



# REWIRING GLOBAL SUPPLY CHAINS

*Executive Global Insight, September 2023*

# SHIFTING SUPPLY CHAINS IN A FRAGMENTED WORLD

Global megatrends and two major recent crises – the Covid pandemic and Russia’s invasion of Ukraine – have prompted a major strategic shift in the way companies operate and organise their international supply chains. Sustainability, agility and resilience are now the maxims for safeguarding future success.

As supply chains are reshaped for a radically changed era, Swedish companies are pivoting to new strategies to keep pace with change. This new thinking encompasses everything from product development and planning to procurement and sourcing, manufacturing, logistics and distribution.

Overall, we can observe that Swedish companies are demonstrating relative success as they increasingly reorganise and “de-risk” their global supply chains. But what are the driving forces influencing their decision-making in different regions of the world? And how do Swedish business leaders view the opportunities and threats going forward?

In this report, we uncover the answer by presenting first-hand perspectives and insights based on extensive interviews with 25 supply chain executives at Swedish companies – operating across the globe in a wide range of industries. Among the key findings is that a majority of the interviewed executives consider that the current global rebalancing of supply chains is more beneficial for Sweden rather than less.

According to their feedback, Sweden’s competitive position in the new supply chain environment has never been stronger. While this doesn’t necessarily mean that Sweden will always be the most suitable alternative option, an overwhelming majority of the interviewees confirm a strong commitment to long-term investments in R&D operations in Sweden.

As geopolitics, climate change, digitalisation and the vulnerabilities exposed by the pandemic continue to shape decisions, it is clear that Swedish companies are busy building new capabilities for competing and succeeding in an increasingly fragmented world.

By diving deeper into these factors and exploring the momentum of current trends, including the regionalisation and localisation of manufacturing, this study aims to provide guidance and serve as a useful source of knowledge – and help you to maximise the impact of your company’s next supply chain strategy.



INTRODUCTION

# PAVING THE WAY FOR REGIONALISED SUPPLY CHAINS

The geography of supply chains is changing rapidly as companies worldwide take steps to mitigate risks and future-proof their business. Being agile and resilient, getting closer to customers and improving sustainability performance are all key factors underpinning a new supply chain rationale.

Swedish companies are increasingly adopting strategies that are in line with the global trend towards regionalisation. As this study points out, a certain level of consolidation of suppliers and of how they are managed is also taking place to improve visibility, maximise economies of scale, sustainability and time-to-market.

But these are far from the only factors at play. It is clear that business leaders have recognised the importance of proactively avoiding the pitfalls that became painfully apparent during the pandemic. Meanwhile, digitalisation and automation are racing ahead and radically changing the landscape – manufacturing in low-cost countries such as China is no longer a given option.

While the companies sampled in this study confirm that they are less inclined to scale up production in traditional low-cost markets, moving away from China is proving to be challenging as the country has spent decades building up advanced supply networks. In addition, many Swedish companies are taking a pragmatic approach to automation. The idea is to automate when possible but not discard the potential benefits of nearshoring or offshoring.

In all, the fundamental change which is now in full swing is that supply chains are increasingly being reorganised into regional hubs. In addition to eliminating the climate effects of long-distance transport, this allows companies to de-risk their operations, optimise logistics and enhance predictability, leading to faster deliveries, stronger resilience and better customer service.

Swedish supply chain managers are also integrating their business planning and taking action to improve dual sourcing, demand forecasting and inventory management.

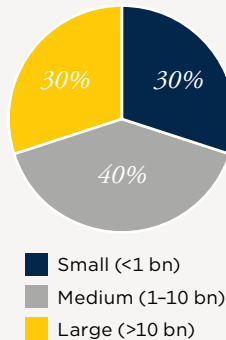
## ABOUT THE STUDY

This report captures and consolidates the views of 25 Swedish executives on the changing landscape for global supply chains. The interviews were conducted during spring 2023 based on approximately 20 predefined questions put to representatives from a diverse group of companies in terms of size, sectors, geographical footprint and business models.

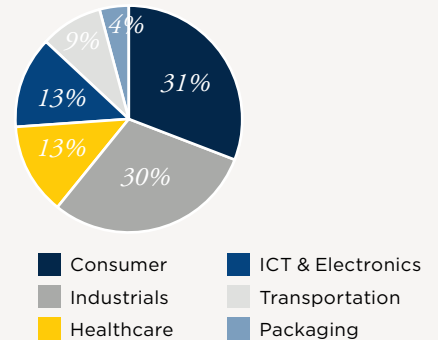
The insights were gathered by Business Sweden's Global Supply Chain Team with representatives from Sweden, EMEA, APAC and Americas. The aim of the study is to uncover why and how supply chain managers are redrawing their supply chains, explore their outlook on the future and current trends, and how they view Sweden's competitive position in the new business environment.

## INTERVIEWED COMPANIES

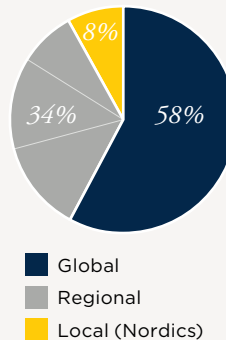
Size of companies (based on turnover in SEK)



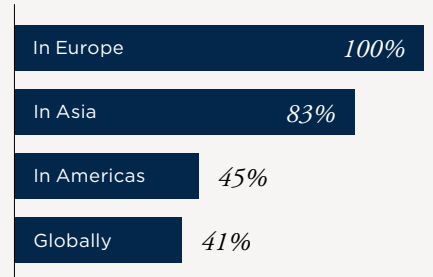
Segmentation of companies



Presence in global markets



Share of companies with significant part of their supply chains in the following regions





## KEY TAKEAWAYS

- Regionalisation is becoming a favoured strategy to de-risk supply chains, reduce time-to-market and enhance sustainability.
- Sales and operations planning is being implemented proactively to improve predictability and demand forecasting.
- Increased focus on consolidation of suppliers, dual sourcing and inventory management to improve economies of scale.
- Automation and geopolitical risks are reducing the attractiveness of further developing supply chains in low-cost countries.
- Swedish companies are optimistic about their readiness to succeed in a more regionalised and distributed supply chain environment.

The report series *Executive Global Insight* is published by Business Sweden to give Swedish business leaders regular analysis of the most important trends in cross-border trade.

The reports help decision-makers break down risks and opportunities and provide actionable insights, drawn from the knowledge and expertise of Business Sweden's global advisors based in more than 40 markets worldwide.

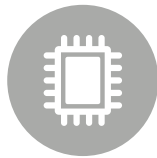
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# FOUR FORCES SHAPING FUTURE SUPPLY CHAINS

Global markets – and supply chains by extension – are becoming increasingly fragmented as the forces of geopolitical tensions, the technology race, labour competition and climate action prompt a new era of strategic thinking.



*Return of geopolitics*



*Technology race*



*Labour competition*



*Climate action*

## CURRENT OUTLOOK

The landscape for global business is changing rapidly as the world becomes increasingly fragmented. This is particularly evident when examining the flow of goods, technology and labour – all influenced by a new set of economic, political and industry-specific factors.

In this new reality, four driving forces are currently at play and are prompting more and more companies across all major sectors to re-orient their supply chains. This will have an impact on everything from business models to strategic planning, design and sourcing to manufacturing, packaging, marketing, distribution.

While there is no one-size-fits-all approach to building a supply chain strategy that is fit for the future, the key to success in all industries will be to strike a balance between diversified local, regional and global supply chains.



### 1. THE RETURN OF GEOPOLITICS

The first driving force, which has also become a priority concern

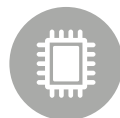
for companies recently, is the continued rise of geopolitical tensions which has prompted new trade barriers and protectionistic measures with the US-China rivalry at the fore.

Russia's invasion of Ukraine dealt another major blow to the established multilateral system and pushed geopolitical competition even higher up on the agenda. Increased export controls, investment restrictions and a race on subsidies, coupled with shipping disruption and surging energy prices, have prompted companies to urgently reorganise their supply chain networks.

When it comes to action taken by the US, the CHIPS and Science Act and the Inflation Reduction Act – both signed into law in 2022 – exemplify the changing dynamic as subsidies, tax credits and other incentives are used to boost the country's domestic manufacturing sector.

Both are linked to US objectives of pursuing superiority in high-tech sectors while safeguarding national security. As pointed out in a recent report from the International Chamber of Commerce (ICC), the former bill aims to restrict investments in semiconductor manufacturing in China, or any other country of concern, and the latter includes incentives designed to minimise China's role in the clean tech pipeline.<sup>1</sup>

In the case of Europe, Russia's invasion of Ukraine has triggered a fundamental reassessment of economic relations and dependencies within the EU. The European Commission urgently encouraged member states to tighten their screening of investments linked to Russia and Belarus while taking major steps to reduce dependence on Russian energy resources and raw materials. In this context, regionalisation has become an inescapable necessity.



### 2. TECHNOLOGY RACE INTENSIFIES

The technology race is playing a key role in the new competitive playing field. Business models and decision-making processes are becoming increasingly data-driven, and supply chain planning is no exception. Today, not only countries but also companies are leveraging new technologies to ensure strategic autonomy and resilience as a way of mitigating future disruptions.

<sup>1</sup> ICC 2023 Trade report: A fragmenting world

Enabling technologies such as artificial intelligence, the Internet of Things, blockchain, and automation are changing production processes, lowering labour costs and logistics, and raising productivity. But at the same time, global technology transfer and information flow is clouded with uncertainty as countries increasingly define and implement more restrictive data regulations.

In this context, the world's leading economies – the EU, US, China, and India have all embraced distinct approaches to data governance including storage, use and transfer. This decoupling in the name of data protection has clearly made global business more complex. While there is little evidence so far that globalisation is being pushed into reverse, as a recent study highlights<sup>2</sup>, concerns are growing around the further fragmentation of information flows.



### 3. LABOUR COMPETITION HEATS UP

The global labour market is currently struggling with shortages of skilled workers in sectors that are vital to the green and digital transition. Simply put, demand is outstripping supply and changing job requirements are creating a competency gap.<sup>3</sup>

In light of this tug-of-war for talent, companies need to invest more than ever in employee development and retention. Besides scouting the right competences, success will also depend on their ability to embrace the new era of flexibility ushered in by the pandemic.



### 4. ALL EYES ON CLIMATE ACTION

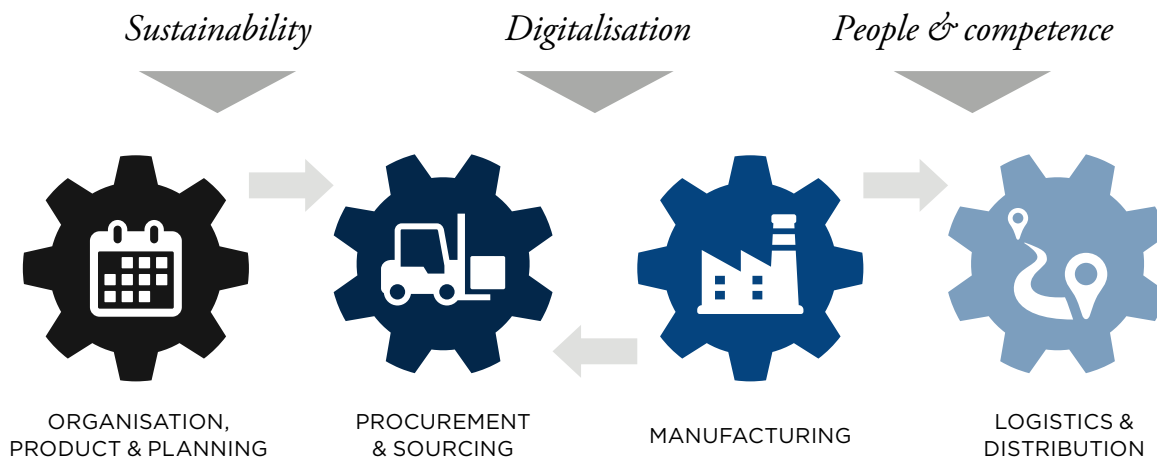
Reducing the carbon footprint of global supply chains is critical for the future viability of companies. The pressures to step up climate action are not only mounting from the perspective of customers, but new regulations are dictating the way forward, for example the EU's Carbon Border Adjustment Mechanism (CBAM).

In the global push for sustainability, companies are racing to adopt cleantech innovations and circular economy models to gain a green competitive edge. The mass deployment of clean technologies has put the issue of securing critical raw materials in the spotlight for strategic sectors such as energy, transport, and defence.

Growing uncertainty over costs is another major challenge in the current efforts to decarbonise the world's economies. Automotive manufacturing is just one industry where decarbonisation is both complex and involves massive upfront costs due to required investments in R&D, technology and product development, as well as other large repercussions in upstream value chains (e.g steel and aluminium).

Achieving this transformation requires coordinated efforts by all stakeholders with governments being the key actors in terms of introducing new regulations, incentives and financial instruments.

## PROCESSES AFFECTED BY THE SUPPLY CHAIN SHIFT

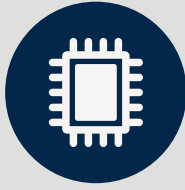


<sup>2</sup> DHL Global Connectedness Index 2022: An in-depth report on the state of globalization  
<sup>3</sup> DHL Supply Chain, Talent Gap: Winning the War for Talent

## DRIVING FORCES



*Return of geopolitics*



*Technology race*



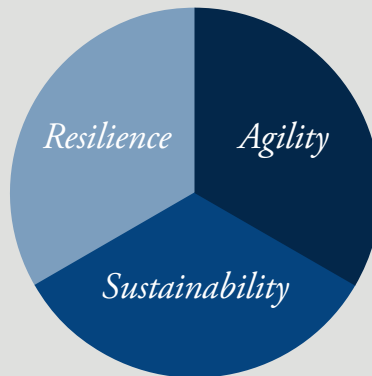
*Labour competition*



*Climate action*

## KEY TRENDS IN SUPPLY CHAIN SHIFT

OPERATIONAL PLANNING  
DUAL DESIGN  
DUAL SOURCING  
MODULARISATION  
SUSTAINABILITY



GREEN PROCUREMENT  
REGIONALISATION  
AUTOMATION  
CONSOLIDATION  
LOGISTICS AND DISTRIBUTION  
UPSKILLING

## PURSUED ACTIONS

IMPROVE RISK MANAGEMENT  
BUSINESS CONTINUITY PLANNING (BCP)  
MONITOR REGULATORY CHANGE  
DECARBONISE SUPPLY CHAINS  
FOCUS ON LOCALISATION  
CONSOLIDATE SUPPLY CHAIN TEAMS

REVIEW PRODUCT PORTFOLIO  
INCREASE PRODUCT / MATERIAL UNIFICATION  
DIVERSIFY SUPPLIER BASE  
INCREASE SUPPLIER CONTROL  
BALANCE REGIONALISATION VS ECONOMIES OF SCALE

MITIGATE DISRUPTION  
BOOST SALES AND OPERATIONS PLANNING (S&OP)  
AUTOMATE PROCESSES  
TRAIN EXISTING / NEW TALENT  
OPTIMISE LOGISTICS AND DISTRIBUTION  
MANAGE CUSTOMER BASE COMPLEXITY

*“Already today we are limited in utilising the whole extent of the US market if our products have a Made in China label on them, and this has become constant regardless of presidential shifts in the US.”* COO, HEALTHCARE SECTOR

## **A SWEDISH PERSPECTIVE ON GEOPOLITICAL TENSIONS**

The interviewed Swedish companies all confirm that geopolitics have added a new layer of complexity in their supply chain decisions, especially for those operating in sensitive value chains. While they are not making swift market exits and/or geographic moves, they choose to either expand or decrease their volumes gradually depending on the current geopolitical state of affairs and associated risks.

Geopolitical tensions and new policy instruments aimed at ‘friendshoring’ are being carefully monitored by Swedish supply chain managers and has become a key element of their risk assessment. Some companies are proactively exploring the China + 1 strategy as part of their efforts to de-risk supply chains, turning their attention to India, Vietnam and other alternative countries in the region.

The biggest worry highlighted by a majority of the interviewed companies is the current state of US–China relations. The concerns are often two-fold:

- a) Many companies currently have suppliers in Taiwan and getting these components into production in China is now a sensitive issue, coupled with growing tensions overall which may lead to an open conflict.
- b) Companies are not worried about production in China, but more so the worsening trade war between the US and China as this could potentially mean that China-made products cannot be brought into the US and Europe. Retaliatory measures blocking trade in the opposite direction is also a concern.

Against this backdrop, geopolitical tensions are considered one of the top reasons for why companies are diversifying their supplier base and expanding their risk assessment work, scenario planning and mitigation measures.

Additional drivers: Russia’s invasion of Ukraine was mentioned as an additional risk factor impacting decision-making but more so in relation to security rather than supply chain-related dependencies (except for companies in value chains relying on specific raw materials).

Besides this, changing regulations are pushing some companies to reconfigure supply chains, such as the Corporate Sustainability Reporting Directive (CSRD) which adds new requirements on disclosing in-depth details about suppliers across all parts of the value chain.

*“We are hesitant about China. Although there are no active plans to fully re-allocate, our strategy is to diversify our supplier base by starting to collaborate with more companies in Europe, but also expand our supplier footprint in Asia.”*

DIRECTOR STRATEGIC SOURCING,  
HEALTHCARE SECTOR

SHENZHEN, CHINA





# CHARTING A NEW COURSE: THE KEY TRENDS

Think global, act local – this is the basic premise of today’s supply chain management. In this section we examine the most important trends influencing Swedish companies’ strategies for international procurement, sourcing, manufacturing and logistics.



## RETHINKING OPERATIONAL PLANNING

The growing trend towards regionalisation means that production is moving closer to where products are sold, for all the reasons outlined in the previous chapter. However, the Swedish companies interviewed in this study confirm that they are also consolidating their supply chain organisations to improve overall efficiency.

By consolidating supply chain planning they get better control over key processes while at the same time leveraging all the benefits of manufacturing closer to their customers. In some cases, executing regional planning at the global organisational level will be a challenging task, especially when companies have large volumes of intermediate goods sourced from many different suppliers in each region.

For this reason, a significant share of the interviewed companies will take a gradual approach that involves:

- **Consolidation of volumes:**  
global commodities vs local components
- **Increased internal visibility:**  
by implementing ERP (Enterprise Resource Planning) systems and tools across regional organisations
- **Control of product roadmap:**  
by making product development as customer centric as possible
- **Insourcing (when possible):**  
to secure better control over processes and costs

Most of the interviewed companies confirm that they are paying more attention to demand forecasting, scenario planning and financial planning to improve their agility. Another reason why forecasting has become so important is the continued pressure being felt from high inflation and energy costs.

Meanwhile, digitalisation continues to unlock new capabilities. Swedish companies are becoming more and more adept at leveraging data and digital tools to consolidate all aspects of their supply chains, from order to delivery, and thereby achieve efficiency gains. This, for example, allows them to deploy new inventory planning and manufacturing strategies including:

- **Make-to-stock (MTS):**  
production planning and scheduling based on forecasted product demand
- **Make-to-order (MTO):**  
production is only started on receipt of confirmed customer order

Some of the companies are also exploring how AI can help them reach new levels of accuracy in their forecasting and planning. Besides this, Supplier Relations Management (SRM) platforms are more commonly deployed by global companies to identify synergies and streamline supplier management practices.

CO<sub>2</sub>

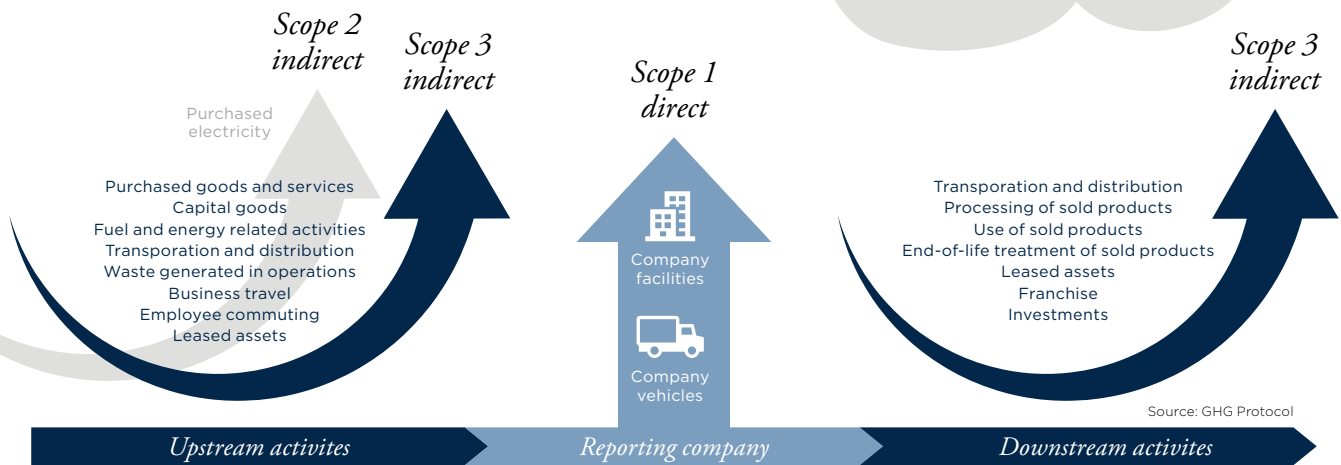
CH<sub>4</sub>

N<sub>2</sub>O

HFC

PFC

SF<sub>6</sub>



### OVERVIEW OF SCOPE 1-3 EMISSIONS ACROSS VALUE CHAINS



#### SUSTAINABILITY TAKES CENTRE STAGE

Multiple strategies are being deployed to tackle sustainability-related challenges in product development, planning, manufacturing and distribution. Components that have a notoriously high CO<sub>2</sub> footprint are increasingly being reused in remanufactured products.

More emphasis is also being put on weight management as one of the key streams in improving the lifecycle of products. As Swedish companies set zero waste targets, the entire product roadmap is being designed for reuse, repair or recycling back into nature or the marketplace.

Supply chain managers are currently grappling with challenges such as collecting materials for recycling from a global customer base which, in turn, will determine whether recycling can be managed inhouse or if it must be outsourced across different markets. There is also an increased focus on renewable energy in footprint decisions.

Swedish companies are at the forefront of the global push for sustainability and circular material flows, but the interviewed companies highlight important gaps when it comes to reporting on sustainability and calculating CO<sub>2</sub> emissions across Scope 1-3, to mention one example. Typically, Scope 3 emissions are the most difficult to track.

Filling this gap will become paramount in the run up to the EU's introduction of a Digital Product Passport (DPP) which aims to improve transparency on product information across the entire value chain, including data on raw material extraction, production and recycling.

The European Commission aims to implement the new legislation in 2026 for three industries: apparel, batteries and consumer electronics – with more to follow and food and pharmaceutical products to be excluded.

According to the feedback from the interviewed companies, supply chain managers are now ramping up their focus on:

- **Product lifecycle management (LCM):** including introduction of end-of-life monitoring of physical products and proactive recycling and reuse practices
- **Integrated chain management (ICM):** continuous analysis to reduce the environmental load of products across the lifespan, from cradle to grave



### MORE FOCUS ON DUAL DESIGN

The disruptions caused by the pandemic, war in Ukraine and rising geopolitics have exposed the many vulnerabilities of global supply chains. One of the most talked about crises of late has been the semiconductor shortage which forced high-tech companies to re-design many components. This, in turn, meant that production processes had to be reconfigured.

Since then, companies have recognised that redesigning products in reaction to world events is substantially more costly than designing two versions of the same products from the start. For this reason, companies are now preparing for the unexpected by taking a proactive approach based on dual design and dual sourcing.

According to some of the companies interviewed for this study, adopting dual design proactively has enabled them to eliminate the need for keeping a buffer stock of components in their global supply chains.



### EXPLORING DUAL SOURCING

While being proactive clearly involves upfront costs, some of the interviewed companies point to useful strategies that can be deployed to facilitate an efficient dual design process. This includes revisiting the materials portfolio and bringing dual sourcing into R&D discussions at the earliest possible stage.

The benefits, they say, are convincing and especially when it comes to strategically important products such as electronics. Safeguarding critical deliveries is no longer optional. The goal of dual sourcing is to make sure that the most critical products and customers have a backup manufacturing site, which can always deliver in case of disruption.

The current debate is now focused on who will pay for the extra costs of dual sourcing strategies as customers have demonstrated little willingness to take on the burden. Initial discussions are taking place on finding a mechanism for sharing the cost of dual sourcing.



### SPOTLIGHT ON MODULARISATION

Product-driven companies are increasingly embracing modular design as an efficient pathway to offering customized products while improving economies of scale. Modularisation involves the re-use of hardware components combined with interchangeable modules and software which allows for different product configurations to match customer needs.

This trend is picking up momentum in several industries, not least in the automotive sector, where business models based on modular products are increasingly becoming necessary to stay competitive. The interviewed supply chain managers confirm that they are actively pursuing opportunities to make their product portfolios more modular with customised designs.

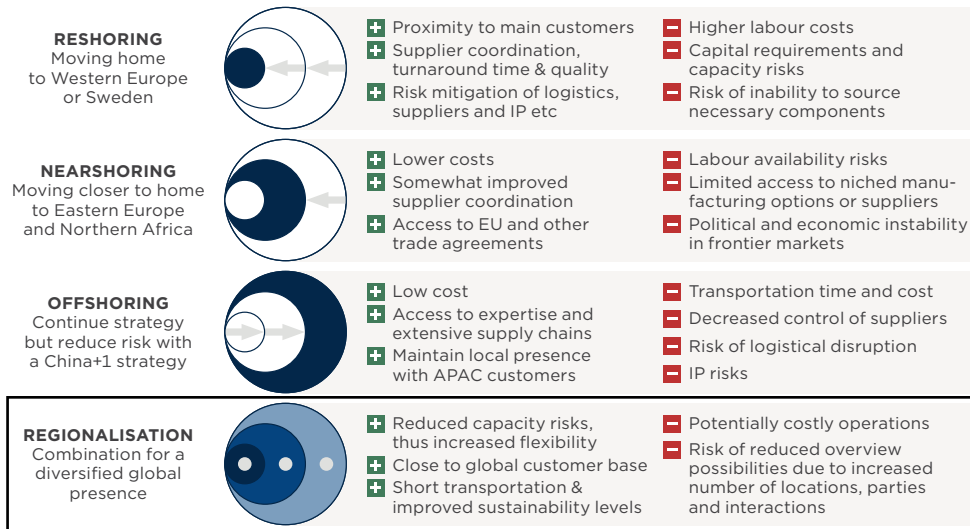
While modularisation is not suitable for all companies – especially the ones already offering many unique designs and a broad spectrum of products – it is nonetheless becoming a strategic imperative.

On the procurement side, more and more SMEs (less common among large corps) are looking to purchase more modularised components closer to Sweden, so that they can focus on final customisation for their clients. Overall, challenges such as time-to-market and the need for flexible sourcing and production strategies to support wider adoption of modularisation still need to be tackled.

*“We work hard to understand the actual cost of components versus the gains from modularised components including logistical and inventory savings.”*

DIRECTOR OF PURCHASING, INDUSTRIALS SECTOR

## SUPPLY CHAIN REGIONALISATION TRENDS



Source: Business Sweden EMEA Regionalisation Study



### REGIONALISATION PICKS UP SPEED

Most Swedish companies consulted for this study report that they are moving away from scaling production in low-cost countries. The trend towards regionalisation appears to be accelerating, however, conventional outsourcing is far from obsolete. The regionalisation of supply chains is proving to be a balancing act.

Some supply chains are going regional, or even local, for strategic markets where origin of manufacturing will have a direct impact on sales performance. But in other cases, suppliers will be sourced globally. However, a sizeable share of the interviewed companies have recognised the need to reshape the outbound part of their supply chains, given that many are still sending parts to Sweden and then redistributing them from there globally which is both costly and inefficient.

While the majority of the interviewees are trying to regionalise their supply chains – with stated goals of sourcing more in Europe and the US – diversifying away from China is also proving to be challenging given the country’s long-established and advanced supply networks. That said, most projections indicate that governments will only intensify requirements on local production over the next ten years, which certainly goes for China as well as it has already implemented such regulations.

Moreover, there is a clear understanding among the companies that realising their market potential in the US will get increasingly difficult if their products are stamped with ‘Made in China’ labelling. Besides this, a significant share of the interviewed supply chain executives believe that having local production will be a strategic imperative to secure future business regardless of whether supply chains are regionalised or localised.

This reason for this, not surprisingly perhaps, is that customers are demanding ever-faster delivery times coupled with higher expectations on sustainability performance. The bottom line is that certain strategic parts and components will be sourced locally and others at the global level. The short-term priority is to reshore big and bulky components back home, which has been one of the pain points for logistics cost optimisation lately.

Where and how companies choose to regionalise their footprint will be dictated by the centre of gravity of their business. More often than not, customers are demanding that suppliers move closer and offer more flexibility. For companies that mainly sell in Europe and the Americas, divesting in Asia will possibly make sense. But for the companies who see most of their demand coming from Asia, maintaining a supply network in this region will be the first choice.

Some Swedish companies are currently exploring supply chain alternatives in other East Asian countries to reduce their exposure in China while maintaining customer proximity and economies of scale. The idea is to have more than one partner for critical products.

In addition to these dual sourcing strategies, a select group of companies are pursuing dual production capabilities to mitigate risks related to the loss or closure of manufacturing sites. Doing so in a cost-efficient way, however, is difficult and requires cost optimisation in the form of common sourcing and other measures, including deeper collaboration with key Tier 1 suppliers to identify and manage Tier 2 and Tier 3 suppliers.

*“During the pandemic, localisation enabled us to stay ahead of the competition. We were operating in the distributed footprint framework with primary and backup sites. On top of that, we were predictive on components and critical raw materials, which allowed us to run the machines non-stop.”*

HEAD OF GLOBAL SUPPLY CHAIN, ICT AND ELECTRONICS SECTOR



### PUSH TO CONSOLIDATE

Most of the interviewed companies are taking steps to consolidate their suppliers – in essence reducing the number of suppliers they have across the world. The benefits of this include time and cost savings and the ability to build closer relationships with select suppliers.

But this is always weighed against the importance of having “security stock” and backup suppliers for critical parts and components that can bring production to a halt. Overall, the push to consolidate is mainly occurring in the way supply chains are managed, meaning that regional supply chain teams are being incorporated into the global organisational structure.

This gives the companies better control over supply chain processes and, according to the interviewed executives, makes it easier to quickly identify and engage suppliers for regional or global volumes.

*“When you compare individual streams in different regions, maybe the global partner is not the most competitive. However, when you consolidate the cost of such global collaboration, this will end up being the most efficient solution.”*

COO, HEALTHCARE SECTOR



### GREEN PROCUREMENT

More and more work is being done to identify and disclose the origin of materials. The interviewed companies point to the benefits of existing tools such as the Environmental Product declaration (EPD) developed by the International Organization for Standardization (ISO) – as this helps to put pressure on other stakeholders in the value chain.

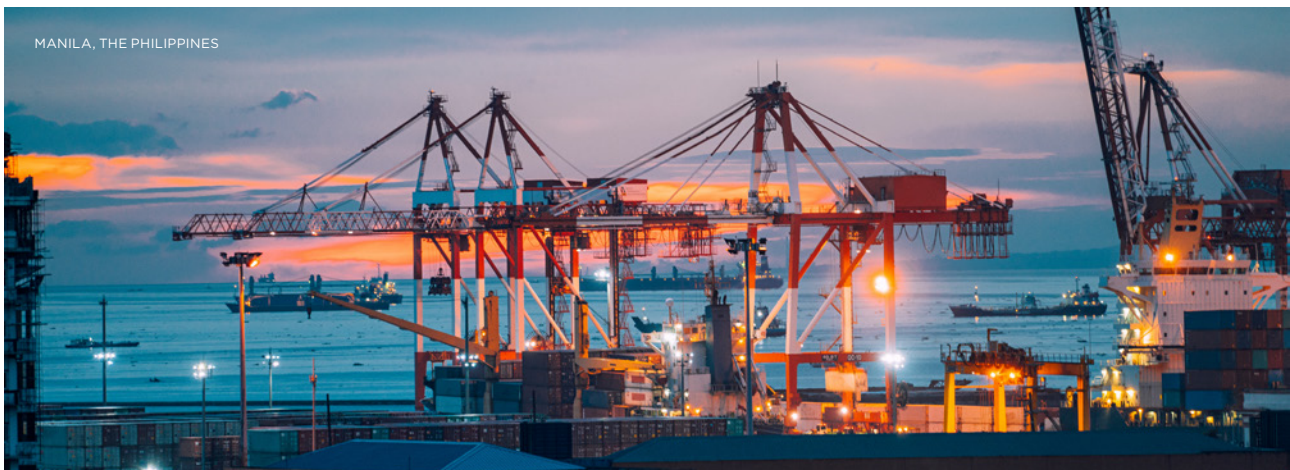
The EPD documentation process means that the lifecycle environmental impact of products is independently verified, ultimately providing more transparency on value chain emissions. Similarly, the Carbon Disclosure Project (CDP) linked to the Paris Agreement provides a vehicle for managing risks and opportunities in terms of climate taking action.

Some 13,000+ companies are affiliated to the Carbon Disclosure Project – including many Swedish frontrunners – which helps all members measure and manage their risks and opportunities related to climate change, water security and deforestation.

The interviewed Swedish companies in this study confirm that greatest risks are linked to how materials are sourced. Determining whether materials are biobased or recyclable requires extra resources and local knowledge to monitor supply chains worldwide. New digital tools are coming into play in this context to continuously improve transparency and compliance with sustainability standards.

*“Increasing and localising our manufacturing footprint is our main enabler to become more sustainable.”*

CEO, INDUSTRIALS SECTOR





### THE AUTOMATION FACTOR

Most of the companies sampled in this study across all industries are moving towards more automated processes – with some reporting that they have reached a 90 per cent automation level. And the implementation of automation goes well beyond manufacturing.

According to the answers, many Swedish companies currently feel the need to do more to automate and adopt new technologies across their global operations. Automated vehicles for transport, automated inbound and outbound warehousing – these are a few of the additional focus areas that are being given top priority.

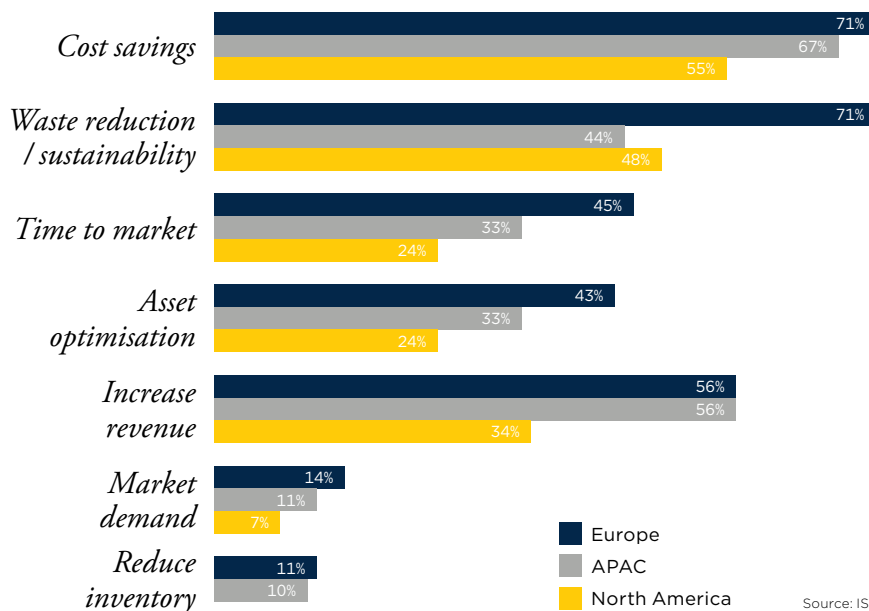
The benefits are unmistakable. Apart from unlocking major cost savings and reducing waste, automation has enabled many Swedish SMEs operating from Sweden or Europe to inhouse their manufacturing, helping them to minimise risks and lead times and improve quality control. The general trend is to automate whenever possible, build inhouse capabilities and then explore nearshoring opportunities.

Conversely, finding the right partners to support both continued automation and the shift to electrification of transport and industrial processes abroad has been identified as a main challenge. The interviewed executives also express concern about the increased demand for electricity triggered by the introduction of more automation technology, digital tools and electrified transport in all parts of the supply chain.

*“We always look into balancing labour and automation. On one hand, there is a deficit of blue collars in manufacturing in Europe. On the other hand, it becomes even more difficult to find support personnel to run and sustain automated production (e.g. engineers, programming, maintenance). Also, automation is cash intense and does not always make sense from the RoI point of view.”*

CEO, TRANSPORT SECTOR

### MOTIVATIONS FOR ADOPTING SMART MANUFACTURING



Source: ISG Research



### OPTIMISING LOGISTICS AND DISTRIBUTION

The interviewed companies are all spending more time and effort on optimising global transport and logistics to prevent intermediate goods from getting stuck in deliveries. This includes ramping up digital planning and forecasting tools and robotisation in warehousing.





The disruption caused by recent crises, notably the pandemic and war in Ukraine, has prompted more companies to diversify their logistics network. Many supply chain managers realised they were too dependent on air cargo and are now opting for a broader mix of transport modes. Continued volatility in freight costs, lead times and sustainability aspects remain the biggest challenges which has been a wake-up call for companies with widely distributed supply chains.

This unpredictability leads to a complex set of decisions. In some cases, companies are choosing to fly low quantities of goods to meet customer expectations on fast deliveries. Other supply chain managers are gradually moving away from air, sea and rail freight as land deliveries via electric trucks becomes more available.

Meanwhile, companies are also focusing on maintaining working capital and efficient inventory. Buying from China, for example, pushes up inventory levels and costs. To counteract this, the interviewed executives are spending more time and effort on finding a good sequence of incoming supplies rather than building up stock.

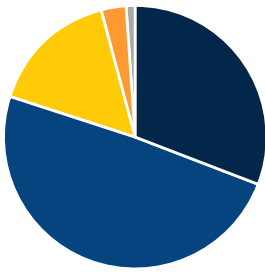
Optimisation is also being pursued by partly using operational plants as fulfilment centres – a widely adopted measure during the pandemic – while others are choosing to work with distributors as part of their optimisation strategy.

### PRIORITIES IN LOGISTICS AND DISTRIBUTION

		1ST PRIORITY	2ND PRIORITY	3RD PRIORITY
<i>Freight services</i>		Cost	Accuracy	Speed
<i>Order management</i>		Accuracy	Speed	
<i>Warehousing and distribution</i>		Service quality	Cost	Speed
<i>Freight consolidation</i>		Service quality	Cost	Speed

Source: Kearney State of Logistics 2023

## WORKFORCE EQUIPPED WITH THE NECESSARY SKILLS TO HELP ENSURE RESILIENCE IN THE SUPPLY CHAIN



- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Unsure

Source: PWC 2023 Digital Trends in Supply Chain survey



### UPSKILLING IS ESSENTIAL

The majority of the interviewed companies confirm that they are paying much more attention to building specialist competences in supply chain management. In short, upskilling has become an essential necessity to tackle the complexities of today's shifting landscape and to keep up with the fast-moving industry trends outlined above.

This includes training personnel in everything from new digital tools for demand forecasting, volume/business planning and inventory management to responsible sourcing and procurement and leadership skills for supply chain teams. More emphasis is being put on developing technical competences for assessing quotes, identifying competitive advantages and handling negotiations.

Upskilling is particularly important at this point in time given that many companies are centralising their supply chain management functions, while decentralising their footprint and sourcing.

*“We address four areas in our strategy: people & culture, responsible purchasing, global collaborations, and supplier relationship management.”*

SENIOR VP PURCHASING,  
TRANSPORT SECTOR

DUBAI, UNITED ARAB EMIRATES





## CONCLUSION

# KEEPING A FINGER ON THE PULSE

Change is the new normal. Swedish companies are thoroughly reviewing their global supply networks, practices and routines – to keep pace with new realities on the ground, sustainability pressures and fast-moving technology trends.

Global supply chains are undergoing rapid transformation and will remain in a state of flux as companies adapt to a complex new landscape. This involves assessing everything from macro-economic and geopolitical risks to adopting automation and new digital tools to meet customer demands on agility and speed, while also taking steps to improve sustainability performance.

Embracing this period of change is the only way to ensure resilience, competitiveness and prosperity in the years ahead. As the companies interviewed for this study have pointed out, global sourcing and procurement today is increasingly about addressing uncertainties in a proactive way, and to build supply chain strategies that allow for flexibility, greater visibility and control.

### NO 'ONE-SIZE-FITS-ALL'

There is no universal roadmap to succeed in the new supply chain environment. Take for example regionalisation, a trend that is indeed moving forward. Swedish companies are recognising the benefits of developing regional production hubs, but their strategies are measured as some conditions still favour long-distance trade. Moreover, alternative supplier solutions to dominating nations such as China are not always available, not yet at least.

As such, we can observe that the pendulum hasn't swung quite as far as many analysts believed it would a couple of years ago. But in the cases where regionalisation is a viable option, the interviewed companies demonstrate strong commitment to move as close to their customers as possible, and even localise their operations. With this in mind, it is clear that we are heading towards a much more distributed supply chain environment where new just-in-time models will undoubtedly emerge.

### TECHNOLOGY MARCHES ON

In contrast to this mixed pace of change, the march of digitalisation is only intensifying and companies are investing more and more in

automation and other enabling technologies that provide better demand forecasting capabilities, supply chain visibility and ultimately pave the way for more informed decisions.

A number of the interviewed companies report that financing is becoming a problem for many stakeholders in their supply chains, given that high interest rates have caused a lack of cash in the system. This comes at a time when many need to upgrade their processes and invest into machinery, digital tools and automation. Some companies are sacrificing their margins to improve their cash flow for technology investments that will help to ensure a more stable future.

### MORE DISRUPTION IS EXPECTED

Although the supply chain shocks from the pandemic and war in Ukraine have largely abated, the interviewed executives are still expecting future disruption. This may come in the form of issues that were previously considered of minor importance – for example the question whether parts and components manufactured in China will even be permitted in some markets.

The interviewed companies have expressed clear concerns related to the current geopolitical tensions, particularly when it comes to the supply of electronics and high-tech components but also when it comes to raw materials sourcing.

### THE ROLE OF PARTNERSHIPS

In all, the current rewiring of global supply chains will require closer collaboration between stakeholders than ever before. Whether transformation involves technology upgrades, living up to new sustainability standards and social responsibility, addressing risks, cost optimisation or meeting changing customer requirements – getting your suppliers onboard with a new mindset and coordinated action is critical to success.

In this sense, the companies that develop the strongest partnerships and strategic alliances across all three tiers of suppliers are likely to emerge as winners in the new era.

*“Partnership is the new leadership. This is the future of the supply chain relations.”*

SVP SOURCING,  
TRANSPORTATION  
SEGMENT

# STRATEGIC RECOMMENDATIONS

## ORGANISATION, STRUCTURE & PLANNING

- Improve risk management in all supply chain decisions.
- Enhance business continuity planning (BCP) to strengthen your ability to deliver regardless of potential disruptive events.
- Boost sales and operations planning (S&OP) to allow for better integration of demand forecasting.
- Monitor regulatory changes which may have a disruptive impact on supply chains (e.g carbon disclosure mechanisms, raw materials access, local manufacturing requirements etc.)
- Consolidate supply chain teams, global volumes and supplier relations to enable greater visibility, economies of scale and sustainability.
- Focus on localisation to eliminate risks, increase sales thanks to customer proximity and to improve environmental footprint.
- Mitigate supply chain and sourcing disruption through regionalisation, dual/multiple sourcing, improved inventory management, product and material unification and integrated business planning.

### PRODUCT

- Review product portfolio to identify potential improvements in terms of supply chain efficiency.
- Increase product/material unification to reach higher levels of redundancy.
- Manage customer base complexity by reviewing product lifecycles and portfolio complexity on a running basis.

### PROCUREMENT & SOURCING

- Diversify supplier base both operationally and geographically and consolidate key suppliers to gain better efficiency, product and quality control.
- Increase supplier control through close partnerships with key suppliers – covering the full lifecycle from product design to end usage.

### MANUFACTURING

- Closely monitor and adapt to 'Made In' requirements for selective sectors.
- Consider the benefits of inhousing to minimise risks and lead times, and increase quality control.
- Secure energy supply to support continued pace of electrification across manufacturing processes.

### LOGISTICS & DISTRIBUTION

- Optimise logistics and distribution by focusing on rightsizing strategies, order optimisation and by establishing regional distribution hubs.
- Improve visibility and security stocks to enable greater flexibility and customer satisfaction on the distribution side.

### SUSTAINABILITY

- Decarbonise supply chains to not only improve sustainability performance but also to tackle one of today's largest risk factors.

### PEOPLE

- Train existing/new talent and develop competences around sustainability, technical proficiency and supply chain management.

### TECHNOLOGY

- Automate processes when relevant in terms of cost benefits/ROI and evaluate inhousing or nearshoring options.



ÖRESUND BRIDGE, SWEDEN

## BUSINESS SWEDEN CAN SUPPORT YOU

Business Sweden's supply chain management specialists have helped many Swedish companies, of different sizes and in diverse sectors, to maximise the impact of their supply chain strategies.

We can help you improve your risk management, sales and operations planning (S&OP), procurement, sustainability performance, logistics and distribution – and provide hands-on support for localisation, M&A and 'Make or buy' (MoB) decisions.

With a unique mandate from the Swedish government and the business sector, our global team offers strategic advice and practical support in more than 40 markets worldwide.



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*We help Swedish companies grow global sales and  
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