General Motors’ executive director for global supply chain, Todd Scott, meets frequently with the faculties of several universities. At Cranfield University School of Management – ranked number one outside the United States in Supply Chain World’s annual Top 100 Universities survey – senior supply chain executives from industry, including the automotive sector, sit on an advisory board tasked with helping to ensure the school’s supply chain expertise remains firmly focused on industry’s needs. At logistics provider Ryder System, meanwhile, group director for automotive operations Jeff Kosloski describes a formal university relationship programme, complete with recently appointed ambassadors for key universities with which the company has established internship programmes.

The reason for all this activity isn’t difficult to fathom. Managing supply chains and logistics processes is becoming ever more complex and demanding – characteristics that are especially true in the case of the world’s automotive industry.

Consequently, the demand for highly skilled, high-calibre employees has never been greater, especially for management positions. Talk to any group of automotive logistics executives, and a frequently-heard refrain is that they’ve never been hungrier for logistics and supply chain talent.

But where are these talented people to come from? What skills will best equip them for their roles? How are institutions developing and teaching these skills? What role can the industry itself play? And what are the barriers to building a so-called ‘next-generation’ workforce?

Some interesting answers soon emerge, and at their root lies a perhaps surprising finding: the skills that the industry thinks it’s hungriest for – at least at the moment – aren’t necessarily those you would imagine. The bottom line is that ‘hard’ logistics and supply chain skill sets have their place, but so too do a growing number of ‘soft’ skills and competencies. As the world’s automotive industry hones its supply chains to ever higher pitches of efficiency, those soft skills may be of increasing importance.
At Toyota Motor North America, for instance, senior manager for supply chain development Thor Oxnard, who works in the company’s service parts logistics division, explains that the carmaker is increasingly looking to staff its logistics and supply chain operations with people strong in influencing and negotiation skills, coupled with leadership and communications competencies.

“Being able to lead, being able to problem-solve, knowing how to innovate and being able to influence people cross-functionally: these are important attributes, especially across different geographies and organisations – and especially here at Toyota,” Oxnard explains. “Traditional purchasing negotiations, for example, are zero-sum, which isn’t the way that we work at Toyota. We want people who can conceive of a solution that is the right solution, and then work to reduce its cost through kaizen [continuous improvement]. So too is being able to influence people in other areas of the organisation, working in functions and teams that don’t have your project on their annual plan.”

General Motors’ Todd Scott, executive director for global supply chain, makes a similar point, explaining that while the carmaker’s global logistics and supply chain management look to recruit people with a broad-based education rooted in business, soft skills and attributes have an important influence on hiring decisions.

“We want people who are collaborative in nature, but who can demonstrate leadership in cross-functional groups... It’s also important for people to be able to deal comfortably with extreme levels of ambiguity and change, because both are a strong feature of supply chain management. "

Todd Scott, General Motors

Resilience and adaptability are also valued, adds a senior manager of logistics for a major tier supplier based in North America, who has asked to remain anonymous since he is not authorised to speak about this subject for the company. The pace of change in the modern world, he argues, means that while logistics and supply chain executives must act as change agents in order to help their organisation and its supply chains evolve, they must also be capable of effecting change within themselves.

“In our logistics function, we want employees who can learn and adapt throughout their professional careers: being one-dimensional will no longer suffice. Employees need to have a broad skill base, and an ability and willingness to upgrade their skills and knowledge over the course of their career. Flexibility matters, too: an ability to work independently as well as in a team, and an ability to be a leader as well as to be led by others,” says the executive.

Similarly, points out Richard Wilding, professor of supply chain strategy at Cranfield University’s Cranfield School of Management and head of the school’s Master’s programme in logistics and supply chain management, there is no point in supply chain executives being able to conceive of improvements to supply chain operations without a commensurate ability to make those improvements happen.

Consequently, he explains, the Cranfield ‘knowledge in action’ ethos revolves around combining academic capability with the abilities and competencies to apply that knowledge to real-world situations in industry.

“It’s about evidence-based decision-making: giving students an ability to create and add value to the supply chain, but also an appreciation of the real-world issues involved in..."
implementing changes. Emotional intelligence and soft skills are vitally important when making supply chain and logistics decisions that cut across entire functions, and impact the organisation at various levels,” he states.

**A harder approach**
If such sentiments come as a surprise, so too might industry’s views of the ‘hard’ skills it is seeking. While traditional logistics and supply chain disciplines have their place, goes the message, there are areas where educational institutions are falling short.

Back at Toyota Motor North America, for instance, field operations improvement manager Martin Casas is one of several industry insiders to speak of a deficit in data analytics skills.

“The world of supply chain management is data-rich and information-poor, and there’s a real lack of people who can use today’s analytics technologies to pull all that data together and analyse it with cutting-edge software,” he argues. “We’re actively looking for people who can do that, because it isn’t a skill set that people who have been in Toyota for a number of years will possess.”

For his part, Todd Scott explains that his meetings with university faculty personnel often revolve around explaining the emerging issues in global supply chains, and the skills – mostly ‘hard’ ones – that would better equip students for a role within supply chain management at GM.

“Risk management, for instance, involves data mining and triangulating data in order to find potential problems before they actually occur,” he says. “Cyber-security is another issue that is affecting us in the world of supply chain management, where university curriculums are lacking.

“Intellectual property rights, too, as well as legislation more broadly: from conflict minerals to the certification of wooden pallets and the transportation of lithium-ion batteries, legislation is directly impacting supply chains, and supply chain management decisions. And when I meet with university faculties, I’m telling them that there’s a need to incorporate some of these things in their teaching,” notes Scott.

Engineering, he adds, is another area where GM has been pushing for universities to provide logistics and supply chain students with some exposure to key concepts. Michigan State University, for instance – the global number one in Supply Chain World’s annual Top 100 Universities survey – has now launched an applied engineering sciences course, notes Scott.

“The idea isn’t to turn people into engineers, but simply provide them with a few classes covering the basics of engineering and engineering concepts. Instead, the idea is to equip supply chain people so that they can better interact with engineering people and [understand] engineering issues, and if necessary some of the assumptions that engineers might make in terms of design, or costs, or application.”

GM isn’t alone in talking with universities to shape logistics and supply chain education to the automotive industry’s requirements. Ryder System’s Jeff Kosloski, for instance, points to the advantages that such collaboration can offer, both to the universities and the firms that engage with them.

“Investment and commitment to support universities’ supply chain management programmes, ensuring that the curriculum is relevant and that students are exposed to real-life industry issues early on, is really important,” he says. “We’ve created a formal university relationship programme and appointed ambassadors for key universities, which has contributed to the success we’ve had in hiring and developing some of our key talent. As part of this programme, we not only offer internships and management trainee programmes, but we’re trying to find other ways to give back to these universities and contribute to their curriculums, so we can help groom students to come out as prepared as possible, with as many tools as possible.”

At one of those establishments, Wayne State University, John Taylor, chair of the department of supply chain management within the Mike Ilitch School of Business, points to how such interactions have shaped his own school’s offering. As opposed to many other university logistics and supply chain management programmes that are heavily focused on industries such as consumer packaged goods, he observes, Wayne State’s focus is much more on complex manufacturing – and specifically the automotive industry.

Consequently, the curriculum offers courses on quality,
purchasing, the management of global supply chains, and logistics and transportation, together with a number of automotive-oriented two-week overseas study programmes taking place every year in European countries including Italy and Germany, as well as in Brazil and China. In specific response to automotive industry needs, courses in engineering and negotiation skills have been added.

“Ideally, of course, you’d have engineers in a buying role within the automotive industry, but the reality is that engineering talent is scarce, so it makes sense to take business school students and give them enough of an appreciation of manufacturing processes, such as casting, forging and plastic injection moulding, that they can understand what drives cost and quality in these processes,” says Taylor.

Similarly with negotiation, he adds, as the number of business relationships in automotive supply chains serve to make this a key skill.

“The ability to negotiate is paramount and so students need training in how to negotiate. Our core operations and supply chain management courses include negotiation training, and there’s also an elective negotiation class that students can take if they want a more advanced appreciation of negotiation skills.”

Of course, the number of business relationships in automotive supply chains can increase their inherent risk – prompting a growing interest in industry for curriculum content in the area of crisis management, too, adds Paul Nieuwenhuis, senior lecturer in logistics and operations management and co-director of the Centre for Automotive Industry Research at Cardiff Business School, another of Supply Chain World’s annual Top 100 Universities.

“A number of our industrial contacts have been saying that crisis management was an important skill set and we identified that we had specific expertise in the area. Among other resources, we use a case study of how Toyota responded to the 2011 Japanese earthquake and tsunami.”

John Taylor, Wayne State University

Developing internally
That said, logistics and supply chain education doesn’t end with university, and sensible employers will also invest in developing existing employees.

Business schools such as Wayne State and Cranfield play a part, running short executive development courses focusing on logistics and supply chain management or even, as at Cranfield, making the Master’s logistics and supply chain management programme available on a part-time, modular basis.

Wayne State, for its part, runs both a one-week programme annually specially focused on automotive logistics and supply chain management, and a certificated 23-week programme, both of which are run in conjunction with AIAG and draw delegates from the major automotive manufacturers, tier suppliers and logistics service providers.

Another option for executives seeking specific training in automotive industry-specific logistics and supply chain management skills is the five-module, part-time ‘ECG Academy’ programme run by the Association of European Vehicle Logistics. Taking in visits to terminal operators, ports and carmakers and culminating in an examination, it is again certificated, giving successful delegates a formal qualification in automotive logistics management, according to the association’s executive director, Mike Sturgeon.

“Globally, we think that it’s the only such course devoted specifically to vehicle logistics in existence,” he explains. “Junior management within the industry were asking for such training, and the association’s board at the time decided to make the investment and develop the course. Over the years, firms within the industry have followed through by sending delegates to it and now, some of those former delegates are moving into senior positions.”

Whatever the route to the so-called ‘next-generation’ workforce, there’s no shortage of bolt-on education and development for firms and employees willing to make the investment.

Moreover, unlike new hires, existing employees will have demonstrated possession of the competencies and cultural values necessary for a good ‘fit’ within an organisation.

“We go to business schools to fill positions, but we also look internally,” confirms Toyota’s Oxnard. “We have a lot of very intelligent and capable people at work in our organisation and we make sure that they get a lot of mentoring and encouragement to grow and develop to their full potential.”

While manufacturers are seeking fresh talent, many also want to ensure they develop existing staff.