

GRADUATING TO A SMARTER SUPPLY CHAIN

HOW SPECIALIZED EDUCATION PAYS OFF



CSCMP Council of Supply Chain
Management Professionals
Educating and Connecting the World's Supply Chain Professionals™

ILLUSTRATIONS BY STUART BRADFORD

THERE ARE A LOT OF COMPANIES that have not employed sophisticated supply chain methodologies," says Rick Blasgen, president and CEO of the Council of Supply Chain Management Professionals (CSCMP). "They just haven't been schooled in it. They haven't understood the benefits of it, but they're now finding out that the benefits are there."

□ Today, to meet rising customer expectations, supply chains must be more nimble, quick to anticipate shifts in demand, and even quicker to respond. Leaders at every stage must know not only their domains and silos, but also how all the parts of a complex system work together.

□ Information technology (IT) has upended previous

forecasting models by enabling manufacturers to track shifts in demand, as well as shipments of materials and parts, through the cloud in real time. No plant or distribution center manager can afford to be oblivious to big data.

In IT, as in planning and purchasing, one principle has become paramount: Companies need people to analyze beyond the scope of their day-to-day operations. They must understand how distant dynamics upstream or downstream have long ripple effects and require short response times. A holistic understanding of supply chain dynamics is especially important in this era of technology-driven disruption of business models.

"Companies are getting value out of analyzing data on spreadsheets, but there's more value if you adopt techniques for more sophisticated analysis," says John Langley, professor of supply chain management at Penn State.

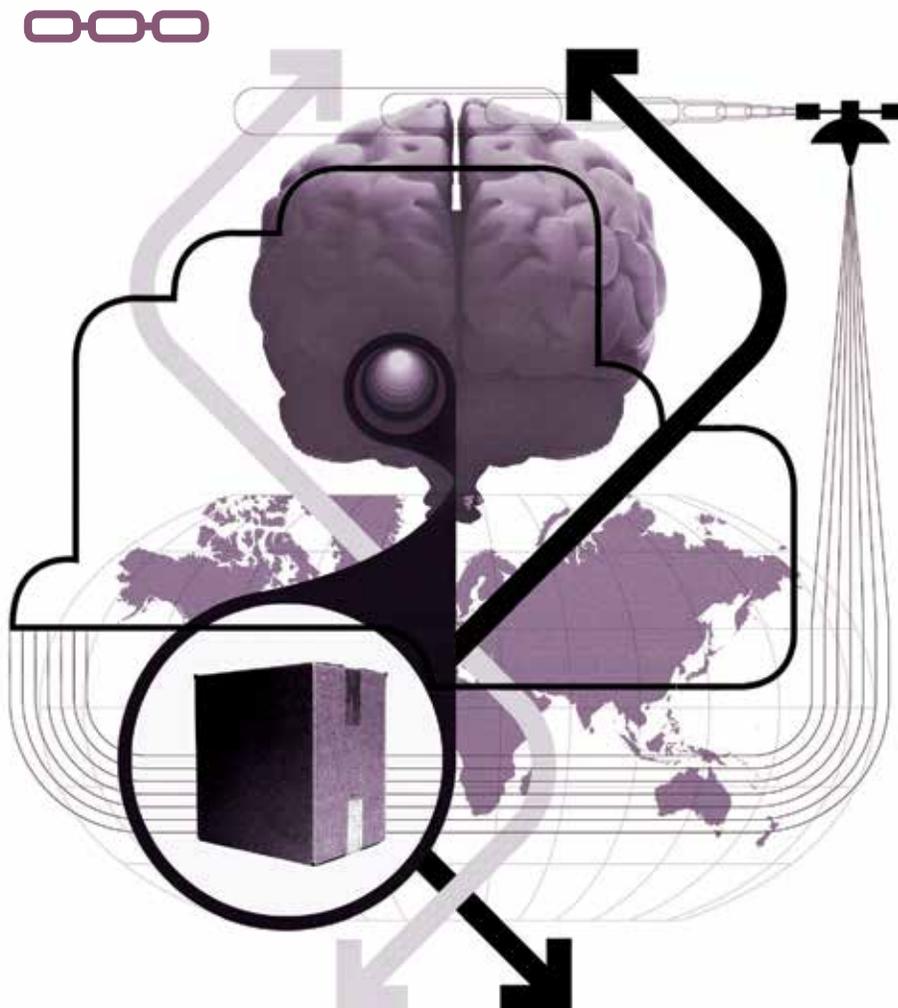
"To be competitive in this changing landscape, companies need a supply chain leader that they didn't need 20 or even 15 years ago," says Carl Briggs, professor of operations and decision technologies at Indiana University's Kelley School of Business.

Encouraged by this professional vacuum for next-gen supply chain experts, new investment—from students, companies, schools, and professional organizations—is pouring in to supply chain education.

Briefly put, both newbies and pros alike need training on a level that their predecessors never did.

SOURCES OF SUPPLY CHAIN SMARTS

As a result, 74 U.S. colleges offered a business degree in supply-chain, transport, or logistics last year, according



to the Association to Advance Collegiate Schools of Business (AACSB) International. That's up from 56 four years earlier. On the graduate level, 19 business schools now confer a supply chain-related degree and 26 offer an MBA with a supply chain focus.

The University of Southern California Marshall School of Business has developed a 16-month master of science in global supply chain management. The on-campus and online program is comprehensive, including academic concepts and practical applications as well as a mixture of distance education and face-to-face learning through experiential learning trips. Synchronous and asynchronous learning are designed to provide a world-class network of contacts and access to resources at the Center for Global Supply Chain Management, with its speaker events, research, networking, roundtable discussions, and annual conferences.

In addition to work on applied industry projects, students have an opportunity to attain Lean Six Sigma certification. Upon graduation, "they're ready to hit the ground running and make an impact on their organizations. We try to pack 16 years of working experience into 16 months of well-rounded education," says Nick Vyas, director of

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USC's Center for Global Supply Chain Management and program director of its M.S. program.

For the ambitious, specialized degrees are launching upward career trajectories. With a master of supply chain management degree from the University of Michigan's Ross School of Business, graduates routinely climb from mid-level positions in their organizations to supply chain leadership roles.

In Indiana University's MBA Supply Chain Academy, students work to solve real-world supply chain problems for corporate partners, many of whom are members of the school's corporate Supply Chain Alliance.

Southern New Hampshire University (SNHU) offers a 15-month online

MBA in operations and supply chain management, tailored to working students with high-level ambitions in warehouse management, transportation planning, procurement, distribution, and inventory control.

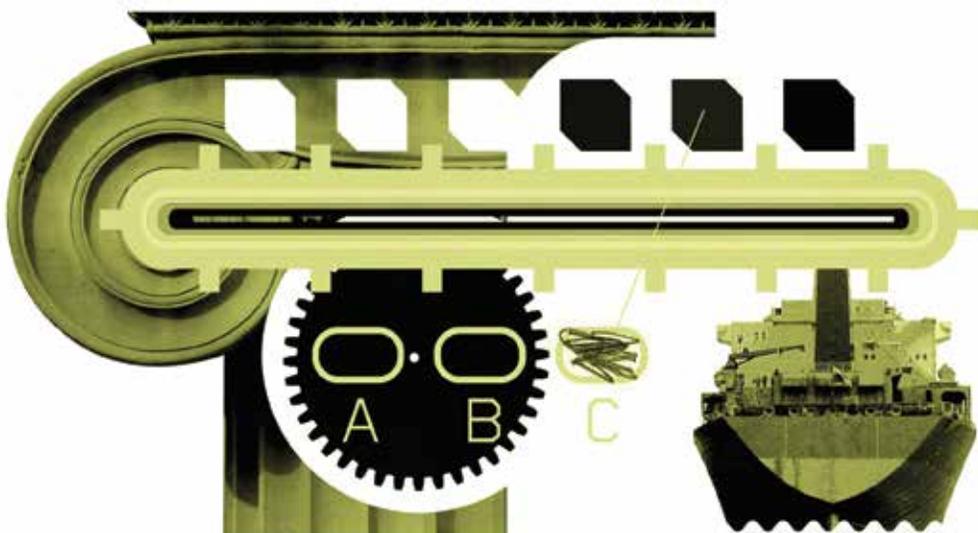
The draw of affordable, practical education makes SNHU, a private non-profit university in Manchester, N.H., one of the fastest-growing schools in the country. Since 2010, enrollment has soared from 12,000 to 72,000, with most of the growth online. Through three-year degrees and other innovations, SNHU is helping students hone marketable skills and save up to 40% on a bachelor's degree education.

"We collaborate with employers to develop programs," says SNHU president Paul LeBlanc. "The focus is on our students and the needs of potential employers, getting the right students with the right skills in the right jobs."

Long-established programs are also growing larger and becoming more selective. The Haslam College of Business at the University of Tennessee, Knoxville (Haslam) awarded 150 undergraduate supply chain degrees back in 2003 but now confers 300.

At Penn State University's Smeal College of Business, more than 2,000 undergraduates apply each year to the supply chain management program; one in six gets accepted.

"The students come out



prepared,” says Penn State professor Langley. “We use a lot of cases, and every case makes you aware of a different supply chain problem. Then we use action projects to ensure learning transfers to practice.” Students learn problem-solving techniques as well as supply chain processes from managing IT-enabled logistics to crafting strategy. The curriculum, offered online and in residence, often leads to a master’s or Ph.D. in supply chain management.

Organizations flock to hire the program’s graduates, as evidenced by an annual three-day recruitment fair that draws at least 150 corporations annually, from Lockheed Martin to MillerCoors. The number of companies hiring Penn State talent? 550. Based on the 2014-15 exit survey, companies that hired the most students included EY, Amazon.com, DICK’S Sporting Goods, IBM, and Boeing.

Additionally, the United States Navy, Army, and Marines are loyal supporters of the school’s supply chain professional development programs.

Few companies have the in-house

“It used to be much more about functional expertise. Now you have to have cross-functional management skills, international exposure, and the ability to transcend the technical side.”

ABE ESHKENAZI, CEO, APICS



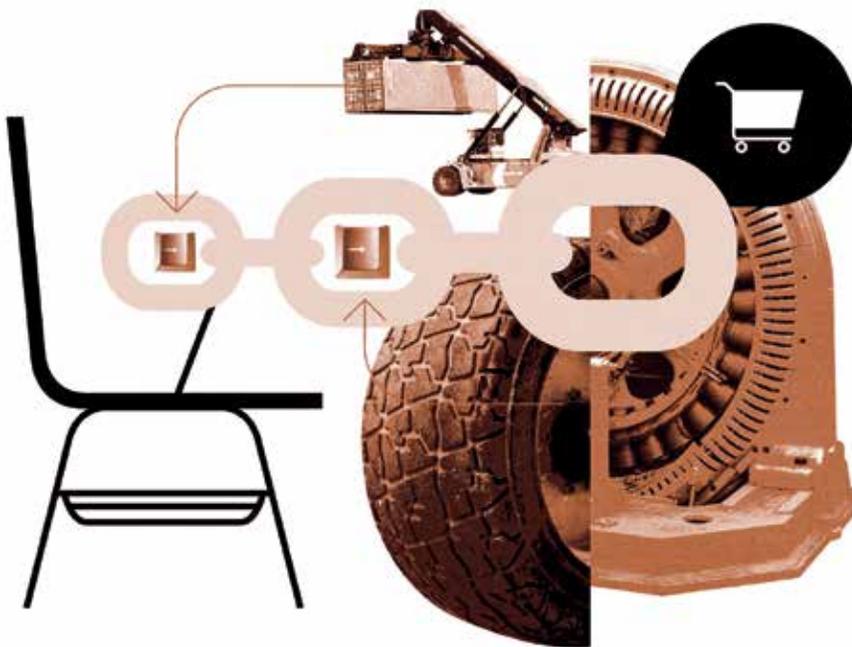
resources to study the best practices of a range of industries, with radically divergent scenarios to apply. Nor do they have the luxury to do much, if any, trial and error in real time. But academic centers and nonprofit providers of business courses glean insights from far and wide, and they increasingly package essential learning tools for distribution through a variety of platforms.

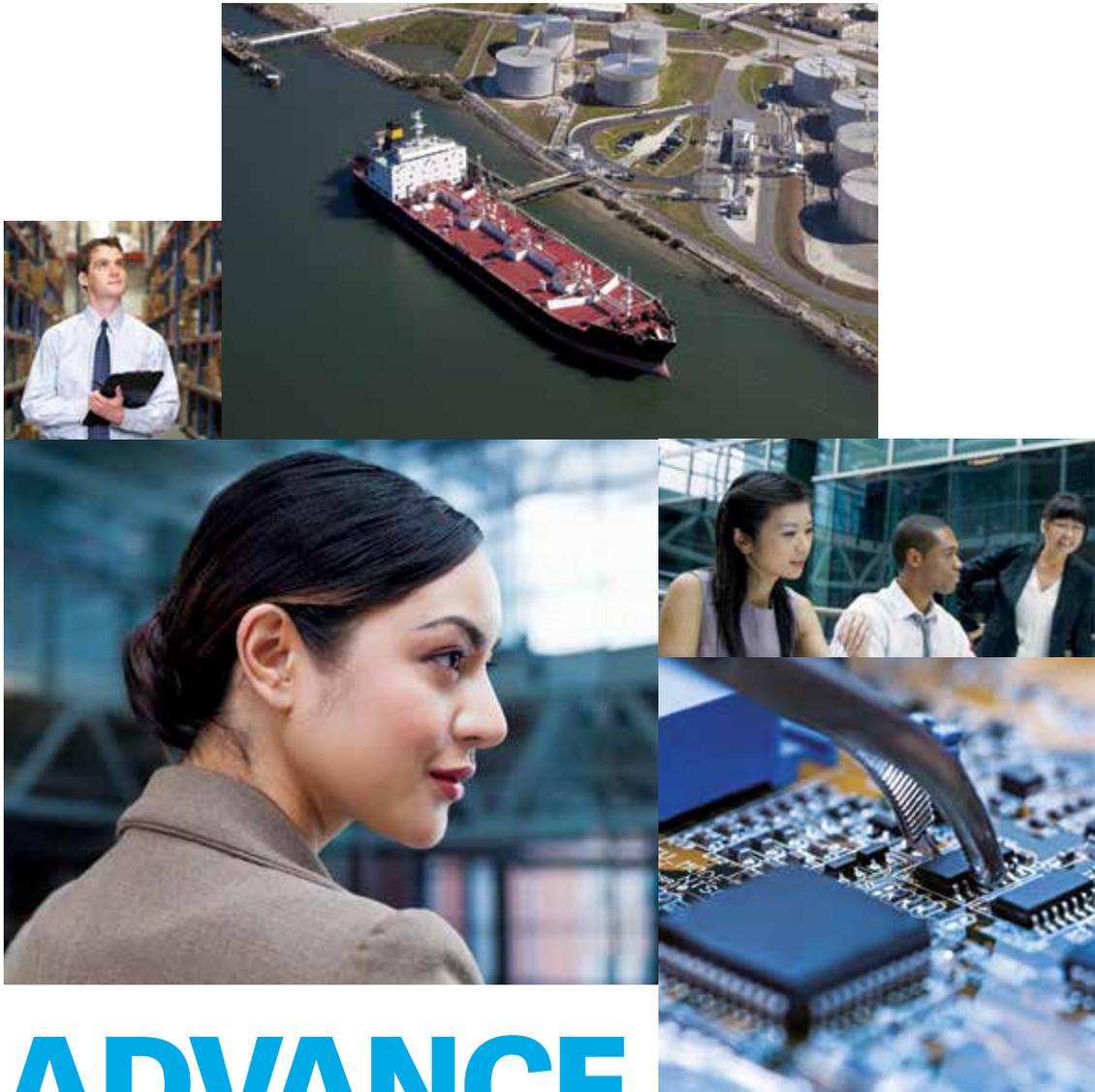
For example, such organizations

are tapping into CSCMP’s library of materials, including SCPro™, a certification program for senior-level supply chain professionals, with content online, in workshops, and in customized courses. Nine community colleges and three universities use CSCMP content, and some Haslam students take the SCPro™ certification test as a final exam.

CSCMP also certifies entry- and mid-level supply chain employees through LINCS (Leveraging, Integrating, Networking, Coordinating Supplies). Supported by a \$25 million Department of Labor grant, LINCS is increasingly accessible—especially for veterans, displaced workers, and the long-term unemployed—through a consortium of 12 colleges and universities around the country.

Decision-makers also turn to Chicago-based APICS, an organization for supply chain and operations management professionals, for up-to-date insights—and for certifications that, according to APICS surveys, lead to employee salary increases of 9%–17%. Why? They leave with credentials, such as Certified in Production and Inventory Management





ADVANCE YOUR SUPPLY CHAIN PERFORMANCE

The world of supply chain management never stops advancing—and neither should your supply chain organization. APICS helps organizations like yours develop supply chain talent and elevate supply chain performance. From education and certification to benchmarking and best practices, APICS sets the global industry standard.

Learn how APICS can advance your supply chain performance.

Develop your supply chain organization through APICS training and certification at apics.org/advance.



(CPIM), that prepare them to see supply chains as more than balance sheet liabilities, and the extra training leads to measurable value for their organizations.

“It used to be much more about functional expertise,” says APICS CEO Abe Eshkenazi. “Now you have to have cross-functional management skills, international exposure, and the ability to transcend the technical side.”

Companies and their employees gain insights through the APICS Supply Chain Council (SCC). When firms affiliated with APICS SCC tap the SCORmark benchmark process, they see how their processes stack up against those of more than 1,000 companies and 2,000 supply chains. Once they’ve identified areas for improvement, they can often turn over inventory at a 20% faster rate and boost operating margins.

At the university level, gone is the ivory-tower mentality. The supply

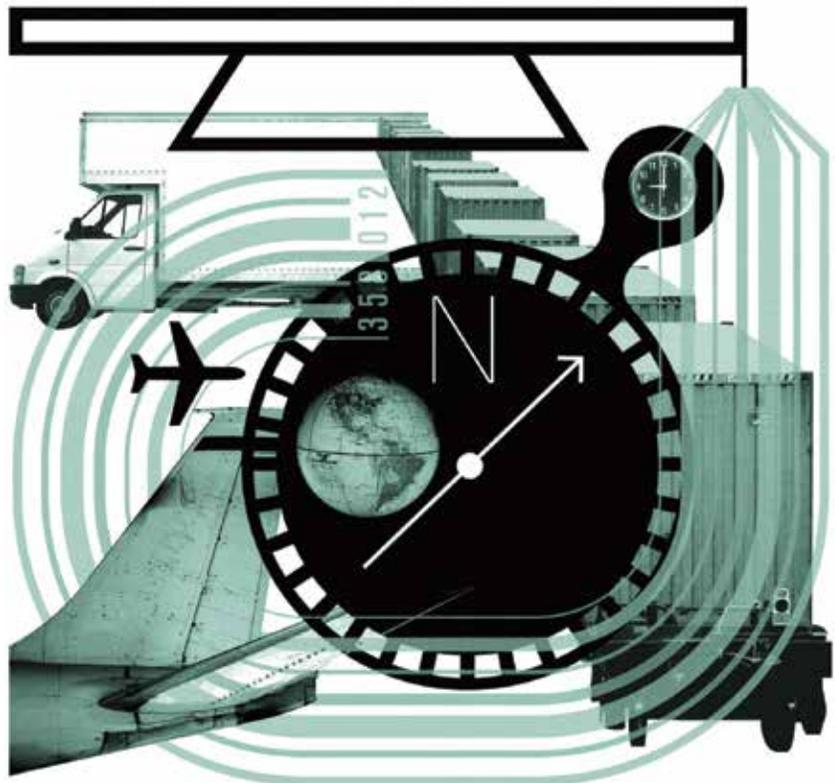
chain track forges partnerships with corporations that, in turn, use business schools like supply chain doctors to diagnose what’s wrong—and to prescribe cures.

As companies come to regard supply chains as strategic assets, educational institutions are developing curricula aimed at graduating men and women ready to step into roles—such as chief supply chain officer—that were virtually nonexistent a generation ago.

PAYOFF FOR THE COMPANY

Companies don’t need much arm-twisting to write checks for executives’ supply chain tuitions. They are taking their education investments to the bank, leading them to invest in everything from advanced degrees to multi-day modules custom-crafted for their organizations.

Consider Haslam’s Executive MBA for Global Supply Chain, a one-year



The United States Navy, Army, and Marines have all sent teams to Penn State University for its analytics programs.



program that launched in 2013 and draws managers from aeronautical, food and beverage, and consumer goods companies with international reach. Each participant completes a project to improve their company's supply chain. The average project delivers \$6.5 million in value to the organization, according to Shay Scott, managing director of Haslam's Global Supply Chain Institute, a hub for research and industry consulting.

The Master of Supply Chain Management program at the University of Michigan combines end-to-end supply chain education with paid, 14-week action based learning projects to address actual supply chain problems for *Fortune* 200 companies. In tackling challenges from remanufacturing to cloud-based infrastructure, they helped corporate partners save an average of \$12.8 million per project last year.

Companies that specialize in making supply chains hum have been stepping up to build closer ties with universities. Penske Logistics sponsors research, provides internships, and supports forums at institutions that equip business students with the know-how to make an impact from day one on the job.

"The trend today is specialization," says Penske Logistics senior

vice president of human resources Jeff Stoicheff. Ten years ago, many supply chain executives had degrees in general business disciplines, Stoicheff says, but now they are more focused. "Today, more members of our leadership team possess or are attaining degrees specifically in supply chain management."

With 13,000 employees worldwide and revenues of \$1.1 billion, Penske Logistics has carved a leading niche in trucking, warehousing, and supply chain management. By investing in education, the company aims to get a leg up on the industry's forecasted talent shortage in years ahead.

"Today, we are seeing outstanding talent coming out of the universities, as they have instituted excellent internship programs that include operations exposure," Stoicheff says.

The payoffs can make a little extra schooling seem like a gold mine. For example, Ingersoll Rand saved \$5.5 million over three years by partnering with APICS to train more than 200 employees in strategies for improving delivery performance; APICS training for 150 employees of GE Oil & Gas resulted in a 30% increase in on-time deliveries.

PAYOFF FOR THE PRO

The employment outlook in supply chain fields is indeed bright for professionals with the right training. And companies are paying a premium for employees who can help them run a more integrated ship.

For those logisticians who analyze and coordinate a company's supply chain, the median pay was more than \$72,000 in 2012, according to the U.S. Bureau of Labor Statistics. "Employment of logisticians is projected to grow 22% from 2012 to 2022, much faster than the average for all occupations," the BLS states. "Employment growth will be driven by the important role logistics plays in the transportation of goods in a global economy. Job prospects should be best for those with a bachelor's degree and work experience related to logistics."

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CARL BRIGGS

*PROFESSOR OF OPERATIONS AND DECISION TECHNOLOGIES,
KELLEY SCHOOL OF BUSINESS, INDIANA UNIVERSITY*



For people in the workforce, the path to a degree can now involve getting credit for job skills, not just academic credit hours or grade points. SNHU’s College for America partners directly with employers to help working adults achieve accredited, competency-based degrees.

Those graduating from college with a specialization in supply chain have recently seen starting salaries jump an

average of more than 10% to as much as \$70,000 this year, according to CSCMP.

Education pays, too, for supply chain brains already in the workforce: On average, those with bachelor’s and master’s degrees earn around \$125,000, versus \$81,000 for those with a high school diploma, according to an April survey of readers of *DC Velocity*, a magazine for supply chain managers and executives.

Finally, those who learn the most earn the most and bring outside value to their employers. *DC Velocity*’s April survey found that those with doctorate-level training are taking home an average paycheck of \$340,000.

THE FUTURE

Program tracks are constantly evolving, as companies discover what they need and where they can turn for help. For instance, lean manufacturing principles that focus on eliminating waste are increasingly applied to transportation, distribution, and other supply chain areas.

To make the leap and bring “lean” to bear, companies often need a guide.

Supply chain management might not be as simple as it used to be, but herein is where the opportunity lies. The field is attracting professionals who like a challenge and welcome a career path filled with promise. And with plenty of sources for the knowledge they need, they’re ready to be nimble. ●

