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CUTTING THROUGH COMPLEXITY AND CLIMBING COSTS IN CONSUMER GOODS SUPPLY CHAINS

How end-to-end visibility, integrated systems and synchronised logistics are changing the face of FMCG logistics

A Reuters Events, Supply Chain white paper in partnership with Maersk

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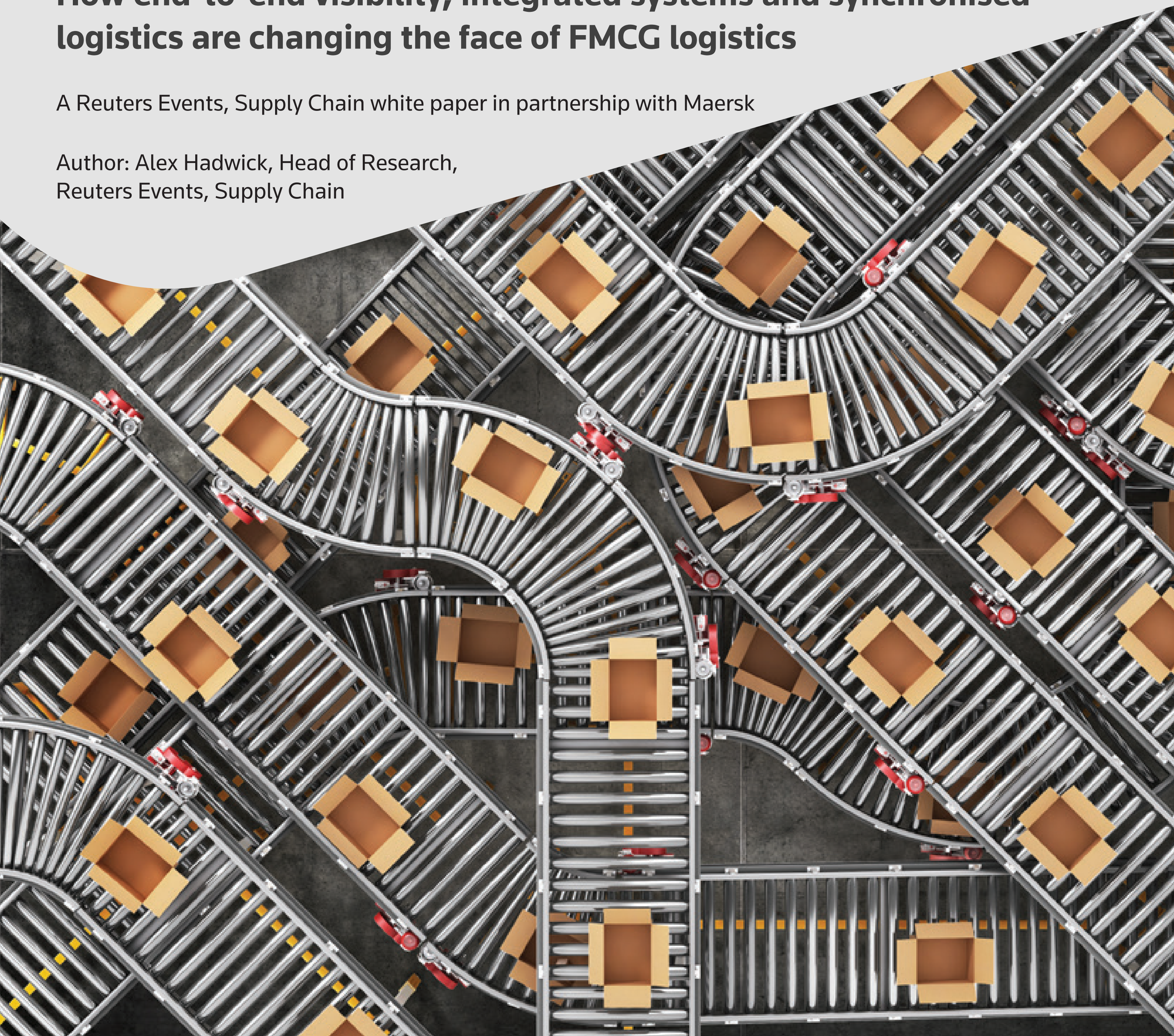

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FOREWORD

For consumer goods companies there are a coalescing set of trends that are making their supply chains more complicated, even as they need to move faster and more efficiently.

Hit with high inflation, both consumer goods companies and the consumers they serve are now looking carefully at their budgets and trying to find savings.

That is pushing consumer purchasing habits, already unsettled by the pandemic, to shift as well, introducing historically high demand volatility and an ongoing swing to online purchasing, with direct-to-consumer interest flourishing.

Meanwhile, disruption is far from over, particularly for Food and Beverage (F&B), where input shortages, geopolitical risk, labour constraints and transportation performance remain issues supply chain professionals must overcome.

To balance this risk, many are seeking more sourcing and manufacturing partners in more locations.

These factors are creating complexity for consumer goods companies managing a broader number of suppliers.

They now must monitor, coordinate and plan across wider and deeper supply chains, all while extending distribution capabilities.

The primary solution to these issues must come from increased visibility across the entire supply chain.

This is the fundamental building block for operational success, as with greater insight into what products and components are in demand, in transit or in short supply, the less uncertainty there is, the more accuracy there can be in planning, the faster decisions can be made and the lower the risks are when executing those plans.

It also allows greater coordination and planning with partners, which is the other fundamental capability needed in what are often fragmented and disparate FMCG supply chains. A wider spread of suppliers and a greater range of fulfilment channels means that oversight and cooperation are now mission critical.

In order to explore these key challenges for the sector and the ways they can be tackled, we have partnered with Reuters Events, Supply Chain to produce this white paper packed with expert opinion. It is our hope that these industry insights from companies like Nestle, Coca-Cola HBC and Heineken will help you see the big picture and develop strategies to improve your own operations, leaving you with a more resilient and efficient supply chain that is capable of thriving in this highly dynamic sector.

Gunnar Pflanz
Global Vertical Excellence Manager, FMCG, A.P. Moller Maersk

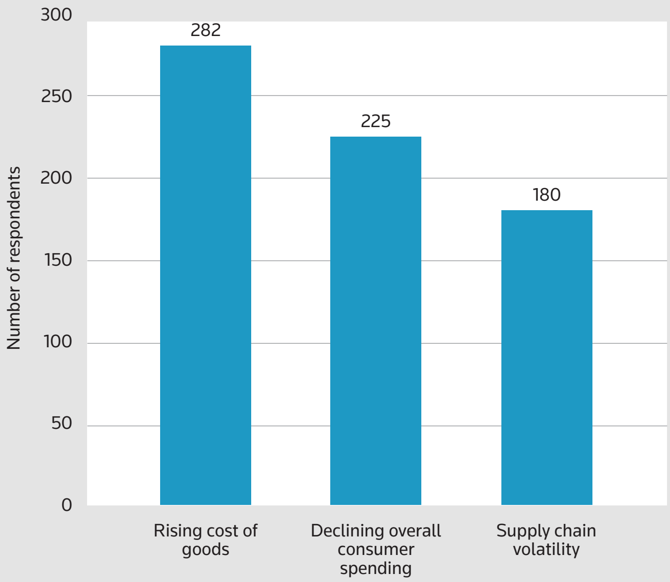
1
CONSUMERS AND CONSUMER GOODS FEEL THE SQUEEZE IN 2023

Consumers are under pressure in 2023, but producers and retailers might be under even more pressure.

As inflation has hit economies hard, and caused an unprecedented run of interest rates rises, consumer discretionary spend has been reduced. Consequently, many in the Fast-Moving Consumer Goods (FMCG) sector have had to focus hard on keeping operations lean to try and reduce the amount of price rises they must pass on to their customers.

This is reflected strongly in industry survey data from the last 12 months, where inflation and economic uncertainty repeatedly tops the bill of issues facing transport and logistics functions.

Figure 1: Top three concerns for retail leaders in 2023



Source: Resilient retail amid uncertainty, BCG, 2023

The top three concerns among over 550 retail leader surveyed by BCG in February 2023 were, firstly, rising costs, followed by declining consumer spending as a result of that inflation and then supply chain volatility.

A Reuters Events, Supply Chain survey from the start of 2023 found that the top disruptions expected largely centred around inflationary pressures, whether that was the squeeze on energy (66%) created by the Russo-Ukraine war (68%), reduced spending power among consumers (55%), or being hit by low labour availability (54%), which also typically leads to higher costs for businesses.

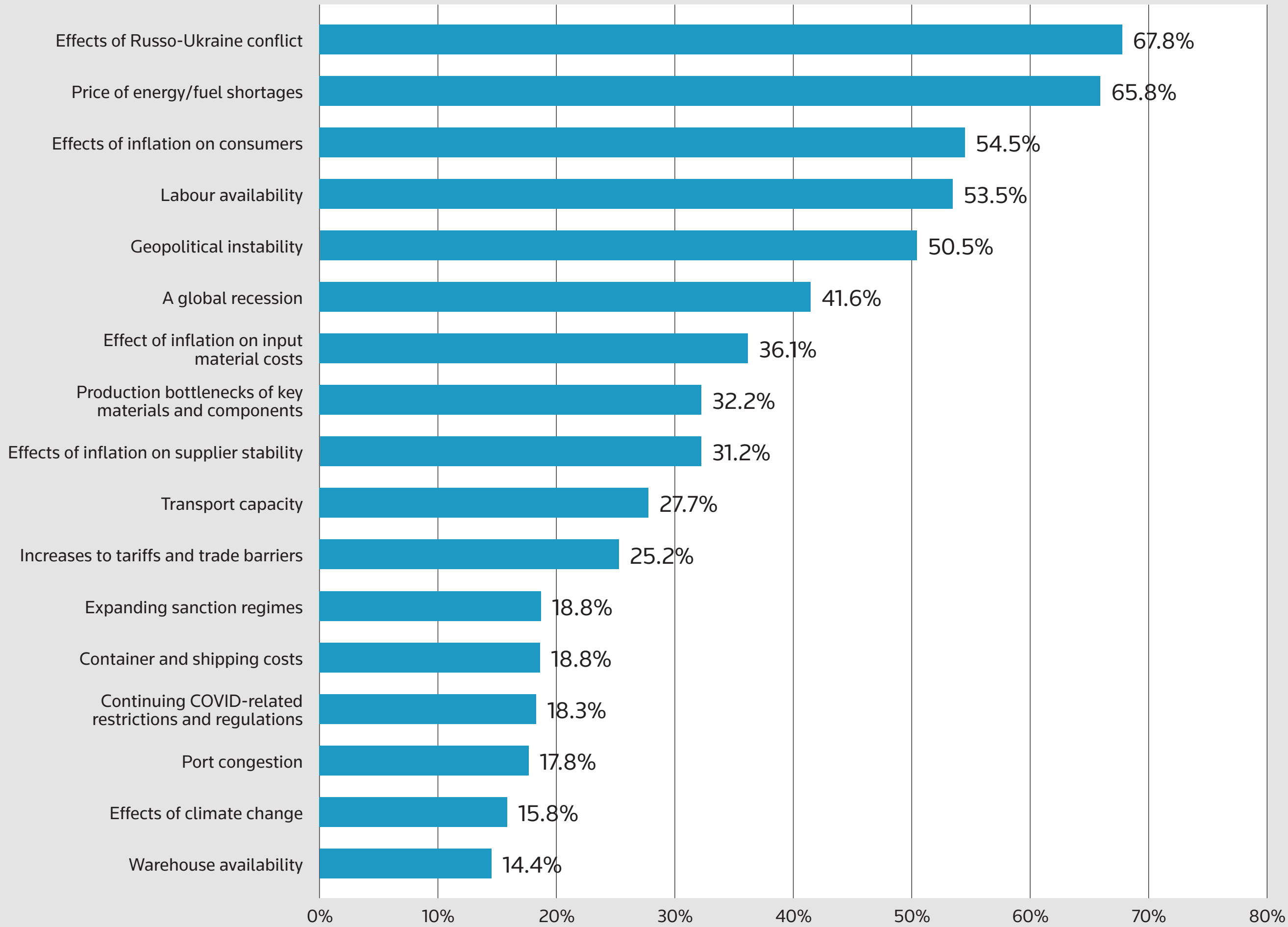
Likewise, CGS' survey of 350 fashion, consumer goods, and retail supply chain professionals found the top three challenges were all linked to the rising cost environment and the pressure it is placing on consumers goods businesses and their customers:

- 94% expected inflation and economic uncertainty to be a moderate or severe challenge.
- 90% said the same for labour shortages and rising payroll.
- 92% were concerned about margins falling as a result of rising costs.

This puts inflation and its consequences centre stage for the consumer goods sector in 2023 and into 2024.

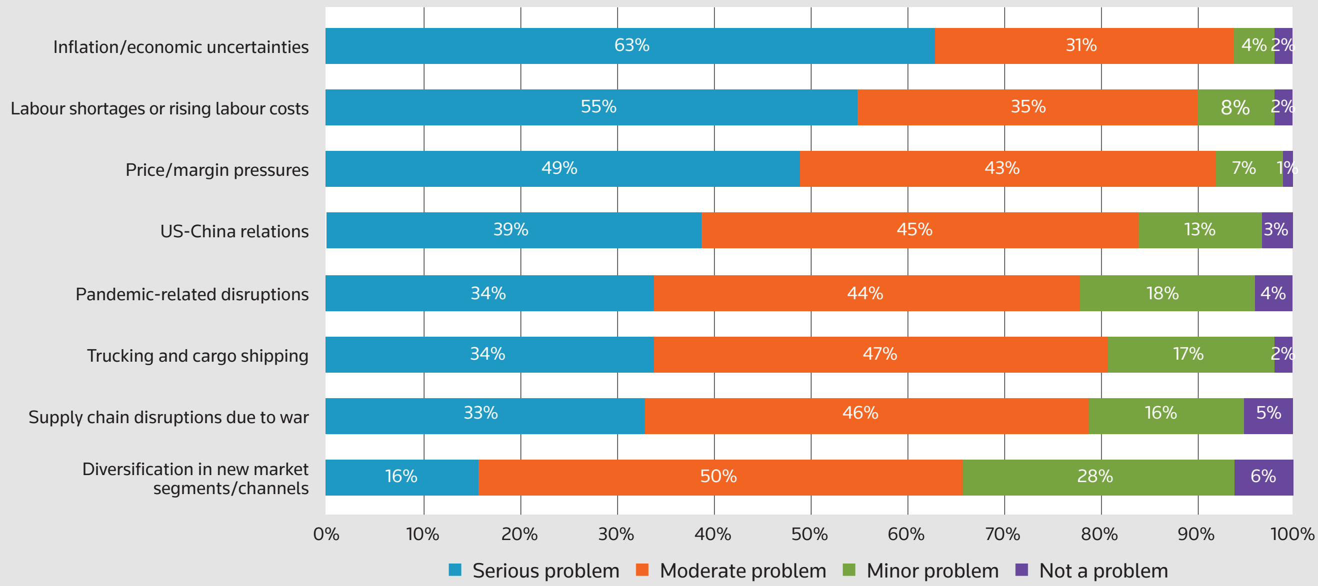
While a significant amount of that pressure from upwardly moving input costs for raw materials, products and components is being passed on to the consumer, competitive pressures and the reductions in consumer spending power mean that there is limit to how much prices at the till can rise. Therefore, FMCG firms often find themselves eating these increases.

Figure 2: Biggest disruptions expected to impact supply chains in 2023



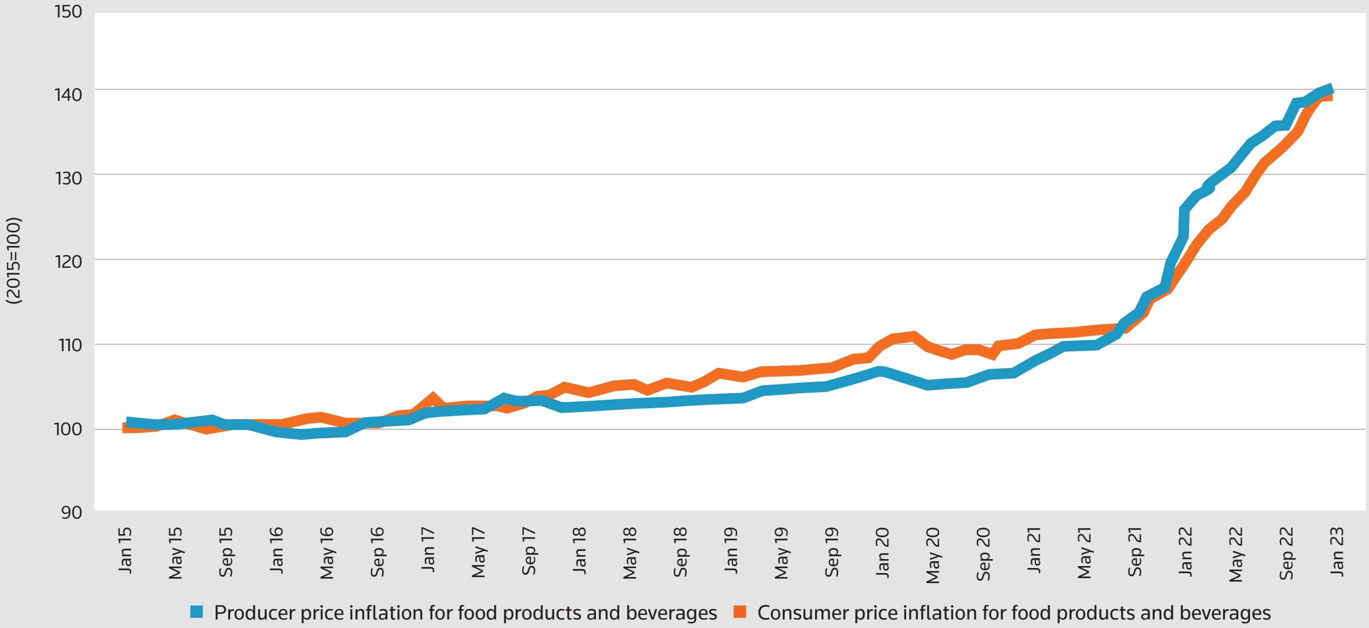
Source: The state of European supply chains 2023 in partnership with JLL, 202 respondents, Reuters Events, Supply Chain, 2023

Figure 3: Biggest supply chain challenges in 2023 for fashion, consumer goods, and retail industries



Source: CGS Annual Report: Supply Chain Trends & Technology, 100 respondents, CGS, 2023

Figure 4: EU, Industrial producer price and consumer price for food products and beverages, 2015-2023, unadjusted data (2015 = 100)



Source: Producer prices in industry, total - monthly data, Eurostat, 2023

European firms have been particularly impacted, seeing a stark reversal in the long-term trend for input and final sales prices for food and beverage items, for example.

Using Eurostat figures we can compare the changes in prices paid by consumers over time in the shops for F&B items and then also from producers to suppliers. These two measures are known as the Consumer Price Index (CPI) and the Producer Price Index (PPI), respectively. Through this we can see that costs for producers have risen faster than final sale prices over the course of 2022 and Q1 2023.

This is the opposite to the long run situation, where consumer prices have typically risen slightly ahead of producer inflation rates and at relatively predictable and low rates, allowing producers and retailers to maintain margins and plan ahead reliably.

For the F&B sector, the inflection point came at the close of 2021, where wider inflation in the economy began to heavily impact the sector.

From 2015 to 2021, PPI in the EU for F&B products was 1.5 percentage points behind CPI on average, but from January 2022 to April 2023 this flipped to a monthly average of PPI leading CPI by 3.4%. Translated, this means that companies in the sector have not been able put up prices on the shelves anywhere near as fast as their suppliers are raising them and that price rises have accelerated considerably. This has left firms internalising a big chunk of the difference for more than a year and handling a very different pricing environment, although we can now see an easing pace in price rises and the two measures coming together at the end of the available data series.

"Price is going to be the driver of consumer choice," comments Kelly Miely, Partner, Retail and Consumer Products Supply Chain, Buying & Merchandising at Deloitte. "Consumer trackers are showing us that they are looking for deals, they're looking for discounts, they're looking for value, and they're thinking a lot harder about what they buy and where they spend their money. I think that obviously has a big impact on FMCG companies because it puts pressure on them to invest more in discounting or high value products, and it also increases the competition from private label brands," she thinks.

Impacted consumer goods companies therefore need to find efficiencies and savings within their supply chains to remain competitive, maintain overall profitability and retain market share in a space where consumers' wallets are increasingly strained.

2 CONTINUED DISRUPTION, COMPOUNDING COMPLEXITY

2.1 Ambiguity and uncertainty in FMCG supply chains

Although consumers goods companies' number one concern is inflation, they also cannot neglect continued disruption in their supply chains and increasing complexity in both sales and procurement channels.

Alexandros Skandalakis, Director, Operations Strategy and Transformation for Greek nutrition company Delta Foods SA, summarises the situation for consumer supply chains over the last four years in one word: "Ambiguity".

"Whatever you were planning ahead for, you were assuming that things would go right... [but] in reality, those plans could be thrown upside-down easily," he says.

"Every business ecosystem can be impacted by external events beyond a company's control. Examples include COVID, national financial crisis, the war in Ukraine, energy price inflation, employee shortages or even fast changes in consumer preferences. Over the last four years we have seen a plethora of such black swan events happening at various places globally ... impacting businesses located thousands of kilometres away.

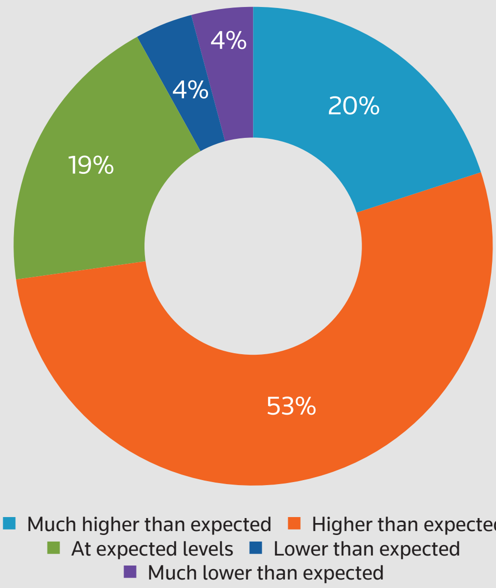
"One thing is certain: It's not the establishment of the most detailed and thought-out plan that makes a company survive, but its ability to promptly react to changes and successfully deal with ambiguity," he concludes.

Skandalakis' experience is not unusual, with nearly three quarters of 100 F&B and agriculture business leaders surveyed by Willis Towers Watson in Q4 2022 experiencing more losses in their supply chains from disruptions than they had expected over the preceding two years.

Furthermore, that survey noted a wide range of issues often experienced during the pandemic remain and continue

> **"WHATEVER YOU WERE PLANNING AHEAD FOR, YOU WERE ASSUMING THAT THINGS WOULD GO RIGHT ... [BUT] IN REALITY, THOSE PLANS ARE OFTEN THROWN UPSIDE DOWN"**

Figure 5: Which of the following best describes the extent of your business's supply chain risk-related losses in the last two years?



Source: 2023 Food, Beverage and Agriculture Supply Chain Risk Report, Willis Towers Watson (WTW), 2023 to fall onto supply chain planners' in trays. Component shortages (34%), dislocated transportation (28%) and low supplier capacity (26%) were all highly cited underlying risks for 2023 that have also frequently cropped up in the last four years.

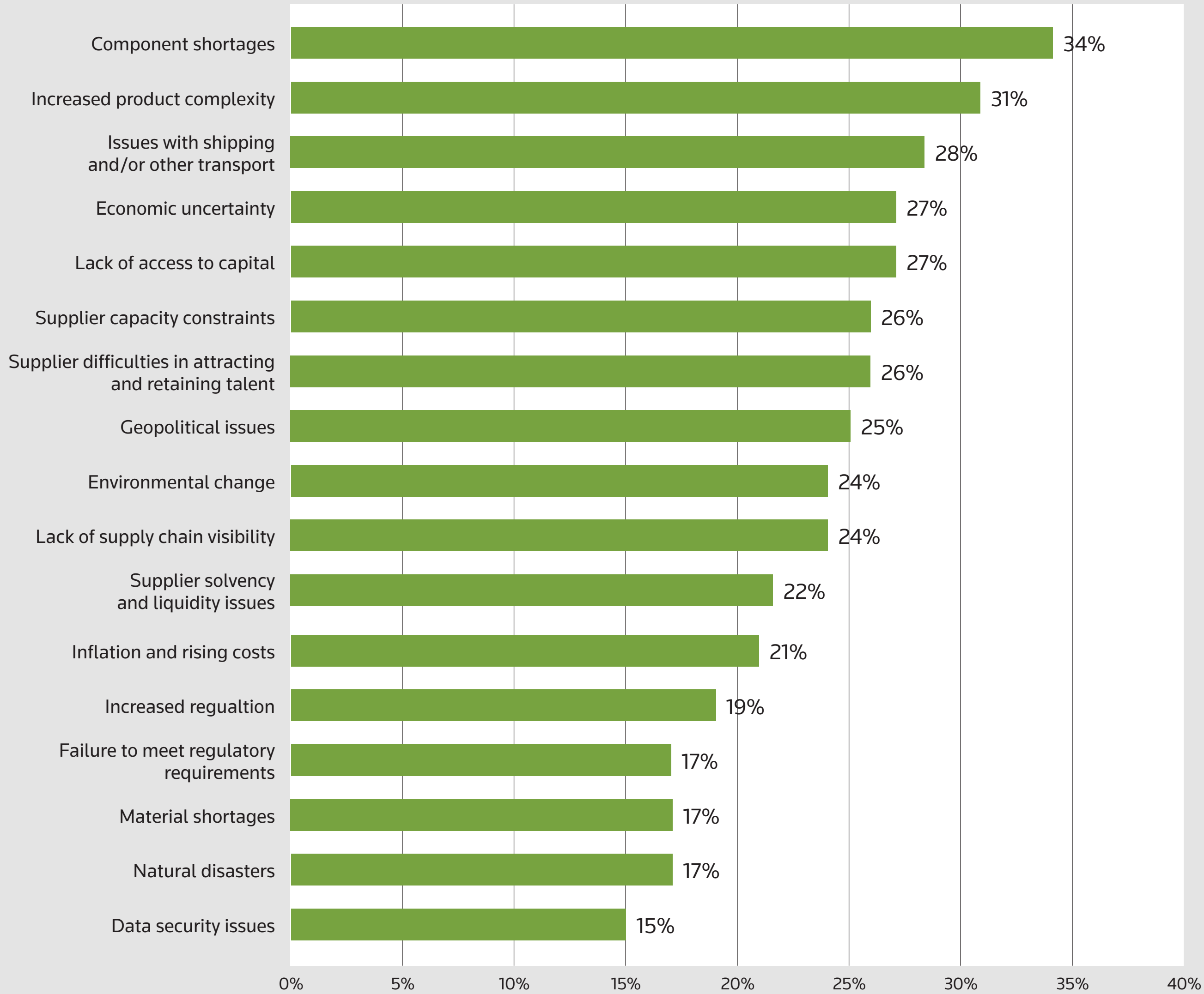
The experience for Marc Bekkers, Director Customer Service & Logistics, Heineken Netherlands Supply, has encompassed many of these aspects. He and his team have frequently had to contend with "demand volatility, new capacity constraints in our production distribution and low material availability."

The combination of all of these aspects has heightened the challenge, so that even in a "business like ours, it becomes difficult, and things can change rapidly," he says.

Top of Heineken's list of concerns has been demand volatility, with the volumes required changing more rapidly and dramatically than previously, making "demand sensing capability that can really sense those trends early enough" to adjust plans a top investment priority for them.

Fluctuations in demand have major consequences when you are bottling and distributing 15 billion litres of beverages per year, which is the volume that Coca-Cola HBC (one of the world largest bottling partners of The Coca-Cola Company) typically moves, says Group Head

Figure 6: Which of the following underlying factors do you believe to play the greatest role in your supply chain risks?



Source: 2023 Food, Beverage and Agriculture Supply Chain Risk Report, WTW, 2023 of Logistics Antonio Ventriglia. "Our main challenge is the large scale at which we must store, move, and deliver, significant quantities under very tight time schedules," making "responsiveness to volatility a critical factor for success," he underlines.

As demand patterns have shifted away from long-term norms and forecasts have become less accurate, as has been the case for many FMCG companies in the last three years, it has become "more and more complex to balance efficiency and effectiveness," Ventriglia notes, "putting severe pressure on operational capacity in warehousing, transportation, and rates. This requires adaptation, agility, flexibility and close partnerships with suppliers and customers," both internal and external.

Even "simple things like warehousing and transportation have suddenly become bottlenecks," in this environment says Bekkers, "which is completely new to us." Previously, these could be acquired reliably at short notice, but changing market dynamics have put them at a premium, "so we need more visibility and a stronger grip on critical resources," he says.

Alongside these concerns, which have been a feature of supply chains for some time, are emerging issues created by rising interest rates and growing tension on the geopolitical stage, as 27% in the WTW survey were concerned about access to capital and a quarter were worried about rising global tensions.

Add on a tight labour market, noted as a central issue by both Bekkers and Ventriglia, and it is clear the risk profile for the consumer goods sector is not yet back to pre-pandemic norms, and so supply chain professionals will need to have far more insight and coordination of their supply chains going forward to handle the potential pitfalls and reliably deliver capacity that matches true market demand.

> **"THE MORE COMPLEX [THEY ARE], THE LESS VISIBILITY THEY CAN HAVE END-TO-END AND THE MORE CHALLENGES THEY ACTUALLY HAVE TO CLOSE THAT VISIBILITY GAP"**

2.2 More locations, more channels, more complexity

Another notable issue brought up by the WTW survey was increased product complexity. This was the second biggest risk category noted by F&B executives in the survey, being selected by just under a third.

This is a critical layer that lies across the consumer goods space and makes management and coordination even more important, as the requirements placed on logistic functions grows.

That rising complexity broadly is coming from two main areas: a wider spread of manufacturing partners in more locations in order to reduce risk; and the increasing need to respond to changing consumption patterns, in particular the direct-to-consumer sector.

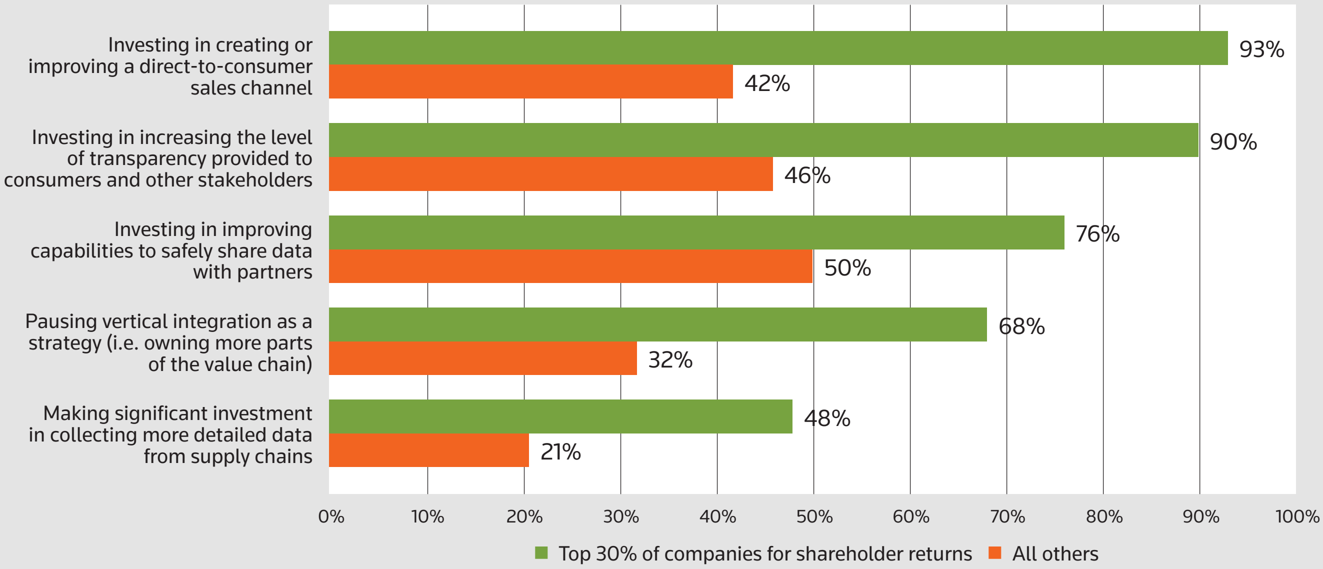
Looking first at manufacturing patterns, we are in a wave of nearshoring, near-sourcing and reshoring within supply chains generally, which we have extensively covered in other research, and consumer goods are no different.

While perhaps less extreme than the drive to resituate electronic manufacturing for example, there has been a recognition of the potential vulnerabilities and the need to spread beyond small supplier bases, as well as an expansion of contract manufacturing.

This push is leading to FMCG companies to have more partners in more locations. According to a 2023 survey of over 300 F&B professionals by TraceGains:

- 52% are expanding their international manufacturing footprint.
- 55% of respondents report using more co-manufacturers than three years ago.
- 29% of companies report using at least ten co-manufacturers.

Figure 7: Successful consumer goods companies are investing in direct-to-consumer and collaboration



Source: 2023 consumer products industry outlook, Deloitte, 2023

While this offers more resilience and potential capacity for companies, it also introduces burdens in terms of monitoring, collaboration and coordination.

At the other end of supply chains there are further complications when it comes serving customers through their preferred channels. E-commerce grew stratospherically during the pandemic and online shopping behaviour became prevalent and entrenched in sectors where previously it was a slim minority of the market, such as for groceries.

In particular we have seen a rise in Direct-To-Consumer (DTC) purchases, with just under two-thirds of global consumers purchasing directly from a brand in 2022 according to Salesforce.

Operating a consumer goods operation across mutiple channels, while creating the logistics necessary for DTC can be hugely challenging. DTC requires a different logistics and sales set up, and failing to provide rapid fulfilment to the consumer can create lasting brand damage.

"What I find in client conversations is there's still a big struggle to make that profitable," comments Deloitte's Miely, "particularly the last mile delivery, due to the fact that the consumer goods' supply chain is not set up around picking singles or in smaller pack sizes," making it almost "a completely separate operation."

However, there are rewards in doing so. In a Deloitte survey of 150 consumer products executives, the top 30% most profitable companies were far more likely than the remainder to be investing into their DTC sales channel.

While 93% of those in highly profitable companies said they were building or improving DTC operations, just 42% of lower performers were taking the same approach, a 51% disparity and one of the highest noted in their research.

For Gunnar Pflanz, Global Vertical Excellence Manager, FMCG at A.P. Moller Maersk, his experience has been to see these effects firsthand. "I talk to a lot of companies who have a highly complex structure," in the sector he says. "They deal with different categories, different segments, different business units. They go through a lot of mergers and acquisitions. Therefore, they have, almost by definition, frequently disjointed supply chains."

With that comes a growing understanding amongst FMCG companies "that the more complex [they are], the less visibility they can have end-to-end and the more challenges they actually have to close that visibility gap."

Addressing this gap therefore now presents the single greatest opportunity for FMCG companies to fight back against the issues outlined above.

3

A CLEAR-EYED VIEW OF THE SUPPLY CHAIN IS THE BEST ROUTE TO SUCCESS

The best route to handle complexity, build out sales channels and avoid disruption is unequivocally having a high degree of visibility into supply chains.

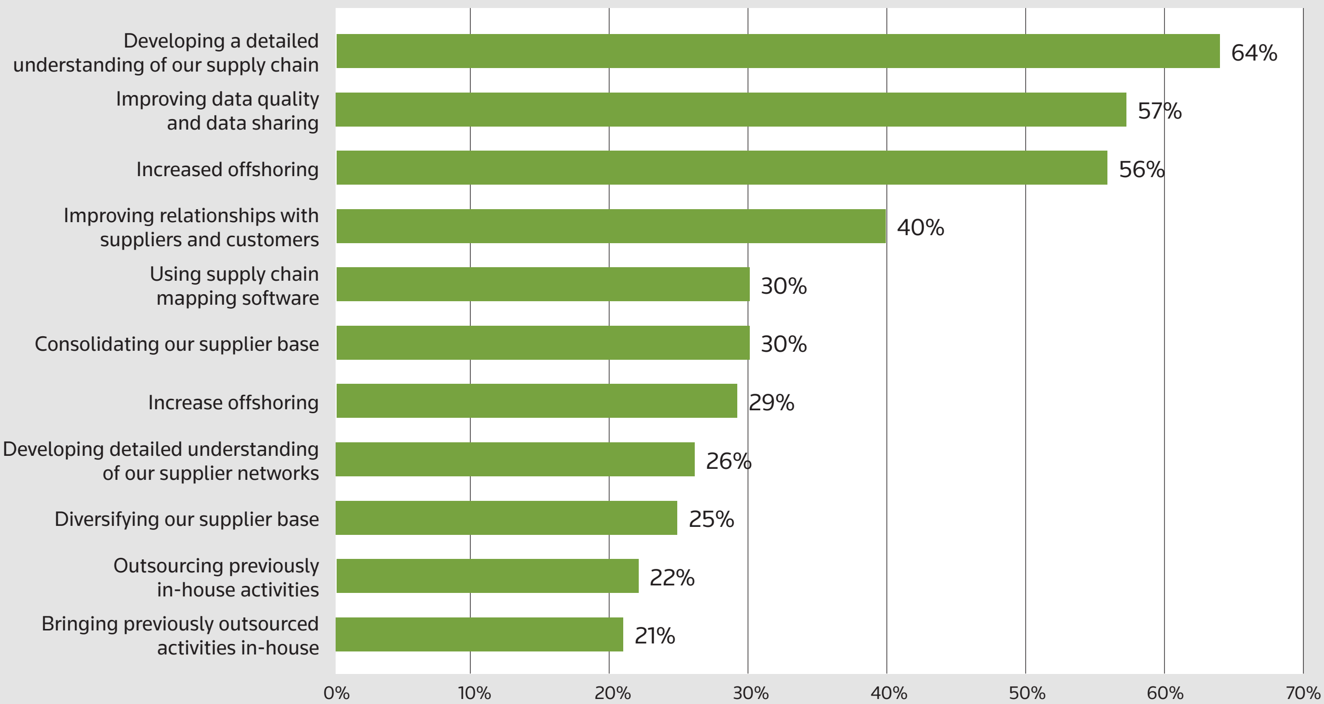
Understanding what is going on in near real-time unlocks huge advantages across the supply chain, principally by giving more freedom of action to supply chain planners and allowing precision in their interventions.

FMCG companies are now throwing their weight behind improving supply chain visibility, planning, forecasting and cooperation as their top priorities.

3.1 Visibility over supply chains now the number one focus for FMCG companies

According to the Deloitte research cited in Figure 7, supply chain visibility is a difference maker, as the greatest divergence between top performers and the remainder were in their approaches to the field. They found that there is a 44% positive difference between the two when it came to investing in transparency, a 27% gap for collecting detailed supply chain data and a 26% leap between top performers and the rest for investment into secure data sharing capabilities.

Figure 8: Which of the following measures do, or would have, the greatest impact on managing your supply chain risks?



Source: 2023 Food, Beverage and Agriculture Supply Chain Risk Report, WTW, 2023

FMCG companies are now widely recognising the competitive advantages that visibility can bring not only to their supply chain, but their wider organisations, especially under current circumstances.

WTW's survey of F&B executives found that the most impactful measures that reduce supply chain risks were linked to visibility. Sixty-four percent felt that having a deeper understanding of their overall supply chains would be the most effective measure they could undertake to reduce risk, and 57% highlighted better data quality and sharing.

TraceGains' survey also found that supply chain traceability and transparency was the primary driver for investment among their respondents, being cited by 55% of respondents.

"Real time visibility is a key pillar of our digital transformation road map and we have introduced and deployed several solutions that are giving us more and more visibility along the end-to-end supply chain," agrees Coca-Cola HBC's Ventriglia.

3.2 Technology as a key enabler

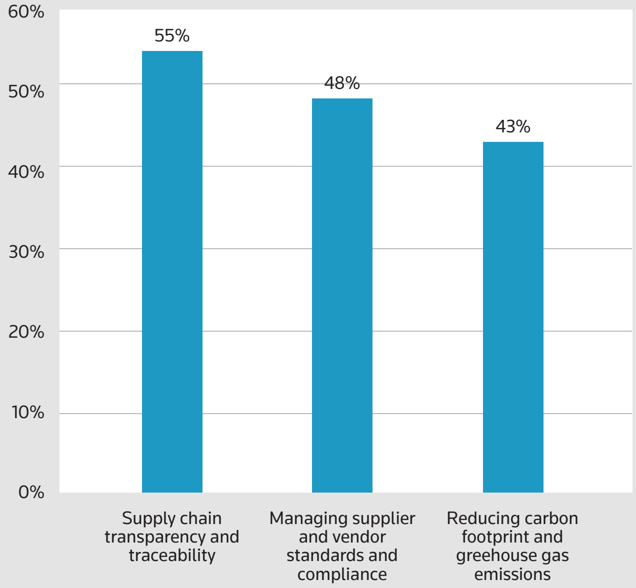
Rising investment levels will be critical to enhance supply chain visibility as it requires foundational technologies, but it will be well worth it as these have widespread benefits.

Data capture, management, manipulation, analysis, and modelling provide major benefits to supply chains, but require reliable storage, security, platforms and tools to be accessed.

Aksel Eroglu, Global Head of Operations Strategy and Supply Networks for Nestlé, lists just some of the technologies they are building and deploying in relation to visibility as: "Advanced demand and supply planning solutions to better plan or synchronise our supply chain end-to-end; real-time visibility to react more quickly to disruptions; warehouse automation; and a dedicated hired truck fleet to execute route loops and effectively redeploy trucks where needed to ensure service continuity."

"REAL TIME VISIBILITY IS A KEY PILLAR OF OUR DIGITAL TRANSFORMATION ROAD MAP AND WE HAVE INTRODUCED AND DEPLOYED SEVERAL SOLUTIONS THAT ARE GIVING US MORE AND MORE VISIBILITY ALONG THE END-TO-END SUPPLY CHAIN"

Figure 9: Main drivers for investment among F&B companies



Source: The State of ESG Compliance for the F&B Industry, TraceGains, 2023

3.2.1 Case study: achieving real time delivery visibility

Coca-Cola HBC can see "how our delivery trucks (in this case Full Truck Loads - FTLs) are operating from the moment they are called off for loading at our warehouses, to the moment they deliver to customers' premises," says Ventriglia. "Across most of our business units we track them in real-time."

By leveraging the transport visibility solution deployed via "one of our business partners, we are able to monitor the on-time loading, waiting time, and the journey time from our premises to the customer," and potentially provide those end customers "with updated estimated times of arrival if there is a truck that is delayed," he outlines. This gives them "visibility and transparency on delivery."

They have discovered numerous advantages to this deployment, with the foremost "addressing the exceptions and managing these proactively." Now, they are no longer "reactive, only receiving information about a delivery delay directly from customers or logistics providers," and instead have "shifted to more predictive approach to prevent service issues with customers."

Additionally, the solution is "playing a key role in streamlining logistics operations. Customers are more satisfied because we are addressing their needs differently. At the same time, through data visibility, we can also address waiting times at customer premises and/or at our premises, so transportation providers have shorter turnaround time for their trucks, thus gaining efficiencies to fulfil other companies' needs. They can have a more sustainable business and utilise their assets in a more productive manner. All of that contributes to strengthening our collaboration."

IF YOU KNOW HOW TO GATHER, HANDLE, AND CHANNEL INFORMATION THE RIGHT WAY, THEN YOU CAN MAKE FASTER DECISIONS

Ventriglia feels that this is a prime example of how "setting up and applying the technology for visibility allows collaboration with different partners in the logistics ecosystem".

Establishing these types of initiatives or maximising their utility relies on getting the foundational data and the means to access it right.

"If you know how to gather, handle, and channel information the right way, then you can make faster decisions, or you can sometimes predict that you're going to have a capacity bottleneck in the near future," points out Ventriglia.

Nestlé, for example, is using the programs listed above "to create synergies to optimise routes through better planning and transport selection, ensuring the best transportation type is selected according to route and cargo, and is always full (inbound and outbound), as well as to reduce inventory and waste, helping to cut CO_2 emissions" explains Eroglu.

3.3 Data quality and synthesis, not data format form the heart of analysis

"I think harmonised, standardised data is an absolute prerequisite," to any visibility initiative declares Heineken's Bekkers. "It's painful job, but it has to be done, otherwise you can't move forward."

"Due to the scattered landscape of information sources, I would say it's very difficult to collect," agrees Pflanz, "especially if you cherry pick and you have thousands of service providers and you try to collect data from all of them."

"We can see that just having a system helping with visibility is not good enough. Companies have tried that out and have also understood that if there is no quality data coming into the system, it's very hard to do something about it," he says.

He sees the industry as facing "challenges to generate quality and timely data on their own," leading to companies asking, "how can we have a simpler view?"

Deloitte's Miely is frequently party to this experience. "Often when we talk to clients, you have teams that spend days and weeks just gathering data," she notes. "They're not spending that time thinking about how to make better decisions, how to make things more efficient. There's a lot more effort spent in gathering the data and trying to close the gaps."

However, the good news is that this constraint is being eased by new technologies and partnerships.

"You don't need the kind of level of harmonisation of data as an input that you used because the technology is there to pull the data together and present it in a consistent way," points out Miely. "Historically everything had to be in the same format and there were a lot of rules around data that made it very hard to give a harmonised view." However, "now some of the more AI-driven tools are able to take different types of data and understand them and pull them together," she says.

This is allowing supply chain functions to be able to bite off and chew functions in a more manageable way, rather than having to try and wrestle a company-wide dataset into a workable format.

"OFTEN WHEN WE TALK TO CLIENTS, YOU HAVE TEAMS THAT SPEND DAYS AND WEEKS JUST GATHERING DATA. THEY'RE NOT SPENDING THAT TIME THINKING ABOUT HOW TO MAKE BETTER DECISIONS, HOW TO MAKE THINGS MORE EFFICIENT"

"What we've seen is kind of clients pick off the control tower in pieces," says Miely. "For example, a control tower on shipping and inbound deliveries, or a control tower on warehouse operations."

3.3.1 Case study: piecing together a piece-by-piece view of the supply chain

When it came to increasing Delta Foods' oversight of their supply chain, "we did not go for an off-the-shelf, ready-made solution," explains Skandalakis. "It was much better for us to sit and look at what we really need at every stage of our value chain and develop bespoke, yet integrated, solutions with external partners and academia that fully satisfy our needs."

Their approach allowed them to "gain significant agility and visibility across our value chain with very low-cost solutions."

He gives the example of the implementation bespoke pick-by-light solutions and the replacement of handheld barcode scanning with custom made Google lenses able to scan 2D barcodes, speeding up picking and improve tracking of goods without the need to change to QR coding.

Goods would then be moved onto trucks equipped with custom-made telematics solutions, monitoring not only geo-location status, but also quality and conditioning related parameters. These include "routings, locations, adherence to plan, traffic conditions, estimated timings, driving parameters, temperatures and all the necessary details concerning the safety of the product during transportation."

These "allow us to continuously maintain our high standards," he notes.

On top of these, "there is a structure that allows us to connect internal and external solutions," he explains. "There is a central data management system we use as a reference point, in this case SAP, and, of course, everything is connected there. We always have one dataset, one single point of truth."

Integration is vital he says, as if you have data, "but if it's not interconnected, or if it's not available when you need, it's always a problem."

These "bespoke solutions have been ideal" for them he notes, generating "payback in the region of days for certain smaller applications ... up to several months."

Pflanz is in lockstep with this outlook, advising companies to "start monitoring or document, and then potentially centralise and standardise, their own processes across the different segments as far as they can."

He thinks companies should begin by looking "into the supply chain and try to simplify the way of working within the organisations and come to a model that is more standardised and scalable and allows also for better integration and automation with suppliers and service providers."

3.4 Ending as close to end-to-end as possible

While a piece-by-piece approach is becoming more common, the end goal should be the same: a holistic view that stretches across as much of the supply chain as possible.

Ultimately this is easier said than done as even the very term can mean different things to different people.

"Often, there is no clear definition as to what end-to-end visibility actually means," says Maersk's Pflanz. "The companies themselves have often a very different picture of end-to-end to what their service providers or partners or suppliers would think."

Indeed, full end-to-end visibility in a completely literal sense is likely beyond the reach of the majority of companies.

"End-to-end in our case means from grain to glass," says Heineken's Bekkers. "That's a long chain and stretching across the whole world. So, to achieve truly end-to-end visibility I'm not sure if we will ever get there," he thinks. However, achieving an overview across "60%, 70%, 80% [of the supply chain] is definitely our aim." Doing so will allow them to "make a lot of progress on cost, revenue, cash and to manage our supply chain through all the disruptions that are that are occurring."

"WE KNOW WHAT'S COMING INTO THE FACTORY, WE KNOW WHAT'S BEING PRODUCED, WHAT IS BEING SHIPPED AT EVERY LOCATION, WHERE IT IS, WE KNOW THE TEMPERATURES, WE CAN MONITOR THE QUALITY PARAMETERS"

Given the difficulties in gaining a complete view, he advises making hard choices and prioritising "where the big problem areas typically are or the big constraints. Then in those areas you make choices on where you invest your time on the tooling, the process and on the governance. That should give you the biggest benefit.

"You can't do everything," he concludes, "no one can".

Ventriglia echoes this viewpoint about starting by focusing on the areas of most impact: "If I had to decide tomorrow morning with a magic wand whether to get full visibility on inbound logistics of raw materials, versus full visibility on the last mile delivery, I would go for the last mile" because their philosophy is that everything needs "to be designed backwards from the customer perspective. The customer is not that interested in knowing if we have an issue supplying raw materials stuck at the port of arrival. They just expect the end product delivered in full and on time, possibly with a chance to track their orders in transit".

At its core, says Skandalakis, the type of approach advocated by these experts centres around moving away from "islands of information, to a unified process that digitises everything," starting with the most business critical or high friction areas.

For Delta Foods, this looks like "digitised operations in both upstream and downstream supply chains ... starting from the milk collection, down to the delivery at the final point of sale. At any given moment we know: what's been collected at the farms; what is coming into our factories and when; what's being produced; what is being shipped at every location; where it is; its delivery time; along with its quality parameters," giving them a wealth of insights and standardisation across their product range.

3.5 Fast moving decisions for a fast-moving sector

As noted in chapter 2, conditions in the FMCG sector are more variable and less predictable than in the past, leading to the need to increase the rapidity of decision making and also how quickly those decisions can then be implemented.

Carmelo Ippolito, Maersk's Senior Sales Management FMCG - Beers, Wine & Spirits, has found that his sector has been at the very forefront of this trend. The pandemic

"ON A MORE STRATEGIC LEVEL, VISIBILITY MEANS ... FASTER DECISION MAKING. SO, INSTEAD OF BEING PASSIVE AND WAITING FOR THINGS TO HAPPEN, WE HAVE THE CHANCE, THROUGH REAL TIME VISIBILITY, TO IMPROVE THE ACCURACY AND RELIABILITY OF OUR OPERATIONS"

created demand for home deliveries and to grocery stores of alcoholic beverages at much higher-than-usual volumes. However, post-pandemic this has reversed and now the outlook is for a higher "quantity of orders with less quantity of product, so there is an increase in the speed of ordering and it's becoming more complex, because instead of consolidating four different suppliers into one container, now you have to consolidate up to 10-to-12 suppliers.

"Now we need to process more data. We need to interact with important distributors more frequently than before," he has found.

Therefore, "we needed to accelerate the way we anticipate the reordering, and so at the end we have been forced to be even closer to suppliers and importers to understand what is changing." This has led them to "developing a stronger IT structure to keep up with that increase in the speed of Purchase Order (PO) management and our forecasting has been accelerated."

The importance of rapid information flows is shared by Coca-Cola HBC's Ventriglia. For him, visibility also "translates into getting immediate alerts when our fulfilment operations are in front of big challenges, or even daily operational disruptions".

He finds that "thanks to these alerts, we have the possibility to react and respond immediately". However, there is additional value to be unlocked if organisations develop a "real time capability to analyse data on the spot," so that any alert has clear decision-making pathways.

Overall, he feels that "on a more strategic level, visibility enables capability for faster decision making and allows for improvement of accuracy and reliability in the execution of key processes."

The next step is to move beyond data drawn from within and look outward at automated feeds from third parties believes Maersk's Pflanz.

"Today you can subscribe, and you might get an alert on your phone or via e-mail when something happens and there's a new impact coming," he says. However, he sees growing capability from machine learning programmes parsing through the available information online, which can then "immediately connect to supply chain planners' current workflow or send them alerts already enhanced with more background to their actual case.

"What makes it super exciting is it will help to, first of all, give a more holistic picture of what's going on in supply chains," he feels, "and it will also allow, at a certain stage, immediate advice on how cargo is being impacted by what's going on in the world."

"Some easy wins," that are already available and simple to integrate into supply chain decision making in his opinion are weather and ocean trade as these already have large, open-source datasets. For example, "if there's a typhoon, there might be some diversion of the route" or an example might be "port congestion or the potential of strikes or lockdowns when it comes to truckers," as these "will be a continuous disruption that needs to be considered, but can come with a huge cost to our clients as well impact on product availability."

4

COOPERATION, COORDINATION AND CONTROL

Ultimately, supply chains are collaborative chain reactions where nothing happens in isolation. They therefore require communication, cooperation and information sharing to succeed.

This is the other critical facet in bringing together the elements of visibility to enhance wider supply chain functionality. Information alone is merely a foundation – it is the capacity to access and action this data that will make the difference.

Bringing information together in an accessible, but still meaningful, centralised location while adding insights from a wider array of partners, as well as sharing and sourcing that information both up- and downstream, is the next major step for supply chains.

This is easier said than done, however, especially in the complex, high volume situations that most FMCG companies exist within.

Frequently, suppliers beyond tier one are hard to bring into data structures and many companies have different subdivisions or affiliates producing certain well-established brands that can be tricky to bring together and achieve a holistic vision over.

> **"NESTLÉ HAS BUILT IN THE LAST FEW YEARS SEVERAL TRANSPORTATION CONTROL TOWERS THAT ALLOW THE COMPANY TO IDENTIFY POTENTIAL DEMAND SENSING, PLAN DIFFERENT SCENARIOS, AND BE MORE COST-EFFECTIVE"**

The gains, though, are clear and organisations need to focus on the win-wins that provide clarity and surety to both internal and external stakeholders in order to maximise gains from visibility investments.

4.1 Bringing insights together is the key to unlocking the power of supply chain visibility

Deepening the view into supply chains only has limited value as a standalone exercise. The second core component in unleashing the power of visibility is bringing together that information in a way that enables the wider organisation to make coherent decisions.

Heineken is one company that has recognised this issue, reforming their overall governance, as previously "we had quite autonomous operating companies with the brewery and the commercial operation, each with their own Standard Operating Procedures (SOPs)," says Bekkers. "What we're trying to do now is lift it up on level regional level and global level and to have more regional and global SOP governance as well. With that, we can share bottles between operating companies when needed, or if the demand is high in one part of the region and low in the other part, we can actually share capacity. That is completely new for Heineken and maybe it sounds obvious, but Heineken was composed of local operations, and we are trying to become one network, one company, especially on the regional level and, to a certain extent, on a global level."

Now, when it comes to "scheduling, production planning and Material Requirement Planning (MRP) runs, we have a European set-up that has a good, complete view forward on what we need for the whole continent, rather than unit-by-unit within Heineken."

“The next step is to link up and integrate with our suppliers,” he comments, “but that's another layer that we haven't cracked yet.”

Ventriglia’s mission is similar at Coca-Cola HBC, where they “need to expand the coverage of our digital solutions in supply chain, but also continue to work towards integration between all these new solutions and legacy technologies, so that all the information is available in ‘one place’. Such an integration will allow for easier access to large sets of data and will be the base for real-time decision and execution capability.”

One of most common ways to tackle the issues brought up by contributors to this research is the establishment of control towers over their supply chains. While this concept is somewhat flexible, a control tower is effectively a command centre, aggregating and presenting pertinent data through an easy-to-understand interface in near real time.

“Nestlé has in the last few years built several transportation control towers that allow the company to identify potential demand sensing (i.e., identify external trends and demands in order to forecast the potential future demands), plan different scenarios, and be more cost-effective through, for example, better transport procurement and route planning” explains Eroglu.

“This has also allowed the company to identify improvement opportunities in areas such as demand and supply planning, transportation and procurement,” ranging from reacting faster to delays to “reducing cost and empty kilometres driven.

“We are now in the process of making sure these transportation control towers are connected and work harmoniously together to improve our network end-to-end visibility,” concludes Eroglu.

Similarly, Maersk increasingly finds itself acting as a control tower for their own customers says Ippolito. They "work with important distributors and contact the suppliers directly on behalf of the importer, distributor and retailer, managing and combining the orders together and trying to fill the container or the truck in the best way possible.”

Sitting as an intermediary between different segments of the supply chain gives them an important visibility role that they increasingly look to leverage into their customer supply chains.

“We provide visibility through our website,” he says so that “on a PO level an importer can check directly where their goods are located at any moment and at which stage, ranging from us contacting the supplier to see if the goods are ready, to if the goods are being loaded, if they are being picked up, as they are shipping, so visibility is becoming a key factor for us.”

This also works the other way round, as Bekkers says that for their “big logistics service providers, big carriers that we export a lot with, we do container forecasting, and we share our data and systems with them.”

With shared information and processes, there is a networking effect that strengthens all parties’ abilities to plan out their production and distribution.

4.2 Getting top-tier visibility from lower tier partners and vice versa

The next major challenge when it comes to visibility in supply chains is extending the view deeper into the partner networks.

Right now, there is a definite gap in being able to see upstream and beyond tier one suppliers.

“I think the challenge is always the smaller and less mature organisations,” says Deloitte’s Miely, “not just getting the data but making sure it's the right data,” which she feels is “kind of a symptom of the fact that it's not fully defined yet. You could be gathering loads of information on your second- and third-tier supply chain, but making sure it's actually the right information, auditable to an acceptable standard,” is another matter.

As we noted in Section 2.2, with FMCG supply chains increasingly moving to multi-sourcing this is becoming more important, but also more complex, with companies having to run to keep up.

Organisations need to keep in mind the win-wins Ventriglia mentioned in the previous chapter when building out this kind of upstream visibility. While tier one suppliers may be reticent to share their own network, this kind of mapping can bring mutual benefits. Establishing a database of their suppliers and locations, or the contracts that are in place, means that vulnerabilities and disruptions are going to become apparent earlier, not just to the end customer, but also to the tier one supplier, who can then redirect capacity, source from alternatives, maintain product flows and fulfil their expected volumes.

Furthermore, this process will become more necessary as traceability and reporting standards rise. These are becoming more stringent as legislation is introduced to try and reinforce ethical standards, particularly in Europe, and also to capture the true scale of emissions in supply chains.

An alternative is to look at other partners in the supply chain who may have more advanced capabilities to view supply chains and work with them in order to have a greater view.

> **"VISIBILITY IS GRANTED TO US INTERNALLY BY THE CONNECTION THAT WE HAVE IN OUR SYSTEM, AND WE GIVE PARTIAL VISIBILITY BACK TO THE CUSTOMER, BUT ONLY WHAT IS WHAT IS NEEDED BY THEM. THEY DON'T NEED TO UNDERSTAND THE TRUCKING COMPANY WE ARE USING ... THEY JUST NEED TO SEE IF THE GOODS ARE GOING FAST ENOUGH TO REACH THEIR DESTINATION"**

Miely recounts several recent "cases where organisations outsourced management of a distributed 3PL network to one of the bigger 3PLs. They outsourced the more complex tracking and management in the more fragmented parts of their supply chain, which I thought was quite an interesting approach because it definitely reduces complexity for them and gives them what they need."

Ippolito says that their customer base increasingly desires this approach, likening it to sending a postcard, where the customer isn't interested in how it reaches its destination, but more that they can have confidence in it reaching the end destination by a set time.

"Visibility is granted to us internally by the connection that we have in our system, and we give partial visibility back to the customer, but only what is what is needed by them. They don't need to understand the trucking company we are using – whether they are all overbooked or not – they just need to see if the goods are going fast enough to reach their destination."

Therefore, while we will see organisations delve deeper into their upstream to achieve visibility, we are also likely to see more companies lean on their downstream networks to try and help with this effort in the coming years.

4.3 Shared forecasts, common goals lead to success

Increased connectivity within internal supply chains and across shipping and production chains, particularly when it comes to control towers, allows companies to have a better view back into their supply chains. With these foundations, organisations can radically improve their capacity to project forward.

When it comes to forecasting "The best way is always to start bottom up and to go from the lowest possible point, aggregate and then move upwards," advises Skandalakis, meaning that items emphasised by interviewees in this paper, such as demand sensing and ascertaining upstream capacity, act as cornerstones.

"IN LESS THAN TWO YEARS, WE DECREASED LOSSES ON GOODS DESTROYED DUE TO BAD FORECASTING BY MORE THAN 95%"

Once established, forecast frequency and accuracy are typically improved, which is even more important currently given the highly unpredictable demand patterns typical of the recent past.

"Aligning the entire organisation to certain goals through an established and timely process is of upmost importance," Skandalakis emphasises. "It brings the problems up to a common base, so that we collectively engage to find the right solutions and avoid waste/losses in the whole process." Indeed, "ESG is part of our DNA," he states.

"As an example, in less than two years, we decreased Losses on Goods Destroyed (LOGD) due to bad forecasting by more than 95%, reducing food waste."

For Ventriglia, "it's easier to build alliances, to build partnerships, to build common purpose, based on shared goals," with sustainability one of the core, if not the most important, goals upon which the entire organisation can align. "We consider our sustainability impact in our major decisions as we invest to grow responsibly and create shared value. And we can't do this alone. We seek and work with the right partners who share our sustainability vision and can help us deliver joint progress," he says.

By sharing forecasting and marking these against well-understood goals, such as sustainability targets, organisations can move forward in a much more coordinated manner.

"For any company, the enterprise's functions, customers, suppliers, etc. can have different priorities and face completely different challenges. The management and synchronisation of all these needs is not easy" comments Ventriglia. However, objectives rooted in transparent data, robust forecasts and mutual gains are a way of establishing win-wins. "When you find a common ground with key stakeholders ... you remove barriers to collaborate and find solutions and opportunities for all," he says, especially when it comes to sustainability in supply chains as it is a strong basis for mutually beneficial programs, such as cutting out unnecessary miles or reducing the kind of wastage Skandalakis mentions.

Ventriglia says more and more they try to engineer these scenarios not only internally, but across "the broader logistics ecosystem of companies, suppliers and customers" with whom Coca-Cola HBC collaborate or interact directly or indirectly.

5

FIXING FRAGMENTATION AND FINDING RESILIENCE

Visibility is a potential glue within supply chains, sticking together different, and potentially disparate, elements with critical information that allows all sides to see the common goals and how to achieve them.

It allows organisations to retain high functionality even when faced with major disruption, as companies can sense stress within supply chains earlier, more accurately understand changing demand patterns and then plan accordingly. They can then share their production plans with partners and shippers directly, and follow this up with up-to-date tracking of goods in transit throughout their journey, taking rapid action when exceptions are encountered and alerting relevant stakeholders.

By putting shared visibility at the heart of a supply chain, as the majority of FMCG firms are now doing, there is the potential to reap rewards in multiple areas and fight back against the biggest issues facing the sector, namely inflation, uncertainty, complexity, fragmentation, increasing velocity and continued friction across supply chains.

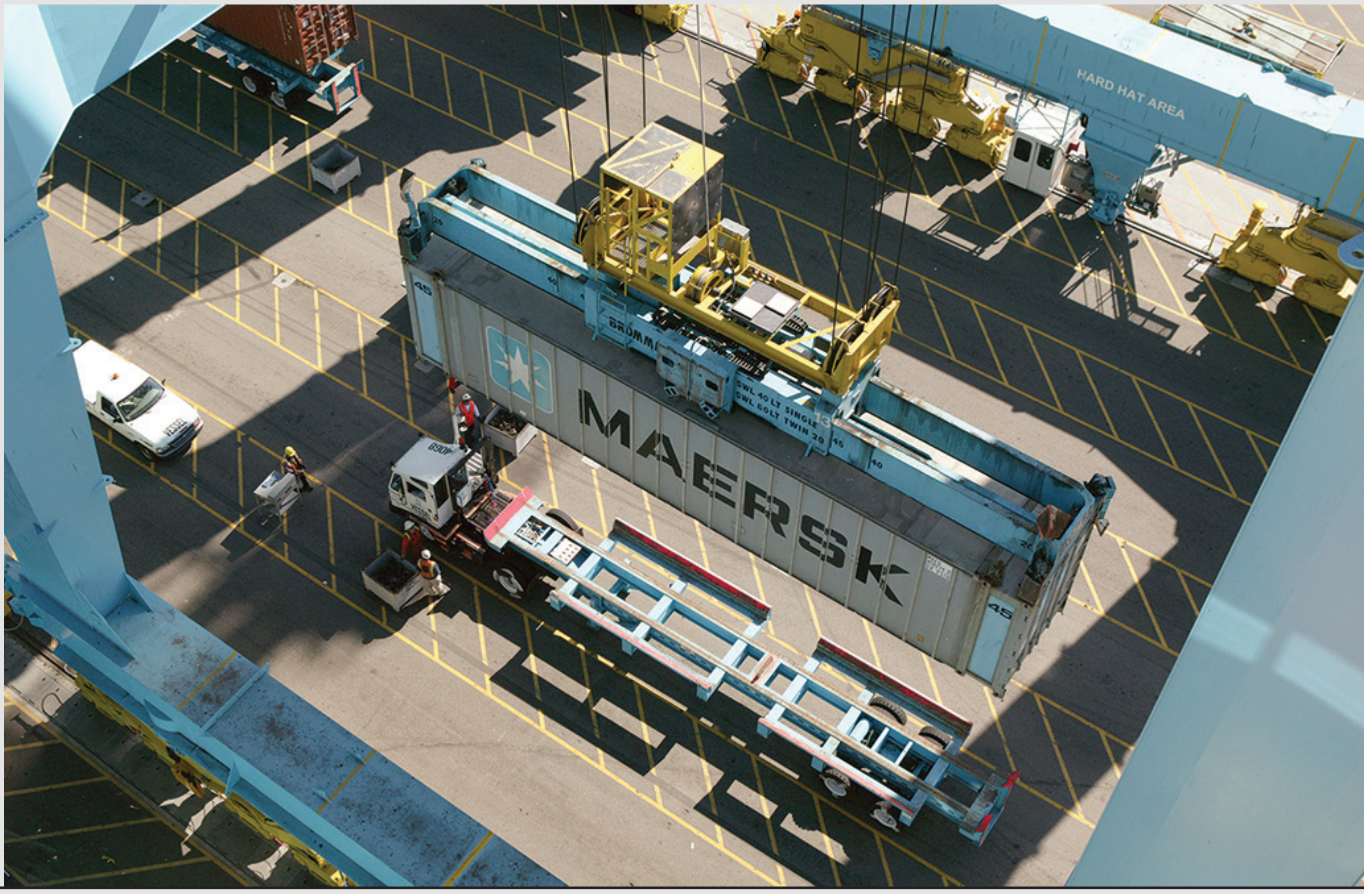
This does require investment and buy-in from both internal and external stakeholders, but as we have seen throughout this white paper, companies are finding value through these investments. Indeed, the establishment of enhanced visibility itself can create the conditions for organisational alignment by more clearly defining issues, goals and forecasts.

Furthermore, the barriers to deepening and widening visibility are falling as logistics providers, manufacturers and suppliers all open up more data to each other, and technology allows organisations to tackle processes or functions without completely harmonising their inputs or taking a monolithic approach.

In an industry that only continues to move faster and faster, and that continues to face volatile conditions, the need for visibility is only deepening and as we have seen in this research it will, and should, be the central focus for consumer goods companies for the next half decade.

ABOUT MAERSK

A.P. Moller - Maersk is an integrated transport and logistics company. We connect and simplify trade to help our customers grow and thrive. At Maersk, we help our key retail, lifestyle, technology, automotive, FMCG, chemical customers with seamless solutions, led by experts who understand the unique requirements and standards of their respective industry. We leverage this knowledge to build our supply chain solutions around customer needs, allowing us to serve some of the world´s most visible brands. The Maersk team works together with customers, living their strategy and growth plans. Integrating our warehousing solutions with other Maersk services such as Ocean, Airfreight, Inland, Customs, and SCM facilitates end-to-end visibility that enhances flow control in a manner that customers can pace their growth and maximise efficiencies and performance. In other words, with Maersk, our customers can bring more opportunities within reach and reduce waste, turning your logistics strategy into a key competitive advantage.



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