ECONOMIST IMPACT

Next-gen supply chains

The transformative role of supply-chain leaders in today's business

Supported by GEP INTELLIGENCE DRIVES INNOVATION

Contents

About this report

'Next-gen supply chains' is an Economist Impact report sponsored by GEP. It explores the evolving world of supply chains amid continued disruption from various sources of risk. The report is based on a survey conducted between January and March of 2024 of 400 executives in the US and Europe who were familiar with their organisation's supply-chain strategy and operations.

Economist Impact is solely responsible for the views expressed in this report, and the content does not necessarily reflect the perspectives of the sponsor.

Economist Impact would like to extend its thanks to the following interviewees for their time and insights:

- **Bertrand Conqueret**, chief procurement officer at Henkel
- **Thina Wallin**, vice president, procurement and supply chain at Schneider Electric

The report was produced by a team of Economist Impact researchers, including:

- **John Ferguson**, project director
- **Oliver Sawbridge**, project manager
- **Eddie Milev**, analyst

Sponsor foreword

In 2024, strategic discussions in corporate boardrooms increasingly address the balance of managing risks while optimising operational performance. This happens as the amount and types of risk have proliferated. Geopolitical tensions have escalated, supply chains are being reshaped to reduce dependency on countries like China and disruptions due to Covid-19 continue to affect commodity markets. According to the latest Economist Impact survey, a notable 55% of executives anticipate significant supply-chain disruptions, highlighting the need for a proactive and innovative approach to operational strategies.

Amidst these challenges, however, a substantial 68% of surveyed executives acknowledge the imperative role of sophisticated digital solutions in empowering operational efficiencies, enhancing visibility, and fostering supply-chain collaboration. This underscores the role of technology in fortifying supply-chain resilience, with a parallel emphasis on digital transformation initiatives — both aimed at augmenting operational capabilities. In view of this, the significance of AI assumes prominence. Generative AI emerges not only as a tool that helps fortify resilience but also as a means for heightened supply-chain efficiency and sustainability.

Yet, to transform supply chains, more than mere technology adoption is needed. While AI and digital tools are enabling, their efficacy is optimal when complemented by human insight and strategic foresight. When skilled professionals use sophisticated technology, business performance is optimal: strategic decisions are informed by cutting-edge analytics alongside deep industry acumen. This equilibrium between technology and people is indispensable, as evidenced by the 41% of executives who say that AI integration creates new job opportunities. In turn, this results in a need for a workforce adept at navigating technological advancements and business management alike.

This research programme explores these themes comprehensively, offering data-based analysis and forward-looking strategies on harnessing the full potential of AI and technology in supply-chain management. As you engage with it, consider the potential of embedding advanced AI and technological solutions into your supply-chain operations to ensure that resilience, growth and innovation remain central tenets of your strategy.

Santosh Nair
Chief Product Officer,
GEP

Executive summary

1. **In 2024, 55% of executives anticipate significant supply-chain disruptions, as they are caught between macroeconomic uncertainty, government protectionism and the impacts of climate change.**
   In 2024, 63% of executives flagged macroeconomic uncertainty and geopolitics as major supply-chain disruptors, consistent with the 2023 figure. This was a sharp rise from 2022, when only 29% expressed concern over these issues. The variety of threats has also expanded beyond geopolitics and macroeconomic uncertainty, now including regulatory changes, labour shortages and cyberattacks. Across all risks, 55% of executives anticipate significant supply-chain disruptions in 2024. This encourages supply-chain managers to adopt a proactive approach to building resilience, as opposed to focusing on crisis-management. This could entail stress-tests, enhanced collaboration and accelerated technology adoption across the supply chain.

2. **With only 18% of executives prioritising efficiency, the remit of supply-chain managers is expanding.**
   The remit of supply-chain managers now extends beyond cost, quality and delivery—amidst disruptions, resilience and growth gain importance. This is why boosting resilience and security is the primary motive for incorporating generative AI into supply chains, according to 63% of executives. Efficiency improvement and cost reduction are secondary, cited by 18% and 11% of executives, respectively. Yet, high inflation and interest rates remain a top risk factor. Taken together, this expanded set of factors requires supply-chain managers to have a more diverse skill set, as they play a fundamental role in enabling growth, mitigating risk and staying competitive across the end-to-end supply chain.

3. **Nearly 38% of executives consider the supply chain a major strategic influence, highlighting the need for greater representation of procurement and supply-chain functions at the C-suite level.**
   Faced with a multitude of supply-chain risks, businesses are seeing the procurement and supply-chain functions as increasingly important. Nearly 38% of executives view procurement and supply-chain decisions as having a major influence on business strategy. A further 56% of executives see them as having a moderate influence. Despite this, 41% of companies' most senior procurement and supply-chain executives are below the C-suite level.[1] More emphasis needs to be placed on making the supply-chain function a core part of the senior management team, particularly as supply-chain outlays account for around 55% of the total product cost.[2] The roles of the procurement and supply-chain managers needs to be recognised for businesses to operate effectively in today's world.

4. **Technology is central to supply-chain resilience, with 68% of executives emphasising the importance of it—yet, human input remains indispensable.**
   Neither people nor technology can be relied on in isolation: it requires a combination of both to operate effectively. To mitigate potential disruptions in 2024, executives are employing this approach. More than two-thirds rank the adoption of technology (68%) and digitally transforming their supply chains (70%) as a high priority. Yet emerging technologies will not drive a slowdown in the collaboration between people and machines. Two-fifths of executives (41%) stated that generative AI will create new job opportunities for people as soft skills like problem solving and critical thinking are important to the industry (21%) but are in very short supply (58%). Businesses need to recognise this interdependency and ensure that interoperability both within systems and between people and systems is managed appropriately.

5. **Improving supplier relationships is at the heart of supply-chain strategies, with 73% of executives considering it a priority.**
   Executives are working to expand and enhance their collaboration with suppliers (73%). Enhancing resilience to cope with this is imperative if businesses are to operate effectively in this era of heightened uncertainty. As firms are faced with multiple disruptions, navigating these challenges on their own is impractical. Collaboration with supply-chain partners and stakeholders is imperative as forming alliances and fostering partnerships within the supply chain can fortify resilience through shared monitoring and responses to disruptions.

6. **On average, over half of businesses plan to invest in AI and automation to enhance supply chains over the next year.**
   Businesses are still betting big on technology, yet are now focusing on next-generation capabilities. In the next 12 months, 57% of businesses plan to invest in AI and 44% in advanced automation to enhance their supply-chain and procurement operations. However, there are significant gaps between next-generation technology investment across sectors, such as healthcare and energy. Businesses should seek to understand the benefits of these technologies for their area of operation.

[1] Talking Logistics. The Missing Chief Supply Chain Officer: Insights From Indago Members. Available at: https://talkinglogistics.com/2020/05/06/missing-chief-supply-chain-officer-insights-indago-members/
[2] Lapinskaite, I. & Kuckailyte, J. 2014. The Impact of Supply Chain Cost on the Price of the Final Product. Available at: https://www.researchgate.net/publication/272857284_The_Impact_of_Supply_Chain_Cost_on_the_Price_of_the_Final_Product

7. **Generative AI brings optimisation and automation but could also pose challenges.** Over two-thirds (67%) of executives state that of all investments in procurement and supply-chain technology, up to a quarter will go into generative AI. A further 29% believe such investments will be between 26-50%. Their rationale is clear: 65% of executives believe that between a quarter and a half of their procurement and supply-chain operations can be optimised or automated by AI in the next three years. This could be from demand forecasting and inventory optimisation to code generation, diagnosis and onboarding of new hires.[3] Yet, businesses should proceed with caution. Executives see bias in AI systems, a top concern for the technology's implementation. This is the backdrop for 73% of executives believing the current quality and reliability of their data to be good, 24% rating it as average, and only 3% believing it is excellent.

[3] Supply Chain Dive. Supply chain and procurement leaders are flocking to generative AI: Gartner. Available at: https://www.supplychain-dive.com/news/supply-chain-procurement-leaders-flocking-generative-ai-2024-Gartner/705306/

Part One: The risks

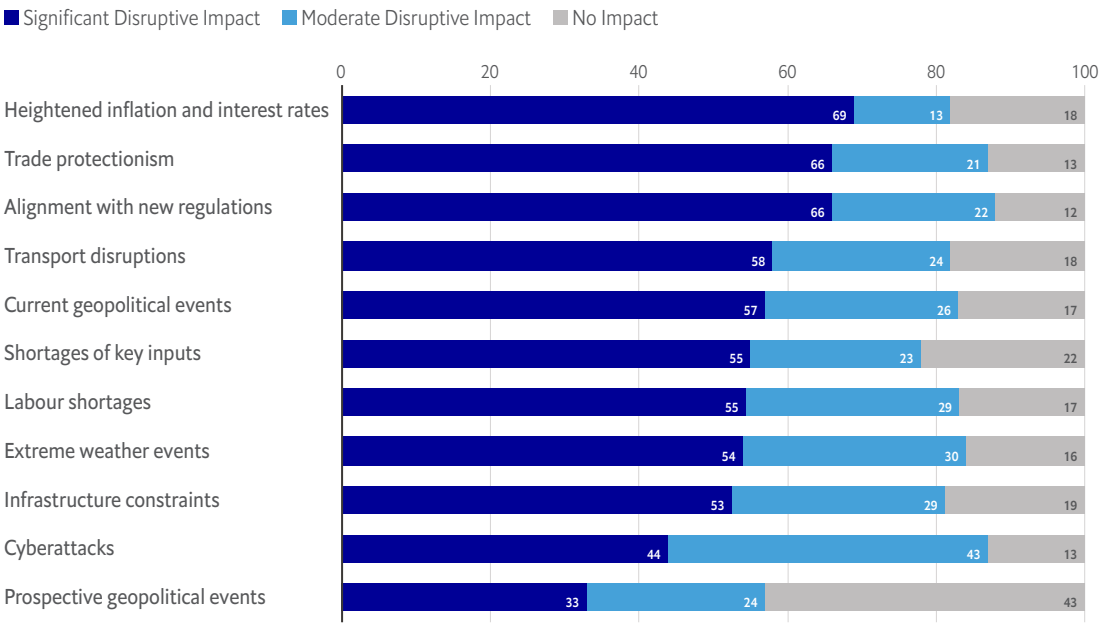
Supply-chain disruptions continue, with more sources of risk

In 2024, supply chains without disruptions remain a distant prospect. Across all issues surveyed, a striking 55% of executives foresee significant disruptions to their supply chains, marking a 26 percentage point increase from 2022. Conversely, only 19% of executives expect the issues presented to them to have no disruptive impact on their supply chains. Bertrand Conqueret, chief procurement officer at Henkel, is clear: "The turbulence has not disappeared, and I do not believe it will disappear – the world is in transition." This shift underscores a growing pressure on supply-chain managers to be better prepared for both current and potential disruptions.

The risks that could disturb supply chains come from a wide range of sources and differ in how they affect the chain. Climate change introduces extreme weather events, directly impacting supply-chain operations or causing resource scarcity. Geopolitical conflicts can disrupt logistics networks and pose significant risks to supply-chain predictability. Protectionism introduces trade barriers, which influence supply-chain costs, sourcing strategies and market access. Economic factors, including heightened inflation and high interest rates, strain operational costs and increase the risk with individual suppliers, making supply-chain planning increasingly difficult.

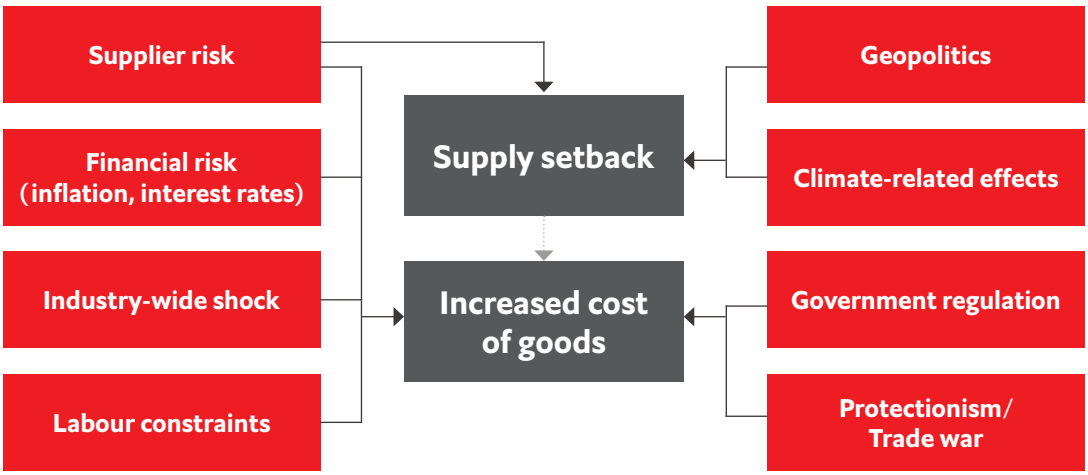
Figure 1: Respondents reporting the impact of various issues

Question: How do you expect the following issues to impact your procurement and supply chain operations in 2024?
% of respondents



Source: Economist Impact survey 2024

Figure 2: Sources of risk and how they impact the supply chain



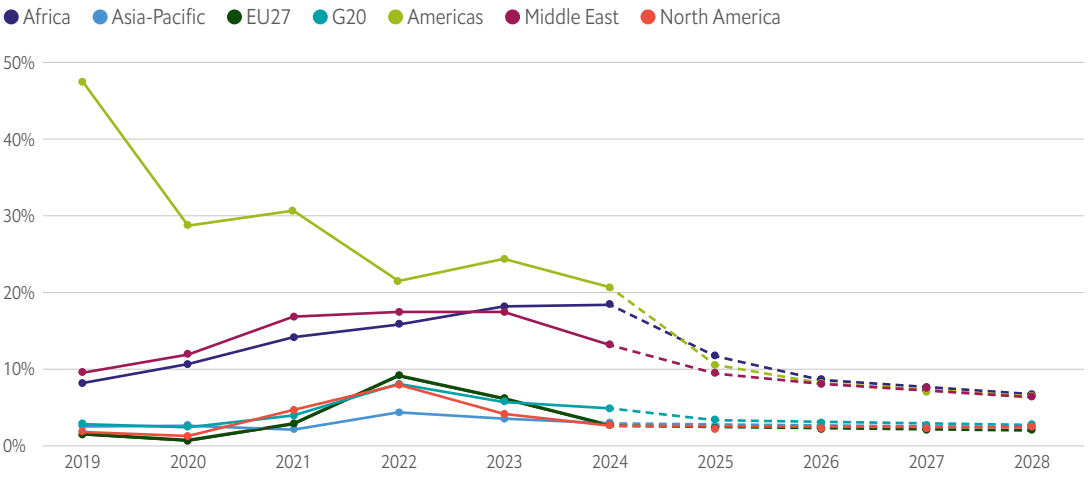
Source: Economist Impact

Heightened inflation puts more strain on supplier relationships

Despite global inflation rates coming down (see figure 3), the executives we surveyed ranked high inflation as having the most disruptive impact on supply chains. The Economist Intelligence Unit (EIU) forecasts that global inflation will drop by 1.4 percentage points to 5.9% in 2024, and projects it to fall further, to 4%, in 2025.[4] Interest rates in major economies, including the US and countries in the EU, are also forecast to drop by 2025. However, the lingering effects of high inflation and elevated interest rates continue to induce uncertainty, casting a long shadow over supply-chain operations.

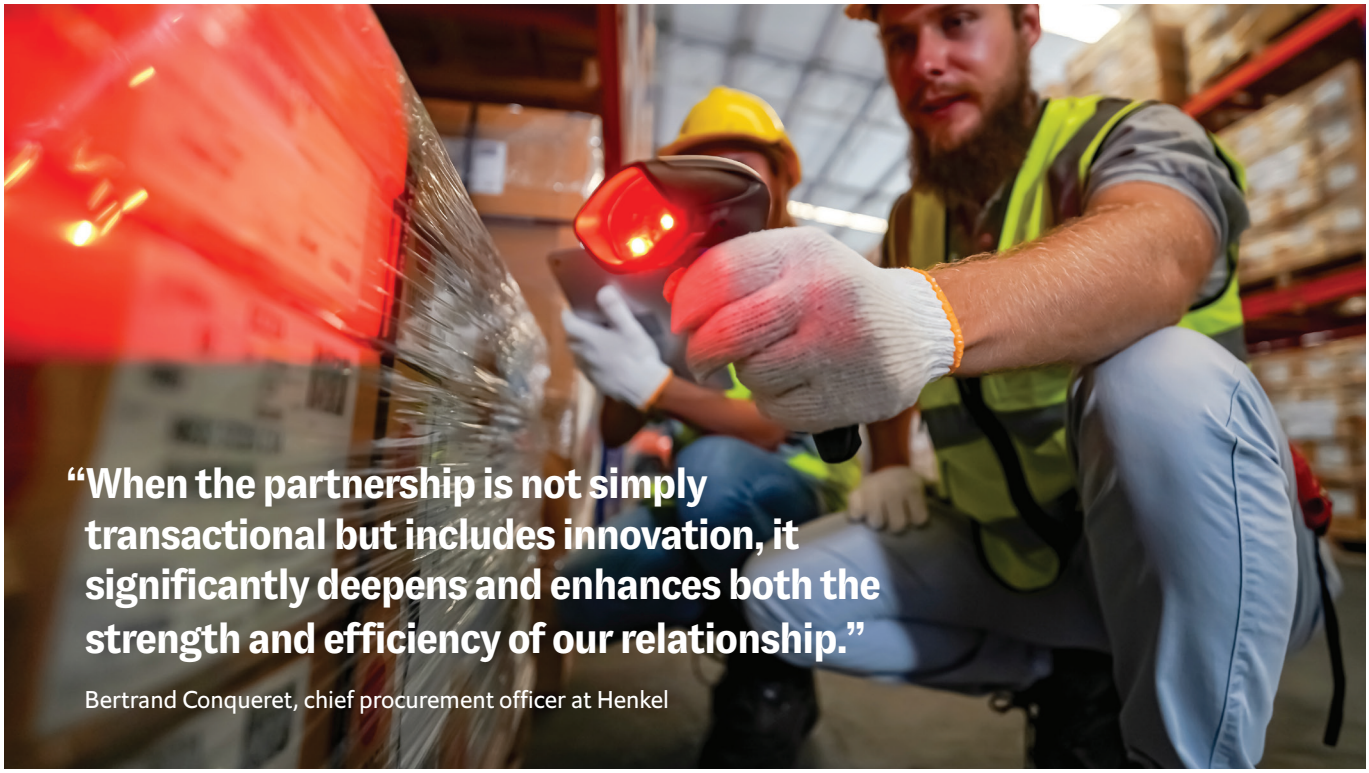
Figure 3: EIU inflation statistics

Inflation estimations (until 2023) and projections (2024 and after)



Source: The Economist Intelligence Unit 2024

[4] The Economist Intelligence Unit. April 2024 Forecast. Available at: https://viewpoint.eiu.com/analysis/geography/XA/reports/one-click-report



Despite the comparatively optimistic macroeconomic outlook, uncertainty around inflation is not unfounded: rising prices affect all aspects of a supply chain. In fact, suppliers themselves are likely to be facing financial uncertainty. A recent study by the International Monetary Fund (IMF) reveals that firms rely significantly on the price changes they observe along their supply chain to form expectations about overall inflation.[5]

These findings likely underpin why executives still perceive inflation as a serious risk to supply chains in 2024. Businesses perceive macroeconomic effects through their immediate experiences with suppliers, which can themselves be significantly influenced by localised fluctuations and lingering economic uncertainty, regardless of general trends. In turn, businesses’ reliance on supply-chain-based economic insights not only informs product-pricing strategies (indicating a pass-on of anticipated inflation to consumer prices) but also underscores the complex relationship between macroeconomic health, supply-chain operations and suppliers themselves.

In this evolved landscape, suppliers play a more integral role in the supply chain and business operations. This goes beyond firms indirectly forming their macroeconomic expectations through supplier interactions—in a number of industries, firms also increasingly rely on suppliers for innovation and R&D capabilities, not merely for raw inputs. Business executives note that supply-chain leaders are buying more than just a product; they are acquiring a source of innovation for their own product, a complete system that includes the supplier’s product innovation and R&D.[6] Reflecting on the nature of supplier relationships during turbulent times, Mr Conqueret underscores, “When the partnership is not simply transactional but includes innovation, it significantly deepens and enhances both the strength and efficiency of our relationship.”

This shift, intensified by the uncertainties supply-chain managers wrestle with, has led to significant changes. On the supplier side, it has increased their leverage: more suppliers now have space to be selective about which businesses they work with. Simultaneously, these changing relationships have affected the role of supply-chain managers: maintaining good supplier relationships has now been elevated to a key responsibility of the job (discussed further in Part III).

[5] International Monetary Fund. 2022. Inflation Expectations and the Supply Chain. Available at: https://www.imf.org/en/Publications/WP/Issues/2022/08/08/Inflation-Expectations-and-the-Supply-Chain-521686
[6] Economist Impact interview with Aurelien Faucheux, former chief procurement officer at Aston Martin Lagonda.

The increased reliance on suppliers—due to their effect on financials and the innovation and R&D they bring—underscores a critical vulnerability: supplier failure now poses a greater risk to overall business health. Undoubtedly, elevated interest rates result in heightened borrowing expenses, placing added strain on companies burdened with significant debt. This can exacerbate suppliers' already narrow profit margins—as they grapple to meet their repayment obligations—or lead to bankruptcy. The bankruptcy of a key supplier can have cascading effects not only by disrupting operations but also by delaying product development due to their vital innovation inputs.

Governments and regulators are adding to levels of uncertainty

Governments play an important role in determining business certainty. Yet, in our survey, 66% of executives saw alignment with new regulations and trade protectionism as causing significant disruptions in 2024 (see figure 1). Regulation spans a vast spectrum, from stringent environmental and sustainability standards to rigorous measures that uphold human rights. Simultaneously, the resurgence of protectionist trade policy marks a strategic pivot in economic and industrial policy that has significant implications on global trade and the future of supply chains.

The need to align supply chains with an increasing number of regulations across multiple jurisdictions often becomes a challenge for businesses. One executive in charge of procurement and supply chain at a major corporation notes that government regulatory measures can have a profound impact on supply chains. When requirements shift the foundational assumptions of businesses, adopting a completely different approach may become necessary. Being compliant with regulations not only increases the operational complexity of a supply chain but could also elevate the costs of running it. New regulations often require firms to conduct thorough due diligence on suppliers to ensure their adherence to labour laws, environmental measures or other targeted areas. This takes know-how, time and, ultimately, money. When new investments are needed, such as in green technologies or shifts in logistics and manufacturing, potential disruptions are possible alongside serious cost increases.

The trend towards protectionism, particularly in Western economies, introduces another set of challenges and risks. Tariffs and other trade barriers are likely to affect the cost structures of importing goods and may force businesses to reconfigure parts of their supply chain. More specifically, firms might find themselves needing to work with suppliers from domestic markets or countries with favourable trade agreements, which restricts their ability to leverage global competition.

An overarching challenge, with both new regulation and protectionism, is the uncertainty about government action and the time spans of policies. As businesses might need to invest to modify existing processes, invest in new technologies or hire specialised personnel to meet regulatory requirements, changes in regulation often mean they have little certainty over the returns of such modifications to their supply chains.[7]

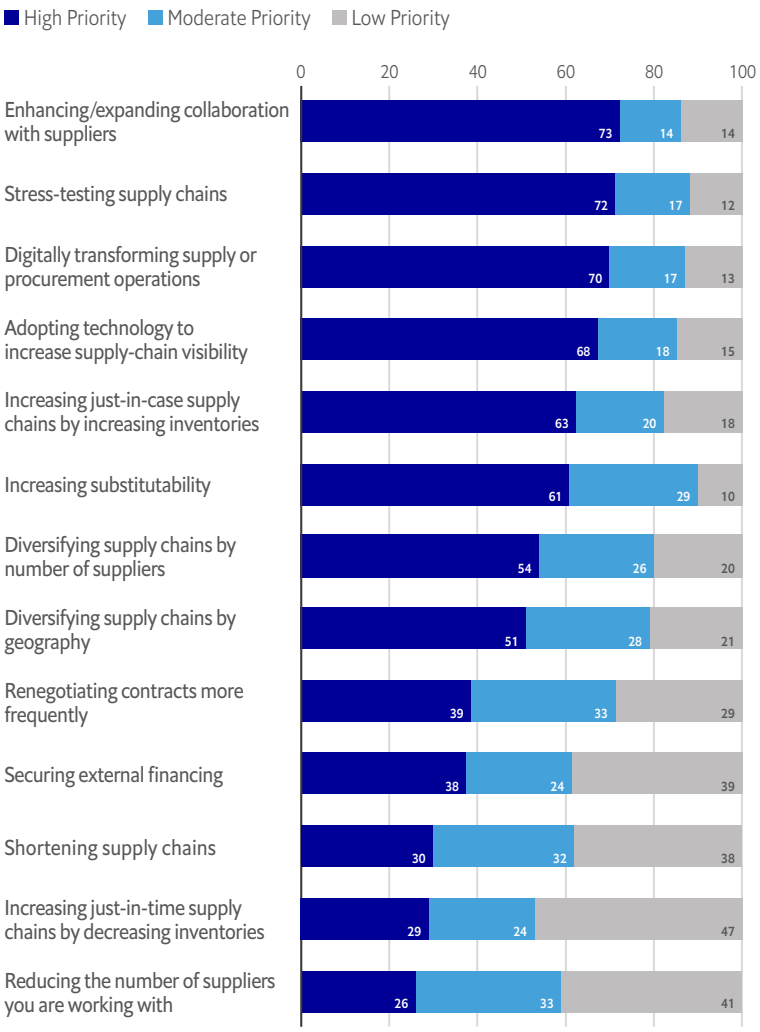
[7] Economist Impact interview with an organisation that helps companies decarbonise, conducted in October 2023.

Part Two: The responses

Figure 4: Strategies to mitigate procurement and supply-chain disruptions in 2024

Question: Which of the following are a priority to mitigate challenges from possible procurement and supply-chain disruptions in 2024?

% of respondents



Source: Economist Impact survey 2024

With 2024 laden with challenges, businesses—rightly—continue to prioritise reducing the risk of supply-chain disruptions. To navigate the confluence of risks effectively, strategic actions can be broadly divided into two main approaches: refining and fortifying existing supply-chain practices or fundamentally reengineering supply chains to inherently reduce risk exposure. These two approaches closely align with two different activities: supply-chain reorganisation and supply-chain restructuring. Supply-chain reorganisation focuses on addressing operational inefficiencies, implementing risk-reduction measures through preventative planning and process optimisation. Meanwhile, supply-chain restructuring takes a more transformative stance, re-envisioning and possibly readjusting supply chains to achieve new production, logistics and distribution methods that inherently enhance resilience against disruptions.

Strengthening existing supply chains through greater collaboration

If firms are not facing serious risks that demand a deeper restructuring of their supply chains, adept management of existing operations may suffice. What's more, for firms that have undergone more transformative supply-chain restructuring since the pandemic, making issue-specific tweaks may be enough to enhance resilience.

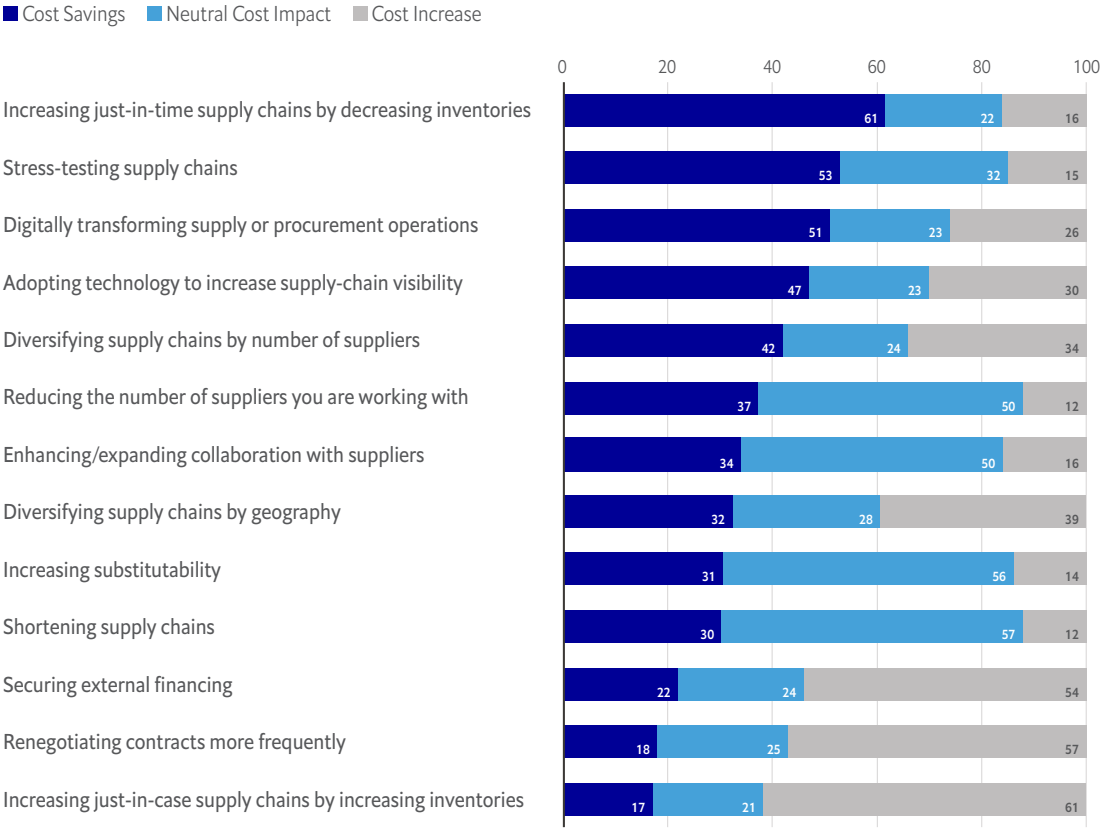
Enhancing or expanding collaboration with suppliers emerges as the top strategy businesses are employing to mitigate potential supply-chain disruptions in 2024.[8] This is confirmed in our survey, as 73% of executives see it as a 'high priority' for 2024 (see figure 4). For example, enhanced collaboration ensures efficiency in delivery, a key priority for small- to medium-sized businesses, roughly 60% of which have reportedly lost 15% or more of their revenue because of supply-chain delays.[9]

[8] Shekarian, Mansoor & Parast, Mahour. (2020). An Integrative approach to supply chain disruption risk and resilience management: a literature review. International Journal of Logistics Research and Applications

[9] Supply & Demand Chain. 2023. Supply Chain Delays Cause Some Companies 15% Loss in Revenue. Available at: https://www.sdcexec.com/sourcing-procurement/erp/news/22820454/anvyl-supply-chain-delays-cause-some-companies-15-loss-in-revenue-study

Figure 5: Cost implications of actions to mitigate supply-chain disruption

Question: What are the cost implications of the following steps your organisation is taking to mitigate supply-chain disruption?
% of respondents



Source: Economist Impact survey 2024

Fostering and maintaining long-term collaborative partnerships within the supply chain is recognised as a non-costly, yet effective resilience-building strategy. In Mr Conqueret's view, a "strategic fit" is at the core of a strong supplier partnership: "It is really about having a clear understanding that we have a strategy that we want to reach together." On a practical level, enhanced collaboration is about reducing vulnerabilities inherent in a supply chain. Collaboration occurs in five key ways.[10] First, through enhanced trust, which is the ability to work with suppliers for the benefit of the entire supply chain. Second, commitment, a pledge to ensure the continuity of collaboration. Third is decision synchronisation. This involves shared planning and operational decision-making, thereby eliminating localised and disconnected choices. Fourth is incentive alignment, which is the degree that supply-chain partners share costs, risks and benefits. And fifth is information sharing, where partners share strategic and tactical data with others in their supply chain. In particular, decision synchronisation and incentive alignment are crucial for effectively navigating disruptions within the supply chain.[11]

These ways to collaborate are increasingly important as firms view their suppliers more as partners, integrating them into their business model to leverage their innovation and R&D capabilities. Firms that collaborate can improve their business performance, enhance customer satisfaction, increase market share and, ultimately, generate more revenue.[12]

Enhanced collaboration also comes with relatively little cost increases for business, as seen in figure 5. At a time of heightened inflation and interest rates, this is a fundamental consideration.

[10] International Transport Forum. 2018. Collaboration in Supply Chain Management: A Resilience Perspective. Available at: https://www.itf-oecd.org/sites/default/files/docs/collaboration-supply-chain-management.pdf
[11] Shekarian, Mansoor & Parast, Mahour. (2020). An Integrative approach to supply chain disruption risk and resilience management: a literature review. International Journal of Logistics Research and Applications
[12] International Transport Forum. 2018. Collaboration in Supply Chain Management: A Resilience Perspective. Available at: https://www.itf-oecd.org/sites/default/files/docs/collaboration-supply-chain-management.pdf

The necessity of technology for visibility and stress-testing supply chains

One way in which collaboration with suppliers can be more provident is through the adoption of technology for supply-chain visibility. It is a supply-chain management approach that 68% of the executives we surveyed identify as a high priority (see figure 4). When discussing how supply chains can enhance business resilience, one executive mentions the crucial role of technology in providing traceability and visibility throughout the supply chain's various tiers. This capability is key to understanding capacity, sourcing and production methods.

Technology-enabled visibility into the supply chain also facilitates compliance with regulations requiring greater transparency, such as carbon emissions. As Sami Naffakh, chief supply officer at Reckitt, puts it: "Visibility into Tier-2 and Tier-3 supply is essential to guarantee both continuity of supply and to drive the necessary improvements in sustainable and responsible sourcing." It is predicted that enabling more agile supply chains by increasing visibility will lead to a 50% reduction in the impact of supply-side disruptions by 2025.[13]

Another step firms can take to improve the management of their existing supply chains is to stress-test them—a priority for roughly 72% of the executives we surveyed. Performing such tests is often aided by technology. Businesses can create a digital replica of their supply chain to enable the modelling of certain disruptive scenarios.[14] The purpose of which is to identify weak points and understand the time required to recover and how this can be shortened. Utilising digital supply chains and applying resilience analytics proactively to simulate supply-chain responses to disruptions can effectively mitigate disruptive impacts on supply chains if corresponding recovery policies are implemented.[15]

Transformative shifts in supply-chain strategy through restructuring can also help shield against disruptions

While a firm can make optimisations to how it manages its supply chain, sometimes a larger-scale restructuring is needed. Diversification is often a central strategy to mitigate potential risks. This sentiment is shared by an executive who underscores the importance of redundancy: having a secondary source and supply chain is crucial for enhancing resilience. This aligns with survey results where over half of respondents state diversifying by both number of suppliers (54%) and geography (51%) is a high priority. An additional quarter of respondents rate them as a moderate priority (26% and 28% of respondents, respectively).

Expanding the supplier base offers a protective shield against disruptions, ensuring sustained operations and adaptability. Recent analysis underscores this point: as global trade disruptions initially affected many businesses, those with diversified supplier networks demonstrated greater resilience over time.[16] Similarly, firms that diversified their supplier base, even in response to the pandemic, consistently mitigated the impact of international lockdowns.[17]

But the strategy moves beyond a diverse supplier base, to include geographical diversification. By implementing dual-sourcing strategies from different geographies, it lowers the risk of supply disruptions. This is particularly important as nations realise their overdependence on the Chinese market. China produces nearly 15% of global goods exports to the world and

[13] IDC. 2021. IDC FutureScape: Worldwide Supply Chain 2022 Predictions. Available at: https://www.idc.com/getdoc.jsp?containerId=US48298220
[14] Ivanov, D. & Dolgui, A. 2022. Stress testing supply chains and creating viable ecosystems. Operations Management Research. Available at: https://link.springer.com/article/10.1007/s12063-021-00194-z
[15] Ibid
[16] Bas, M., Fernandes, A. & Paunov, C. 2023. How resilient was trade to COVID-19?. Economics Letters. Available at: https://www.sciencedirect.com/science/article/pii/S0165176523001052
[17] Ivanov, D. & Dolgui, A. 2022. Stress testing supply chains and creating viable ecosystems. Operations Management Research. Available at: https://link.springer.com/article/10.1007/s12063-021-00194-z

nearly a third (32%) of global manufacturing output. It is still the leading trading partner for 120 countries around the globe, including many major economies.[18, 19, 20] As trade tensions increase between China and the US and EU, these are likely to bring additional trade barriers, particularly in sectors of strategic importance, such as semiconductors and biotechnology. To protect against additional trade barriers, creating dual-sourcing capabilities through diversification is a necessity for businesses.

Diversification for enhanced productivity

Over the past couple of years, the objective of enhancing productivity was deprioritised. Yet, companies that are taking a more proactive approach to supply chains are re-focusing on this objective. If there is a strong business case for diversification, and businesses invest smartly in the power of two, it could benefit productivity. With the help of supply-chain leaders, a crisis situation can pull everyone in the business to work towards a common goal. Retraining and harnessing colleagues' efforts to achieve key business and supply-chain objectives may not have been possible without the added motivation of mitigating disruptions.

But, if a company wants to focus solely on putting less risk into their supply chain by establishing a bigger footprint through diversification, balancing cost and productivity may be challenging. Our survey results indicate this, as 34% of executives state that diversifying the number of suppliers comes with a cost increase. A further 39% of executives believe that diversifying by geography comes with a cost increase. Yet, if managed effectively, resilience, through diversification, can go hand-in-hand with productivity.

Moreover, there is a benefit to firms moving both their production facilities and R&D centres closer to their customers. The reason for this is that production and R&D are interlinked as they form part of a company's product development. Localised production and R&D teams offer greater social capital in network relationships, leading to a greater facilitating effect.[21] This, in turn, would allow for more effective quality control, ensuring they meet the correct standards as well as faster turnaround times.

While it could be seen as regionalisation, this approach can, in fact, lead to greater supply-chain diversification as companies would have local R&D centres in each region. So, while companies would still retain a global footprint, they are increasingly establishing more localised centres for resilience.[22] Yet, to ensure this strategy remains effective, there must be an overarching team or person, linking all of these regional centres to break the silo mentality, principally the chief supply chain officer.

[18] UN Trade & Development. 2021. China: The rise of a trade titan. Available at: https://unctad.org/news/china-rise-trade-titan
[19] World Population Review. Available at: https://worldpopulationreview.com/country-rankings/manufacturing-by-country
[20] CNBC. 2024. China de-linking talk is overdone and it's still key to the global economy, Asian Development Bank says. Available at: https://www.cnbc.com/2024/02/26/china-still-top-trading-partner-for-many-countries-says-adb.html
[21] Bohnenkamp, T., Schiele, H. & Visser, M. D. 2020. Replacing global sourcing with deep localisation: the role of social capital in building local supply chains. International Journal of Procurement Management. Available at: https://www.inderscienceonline.com/doi/abs/10.1504/IJPM.2020.105200
[22] Economist Impact interview with Aurelien Faucheux, former chief procurement officer at Aston Martin Lagonda.

Part Three: The supply-chain leader

Procurement and supply-chain roles are shifting to become more strategic

Supply-chain and procurement leaders could once rely solely on their expertise in managing costs and logistics. However, in today's disruptive times, such a narrow lens doesn't work. Moreover, as the supply chain has numerous touch points throughout the business, the breadth of their role should be better utilised. This view is supported by many business leaders, such as Kevin Crutchfield, CEO of Alpha Natural Resources, who commented, "I expect our head of sourcing and materials management to provide a strategic perspective on the markets we deal with, identify and mitigate supply-related risks, lead change internally and work with our supply base to identify and contribute their best ideas".[23] This strategic perspective encapsulates areas that drive value, from revenue enhancement and cost reductions to working capital improvements.

The triad objectives of enhancing business anticipation, operational efficiency and growth through the supply chain are critical; particularly in this time of increased uncertainty and volatility.

The transition from reaction to anticipation is central to strategy setting

With the advent of multiple and continuous disruptions to supply chains, supply-chain leaders need to shift from being reactive to become more proactive. There are several levers at their disposal for this.

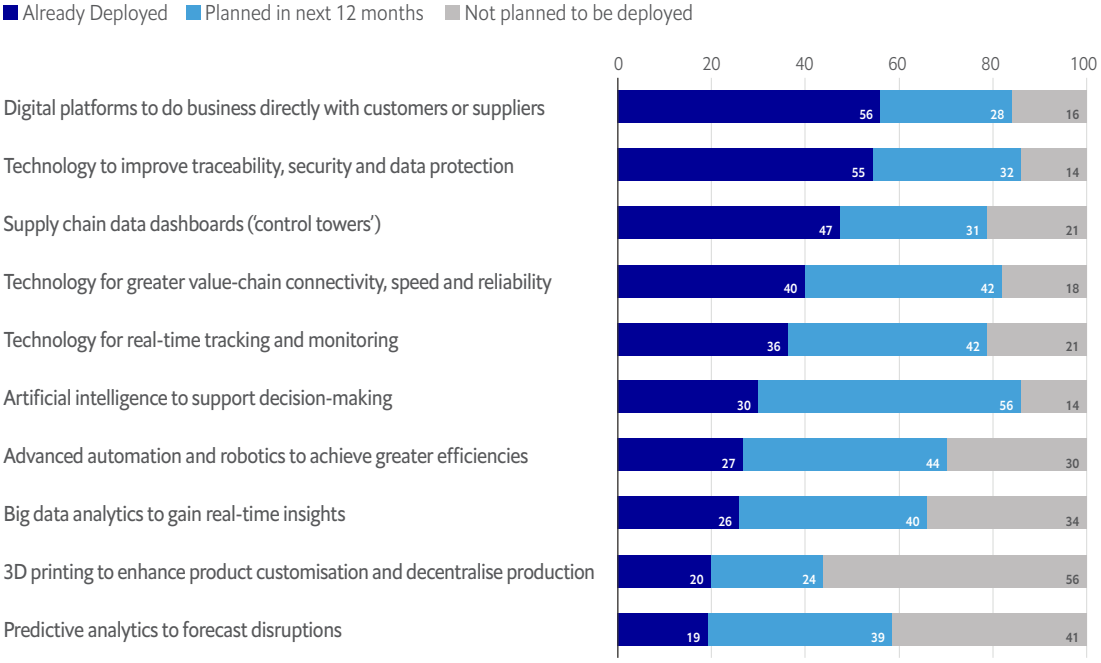
As discussed above, this anticipatory approach can either come from refining and fortifying existing supply-chain practices or fundamentally reengineering supply chains to inherently reduce risk exposure. But an area that cuts across both approaches, and where businesses also need to become more anticipatory, is sustainability.

Recent research found a worrying lack of environmental standards in lower-tier suppliers. These issues ranged from a lack of environmental management systems to marginal environmental practices spanning different regions.[24]

To become more sustainable, supply-chain leaders need to facilitate comprehensive changes throughout the entire chain. Mr Conqueret terms it "an ecosystem". In his view, achieving sustainability (and, equally, resilience) requires more than just individual actions; "it demands creating an ecosystem of collaboration, technological integration and continuous improvement". Indeed, this entails a supply-chain strategy that simultaneously pursues collaboration with partners, deploys appropriate technology, educates employees, establishes clear tracking objectives and, ultimately, transparently reports progress and evaluates impacts.[25]

[23] Kador, J. How to Get the Most from Your Chief Supply Chain Officer. Available at: https://chiefexecutive.net/how-to-get-the-most-from-your-chief-supply-chain-officer/
[24] Harvard Business Review. 2020. A More Sustainable Supply Chain. Available at: https://hbr.org/2020/03/a-more-sustainable-supply-chain
[25] Association for Supply Chain Management. Top Ten Trends for 2024. Available at: https://www.ascm.org/globalassets/ascm_website_assets/docs/top-10-trends-report-2024.pdf

Figure 6: Technologies deployed or planned to improve supply-chain operations
Question: Which technologies have you deployed, or are planning to deploy, to improve your supply-chain and procurement operations?
% of respondents



Source: Economist Impact survey 2024

Supply-chain leaders play a pivotal role in driving innovation and improving operational efficiency

A more anticipatory role is crucial, as is the role of supply-chain leaders in finding innovative solutions to operational challenges and optimising efficiency. An example stems from hospital medication errors. Many business leaders would feel this is a problem for medical professionals, but the solution was found in the supply chain. Mercy hospitals were able to reduce medication error injuries by approaching the problem from the perspective of the supply chain. They did this by repackaging drugs in individually bar-coded unit-dose formats with computer checks at the patient's bedside.[26] This solution was aided by the fact that Mercy's former CEO (now Executive Chairman), Lynn Britton, had a background in supply chain and procurement.

Technology is also central to enhancing the operational efficiency of both the supply chain and the entire business. As seen in figure 6, business executives have deployed or are planning to deploy multiple technologies to aid supply chains, such as artificial intelligence.[27] Yet, there are still challenges: one supply-chain and procurement professional notes that despite efforts in digitalisation, the implementation of technology across different areas remains somewhat fragmented, leading to challenges in achieving smooth end-to-end operations. Put simply, it is difficult to always create a sufficient interoperability overview. As such, overlaps from one process to another to a third creates risks that something falls in between the different interfaces. So, having a solid grasp of the efficiencies technologies provide as well as interoperability issues between existing systems is paramount. Supply-chain leaders can learn from industry best practice to build this understanding.

Internal change management would need to supplement the adoption of technology as it fundamentally requires the rethinking of operations across the organisation. As a result, supply-chain leaders will need to possess adept communication and critical thinking skills to mobilise people and encourage innovation, and to remove antiquated technology and procedures from a business.

[26] Kador, J. How to Get the Most from Your Chief Supply Chain Officer. Available at: https://chiefexecutive.net/how-to-get-the-most-from-your-chief-supply-chain-officer/
[27] The role of generative AI in supply chains is discussed in the second briefing paper in this series. Release date: June 2024

Transitioning from suppliers to innovation ecosystems

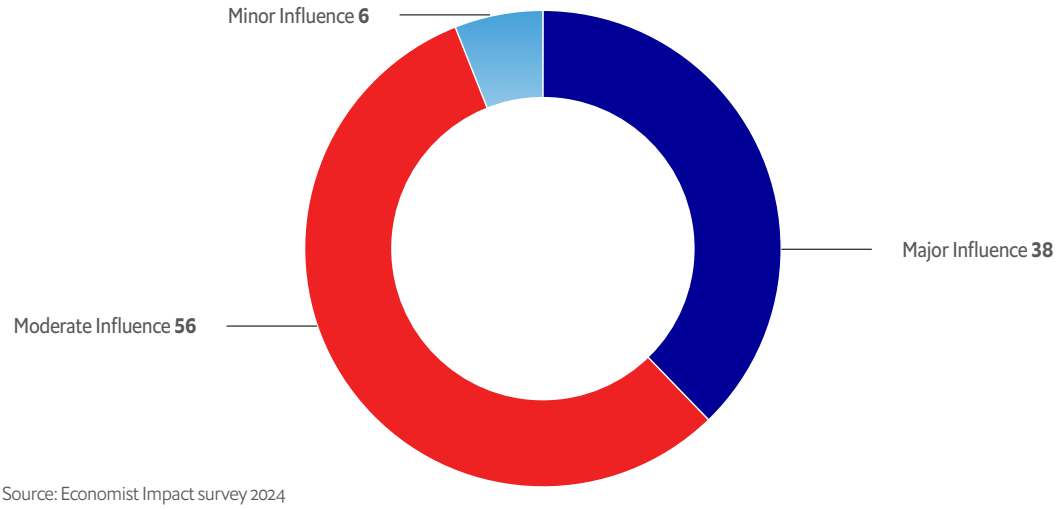
Supply-chain leaders possess unparalleled insight into inventory stocks and production processes, crucial for aligning production capacities with market demands. But, their role extends beyond the confines of warehouses and factories, and into strategic decision-making processes. Having an exhaustive level of visibility over inventories and production, they can help to shape a company's sales and operational decisions. Furthermore, by integrating supply-chain expertise into forecast and budget formulation, companies can wield a sharper competitive edge and bolster overall performance. "Capital allocation is key across the business", highlights Lisa Martin, senior vice president of global procurement and operations at Pfizer.[28] Consequently, supply-chain leaders should form a core part of a business strategy team.

Strategic and operational decisions are particularly important when thinking about suppliers. A prevailing concern among both business and supply-chain leaders is the amount companies spend, both directly and indirectly, with suppliers on areas that contribute towards their end product. Consequently, they should seek to draw more from those relationships by gaining access to both the raw inputs and suppliers' innovation and R&D capabilities. One executive describes this strategic approach, noting the importance of utilising the R&D resources offered by suppliers. These resources, often available at no additional cost, can provide valuable insights and support business operations, enhancing overall corporate innovation.

This paradigm shift should be viewed as transitioning from working with suppliers to building innovation ecosystems. Suppliers should now be viewed as partners that enhance value-add through increased innovation. In the automotive sector, for example, the key parties are the suppliers. They are the ones that can help enable the electrification of the car or help provide more in-car infotainment.[29] Yet it is important that everybody understands each other's objectives for these ecosystems to be successful.

[28] Kador, J. How to Get the Most from Your Chief Supply Chain Officer. Available at: https://chiefexecutive.net/how-to-get-the-most-from-your-chief-supply-chain-officer/
[29] Economist Impact interview with Aurelien Faucheux, former chief procurement officer at Aston Martin Lagonda.

Figure 7: The influence of procurement and supply-chain decisions on business strategy
Question: To what extent do procurement and supply-chain decisions influence your company's overall business strategy?
% of respondents



Source: Economist Impact survey 2024

Drawing these constituent parts (becoming more anticipatory, enhancing operational efficiencies and delivering growth) together highlights the need for supply-chain and procurement leaders to become more strategic. As Randy Dearth, CEO of LANXESS Corporation commented, "When [the supply chain] is aligned with the business priorities of the organisation, supply-chain management can play a fundamental role enabling the company's growth agenda, mitigating risk and delivering competitive advantage across the end-to-end value chain".[30] Yet, they require a delivery mechanism to communicate this strategy to the senior leadership team for it to be acted upon. The creation of a C-suite role that represents the supply chain in businesses that don't currently have this role is critical.

The supply chain needs to be represented at C-suite level

With their expanding roles and influence in overall business operations, it is imperative that businesses include a C-suite role for the supply-chain and procurement functions. Nearly two fifths (38%) of business executives state that procurement and supply-chain decisions have a major influence on their overall business strategy. A further 56% state that it has a moderate influence. No business executives surveyed stated it had no influence (see figure 7).

Yet, research has found that 41% of companies' most senior supply-chain executives are below the C-suite level.[31] More emphasis needs to be placed on making the supply-chain and procurement functions a core part of the top team, particularly as supply-chain outlays make up around 55% of of the total product cost.[32] The role of the supply-chain manager needs to be recognised for businesses to operate effectively in today's world.

[30] Kador, J. How to Get the Most from Your Chief Supply Chain Officer. Available at: https://chiefexecutive.net/how-to-get-the-most-from-your-chief-supply-chain-officer/
[31] Talking Logistics. The Missing Chief Supply Chain Officer: Insights From Indago Members. Available at: https://talkinglogistics.com/2020/05/06/missing-chief-supply-chain-officer-insights-indago-members/
[32] Lapinskaite, I. & Kuckailyte, J. 2014. The Impact of Supply Chain Cost on the Price of the Final Product. Available at: https://www.researchgate.net/publication/272857284_The_Impact_of_Supply_Chain_Cost_on_the_Price_of_the_Final_Product

The second paper of the 'Next-gen supply chains' research programme analyses the current, and gazes into the upcoming, uses of generative AI in the realm of supply chains. Its key findings include:

- *As many as 65% of survey respondents believe that up to half of supply-chain operations can be optimised or automated by generative AI. The report explores how companies are using the technology for optimal outcomes.*
- *With 65% of chief supply chain officers citing regulatory uncertainty and evolving standards as their top concern with adopting generative AI, unified regulatory standards around the technology become increasingly needed. The report discusses this and other challenges businesses face with adopting generative AI in their supply chains.*
- *Only 2% of executives find their current supply-chain systems interoperable with the latest advancements in AI. The report looks at how businesses can ensure better integration of sophisticated computer intelligence in their supply-chain operations.*

The second paper will be released on the Next-gen supply chains hub in June 2024.

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