



Automotive Industry Brief 2015

SOLVING THE TALENT CRISIS:

FIVE ALTERNATIVES EVERY SUPPLY CHAIN
EXECUTIVE MUST CONSIDER

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SOLVING THE TALENT CRISIS: FIVE ALTERNATIVES EVERY SUPPLY CHAIN EXECUTIVE MUST CONSIDER



The automotive industry is facing a threat to its future. The threat is not about product innovation, technology, safety recalls or supplier shortages. It's about people – specifically supply chain talent, and the rapidly growing shortage that could put the brakes on the sector's ability to grow and prosper.

Supply chain talent is in short supply worldwide. As the automotive sector grows, this resource problem will only get worse.

WHY IS THE SUPPLY CHAIN TALENT SHORTAGE SO WORRISOME? CONSIDER THIS SCENARIO:

Situation: An automaker planned to launch a complex new vehicle, and produce the car in four different global locations based on its platform strategy. Two of the four locations were in emerging markets, where lack of infrastructure and availability of skilled supply chain managers complicated an already difficult launch.

Problem: Lack of supply chain expertise in the two emerging markets ended up causing multiple points of failure in the automaker's supply chain. Supplier capacity management, supply chain network design, production line parts/component sequencing and supply chain risk management – none were up to the complex task.

Impact: Supply chain costs exceeded budgeted program costs by more than 15 percent. The OEM was forced to use

premium freight transportation to ensure continuity of supply. Even so, final product launch was delayed three weeks, which ultimately resulted in a 5 percent drop in market share that year in the two new markets.

Lessons like these are painful reminders of what happens when a supply chain fails. Such failures will become more common if companies lack sufficient supply chain expertise, as a growing number of OEMs, suppliers and their supply chain partners are realizing.

To secure its future, the industry must tackle the supply chain talent shortage head on and develop more effective talent acquisition, development and retention strategies.

This white paper explores this issue, what it means to the automotive industry, and discusses five core strategies companies can deploy to address the problem.

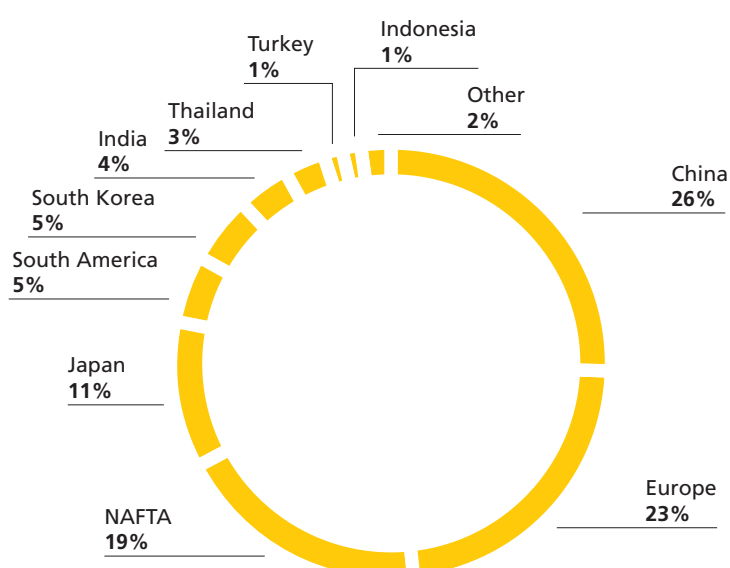


THE STATE OF THE INDUSTRY

The auto industry sold 72 million cars worldwide in 2014, and expects to sell 92 million by 2025, according to Statista Inc. The numbers, while impressive, tell just part of the story about this highly complex and vital sector. In fact, it is undergoing significant structural changes that carry important supply chain implications.

First among these changes is the fact that the sector has seen a “tectonic shift” from mature markets toward emerging markets.¹ As a result, “the automotive supply chain now combines a blend of global buy-supply relations with regional production systems and largely national assembly,” according to a recent report.² More than 75 percent of light vehicles, for example, are built in the region in which they are sold. Figure 1 shows 2014 finished vehicle production broken down by nation/region.³

FIGURE 1: FINISHED VEHICLES PRODUCTION BY REGION



Source: Transport Intelligence, 2014.

¹ “Rethink logistics set-ups: The key to cope with European diversity,” Roland Berger, 2014, 6.

² “Global Market Research Automotive,” Global Automotive Strategy & Priorities, 2013, 4.

³ “Global Automotive Logistics 2014,” Transport Intelligence, 2014, 15.

Components and sub-assemblies still originate from dispersed geographies, but this too is changing. Suppliers are building production capacity closer to demand as a strategy to cut costs, comply with increasing local content regulations, speed time to market and develop their national manufacturing base. This means that supply chain flows – and the need to manage them - will continually shift to reflect the changing sourcing and production dynamics.

Another issue complicating the sourcing, production and aftermarket supply chain is the fact that vehicles have become increasingly complex. The number of components per vehicle has doubled over the last decade, and will continue to rise thanks to consumer expectations in terms of comfort, safety, environment/fuel efficiency and connectedness/technology.⁴

In an effort to reduce costs and optimize production, automakers have adopted a platform strategy for vehicles. Under the platform strategy, a new vehicle may be produced in multiple plants around the world – as opposed to one. Model lifecycles also are shortening – from an average of five years to three.

Taken together, these trends spell greater complexity and bigger challenges for the supply chain and, at the same time, elevate its role in the success of the enterprise.

“We see supply chain as the enabler of our global business,” says Hans Ehm, Lead Principal Supply Chain, Head of Supply Chain Innovations Infineon Technologies AG. “Our supply chain is a competitive advantage.”

John Moulton, Group Vice President of Global Supply Chain & Manufacturing Engineering for Johnson Controls Automotive agrees with Ehm’s statement. “There are billions of dollars in value to be realized by integrating how supply chain interacts with product design, suppliers, manufacturing, purchasing and other areas of the company,” he says. “The opportunity comes from integrating all of these areas and optimizing the supply chain end-to-end. Our CEO is driving this alignment strategy across the enterprise, in order to realize real, sustainable value for the company.

“This is a mindset change for the whole company, led by our CEO,” Moulton says, and is the first to acknowledge that accomplishing this strategy requires a supply chain organization with the knowledge, experience and creativity to do so.



⁴ “Global Market Research Automotive,” Global Automotive Strategy & Priorities, 2013, 20.

A PERFECT STORM

While all of this is good news for the stature of the supply chain profession theoretically, there is one problem. There simply is not enough talent to fill the need, according to Christopher Craighead, Director of Research, and Kusumal Ruamsook, Research Associate, at The Pennsylvania State (Penn State) University's Center for Supply Chain Research. In a recent article published in Supply Chain Management Review, Craighead and Ruamsook argue that global business is facing a supply chain talent 'perfect storm'.⁵ The automotive sector is in the eye of this storm.

What's driving this growing talent shortage crisis? While there are a number of causes, five stand out as key drivers (Figure 2).

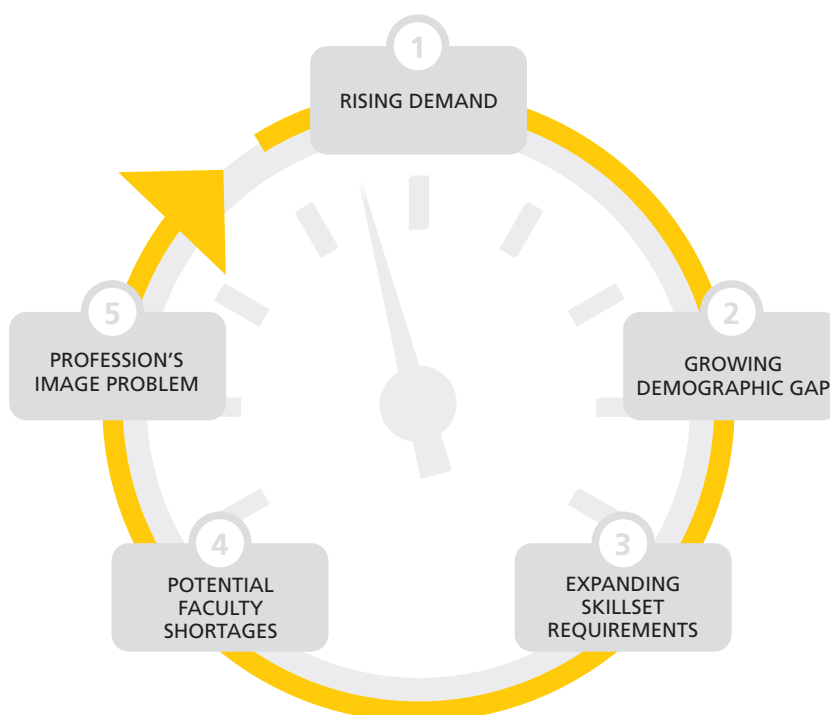
1. RISING DEMAND

The demand for supply chain talent has been on the rise across industries, a function not just of the increasing complexity of globalized supply chains, but of their rise in criticality as a core enabler of enterprise success or failure.

Employment statistics in the United States serve as an excellent case in point. The U.S. Bureau of Labor Statistics reports that jobs in logistics are estimated to grow by 26 percent between 2010 and 2020. **Demand for supply chain professionals exceeds supply by a ratio of 6 to 1**, the Craighead-Ruamsook article asserts.⁶

Others put that number even higher. "For every graduate with supply chain skills, there are six holes to be filled and it could be as high as 9 to 1 in the future," says Jake Barr, CEO of BlueWorld Supply Chain Consulting.

FIGURE 2: FIVE DRIVERS OF THE SUPPLY CHAIN TALENT "PERFECT STORM"



⁵ Christopher Craighead and Kusumal Ruamsook, "A Supply Chain Talent Perfect Storm?" Supply Chain Management Review, 2014.

⁶ Ibid.

2. GROWING DEMOGRAPHICS GAP

The gap between the demand and availability of supply chain professionals is only going to expand. One key reason is demographics – an aging workforce. **“Twenty-five to 33 percent of the supply chain workforce is at or beyond retirement age,”** Barr indicates.

“In the U.S., there are an estimated 76 million ‘Baby Boomers’ who are turning 65 at the rate of one every eight seconds,” Craighead and Ruamsook note. At this rate, the U.S. Census Bureau projects that more than 60 million Baby Boomers will exit the workforce by 2025, while only 40 million new bodies will enter the workforce.

Europe faces the same talent exodus. **“Supply chain managers are retiring faster than they can be replaced,”** notes Christiane Beimel, Vice President, Value Added Services, DHL Global Forwarding--Germany. “There simply aren’t enough young people to backfill the pipeline.”

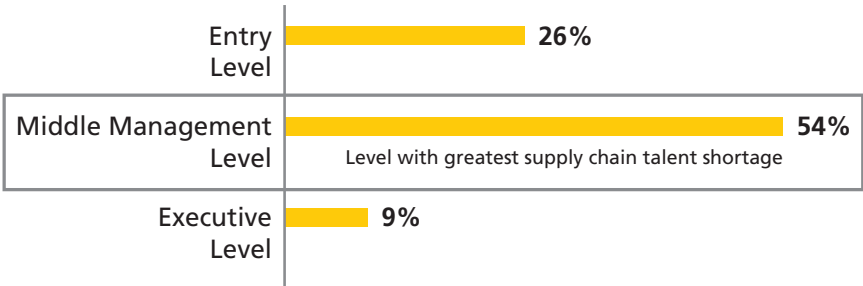
The talent shortage is particularly serious at the middle management level. Notes a 2014 report by Supply Chain Insights LLC, “While traditional supply chain talent programs focus on the onboarding of entry-level employees, and high-potential employees for executive positions, companies are unsure what to do to build talent in middle-management” (Figure 3)⁷.

Han Roest, Vice President, Global Sector Head Technology for DHL Global Forwarding (and former Americas Head of Automotive), sees this trend first-hand in the U.S. automotive sector. “A huge wave of people will retire over the next 10 years, but we have a break in the pipeline of people in their 30s who can mature to fill those positions. That’s a problem.”



A further complicating factor is the residual fallout from the massive layoffs during the financial crisis of 2008-2009. “Supply chain capabilities and knowledge were lost permanently,” says Frank Vorrath, Vice President, Global Sector Head – Automotive, DHL Global Forwarding. “Companies have been very cautious in their hiring efforts, so they have not replenished that loss.”

FIGURE 3: THE TALENT GAP PROFILE



Source: Supply Chain Insights LLC, August 2014.

⁷ Lora Cecere, “Supply Chain Talent: A Broken Link in the Supply Chain,” Supply Chain Insights LLC, August 19, 2014, 8.

3. EXPANDING SKILLSET REQUIREMENTS

As supply chain matures as a discipline, the skillset required of its practitioners is changing. Competencies in hard analytical skills are no longer sufficient; managers must also excel in soft skills such as leadership and creativity.

“The job of supply chain has grown from being a logistics operator responsible for shipping to being a supply chain engineer,” explains Ehm of Infineon. “Our people need good skills in operations research, supply chain engineering, statistical process control, data analysis and simulation. And they need emotional intelligence – the ability to manage relationships with internal and external customers and suppliers.”

Even at the entry level, it is often difficult to find qualified employees with the highly specialized expertise to perform their job tasks. According to Kathrin Bock, Human Relations Manager for Supply Chain Management Automotive within the Continental Group, “The field has developed far beyond pure material supply or logistics, so the required qualifications have become much broader.”

4. POTENTIAL FACULTY SHORTAGES

What about the capacity of academia to create new talent? The outlook does not look good on that front either, Craighead and Ruamsook of Penn State assert. “According to the International Business School Data Trends, published by the Association to Advance Collegiate Schools of Business, the number of full-time business faculty in supply chain management, transportation, and logistics has been consistently below 1.3 percent of all-field business faculty both in the United States and worldwide.

In the US, for instance, the number of supply chain business faculty members remained at about 365 between 2009 and 2013. This relatively small group could shrink even further given the pending retirements of baby boomer-aged faculty and the fact that, for example, the number of full-time doctoral positions in logistics is forecast to grow at less than 2 percent (and 2.9 percent globally).⁸

5. PROFESSION'S IMAGE PROBLEM

Within the automotive sector, supply chain as a career has an image problem, one that is particularly severe in emerging markets. This problem stems from several reasons, including a lack of understanding of what supply chain is, a perception that supply chain is not an attractive career path, and inadequate educational programs.

“Few people in India start out pursuing a career in supply chain,” observes Hariharan Muthukrishnan, Automotive Head, DHL Global Forwarding – India. “Most want jobs in manufacturing, for instance, but end up in logistics as a fallback. So, it’s not something people choose as a career. This is starting to change, but progress is slow. As a result, we have a very limited number of people who are highly qualified in supply chain.”



The same trend exists elsewhere around the world. “I have seen an improvement in the quality of supply chain talent in Asia in the seven years,” says Osvaldo Oliveira, Head of Asia-Pacific Supply Chain, Johnson Controls Automotive. “But, the average level of expertise is still very low compared to other regions of the globe. This stems from the low availability of academic education in the area, the fragmentation of the supply chain roles into smaller pieces, and the developing ‘industrial culture’, yet to fully glimpse the benefits of developing the supply chain.”

It comes down to the simple fact that companies have long neglected the supply chain function, considering it of lesser importance than sales, marketing, finance and other traditional job functions. “This means they have dedicated few resources to developing local talent,” says Jeffrey Stryker of Heidrick & Struggles International. As a result, the skills needed to manage these supply chains frequently exceed those of the talent that is currently available.

⁸ The Association to Advance Collegiate Schools of Business, “Business School Data Guide 2014, 35.

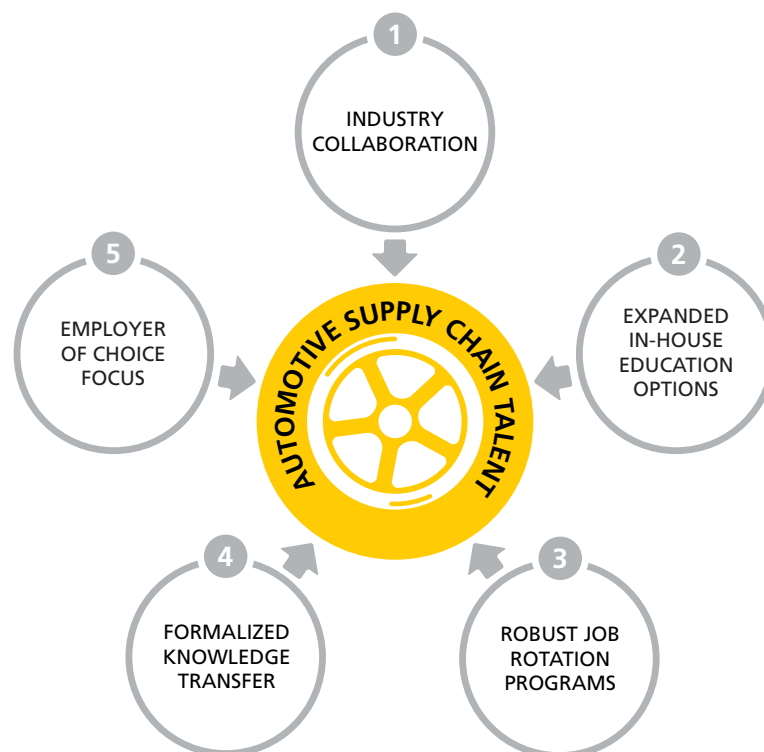
SOLVING THE PROBLEM

Solving the talent shortage calls for new thinking, new approaches, and collaboration on an industry-wide scale.

“Relying on the traditional education path – universities – to fill the talent needs won’t work because that will take years,” insists Beimel of DHL. **“The industry needs a faster solution – one that combines a multi-pronged approach, and one that is collaborative across all players in the business.”**

Given this environment, what strategies can the industry pursue to develop and sustain its supply chain talent pipeline? There are myriad options, but five alternatives stand out (Figure 4):

FIGURE 4: THE FIVE ALTERNATIVES OF AUTOMOTIVE SUPPLY CHAIN TALENT DEVELOPMENT



1. INDUSTRY COLLABORATION

The automotive industry – OEMS, suppliers, third-party logistics service providers (3PLs) and academic institutions – has begun to take a proactive stand on resolving the talent gap. Leaders in the industry are working with universities and trade associations to develop supply chain education programs designed expressly for the sector.

“For example,” says Thomas Wimmer, Chairman of the Executive Board of BVL International, a supply chain professional association based in Germany, “we are collaborating with a global 3PL, a major university, and several OEMs to develop an automotive supply chain academy. The idea behind the academy is to enhance the supply chain skills, expertise and capabilities of people working in the automotive sector specifically. The academic program is based on a lifecycle approach to understanding the end-to-end automotive supply chain.”

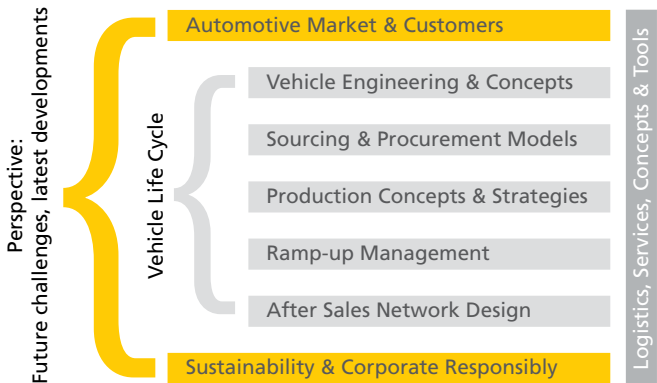
Figure 5 shows the different modules that make up this industry-specific program.

“To fully exploit the innovation potential within the logistics sector,” Wimmer observes, “a collaborative industry-based program like this one helps logistics practitioners at any level better understand the complex requirements of the auto industry and its supply chain.

In this academy, participants work cooperatively and interactively in classroom labs and on virtual platforms to find solutions for issues in all areas of automotive logistics.”

Notes Frank Baur, Vice President, Bosch Automotive Aftermarket, Demand Planning & Logistics NAFTA, “We see the urgent need to establish a learning platform for automotive logistics on a global scale to ensure competitiveness and drive talent.”

FIGURE 5: SAMPLE AUTOMOTIVE INDUSTRY-BASED SUPPLY CHAIN EDUCATION PROGRAM



2. EXPANDED IN-HOUSE AND EXTERNAL EDUCATION OPTIONS

Faced with a lack of educational resources tailored to supply chain and the automotive industry, a growing number of firms are taking matters into their own hands and developing their own education programs. “Our biggest concern is to make sure there are no huge gaps in our people’s education,” reports Ehm of Infineon. To remedy this problem, Infineon founded an internal e-learning academy. “The modules we developed cover about 100 topics, and we’ve trained 1,000 people on these modules so far,” he says.

This year, Continental Group is launching a talent pool program for supply chain professional development, Bock reports. “This pool contains potential candidates for future internal logistics positions. The goal of this effort is to further develop these people individually so they can receive strategic support in the next stage of their career.

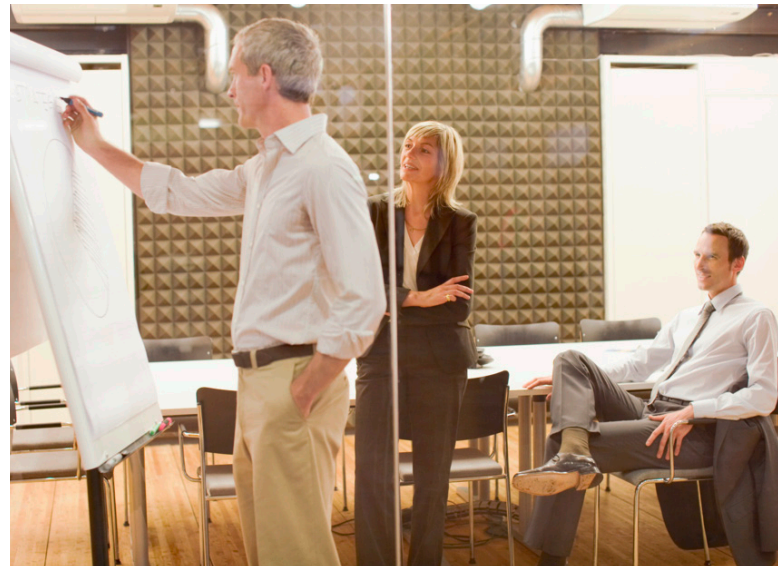
“We’re also creating a development landscape or career track which lists and explains all the positions in the area of supply chain management (SCM)/logistics,” Bock continues. “Our intent is to provide employees and managers with an overview of the interesting opportunities there are for further development within this community. In addition to the management career track, this development landscape includes an expert career track in SCM/logistics under the umbrella of the manufacturing expert career, which illustrates development opportunity for employees who have extensive expertise in specific areas.”

Matthias Braun, Head of Network and Factory Projects for Inbound Logistics Material at Volkswagen Group Logistics, reports that his company has a supply chain career five-year development program for students. During the first years, Volkswagen trains employees of the dual-study programme in the “blue collar” aspects of supply chain i.e. by passing through various jobs at the in-plant logistics. They complete their university course in five years and in the same time gain a qualification in a recognised occupation. So they acquire two qualifications, while working for the company and pursue a degree in supply chain management at the end.

3. JOB ROTATION PROGRAMS

Formal job rotation programs can be an effective way to grow people. “Rotating supply chain professionals through different departments and functions enriches their skills and gives them a broader perspective of the business. A global services company calls its job rotation program a ‘talent exchange’ and uses these placements to promote cross-functional development. In one program, employees – who include new recruits from universities as well as more experienced folks – complete a two year rotation that involves six-month stints in different functions,” says Ken Cottrill of the MIT Center for Logistics and Transport.⁹

One tier 1 automotive supplier rotates its supply chain managers to different positions around the world. “One individual spent two years in transportation management in Shanghai, then was asked to do customs compliance in Indonesia,” notes the supply chain director-Asia for the company. “This meant he had to visit with customs officials not just in Indonesia, but also Vietnam, India, and elsewhere in the region. After two years in that position, he’s now training his junior staff, passing his knowledge along before moving on to a different, more senior position.”



⁹ Ken Cottrill, “Are You Prepared for the Supply Chain Talent Crisis?” MIT Center for Logistics and Transport, 2010, 8.

4. FORMALIZED KNOWLEDGE TRANSFER

With so many retirements looming on the horizon, the automotive industry must get serious about capturing its people's knowledge before it literally walks out the door. Companies could set up formal programs where their soon-to-retire supply chain professionals transfer their knowledge to their younger colleagues under a formal program, suggests Braun of Volkswagen.

"This would help capture, retain and transfer the knowledge our senior people have before they leave the organization," he points out. "This may mean a higher head count within the organization for a time, but it is also an investment in the future success of the company."

Making that investment at a time when automakers are doing everything they can to sustain a lean organization may be a challenging approach to "sell" to senior management, Braun acknowledges. Nevertheless, management is starting to understand they cannot afford to let such a valuable knowledge asset just walk out the door.



5. BECOMING AN EMPLOYER OF CHOICE

Companies will need to do more to retain the supply chain talent they have – and that means taking steps to ensure they are an attractive place to work. **"Our industry needs to incentivize people to stay in supply chain, and that comes from providing competitive salaries and establishing attractive career paths,"** says Gabriela Gola, Supply Chain & Procurement Senior Recruitment Consultant at recruiting firm Michael Page's São Paulo, Brazil office.

What are these incentives? The obvious include better pay and a formal career path with clear opportunity for advancement. The less obvious, but equally important, include a recognition within the organization that a career in supply chain is valued by senior management. "We need to eliminate the perception that supply chain isn't a valuable profession, or is less valuable than other careers such as finance or marketing," says Volker Oesau, CEO DHL Global Forwarding Middle Europe. "Supply chain can't be seen as a 'fallback' position, as a less worthy profession. This means corporate culture needs to change – and that change must come from the C-level."

Bock of Continental Group agrees. "We must clearly illustrate the opportunities for further development to our employees and actively support them in pursuing these opportunities."

Adds Gola of Michael Page, "People want a company that can offer career growth opportunity, good training and mentoring programs, a good management style and corporate culture, and job security or stability. If you can offer these things, you become an employer of choice."

INDUSTRY COMMITMENT: REQUIRED

"For the automotive industry, the supply chain talent crisis is a house of cards ready to collapse," cautions Vorrath of DHL. "Solving it requires planning for the long term and building a talent investment strategy into the corporate culture."

"There is no magic pool of talent in our industry," Moulton of Johnson Controls Automotive acknowledges. "So it's not a matter of simply outsourcing to a logistics service provider to solve the problem. We all face the same issue and we need to work together to solve it."

Companies are competing for supply chain talent. Those that have well-defined supply chain talent strategies and aligned/supportive management have the best shot at getting the best talent. And at the end of the day, given the increasingly strategic role supply chain plays in the success of the overall corporation, those companies with the best talent will be more profitable and gain an advantage.

"Tackling the talent gap will take commitment, money, time and hard work," Baur of Bosch sums up. "Manufacturers, suppliers, logistics service providers, educational institutions and industry associations need to work together on this. Those four must be aligned. Without that collaboration, if we leave it up to the individual companies, it won't happen on a big enough scale to make a difference."

"We all need to raise the awareness of what supply chain is and why it is critical to the future of the automotive industry," Oesau concludes. "We can solve this issue, but it will take time and it will take a major collaborative and concerted effort. As an industry, we really don't have a choice."



ABOUT THE AUTHOR

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