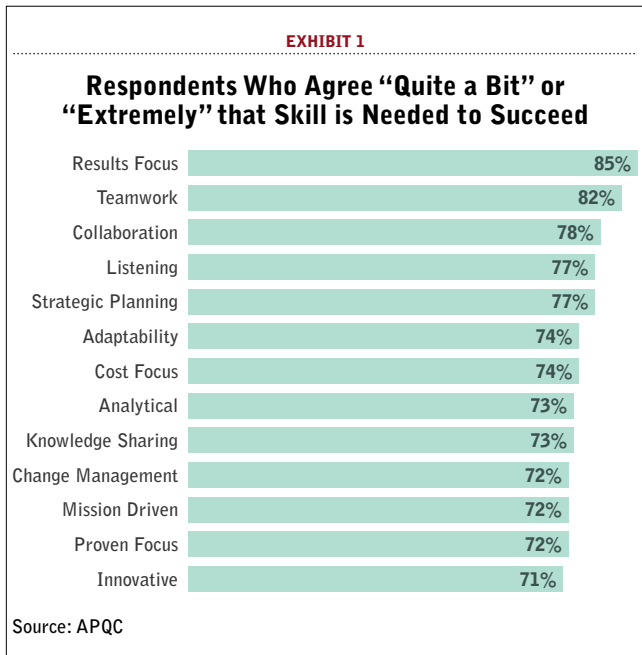
Organizations with dynamic leadership develop all employees to lead as the situation and their expertise dictate. In an unpredictable and data-infused business world, supply chain functions need to tap the potential of all employees to make complex decisions when needed. Yet few of the organizations represented in APQC's survey develop leadership capabilities in all employees.

Those organizations that take this approach develop a mix of hard and soft leadership skills. As shown in Exhibit 1, the leadership skills that APQC survey participants identified as most important for business success reflect this mix of hard and soft leadership capabilities: They include results focus, teamwork, collaboration, listening, strategic planning, adaptability, cost focus, analytics, and knowledge sharing. Unfortunately, APQC's past research on supply chain talent management has indicated that related skills, such as supply chain strategy and

financial management, are areas in which supply chain candidates are the least prepared.

Identify Core Leadership Behaviors and Tailor These to Specific Roles

As part of its Leadership Deficit study, APQC interviewed organizations that embrace the dynamic leadership style to determine what this approach looks like in practice. One key to these organizations deriving value from an “all employees are leaders” philosophy is defining how individual



employees will lead. Dynamic leadership can lead to benefits if employees know how to lead in accordance with the organization’s mission and strategy. Dynamic leadership organizations outline behavioral expectations that are broad enough to empower individual workers to use their talents but specific enough to minimize worker confusion, inconsistencies, and mistakes.

Cardinal Health, which provides supply chain management services to health care organizations, is an example of an organization that has codified the leadership behaviors that employees need to demonstrate based on their role in the organization. Cardinal Health refers to these behavioral expectations as leadership essentials. Three leadership essentials apply to all Cardinal Health employees:

- they have a customer-centric focus with deep expertise;
- they build strong relationships, foster teamwork, and develop others; and
- they focus as a genuine leader on getting the right things done.

How these three essentials apply to employees varies depending on an employee’s role. For those working at the

managerial level and above, Cardinal Health has outlined the following additional leadership essentials:

- think and act strategically;
- have an enterprise perspective;
- attract, develop, and retain talent;
- be inspirational and confident;
- be an influential leader;
- have personal courage and resiliency;
- be willing to roll up their sleeves; and
- focus on getting the right things done.

These essentials were developed as a result of internal and external benchmarking and employee interviews. The behavioral descriptions for these additional leadership essentials are tailored to different managerial and leadership roles. For example, for a vice president, the behavioral expectation to “think and act strategically” is to be “a big picture thinker using a broad, global perspective to develop actionable, high-value strategies.”

Communicate Leadership Behaviors Using Role Models

Organizations embracing dynamic leadership do not stop at establishing guidelines for how all employees will lead. They also deliberately and continuously invest in helping employees adopt and appropriately use leadership guidelines. One way they encourage the use of core leadership behaviors is through role modeling. Senior leaders and managers set the leadership example by providing information, tools, and teaching to help all employees learn to lead. This takes desired leadership behaviors from being abstract concepts to actionable steps that employees use to carry out their daily work.

The Ford Motor Co., for example, has an organizational vision called the ONE Ford Plan; this translates to Ford having one team, one plan, and one goal for delivering profitable growth for all. ONE Ford illustrates the fundamentals of Ford’s success and describes the behaviors that are expected of Ford employees in order to realize this success:

- foster functional and technical excellence;
- own working together;
- role model Ford values; and
- deliver results.

The organization provides employees with examples of what these behaviors look like in practice. For example, to foster functional and technical excellence, Ford suggests that employees should:

- know and have a passion for the business and customers;
- demonstrate and build employee functional and technical excellence;
- ensure process discipline; and
- have a continuous improvement philosophy

and practice.

ONE Ford behaviors have been integrated into the organization's processes for developing leaders. For instance, Ford leaders heavily refer to ONE Ford behaviors in their formal communications. The senior leadership team at Ford is heavily involved with the organization's leadership development programs, which creates a rich dialogue between future and current Ford executives about leadership and the business. Senior leaders share their leadership stories, which help program participants understand how current Ford leaders gained success.

Dynamic leadership organizations enable their employees working in formal leadership roles to use a fluid, inclusive, and collaborative style of leading.

Ensure Selection and Development Promote Leadership Behaviors

APQC's leadership research revealed a top barrier to dynamic leadership—and a top predictor of leadership skills gaps—is an organization having selection, development, and reward practices that support an outdated approach to leadership. APQC's interviews with organizations underscored the importance of aligning HR practices with the leadership behaviors that an organization wants to promote. Dynamic leadership organizations hire and promote employees with a record of exhibiting organization-specific, core leadership behaviors. This ensures that they hire candidates that fit best within the organization's culture and helps reduce turnover.

At W.L. Gore & Associates Inc., a privately held company that produces a wide range of industrial products, such as electronics, fabrics, medical products, cables, and sealants, leadership is defined by followership. Founder Bill Gore believed that if you look behind you and nobody is there, then you are not a leader. As a result, Gore employees work on small teams. The culture maintains a focus on acting for the benefit of the organization and keeping a long-term view. These areas of focus are central to Gore's selection and hiring process.

During its interview process, Gore questions candidates about their needs for formal career paths and prestigious job titles, as well as their need to be in charge. Gore seeks individuals with the patience to seek input when making

decisions and to gain credibility and support among other employees before executing on decisions. That is, Gore looks for candidates who have good communication skills, are good at influencing others, and can handle conflict. It hires candidates who are prepared to be empowered, work on teams, and share leadership responsibilities. Gore attributes its low employee turnover rate to its success in selecting candidates who fit with its culture, values, and ways of working. In selecting employees for formal leadership commitments, Gore looks at whether people would be willing to follow the employee. Gore also considers whether the employee has a history of being an effective sponsor—that is, someone who effectively guides the career development of another.

Dynamic Leadership for Supply Chain

Dynamic leadership organizations enable their employees working in formal leadership roles to use a fluid, inclusive, and collaborative style of leading. These employees are accessible to others regardless of their role, which extends to providing coaching and mentoring to others. Leaders also encourage employees to collaborate and make decisions.

There is no debate that leading a supply chain today is a complex endeavor requiring a wide range of leadership skills. APQC's research on supply chain talent management has found that supply chain professionals need more leadership development in order to address the demands of a complex, global economy. Supply chain functions should consider offering formal training to help current supply chain leaders adopt these dynamic leadership behaviors. Establishing the infrastructure for dynamic leadership presents a cost-effective way to develop supply chain talent and ultimately close skills gaps within the organization. In addition, formal leadership training can help organizations retain strategic-level supply chain talent, something that APQC's research has found to be challenging many supply chain functions. ∞

About APQC

APQC is a member-based nonprofit and one of the leading proponents of benchmarking and best practice business research. Working with more than 500 organizations worldwide in all industries, APQC focuses on providing organizations with the information they need to work smarter, faster, and with confidence. Every day we uncover the processes and practices that push organizations from good to great. Visit www.apqc.org and learn how you can make best practices your practices.



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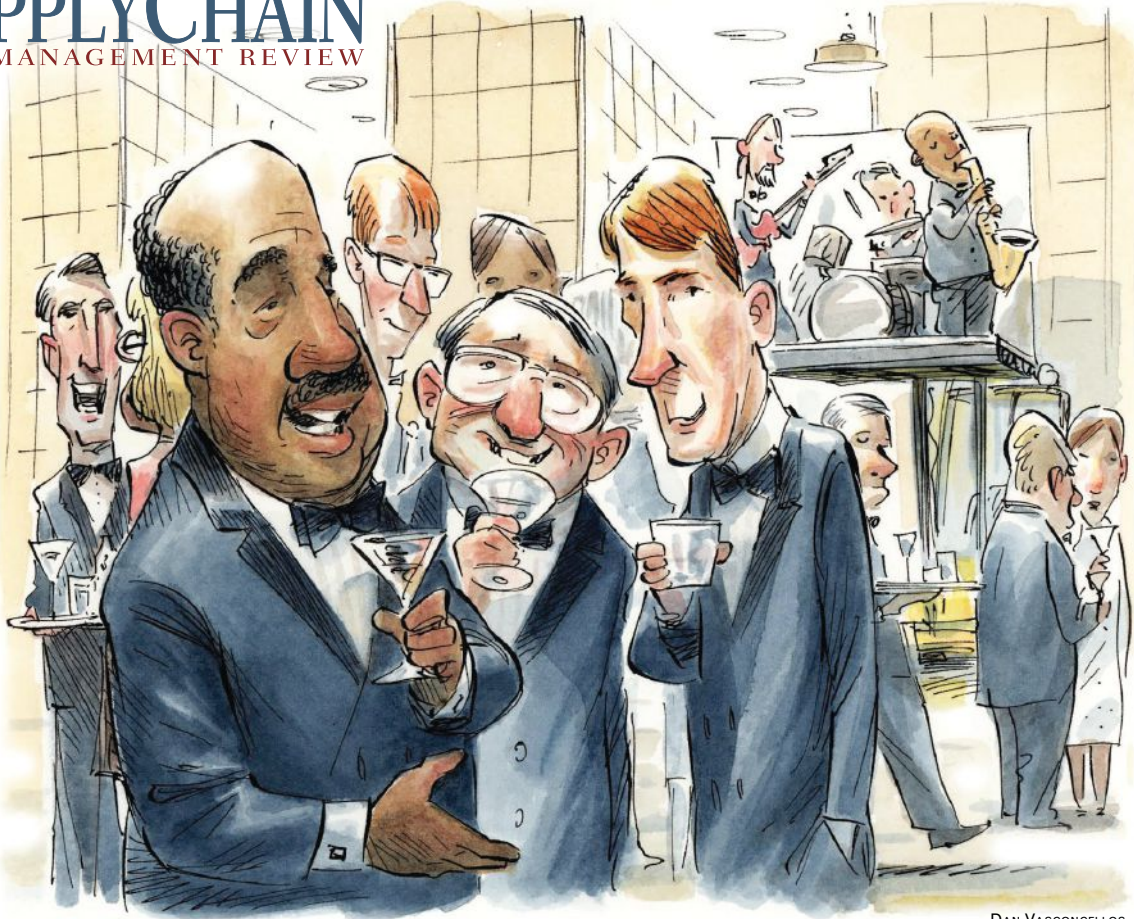
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DAN VASCONCELLOS

2015 Top 50 3PLs: The Party Keeps Roaring Along

In the wake of the recent acquisition of Norbert Dentressangle by XPO Logistics, the logistics community is bracing for even more major consolidation deals. The third-party logistics provider (3PL) community is loving it, especially as their margins continue to widen—particularly throughout North America.

By Patrick Burnson, Executive Editor

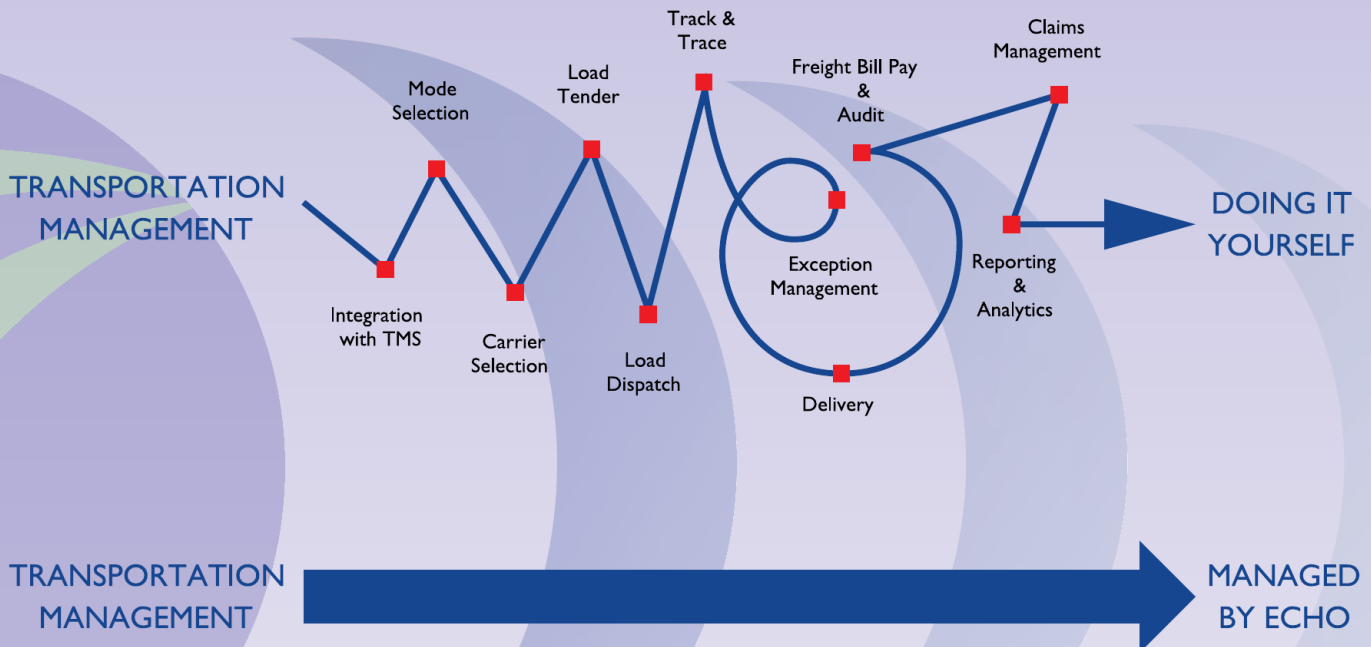
According to the latest figures compiled by the third-party logistics consultancy Armstrong & Associates, major domestic 3PL players posted double-digit growth in 2014, with more of the same in this year's forecast.

In the meantime, analysts at research giant Gartner have published their annual *Magic*

Quadrant report that provides market intelligence on its premier list of lead logistics providers. All in all, it appears to be a good time to be a third-party logistics provider—and according to both Armstrong and Gartner, it looks like the party is going to keep roaring along.

For example, thanks to its prominence in

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the Asia Pacific region, DHL Supply Chain and Global Forwarding reported gross logistics revenue earnings of more than \$32 billion last year—more than a billion over 2013 numbers. The company's concentration on controlled-atmosphere shipping in the Americas also contributed to record profits.

On the domestic side, it was all C.H. Robinson Worldwide, which garnered slightly less than \$14 billion in gross logistics revenue last year. A distant, but significant, second place was held by Expeditors International with earnings of nearly \$7 billion. Expeditors value-added warehousing continues to attract new business, and analysts note that there's more growth potential in 2015 for the cluster of 3PLs that can differentiate their services in this manner.

"At this time last year, we noted that shippers were going to hedge their bets by working with several domestic and international 3PLs," says Dick Armstrong, the consultancy's chairman. "That trend hasn't changed, and in fact, it may become even stronger in 2015."

Adrian Gonzalez, the founder and president of Adelante SCM, a peer-to-peer networking community for logistics professionals and 3PL watchdog, concurs, saying that the 3PL industry is perhaps becoming more "barbell shaped."

"At one end of the barbell we see small, niche providers thriving, and at the other end are the very large players retaining market share," says Gonzalez. "And everybody else is getting squeezed out in the middle." He adds that "gaining scale" is driving a lot of merger and acquisition activity in the 3PL industry today—and that will keep fueling it in the months ahead.

Brooks Bentz, a former supply chain management practice partner with Accenture who now serves as president of Transplace's supply chain consulting business, agrees with both Armstrong and Gonzalez, observing that no slowdown in merger and acquisition activity is in sight.

"When you look at the Armstrong list, and see that C.H. Robinson is up at the top in the U.S., it's clear that there's quite a gap between their

annual revenue and those that follow. I think you will find that some—if not most—will see closing that gap as an attainable goal for themselves, and they'll choose to do that through deals," he says.

For other 3PLs, adds Bentz, they'll choose to go the route of organic growth, which is a long, slow process compared to the current practice of buying up revenue. At the same time, he adds, the over-arching trend in logistics management will be to drive improved supply chain performance. He maintains that few 3PLs—if any—have it right. In large part, that's due to the growth of very large-scale multi-national companies.

"At this time last year, we noted that shippers were going to hedge their bets by working with several domestic and international 3PLs. That trend hasn't changed, and in fact, it may become even stronger in 2015."

—Dick Armstrong,
Armstrong & Associates

"Because so many 3PLs have generally grown through multiple acquisitions, they've created a hydra-headed monster for logistics managers" says Bentz. "These include cultural and geographic differences, varying regulations and rules, and they're reliant upon a large array of service providers."

Analysts also continue to track what has been coined "The Amazon Effect" on the third-party logistics industry. The Seattle-based e-commerce giant has hired 50,000 full-time workers to staff its distribution centers across the U.S. in order to speed up delivery times. It's \$99 annual "Prime Membership Service" comes with a free two-day delivery on many items. Further complicating this scenario is Walmart, which plans to introduce an unlimited shipping service for online shoppers this summer.

Bentz notes that the torrid pace of the growth of internet sales and the resulting fulfillment and logistics requirements will bode very well for 3PLs. "The 'I-want-it-now, if-not-sooner' consumer demand is being served—and in some cases created or amplified—by companies like Amazon and Walmart," he says.

Impact of "Near-shoring"

The domestic battle being waged by these retail behemoths is not likely to be confined to the U.S., however. Indeed, many analysts see the trend sweeping through all of North America before long.

John Langley Jr., Ph.D., who serves as a director of development at the Center for Supply

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Armstrong & Associates Top 50 U.S. 3PLs - April 2015

2014 Rank	Third-Party Logistics Provider (3PL)	2014 Gross Logistics Revenue (USD Millions)*
1	C.H. Robinson Worldwide	13,470
2	Expeditors	6,565
3	J.B. Hunt (JBI, DCS & ICS)	5,799
4	UPS Supply Chain Solutions	5,758
5	Kuehne + Nagel (The Americas)	5,157
6	UTi Worldwide	4,180
7	Hub Group	3,571
8	Burris Logistics	3,506
9	Schneider Logistics & Dedicated	3,390
10	Exel	3,300
11	CEVA Logistics (The Americas)	2,618
12	DB Schenker Logistics (The Americas)	2,615
13	Panalpina (The Americas)	2,463
14	Ryder Supply Chain Solutions	2,461
15	XPO Logistics	2,357
16	Total Quality Logistics	2,142
17	Coyote Logistics	1,950
18	BDP International	1,900
19	Menlo Logistics	1,717
20	Americold	1,696
21	Landstar	1,624
22	Transplace	1,605
23	GENCO	1,500
24	FedEx SupplyChain/FedEx Trade Networks	1,462
25	Cardinal Logistics Management	1,430
26	Swift Transportation	1,394
27	OHL	1,305
28	Werner Enterprises Dedicated & Logistics	1,182
29	Echo Global Logistics	1,173
30	NFI	1,160
31	Penske Logistics	1,137
32	APL Logistics (The Americas)	1,030
33	Damco (The Americas)	1,007
34	syncreon	1,000
35	Nippon Express (The Americas)	895
36	Yusen Logistics (Americas)	891
37	Transportation Insight	850
38	Ruan	849
39**	Neovia Logistics Services	800
39**	Ingram Micro Logistics	800
40	Norbert Dentressangle US	781
41	Agility (The Americas)	774
42	ModusLink Global Solutions	723
43	GEODIS (The Americas)	715
44	DSV (The Americas)	693
45	Crane Worldwide Logistics	689
46	Hellmann Worldwide Logistics (The Americas)	688
47	Freightquote.com	623
48	U.S. Xpress Enterprises	615
49	BNSF Logistics	610

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Armstrong & Associates Top 50 Global 3PLs - April 2015

2014 Rank	Third-Party Logistics Provider (3PL)	2014 Gross Logistics Revenue (USD Millions)*
1	DHL Supply Chain & Global Forwarding	32,193
2	Kuehne + Nagel	23,293
3	DB Schenker Logistics	19,861
4	Nippon Express	17,916
5	C.H. Robinson Worldwide	13,470
6	DSV	8,661
7	CEVA Logistics	7,864
8	SDV (Bolloré Group)	7,483
9	Sinotrans	7,463
10	Panalpina	7,338
11	DACHSER	7,043
12	Expeditors	6,565
13	GEODIS	5,960
14	Hitachi Transport System	5,920
15	Toll Holdings	5,822
16	J.B. Hunt (JBI, DCS & ICS)	5,799
17	UPS Supply Chain Solutions	5,758
18	GEFCO	5,387
19	Agility	4,300
20	UTi Worldwide	4,180
21	IMPERIAL Logistics	4,080
22	Yusen Logistics	3,945
23	Hellmann Worldwide Logistics	3,800
24	Hub Group	3,571
25	Burris Logistics	3,506
26	Norbert Dentressangle	3,409
27	Schneider Logistics & Dedicated	3,390
28	Damco	3,212
29	Kintetsu World Express	2,942
30	CJ korea express	2,842
31	Kerry Logistics	2,723
32	Ryder Supply Chain Solutions	2,461
33	XPO Logistics	2,357
34	Sankyu	2,293
35	Total Quality Logistics	2,142
36	Coyote Logistics	1,950
37	BDP International	1,900
38	Wincanton	1,816
39	arvato	1,797
40	NNR Global Logistics	1,745
41	Menlo Logistics	1,717
42	Americold	1,696
43	APL Logistics	1,659
44	Mainfreight	1,640
45	Landstar	1,624
46	Transplace	1,605
47	JSL Logistica	1,514
48	Logwin	1,501
49	GENCO	1,500
50	FedEx SupplyChain/FedEx Trade Networks	1,462

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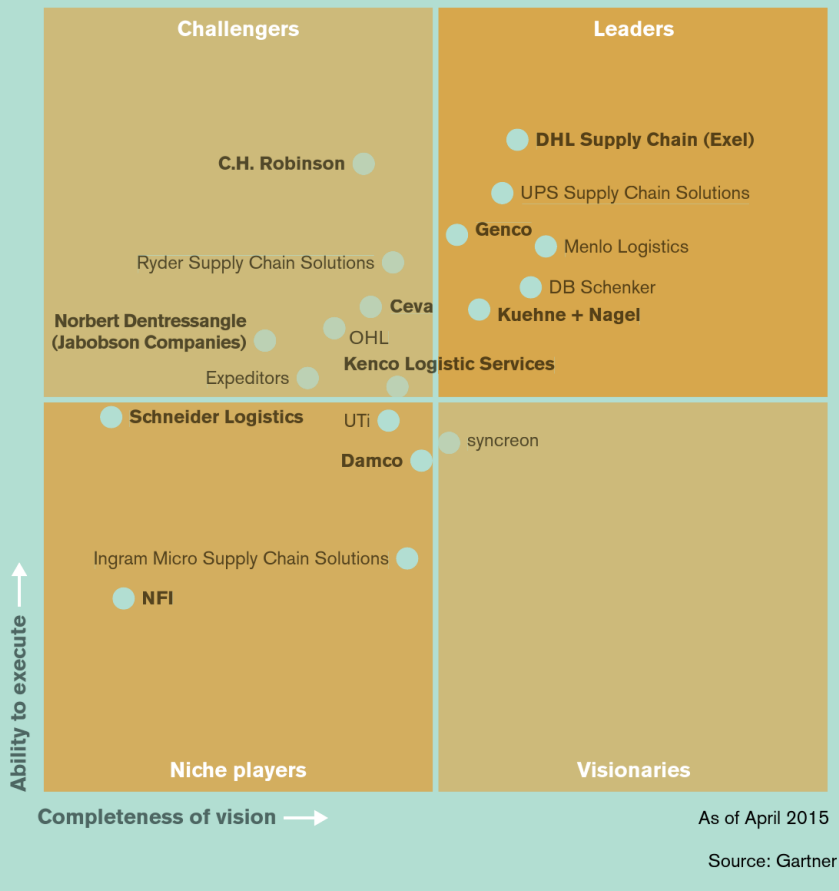
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Magic Quadrant for Third-party Logistics, North America



Mexico and other offshore locations for companies considering consolidating finance, IT, and related business services operations.

“Many companies are realizing that the U.S. is becoming an increasingly viable option for elements of their service delivery organization,” says Jim O’Connor, The Hackett Group’s principal and global finance practice leader. “We’re seeing real growth in this sector, with nearly 700 U.S. centers of excellence, shared service centers, and global business services operations now up and running.”

According to O’Connor, labor and operating costs are still high in the U.S. compared to Eastern Europe, Latin America, and Asia. But the gap is shrinking, while there are significant other benefits. “In more and more cases, those benefits outweigh the additional cost. In addition, the public response to offshoring has made keeping jobs at home a attractive option for U.S. companies,” he says.

At the same time, says analysts at Gartner, the 3PL industry is “progressing along a maturity spectrum in accordance with customer require-

Chain Research at the Smeal College of Business at The Pennsylvania State University, observes that U.S. shippers are concentrating more on hemispheric services this year. This trend, he says, is in response to “less-than-exciting” global economic activity.

“The manufacturing industry in Mexico is improving, which is creating opportunities for 3PLs as logistics services play a crucial role in rendering Mexico as cost competitive,” says Langley. “Mexico has more free-trade agreements than any other country, a strategic geographic location, and is renowned as a low-cost manufacturing and export destination.”

However, Langley cautions that a lack of quality infrastructure and certain regulatory aspects continue to challenge Mexico. Analysts with The Hackett Group, an intellectual property research firm, share this view, observing that many mid-size U.S. cities now make attractive alternatives to

ments through a combination of acquisition and organic growth strategies.” The research firm’s annual *Magic Quadrant* rankings chart the growth of the top global logistics services companies as they work to improve their ability to improve and expand value-added services.

The report notes that, increasingly, 3PLs have extended their services beyond the basics—providing opportunities to increase their value and resolve additional customer supply chain challenges. For example, these services include returns and repair processing, assembly and kitting, packaging, postponement, freight payment and audit, network modeling, shipment consolidation, cross-docking, and logistics and supply chain consulting.

According to Greg Aimi, Gartner’s director of supply chain research and *Magic Quadrant* co-author, there’s a transformation underway across today’s logistics industry, and perceptions of logistics service providers are changing.

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“In an industry that had been commoditized into transactional warehousing and transportation activities, the idea of specialized services, joint-value creation, and supply chain integration would have seemed nonsensical,” says Aimi. “Relationships have been historically transactional, pragmatic, and physical activity-oriented. Third party providers responded in kind by competing head-to-head in low-margin pricing wars and assumed the role of an interchangeable commodity—a low-value part.”

Aimi maintains that most of the 3PLs today in North America—if not across the globe—started the transformation by providing deep capabilities in one of three major logistics service roots: transportation services, warehousing and fulfillment services, or international freight forwarding and customs brokerage. Furthermore, this pattern will probably not change in the coming years

“In fact, many providers today still predominantly offer services from just one of these roots,” says Aimi. “Other providers, especially the larger ones, have expanded their offerings to include services from one or both of the other roots.”

Gartner Defines a “Good” Player

Magic Quadrants are made up of two major axes, “ability to execute” and the “completeness of vision.” According to Aimi, to create a *Magic Quadrant* that would be valuable to logistics customers, it was important to develop a definition of what good outsourced logistics is in the context of the criteria of the two axes.

According to Aimi, the first critical factor is that a provider offers a broad set of services that match shipper demand trends. “As shippers refine their logistics management capabilities, they normally want to consolidate the portfolio of logistics providers they work with,” notes Aimi. “This means shippers would like the opportunity to use more services from the same or smaller set of providers, and that’s a huge, critical factor.”

“Today’s logistic managers are looking to have seamless access to an integrated portfolio of services, and they expect them to be supported globally by unified technology platforms.”

—Greg Aimi, director of supply chain research, Gartner

The second major factor is that a 3PL must offer more than just a “large menu” of services. “Today’s logistic managers are looking to have seamless access to an integrated portfolio of services, and they expect them to be supported globally by unified technology platforms,” says Aimi.

Fair and competitive pricing represents the third critical factor, says Aimi, who notes that the best logistics providers know how to segment customers’ needs and deliver the right offering and the right pricing when needed. “This shows a bit more vision for the providers that master this and directly influences their ability to execute.”

Finally, as shippers continue to mature, they

look to their logistics providers to be able to tailor their services to the idiosyncrasies of their industry—and to have retained and developed highly-seasoned competency in top industry-specific practices.

This is the fourth critical factor, according to Aimi. “Logistics managers are looking and hoping to gain leverage through specialized expertise and capabilities beyond what they have themselves,” he says. “Providers with more depth

and tailored support for industry variants tend to move right on the ‘completeness of vision’ axis.”

Beyond these four basic factors, other influences on the “completeness of vision” may still affect the “ability to execute.” According to Aimi, the execution scale had a multiplying factor that considered the difficulty of managing top performance based on customer base size, organization scale, and process complexity.

With this contextual backdrop, Gartner says that companies can now more fully understand how the various 3PL providers were evaluated, what was deemed important and what might be differentiated, and, consequently, why the dots for each 3PL appear where they do on the *Magic Quadrant*.

Patrick Burnson is Executive Editor of Supply Chain Management Review



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Optimizing 3PL Relationships: How to Avoid Commoditization

While shippers may generally be content with the reliability of their 3PL partners, new research indicates that there's considerable concern about the value of long-term, strategic relationships. Industry analysts explain how innovation and a deeper commitment to collaboration will become the key differentiators in the 2015 marketplace.

By Patrick Burnson, Executive Editor

A recurring theme seems to be surfacing in the complex world of global third party logistics providers (3PLs) these days. The sector is booming, but shippers are still “shopping around” for a better price or more complete service.

Explaining the friction that exists between 3PLs and the customers that they serve in key manufacturing and retail sectors was a daunting challenge for researchers at advisory firm SCM World, but a recent study may finally provide some answers.

“The disconnect between 3PL



DAN VASCONCELLOS

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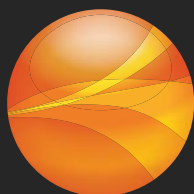
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performance levels and their reluctance to embrace new technologies was something we hoped would change by now,” says Barry Blake, vice president of research at SCM World. “But that hasn’t been the case at all. Shippers say that they’re still searching for more value.”

Between January and May of this year, SCM World fielded a six-question survey in order to understand the supply chain community’s perception of its 3PLs. After sifting through the remarks made by 557 global shipper organizations, the results were made public last month.

“The story emerging from the data is compelling,” says Blake. “Third-party logistics providers are seen as fast and fairly reliable...but not innovative. Furthermore, logistics managers are questioning the value received for the cost of their 3PL services.”

Blake asked respondents to rate 3PLs on the following metrics: reliability; speed; innovation; value for the money; and scale of impact, or how vital the 3PL is to the shipper’s strategic needs. With a few exceptions, most 3PLs scored well, with over 50 percent of respondents rating them “good” or “excellent” at the aggregate level when it comes to the basics, such as reliability.

However, shippers don’t seem completely confident that they’re receiving the degree of value expected for the money they are paying for 3PL services. Moreover, the results showed that the 3PL community collectively struggles to deliver innovative solutions in the eyes of their customers.

“The message coming across loud and clear through the data and follow-up discussions with logistics professionals is that 3PLs need to do a much better job understanding the businesses of their customers if they are to move up the innovation curve,” says Blake.

Blake adds that, while the results didn’t surprise him, shippers need to keep in mind that this is a two-way street. Unless a shipper “incentivizes” its 3PLs to focus on innovation, it’s difficult for the provider to make the necessary investments to support it.

“Innovations don’t typically sprout overnight, nor even during the yearly tender cycle between parties,” says Blake. “Shippers and 3PLs should

Biggest Challenge in Achieving Supply Chain Sustainability Via Outsourcing



have a one-on-one discussion about risk mitigation, and how change management can address those concerns.”

Overall, the major expectation for logistics service providers is cost savings. This entrenched focus essentially commoditizes logistics services, creating a self-perpetuating cycle in the marketplace where 3PLs resist investing in innovation since their customers don’t yet believe that innovation will drive cost savings more effectively than traditional methods.

“This pushes logistics services further towards blandness without any meaningful differentiation,” Blake concludes. “Both sides need to come together if logistics service innovations are to take root and see the light of day.”

Partnership Pays Off

As cost control remains a key priority for supply chain professionals—and no doubt will remain so for many years to come—initiatives such as horizontal collaboration and supply chain sustainability are becoming increasingly important.

Researchers at London-based eyefortransport say that their recent survey of global chief supply officers indicates relationships between supply chain executives and 3PLs are increasingly improving as these providers are perceived to be more proactive in suggesting strategic partnering.

Some prominent U.S. shippers agree. “Given the ongoing talent-gap in the supply chain industry, we see a greater reliance on outsourcing key functions,” says Craig Boroughf, senior



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director, global sourcing for U.S. Gypsum Company, a subsidiary of USG Corporation. “While we continue to invest in our own human resources, 3PLs can augment that effort by providing skilled workers as we need them.”

Boroughf is responsible for USG’s procurement, including supplier management and strategy of raw materials, indirect goods, and services and freight transportation services. He maintains that 3PLs are showing a greater willingness to become strategic partners, but must continue to demonstrate that they’re putting shipper value

ahead of pure cost.

“As in any customer-supplier dynamic, 3PLs should concentrate on economies of scale when budgeting in the procurement arena,” says Boroughf.

Frank McGuigan, president of transportation management at 3PL Transplace, says that closing ranks with his customer base comprising USG and others is important, but requires a new “play book.”

“The 3PL has undergone tremendous change in recent years,” says McGuigan, “and we are aware that shippers can hedge their bets by

Supply Chain Risk Weighs Heavy in Relationship Optimization

The majority of shippers see supply chain risk management as a vital element on the way to optimizing their relationships with third-party logistics providers (3PLs). According to a new study by Accenture, however, only seven percent of shippers are generating returns of over 100 percent on their supply chain risk management investments.

Indeed, the study suggests that 3PLs hoping to optimize their services for shippers should develop distinct approaches toward risk mitigation.

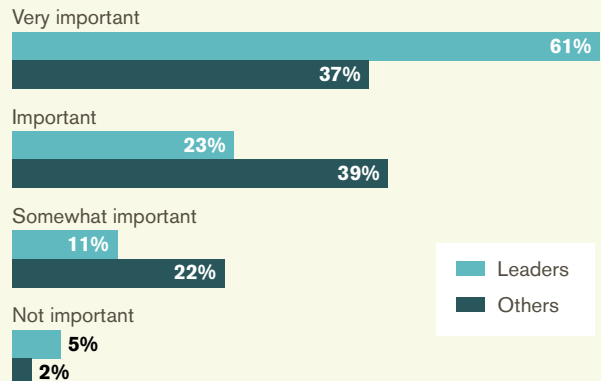
Seventy-six percent of companies participating in the *Accenture Global Operations Megatrends Study—Focus on Risk Management* describe supply chain risk management as “important” or “very important.” Of the more than 1,000 companies represented across 10 industries, 25 percent plan increased investments of at least 20 percent in supply chain risk management in the next two years.

The analysis reveals that while nearly all of the companies represented in the study receive a return on their investment (ROI) in risk management, the leaders—those seven percent that generated returns exceeding 100 percent—had three practices in common that distinguished them from others:

1. Make risk management a priority. The leaders make risk management a strategic imperative and recognize the importance of capabilities that help them gain greater visibility and predictability across their supply chains.

2. Centralize their responsibility for risk management. They have a central risk management function led by an executive in the C-suite or a vice president who oversees all of their risk

Leaders Make Operations and Supply Chain Risk Management a Priority



Leaders are companies that generated an ROI of 101% or more on improved SCRM capabilities in the past two years.

Source: Accenture

management activities.

3. Invest aggressively in risk management with a specific focus on end-to-end supply chain visibility and analytics. Leaders were nearly three times as likely to say they planned to boost their investment in risk management by 20 percent or more in the next two years.

“Although unforeseen events or natural disasters lead some to give up on risk management, most risks can be managed to not only minimize the downside, but also to gain a competitive advantage as a result of being prepared to respond to circumstances when they arise,” says Mark Pearson, senior managing director of Accenture Strategy Operations. “Scenario planning and robust analytics can play a key role in developing effective risk mitigation strategies.”

—Patrick Burnson, Executive Editor

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working with several 3PLs at the same time. But as their reliance on outsourcing becomes greater, the exposure to risk becomes more of a concern.

Trust But Verify

As President Reagan was fond of saying: “Trust but verify.” That adage is winning currency with 3PL consultants as well. Steve Banker, who leads the supply chain and logistics team at market research firm ARC Advisory Group, says

3PLs that are seeking to optimize their relationships with shippers should invest carefully in a transportation management system (TMS).

“Before committing to any TMS demonstration, we suggest that the 3PL asks about shipper ‘onboarding,’” says Banker. The 3PL must be able to leverage the configuration settings used to support shippers with templates that can be setup for various implementations. Shippers have unique workflow rules, Banker adds, and require 3PLs to have flexible billing capabilities to meet specific needs.

“Both third-party providers and shippers need a TMS that manages multi-leg, multi-mode, time-phased planning and execution,” says Banker

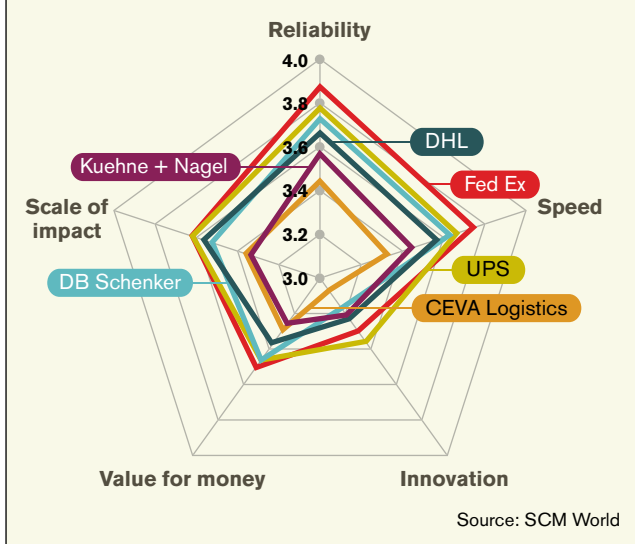
Is there a limit to the number of legs or modes? “For shipments that cross an ocean, that time-phased element is important,” says Banker. “If you look at a dray move to port, 27 days on sea, do you really want a pre-planned truck move on the other side of the ocean? A lot can happen in 27 days.”

Which brings security into the picture. Banker says that there should be “logical barriers” between a 3PL’s client base so that one shipper can’t see another’s shipment performance or billing.

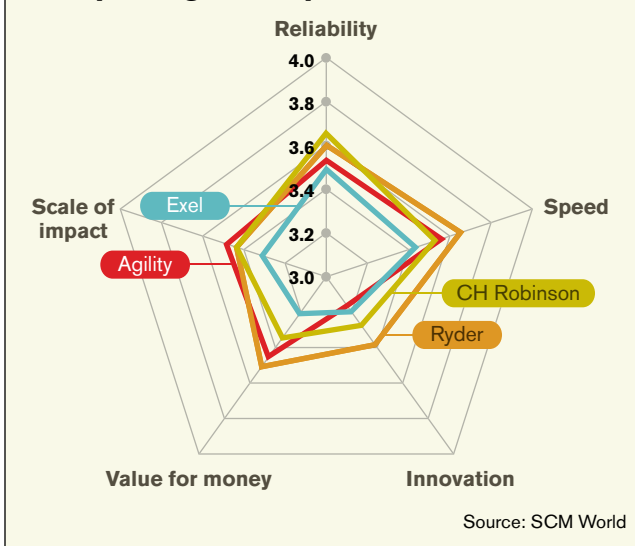
A new study by Accenture reinforces the idea that 3PL/shipper relationship optimization will be focusing on risk in the future. “As demonstrated by the leaders in our study, a centralized, top-down approach to supply chain risk management tends to generate the highest ROI on risk management,” says Mark Pearson, senior managing director of Accenture Strategy Operations.

“Such a commitment to risk management between the two parties can also help managers guard against business disruptions in the wake of natural disasters, geo-political events, shifts in commodity or shipping prices, or any number of circumstances that can endanger a company’s operations,” adds Pearson.

Top 6 by Number of Respondent Ratings



Completing the Top 10



Patrick Burnson is Executive Editor of Supply Chain Management Review

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Outlook 2025

By Bridget McCrea, Contributing Editor



**What will it take to find, train, and retain talent going forward?
Three supply chain experts dust off their crystal balls and discuss
the top ways to build the workforce for 2025.**

As the national economy continues to improve and organizations strive to minimize risk, improve customer service, adopt solid omnichannel processes, and gain competitive advantage, supply chain talent is becoming increasingly difficult to find and retain. Add to the equation the fact that the nation's 73 million Baby Boomers have already started retiring and the need for better talent retention becomes even more critical.

To address these and other issues with the supply chain workforce of today and tomorrow, *Supply Chain Management Review's* Editorial Director Bob Trebilcock sat down with three top executives at ProMat 2015 in Chicago. There, they discussed how companies could find, train, and retain a workforce that will sustain to 2025 and beyond. The summit keynote panel laid out the broad challenges that companies are facing and then offered a range of approaches to create a workforce capable of exceeding the expectations of supply chain partners and customers.

Joining Trebilcock were Betsey Nohe, vice president of supply chain at Morton Salt; Jeff LeClair, vice president of manufacturing and supply chain for Basin Industries; and John Caltagirone, an experienced supply chain executive and the founding director of the Supply and Value Chain Center at the Quinlan School of Business, Loyola University Chicago. During the keynote presentation, they touched on four key areas of concern for today's leading organizations. This article

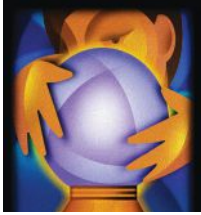
explores each of those key areas, explains the top challenges associated with them, and lays out some solid strategies for managing these issues in today's competitive business environment.

A Look into the Crystal Ball

Given the rapid pace of change that most companies are dealing with today, getting professionals and executives to give 10-year outlooks on specific topics has become increasingly difficult. Luckily, the ProMat panel's supply chain gurus were up to task. When asked to look into their crystal balls and determine what challenges companies might be facing at an operational or corporate level in 2025, the panel discussed the broad challenges that their own organizations are confronting, the approaches that they're taking, and key ways to exceed the expectations of supply chain partners and customers.

Morton Salt's Betsey Nohe kicked off the panel by talking about the massive wave of retirements that are expected to affect firms over the next decade. "We're losing sleep over how to fill those roles," said Nohe, who pointed to the fact that many of Morton Salt's operations are situated in small towns where salt deposits are located. With more people migrating to larger towns and metropolitan areas—and with the booming oil and gas business attracting a higher number of workers—the company faces some unique challenges when it comes to fulfilling its workforce needs.





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Concurrently, Nohe said that mining itself has become more technological in nature. “It’s not just about brawn anymore,” she pointed out. “We need highly skilled, tech-savvy workers to fill open positions.” On a corporate level, Morton Salt has some stiff competition for talent in the company’s hometown of Chicago. “We’re always looking at how to better brand our business to attract candidates and help them choose our company,” Nohe said.

Basin Industries’ Jeff LeClair has prior experience working for large corporations like Toyota and Caterpillar. In assessing future workforce needs and the 2025 timeline, LeClair said that now is the time for organizations to start working more closely with institutions (both high school and college) to build a better workforce. “It’s about helping employees understand their roles and what value they bring to the customer,” said LeClair. “To achieve this, companies need to take a long-term view on workforce development.”

At Loyola University of Chicago’s Quinlan School of Business, John Caltagirone noted that supply chain professionals are becoming more and more critical on a global basis. Asked what its top challenges were in the Middle East and Asia right now, one global company told Caltagirone the most critical three were: water, labor, and talent. The problem, he said, is that supply chain is currently “behind the times” as a profession.

“Information technology knows it needs a backup plan, but supply chain is catching up and saying: ‘Could a disaster happen and if so, do we have a backup plan?’” Caltagirone said, adding that he sees close alignment among workforce planning, business strategy planning, and human resource management in the future. “To get us to where we need to be in 10 years, everyone has to be involved.”

Achieving a Good Balance

While the need for technical competency within the supply chain management space remains high, companies’ requirements around soft skills have changed significantly in the last few years. For example, the recent supply chain graduate who can pore over spreadsheets and assess performance—but who can’t communicate effectively with team members—faces key hurdles in his or her career.

In looking at how demand is changing from hard to soft skills, and in looking forward to how the demands of the supply chain job will change in the future, Nohe pointed to demand planning as one area of particular concern. “In this area, we go out and hire math-minded individuals who understand statistical models and predictive analytics,” she said, “but in

doing so we’re finding that these people really can’t hold a good meeting, or that they can’t effectively collaborate with their peers.”

To help fill in those gaps, Morton Salt conducts formal, in-house training sessions with its employees. “A computer may be able to take over the demand planning process,” she noted, “but it’s the other pieces where the human element adds value.”

According to Caltagirone, communication skills seem to be lacking most among recent college grads who are making their way out into the workforce. “That’s the number one concern that we’re hearing from corporations,” Caltagirone said. As a result, his institution has increased its focus on teaching writing, speaking, business ethics, and communication skills to its students. “In the end, it’s a two-way street,” he said. “Both corporations and schools have to work together to come up with different programs to tackle these challenges.”

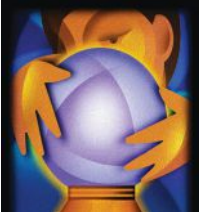
More Soft Skills Needed

Soft skills may be especially critical at the managerial and executive level, but that doesn’t mean that they aren’t also important out on the plant floor. At Morton Salt, for example, the company is involving more of its operations and distribution center employees in the “soft skills” conversation.

“Both are becoming more ‘businesspeople’ in nature and tying their activities into the overall business picture,” said Nohe, who recently learned that one of the firm’s human resources professionals was talking to a plant manager about the need for better adherence to schedules. When overlooked, this single process can result in customer disappointment—a problem that affects the entire organization. “This elevates the level of conversation,” she said, “and helps everyone understand what’s right for the business, the customer, and the community.”

LeClair pointed to the fork-lift truck driver who opens up process improvement dialog with an assembly worker as another example of effective cross-communication on the plant floor. “It can be as simple as: ‘hey is everything running okay?’ but it works; as a company, you get the best of both worlds out of these interactions,” said LeClair. “In the end, constant improvement dialog starts with two people collaborating and communicating.”

In Caltagirone’s eyes, the responsibility of getting plant floor employees to “see the bigger picture” and understand how their activities impact profitability ultimately falls on management’s shoulders. As the former COO of grocery delivery service Peapod, Caltagirone said that forklift operators were called “ambassadors” because in many cases these folks were



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the only ones who made face-to-face contact with the firm's customers. "Whenever you find an organization that uses the 'reverse pyramid' leadership approach—with the employees at the top and management at the bottom," he pointed out, "that really says something about its culture."

Waging the War for Talent

No one would argue the fact that companies are going to find themselves in a heated competition for top supply chain talent in the near future. "It's already intense," said Caltagirone, who works with a number of companies that are opening offices both in downtown Chicago and in the suburbs to accommodate younger workers who want to live and work in the city. "Going forward, it's not going to get any easier to obtain and retain talent."

Nohe concurred, and said that Morton Salt puts much effort into workforce planning. "We're looking at our bench strength for critical positions and always scouting in non-traditional places (i.e., military personnel who have completed duty and are now looking for

work)," said Nohe. "We've broadened our perspectives and are even working with high schools to get students excited about our careers and our field."

As part of that process, Morton Salt runs an apprenticeship program designed to attract a younger crowd interested in future careers with the company. "Mining is a very skilled job, so we frequently partner with high schools and colleges," she explained. "We bring the technical piece to the party and they're going to bring the math skills and other essential skills; together, we can create those programs."

Finally, getting into the "mind of the Millennial" will be a crucial point for companies looking to develop their workforces for 2025, according to Caltagirone. "Millennials want options, good corporate cultures, and the opportunity to work on teams and collaborate," said Caltagirone, who suggests cross training as a potentially useful tool for firms looking to develop solid supply chain talent and bench strength. "The better understanding someone has of the company's internal and external customers, the more paths you'll be able to provide for them to go down." ∞

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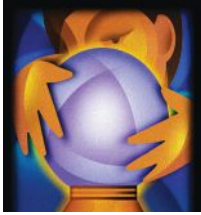
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Supply Chain Education Programs

UNIVERSITIES AND EDUCATIONAL INSTITUTIONS

Arizona State University

W.P. Carey School of Business
480-965-7579
www.asu.edu

The curriculum for the supply chain certificate is in-depth and driven by best practices and industry benchmarks. Delivered by faculty who teach in the W. P. Carey Master of Science in Global Logistics (MS-GL) program, the certificate consists of two core courses and your choice of elective tracks, each offering two additional courses. Customize your certificate with a specialization in operation management, supply management, or logistics management.

Auburn University

334-844-2460
www.auburn.edu

The Harbert College of Business is establishing a SCM research and resource center to facilitate industry engagement. Key capabilities include: conducting annual studies, creating and executing customized development programs, facilitating internship and employment opportunities for students, and driving thought leadership through cutting-edge research.

Brigham Young University

801-422-5367
Marriott School
<http://marriottschool.byu.edu>

The global supply chain management coursework prepares students for positions in purchasing and supply management, inventory management, logistics/transportation management, and operations management. Career paths also lead to executive-level positions such as chief supply chain officer, chief purchasing officer, chief logistics officer, and chief operations officer. Since many supply chains are becoming global, there are particularly good opportunities for individuals with international exposure or interest in working for multinational firms.

Cranfield University

School of Management
+44 (0)1234 751122
www.cranfieldmsc.biz/log

Established over 26 years ago, the University offers one-year full-time Master's in Logistics and Supply Chain Management. It is widely recognized as one of the top Logistics courses in the world. Whether you are already

a professional in this field or are looking to move into this area, this course provides you with the specialist knowledge and skills to further your career in supply chain management.

- Offering one year full-time course beginning September 28, 2015

Georgia Institute of Technology

Executive Master's in International Logistics (EMIL)
404-894-3808
<http://www.emil.gatech.edu/>

As the premier international logistics and supply chain strategy Executive Master's degree program in the world, EMIL-SCS creates superior value for its program participants and company sponsors through real-world supply chain education and solutions. Our mission is to help world's leading companies solve their global supply chain challenges by equipping their executives with the knowledge, strategy, tools, and network of contacts necessary to improve efficiency, reduce cost, and manage risk in today's global markets.

Georgia Institute of Technology

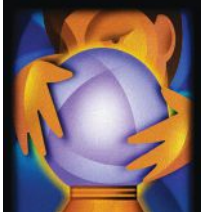
Supply Chain and Logistics Institute (SCL)
404-894-2000
www.gatech.edu

The Supply Chain Management Certificate is a four-course certificate developed to provide participants with both a solid cross-domain understanding of Supply Chain as well as an opportunity to go deeper in specific domains or techniques of interest. The flexibility of the certificate allows participants to broaden their skills and knowledge base while also achieving a specific noteworthy career accomplishment – obtaining a Georgia Tech Professional Education Certificate. Each course can be applied towards earning a Supply Chain Management Certificate. There are two core courses which are required and then participants choose two electives.

Golden Gate University

415-442-7800
www.ggu.edu

For those who don't need an MBA degree but do need to update and broaden their professional skills, the graduate Global Supply Chain Management (GSCM) Certificate provides the theories and practices to be successful in this critical area of modern business. Students take two core operations management (OP) courses, two elective OP courses, and two other elective courses, as approved by the program director for a total of 18 units. The two core OP courses cover key strategic, design, tactical, and execution management knowledge. The two elective OP courses allow students to tailor their certificate in GSCM. The two other elective courses allow students to broaden



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their knowledge either in GSCM or in related areas such as marketing, finance, technology, project management, and international business. In addition to academic knowledge, students will have the opportunity to create a career plan to accomplish their goals with the support of academic, industry, and alumni advisors.

Illinois Institute of Technology **Industrial Technology and Management** **312-567-3650** **www.intm.iit.edu**

The Industrial Technology and Management Certificate is appropriate for individuals from a variety of backgrounds who need a better understanding of industrial operations to perform their current jobs and qualify for promotions. For those who already have a bachelor's degree, the certificate provides a focused introduction to industry and operations management. For individuals with some college experience, this certificate would provide additional education and could also lay the groundwork for earning a bachelor's degree.

Indiana University **Kelley School of Business** **812-855-8100** **www.kd.iu.edu**

AST&L Certification Programs offer a career pathway to improve your skills and enhance your overall job performance - simply, easily, and effectively. Our certification programs are designed to promote education, self-regulation, recognized achievement, and improved performance. AST&L certified individuals are recognized as working professionals who are fully knowledgeable in the transportation and logistics industry, and who are performing their jobs in accordance with high standards set by industry professionals.

Loyola University Chicago **Supply and Value Chain Center** **312-915-6574** **www.luc.edu/quinlan/scm/events/summit2015/**

Mark your calendars to join supply chain professionals and leaders for a robust agenda of critical topics, industry-leading speakers, and the opportunity to network with supply chain management experts and peers. The school will unveil the Supply and Value Chain Center's new home at the Quinlan School of Business' Schreiber Center and explore how to build sustainable and socially responsible supply chains in times of complexity and uncertainty.

Scheduled speakers for the summit include Congressman Bill Shuster, Chairman of the House Transportation and Infrastructure Committee; Kevin O'Reilly, Deputy Chief of Mission for the U.S. Embassy in Panama; Francesca DeBiase, Senior Vice President for Worldwide Sourcing and Sustainability at McDonald's; and Scott Spata, Vice President for Direct Fulfillment at Home Depot.

• Tuesday, October 20, 2015, 8:00 a.m. – 5:00 p.m., reception to follow:

Four Seasons Chicago, 120 East Delaware Place, Chicago, IL 60611

Massachusetts Institute of Technology (MIT) **Center for Transportation and Logistics** **617-253-5320** **www.bus.msu.edu/supplychain/**

Today's companies are realizing the importance of the supply chain as a revenue generator. It's not just a cost of doing business. In order to remain competitive in the global marketplace, senior executives must completely transform their business approach and conventional supply chain practices, and embrace new capabilities that drive more value. How can you leverage the latest supply chain tools, practices and capabilities to ensure that your company is poised to adapt in this rapidly changing environment and not be left behind? You can start by learning from the best at MIT.

Events scheduled are:

• Executive Education - Supply Chain Management: Driving Strategic Advantage.

June 9, 2015 - 10:00 a.m. EDT - June 12, 2015 - 2:30 p.m. EDT, 1 Amherst Street,

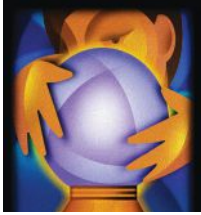
Building E40, Room 364- 3rd Floor, Cambridge, Mass.

Michigan State University **Broad College of Business** **517-353-6381** **<http://supplychain.broad.msu.edu>**

The Master of Science in Supply Chain Management (MSSCM) degree is a unique graduate program providing specific deeper knowledge of supply chain practices and technologies in a structure that it allows it to be completed while students are working full time. Firms are interested in individuals who have sound business skills, decision-making capabilities, and a solid understanding of the latest technology applications. In Supply Chain, the search widens for professionals who understand business alignment and value creation, who are aware of social and environmental responsibility, and who value risk management. MSU Supply Chain graduates understand real-world strategies and have been taught the tactics employed by leading practitioners around the world.

North Carolina State University **919-513-7100** **www.mgt.ncsu.edu**

Today's supply chain management industry requires professionals who can integrate and optimize all the steps required to produce the right amount of the right product or service and deliver it to the end user at the right time. The interdisciplinary role of supply chain management spans logistics, distribution, purchasing, manufacturing, inventory management, marketing, and product development. It involves diverse skills and knowledge, along with multicultural and global perspectives.



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Northeastern University **D'Amore-McKim School of Business** **617-373-2000**

www.damore-mckim.northeastern.edu

The Supply Chain Management program benefits include: Develop an integrative management approach critical in supporting supply chain cost and service improvements. Learn how different supply chain practices, strategies, and decisions can converge to tackle domestic and global supply chain challenges. Acquire an understanding of contemporary challenges, international trade, and development issues that affect the design of international supply chain systems. Gain valuable insights from professors who are thought leaders in the field. Apply the course credits acquired through the Certificate toward the Online MBA, pending admittance into the program.

Northwestern University **Kellogg School of Management** **847-467-6018**

www.kellogg.northwestern.edu/execed

Taught by leading authorities on management, strategy, marketing, and decision sciences, the Supply Chain Management: Strategy and Planning for Effective Operations offers an interdisciplinary approach to managing supply chains and leading effective operations. Faculty present state-of-the-art models and real-world case studies on managing facilities, inventories, transportation, information, outsourcing, strategic partnering, and more. You will learn effective strategies for managing logistics and operating complex networks. You'll develop new skills for integrating your supply chain into a coordinated system. You'll gain practical tools for increasing service levels and reducing costs. And you'll be inspired to redesign your operations for peak performance.

- Operations Management Week

June 7- 12, 2015, you may combine this program with our The Science of Lean Operations program in Operations Management Week. When taken consecutively, these programs are offered at a 10-percent discount and provide an executive summary of the innovative approach to operations management used in the highly-acclaimed Kellogg MBA program.

The Ohio State University **Fisher College of Business** **614-292-0331**

<http://fisher.osu.edu/centers/scm/executive-education>

The Supply Chain Management Program focus on how to implement The Global Supply Chain Forum framework. The framework is comprised of eight essential cross-functional, cross-firm business processes. Examples are provided on how they have been implemented by major corporations. These processes must be implemented cross-functionally and with key customers and suppliers in order to create the maximum value for customers, shareholders and other stakeholders.

The seminar includes a session on the GSCF partner-

ship model that is being used to structure more than 100 business relationships, including Coke and Cargill, and Wendy's and Tyson which was the basis for a Harvard Business Review article. Also there is a session on the collaboration framework that is being used by restaurant chain Bob Evans Farms (and other companies) to realize the value of collaboration in real tangible terms. Events include:

- Supply Chain Management program - Columbus, Ohio - September 15 - 18, 2015

The Pennsylvania State University **Smeal College of Business** **814-865-3435**

www.smeal.psu.edu/psep

The Supply Chain Management Concentration enables you to accommodate organizational and supply chain goals for profitability, asset utilization, customer service, and systems flexibility. Upcoming events at the Executive Center, University Park Campus:

- Developing Strategic Supply Chain Leaders - September 15, 2015
- Essentials of Supply Chain Management - October 06, 2015
- Processes and Tools for Supply Chain Success - November 3, 2015

Rutgers University **Rutgers Business School** **973-353-5185**

www.business.rutgers.edu/scmms

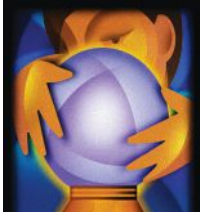
Rutgers Business School's Center for Supply Chain Management is pleased to announce a three-day certificate program developed in cooperation with leading industry experts. This exciting program covers all major aspects of supply chain management, including strategy, sourcing and procurement, operations, logistics, and organizational alignment. Learn how to execute a strategic supply chain management plan that is grounded in today's business needs for competitive effectiveness and operations efficiency.

- Supply Chain Certificate- 3 Day Certificate program- June 10 -June 12, Livingston Campus, 100 Rock

Stanford University **Graduate School of Business** **650-723-3341**

www.gsb.stanford.edu/exed

Strategies and Leadership in Supply Chains is ideal for organizations—of any size or industry—that are faced with the challenges of managing complex global supply chains. It's specifically designed for: Functional executives and general managers who have strategic responsibilities for supply chain management, manufacturing, operations, logistics, distribution, or procurement. The Strategies and Leadership in Supply Chains program is taught by world-renowned thought leaders in the field. This program gives you the tools you need to create and manage market-leading global supply chains. Upcoming events:



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- Strategies and Leadership in Supply Chains - August 16-21, 2015 - Executive Education Stanford Graduate School of Business, Stanford, California

Syracuse University

Whitman School of Management

315-443-3751

www.whitman.syr.edu/scm

Supply chain managers very often hold the key to corporate profitability. Economists and employers single out supply chain management for its strong growth potential. Home to the nation's first supply chain program (established in 1919), the school's Supply Chain Management program is well attuned to the needs of this dynamic specialty. Whitman offers an undergraduate degree program and an MBA degree program in Supply Chain Management.

Texas A&M University

Mays Business School

979-845-1216

www.business.tamu.edu

The Supply Chain Management major prepares students for a career in designing and managing the activities that deliver products and services to customers. This major produces graduates with strong analytical and problem-solving skills and the ability to work in and coordinate team activities. Graduates possess the business, technical, and leadership skills needed to meet the challenges of the rapidly evolving global marketplace.

The World Academy

855-496-8394

www.theworldacademy.com

The Academy provides training programs and seminars for organizations in all phases of export/import logistics, hazardous materials (HAZMAT), letters of credit, communications, harmonized tariff schedules, and INCO terms. A full list of webinars and workshops can be found on the Academy's website.

The University of Alabama

College of Continuing Studies

Tuscaloosa, AL

205-348-6222

<http://training.ua.edu/supplychain/>

The Supply Chain and Logistics Management Certificate Program offers a comprehensive management development program for professionals involved in inventory management, purchasing, warehousing, or transportation. A materials manager who completes six seminars within a three-year period will receive a certificate of completion from The University of Alabama College of Continuing Studies.



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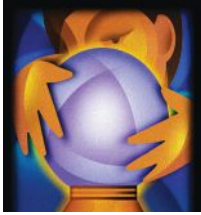
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University of Arkansas

Sam M. Walton College of Business
479-575-5949
www.waltoncollege.uark.edu

Graduates of the Supply Chain Management (SCM) program will find themselves in exciting and diverse roles in organizations where they will manage activities, such as planning and forecasting, purchasing, sales, transportation, storage, and distribution, which are required for the efficient flow of goods and services between the points of their creation and their ultimate consumption or disposition. Beyond faculty expertise in these areas, our students benefit from the College's Supply Chain Management Research Center, which connects students to industry executives leading to job opportunities, internships, or other support.

University of Denver

Daniels College of Business
303-871-3416
<http://daniels.du.edu/>

The Supply Chain Roundtable at the University of Denver's Daniels College of Business has welcomed well-known executives from throughout the Rocky Mountain region and around the country. The Supply Chain Roundtable gives Daniels students an opportunity to meet with top professionals through our speaker series, networking events, out-of-classroom projects, and internships while giving speakers a chance to meet the students and market their companies.

University of Maryland

R.H. Smith College of Business
301-405-3063
www.rhsmith.umd.edu

Whether you're a recent graduate with an interest in how goods move around the globe, or a manager who would like to broaden your understanding of the global supply chain, the Smith MSB in Supply Chain Management will help you develop strong managerial skills and make connections with supply chain executives from a cross-section of industries. You'll be prepared to lead innovation that drives business growth, promotes efficiency, and helps sustain the planet - and gain the relevant, real-world experience most sought after by recruiters.

University of Michigan

Ross School of Business
734-763-1396
<http://execed.bus.umich.edu/>

Students in our Ross School's Master of Supply Chain Management Program (MSCM), learn from Ross' world-renowned faculty in operations and management science, as well as top-ranked researchers in all business disciplines. MSCM students are admitted to the Tauber Institute for Global Operations, a partnership between the Ross School and U of M's College of Engineering.

University of San Diego

Supply Chain Management Institute
619-260-4894
<http://www.sandiego.edu/business/centers-of-excellence/supply-chain-management-institute/>

The Supply Chain Management Institute (SCMI) supports the development of exceptional professionals who are sought after by industry and the public sector alike. The Supply Chain Management Institute in the School of Business Administration is wholly invested in supporting SBA's mission to develop more globally minded, responsible leaders. We regularly research and update the curriculum and create advanced learning opportunities to help students gain relevant supply chain management knowledge that is aligned with industry needs.

University of San Francisco

415-422-5555
www.usanfranonline.com/ism

With companies trying to cut expenses, operate more efficiently, and reduce their environmental footprint, sustainability and supply chain management (SCM) have become critical fields worldwide. Gain cutting-edge skills from U.S. News-ranked University of San Francisco, as renowned instructors guide you toward a three-course Advanced Professional Supply Chain Management Certificate through the convenience of video-based e-learning.

University of Southern California

USC Marshall School of Business
213-740-9000
<http://globalsummit.uscsupplychain.com/>

The 3rd Annual Global Supply Chain Excellence Summit will feature a series of thought-provoking panels presented by a slate of C-level leaders and distinguished faculty while offering guests the opportunity to ask questions to dig further into the topics.

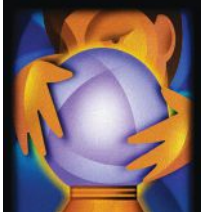
- Friday, September 11, 2015 - 7:30 a.m. - 5:00 p.m.

USC Ronald Tutor Campus Center Ballroom

University of Tennessee

College of Business Administration
865-974-5001
<http://supplychain.utk.edu>

For more than 50 years, University of Tennessee faculty have played a major role in the supply chain arena, conducting innovative research, publishing leading-edge findings, writing industry-standard textbooks, and creating the manual to which companies successful in supply chain management adhere. We offer comprehensive supply chain management/logistics programming across the entire educational spectrum, as well as customized solutions to fit your specific needs.



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University of Wisconsin-Madison

Grainger Center
608-262-1550

<http://bus.wisc.edu/centers/grainger-center-for-supply-chain-management>

The Wisconsin MBA in Supply Chain Management, supported by the Grainger Center for Supply Chain Management, provides students with a personalized, industry-focused program which partners with companies known for supply chain excellence. We provide students with an exceptional interdisciplinary education that builds on fundamental knowledge and incorporates the latest in supply chain thinking. The strategic, cross-functional curriculum takes an integrated business process view of supply chains, including marketing, sourcing, logistics, operations, and customer service. Students connect with and learn from real-world supply chain leaders and are part of a strong, close-knit community.

Walden University

1-866-492-5336

www.waldenu.edu

Whether you are a manufacturer, retailer, or service provider, if you conduct business globally, you need to understand how products and services move from concept to deliverable. Learn the systems required to identify sources of personnel and material and how to ensure that supply chains conform to the highest global standards. In addition, you will explore new ways of applying technology to help cut costs, increase customer satisfaction, and find new business opportunities. Coursework focuses on the development of writing and critical-thinking skills at the doctoral level.

Washington University- St Louis

Olin School of Business
314-935-9494

<http://www.olin.wustl.edu/EN-US/Pages/default.aspx>

With the Supply Chain Certificate for Managers learn to improve operational effectiveness across the entire supply chain, from sourcing to point of sale. Learn how to manage and monitor raw materials, work-in-progress inventory, finished goods, and channel partners. The goal is to balance supply and demand, streamline logistics, and create net value.

PROFESSIONAL ASSOCIATIONS

APICS

1-800-444-2742

www.apics.org

APICS is the leading professional association for supply chain and operations management and the premier provider of research, education, and certification programs that elevate supply chain excellence, innovation, and resilience. APICS Certified in Production and Inventory Management (CPIM) and APICS Certified Supply Chain Professional (CSCP) designations set the industry standard.

CSCMP (Council of Supply Chain Management Professionals)

630-574-0985

<http://cscmp.org/>

The Council of Supply Chain Management

Professionals (CSCMP) provides you and your organization with the education, research, connections, and professional growth you need to meet the demands of a constantly changing marketplace. Our member benefits are designed for supply chain professionals passionate about their careers and the supply chain profession. Council of Supply Chain Management Professionals members receive practical, "how to" solutions on the industry's current hot topics from receiving member exclusives such as publications, professional education, online benefits, networking opportunities, and cutting-edge research. Events planned:

- Annual Global Conference - September 27-30, 2015 - San Diego Convention Center, San Diego, California

ISM (Institute for Supply Management)

480-752-6276

<http://www.ism.ws/>

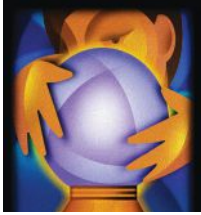
ISM offers certification programs, seminars, professional development services, and online courses for the supply management professional. It also features an annual Conference and Educational Exhibit.

Next Level Purchasing Association

412-294-1990

www.nextlevelpurchasing.com

So what is the secret to a becoming a world-class procurement professional? It is the SPSM Certification, earned by completing the Senior Professional in Supply Management Program. Individuals who have earned the SPSM Certification have reported that they are having an easier time finding great jobs, getting excellent performance evaluations, and getting large pay increases.



Supply Chain Executive Education Outlook 2025

A SPECIAL SUPPLEMENT TO SUPPLY CHAIN MANAGEMENT REVIEW

NITL (National Industrial Transportation League) 703-524-5011 www.nitl.org

Career advancement, meeting new challenges, and taking advantage of the latest opportunities and trends require today's freight transportation professional to be up to date on the latest developments. The League has a proven track record of providing educational forums which meet all these needs. From seminars on critical emerging issues, to webinars on best practices in every aspect of supply chain management, the League's constantly evolving education program for Members is an industry leader. Events scheduled include:

- 2015 NITL Conference & Freight Exhibition - November 16 - 19, 2015 – New Orleans, Louisiana

SIG (The Original Executive Sourcing Network) 904-310-9560 www.sig.org

SIG is acknowledged by many as a world leader in providing "next" practices, innovation, and networking opportunities through its: global and regional events, online webinars and teleconferences, member peer connection services, content-rich website, and online Resource Center, which was developed by and for professionals in sourcing and outsourcing. The organization is unique in that it blends practitioners, service providers, and advisory firms in a non-commercial environment. Events planned include:

- SIG Global Summit - October 27 - 29, 2015 – Huntington Beach, Calif.

TRB (Transportation Research Board) 202-334-2934 www.trb.org

Transportation practitioners, researchers, public officials, and other professionals need credible, high-quality information and research results to address the transportation challenges of the 21st century. The Transportation Research Board engages professionals worldwide in a broad range of interdisciplinary, multimodal activities to lay the foundation for innovative transportation solutions.

VICS (merged with GS1 US) 609- 620-0200 www.vics.org

In today's omni-channel retail world, consumers are in control. They expect accurate, immediate product information and access to products. Quite simply: they will move on, if they can't find the products they want when they want them. The Apparel and General Merchandise Industry is most concerned with improving inventory accuracy, supply chain visibility, and speed-to-market capabilities to satisfy consumer demands, while still addressing requirements around business process efficiencies and product safety. Events scheduled include:

- Webinar- Using GS1 Standards for Supply Chain Visibility- June 18, 2015
- GS1 Supply Chain Visibility Workshop, Chicago, Ill.- October 22, 2015

WERC **(Warehousing Education & Research Council)** 630-990-0001 www.werc.org

WERC offers resources that help distribution professionals stay at the leading edge including educational events, performance metrics for benchmarking, practical research, expert insights, and peer-to-peer knowledge exchange. WERC members are from companies across the gamut whose focus is on warehousing and distribution.

PRIVATE FIRMS

Accenture Academy 312-842-5012 www.supplychainacademy.com

The Accenture Academy supply chain curriculum offers hundreds of courses covering supply chain fundamentals, product innovation and lifecycle management, supply chain planning, sourcing and procurement, manufacturing, logistics, and customer and service management. We integrate these supply chain-specific courses with the specialty skills and broader business management capabilities needed to help the supply chain workforce become more versatile business professionals.

Vantage Partners 888-547-8852 www.vantagepartners.com

At Vantage Partners, we advise chief procurement officers, lead supply chain transformation initiatives, support development of category strategies, design and implement supplier relationship management programs, advise on high-stakes supplier negotiations, and provide a range of training solutions to procurement leaders and professionals.

SupplyChain OUTLOOK SUMMIT 2015

Nov 2-3, 2015
Rosemont
HILTON
Chicago, IL

The Future of Supply Chain Management: What you need to know for 2016 and beyond

What's Next?

The Supply Chain Outlook Summit is a 1½ day Executive Conference developed exclusively for qualified end user VPs and Director-Level Managers.

Monday, November 2	
10:00 AM	Welcome
10:30 AM	OPENING KEYNOTE: Economic Forecast for the Supply Chain Brian Beaulieu , ITR Economics
11:30 AM	Networking Lunch Sponsored by: 
1:00 PM	What Will It Take for Purchasing to Get a 'Seat at the Table'? Rob Handfield , Supply Chain Resource Cooperative, Poole College of Management, NC State University
2:00 PM	Reshoring and Rebalancing Global Supply Chains Rosemary Coates , Reshoring Institute
3:00 PM	Break
3:30 PM	Supply Chain Innovation Scott Sopher , Deloitte Consulting LLP
4:30 PM	Transportation Logistics: Freight Outlook Kevin Zweier , Chainalytics
5:30 PM	Research presented by SCMR and Platinum Sponsor: 
6:00 PM	Networking Reception

Tuesday, November 3	
8:30 AM	Supply Chain 2020: When Uncertainty is a Certain Factor Lawrence Lapide , MIT Center for Transportation and Logistics (CTL)
9:30 AM	Supply Chain Priorities Roundtable John Caltagirone , Loyola University Chicago
10:30 AM	Break
11:00 AM	Supply Chain Sustainability: Future Challenges and Opportunities John Bell , University of Tennessee
12:00 PM	Lunch: Supply Chain Reader Research Presentation Bob Trebilcock , Supply Chain Management Review Sponsored by: 
1:00 PM	CLOSING KEYNOTE: Culture is the Future of Supply Chain Steven Melnyk , Michigan State University

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