

# Building the next-generation supply chain

How the manufacturing function approaches resiliency to avoid risk



# Introduction

The next-generation supply chain is being shaped by the need for resilience in an uncertain world and by customer expectations of speed and sustainability. Its success depends on the free flow of high-quality data and collaboration between partners for maximum efficiency.



To better understand how executives are navigating these systemic shifts, Oxford Economics and SAP surveyed 1,000 executives in the first quarter of 2023. These leaders come from all parts of the business—including the manufacturing, logistics,

and supply chain planning functions, among others—at large and mid-market companies across a range of industries and countries. This paper focuses on executives in the manufacturing function—a leading cohort in many ways in this historic transformation.

## Among the key findings of our research:

- **The map of global trade is being redrawn** as companies look to shorter, more reliable supply lines.
- **The new supply chain is built for speed.** Time to market and time to innovation are critical to competitive advantage, and keeping up with the pace requires the right supply chain.
- **Green is the new black.** Supply chains have to be clean—ethically and environmentally—and visibility is essential.
- **Suppliers are going digital and are data driven.** Manufacturing executives know technology investments in their line of business are critical to the success of the business—and they are investing accordingly.
- **The best-performing companies in our survey are adopting emerging technologies** at a higher pace and incorporating sustainability practices early and often—and based on the strength of their results, you should too.





# Bringing it all back home

Unhappy customers can quickly become ex-customers. That makes the widely felt shortfalls of globalized supply chains since 2020 a major business risk. Nearly half of the manufacturing executives we surveyed expect negative customer outcomes as a result of geopolitical turbulence, forcing companies to focus on increased supply chain resiliency as a top priority. Close to 40% name alternative sourcing as the top choice for building this resiliency and avoiding risk.

One important way organizations can minimize supply chain risk is by reshoring—bringing production back to a manufacturer's native country, a close neighbor, or an ally (a practice sometimes referred to as “friend-shoring”). Just over half of manufacturing executives say the top choice for protecting their organization from supply chain risk is creating a more local or regional supply chain. Manufacturers are ready to localize production—nearly one-third name onshoring manufacturing as a top priority. Around two-thirds have piloted near-shoring manufacturing, and even more have piloted alternative sourcing strategies.

Another advantage of reshoring is greater visibility into supply chains, which matters for speed, sustainability, and value creation within the product chain. The manufacturing function already places great value on supply chain transparency—around

60% of manufacturing executives report significant executive visibility into external suppliers and sub-suppliers.

These trends are front-page news in major economies around the world. Reshoring created more manufacturing jobs in the US than foreign direct investment from 2020 to 2022.<sup>1</sup> And public policy is driving domestic investment even further: The 2022 CHIPS act in the United States has led to major investments in near-shored semiconductor production. Intel has already invested \$20 billion in Ohio plants that will employ 3,000 workers, and Micron has sunk \$40 billion into memory-chip manufacturing that will bring the US market share of memory-chip production from 2% to 10% over the next decade.<sup>2</sup> Similar stories are playing out globally, highlighting the need for new thinking around supply chain basics.

**Fig. 1: Manufacturing executives look to clarify and diversify**

**Q: In your opinion, how can your organization become more resilient to risks in the supply chain?**



<sup>1</sup> Rogers, J. (2022, July 14), *Reshoring Bringing 400K Manufacturing Jobs to US in 2022*. Globest.

<sup>2</sup> Yang, L. (2022, August 9), *Micron to invest \$40 billion in U.S. chip manufacturing*. CNBC.



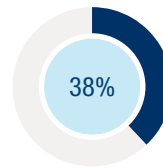
# The need for speed

Customers increasingly set the tone for business strategy. Around half of manufacturers in our survey say they base product value chain decisions on customer needs—and customers are in a hurry. The Great Acceleration that picked up pace with the introduction of e-commerce continues to shape customer expectations and business strategy.<sup>3</sup> Major retailers offer delivery at break-neck speeds and have begun imposing financial penalties on suppliers for late or incomplete orders, threatening to cut into supplier profit margins.

This places enormous stress on supply chains and the manufacturers who depend upon them. Our survey analysis shows a growing emphasis on the timely delivery of products to the marketplace—and the need for faster, more efficient supply chains. One-third of manufacturing respondents say customers are less forgiving of delays than they were three years ago. Nearly half (49%) say customers expect the same quality as five years ago but now they want it faster. Suppliers are expected not only to meet customer expectations for expedited deliveries but for data insights as well. Manufacturing executives rank real-time responsiveness as a top challenge for their organization and report that customers expect real-time tracking to accompany deliveries.

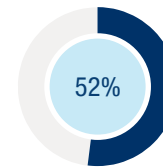
**Fig. 2: Keeping up with customer expectations**

**Q: What are the top challenges your organization faces in meeting its supply chain goals?**

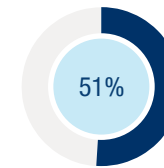


**Real-time responsiveness** is a key challenge in meeting supply chain goals.

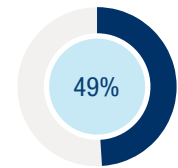
**Q: To what extent do you agree with the following statements about your customers?**



Our customers expect more customized or personalized products than they received three years ago.



Our customers expect real-time updates and tracking.



Our customers expect the same quality products and services as they received three years ago but delivered more quickly.

<sup>3</sup> Kuntze, C., Martin, A., Regnier, C. & Silva, I. (2018, September 6), *Deliver on time or pay the fine: Speed and precision as the new supply-chain drivers*. McKinsey & Company.



## SIDEBAR | The sustainable supply chain

The marketplace is going green and taking suppliers with it. Consumers increasingly want products that are environmentally sustainable and ethically sourced. An earlier iteration of this study<sup>4</sup> showed consumer demand rivaling regulatory pressure as a driver of sustainable supply chains. This trend appears to be accelerating as younger consumers become more entrenched: nearly 90% of Gen X consumers said that they would be willing to spend an extra 10% or more for sustainable products, compared to just over 34% two years ago, according to a 2021 study conducted by First Insight and the University of Pennsylvania.<sup>5</sup>

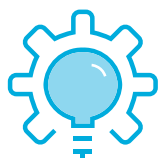
Conflicting customer mandates present a challenge for the executives in our survey. Customers want sustainable sourcing, but their demands for speed and convenience are a top barrier for successfully implementing sustainability initiatives. Yet, sustainability efforts may help resolve this contradiction: close to 40% of manufacturing respondents say that sustainability-driven changes to product delivery will have a positive effect on customer experience.

The manufacturing executives in our study outperform their peers in other functions when

it comes to sustainability, but a lot of work remains to be done. 46% reported successful sustainability efforts during the manufacturing phase, though only 35% of logistics counterparts agreed with this assessment. Manufacturing consistently leads other functional areas when it comes to prioritizing sustainability throughout the supply chain, but it remains unclear if they give it appropriate consideration during early-stage planning. A third of manufacturers rank sustainability as only a minor concern during the planning stage, and 40% give it the same ranking during R&D.

<sup>4</sup> Wright, B. & Cone, E. (2020, May 8), *Surviving and thriving: How supply chain Leaders minimize risk and maximize opportunities*. Oxford Economics.

<sup>5</sup> Petro, G. (2022, March 11), *Consumers Demand Sustainable Products and Shopping Formats*. Forbes.



# Transforming the supply chain

The reimagined supply chain is built around data and digital technology. Robust data flows and the tools and skills that create value from them are essential to rapid, collaborative, and transparent ways of doing business. Gartner research shows that 80% of CEOs in manufacturing are increasing digital technology investments to counter current economic pressures.<sup>6</sup>

Our manufacturing respondents are more likely than those in other functions to have deployed intelligent technologies at scale throughout the supply chain (26% vs. 11% in logistics and 12% in supply chain planning). One area of focus for manufacturers is predictive analytics, a critical technology for navigating fast-changing economic conditions. Yet they have a long way left to go—only 40% have deployed predictive analytics in any part of their enterprise (vs. 28% in logistics and 12% in supply chain planning). The same holds true for robotic process automation,

where manufacturing is ahead of other functions but still closer to the beginning than the end, with just 22% having deployed it across the enterprise.

When it comes to data, the lifeblood of the new economy, manufacturers are increasingly capable, with 40% able to capture real-time insights from product value chain data and act on it. Such visibility is increasingly necessary when customers demand transparency beyond a company's own suppliers and workplace rules, and expect assurances that good practices are in place throughout the supply chain.



<sup>6</sup> Gartner. (2023), *2023 CIO Agenda Insights for the Manufacturing Industry*.

## SIDEBAR | Leaders

A small subset of survey respondents stands out for its superior performance across key metrics, including well-developed sustainability programs and clear visibility into sustainability practices throughout the supply chain. These Leaders (which include respondents from all functions surveyed, including manufacturing) are seeing measurable benefits from their early moves. For example, 60% feel that perception of their brand in the marketplace is better than that of industry peers.

Leaders give the manufacturing function high marks on factors like collaboration and visibility.

Close to two-thirds report strong internal collaboration during the manufacturing phase. Nearly half report successful sustainability efforts during manufacturing, in line with responses from manufacturing executives themselves. But leaders pull ahead in incorporating sustainability practices early in the value chain; 28% say sustainability is a major concern during the planning phase (vs. 19% in manufacturing), and 12% say it is top of mind during Design/R&D (vs. 1% in manufacturing).

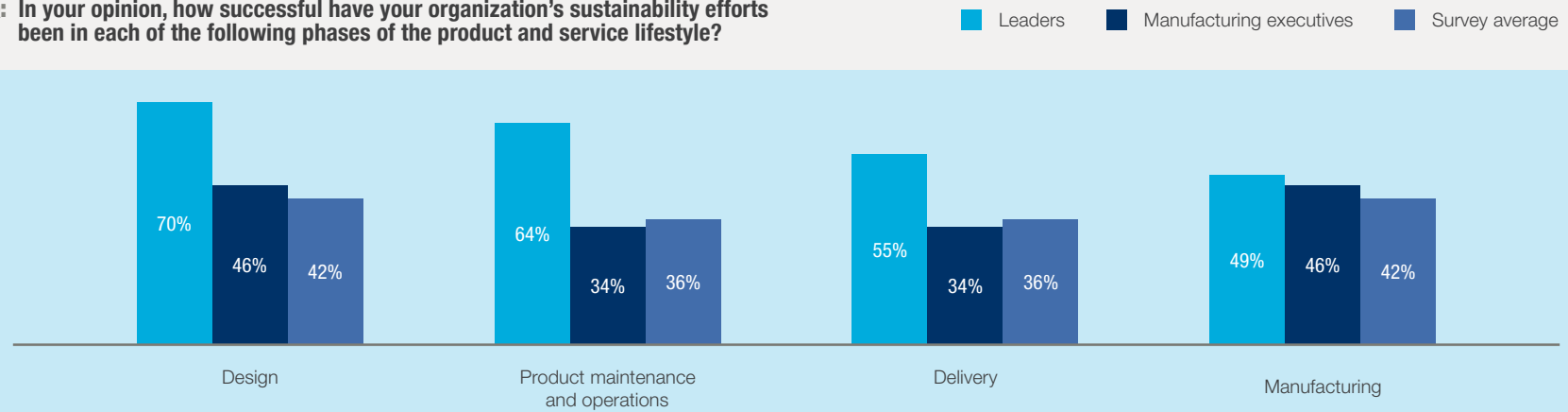
Leaders cite similar business strategies to our manufacturing respondents, but they tend to

be further along in executing them. 34% have on-shored most of their manufacturing activity, compared with 9% of manufacturing executives. 19% have deployed predictive analytics across their enterprise today (compared to 9% of manufacturing executives). Leaders are advanced in adopting most intelligent technologies; for instance, 52% have deployed IoT across their enterprise today.

**For more on our leader group and a deeper dive into this research program, you can view our [overview report](#).**

**Fig. 3: Sustainability Leaders reap sustainability success**

**Q: In your opinion, how successful have your organization's sustainability efforts been in each of the following phases of the product and service lifecycle?**





# Conclusion and calls to action

Supply chain needs will vary by industry, region, and company size, but our research shows that manufacturing executives are highly focused on updating supplier networks and infrastructure to address risk, resiliency, and sustainability. Executives should prioritize investments that allow them to meet changing marketplace demands and maneuver through a challenging global landscape.

As you rethink your company's value chain, consider these key areas of emphasis:

- **Review supply networks to maximize speed and security.** Consider regional or local sourcing and production while continuing to leverage global resources to best meet the realities of your market.
- **Listen to your customers.** The marketplace demands speed and sustainability, so next generation's supply chains must be built to meet those needs.
- **Use technology to streamline manufacturing efforts and insulate your business from risk.** Digital tools that predict trends and disruptions while enabling greater transparency across the entire supply chain will generate competitive advantage in the years ahead.



## About Oxford Economics

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