

# Supply chain shock absorbers

When processes work,  
Supply Chain teams  
can always deliver



# Contents

|  |           |
|--|-----------|
| <b>A process improvement conundrum</b>                 | <b>03</b> |
| <b>Section one:</b>                                    | <b>04</b> |
| <b>Unpredictability is now the norm</b>                |           |
| Supply chain disruption ebbs and flows                 | 05        |
| Rising costs prove the greatest challenge              | 07        |
| ESG goals at risk of deprioritization                  | 08        |
| <b>Section two:</b>                                    | <b>09</b> |
| <b>Innovation is underway</b>                          |           |
| How leaders are mitigating supply chain disruption     | 10        |
| Supply Chain leads on process mining adoption          | 11        |
| How AI is used in supply chain operations              | 12        |
| <b>Section three:</b>                                  | <b>15</b> |
| <b>Accelerating process progress</b>                   |           |
| Teams must shift from a reactive to proactive approach | 16        |
| Consolidation or connection? Improving the tech stack  | 18        |
| <b>What's next?</b>                                    |           |
| <b>Three Supply Chain takeaways</b>                    | <b>19</b> |
| <b>Survey sample</b>                                   | <b>21</b> |

# A process improvement conundrum



The five editions of the 2025 Process Optimization Report

Supply Chain leaders find themselves in a catch-22 situation, according to recent research.

The vast majority understand that improving their processes will help them manage the ongoing change that characterizes modern supply chains. **A resounding 83% say the quality of their processes can help them mitigate the impact of supply chain disruptions – effectively working as supply chain shock absorbers.**

But at the same time, many say they're too busy reacting to those disruptions to really focus on process improvement. Too much time spent in "firefighting mode" is cited as the most significant factor preventing Supply Chain leaders from fully understanding – and therefore improving – their business processes.

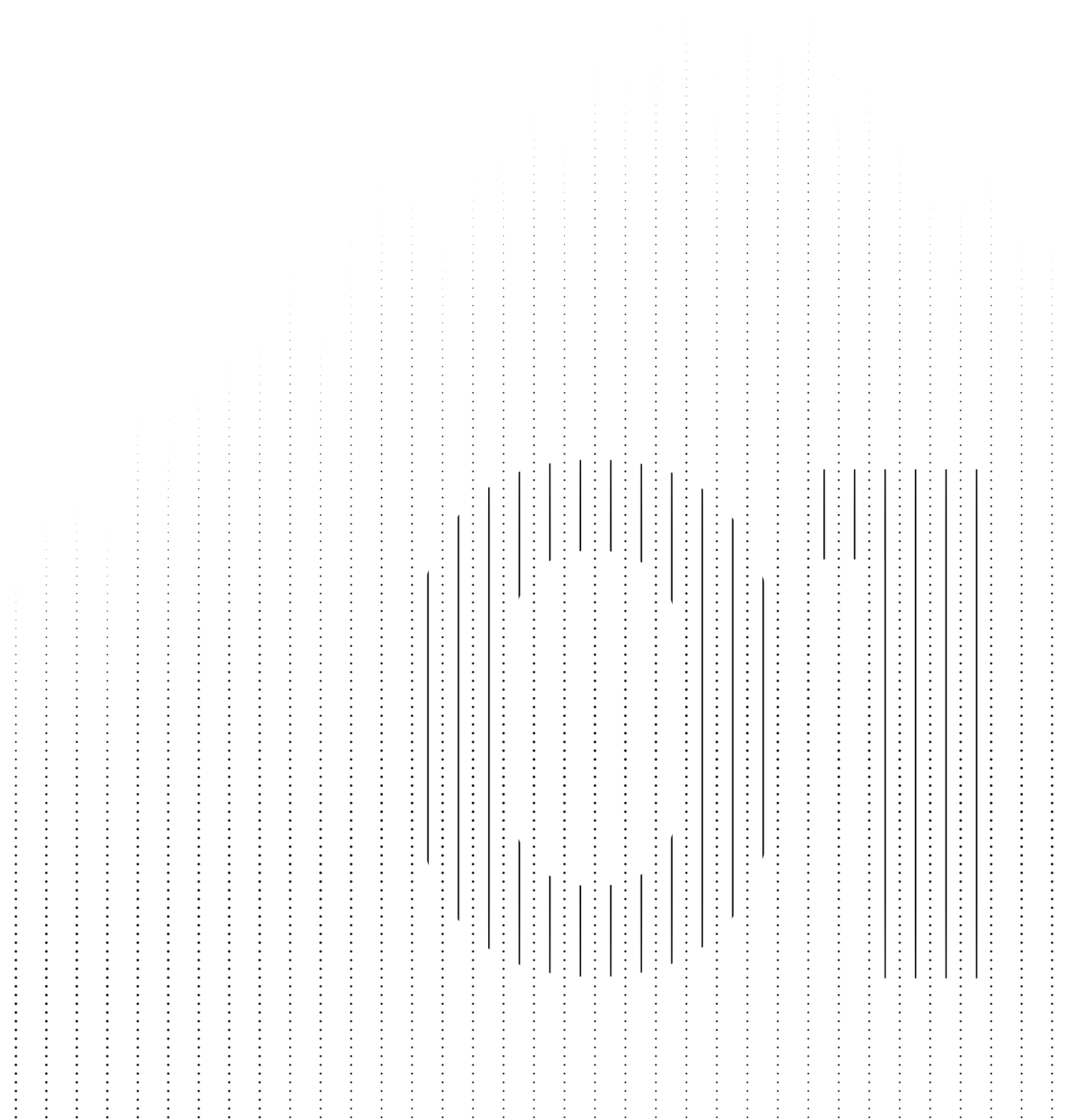
So how are they breaking out of this no-win cycle? We surveyed 401 Supply Chain leaders from Australia, Austria, France, Germany, Japan, South Korea, Spain, Switzerland, the UK, and the US to find out.

This report takes a closer look at the challenges Supply Chain departments face today – from high costs to geopolitical volatility, and many other factors in between. It examines the actions they're taking to improve their processes so they can overcome these challenges, including the use of advanced tools like process mining and the adoption of AI. And it explores how process progress can be accelerated to help manage perpetual complexity and change, ultimately allowing Supply Chain leaders to contain costs, optimize working capital, and improve service levels.

What you're reading is part of a series of reports from a larger study of 1,620 business leaders, which also included respondents working in Finance, IT, and Process and Operations. Throughout the report, we'll draw comparisons with these other functions where it's relevant to do so.

**Let's get started.**

**Unpredictability  
is now the norm**



# Supply chain disruption ebbs and flows

One thing you can be sure of in the supply chain?  
There's nothing to be sure of.

There've been endless discussions around the pressures on supply chains since 2020. In reality, unpredictability has simply become the norm, whether due to weather events, trade tensions, geopolitical situations, or a variety of other disruptors.

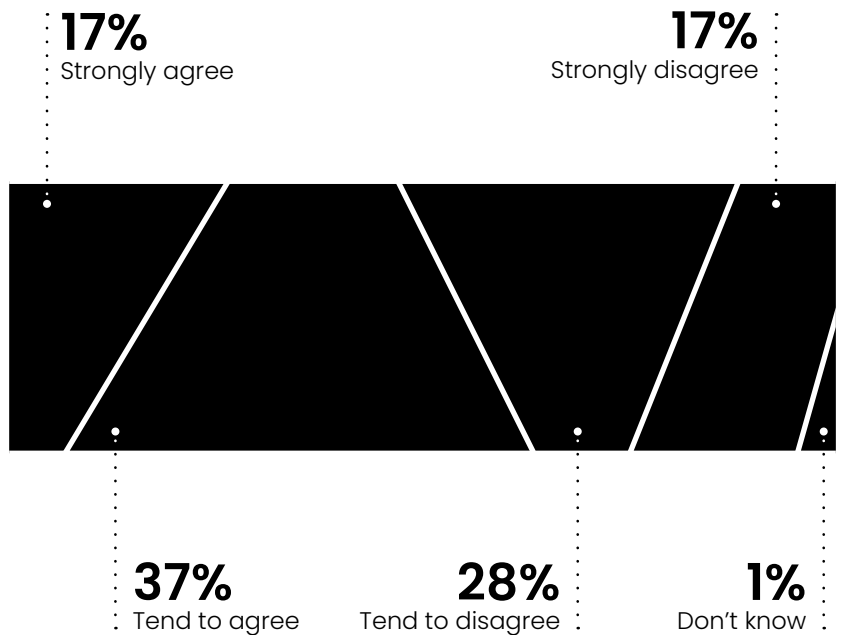
At time of writing, the Global Supply Chain Pressure Index (**GSCPI**) is actually close to average. But there have been continual spikes and valleys in pressure since it began – so that status can change anytime. While 2020-2021 was the biggest spike, there was a significant dip in May 2024 and pressure has been climbing since.

The common rhetoric is that supply chain disruptions are now a day-to-day occurrence. But we wanted to know if Supply Chain leaders agree, so we asked them whether that's really what they're seeing.

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## Supply chain disruptions are a day-to-day occurrence

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Interestingly, only a little over half (54%) of Supply Chain leaders agree with that statement. There are passionate opinions at either end of the scale, with 17% strongly agreeing and another 17% strongly disagreeing that supply chain disruptions now happen every day. This indicates disruption may be experienced differently by teams in different organizations and industries.


There are also some regional variations in how Supply Chain leaders perceive the frequency of supply chain disruptions:

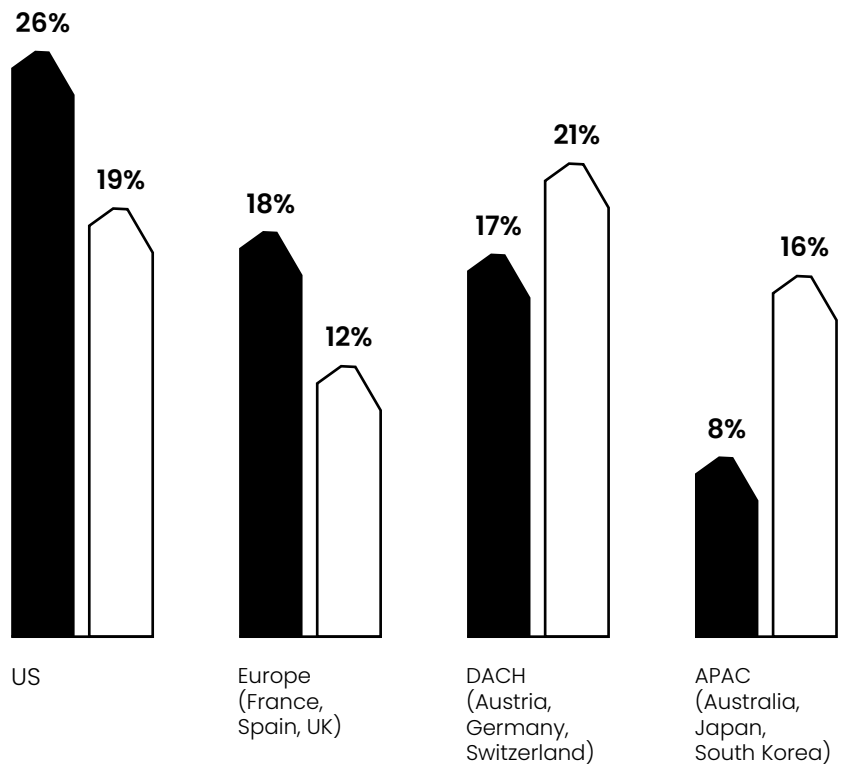
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## Regional differences in perception of disruption

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 **Strongly agree**  
that supply chain  
disruptions are  
a daily occurrence

 **Strongly disagree**  
that supply chain  
disruptions are  
a daily occurrence

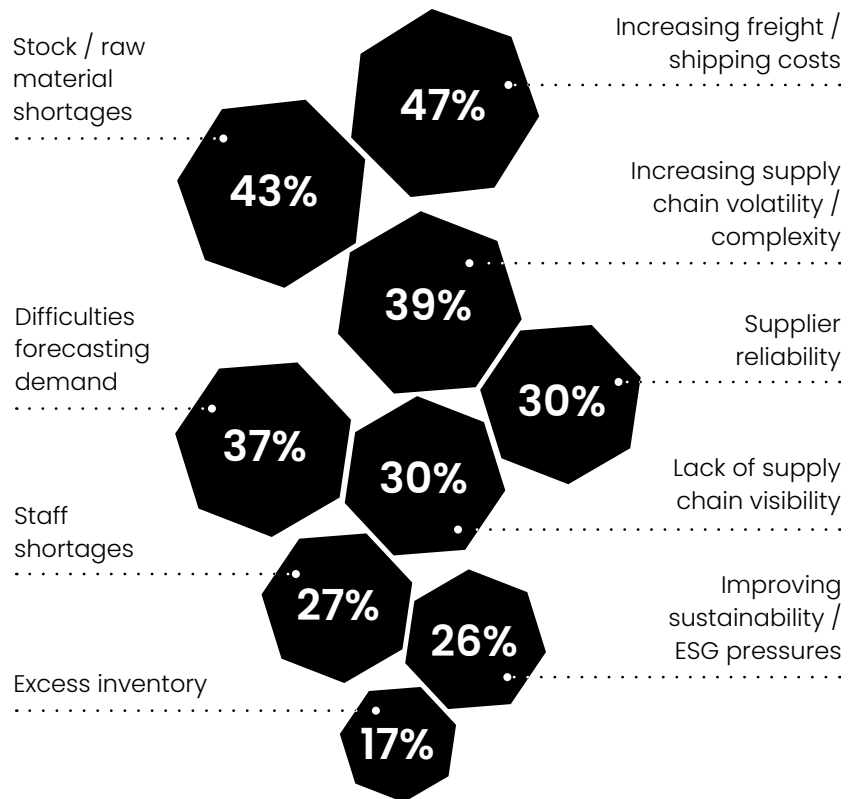


# Rising costs prove the greatest challenge

To understand more about the pressures Supply Chain leaders are under, we asked them to identify their three biggest challenges.

## The biggest challenges

● Percentage that included the challenge in their top three



Rising freight and shipping costs come out as the top challenge. This is perhaps not surprising as, during the period this survey was conducted, the global freight rate hit the highest value on record, at over **\$5,900**.

Shortages of stock and raw materials, increasing supply chain volatility and complexity, and difficulties forecasting demand were also cited as top-three challenges by more than a third of Supply Chain leaders. Factors like excess inventory and staff shortages that were well-documented challenges during and after the COVID-19 pandemic have reduced in severity, according to the survey.

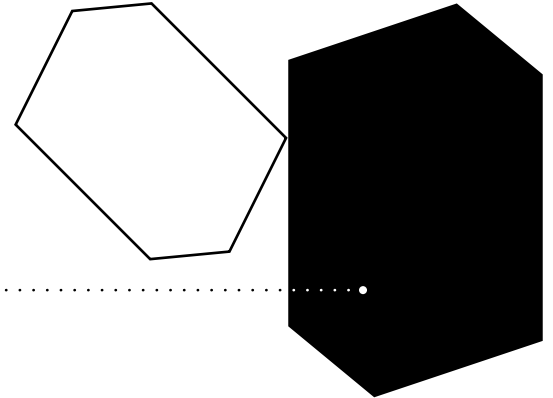
## ESG goals at risk of deprioritization

Environmental, Social, and Governance (ESG) pressures come relatively far down the list of challenges, indicating they aren't currently a high-priority area, or seen as a major challenge. This trend is evident across the whole survey sample, even though respondents work in a wide variety of regions and regulatory environments.

Two-thirds (66%) of Supply Chain leaders say they aren't making progress towards net zero as quickly as expected. And 64% say ESG actions tend to be deprioritized when they're dealing with supply chain disruption. This is a prime example of being unable to drive positive progress towards important initiatives due to perpetually being in firefighting mode.

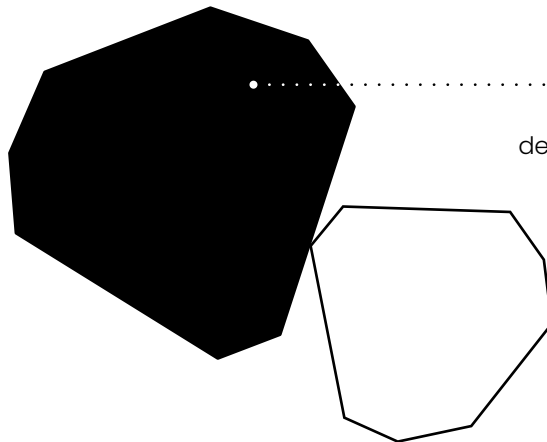
**66%**

say progress towards net zero is slower than expected



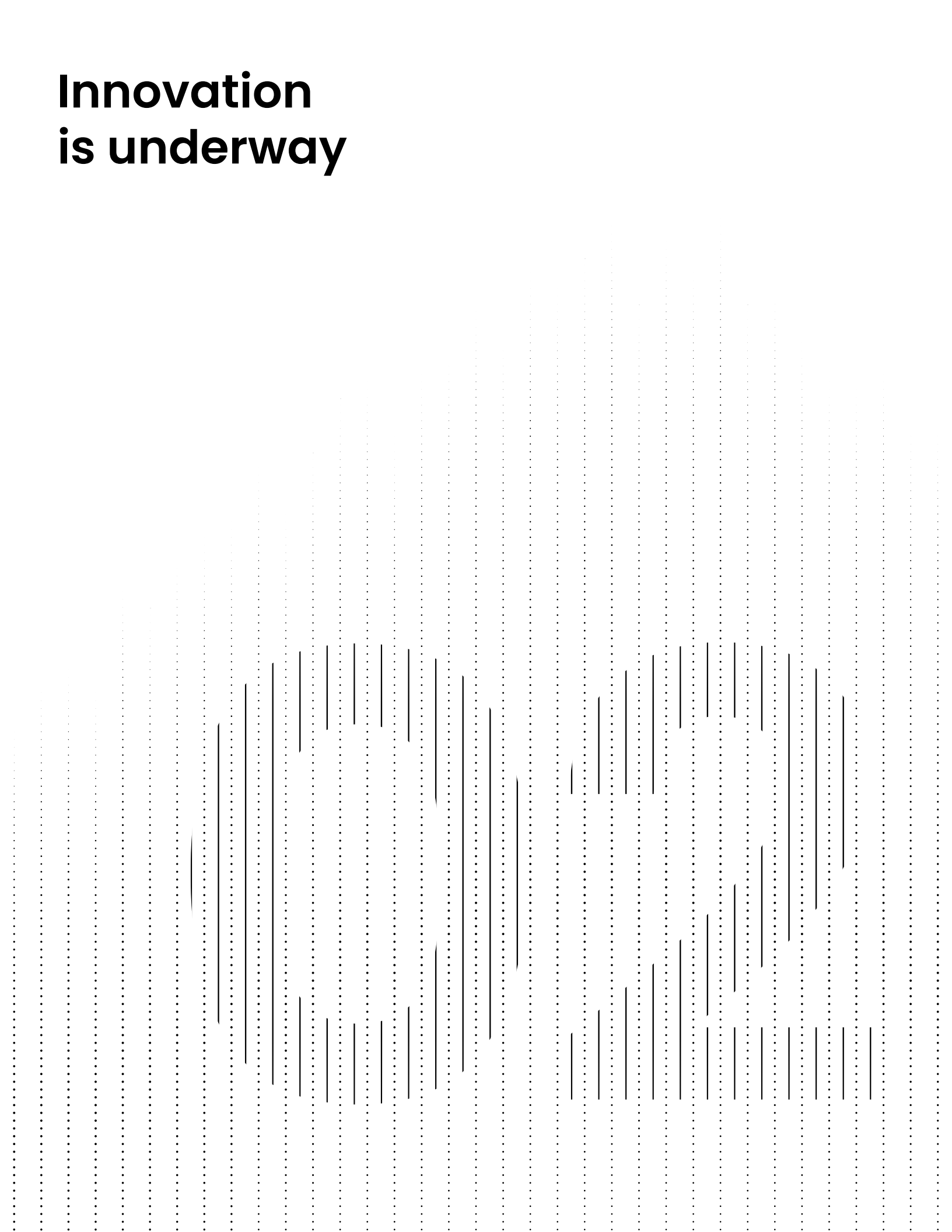
**64%**

say ESG goals get deprioritized during supply chain disruptions





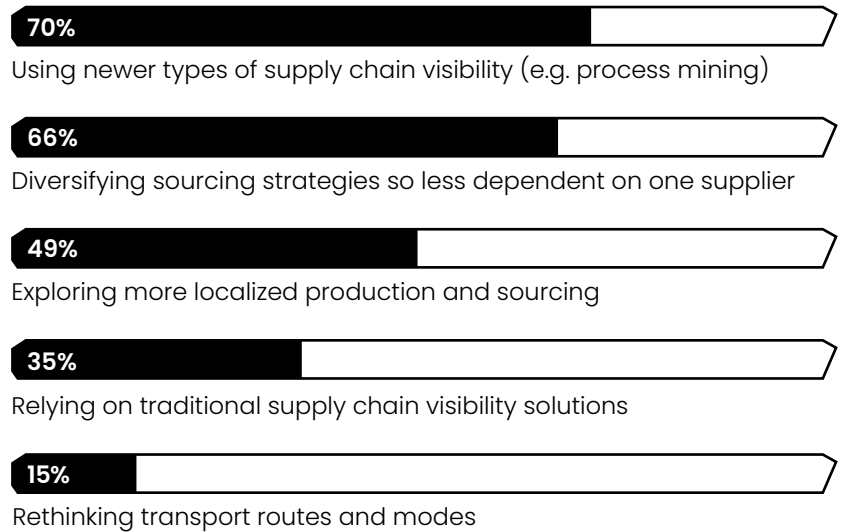
**Innovation  
is underway**



# How leaders are mitigating supply chain disruption

In this changeable environment, **88% of Supply Chain leaders say it's more important than ever to focus on what can be controlled to mitigate risk.** So we asked what actions organizations are taking to mitigate supply chain disruptions caused by geopolitical issues, such as ongoing conflicts and the current shipping crisis in the Red Sea.

## Action being taken to mitigate geopolitical disruption



Increasing supply chain visibility is a popular way to mitigate disruptions, which isn't surprising as it's hard to solve a problem you can't see. A promising 70% say they're using newer types of supply chain visibility solutions like process mining, while far fewer (35%) are using more traditional approaches like shipment visibility and control towers.

Very few say they are rethinking transport routes and modes, which is surprising as there is a prevailing sense that Supply Chain teams are continually trying to optimize in these areas.

However, two-thirds are diversifying sourcing strategies so they are less dependent on specific suppliers, and almost half are exploring more localized production and sourcing. These actions are likely to increase the complexity of supply chains.

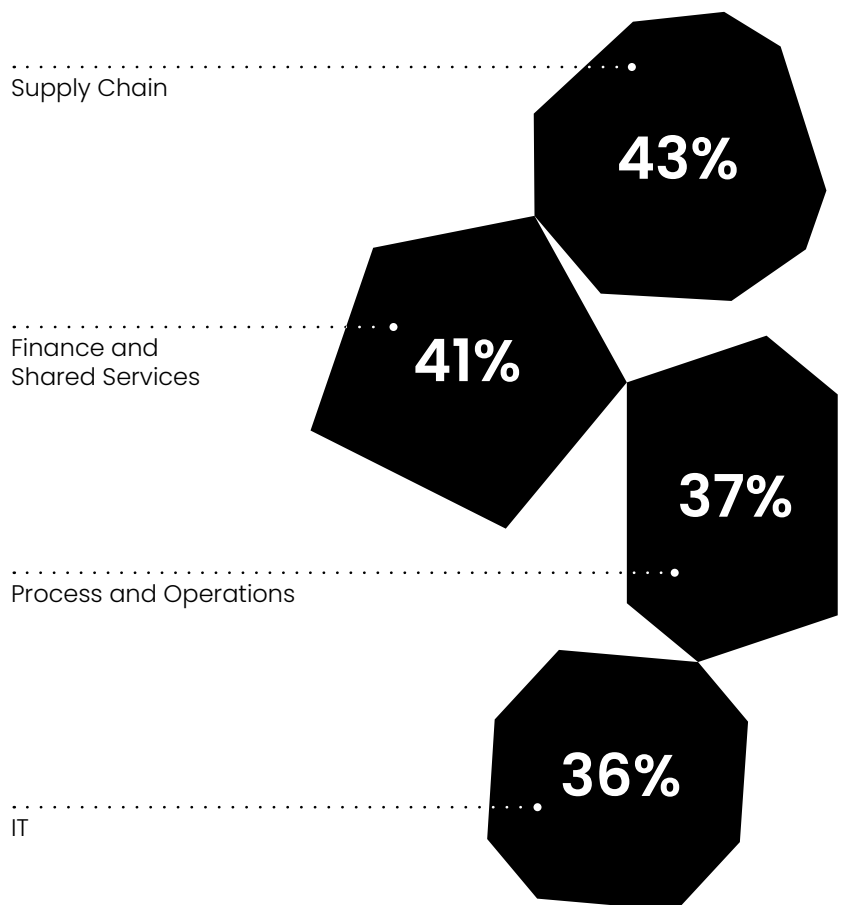
## Supply Chain leads on process mining adoption

Given the rising popularity of newer types of supply chain visibility solutions, we explored how Supply Chain teams' use of process mining compares with IT, Process and Operations, and Finance and Shared Services departments.

For those unfamiliar with the technology, **process mining** uses real-time data from business systems to visualize, analyze, and optimize business processes. It reveals why processes aren't working the way they were designed to, and provides the information needed to improve them.

**Of all the functions we surveyed, process mining adoption is currently highest in Supply Chain, indicating this department is leading the way in process optimization.** Some 43% are already using process mining, and a further 49% plan to use it in the next 12 months.

### Process mining use by function



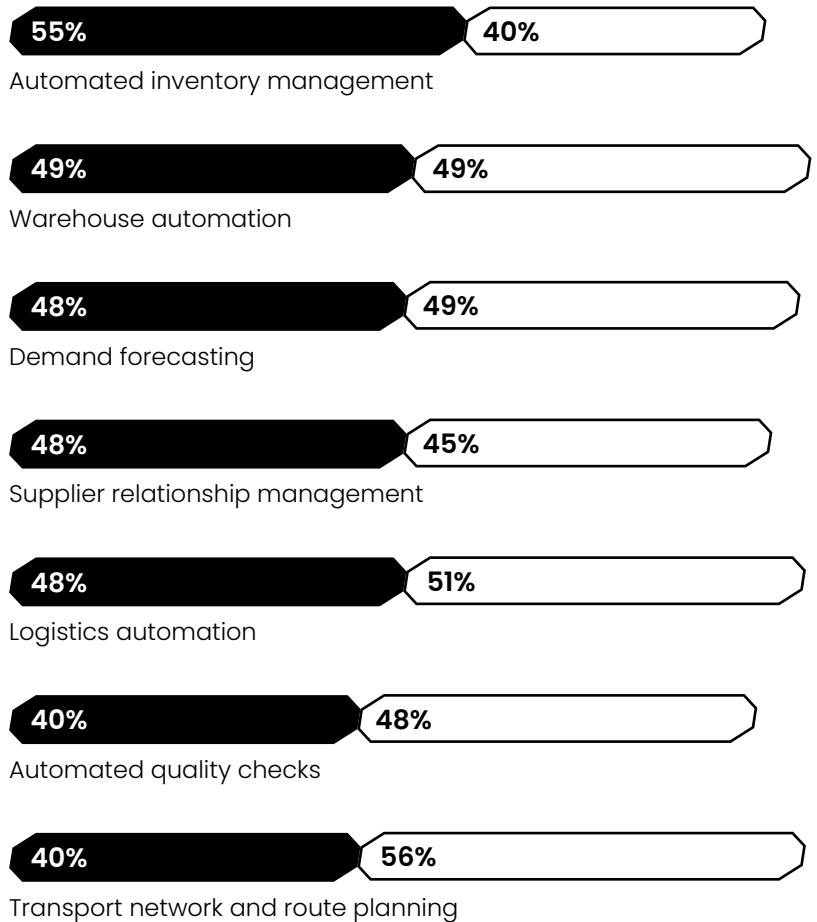
# How AI is used in supply chain operations

Not only are Supply Chain leaders ahead of the game in process mining, they're also using AI to improve processes. In fact, a convincing 81% say they expect AI to be used to directly improve their business processes in the coming year.

We asked how else their department is currently deploying AI, as well as how they plan to use it in the next 12 months.

## How AI is used by Supply Chain teams

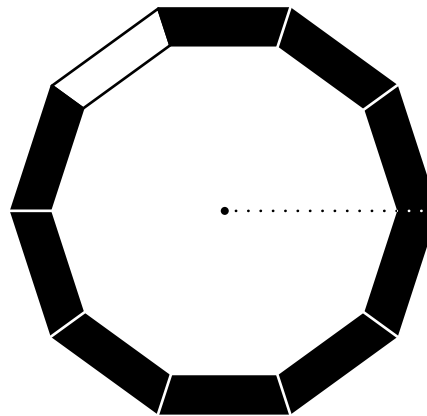
● Already in motion      ○ Planned for next 12 months



The results indicate AI is already firmly embedded into supply chains, with close to half of respondents already using it for the majority of use cases listed.

Automated inventory management is the most popular use case, with demand forecasting and logistics automation not far behind. Even in areas where adoption is currently slightly lower, like transport network and route planning, expectations are high for introducing AI in the coming months.

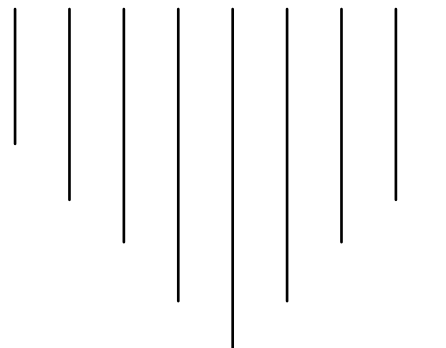
All these uses of AI are more effective when the technology fully understands how supply chain processes work – that is, when it runs on process insight. Supply Chain leaders recognize the importance of process insight, with 91% saying it's crucial that AI has the context of how their business runs – including how they calculate KPIs, what their policies and procedures are, and how their organization is structured – if it's going to be effectively deployed.



**91%**

say AI needs the context of how their business runs to be effectively deployed

The bond between processes and effective AI is undeniable – check out how the two play off each other.



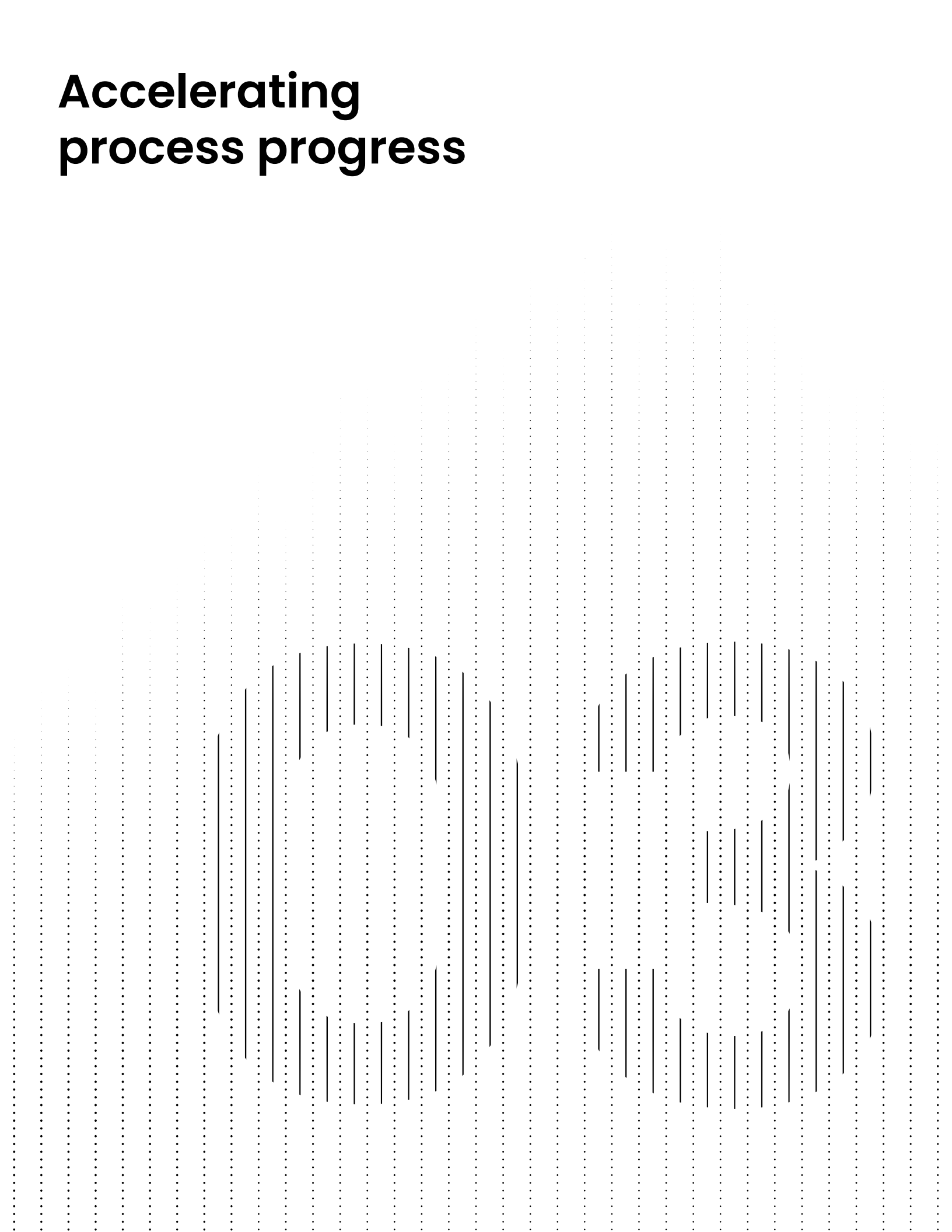
## **What's the deal with AI and processes?**

Celonis Process Intelligence (PI) gives AI the context it needs to be relevant and effective for your business. There's no enterprise AI without PI.

How does it work? After PI creates a digital twin of a business's end-to-end processes, it then uses AI algorithms to show teams where value opportunities lie and how to capture them.

At the same time, PI provides AI agents, co-pilots, and assistants with the contextual data they need to understand how processes run and interact, like KPI definitions or a business rule that says all excess inventory purchases have to be escalated for approval. All that means PI provides the relevant insights that are essential to effectively automate processes with AI agents.

# Accelerating process progress



## Teams must shift from a reactive to proactive approach

Supply Chain leaders appreciate the necessity of process optimization to improve business performance. A sizable 84% say they urgently need to better understand how their business processes actually work so they can find opportunities for value creation, and 93% believe there's untapped value in their departmental processes.

**84%**

say they urgently need to improve process understanding to create value

**93%**

believe there's hidden value in their processes



So what's holding Supply Chain leaders back from gaining this process understanding?

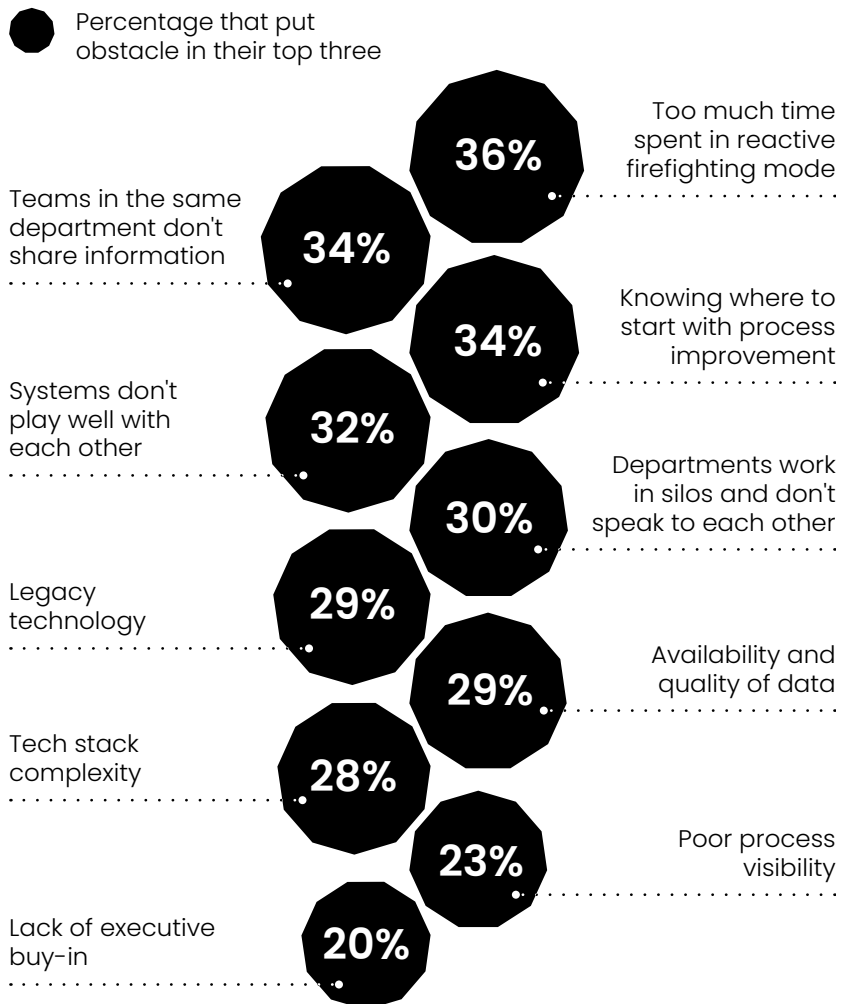
We asked them to identify the three biggest things that get in the way of being able to fully comprehend their business processes. **The top answer is that they spend too much time in reactive firefighting mode.**

This reveals teams need to move from a reactive approach, where they're constantly responding to every disruption, issue, or crisis, to a more proactive, process-led approach. A process-led approach uses process analysis, management, and monitoring to optimize how things are done within and across the supply chain, so enterprises can both solve existing problems more easily and prevent new issues from cropping up.

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## ● Obstacles to process understanding

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## Consolidation or connection? Improving the tech stack

At least 30% of Supply Chain leaders include teams not sharing information, systems not playing well together, and departments working in silos in their top three obstacles to process understanding. **These responses indicate a general disconnect within organizations.**

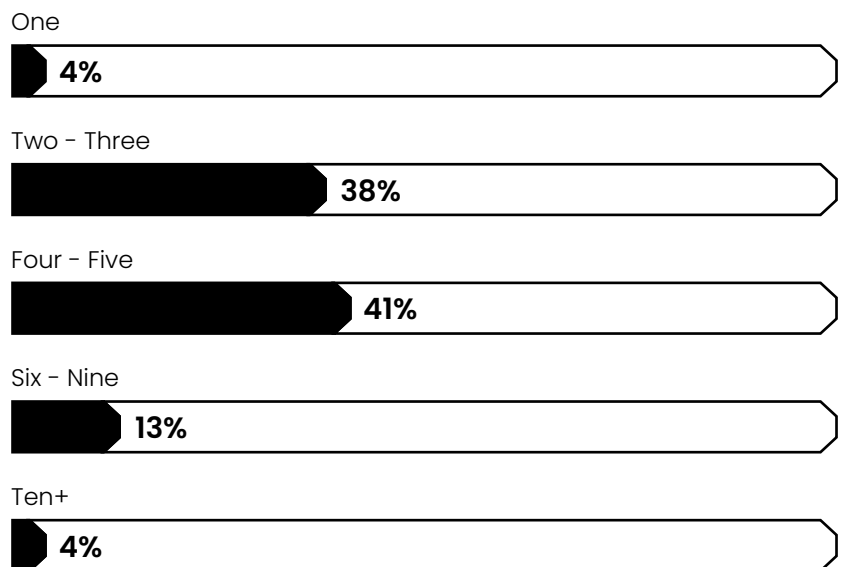
Looking more specifically at technology, over a quarter of Supply Chain leaders see legacy technologies and tech stack complexity as top-three obstacles to process understanding.

To gain deeper insight into this perceived tech stack complexity, we asked how many transactional systems – such as warehouse management systems, transport management systems, and enterprise resource planning systems – organizations are currently using in their supply chain. **The average is five distinct systems.**

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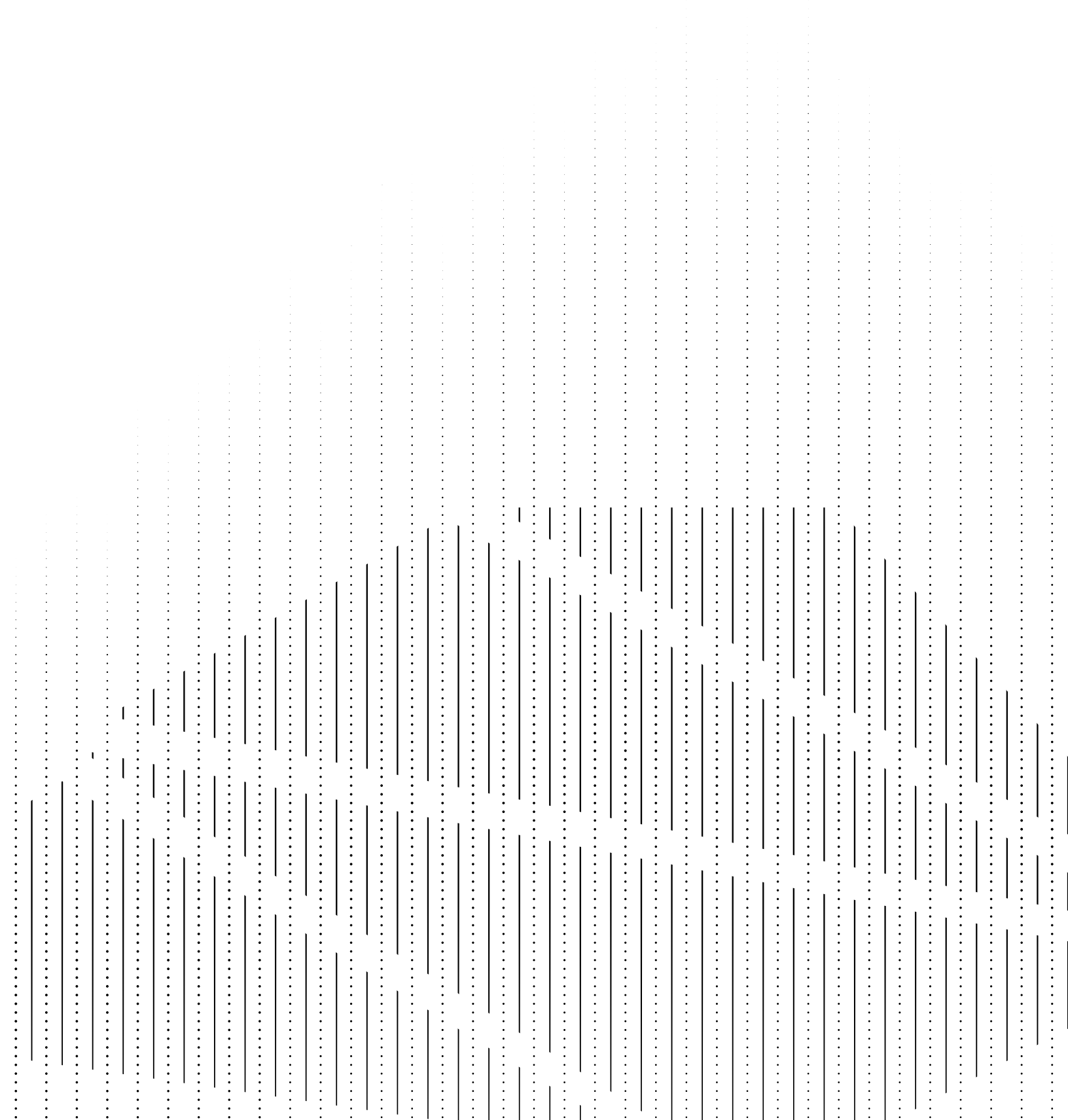
### Number of transactional systems used in supply chain operations

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A strong majority (86%) say they are looking to consolidate the tools and apps they use for supply chain management over the next 12 months. But consolidation isn't always necessary. They may simply need to better connect the systems that they are using – especially the 17% that are using more than six transactional systems.

# What's next? Three Supply Chain takeaways



Supply Chain leaders already understand the importance of process understanding and optimization. They're making good use of advanced tools like process mining as well as implementing AI for a variety of use cases. These are all positive trends that should continue.

Moving forward, there are three key approaches for Supply Chain leaders to consider:

1. **Move from reactive to proactive.** By understanding end-to-end processes across the organization, leaders can get

out of firefighting mode and take a more proactive approach.

2. **Run AI on process insight.** Supply Chain leaders need to ensure AI tools understand how their organization's processes work. They can with **Celonis Process Intelligence**.
3. **Connect the organization.** By connecting organizations – from both a technological and person-to-person perspective – Supply Chain leaders can make processes work to contain costs, optimize working capital, and improve service levels.

Want to find out more about how Process Intelligence can benefit your supply chain?

- Take a look at **Process Intelligence 101** to find out what Process Intelligence is and why you should care.
- Learn **how Hitachi Energy uses Celonis** to future-proof its supply chain.
- Discover how you can use Celonis for **process-led supply chain transformation**.

You can also read our report, **Making processes work**, to find out what 1,620 business leaders across multiple departments are doing to optimize their processes. And there are additional department-specific editions to explore too.

Check out the reports:

- **Finance and Shared Services Edition**
- **Operations and Process Improvement Edition**
- **IT Edition**



# Survey sample

The research was conducted by Insight Avenue, an independent, third-party, specialist B2B and technology research consultancy. 1,620 interviews, with around 400 in each of four regions and in each of four departments, were conducted during July and August 2024. Business leaders were interviewed from organizations with revenue of \$500m+ across a range of sectors.

This report uses data from the 401 respondents who selected “Supply Chain” in response to the question, “Which of the following best describes your department in your organization?”

The sample used in this report is made up as follows:

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## Level of seniority

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|                               |     |
|-------------------------------|-----|
| Board / C-level               | 2%  |
| VP level                      | 13% |
| Head of Department / Director | 37% |
| Senior manager                | 48% |

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## Organization revenue

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|                  |     |
|------------------|-----|
| \$500m - \$2bn   | 16% |
| \$2bn - \$10bn   | 80% |
| More than \$10bn | 4%  |

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## Industry sector

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|                 |     |
|-----------------|-----|
| Life sciences   | 3%  |
| Pharma          | 3%  |
| Oil & gas       | 13% |
| Retail          | 7%  |
| CPG / FMCG      | 12% |
| Manufacturing   | 5%  |
| IT / technology | 6%  |
| Automotive      | 15% |
| Chemicals       | 8%  |
| Banking         | 3%  |
| Insurance       | 7%  |
| Logistics       | 6%  |
| Public sector   | 4%  |
| Utilities       | 8%  |

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## Region

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|                                      |     |
|--------------------------------------|-----|
| US                                   | 25% |
| Europe (France, Spain, UK)           | 25% |
| DACH (Austria, Germany, Switzerland) | 25% |
| APAC (Australia, Japan, South Korea) | 25% |

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## Country

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|             |     |
|-------------|-----|
| Australia   | 10% |
| Austria     | 6%  |
| France      | 7%  |
| Germany     | 15% |
| Japan       | 8%  |
| South Korea | 8%  |
| Spain       | 5%  |
| Switzerland | 4%  |
| UK          | 12% |
| US          | 25% |



# About Celonis

Celonis makes processes work for people, companies, and the planet. The Celonis Process Intelligence Platform uses industry-leading process mining and AI, and augments it with business context to give customers a living digital twin of their business operation. It's system-agnostic, without bias, and provides everyone with a common language for understanding and improving businesses, and enabling AI to be effective and relevant for the enterprise. Celonis empowers its customers to continuously realize significant value across the top, bottom, and green line.

Celonis is headquartered in Munich, Germany, and New York City, USA, with more than 20 offices worldwide.

Find out more at [celonis.com](https://celonis.com)

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