

fictiv

9TH ANNUAL



# STATE OF MANUFACTURING

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# INTRODUCTION

## The Future in the Making

After four years of unprecedented global disruptions, the industry has redefined what battle-hardened, world-class manufacturing and supply chain teams need to succeed in 2024 and beyond: Greater speed and efficiency, higher revenue, lower costs, and more resilience and agility than ever before. For some, that means integrating AI solutions into operations. Others are leveraging regionalization to find some kind of equilibrium. These teams face numerous pressures ranging from election uncertainty to heightened concerns about trade wars and global economic uncertainty.

As in prior years, optimizing supply chain management and minimizing risk is the focus of most manufacturing leaders in 2024.

However, spurred by efficiencies identified using AI and other technologies like on-demand manufacturing and some reduction in barriers to new product innovation, there are signs that the industry has found something closer to firmer ground in its quest for further stability and predictability.

**"The last four years have redefined what top performing operations and supply chain teams need to succeed in a tough economic environment."**

**Dave Evans,**  
*CEO, Fictiv*



# EXECUTIVE SUMMARY

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## THE ECONOMY

This election year, economic challenges most impact company strategy, labor costs, and shortages.

89%

say they are concerned **trade wars** might escalate in the next few years.

47%

report **economic headwinds** as critical to overall company strategy.

39%

report that **labor costs and shortages** remain a concern for manufacturing leaders.



## SUPPLY CHAIN MANAGEMENT

Supply chain management is entrenched at the forefront as barriers to innovation ease.

54%

say improving manufacturing and **supply chain visibility** is the top business priority for the third year.

48%

report improving supply chain **resilience and agility** comes in a close second.

15%

report report they have **no barriers to innovation**—its highest level in four years.



# EXECUTIVE SUMMARY

## AI & MANUFACTURING

Last year's enthusiasm for AI has been operationalized and is substantially impacting the industry.

88%

of respondents have **implemented AI** in manufacturing and supply chain operations.

87%

of respondents agree that **"Implementing AI into manufacturing is vital** to my company's future success."

44%

report that the long-term impact of AI will enable a **reduction in planned hiring**.



## SUSTAINABILITY

Results show continued prioritization of sustainability goals and programs.

77%

report that the importance of **sustainable manufacturing is increasing** at their companies.

53%

have **embedded sustainability** into their company goals.

42%

of respondents prioritize **investments in sustainable manufacturing**, which has been holding steady since 2023.



# 01

## THE ECONOMY (& THE ELECTION)

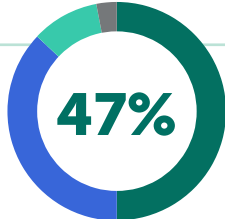
In 2024, the global manufacturing industry is navigating significant economic challenges, including supply chain disruptions, geopolitical tensions, and labor shortages. These factors influence decision-making and strategic planning at every level. Economic fluctuations in consumer demand can swiftly alter production schedules, investment plans, and market strategies. Given the instability of the last few years, it's unsurprising that concerns about the economy continue to impact company strategy.

Survey respondents report that “economic headwinds” (inflation, interest rates, and the risk of recession) are most likely to influence their 2024 strategy, along with labor costs and shortages (39%), increasing competition (33%), and pressure to drive profitability (30%). Driven by a volatile economy and shifting company goals, companies are looking for ways to navigate significant challenges. These trends are consistent with prior years.



**“In the past four years, we’ve noticed a big shift away from growth at all costs to revenue at all costs.”**

**Sabrina Paseman,**  
General Partner, *Omni Venture Labs*



Survey respondents report that “economic headwinds” are most likely to influence their 2024 strategy.

*State of Manufacturing Report 2024, Fictiv.*

# Macroeconomic Trends

Which of the following trends MOST impact your company's 2024 strategy? Choose up to three of the following.

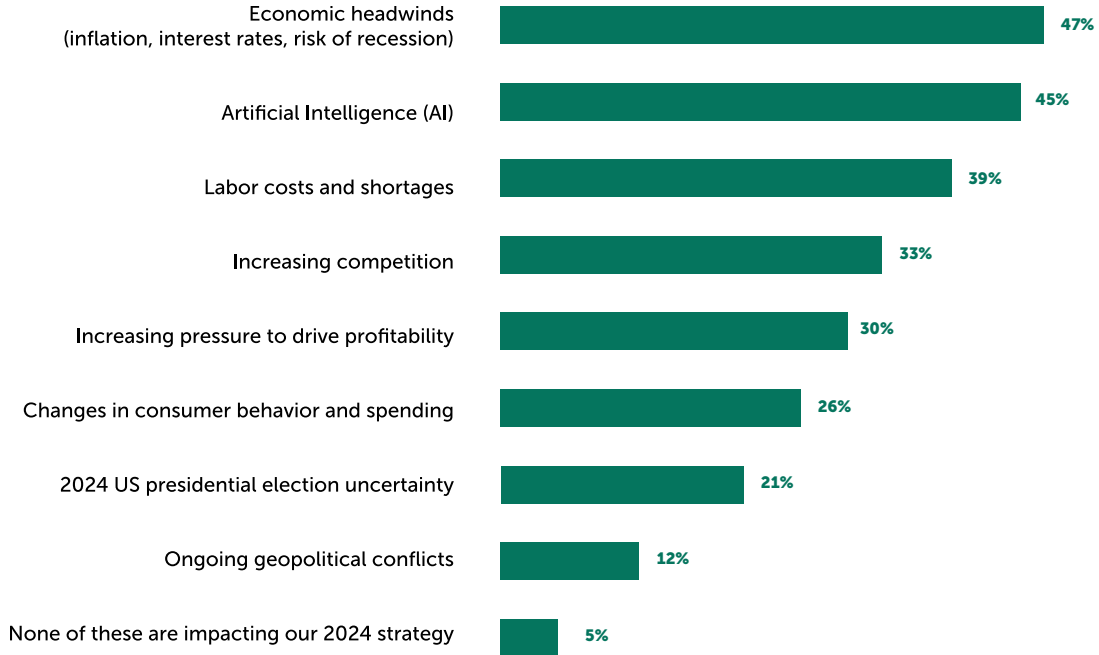


fig. 1

## Concern About Potential Trade Wars

How concerned are you that trade wars might escalate in the next few years? Choose the one answer that most closely applies.

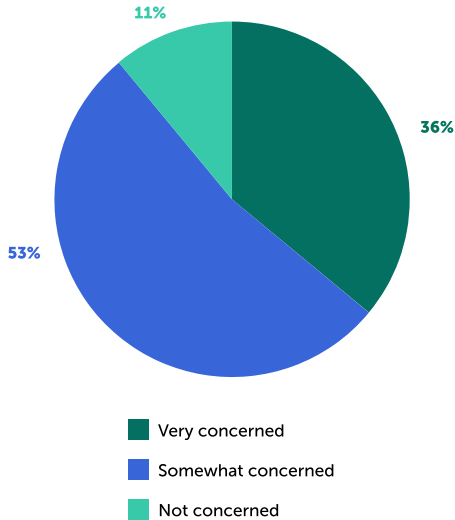


fig. 2

## Global Tensions & Supply Chain Planning

Are global tensions (e.g., Russia/Ukraine conflict, tensions in the Middle East, sanctions, etc.) being considered in your company's long-term supply chain planning efforts? Choose the answer that most closely applies.

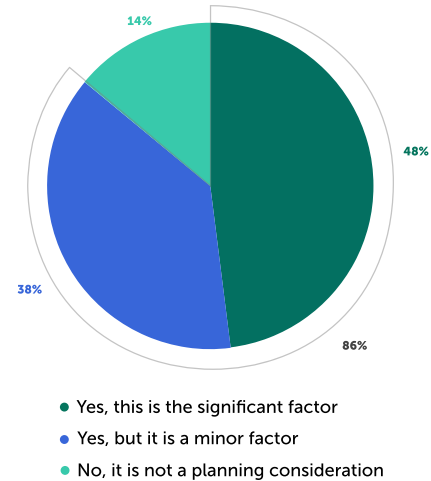


fig. 3

## THE ELECTION, TRADE WARS, & GLOBAL TENSIONS

It's an election year in the U.S., but uncertainty around the election outcome only impacts a modest percentage (21%) of company strategies. Still, 89% are either "somewhat" or "very" concerned about the possibility of escalating trade wars in the next few years, and 86% say global tensions are a consideration for long-term supply chain planning. These findings make sense, given that both candidates have a track record of trade policies that impact the manufacturing sector.

It's also apparent that the broader geopolitical uncertainty of the last few years persists.



### The Economy Key Takeaway:

This election year, economic challenges most impact company strategy, along with labor costs and shortages.

# 02

## SUPPLY CHAIN RISK MANAGEMENT



In light of these drivers and potential impacts, it's not surprising that supply chain visibility is the number one business priority for the third year in a row, followed by supply chain resilience and agility, which displaces last year's drive for improving customer experience and satisfaction. Ultimately, the ability to track a project from planning and design through prototyping and on to production is more critical than ever.



**“With global trade increasingly susceptible to extreme weather and regional conflicts (e.g. Houthi attacks on container ships in the Red Sea), supply chain visibility and agility are as important as ever.”**

**Andy Sherman,**  
GM-U.S., *Fictiv*



**“Manufacturing and supply chain leaders are focused on improving supply chain resilience. Improving supply chain visibility and, by extension, efficiency are keys to making that happen.”**

**Sabrina Paseman,**  
General Partner,  
*Omni Venture Labs*



# Top Business Priorities 2022 - 2024

Which of these are your company's most important business priorities for 2022/2023/2024? Choose up to three of the following.

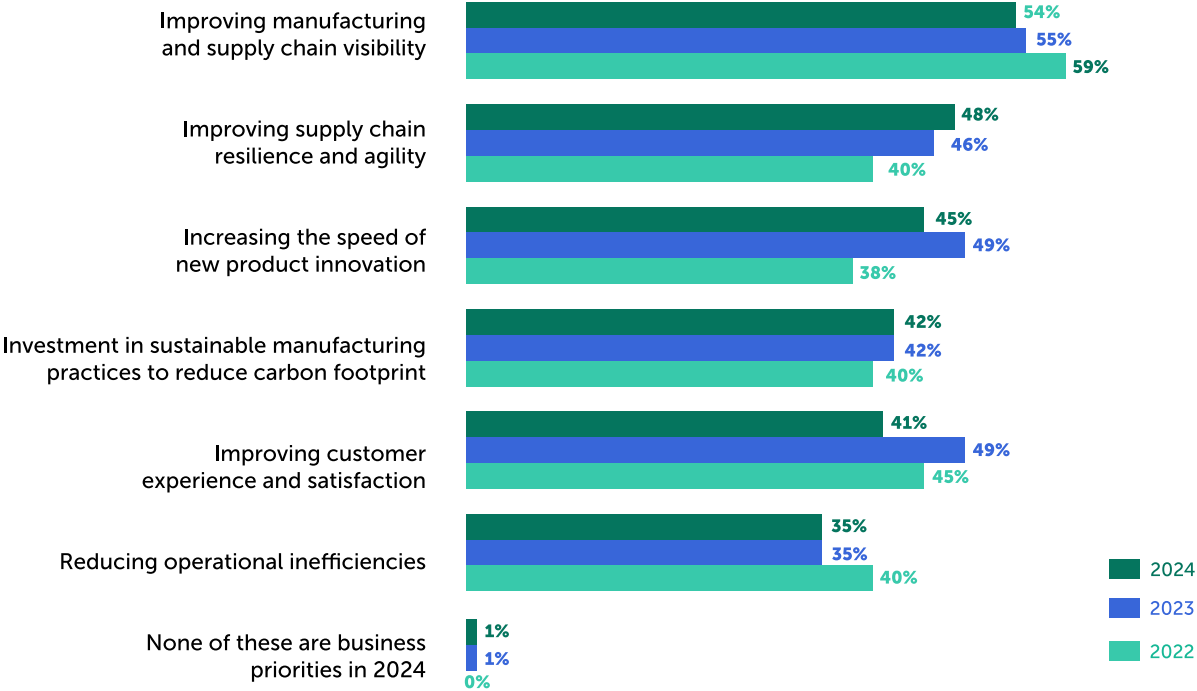


fig. 4

## **BARRIERS TO NEW PRODUCT INNOVATION**

Despite the focus on supply chain priorities, companies haven't lost sight of the importance of clearing speed bumps in the path of new product innovation. While barriers to new product innovation are a persistent theme between 2021 and 2024, there are some signs of hope here. It seems that improvements to rigid internal supply chain processes have contributed to the fewest reported barriers to NPI in at least 4 years.

Barriers are still a concern, however. Specifically, sourcing fast, high-quality options to manufacture low-volume builds (43%), slow feedback loops with manufacturing partners that extend production time (41%), and friction created by poor cross-functional visibility into projects (37%).

We see additional improvements in the time engineers spend on vendor sourcing, management, quote, and order activities every week. There's a notable decrease in the percentage reporting 8 or more hours, with the most significant percentage spending between 4 and 6 hours per week doing these tasks. The hope is that as more technologies take hold, automation will help defray some of the time spent on procurement.

# Barriers to New Product Innovation

What barriers does your organization face with new product innovation? Choose all that apply.

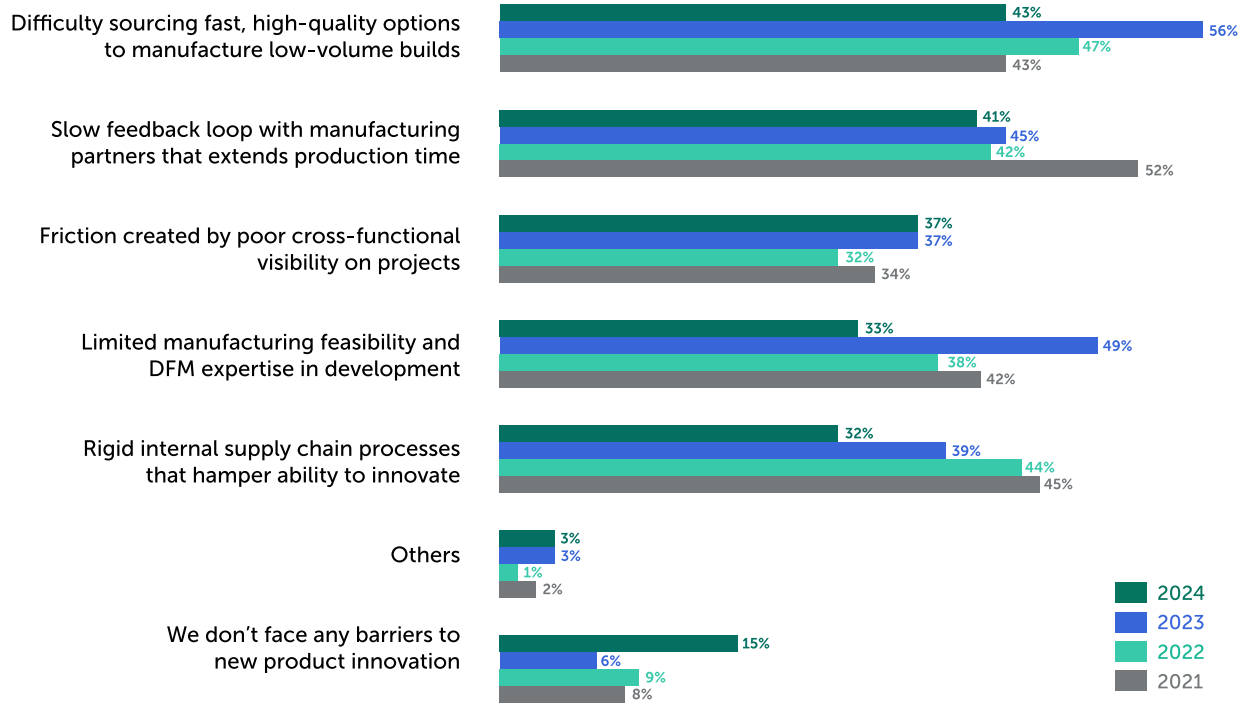


fig. 5

# Engineering Time on Sourcing Activities

How much time would you estimate a typical engineer spends on vendor sourcing, management, quote, and order activities on a weekly basis? (activities include: sourcing, vetting, and onboarding new vendors; requesting quotes & DFM; following up on orders; managing quality) Choose the one answer that most closely applies.

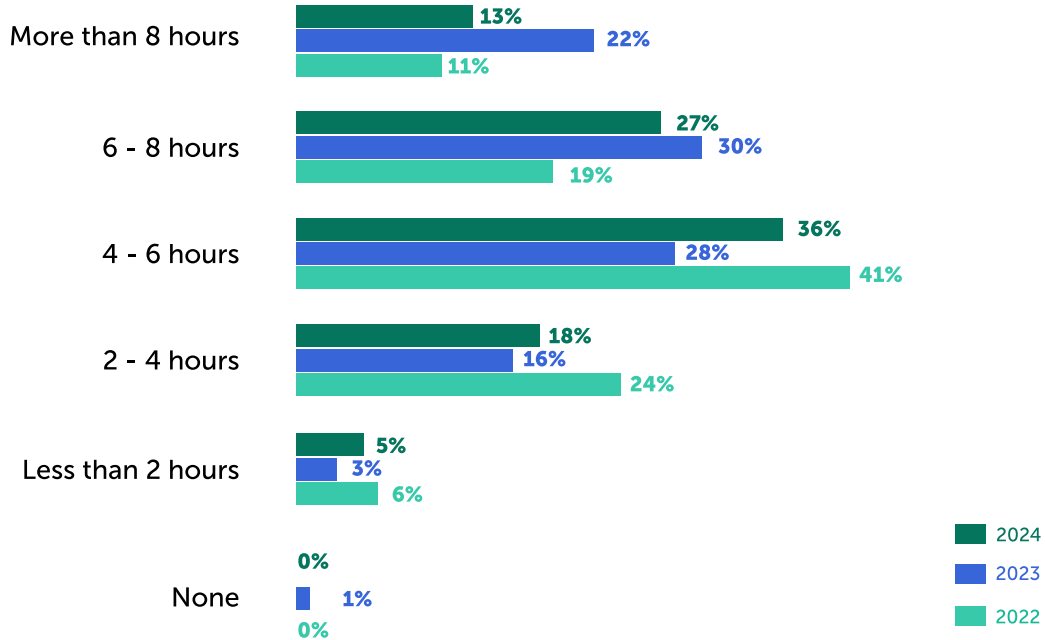


fig. 6

## TECHNOLOGY SOLUTIONS TO DRIVE EFFICIENCY

To solve similar challenges, many manufacturing leaders are turning to on-demand manufacturing (72%) and/or are actively evaluating technology solutions to increase company-wide operational efficiency for new product development (77%). This speaks to the general drive to find more efficiencies overall, as well as the need for lower operational costs associated with manufacturing and supply chain management.

The benefits of using on-demand manufacturing pair well with top business priorities, with most respondents reporting faster development cycles (57%), improved manufacturing quality (49%), and improved transparency and visibility (48%). Another benefit is the ability to shift production to a variety of manufacturing regions around the world. Let's look at how regionalization strategies are evolving this year.

### Use of On-Demand Manufacturing Platforms

What barriers does your organization face with new product innovation?

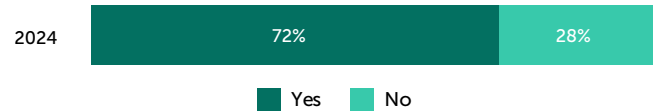


fig. 7

**“These results show that on-demand manufacturing offers greater agility, cost-effectiveness, and responsiveness to market demands.”**

**Uday Shenoy,**  
GM-India, *Fictiv*



# Technology for Efficient Product Development

Is your company evaluating technology solutions to increase company-wide operational efficiency for new product development? Choose the one answer that most closely applies.

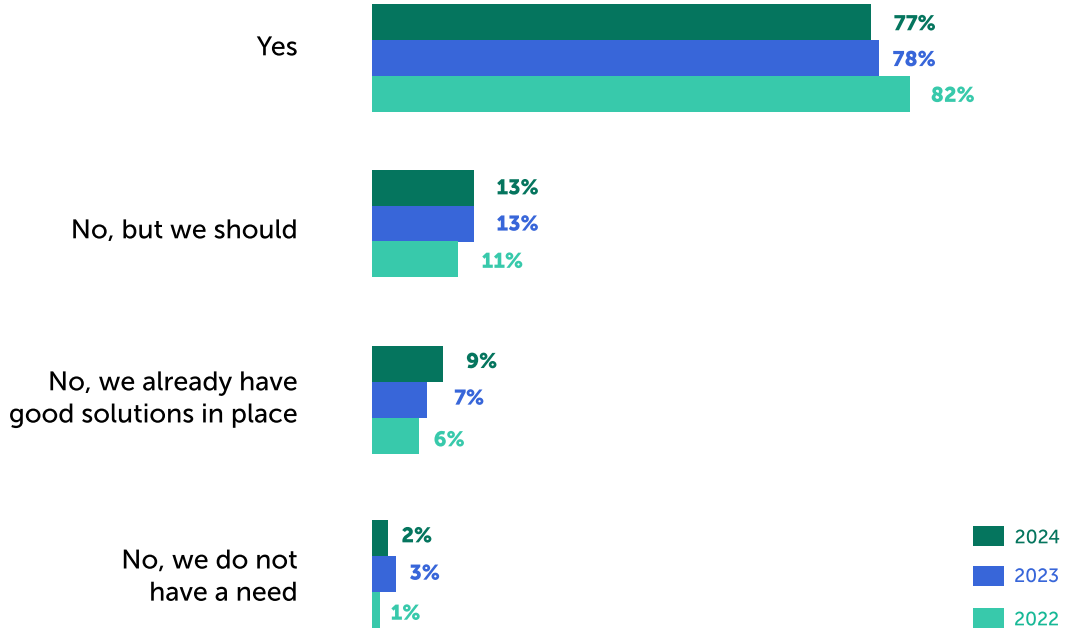


fig. 8

# The Benefits of Using On-Demand Manufacturing Platforms

What benefits has your company experienced by using on-demand manufacturing platforms? Choose all that apply.

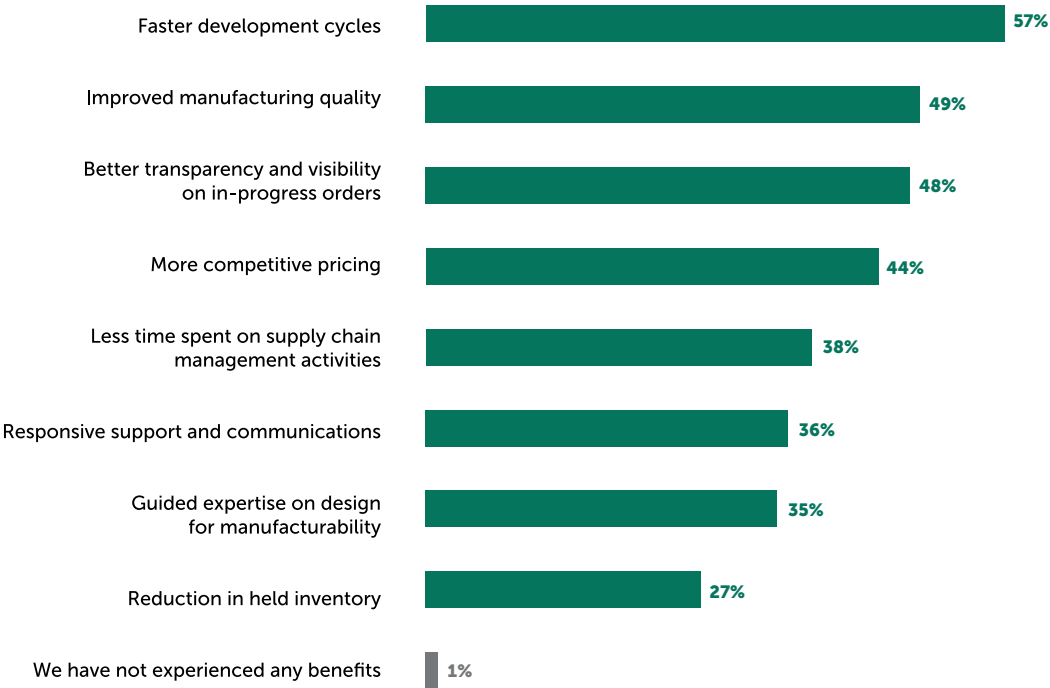


fig. 9

## REGIONALIZATION STRATEGY TO MITIGATE SUPPLY CHAIN RISK

It appears the momentum towards on-shoring caused by recent years' global disruptions, trade policies, and other economic drivers has slowed. While increasing U.S. manufacturing (on-shoring) remains the leading supply chain strategy for the third year (66%), it's fallen substantially since last year. At the same time, North American production (near-shoring) has increased again this year (53%). In this case, near-shoring is defined as U.S., Canada, and Mexico. Diversifying global manufacturing operations (off-shoring) has also gone up slightly since last year.

**"Onshoring is important from a sustainability standpoint, but it's still costly and just isn't within the realm of economic possibility for many companies."**

**Sabrina Paseman,**  
General Partner,  
*Omni Venture Labs*



## Regionalization Strategy

Which of the following statements represents your company's strategy for 2024/2023/2022? Choose all that apply.

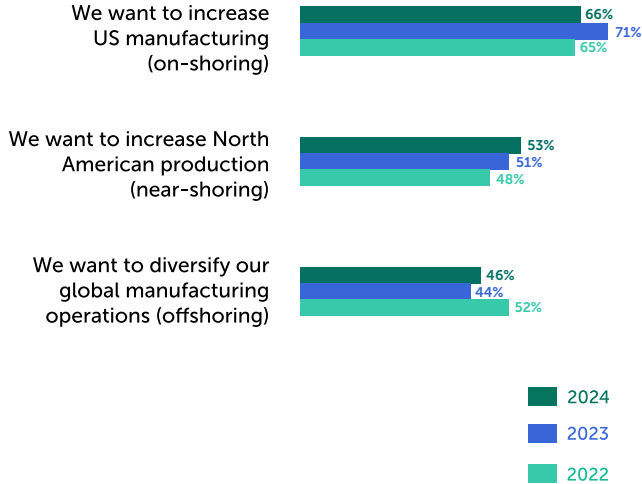


fig. 10

## Regionalization Strategy Geography

Where are you most likely to outsource manufacturing?  
Choose all that apply.

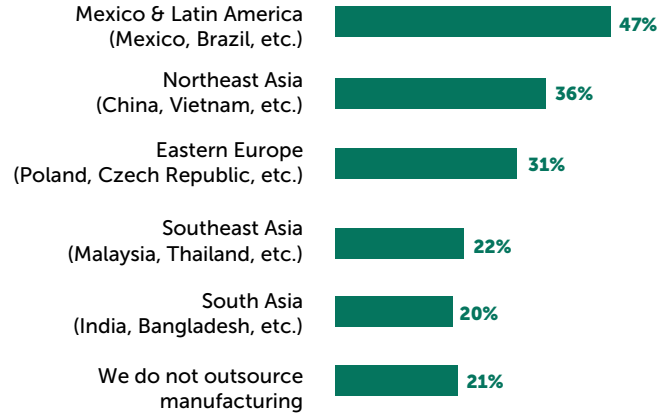


fig. 11



**“We believe companies are trying to make their supply chains more resilient to potential geopolitical volatility, in part by moving more manufacturing to North America.”**

**Valerie Shen,**  
Partner & Chief Operating Officer,  
*G2 Venture Partners*



When asked where they're most likely to outsource, most manufacturing leaders indicate Mexico and Latin America (47%), with additional interest shown in Northeast Asia (36%) and Eastern Europe (31%).

## **LACK OF SUPPLY CHAIN RESOURCES**

Another area of focus for survey respondents is the scarcity of supply chain resources. In fact, 81% identify insufficient budgets, high workforce costs, and labor shortages as hindering effective supply chain management. Coupled with the identified priorities around supply chain visibility, this is a crucial area for continued improvement. And companies are turning to novel solutions to address these shortages.

## Lack of Supply Chain Resources

Lack of resources (workforce, budget, etc.) severely impacts our ability to manage our supply chain effectively

- Strongly agree
- Disagree somewhat
- Agree somewhat
- Strongly disagree

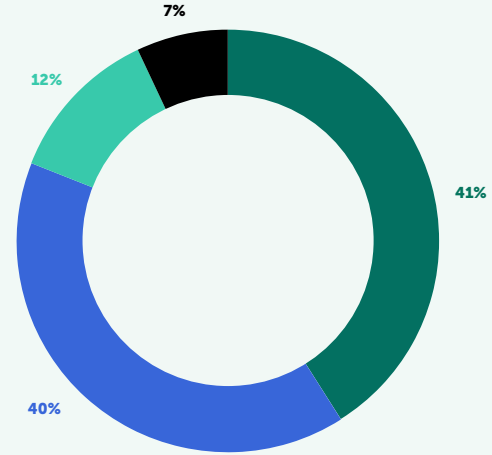


fig. 12



## Supply Chain Key Takeaway:

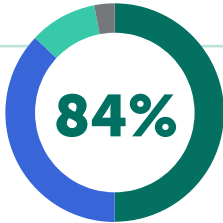
The top business priority is improving manufacturing and supply chain visibility, followed by resilience and agility.

# 03

## EXCITEMENT OVER AI CONTINUES, WITH IMPLEMENTATION NOW PRIMARY FOCUS

Last year, excitement about AI and other technologies drove some notable developments, including implementing and applying AI to manufacturing and supply chain operations.

Building on last year's excitement around new technologies and spurred by continued challenges with labor costs and shortages, improving supply chain operations has become the leading focus of AI implementations for most of the industry. This makes sense given that 84% of leaders say implementations of AI are currently providing value, although they're split on the degree of value provided.



leaders say implementations of AI are currently providing value.

*State of Manufacturing Report 2024, Fictiv.*



**“We have historically believed that manufacturing is an old-school industry that is harder for new technology to break into. Despite this, data in this year’s State of Manufacturing Report indicates manufacturing leaders are broadly recognizing the importance of AI.”**

**Valerie Shen,**  
Partner & Chief Operating Officer,  
*G2 Venture Partners*



# Importance of AI in Manufacturing

'Implementing AI (Artificial Intelligence) into manufacturing is vital to my company's future success

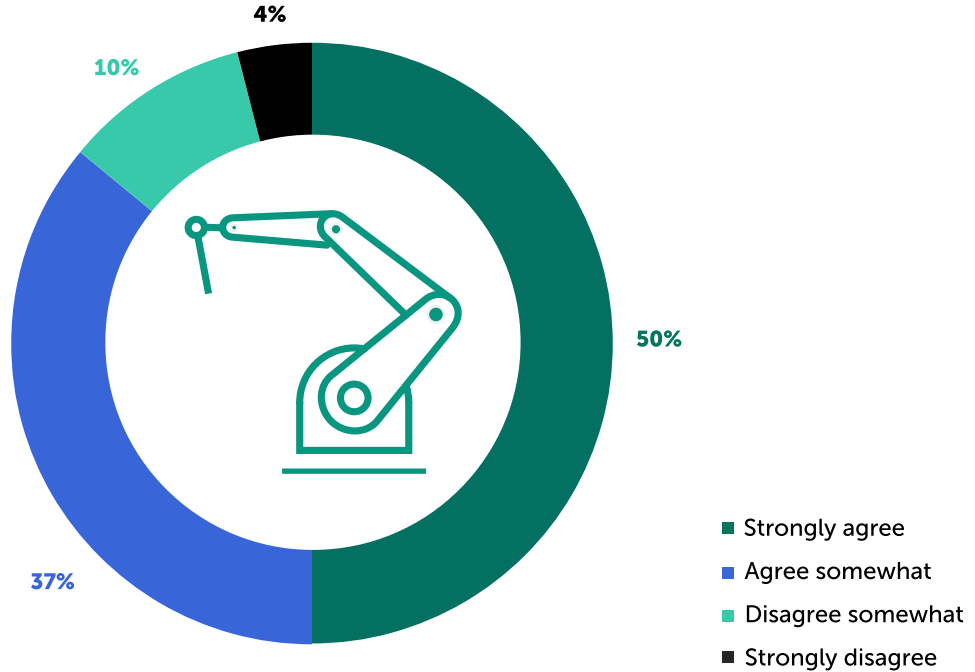


fig. 13

## VALUE OF AI TO SUPPLY CHAIN AND MANUFACTURING OPERATIONS

When rating the value they receive from the use of AI in manufacturing and supply chain operations, 43% state the value is “high” while 41% report it’s “marginal.” In 2024, it’s clear that expectations for AI have become implementations that are already generating some value.

Another benefit is the ability to shift production to a variety of manufacturing regions around the world. Let’s look at how regionalization strategies are evolving this year.

## IMPLEMENTING AI IN 2024

87% report that “implementing AI into manufacturing is vital to my company’s future success.” And AI is the second most cited impact on companies’ 2024 strategies (45%). Supply chain management, product design, and quality control and inspections top the list of implementations.

### The Value of AI In Manufacturing and Supply Chain Operations

How would you rate the value your company currently receives from its use of AI for manufacturing and supply chain operations?

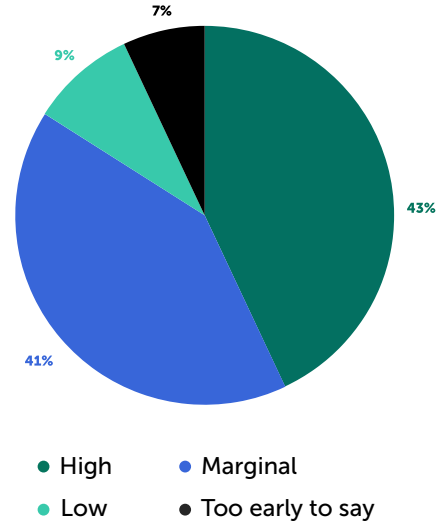


fig. 14

## 2023 Expectations

In your opinion, which of the following product development and manufacturing functions will be MOST impacted by advances in Artificial Intelligence (AI)? Choose up to three of the following.

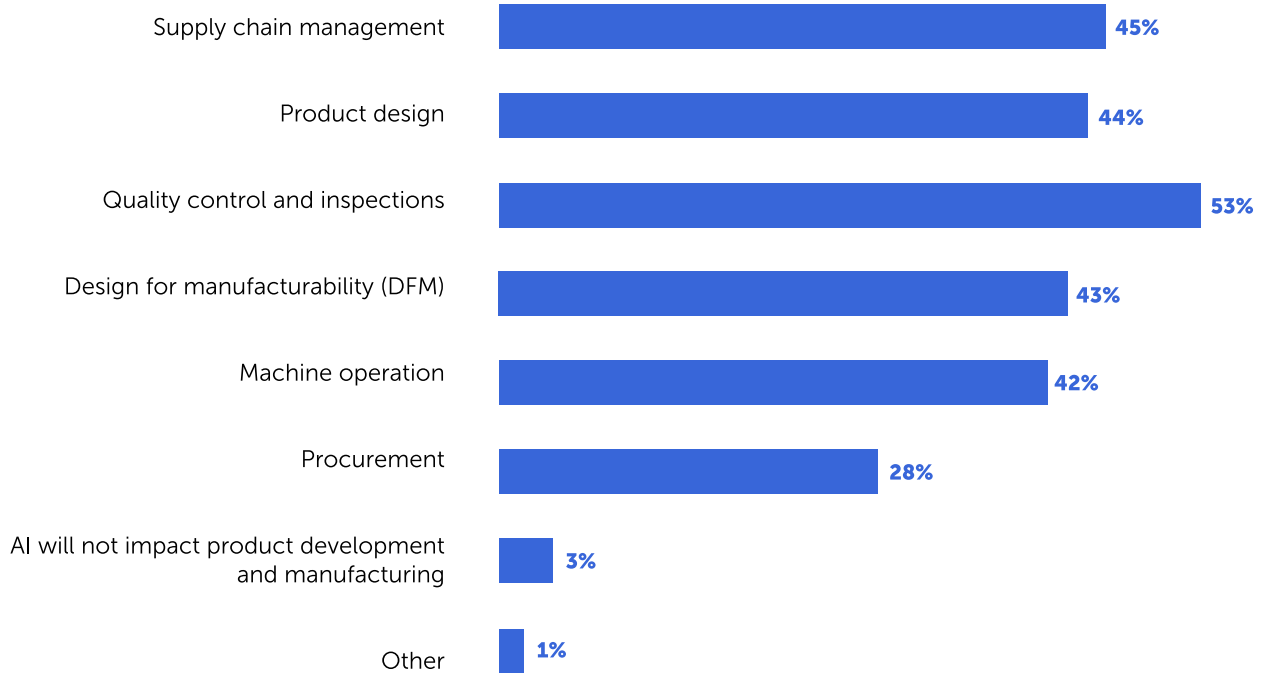


fig. 15

## 2024 Implementation

In what areas of manufacturing and supply chain operations is your company using AI (Artificial Intelligence) capabilities? Choose all that apply.

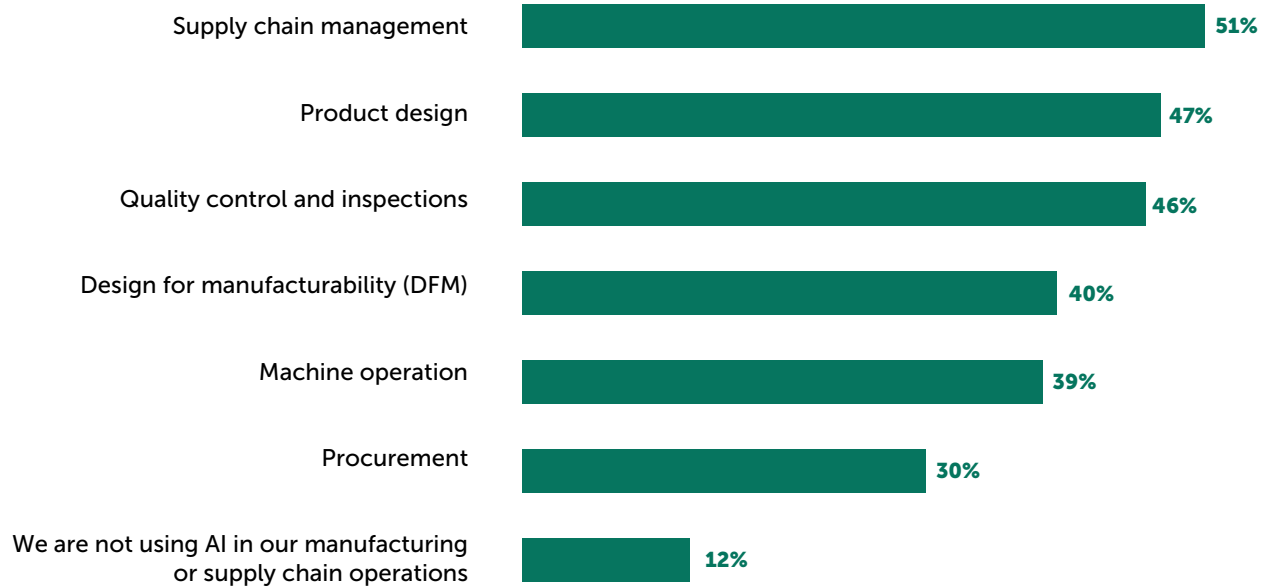
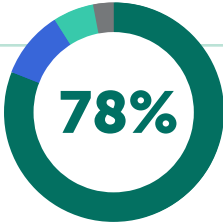


fig. 16

# AI AND HIRING

Part of the ongoing excitement for AI relates to finding a solution to persistent labor shortages. In fact, the majority of companies report AI is already enabling hiring reductions, with 78% reporting that AI will help them reduce planned hiring and/or will impact hiring in the next two years. Perhaps this is why, despite the continued excitement (61% vs 65% in 2023), we're also seeing a slight uptick in respondents indicating worry about the impact of AI in their functional areas (12% vs. 9%).



say AI is impacting their hiring strategy

*State of Manufacturing Report 2024, Fictiv.*

## Sentiment Towards AI

What is your personal opinion about the long-term impact of AI in your functional area of the business?

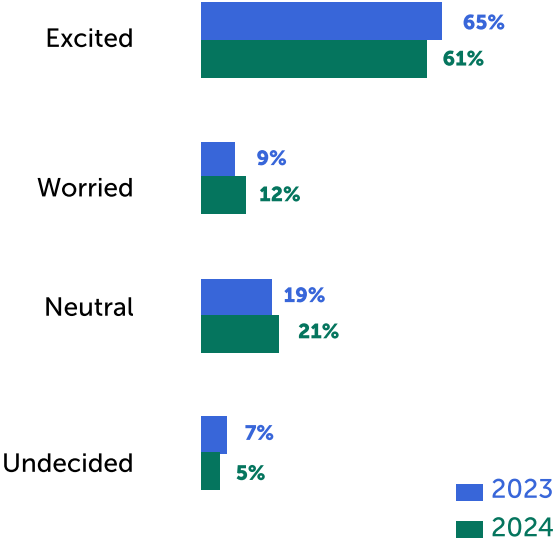


fig. 17



**“The value of AI is the ability to take on rote, mechanical tasks that happen in manufacturing and supply chain management, and refocusing individuals on doing higher-level, more productive, creative work.”**

**Dave Evans,**  
CEO, *Fictiv*



### **AI Key Takeaway:**

Leaders continue to be excited by AI but have moved toward implementation- especially in supply chain operations.

# 04

## SUSTAINABILITY COMMITMENTS HOLD

Given the continued economic and workforce concerns highlighted since last year's [Sustainability in Manufacturing Report](#), it's notable that prioritizing investments in sustainable manufacturing remains steady for a second year for 42% of respondents (fig. 4, Supply Chain Risk Management.)

Smaller companies still trail their larger peers, and there's a continued rounding-out of the stated importance of sustainable manufacturing since 2021, with fewer reports of it increasing to the highest levels of corporate history and a significant increase in those who report no change in importance.

Compared to last year, this year's responses indicate a better consensus among executive leadership as functional leaders tackle the realities of championing sustainability in a challenging economic environment.

The tension between sustainability aspirations and the reality of the true costs is a factor that has huge implications for the ability of companies to achieve their sustainability goals.



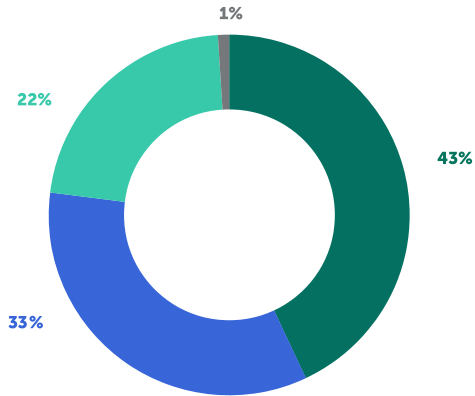
**“From a carbon reduction standpoint, on-shoring or near-shoring makes sense. From a cost perspective, it might be more economical to manufacture in China or Mexico. That’s what most supply chain leaders are confronting - the tension between sustainability and cost.”**

**Nate Evans,**  
CXO & Co-Founder, *Fictiv*

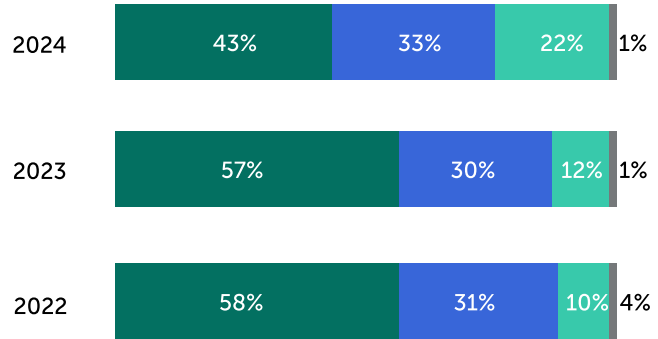


# Importance of Sustainable Manufacturing

How is the importance of sustainable manufacturing changing at your company in 2024/2023/2021?  
Choose the one answer that most closely applies.



- Increasing to highest level in our corporate history!
- Increasing, but it's been more important before
- No change
- Decreasing



- Increasing to highest level in our corporate history!
- Increasing, but it's been more important before
- No change
- Decreasing

fig. 18

# ACTIONS TO ACHIEVE SUSTAINABILITY GOALS

Whereas last year’s survey focused on challenges, we wanted to learn more about how companies are tackling their sustainability goals this year. Although only 34% have set a net-zero or carbon reduction goal, embedding sustainability in company values (53%) and developing a formal plan (52%) are critical to progress. In contrast to the 31% who reported having “no practical plan” last year, 45% of this year’s respondents have developed or adopted standardizing reporting models.

**“It’s clear that companies are setting sustainability goals and taking action, and the vast majority feel sustainable manufacturing is increasing in importance”**

**Valerie Shen,**  
Partner & Chief Operating Officer,  
G2 Venture Partners



State of Manufacturing Report 2024, Fictiv.

## Actions to Achieve Sustainability Goals

Which of the following actions has your company taken to achieve your sustainability goals? Choose all that apply.

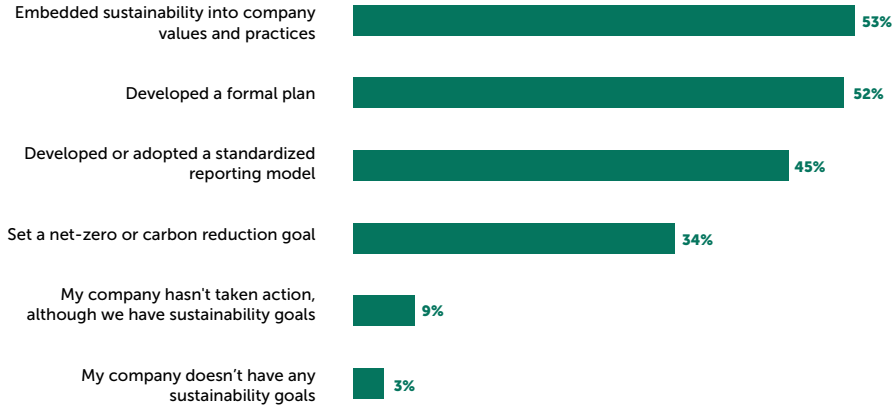


fig. 19



### Sustainability Key Takeaway:

Results show continued prioritization of sustainability goals and programs.

## LOOKING AHEAD

Supply chain and manufacturing leaders face persistent challenges and economic uncertainty, which is exacerbated by election year considerations. Yet there are reasons to be optimistic, including the increased availability of technology solutions like on-demand manufacturing and AI.

Gaining visibility, resiliency, and agility and embracing new technologies to solve manufacturing and supply chain challenges is critical to success.

The convergence of these innovative trends heralds a transformative era in manufacturing. Adaptability and continual innovation will give businesses a significant competitive advantage in 2024 and beyond.



**“To meet their increasingly aggressive revenue and cost targets, supply chain teams need to be agile, find operational efficiencies, and utilize technology to surface opportunities for savings in 2024 and beyond. It’s clear we’re at an inflection point where those embracing change will win!”**

**Dave Evans,**  
CEO, *Fictiv*



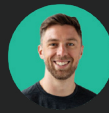
## MEET THE EXPERTS

Every year, we ask experts to offer insights and analysis of the State of Manufacturing findings. This year we were assisted by the following:



**Valerie Shen**

Partner & COO,  
G2 Venture Partners



**Dave Evans**

CEO & Co-Founder,  
Fictiv



**Sabrina Paseman**

General Partner,  
Omni Venture Labs



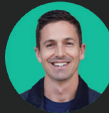
**Nate Evans**

CXO & Co-Founder,  
Fictiv



**Uday Shenoy**

GM-India,  
Fictiv



**Andy Sherman**

GM-U.S.  
Fictiv

## SURVEY METHODOLOGY

This is Fictiv's ninth annual report conducted with Dimensional Research. The report surveyed 178 Director-level decision-makers who work in engineering, supply chain, R&D, and digital innovation roles for companies that produce consumer electronics, medical devices, automotive, industrial and robotics, aerospace, or energy.

For more trends and updates on the manufacturing industry, download the full 2024 State of Manufacturing report [here](#).

## ABOUT

### Fictiv

Fictiv is a global manufacturing company that simplifies sourcing for custom manufacturing, from prototype to low-volume production. Through its highly-vetted manufacturing network, AI-powered technology platform, and global operations centers across the USA, Mexico, India, and China, Fictiv delivers fast, high-quality custom manufacturing services from quote to delivery. Fictiv's capabilities span the full mechanical bill of materials, including Injection Molding, Compression Molding, 3D Printing, CNC Machining, Urethane Casting, Die Casting, and Sheet Metal. To date, Fictiv has delivered more than 30 million commercial and prototype parts for early-stage companies and large enterprises alike, helping them innovate faster, free up precious resources, and drive profitable growth.

## Dimensional Research

Dimensional Research® provides practical market research to help companies make smarter business decisions by delivering actionable information to reduce risks, increase customer satisfaction, and support growth. Whether launching a new product into the marketplace or desiring fresh insights from buyers, our research services help companies gain a clear understanding of customer and market dynamics.

## G2 Venture Partners

G2 Venture Partners is a venture and growth firm investing in transformative technology companies, like Fictiv, at their inflection points building a sustainable future. We support entrepreneurs who are unlocking new paths to environmentally and socially responsible economic growth.

## Omni Venture Labs

Omni Venture Labs is a “first check” DeepTech VC. Led by former Apple product and manufacturing experts, our mission is to invest at the frontier of Sustainable Industrials + AI, Robotics, and Automation.

**2024**  
**STATE OF**  
**MANUFACTURING**

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