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How to tackle supply  
chain challenges  
and thrive

# Introduction

For the past two years and counting, global and local supply chains have been buffeted from multiple directions by adverse factors—some a result of COVID-19 and some not. To help businesses across sectors respond to these challenges, here we explore some of the practical approaches and methods used by Deloitte clients to navigate today's supply chain volatility.

This is particularly salient since the pandemic first triggered the freezing of global supply chains. Almost overnight, management teams were required to shift their focus from technology investment, product innovation, and supply chain expansion towards a greater emphasis on resilience. While pre-pandemic supply chains were built to maximize efficiency, minimize inventory, and support growing global trade volumes, today's supply chains need greater flexibility.

Going forward, companies will require a two-pronged approach: one focused on meeting new demand patterns driven by ongoing digitization, a mounting focus on environmental sustainability, and the work-from-home economy; and another focused on responding to evolving macroeconomic pressures. In this context, businesses face supply chain challenges that are directly pressuring margins and company results. The Institute for Economic Research noted that these challenges were impacting business confidence, describing them as "sand in the wheels of the economy holding back the recovery".<sup>1</sup>

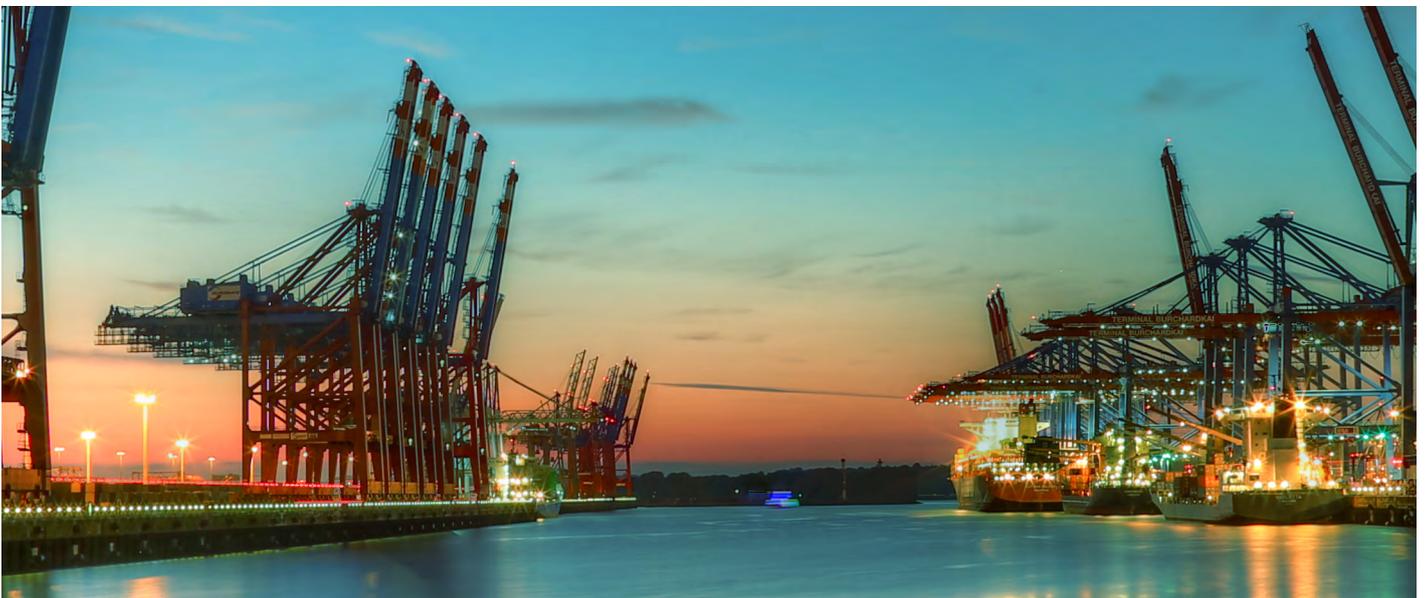
In this report, we look at four areas that are testing our clients' ability to design and deploy deliver technologies and improvements in their supply chains:

01. Addressing, foreseeing, and dealing with supply chain disruptions

02. Managing peaks in raw material prices and cost inflation

03. Concentrating efforts on priority areas of the supply chain

04. Preparing for the shortage of talent, labour, and skills



<sup>1</sup> source - Supply chain warnings intensify | Financial Times (ft.com)

# The supply chain crunch

## Events and trends

### COVID:

- The legacy of COVID-driven disruption
- Pent up demand from COVID-stimuli and consumer savings

### Geo-politics:

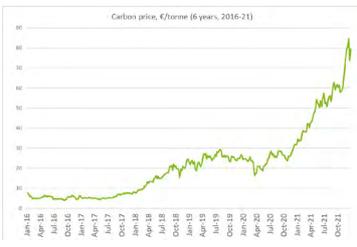
- Russia-Ukraine war
- US and China competition
- Brexit

### Broader macro-economic trends

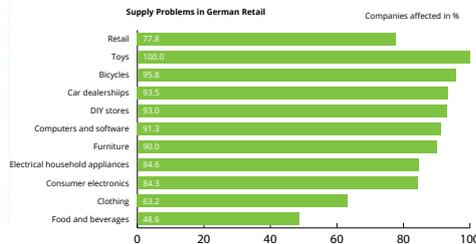
- The inexorable transition to digital and distribution vs physical retail
- Environmental, Sustainability, and Governance (ESG)-driven dynamics, including turbulence from the green energy transition directing investment away from base-load fossil fuels, as well as changing consumer preferences

## A focus on supply chain resilience

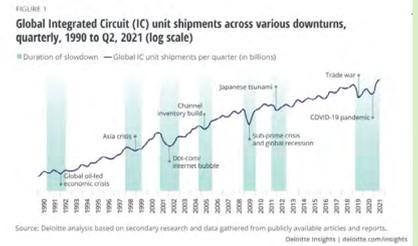
Globally, demand has been outstripping constrained supply chains...



...with the industry suffering significant lost revenue as a result



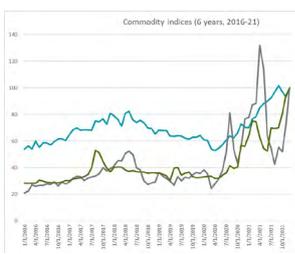
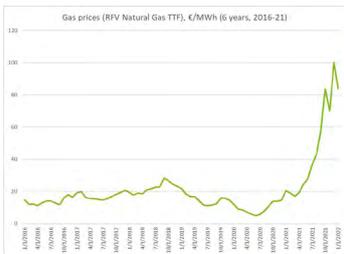
Semi-conductor supply: "The cumulative revenue impact of the shortage will likely be over US\$500 billion globally from 2020 to 2022."<sup>2</sup>



## Economic implications

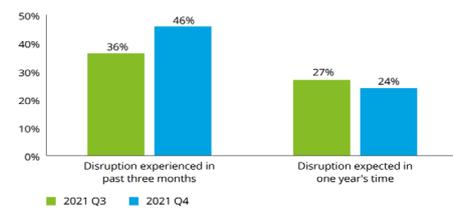
### Cost inflation

Prices for raw materials have generally seen a significant upswing, leading to inflation



While skilled labour shortfalls exert additional pressure Persistent labour shortages were the top concern in Deloitte's UK 2022 CFO survey.<sup>3</sup> Indeed, the pandemic exacerbated growing digital, education, and skill divides around the globe—putting further strain on talent supply ... with seven in 10 employers globally saying they are struggling to find workers with the right mix of technical skills and human capabilities.<sup>4</sup>

% of CFOs who report significant or severe levels of recruitment difficulties or labour shortages experienced by their business over the last three months and those expecting similar levels of disruption in one year's time



### The end of cheap money?

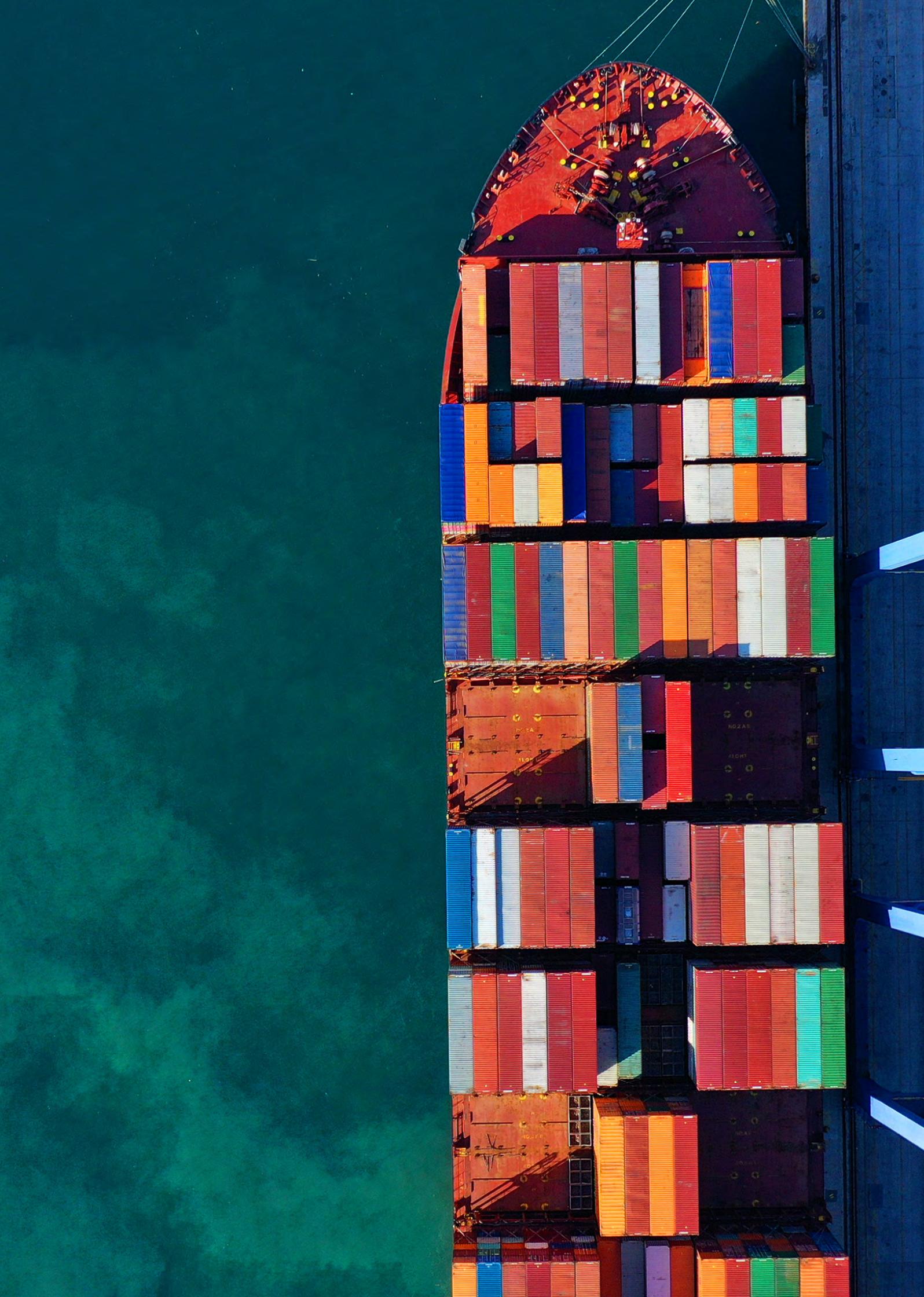
Interest rate hikes are expected, raising the cost of capital at a time when companies are feeling the pressure to increase buffers in the supply chain



<sup>2</sup> <https://www2.deloitte.com/us/en/insights/industry/technology/semiconductor-supply-chain-solutions.html#endnote-2>

<sup>3</sup> <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/finance/deloitte-uk-cfo-survey-q4-2021-report.pdf>

<sup>4</sup> <https://www2.deloitte.com/us/en/insights/focus/human-capital-trends/2021/the-evolving-employer-employee-relationship.html>



# 01 Addressing, foreseeing, and dealing with supply chain disruptions

Operational disruption has been a key feature of the last 24 months, impacting supply chains that have steadily been reducing buffer stocks to meet just-in-time mandates. How can businesses get the best of both worlds by limiting the working capital demands of a ‘safety-first’ supply chain, while avoiding the unnecessary risks of being overly lean?

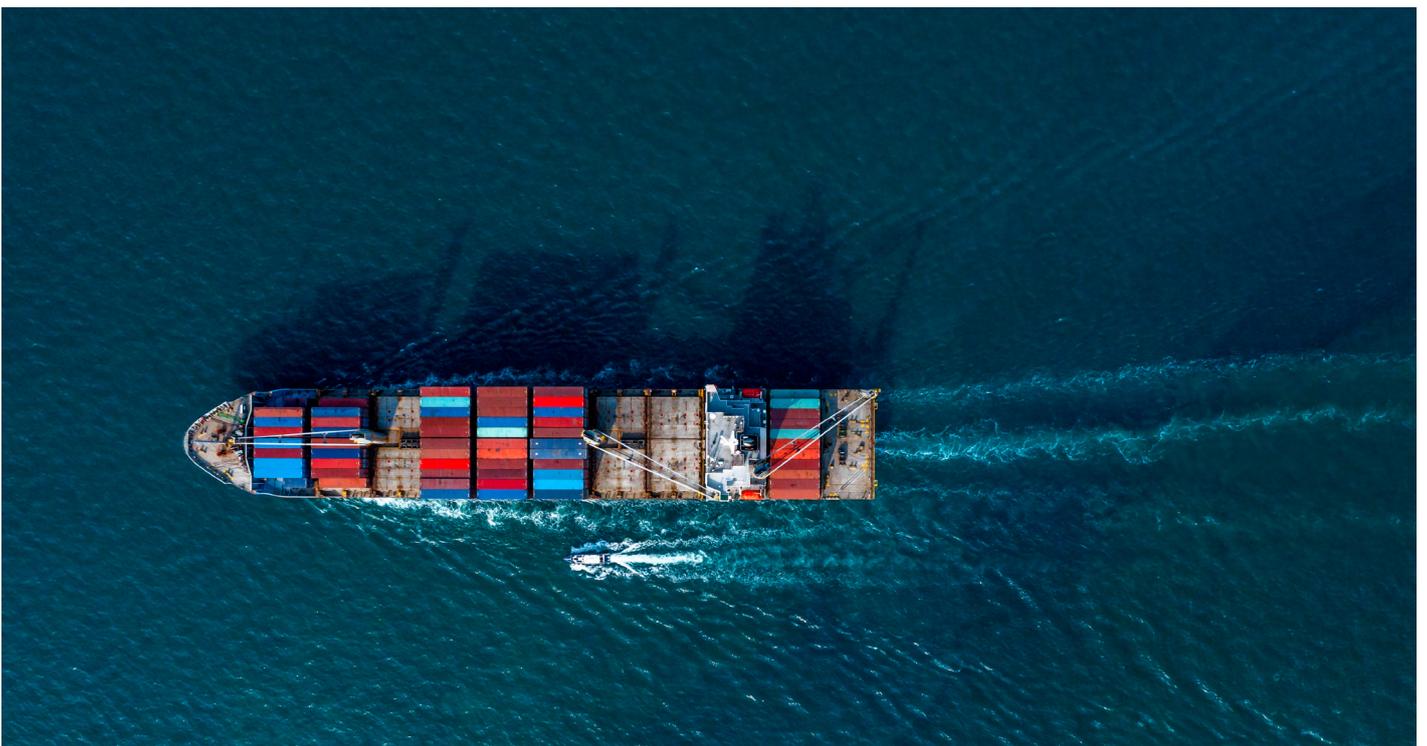
Business challenge	Client best practices
<p><b>Have you identified alternative suppliers and negotiated terms to secure supply?</b></p>	<p>Clients are seeking to develop <b>more resilient supply chains by building near-shoring/in-house capacity</b> for semi-finished products that otherwise were sourced directly from low-cost countries.</p> <p>Other examples include clients <b>increasing minimum order quantities to safeguard supply</b>.</p>
<p><b>Can your Sales &amp; Operations Planning (S&amp;OP) processes quantify and incorporate the impact of supply chain disruption?</b></p>	<p>Successful clients are increasingly using digital tools, including self-service analytics, to gain an integrated view of inventories and demand, while analyzing historical trends.</p> <p>We find that clients who successfully develop an S&amp;OP agenda can formulate a clear and robust forecast that forms the basis for building optimal safety stocks—improving working capital.</p>

## Sector snapshot



### Building Services:

In the building services and infrastructure sector, we found examples of businesses facing 200% to 300% increases in shipping prices due to supply chain disruptions. Using a technology-enabled solution—an ‘inventory watchtower’—these companies enhanced transparency of inventory available in the pipeline, improved the accuracy of future requirements, and reduced unforeseen shortfalls.



### Business challenge

### Client best practices

**Does your business have a clear decision-making framework to address risks (i.e., future price increases, supply disruptions)?**

We have seen clients use **decision trees** to determine how to address supply chain risks. The most successful of these require input from across various functions, including planning, procurement, and financing. This allows greater granularity, breaking down organizational forecasts at the SKU level. It also helps to confirm demand with key suppliers and, above all, address risks of revenue loss by **prioritizing the availability of materials** for high net margin products.

**Does your business always have fast and smooth clearance of goods at the border?**

For most of our clients, we observed that the speed of clearance of goods at the border can be the difference between success and failure. Solutions such as **customs warehousing** can improve cash flow by postponing the payment of taxes at the border, **deferring payment** until goods are removed from the warehouse.

Other steps we see clients taking include:

- appointing a customs broker to undertake customs declarations;
- applying for Customs Freight Simplified Procedures (CFSP), which allow authorized traders to benefit from accelerated removal or release of most third country imports by making simplified declarations; and
- having Authorized Economic Operator status (in Europe) or local equivalents in place.

### Sector snapshot



#### E-commerce:

Online e-commerce businesses reliant on imports from the Far East experienced a lack of stock at seasonal sales peaks, including Black Friday and Christmas.

After those events, businesses were keen to avoid the risk of overstock and revenue loss, with the knock-on impact on liquidity and profitability.

Clients who succeeded in the e-commerce sector focused on improving liquidity and cash planning, integrating operational processes, and developing alternative sourcing strategies, such as the recent charter by a UK supermarket of their container ship to meet Christmas demands.

## ...don't forget about the Tax considerations

Companies importing goods have been exposed to additional tax costs and compliance requirements that arise when holding stock in centralized locations.

For example, bringing goods into the UK from the EU to be sold back to the EU market. In this context, we support clients through technology solutions, such as our Deloitte Global Trade Bureau customs declarations service.



# 02 Managing peaks in raw material prices and cost inflation

The second area impacting clients is increases in the price of raw materials. While inflation was once deemed transitory by economists, it is now a more significant threat to profitability. Additionally, it is spreading to wages as well as materials. Interest rates have already started the upward trajectory that economists predicted would be necessary to combat inflation across major markets.

Business challenge	Client best practices
<p><b>Does your organization have a consistent raw material and cost breakdown that enables you to understand the impact of raw materials' cost movements on SKU, product, and category?</b></p>	<p>Successful organizations can evaluate individual SKUs in terms of revenue and margin by sales channel, incorporating raw material price changes to model profitability erosion over time.</p> <p>Having detailed costing data at hand enables companies to quickly identify what <b>products need to be discontinued</b> (low contribution) and <b>work with sales channels</b> to increase volumes of products less exposed to issues related to raw materials' price inflation and volatility.</p> <p>Hedging practices can also be tailored to focus on materials most closely tied to priority products and categories.</p>
<p><b>How do your commercial teams decide on strategies to pass price increases downstream to specific sales channels/ customers and product types?</b></p>	<p>Having clear visibility into the impact of raw material inflation helps commercial teams plan how to pass-through increases to customers where possible, and highlight where it is not. There is often an untapped opportunity to use analytics and visualization tools during the decision-making process for some companies.</p>

## Sector snapshot

### Industries and processing manufacturing:

In manufacturing and processing industries, reducing waste remains a key lever to offset materials costs, which requires optimizing processes and preventative maintenance. Furthermore, we see companies implementing end-to-end countermeasures to minimize in-transit damage and systematically re-work damaged products.

### Retail:

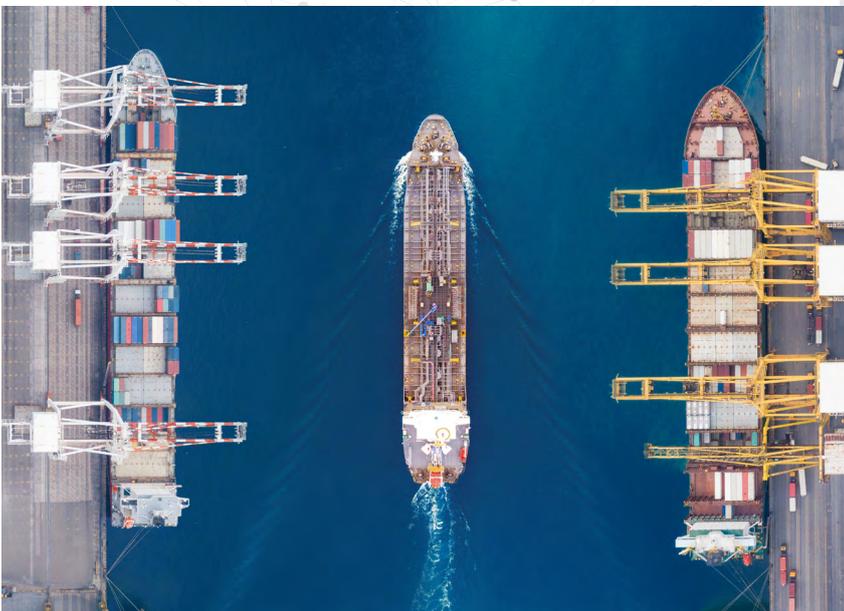
Major retailers have been under pressure, with some seeing 20% increases in import materials, compounded by container shipping inflation and a lack of HGV drivers.

In response, leading retailers have been looking to increase net margin. This requires a reduction in the number of SKUs with negative/ low contribution margins, along with a focus on driving sales of high margin products. To succeed, many retailers needed to approach this as a targeted exercise requiring a fresh end-to-end approach to S&OP and the use of analytics to prioritize and track implementation.

### Logistics:

Haulage, logistics, and postal service providers have faced (and still face) increasing complexity in overseas shipping, in particular, due to new Brexit regulations in the UK and Europe, along with rising protectionism globally.

Many clients realized that part of the challenge was an overly manual classification of products prone to error. This introduced compliance and commercial risks, especially as custom authorities continued to publicly commit to increased levels of audits and controls.



**Business challenge**

**Client best practices**

**Are you tracking commodity futures to forecast impacts on specific SKUs?**

To inform and drive sourcing, planning, and pricing decisions, several clients have been using either third-party providers or in-house analysts to track commodity futures.

Having visibility into commodity trends allows clients to refocus their product development to optimize product specifications and identify alternatives capable of minimizing the medium-term impact of price inflation in advance.

**Do you have clear cost control at handover points, both within your internal supply chain and where third parties are involved, and appropriate measures in place to operate customs processes efficiently and cost effectively?**

The amount of customs duty paid is based on a percentage of the value of the goods, so ensuring goods are valued and classified correctly is crucial to minimizing cost. Maximizing claims such as preferential origin can also reduce the cost burden. Diagnostic analytics have helped clients quickly identify potential overpayments.

**Sector snapshot**



**Building Services:**

Various building and construction companies were facing covenant breaches and liquidity shortages. The triggers were two-fold: materials procured at a high price, and overstock (the 'bullwhip' effect).

For some, the impact on liquidity was so severe it required the sale of raw material stock.

To combat this, some clients optimized their S&OP processes to gain greater visibility into their overseas shipments.

In addition to improving cash management, this helped them boost profitability via flexible pricing strategies. For instance, as customer purchasing power and input costs fluctuate, companies can factor raw material prices such as timber, and arrange access to available grants where possible.



**Retail & Construction:**

In the home furnishings, clothing apparel, and building sectors, some of our clients had to deal with overstock after an initial supply shortage. This resulted in severe working capital fluctuations and liquidity constraints, as well as operational stress in warehousing and operations.

These businesses used four practical measures to address these concerns: (i) pricing strategy, e.g., discounts aligned to existing stock levels, (ii) pre-defined contingency plans to manage overstock, (iii) reduced supply chain concentration through alternative suppliers, and (iv) greater supply chain flexibility by sharing distribution across channels and categories (e.g., online and brick-and-mortar retailers).

# 03 Concentrating efforts on priority areas of the supply chain

Given the importance of supply chain management, a third approach adopted by our clients has been to focus on the areas of priority that are most critical to business success, with the aim of working across the value chain to achieve consistency and secure the availability of inputs.

Business challenge	Client best practices
<p><b>Are your critical suppliers limited in their ability to ramp up production?</b></p>	<p>In some sectors, highly-concentrated supply can create severe downstream shortages. For instance, South Korean manufacturers currently dominate the supply of silicon chips, with Taiwan Semiconductor Manufacturing Company (TSMC) holding a 70% market share of production.</p> <p>When similar challenges arose during the 2007 financial crisis, many automotive OEMs propped up their Tier 1 and Tier 2 suppliers by offering investment support in a bid to keep them afloat and ensure sustainable future supply.</p> <p>A similar approach may be necessary for some sectors over the next few months.</p>

**Have you appropriately incentivised your supplier base?** Notably, we have seen some companies adopting such commercially-innovative approaches—presenting buyers with an opportunity to define service level agreements (SLAs) and provide suppliers with upside rewards in exchange for upfront investments in tooling and machines. The aim is to create win-win strategies that incentivize suppliers to develop capacity and invest in capabilities that meet customer needs.

## Sector snapshot



### Automotive:

The automotive sector is currently experiencing a significant imbalance due to the scarcity of semi-conductors.

While shortages are limiting overall volumes, OEMs are able to maintain margins, manage customer demand, and raise prices. In contrast, their suppliers are facing multiple challenges: 20% - 30% less revenue, low planning certainty, and a lack of leverage to re-negotiate prices with OEMs.



### Mining:

The iron ore mining industry has suffered from large fluctuations in commodity prices, impacting companies' liquidity.

Having visibility of the impact on customer contracts to be able to forecast cash requirements was key to navigating the turbulence.

To Navigate this turbulence, leading companies need visibility on the impact on customer contracts to be able to forecast cash requirements. Having this data available ensured proper management of stakeholders and lenders, ultimately safeguarding funding to maintain operations.



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**Business challenge**

**Client best practices**

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**Are you vetting new suppliers adequately?**

One way for companies to evolve their product offerings is by reducing specifications to **broaden the potential supplier** base and allow new suppliers to be considered.

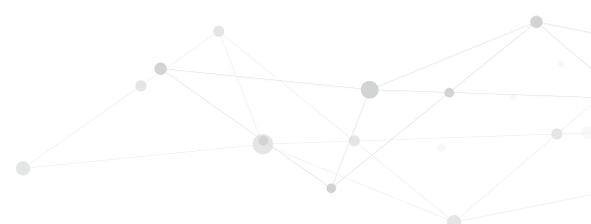
Clients who succeed with such an approach, however, need to foster close alignment between procurement and engineering. The aim is to **audit new suppliers** to make sure they comply with **tax legislation and ESG** practices. This is particularly critical for listed companies and consumer-facing brands, which could face **significant value erosion and reputational damage** if they don't adhere to ESG best practices.

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**Do you understand the tax implications of supply chain decisions?**

It is similarly important to gain advance understanding of the tax implications of any planned changes to your supply chain. There are two main areas to consider: **direct taxation** at each stage of the value chain (including different local tax rates and incentives), and **indirect taxes** (VAT and duty) incurred in transit, on delivery, and on sale. **Timely planning** also enables goods to flow smoothly so they are not held up at the border due to missing authorizations or documentation.

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## ESG Implications

**Ethical sourcing** of limited supply raw materials requires careful consideration. This ranges from ensuring that minerals such as lithium and cobalt—which are in high demand for energy storage—are conflict-free, to monitoring the sustainable production of agricultural products, such as palm oil and soy, to avoid contributing to deforestation and biodiversity loss.

**Carbon emissions.** For most companies, the bulk of their carbon emissions are generated by third-party suppliers (called scope 3 emissions). To reduce carbon emissions meaningfully, this requires many companies to engage with, and gain the support of, their suppliers.



# 04 Preparing for the shortage of talent, labour, and skills

While talent shortages are not new in many sectors, the recent bounce-back in demand has exacerbated the issue for many companies. This is only set to persist as remote work becomes steady-state, which will simply increase competition for agile workers and put less flexible companies and sectors under greater pressure to attract and retain much-needed talent.

Business challenge	Client best practices
<p><b>Are potential labour shortfalls across the planning horizon factored into automation investment decision?</b></p>	<p>Particularly in labour-intensive industries, the shortage of labour is impelling companies to invest in technology and automation as a way to alleviate staff shortages. Efficiencies from automation and improved customer fulfilment models help to offset and reduce the impact of labour cost inflation.</p>
<p><b>Have you changed your recruitment processes to foresee and plan for potential labour shortages?</b></p>	<p>Companies that maintain a close link with the recruitment market have been able to proactively identify looming skill shortages. We have seen a good example in India, where IT service providers have developed outsourcing centres in tier 2 and tier 3 cities to source less expensive labour.</p>

## Sector snapshot



### Casual Dining:

The casual dining industry has been going through a challenging period driven by cost pressures and a squeeze on disposable incomes. This, coupled with the lack of labour has led businesses to increase investment in technology and automation.



**Business challenge**

**Client best practices**

**Can your business increase the speed and throughput of training and development?**

Organizations that have sought to prioritize the rapid training and development of their new staff have **obtained substantial productivity gains**. These organizations are characterized by their successful onboarding, regular training and certification of staff, and continuous on-the-job coaching.

We have seen examples of organizations that incentivize team leaders to upskill and train new hires against a clear set of productivity and performance metrics.

**How rigorously do you consider the labour standards within your supplier network?**

Maintaining labour standards is a relevant factor in the **ESG practices of suppliers**. Companies will be held responsible by investor markets and consumers for suppliers that don't uphold labour standards such as minimum wages, working hours, working conditions, and safety.

**Sector snapshot**



**Retail:**

In mid-2020, a large online retailer lost 50% of its value (despite a sales surge) due to the identification of labour failures within its supplier network.

This is an example of how critical it is for companies to make ESG adherence core to their third-party relationships. This may mean asking suppliers to adhere to your ESG codes, as well as conducting audits and third-party certifications.

In the retail sector, we have also seen some players accelerate their recruitment cycles, triaging where to deploy lower skill—lower cost staff, and where to invest in increased wages to attract and retain staff with needed skills.

**Brexit still creating waves in the UK**

Shortage of labour in customs expertise post-Brexit is leading to risk to exporters and consumer goods businesses. Technology-driven solutions to support the development of alternative models— including outsourcing, as well as the use of technology and automation to simplify processes and enhance compliance—can offset this shortfall of skilled staff by alleviating the burden on existing staff.

# Conclusion

There is little doubt that supply chain risks have become a critical consideration across sectors—not only among management teams and customers, but among investors and private equity houses as well. This requires companies to remain flexible, resilient, and responsive if they hope to both meet stakeholder expectations, and attract the capital required to fuel growth and transformation.

It is too early to say definitively whether the current factors disrupting supply chains across the globe are short-term or mark a major long-term structural shift. Positively, however, there is a rich array of practical steps that can be taken to manage the immediate impact of these factors, preserving value for companies while helping to set them up for future success. By employing the practical steps set out in this report, companies can not only mitigate supply chain challenges, but also build on technologically-enabled capabilities to solve problems faster and better.

At Deloitte, we have helped clients address a wide array of supply chain challenges, and have an unrivalled range of technological tools, analytics, and data-driven solutions at our disposal. In addition, our third-party management team has extensive experience helping businesses manage even the most complex external supplier networks. To continue the conversation, we invite you to get in touch.



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