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EXECUTIVE PERSPECTIVES ON TOP RISKS AND OPPORTUNITIES

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Industry 4.0 and Beyond: Addressing Cyber, Talent and AI Opportunities in Manufacturing and Distribution

By David Kupinski and Sharon Lindstrom

Successful companies view even challenging times as catalysts for innovation and growth, actively seeking opportunities where others see obstacles.

Over the last 13 years, we have issued annual research reports on the top risks faced by leaders all over the world. This year, we have added an emphasis on *opportunities* to set the tone for identifying and responding proactively to emerging trends, market shifts and evolving customer expectations. Organisations balancing risk management with a strong focus on seeking growth are better equipped to innovate products and services, enhance their resilience, adapt to change, and achieve top-line growth and strategic differentiation. It is all about unlocking opportunity.

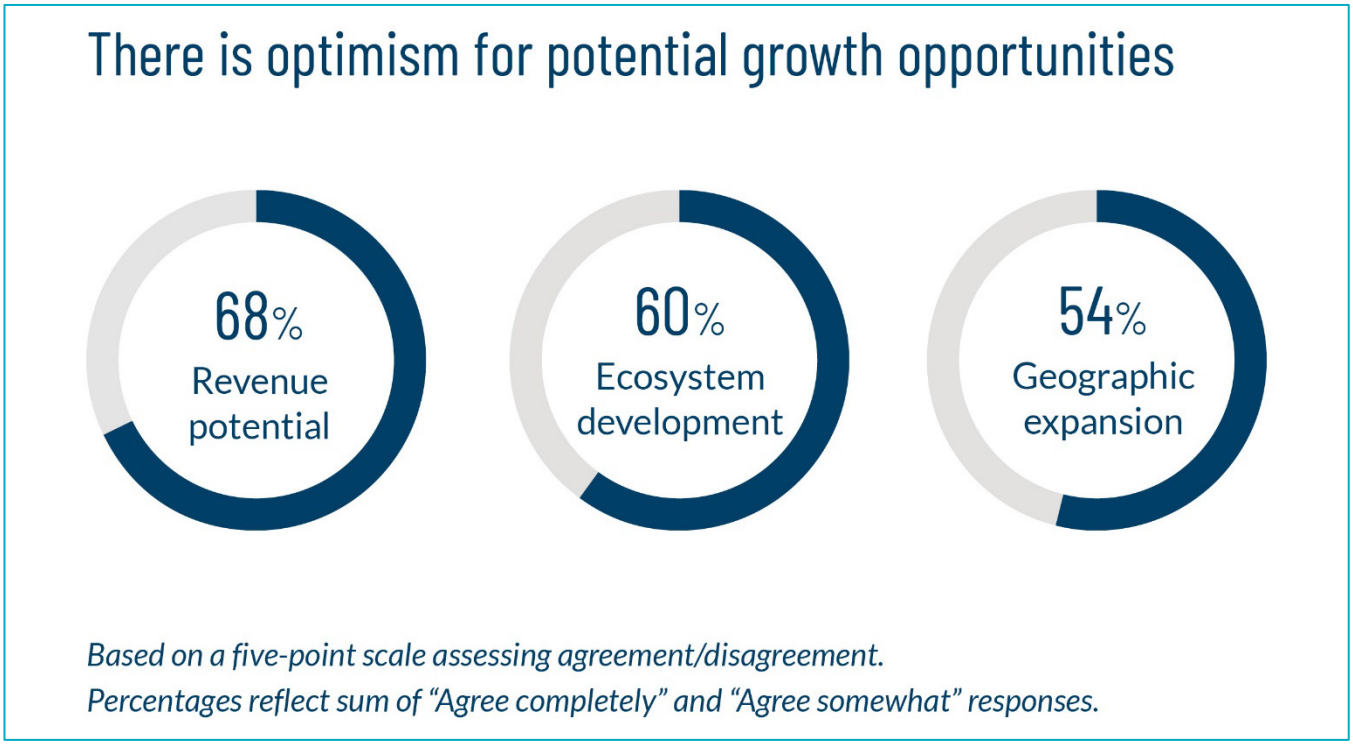
Our 14th annual **Executive Perspectives on Top Risks and Opportunities Survey** contains insights from 1,540 board members and C-suite executives around the world regarding their views on:

- Three specific areas for growth considering the current environment;
- Opportunities and challenges associated with the transformative impact of artificial intelligence (AI) on their organisations;
- The top risks on the horizon for the near-term (two to three years ahead) related to 28 specific risks across three dimensions (macroeconomic, strategic and operational) and for the long-term (a decade from now) related to 12 risk themes that consider the aforementioned strategic and operational risks; and
- A discussion of their organisations' near-term strategic investment priorities, given the opportunities and the risks they face.

Our survey participants shared their views through an online survey conducted from early September through mid-October 2025. This paper offers specific insights into these issues from the perspective of leaders in the manufacturing and distribution industry group.

Where do leaders in the manufacturing and distribution industry group see the greatest opportunities for their organisation over the next two to three years?

Despite recent years of economic uncertainty and tariff-driven headwinds, leaders in the manufacturing and distribution sector are optimistic about the next two to three years.



Several factors underpin their confidence. First, **infrastructure development is fuelling demand** across many industries, presenting significant opportunities for manufacturers to expand capacity, capture new markets and grow revenue. Tariffs remain a concern given continued volatility in policymaking, fuelling ongoing uncertainty from a geopolitical standpoint. However, even amid these challenges, there is renewed optimism among industry leaders in light of opportunities around regional reindustrialisation and supply chain diversification.

Understandably, manufacturing and distribution leaders also see rapid advancements in AI as a game changer. **AI-driven solutions promise substantial productivity gains** through predictive maintenance, process automation and enhanced decision-making, among many improvements. For organisations willing to invest in Industry 4.0 technologies, the payoff could be transformative – boosting efficiency, reducing downtime and accelerating innovation. These leaders see this not only as an operational advantage but also as a strategic lever for differentiation in an increasingly competitive market.

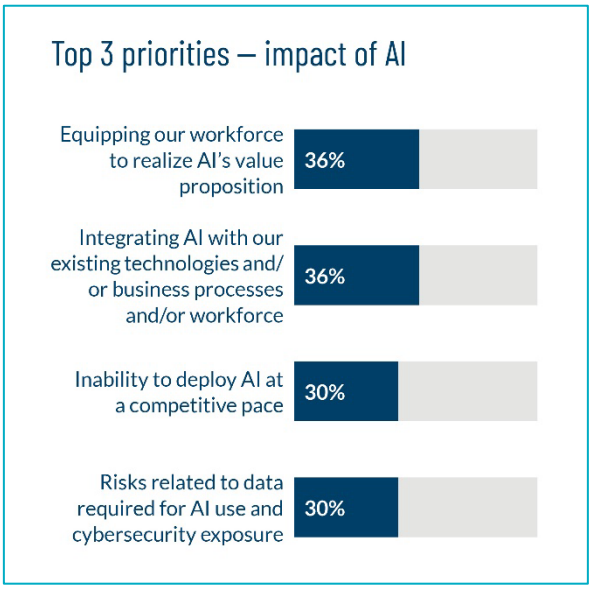
Ecosystem partnerships represent a powerful growth catalyst, as well. As manufacturing and distribution organisations deepen collaborations across suppliers, technology providers and distribution networks, they can **leverage scale and shared capabilities to drive global expansion**. Larger, more integrated

ecosystems enable access to new markets, faster innovation cycles and more fortified resilience against supply chain disruptions.

Stabilising trade conditions, AI-driven modernisation and collaborative ecosystems position manufacturing and distribution companies to move beyond recent stagnation and capitalise on a wave of global growth that's anticipated over the next two to three years. For industry leaders, the imperative is clear: **Invest in technology, partnerships and capacity** to seize these growth opportunities and secure long-term competitiveness.

What will be the organisation's most significant challenges regarding the impact of AI over the next two to three years?

Manufacturing and distribution leaders face a complex set of challenges as they seek to harness AI's potential. While AI promises transformative gains in efficiency and innovation, its integration into these organisations – technology infrastructure, workforce, etc. – is far from straightforward.



One of the most significant hurdles is **technology integration** and, specifically, equipping the workforce to capitalise on new capabilities. Manufacturing companies operate with a high proportion of legacy systems and accumulated technical debt, making AI deployment particularly challenging. Disconnected systems and fragmented data environments require extensive coordination and investment to enable AI-driven processes and insights and to achieve productivity and efficiency gains. Moreover, without a strong data foundation, AI deployment and integration will be slow and inefficient; manufacturing and distribution organisations risk falling behind competitors that can deploy AI at scale and speed.

Workforce readiness compounds the AI challenge. Employees in manufacturing and distribution often express apprehension about adopting AI, driven by concerns over job displacement. At the same time, these organisations are struggling to upskill their workforce at the pace of technological change. Building relevant business cases and equipping employees to realise AI's value will demand sustained investment in training and a focus on building a culture that embraces change while supporting the workforce.

Amid these numerous concerns, **competitive pressure looms large**. Manufacturing has historically lagged other sectors in the adoption of emerging technologies such as AI. The inability to deploy solutions quickly – whether due to data challenges, integration issues, workforce gaps, cyber concerns or a combination of all these factors – could erode market position. Leaders recognise that success will require not only technological upgrades but also organisational agility and resilience.

Cybersecurity adds yet another layer of complexity. Manufacturing and operational technology (OT) environments are already prime targets for ransomware attacks, and **AI adoption further expands the threat landscape** by potentially exposing sensitive systems and data. These organisations must weigh the benefits of AI deployments against heightened security risks, ensuring robust protections are in place to safeguard operations.

While AI offers extraordinary promise, its near-term impact will be shaped by how effectively manufacturing and distribution companies overcome integration barriers, workforce resistance and cyber threats, all while moving fast enough to remain competitive.

What are the most significant short-term (two to three years) concerns and risks on the minds of leaders in the manufacturing and distribution industry group?

Foremost among the most critical near-term risks are **changes in global markets and trade policies**, which have continued to elevate in importance. Uncertainty over the past year resulting from changing government policies around the world (including but not limited to U.S. administration-driven tariffs) are fuelling these concerns given the global nature of manufacturing operations and their complex supply chains.

Top global near-term risks – Manufacturing and Distribution

2026 rank	Risk issue	Average*	2025 rank
1	Changes in global markets and trade policies	3.32	5
2	Increases in labor costs	3.31	4
3	Cyber threats	3.26	7
4	Talent and labor availability	3.18	3
5	Economic conditions, including inflationary pressures	3.14	1

* Average based on a five-point scale where 1 reflects "No impact at all" and 5 reflects "Extensive impact."

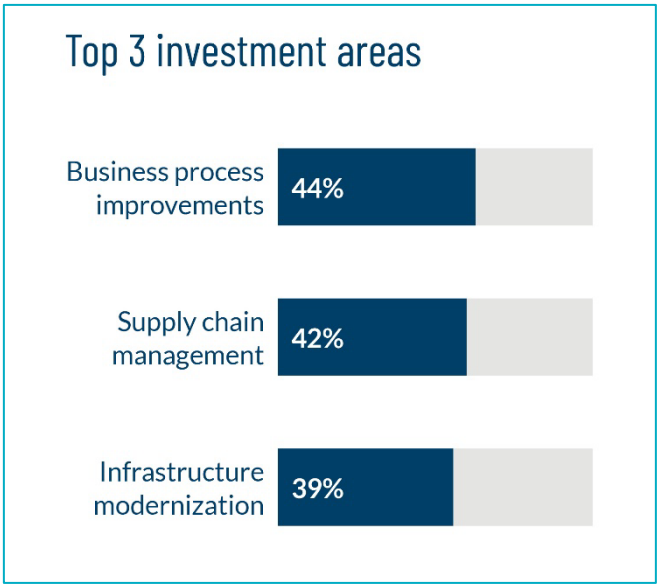
Talent dynamics present another critical challenge. A tight labour market, rising costs and impending "peak retirements," particularly in manufacturing and distribution organisations, threaten workforce stability. Even amid the growth of AI and resulting workforce transformation, a quarter of the workforce is age 55 or older. With millions of roles projected to open by 2033 due to retirements, companies must compete aggressively for talent while adapting to evolving skill requirements driven by Industry 4.0 and AI integration. This talent gap is further complicated by the perennial geographic challenge in manufacturing and distribution, where operations hubs typically are not located in the most populated locations for talent (e.g., in rural versus urban centres).

Then there's the escalating cyber threat landscape. Recent high-profile cyber incidents involving several well-known manufacturers underscore the **vulnerability of production systems and supply chains**. The convergence of IT and OT environments has expanded the threat surface, and ransomware attacks today disproportionately target manufacturing – nearly 70% of incidents, according to recent research from Dragos. In addition, the rapid adoption of AI introduces new challenges around maintaining cybersecurity, safeguarding operational continuity and ensuring data integrity. As manufacturing and distribution organisations digitise their operations and adopt AI, the need for robust cyber defences becomes even more urgent.

Third-party risks (which fell just below the top five near-term issues) compound these concerns. **Complex global supply chains create dependencies** on external vendors and service providers, exposing organisations to operational disruptions, compliance failures, intellectual property theft and reputational damage. These vulnerabilities are magnified by geopolitical uncertainty and shifting trade policies.

Based on these near-term risk issues, in what areas is the organisation likely to invest the most over the next two to three years, and why?

Given the current risk landscape, manufacturing and distribution leaders are poised to make significant investments in two broad areas: **business process improvements coupled with modernisation initiatives,** and **supply chain optimisation and resilience**.



Business process improvements and technology modernisation – particularly Industry 4.0 initiatives – will dominate capital allocation. With aging infrastructure (average machine age exceeding 22 years) and half of U.S. plants between 30 and 60 years old, **modernisation is essential to reduce downtime, improve safety and enhance operational efficiency**. Investments will focus on upgrading both back-office systems and shop floor technologies to enable better data integration and analytics. These upgrades are foundational for implementing and leveraging AI.

Supply chain optimisation and resiliency is the focus of substantial investment as well. Global supply chains are increasingly vulnerable to third-party risks and geopolitical uncertainty. Manufacturing and distribution organisations plan to invest in technologies that **enhance visibility into their supply chains, improve forecasting and diversify sourcing strategies**. These efforts will reduce operational vulnerabilities, strengthen compliance and support reshoring initiatives.

Other planned areas of investment for industry leaders include sustainability and customer experience initiatives. However, while these remain on the radar, they are secondary to technology modernisation, security and supply chain resilience, not only to address immediate risks but also to position organisations for long-term competitiveness in an increasingly digital and interconnected world.

How do leaders in the manufacturing and distribution industry group view the 10-year risk outlook for their organisation?

Industry leaders see a long-term risk landscape that shifts from today's operational concerns toward **broader strategic challenges**.

What truly differentiates the 10-year outlook from the near-term concerns is the shift toward **market-facing priorities** – in particular, customers and competition along with markets and economies. Boards and executives increasingly see competitive differentiation as critical in an industry historically defined by commoditisation. The rise of customer-centric strategies – moving beyond traditional B2B models toward more B2C approaches – reflects this evolution. Leaders understand that success will hinge on the ability of their organisation to innovate, personalise offerings and leverage technology to create unique value propositions for customers and clients.

Industry leaders expect talent challenges to persist as well. As noted earlier, given the long-term demographic changes already underway in the workforce, **recruiting and retaining, together with upskilling and reskilling people**, will be persistent concerns for leadership.

The long-term risk outlook is less about incremental improvements and more about **transformation in customer experience and talent management**. Organisations that adapt to dynamic markets, embrace AI-driven innovation and differentiate themselves in a competitive global environment will thrive. Those that cling to legacy infrastructure and traditional models risk irrelevance in an economy that demands agility, resilience and customer focus.

Guidance/call to action for next two to three years

Following are calls to action for leaders in the manufacturing and distribution industry group as they help their organisations navigate the changing landscape:

- **Accelerate AI integration with a strong data foundation.** Prioritise investments in modernising legacy systems and creating unified data environments to enable scalable AI deployment. Without this foundation, productivity gains and competitive differentiation will be limited.
- **Invest in workforce upskilling/reskilling and change management.** Launch comprehensive training programs to equip employees with AI-related skills and foster a culture that embraces change in technologies and business processes. Address job displacement concerns proactively to build trust and engagement.
- **Strengthen cybersecurity amid IT and OT convergence.** Implement robust cyber defences to protect against ransomware and other threats amplified by AI adoption, particularly considering that manufacturing environments have become prime targets for attack. Ensure security strategies cover both OT and information systems.
- **Build strategic ecosystem partnerships.** Collaborate with technology providers, suppliers and distribution networks to leverage shared capabilities, accelerate innovation, and expand global reach and market share. Partnerships can mitigate supply chain risks and unlock new growth opportunities.
- **Embrace Industry 4.0 by modernising infrastructure and processes.** Allocate capital toward upgrading technology infrastructure and replace aging equipment – improvements that are essential to achieve AI-driven efficiencies.
- **Enhance supply chain resilience and visibility.** Invest in technologies that improve forecasting, diversify sourcing and provide real-time visibility into global supply chains. This will reduce vulnerabilities and support reshoring initiatives.
- **Embed customer-centric strategies for long-term competitiveness.** Begin shifting toward more personalised, technology-enabled offerings to differentiate in a commoditised market. Use AI-driven insights to innovate and deliver unique value propositions.

About the authors

David Kupinski is a Managing Director and global leader of the firm's Manufacturing and Distribution industry practice. He has over 25 years of experience in delivering tailored business solutions to his clients. Leveraging technology enablement, data analytics and internal controls, he works with finance executives to drive transformation through initiatives such as ERP implementation, shared service centre strategies and finance process optimisation.

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