



Building a better
working world

Investing in human capability development

Accelerating supply chain
transformation with enhanced
workforce strategies

In an era marked by continuous innovation and an ever-evolving landscape of global commerce, supply chains are confronting a triple threat: changing job expectations due to technologies like generative AI (GenAI), shifting consumer expectations and global disruptions of unprecedented scale. As businesses continue to grapple with this situation, supply chains are swiftly transforming into autonomous, nonlinear and globally diverse networks to fortify their resilience in the face of these challenges. This metamorphosis is not without complication – the workforce must keep pace with this transformation, evolving alongside supply chains of the future. This white paper delves into the critical intersection of supply chain adaptation and workforce evolution, offering insights into the need for upskilling the supply chain workforce with adaptive and leadership skills, underpinned by targeted personalized learning experiences. Such an approach not only empowers the workforce but also ensures employees can seamlessly adapt to the ever-shifting demands of the supply chain landscape.

The discussion will focus on these three overarching topics:

Global disruptions and innovation are driving the transformation of supply chains.

Supply chain transformations will suffer without addressing the workforce implications.

Organizations can maximize supply chain investments by advancing the supply chain talent.

Major disruptions detailed have accelerated global forces and magnified volatility in the supply chain

GenAI shifting job expectations

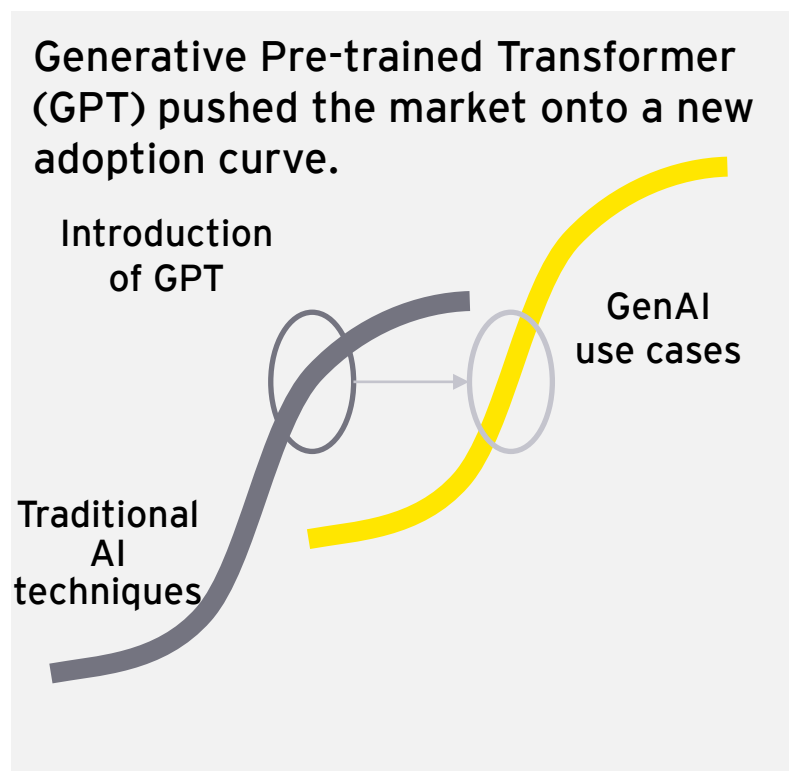
The ability of artificial intelligence (AI) systems to enhance the experience of work is already rippling through supply chain operating strategies. GenAI has emerged as a disruptive technology with the potential to reshape the supply chain management landscape. Eighty-four percent of companies in a 2023 EY surveyed expected to have implemented GenAI within the next 12 months.¹ This rapid transformation is expected to transform job requirements, with 85 million jobs affected by 2030.² This technology is radically altering traditional roles and creating increased demand for new skills and decreasing the demand for others. While labor shortages are no longer a primary concern, both employers and employees now grapple with the imperative of possessing the requisite skills to effectively engage with emerging technologies and seamlessly adapting to the perpetually evolving work landscape.

Shifting consumer expectations

In parallel, consumers expect a seamless omnichannel experience blending physical and digital purchasing³ and they also expect their goods to be delivered with continuously shrinking lead times.^{4, 5}

Global disruptions

The effects of this rapid wave of innovation, advancing consumer expectations and skill shortages are magnified by the recent volatility experienced during the COVID-19 pandemic, the war in Ukraine, the Los Angeles Port strike, the Suez Canal blockage and the evolving Middle East conflict. In navigating these disruptions, supply chain functions are experiencing rapid transformation from an executor of operations to a strategic player leading the business.



¹ Sears, Jonathan, "How artificial intelligence can augment a people-centered workforce," *EY website*, <https://go.ey.com/3tqv0mD>, October 9, 2023.

² "Recession and Automation Changes Our Future of Work, But There are Jobs Coming, Report Says," *World Economic Forum website*, <https://www.weforum.org/press/2020/10/recession-and-automation-changes-our-future-of-work-but-there-are-jobs-coming-report-says-52c5162fce/>, October 20, 2020.

³ Gramling, Kathy, "Future Consumer Index edition 3: getting US consumers beyond the pandemic," *EY website*, <https://go.ey.com/2Cc9wgh>, June 26, 2020.

⁴ "65% of consumers willing to pay more for faster delivery," *Supply Chain Management Review website*, https://www.scmr.com/article/65_of_consumers_willing_to_pay_more_for_faster_delivery, October 21, 2021.

⁵ Alexander, Hani, "How last-mile strategy could be your biggest competitive advantage," *EY website*, <https://go.ey.com/422SM20>, September 8, 2021.

Supply chain industry response to vulnerabilities and opportunities is accelerating transformation of monolithic supply chain models

The combination of constant disruption, shifting consumer behavior and skill availability requires the supply chain industry to address speed, responsiveness and resiliency while monitoring costs and sustainability. These demands have led to an acute industry focus on three strategic imperatives.

Global diversification

Decentralization of existing supply chains is also underway by organizations that have either already begun or will begin to move sourcing, manufacturing and distribution locations closer to the customer to de-risk operations and bolster resiliency and responsiveness.⁶

In 2022, 53% of manufacturing companies in an EY survey stated that they had already nearshored or reshored some of their operations in the last 24 months, and 44% said they are planning new or additional reshoring activities in the next 24 months.⁷ Additionally, 57% say they have established new (i.e., not relocated) operations in one or more additional countries to increase their geographic diversity and reduce risk in the last 24 months, while 53% are planning to do so in the next 24 months.⁸

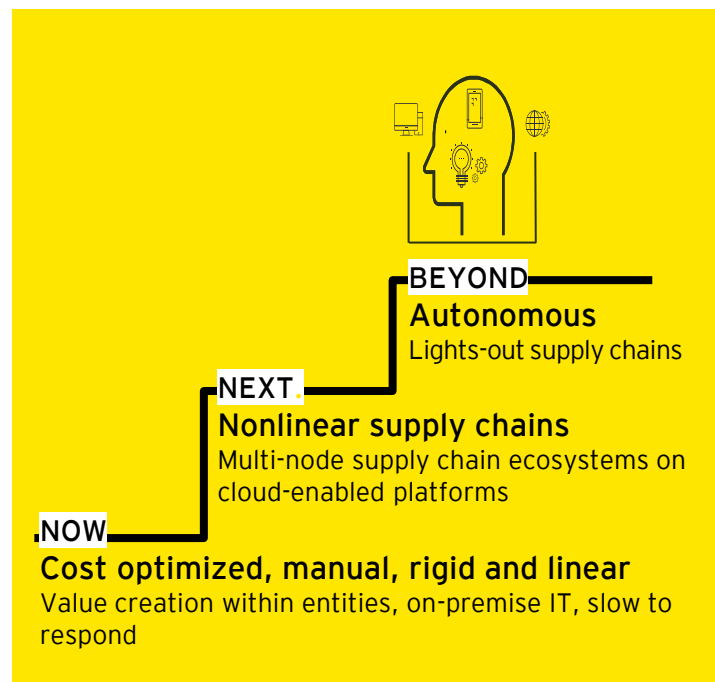
Nonlinear supply chain

Supply chains are evolving from rigid and monolithic single-fit delivery processes to complex, agile, networked ecosystems of multiple shorter chains within a large web.⁹

Most companies have already begun their transition away from a linear supply chain. Of 500 organizations in an EY survey, 86% say they are already on the path toward digitally networked and autonomous supply chains.¹⁰

Autonomous and beyond

Supply chain automation enables efficiency, traceability and accuracy to reduce costs and respond to evolving consumer preferences and global disruption. Through technologies like GenAI, companies can generate insights to drive optimization, innovation and efficiency across the entire supply chain ecosystem. By 2035, 45% of supply chains are expected to be mostly autonomous.¹¹



⁶ Knizek, Claudio, Jenner, Frank, et al., "Why global industrial supply chains are decoupling," *EY website*, <https://go.ey.com/3YRMKA1>, June 13, 2022.

⁷ Ibid.

⁸ Ibid.

⁹ Steinberg, Glenn, "How reinventing the supply chain can lead to an autonomous future," *EY website*, <https://go.ey.com/33mMHSM>, June 14, 2019.

¹⁰ Ibid.

¹¹ Harapko, Sean, "How COVID-19 disrupted supply chains and what comes next," *EY website*, <https://go.ey.com/3b5SylL>, January 6, 2023.



Successful transformations must address workforce implications

There is a growing need for skilled workers who can be successful in autonomous, nonlinear and geographically diverse supply chain ecosystems. However, companies reporting a skills gap in their organization increased from 55% to 69% between 2021 and 2023.¹² Additionally, skills gaps are the number one barrier to the adoption of new technologies.

There are three key challenges that must be addressed by organizations to successfully transform their workforce and address the skills gap. They are:

1. Organizations risk falling behind without a humans-at-the-center approach to new technologies.
2. The global workforce will require upskilling to remain relevant.
3. Supply chain leaders must be developed to help create a healthy leadership pipeline.

¹² Capranos, David, Magda, Andrew J., "Closing the Skills Gap: Employer perspectives on educating the post-pandemic workforce," *Wiley University Services website*, <https://universityservices.wiley.com/wp-content/uploads/2023/01/Closing-the-Skills-Gap-2023-Digital-January-2023.pdf>, January 2023.

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Organizations risk falling behind without a humans-at-the-center approach to new technologies

New technologies, such as GenAI, will be key enablers in advancing automated supply chains. Integration of GenAI into supply chains opens the door to diverse applications that can improve forecasting, resource allocation, risk management and supply chain operational excellence.

Importantly, this deeper integration of AI into the workplace does not mean a wholesale replacement of humans. There likely is a percentage of tasks for every employee that might be supported by AI tools, building an organization's capacity while better equipping employees. However, combining new technology with outdated processes often results in maintaining costly archaic systems that provide suboptimal experiences for both employees and customers. The enduring value of technology adoption is not solely derived from what the technology can accomplish, but rather from the enhanced capabilities it provides to the user.



Organizations will need to approach these advancements with humans at the center. While 84% of employers say they are planning on implementing GenAI in the next 12 months, only 22% of them are prioritizing training in GenAI-related skills.¹³ Without training in emerging technologies, the talent gap will be further increased, and organizations will fail to realize the benefits of technology investments. Sustained success requires organizations to shift their priorities from technology to people at the center of the technology strategy.

¹³ Sears, Jonathan, "How artificial intelligence can augment a people-centered workforce," *EY website*, <https://go.ey.com/3tqv0mD>, October 9, 2023.

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“The average shelf life of a business skill today is just five years, compared with 30 years in 1984.”¹⁴

The global workforce will require upskilling to remain relevant

By 2030, more than 1 billion jobs – approximately one-third of all jobs worldwide – are likely to be transformed by technology.¹⁵ Although 43% of the skills required for employees in the consumer industry (e.g., retail, consumer packaged goods) to perform their existing roles are expected to be different by 2024,¹⁶ there is optimism that for half of those, reskilling is an option to remain relevant.¹⁷

Reskilling involves learning new skills outside of workers' existing skill sets and potentially toward a different career path, while upskilling is defined as expanding existing skill sets to enhance performance in a current role and advance along the same career path.¹⁸ To address skills gaps, both upskilling and reskilling will need to take place in the workforce. However, upskilling and reskilling cannot be a static effort – “The average shelf life of a business skill today is just five years, compared with 30 years in 1984.”¹⁹

Digital and AI-powered technology are driving greater demand for workers who are comfortable and skilled using technology. Digital skills are becoming essential to every role, regardless of the industry or function.²⁰

As organizations tackle reskilling and upskilling initiatives, creating a workforce with digital skills will be essential to remaining competitive in any industry. In fact, 28% of organizations in the EY survey estimate that to remain competitive they will need to revamp the digital skills of a third of their talent base by 2025.²¹

As a result, many organizations are investing in data and intelligence capabilities that provide real-time visibility into their organization's inventory or skills. Over 43% of organizations have already completed skills benchmarking exercises at an employee level.²² Skills intelligence is empowering businesses by providing a centralized source of information about tech and business skills to identify areas that need to be developed across the organization.

¹⁴ “The Future of Jobs Report 2020,” *World Economic Forum website*, https://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf, October 2020.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ “Difference Between Upskilling and Reskilling” *LinkedIn website*, <https://learning.linkedin.com/resources/upskilling-and-reskilling/upskilling-reskilling>, accessed March 2024.

¹⁹ “Do you change your people or change the way your people work?” *EY Canada website*, <https://go.ey.com/34Mxpo4>, April 26, 2018.

²⁰ “Why transformation of technology skills holds the key to navigating the future of workplace” *EY India website*, https://www.ey.com/en_in/consulting/why-transformation-of-technology-skills-holds-the-key-to-navigating-the-future-of-workplace, May 4, 2023.

²¹ Ibid.

²² Ibid.

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Supply chain leaders must be developed to help ensure a healthy leadership pipeline

With the shift to a nonlinear and autonomous supply chain, the nature of leadership roles within supply chains has become significantly complex, requiring leaders to be adept in multiple areas of competency, including:

- ▶ Domain knowledge
- ▶ Leadership
- ▶ Analytical decision-making

Leaders will be expected to develop their perspectives, maintain awareness, and in certain cases possess a working knowledge of functions and technologies historically outside of their purview. Leadership programs today need to be augmented to include all three areas in a structured and deliberate way.

As supply chains continue to become nonlinear, it is critical for leaders to understand the impact and dependencies of each business decision across the end-to-end supply chain. A core element of the end-to-end perspective is the ability of leaders to perform systemic trade-off analyses, driven by data, in environments with increasing volumes of variables.



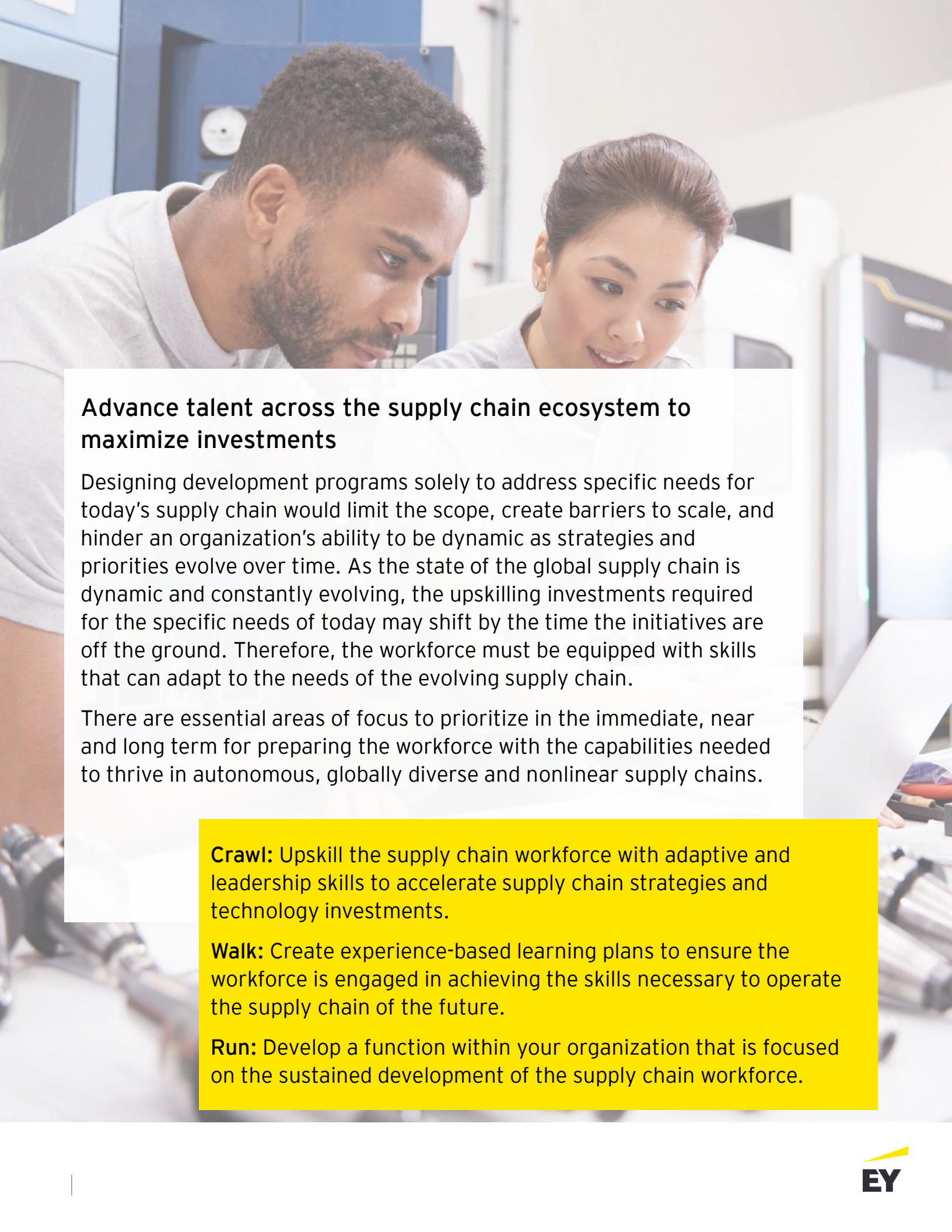
Digitally networked and automated supply chains will enable more intelligent and integrated data that provides visibility into all aspects of the nonlinear supply chain. For leaders to harness the power of this real-time data, it requires them to be competent in analytical and data-driven decision-making.

With these skills, leaders will be able to leverage insights gleaned from intelligent data to make strategic decisions with the enterprise's objectives in mind rather than with intuition or observation.

It is essential that organizations develop the skills of these emerging leaders as they prepare to fill critical supply chain roles. Developing from within helps ensure companies will have a pipeline familiar with their way of working. Organizations with effective leadership development at all levels are more likely to rank higher for financial performance, with 54% reporting that they are in the top 10% of other industries.²³

Today's supply chain workforce operates in a complex environment requiring adaptive skill sets. Leading the enterprise and making future supply chain investment decisions will require a cross-functional perspective and impact assessments. The upskilling of leaders to make fact-based cross-functional decisions will reduce the risk to strategy and investments.

²³ "Global Leadership Forecast 2023," *DDI website*, <https://www.ddiworld.com/global-leadership-forecast-2023>, 2023.

A man and a woman are looking at a laptop screen in a factory setting. The man is on the left, leaning in, and the woman is on the right, looking at the screen. They are both wearing light-colored shirts. The background shows industrial equipment and a blue wall.

Advance talent across the supply chain ecosystem to maximize investments

Designing development programs solely to address specific needs for today's supply chain would limit the scope, create barriers to scale, and hinder an organization's ability to be dynamic as strategies and priorities evolve over time. As the state of the global supply chain is dynamic and constantly evolving, the upskilling investments required for the specific needs of today may shift by the time the initiatives are off the ground. Therefore, the workforce must be equipped with skills that can adapt to the needs of the evolving supply chain.

There are essential areas of focus to prioritize in the immediate, near and long term for preparing the workforce with the capabilities needed to thrive in autonomous, globally diverse and nonlinear supply chains.

Crawl: Upskill the supply chain workforce with adaptive and leadership skills to accelerate supply chain strategies and technology investments.

Walk: Create experience-based learning plans to ensure the workforce is engaged in achieving the skills necessary to operate the supply chain of the future.

Run: Develop a function within your organization that is focused on the sustained development of the supply chain workforce.

Crawl

Upskill the supply chain workforce with adaptive and leadership skills to accelerate supply chain strategies and technology investments

As organizations upskill their supply chain workforce, adaptive skills will be important for all employee levels. Adaptive skills enable individuals to transform their abilities as their demands and environment change and unlock a competitive advantage through accelerating transformation.²⁴ The EY organization, in collaboration with the Manufacturing Institute and the University of Oxford's Saïd Business School, identified five core adaptive skills plus three manufacturing skills relevant to supply chains.²⁵

Core adaptive skills

1. **Analytical acumen:** applying data-driven and lean decision-making to solve problems
2. **Business acumen:** understanding business goals and operations
3. **Creative reasoning:** solving problems with creative solutions
4. **Learning agility:** the ability to understand and learn more effectively
5. **Resilience:** recovering quickly from ambiguity or setbacks



Supply chain adaptive skills

1. **Root cause analysis:** identifying underlying conditions that are creating issues with a machine or system
2. **Social and emotional intelligence:** managing interpersonal relationships and connecting with others
3. **Systems thinking:** breaking complexity into relationships between parts – isolating for challenges and opportunities

In addition to adaptive skills required for all employees, leaders should possess expertise in three core areas: (1) domain knowledge and an end-to-end perspective encompassing the ability to understand how daily leadership decisions impact the broader supply chain, organization and customer promise; (2) strong leadership skills, including strategic thinking, effective communication and team development with high trust; (3) and analytical decision-making based on rigorous data analysis and scenario-based decision engines to make informed strategic choices and solve problems effectively.

²⁴ "How adaptive skills can play a pivotal role in building the manufacturing sector of the future," EY website, https://assets.ey.com/content/dam/ey-sites/ey-com/en_us/topics/advanced-manufacturing/ey-how-adaptive-skills-can-play-a-pivotal-role-in-building-the-manufacturing-sector-of-the-future-v2.pdf, 2022.

²⁵ Ibid.

Walk



Develop a function within your organization that is focused on the sustained development of the supply chain workforce

To catalyze an industry-leading, future-ready supply chain workforce supporting the supply chain strategy, organizations should consider establishing a function or team within their business that focuses on developing the supply chain workforce and ensuring that supply chain employees receive the experiences and skills necessary to advance and lead in their careers. This function should target adaptive skills development through revolutionized experiences for all supply chain employees. Experiences must be intentionally designed to drive business results while leaving lasting impressions on professional development and career progress.

Run

Create experience-based learning plans to ensure the workforce is engaged in achieving the skills necessary to operate the supply chain of the future

Experience-based learning is not only important to driving business results but is widely valued among the workforce as a critical tool to drive and develop their own careers. This is evident with 62% of learners wanting a more personalized learning experience at work, and 75% of learners reporting valuing personalized course recommendations based on their own career goals and skills gaps.²⁶

After establishing a dedicated employee development function within your organization, the next step is to craft experience-based learning plans that cater to employees at all levels.

To initiate the creation of these experiences, several key steps should be taken. It's crucial to collaborate with supply chain leaders to pinpoint proficiency and business-related experiences within each capability and to develop experience map archetypes based on the job level and function.



Additionally, identifying a technology platform to manage experience maps, selecting a virtual reality partner for immersive experiences and simulations, partnering with specialized training institutions and discerning which experiences align with employees' skill development at various career stages are all potential avenues that could be taken to facilitate this.

Crafting experience-based learning plans can empower employees at all levels to excel and adapt in the evolving supply chain landscape.

²⁶ "Learning reimagined," EY website, https://assets.ey.com/content/dam/ey-sites/ey-com/en_uk/topics/workforce/ey-learning-reimagined-v1.pdf, 2021.

Conclusion

Supply chain skills development must become a part of the DNA of your company, embedded as a requirement for future investment asks to help ensure the workforce is ready to implement and execute future supply chain strategies. Spearheading a proactive future-backed approach will continuously identify opportunities to accelerate supply chain strategies by investing in human capability development.

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