



# Unleashing the Power of AI in Supply Chains: Identifying and Developing Leaders for Success



## EXECUTIVE SUMMARY

Determining who will lead AI transformation is crucial to success. Our research discusses how to identify and develop leaders for a future-ready supply chain.

Artificial intelligence (AI) has the potential to fundamentally transform supply chain management, from demand forecasting to inventory management, logistics optimization, and customer engagement. While some organizations have been making investments for years, others are just starting their AI journey. The introduction of ChatGPT and subsequent surge in interest around large language models (LLMs) and generative AI has thrust this technology conversation into the spotlight.

From a leadership perspective, embracing AI-driven solutions can bring efficiency, agility, and strategic advantage. However, given the technology's newness and rapid advancement, many leaders are wondering where to begin. To help leaders better understand how AI can transform supply chain management, Russell Reynolds Associates examined the technology, emphasizing the strategic considerations and leadership approaches necessary to harness its full potential.



# AI in action: how three companies are leveraging it in supply chain management

According to 2023 Boston Consulting Group research, early adopters are rapidly adopting generative AI throughout the supply chain.<sup>1</sup> While AI isn't new to the supply chain management—a 2021 McKinsey study indicated that one-fifth of executives had implemented AI and machine learning for some type of supply chain activity—organizations are moving even faster to embrace generative AI (Figure 1).<sup>2</sup>

Traditional AI operates based on predetermined rules, similar to following a recipe. Conversely, generative AI is like a creative assistant that learns from observing, and can generate new ideas independently. Generative AI enables users to quickly generate new content based on a variety of inputs. Inputs and outputs to these models can include text, images, sounds, animation, 3D models, or other types of data.

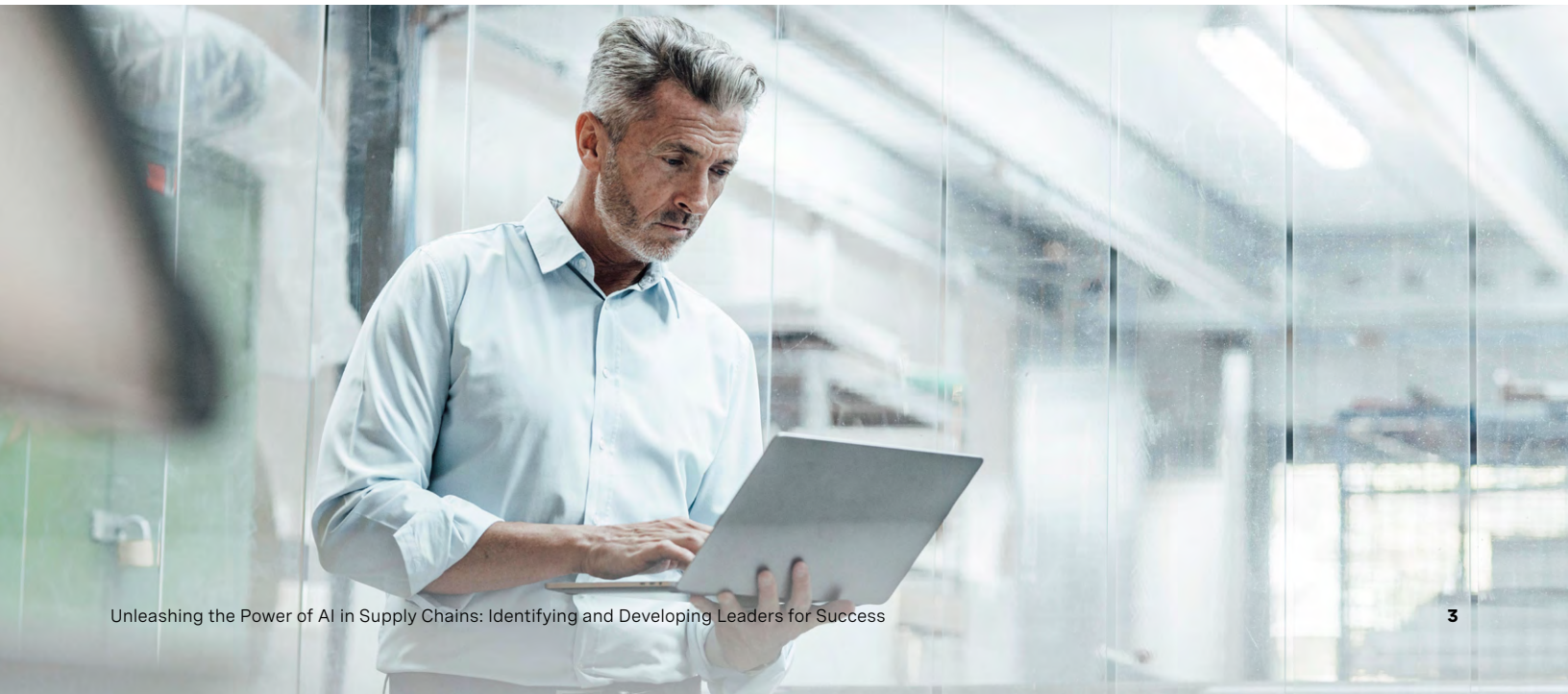
Figure 1: Supply chain adoption of AI

20%

[McKinsey](#) survey in 2021 indicated that 20% of executives had implemented AI and machine learning for some type of supply-chain-planning activity.

49%

[Ivalua](#) survey of 850 procurement leaders across Europe and North America in July 2023 showed a 49% adoption rate for generative AI in the procurement / supply chain function.





Digitization is vital for organizations wishing to become supply chain leaders. These companies must invest to scale that effort, enabling agile decision-making and adaptability through tools like AI and machine learning (ML).<sup>3</sup> Below, we explore how impactful organizations like Walmart, Sanofi and Schneider Electric are benefiting from AI:

**Walmart** has transformed its AI-driven supply chain efforts from predicting in-store sales demand to forecasting consumer demand based on what customers actually want to buy. This shift has been enabled by analyzing data across various channels, including Google searches and TikTok social feeds. In June 2022, Walmart announced that it was planning to open four next-generation fulfillment centers that use robotics and ML to speed up fulfillment over the next three years. Additionally, Walmart will bring Symbotic's next-generation robotics and AI technology to all 42 regional distribution centers by 2030.<sup>4</sup> Finally, according to CEO Doug McMillon, the organization is developing its own generative AI models to make its supply chain more efficient and better connect with customers.<sup>5</sup>



According to Brendan O'Callaghan, Executive Vice President of Manufacturing and Supply at **Sanofi**, manufacturing and supply operations are drawing on advances in AI to produce medicines and vaccines faster, smarter, and more sustainably. With AI & ML capabilities, Sanofi has managed to reduce closure time by 60%, lowering cycle times and advancing productivity while strengthening quality and supply reliability.<sup>6</sup>

**Schneider Electric** began its "AI at Scale" initiative in 2021, appointing its first Chief AI Officer. They have implemented a global "hub and spoke" AI operating model, where each business function (spoke) has an AI product owner and change agent who works with the tech competency center (hub) to discover new use cases for AI. One of the supply chain use cases leverages AI to balance inventory based on projected demand. The insights from those projections resulted in about \$15 million in savings.<sup>7</sup>



# Leadership considerations when embedding AI into supply chain management

Integrating AI into supply chain management presents both opportunities and complex challenges for leaders. To successfully harness the power of AI in optimizing supply chain operations, leaders must consider a range of strategic, organizational, regulatory, and ethical factors. Here's an exploration of some of the leadership considerations involved when it comes to [leadership, culture, organizational structure, and risk management](#):

**1. Strategic alignment** is crucial for the successful adoption of AI in supply chain management. When implementing AI technologies, organizations need to ensure that their AI initiatives are closely aligned with their broader business strategy. By doing this, they can maximize AI's benefits and achieve their desired outcomes more effectively. AI has great value creation potential:

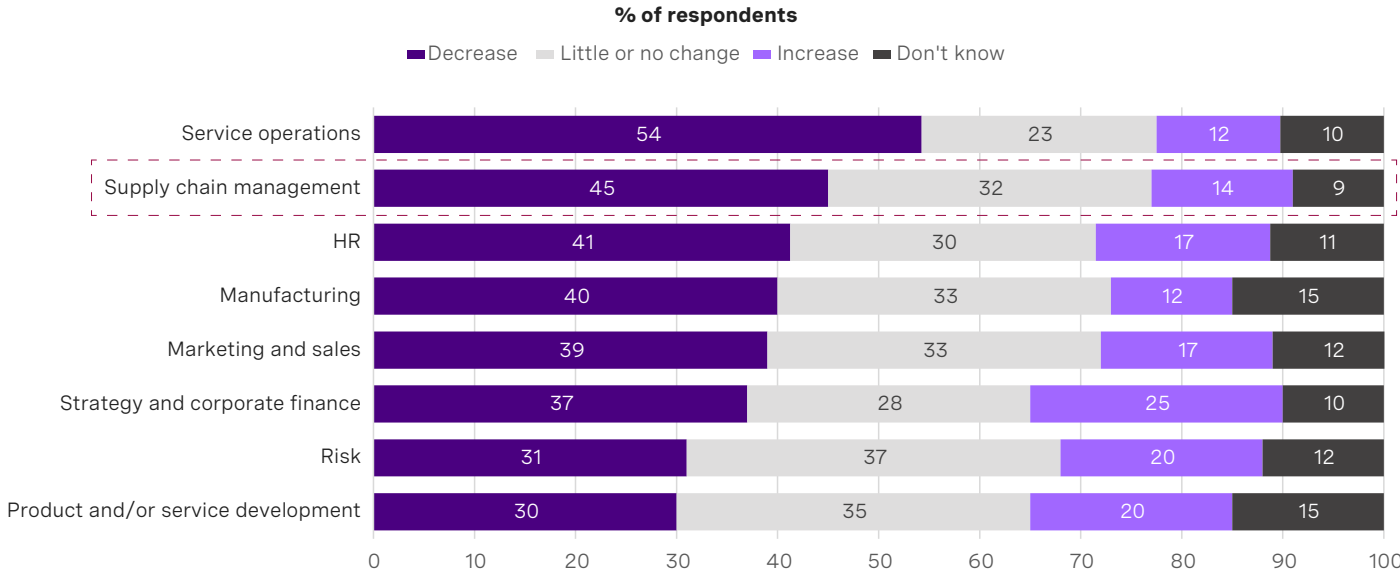
- A 2023 McKinsey survey found that 33% of respondents in supply chain management witnessed cost reductions as a result of adopting AI, while 56% reported an increase in revenue.<sup>8</sup>
- In a recent Gartner survey, 61% of respondents considered supply chain technologies, such as AI, a source of competitive advantage.<sup>9</sup>

**2. Change management and cultural shifts:** AI might supply a new framework, but human judgment, creativity, and strategic thinking are still necessary to lead and develop effectively. Leaders should aim to meet their people with [passion, authenticity, rigor, and humility](#). That's something they'll never get from a bot.

Leaders should communicate the benefits of AI, foster a learning mindset, and lead by example. Additionally, predictions on AI's potential impact on workforce size in supply chain management (Figure 2) may reinforce resistance to change. When addressing these concerns, leaders must communicate transparently, educate employees on the tool's additive benefits, and address employee concerns in an open and supportive environment.

According to a Ivalua survey of 850 procurement leaders in July 2023, 35% of respondents are concerned that their role will be replaced by generative AI.<sup>10</sup>

**Figure 2: Effect of generative AI adoption on number of employees by function over the next 3 years**



Note: McKinsey Global Survey to 1,684 participants at all levels of the organization. Respondents were asked about only the business functions in which they said their organizations have adopted AI.

Source: McKinsey, [The state of AI in 2023: Generative AI's breakout year](#), August 1, 2023. N = 1,684. Data collected between April 11-21, 2023.



**3. Continuous learning and adaptation:** AI technologies evolve rapidly, so leaders need to stay updated on AI trends, encourage innovation, and embrace agility.

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“The new nature of competition is really not about technology; AI technology moves too fast for that. It’s about the value you deliver to customers. And whatever value you deliver, it can be augmented through partnerships.”

- Philippe Rambach, Chief AI Officer at Schneider Electric.<sup>11</sup>

**4. Cross-functional collaboration and organizational structure decisions:** Effective AI implementation requires collaboration across different departments. This effectiveness is highly influenced by the organization’s structure.

While dedicated R&D teams will continue to create new products, every function within the company can have its own R&D capability, leveraging AI tools to improve their respective workflows and processes. The best structures will facilitate collaboration between business and technology, breaking down organizational silos.

**5. AI governance and data privacy:** The success of AI-driven supply chain initiatives heavily relies on accurate and high-quality data. Leaders should establish data governance policies, ensure data security, and address ethical concerns alongside existing and emerging regulations.

Government regulations, such as the EU AI Act, will increasingly impact the deployment of AI, extending beyond ethical considerations.<sup>12</sup>

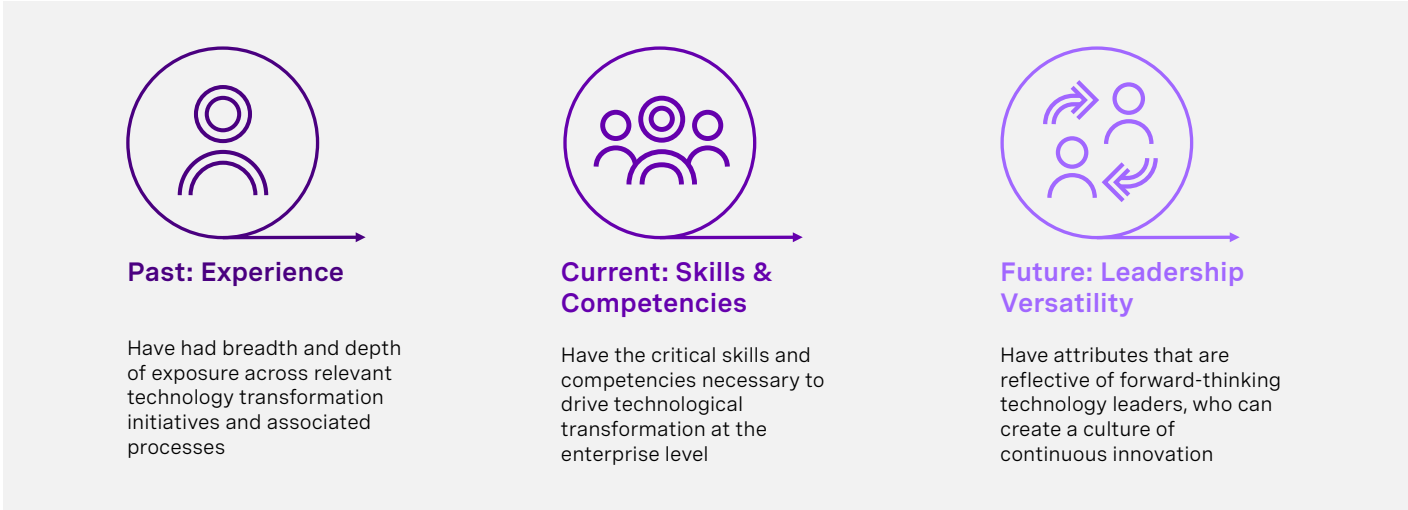
# Embracing the AI revolution: Identifying and developing leaders for a future-ready supply chain

Supply chains have become a strategic priority for many organizations, shifting them from out of sight to front and center on C-suite and, increasingly, [board agendas](#). With organizations racing to capture AI's value, the significance of supply chains as a strategic issue at the board level is likely to be amplified.

To gain an AI advantage, organizations need to embed it throughout their supply chains. While companies will continue to have dedicated central teams, embedding data science teams within functional departments—such as supply chain—promise more success by connecting analytics projects closely with specific needs, providing dedicated resources, and focusing expertise.<sup>13</sup> These efforts and teams require supply chain leaders with technology acumen who are forward thinking and create a culture of continuous innovation. The best ones understand that technology is an enterprise-wide responsibility, and know how to harness technology for strategic advantage.

At Russell Reynolds, our teams of industry experts and industrial organizational psychologists help find and develop those leaders. We assess candidates across three horizons, evaluating their experience, skills, competencies, and versatility. The goal is to identify individuals who have the capabilities needed to address both current and future technology change needs (Figure 3).

**Figure 3: RRA process for finding tech-first leaders**



Determining who will lead AI transformation is [crucial to success](#). External advisors can offer valuable perspectives when it comes to finding and developing those individuals.



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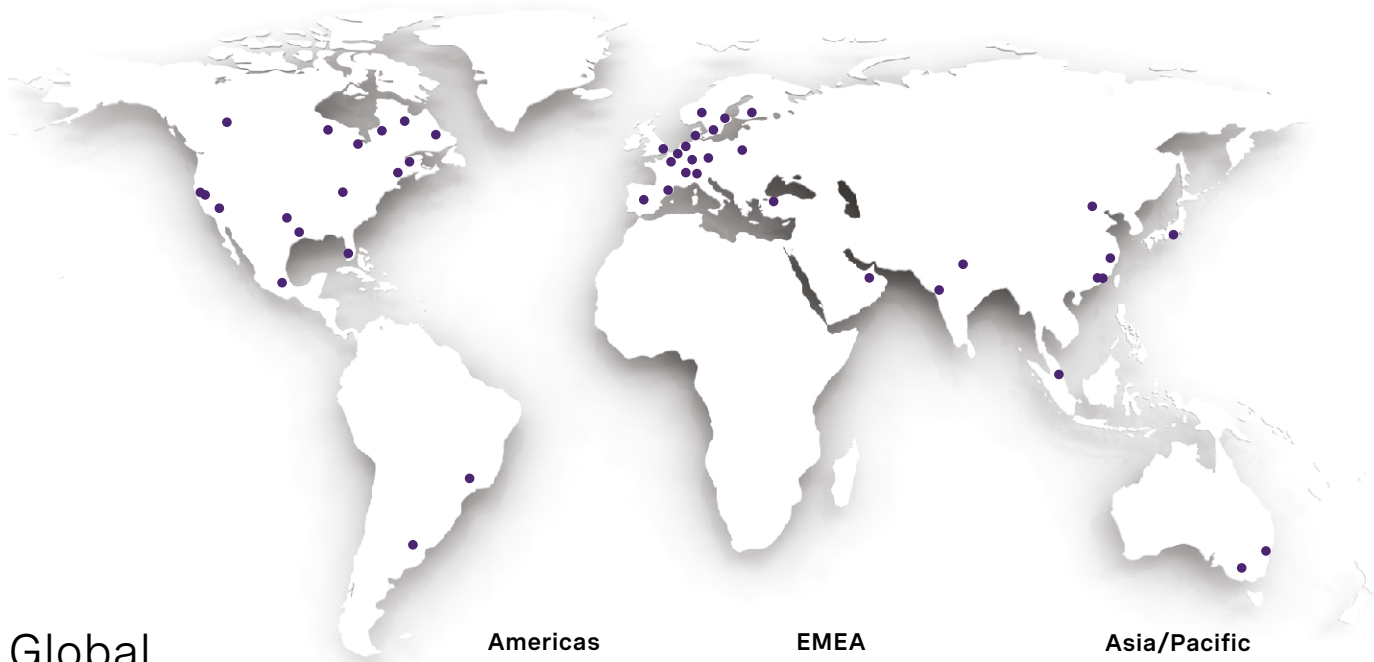
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# About Russell Reynolds Associates

Russell Reynolds Associates is a global leadership advisory firm. Our 600+ consultants in 47 offices work with public, private, and nonprofit organizations across all industries and regions. We help our clients build teams of transformational leaders who can meet today's challenges and anticipate the digital, economic, sustainability, and political trends that are reshaping the global business environment. From helping boards with their structure, culture, and effectiveness to identifying, assessing and defining the best leadership for organizations, our teams bring their decades of expertise to help clients address their most complex leadership issues. We exist to improve the way the world is led

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