SUPPLY CHAIN strategy

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Digital Product Passports and the circular economy

Microsoft

A sustainable *supply chain* transformation

We catch up with **Dhaval Desai, Principal Group Engineering Manager at Microsoft**, to witness a massive and sustainable supply chain transformation at the tech giant...

EDITOR'S WORD

ANDREW WOODS
EDITOR IN CHIEF
CONTENT@B2E-MEDIA.COM

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Welcome to the latest issue of SupplyChain Strategy!

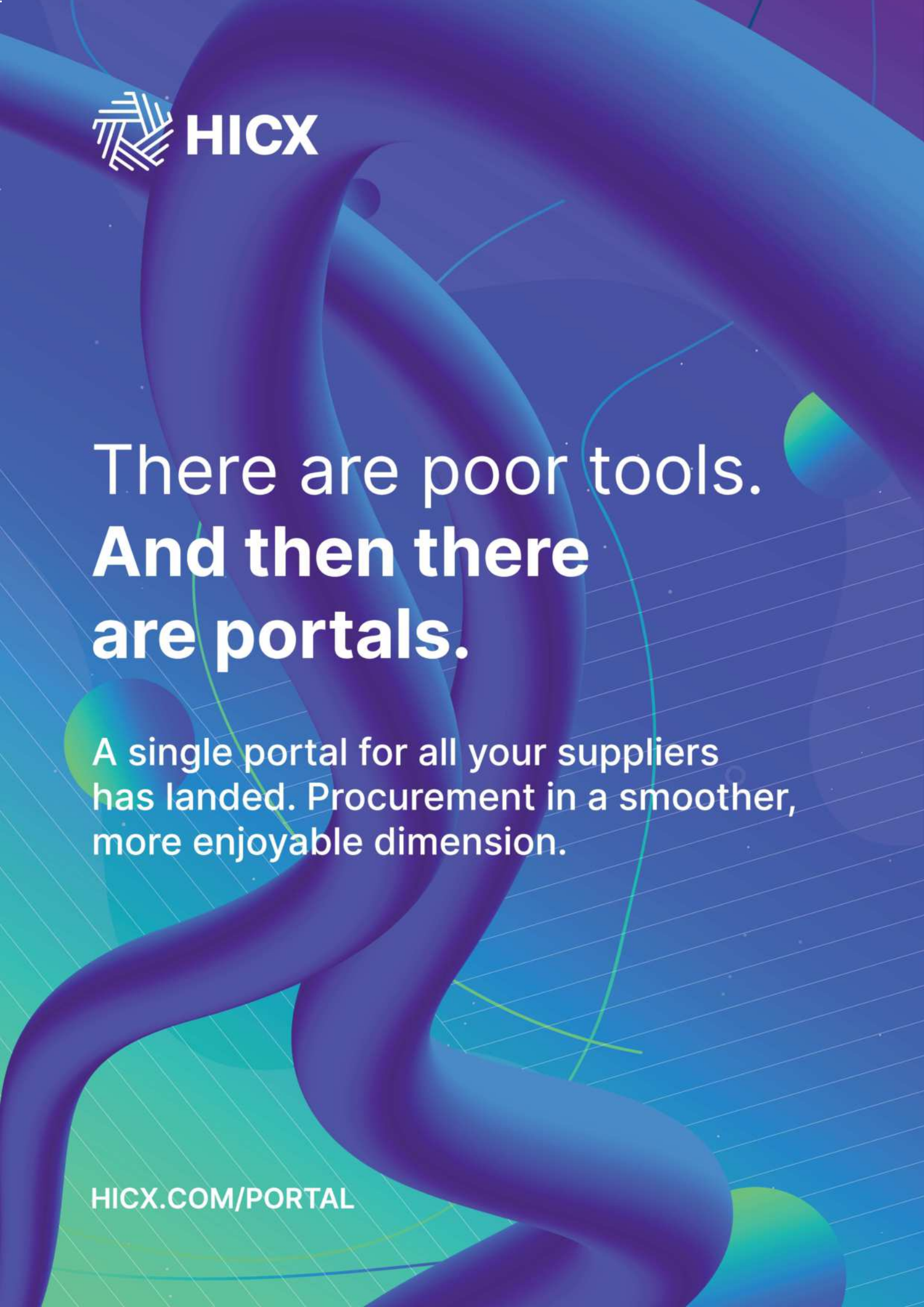
This month's exclusive cover story features a fascinating discussion with Dhaval Desai, Principal Group Engineering Manager at Microsoft, regarding a massive and sustainable supply chain transformation at the tech giant…

In the past four years, Microsoft has gained more than 80,000 productivity hours and avoided hundreds of millions in costs. Did you miss that? That's probably because these massive improvements took place behind the scenes as the technology giant moved to turn supply chain management into a major force driving efficiencies, enabling growth, and bringing the company closer to its sustainability goals.

Expect changes and outcomes to continue as Dhaval Desai continues to apply the learnings from the Devices Supply Chain transformation – think Xbox, Surface, VR and PC accessories – with cross-industry experiences to the fast-growing Cloud supply chain where demand for Azure is surging. As the Principal Group Software Engineering Manager, Desai is part of the Supply Chain Engineering organisation, the global team of architects, managers, and engineers in the US, Europe, and India tasked with developing a platform and capabilities to power supply chains across Microsoft. It's an exciting time. Desai's staff has already quadrupled since he joined Microsoft in 2021, and it's still growing. Within the company, he's on the cutting edge of technology innovation testing generative AI solutions. "We are actively learning how to improve it and move forward," he tells us.
Read the full story here!

Plus, we have some inspiring and informative content from supply chain leaders and experts at Schneider Electric, Smart Cube, Protokol, Red Helix and Astrocast. Plus, expert predictions for 2024 from leading supply chain leaders, as well as a round-up of the best events this year has to offer!

Enjoy!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CHANTELLE BARTRUP

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Microsoft

A sustainable *supply chain* transformation

We catch up with Dhaval Desai, Principal Group Engineering Manager at Microsoft, to witness a massive and sustainable supply chain transformation at the tech giant...

WRITTEN BY
ANDREW WOODS

PRODUCED BY
CRAIG KILLINGBACK


SUPPLYCHAINSTRATEGY.ME

In the past four years, Microsoft has gained more than 80,000 productivity hours and avoided hundreds of millions in costs. Did you miss that? That's probably because these massive improvements took place behind the scenes as the technology giant moved to turn supply chain management into a major force driving efficiencies, enabling growth, and bringing the company closer to its sustainability goals.

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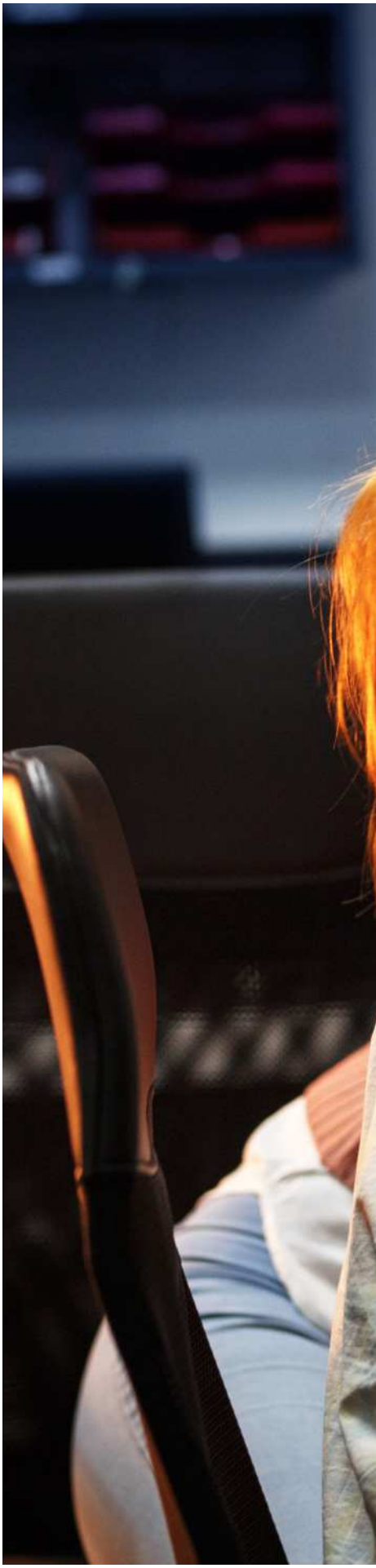
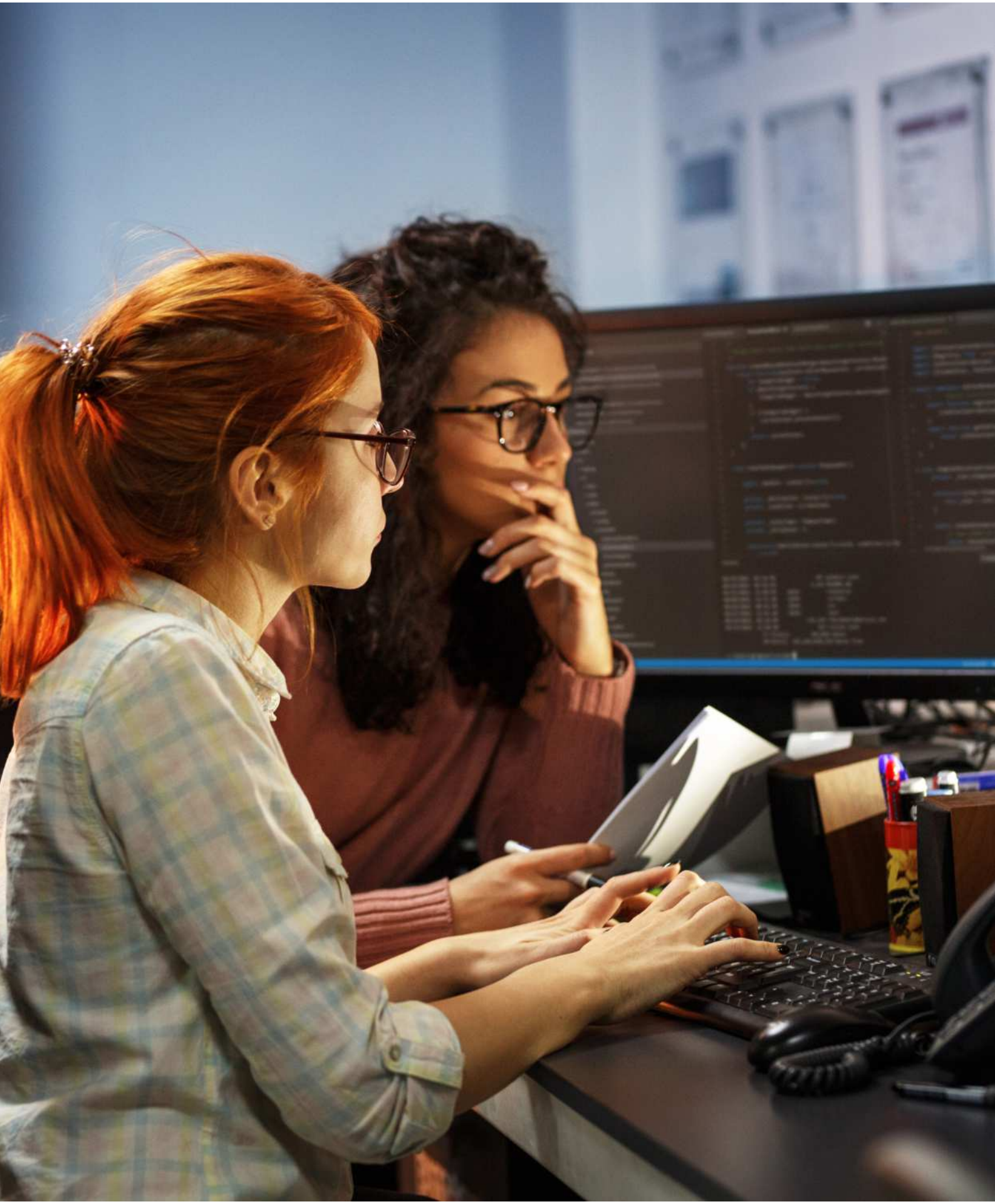
Supply chain may be behind the scenes, but it's forward-looking and massive. Just how big? Consider this: supply chains at Microsoft make contributions to two key business segments: Personal Computing and Intelligent Cloud. These business segments account for two-thirds of the $211.9 billion in revenue Microsoft posted in fiscal 2023. In other words, the size and complexity of the Microsoft supply chain easily rival the size and complexity of many Fortune 500 companies.





SUPPLY CHAIN TRANSFORMATION

Matching capacity to cloud business expansion

Microsoft's cloud business is experienci unparalleled growth, outpacing competi with a remarkable 20% growth rate and leading data center footprint. This succe can be attributed to their extensive netw of over 200 data centers, with plans to a 50 to 100 more centers annually. These centers house several thousand server r globally, making Microsoft's supply chai crucial component of their growth strate

To support this explosive growth and drive down costs, Accenture and Avanad developed a comprehensive roadmap fo Microsoft's Capacity Supply Chain and Provisioning (CSCP) division. This roadm aimed to accelerate cloud revenue, enhance agility, and align with Microsoft sustainability commitments. The result w the implementation of five transformativ solutions: Warranty Transformation, Planning Transformation, Product Data Model, Blockchain, and Control Tower. These solutions revolutionized every asp of Microsoft's supply chain and earned them recognition as a Top 10 Supply Cha by Gartner.

In 2023, the team further optimized thei supply chain by merging these solutions into a unified structure. This consolidatio increased velocity, efficiency, and delive significant cost savings. Looking ahead, as the demand for GPUs continues to ris Accenture and Avanade are excited to continue strengthening their partnership with Microsoft. Together, they aim to leverage the world's largest and most sustainable compute infrastructure to further advance generative AI capabilitie

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Empowering cloud supply chain: Microsoft's control tower redefines efficiency
accenture

AN EARLY EDUCATION IN SUPPLY CHAIN AND SOLUTIONS

Desai's supply chain experiences go back to his childhood, when he closely observed the operations at a factory that his dad ran. "From the early days of my childhood in India, I got to experience what supply chain actually looks like," Desai says. The factory produced traditional cotton garments, like saris. "Though I didn't know the words 'supply chain', I observed many of its processes such as how to procure raw materials and how to plan what needs to be manufactured and in what sequence it should be done – plus the transportation of the goods and selling to consumers. When I got introduced to the supply chain world as an adult, I was able to relate to the core concepts. I had seen those processes on a small scale come to life. And that's where I believe my passion for supply chain was born."

Desai also observed how his father constantly worried about managing an often volatile labour market, especially during peak demand – like for the festival Diwali. His solution will sound familiar to technologists of every stripe: build in redundancies.

From that experience, Desai drew another fundamental business lesson: "I saw that every challenge has a solution."

EMPOWERING EMPLOYEES ACROSS THE ORGANISATION

When Desai arrived at Microsoft in 2021, COVID was still wreaking havoc with the global flow of goods. The technological landscape in the supply chain at Microsoft was mixed, according to Desai. "We leveraged our Azure platform, and we definitely had a few SAP systems. We also leveraged our first-party systems, such as our Dynamic 365, Power Apps platform, and a few third-party systems, apart from SAP."

But the systems had challenges. They were siloed. They were based on function and weren't tightly integrated. "We were not in a position to get the right level of insights into our data to utilise its power. These problems were identified before I joined and so the work had already started, but I soon became part of that journey."

So, Desai's initial mandate married his deeply ingrained understanding of supply chain with his understanding that all problems were made to be solved: He wanted to be sure that everybody and anybody could solve a supply chain issue at Microsoft. His principal tools: SAP applications.

SAP is Desai's sweet spot. Before joining Microsoft, Desai spent 14 years at SAP helping his Fortune 500 clients manage their supply chains. SAP gave Desai a front row seat to a wide range of customers. "We'd integrate the improvements previous customers had requested." This was a source of enormous

satisfaction: “My influence was not limited to the customers I worked with directly, but to every customer who eventually adopted that particular product.”

Desai took away another important piece of wisdom from his years at SAP. “I learned to understand customer processes closely across many industries,” he says. Processes would vary in critical ways depending on industry – say life sciences versus high tech. But Desai also found commonalities across his portfolio of clients – and this enabled him to craft models that he could translate across industries. The result: “I was able to not only help customers adopt our solution from SAP’s perspective, but to adopt successfully at scale.”

“When I got to Microsoft I asked myself: How could I bring my experience from different industries to standardise processes so that so we have the right capabilities, processes and systems that can support our growth? At the same time, you need that agility in your supply chain to support the changing business models from a Cloud Supply Chain perspective. So that was one big ask.” Devices were already in full swing on a transformation, which gave Microsoft an edge in handling the challenges of COVID. So, Desai considered: “What are the next business models? How do we make our supply chains even more efficient and scale to newer heights?” The results were outstanding.

SUPPLY CHAIN TRANSFORMATION

Desai is now increasing his attention to supply chain improvements for the cloud division, where growth is explosive. “The cloud is the heart of the digital transformation journey corporations are undertaking globally. This is pushing demand for Azure. We need to build, deliver clusters/racks/

servers while maintaining these assets on a continuous basis," says Desai.

Benefits from Devices Supply Chain transformation over the years were now being recognised. Microsoft grabbed first place for both Gartner's Supply Chain Breakthrough of the Year and the Process or Technology Innovation of the Year awards in 2023*. Behind the award is Microsoft's sentient supply chain that is both predictive and optimises in real-time or near-real time. "This meant building end-to-end (E2E) visibility, from tracking every raw material to finished goods sales, returns and repair operations," Gartner writes. Net visibility went from 20% of datapoints to 92% of the 50 million datapoints captured daily – all while eliminating silos. Decision-making went from eight weeks to a few days.

The benefits translated into other real-world benefits. Garner writes that Microsoft managed "a cost avoidance of $550 million while increasing sales and improving efficiency" in its device supply chain.

"We tasted success in devices. We were pushing boundaries. Now we are taking the learnings to see how we can apply them to the cloud supply chain," Desai says. For example, Microsoft is looking to make a connected system architecture. "How do we make the best use of the off-the-shelf products in the market with our home-grown solutions? How do we fulfill our requirements AND get a competitive edge?" Anyone engaged in digital transformation understands the delicate balance between the efficiencies of readily available solutions that need to be fine-tuned to specific situations without making the system overly complex.

As with devices, the heart of the system must be great data. "We need to establish a digital thread with our data and leverage it in an efficient way to give us the right insights." Without that, efforts to use predictive and generative AI will fall short of their potential.

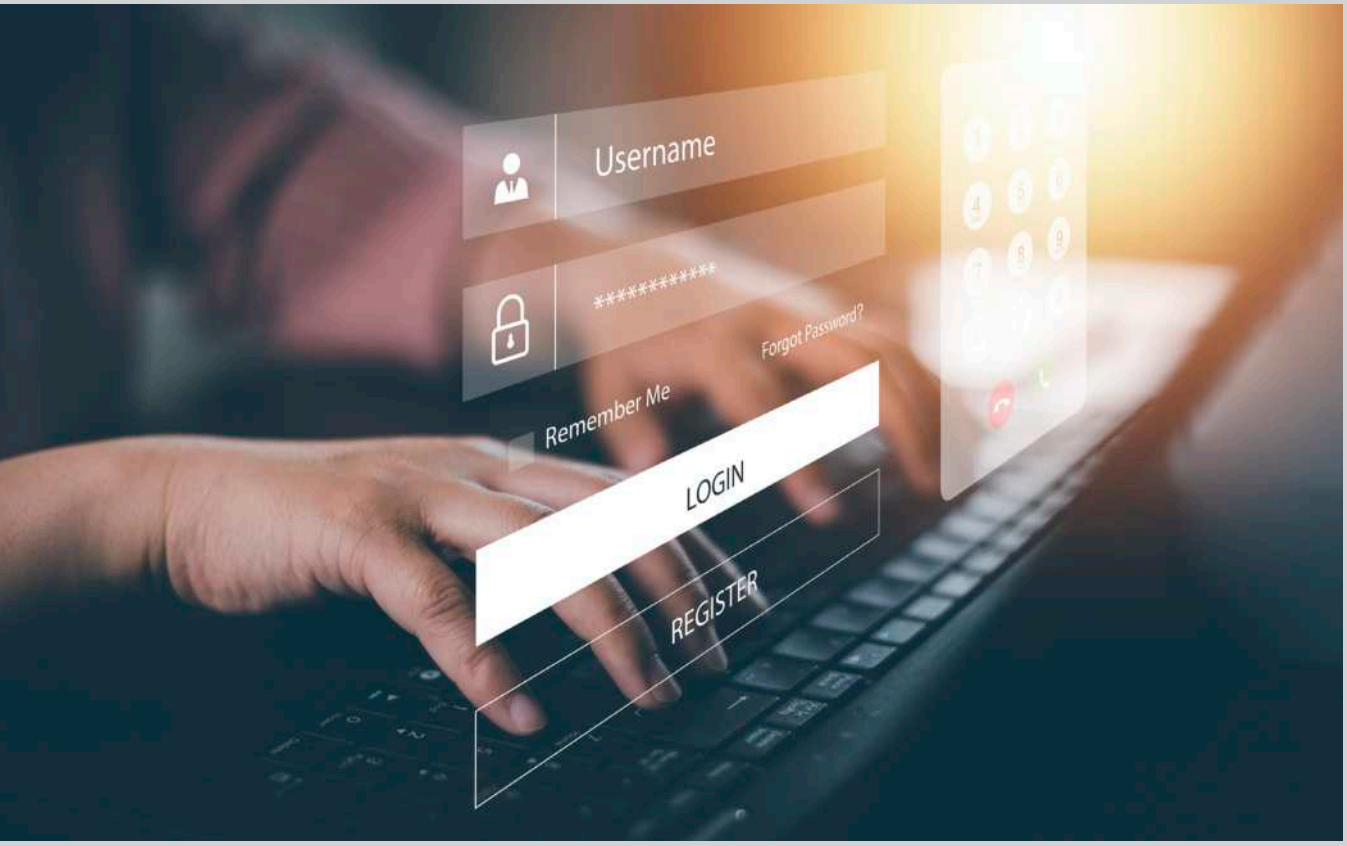
As he did at SAP, Desai is looking for solutions at Microsoft that answer to specific needs while taking advantage of supply chain commonalities. Only now his toolbox has gotten more powerful than ever thanks to generative AI, where Microsoft has an edge, and the Microsoft internal toolbox.

PEOPLE POWER

Microsoft has one other critical superpower: its people. Desai likes to say that he is deeply focused on the classic golden triangle of people, process, and technology. "These three critical pillars have to work in perfect harmony to deliver the objectives and the goals you have set," he says. "Microsoft's culture is very people-centric. There's a lot of focus on nurturing talent, helping people to grow, and creating the right leaders in the organisation who can take us forward. Our supply chains are growing and are extremely critical to achieve our mission to empower every person and every organisation on the planet to achieve more."

Microsoft made it clear to Dhaval that he was being trusted to build the capabilities needed to deliver a world-class supply chain management function at the company. "Microsoft looked to me and said, 'Now you come from this industry and you have this experience, so help us build the right team, so that we can scale and grow.'"

Dhaval then set about talking to his internal customers, the stakeholders he's



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accountable to, to understand their pain points, challenges, and opportunities rather than simply driving through technology to solve the problem. Once he had a good perspective of what needed to be done, he set about building a team that could drive the change using technology.

EXPERT SUPPORT

Historically, in supply chain, Microsoft leveraged the expertise from its consulting partners coupled with a limited set of in-house experts. But Microsoft soon realised that it needs to strike the right balance between in-house experts and leveraging consulting partners. "We wanted to increase the pool of in-house experts while continuing to work with our consulting partners such as Accenture, EY, and boutique firms like CloudPaths."

Partnering with experienced supply chain experts is critical to remaining competitive. Accenture research shows that supply chain maturity is accelerating, with the average digital maturity in supply chain jumping to 48% now from 39% before Covid hit. "Microsoft has a unique challenge in keeping up with global demand for cloud computing capacity. It's understood that where supply chains are concerned, accelerated digitisation of end-to-end processes is essential to achieve the scale and maturity that this growing business requires. Accenture is proud to be a critical partner in Microsoft's supply chain journey to enable this growth by establishing a world class supply chain. Accenture has tapped into its global Supply Chain experts to re-imagine business processes, providing technical expertise in SAP and non-SAP domains to design and deploy these capabilities at scale," says Mahesh Narayan, Technology Lead for Accenture at Microsoft.

MITIGATING RISK: DATA, DATA, DATA

The world is in an unpredictable state and of course the effect this has on supply chain is myriad. Rising costs, demand and inflation, plus geo-political crises and increased regulation in certain sectors have made life tough for those looking to provide value and stability. Those challenges have had a direct impact on Desai and his work as he seeks to enhance the supply chain landscape at Microsoft. "When we look at the supply chain from an end-to-end perspective, right from designing of the product, we have got to make sure that we are not involving any components or any supplier which are tainted based upon the regulations of the country where we operate and sell our products and services."

That's not all. Desai says he must ask: "How do we define our planning processes to be agile if there are changes happening? We need to be in a position to respond to those changes in a much more efficient and quicker way."

From there, Desai says he needs to think deeply about product sourcing. "How do we bring the right level of resiliency as a part of sourcing, to make sure we don't increase the risk associated with sourcing strategies? And do we have a resiliency plan to mitigate the risk as and when they come in? Do we have end-to-end traceability within our supply chain? Are we in a position to identify the risks associated with our supply chain before they have a significant impact? And then can we mitigate and improve the overall resiliency of our supply chain? How do we make more data-driven decisions, versus having users or people interrupting the flow? How do we manage the data and the human intelligence to deliver the right impacts?" According to Desai, the answer is data. "If you have data-driven insights and data-driven decision-making processes,

then you improve that decision by adding human intelligence on top of it."

A CIRCULAR ECONOMY MINDSET

From the start, Desai thinks about the entire life cycle of supply chain products – from transportation to usage and repairs and the opportunity for reuse of parts at the very end. The company works closely with contract manufacturers, system integrators, and suppliers to make sure the processes and the tools are in place to meet its needs and protect its interests. "When we deliver the product, we have to make sure we are doing it in a responsible, sustainable way," he says. "We want to make sure we are choosing a mode of transport that reduces the carbon impact. We also want to make sure the devices we are producing are repairable by consumers or the channel partners within the industry – improving returns on their investment and promoting sustainability."

And at the end of its life cycle, Microsoft sends the hardware to its circularity centre. "We start harvesting the parts out of it. We harvest as many parts as possible, so that way we can bring back those parts back into the supply chain and consume them. Right from design to the customer returns, to circularity centres, we cover the end-to-end lifecycle and develop the processes that work together."

Microsoft is committed and working towards optimising its end-to-end supply

"Accenture has tapped into its global Supply Chain experts to re-imagine business processes, providing technical expertise in SAP and non-SAP domains to design and deploy these capabilities at scale"

– Mahesh Narayan, Technology Lead for Accenture at Microsoft.

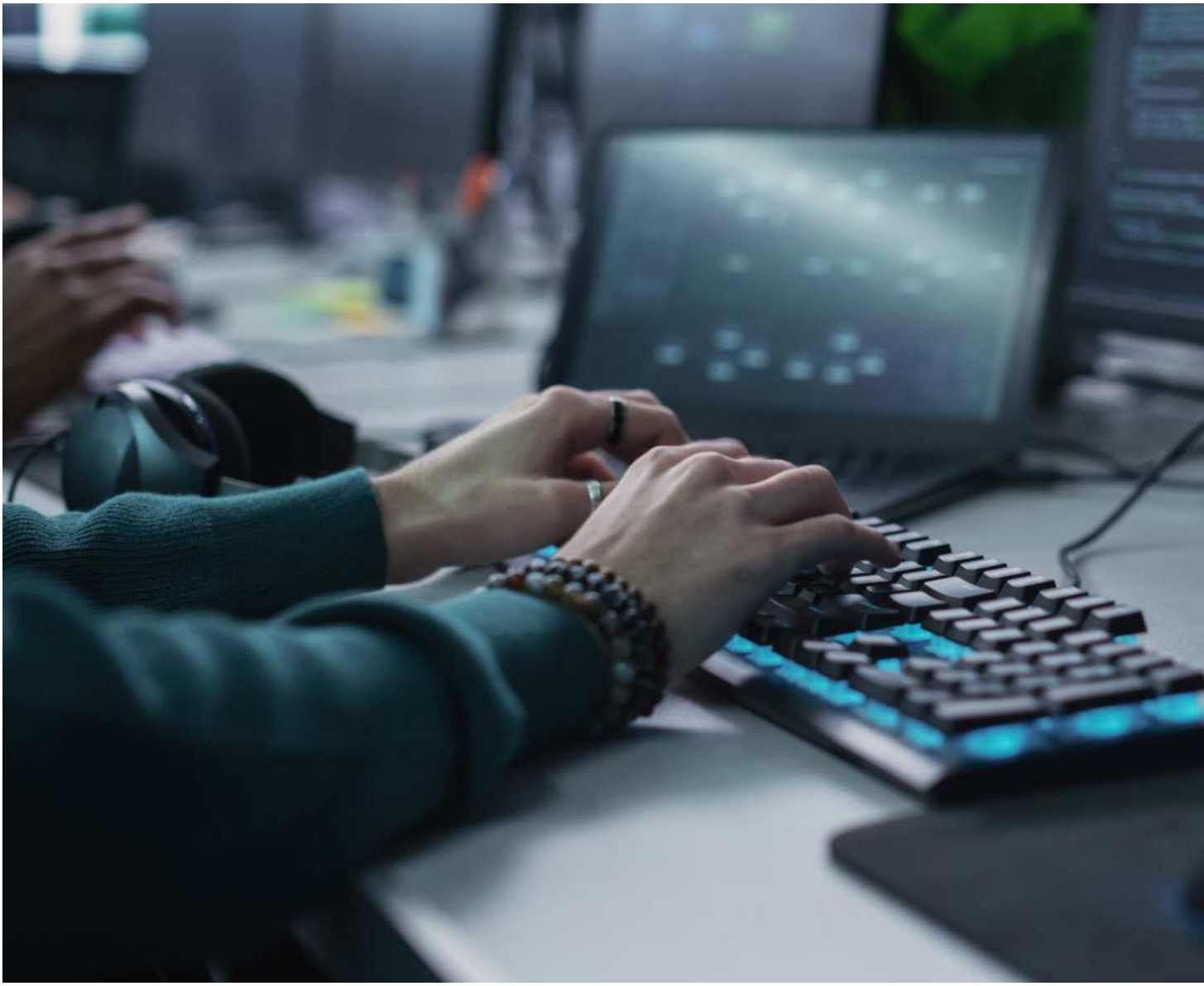
chain from a sustainability perspective and has pledged to be a carbon negative, water positive company by 2030. "While designing the product, we want to choose the components in a way that will minimise our carbon footprint," he says. This isn't easy. Scope 3 carbon emissions from contractors are the biggest contributors to carbon emissions and the hardest to manage. "When we plan for the products, we want to make sure that the factory we choose has the lowest sustainability impact. Same applies from a sourcing perspective. When we do the supplier selection, we don't want to solely focus on the price, but also want to assess the carbon impact. And when we deliver the goods, we want to choose the right mode of transport. Can we go for ocean or rail to reduce the impact from a sustainability perspective?" Progressive supply chain management is strengthening the function at Microsoft and giving it much needed agility.

COMING NEXT

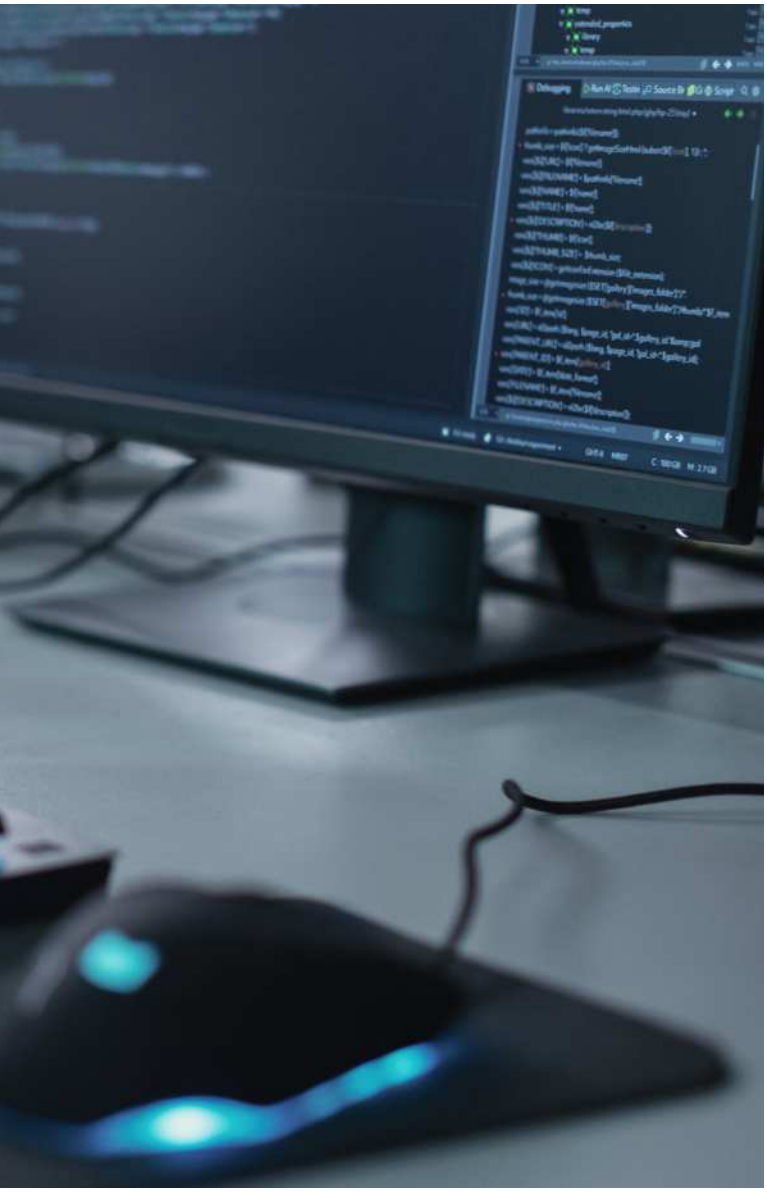
Desai is optimistic about achieving his goals, especially when considering the potential of harnessing emerging technologies like AI. "I'm proud to say that Microsoft is leading the generative AI wave and has already identified a good number of use cases. We are excited to harness the power of generative AI and its positive impacts on supply chains. This is a big opportunity."

Microsoft is rising through the ranks of the 25 Garner Supply Chains, which assesses the sophistication and successes of supply chains in key areas like flexibility, sustainability, and risk management. The company is already on an upward trajectory. In 2023, Microsoft rose to number seven from number 10 in 2022.

"This is the decade of supply chain. Before the pandemic, supply chain was not seen as a strategic entity that helped with the operations of an organisation. But in the post-pandemic era, that's no longer the case. Every organisation is looking at the supply chain as a strategic function. Because they realise that it's the supply chain that will eventually help achieve the goals and objectives of the organisation. So now, supply chain officers play an important role in the organisation's strategy and growth plans. And as a supply chain professional, I'm very happy and proud about that. And



what makes it more interesting for me is that I am working at Microsoft in their supply chain world. I'm working for one of the best organisations with a novel mission to help every individual on the planet to achieve more. To have that culture, to have that purpose, to have that recognition and the commitments Microsoft has made to sustainability, makes it very exciting." ■



"I was able to not only help customers adopt our solution from SAP's perspective, but to adopt successfully at scale"

– Dhaval Desai, Principal Group Engineering Manager, Microsoft

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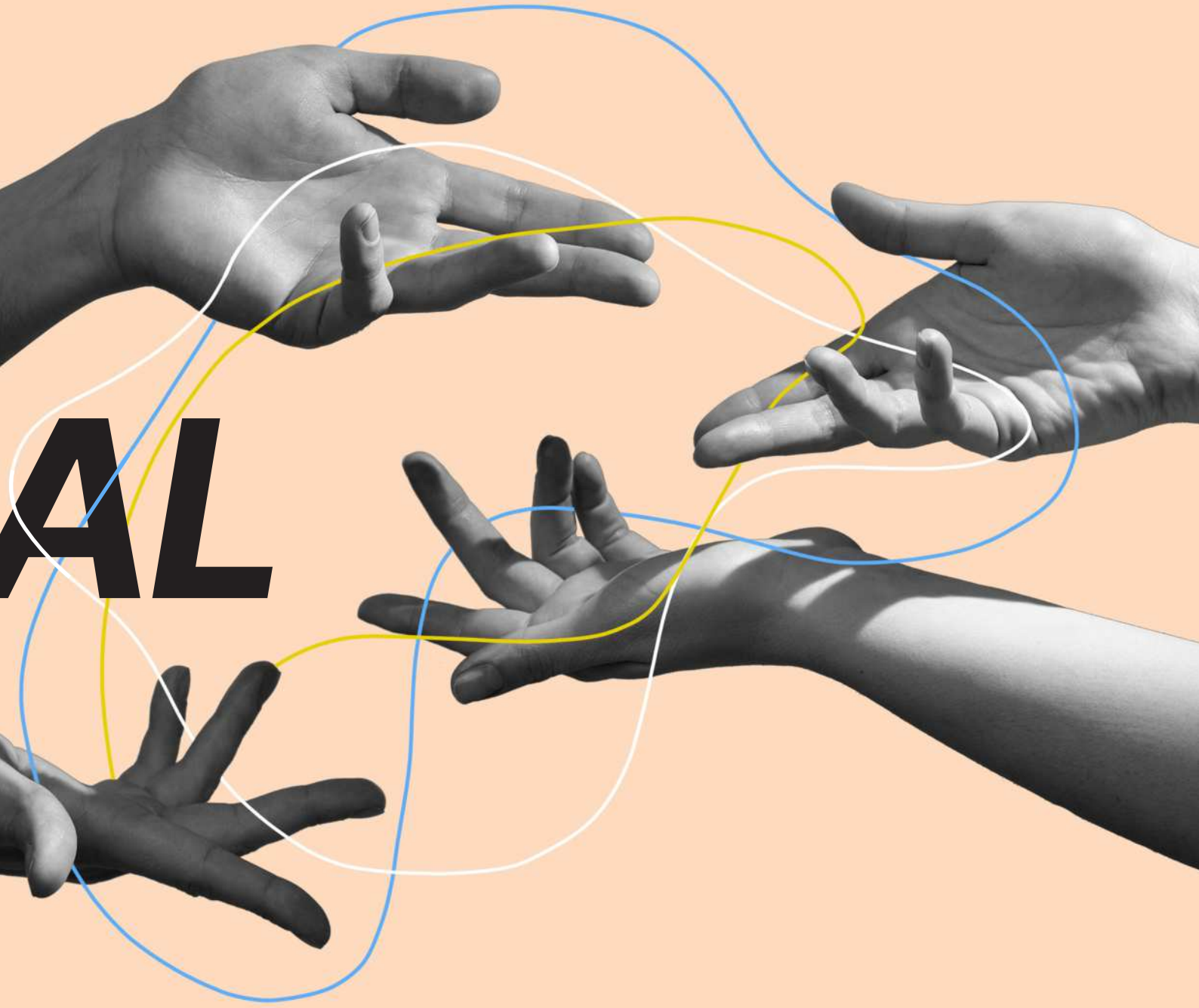
GOING GLOCA

Building more sustainable and resilient supply chains

WRITTEN BY
KAPILA MEHTA, VP SUSTAINABILITY, POWER PRODUCTS GLOBAL BUSINESS AT SCHNEIDER ELECTRIC



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Supply chain disruption is nothing new although globalisation has allowed many large companies to grow and expand their operations at a fast rate, the structure of these large networks makes them vulnerable to external threats. Unexpected bottlenecks, geopolitical conflicts, and severe weather are just a few of the variables that can have a huge effect on the entire value chain.

In order to counter the impact of supply chain disruption, there has been a recent trend of companies moving away from an exclusively global supply chain model and embracing a more "glocal" - global and local mix of supply chain strategies.

More companies are seeing the benefits of going local, in part because of the transparency it allows, but also in reducing their carbon footprints. So, how does a hybrid model of global and local help to promote more sustainable and resilient supply chains,and what does it really mean to be glocal?

INCORPORATING THE LOCAL IN GLOCAL

Transitioning from a global to a glocal supply chain model can significantly contribute to sustainability and resiliency. During the pandemic, for example, businesses were forced to adapt quickly, find creative ways to build resilience into their supply chains, and take advantage of resources a little closer to home. This shift, commonly known as glocalisation, empowers companies to adapt their supply chains to suit the specific needs of local markets.

By tailoring products and services to meet regional demands, businesses can establish a deeper connection with customers and communities while minimising the environmental footprint associated with long-distance shipping. Although metrics suggest that we have made it through the worst stages of supply chain crises, the trend towards glocalisation and local supply chains is likely to continue. As companies seek to improve their agility, competitiveness, customer experience and global positioning, glocalisation will prove vital.

BENEFITS OF GLOCALISATION

Embracing glocalisation and local supply chains offers numerous advantages for businesses. In an increasingly uncertain and dynamic global marketplace, companies can gain greater agility and

flexibility through glocalisation, responding swiftly to individual market changes such as currency inflation and evolving customer preferences. A hybrid approach of global and local enables companies to safeguard against unpredictable shocks in the future.

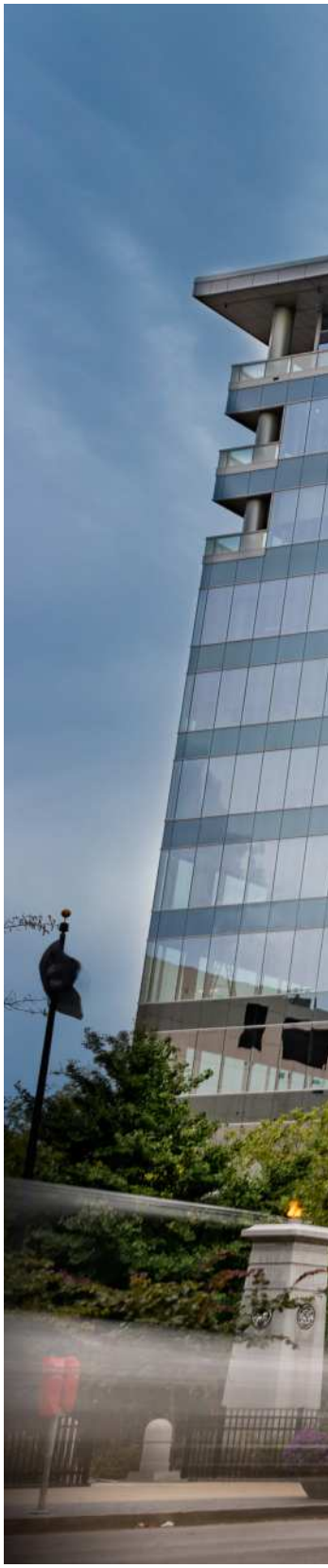
With this hybrid approach, striking the right balance is key. Global supply chains are favourable as they provide economies of scale; on the other hand, local supply chains bring more resiliency. With a balance between the two, companies can remain competitive whilst become more resilient and adaptable to changing market conditions as well as ensuring a consistent flow of goods and services during challenging times like natural disasters, geo-political tensions, or product shortages. Multi sourcing and onshoring play into this, with more local options being added to supply chain strategies to boost resilience. Through glocalisation, businesses can empower the local communities they reside in. By fostering strong ties with local suppliers and manufacturers, businesses can also contribute to the development of regional economies, generating more employment opportunities and nurturing a sense of community engagement.

BEST PRACTICES FOR SUPPLY CHAIN GLOCALISATION

The benefits of glocalisation are clear — but what does this look like in practice? Building a network of factory and distribution centres in different regions can help maximise flexibility, but businesses need to establish what outcomes they want to achieve and understand the tools and resources they need to achieve this.

In order to achieve the right balance between global and local, while also answering strong commitments, organisations need to build net-zero factories and logistic centres with smart solutions that connect it to the overall end-to-end supply chain.

Our factory in Lexington, Kentucky, is one of nearly 300 factories and logistics centres across 40 countries that utilises smart manufacturing solutions to reduce



energy cost and usage, improves operational efficiency, and drives connectivity. The Lexington factory has driven a 26% energy reduction and a 78% CO2 reduction in conjunction with renewable energy credits (RECs) – all whilst reducing equipment downtime by 20%. The success of the factory goes to show that the goal of creating more customised, sustainable, and end-to-end connected supply chains, is best achieved with this combination of smart technologies deployed at a local level.

During the pandemic and global shortages of parts such as semiconductors, it was vital to provide an agile response. Giving procurement teams the freedom to do whatever they needed to adapt quickly to changes in the market and continue meeting customers' needs made supply chains more shock-resistant and customer-centered. Working with local suppliers and developing smart supply chain systems are what helped Schneider Electric China avoid the negative effects of disruption during COVID-19. A big part of this involves nurturing relationships with partners and suppliers to build resiliency and ensure operational continuity. Moreover, the growing emphasis on Scope 3 will require larger organisations to build transparency across their supplier network.

While glocalisation is a core part of this process, it is also a big challenge. In some global supply chains, there are key suppliers in certain parts of the world who have the capabilities to share their emissions data and decarbonise operations. However, in

other parts of the world that lack codes and regulations, tier 2 and tier 3 suppliers simply aren't ready or able to report their emissions. Once more regulations around scope 3 are enforced, glocalisation will accelerate the path to decarbonisation.

The glocalisation movement will only continue to grow, which means more businesses are likely to reevaluate the sustainability and resiliency of their supply chain strategies. Adopting a more hybrid approach that integrates global and local elements can help companies minimise their environmental impact whilst improving their bottom line. By collectively participating in this transformative shift, we can create a more positive and sustainable future for our global community ■

EXPERT SU
PREDICTION

EDITED BY
ANDREW WOODS


PPLY CHAIN
S FOR 2024

THE OPTIMISATION OF TECH

Omer Abdullah, Co-founder and Managing Director of The Smart Cube

"Across the procurement and supply chain industry, there is likely to be an increased focus on technology providers helping their clients, not only optimise the use of tech, but also bring their clients' people along.

Historically, businesses have predominantly hired employees based on their 'hard' skills, including technical qualifications and capabilities – rarely prioritising recruiting those with expertise in relationship management and strong communication abilities. This is because soft skills were often perceived as something people either had or could learn on the job. But in actual fact, they are more challenging to learn than technical skills.

"However, with the recent explosion of AI use, technology can now carry out many of those more technical tasks. As such, procurement and supply chain firms must ensure their employees are able to provide value over and above AI's capabilities so they can truly capitalise on its benefits.

For example, supplier management is now not just about managing performance, but getting the best out of the customer-supplier partnership. This now requires more than a 'by the book' approach. In other words, human intelligence is imperative to make full use of the tech.

Procurement teams, therefore, must bear these developments in mind when purchasing tech: not only buying tech that allows them to do more work efficiently and effectively, but also ensure they support their existing workforce by providing them with the necessary training to develop and enhance the needed soft skills that allow them to focus on value-added outcomes."

AI WILL TRANSFORM THE SUPPLY CHAIN

Oleksander Ivanov, Digital Logistics & Supply Chain Technology Leader at Intellias

"Artificial intelligence (AI) is a game-changer for supply chains, becoming a need rather than a luxury. A 2023 Meticulous Research study reports the market for AI in supply chain is expected to reach $41bn by 2030, with a year-on-year growth of 39%. In 2024 we will start to envision a world where supply chains are self-aware, can forecast tomorrow's customer demand, and can analyse their own inefficiencies and re-route shipments in real time based on rapid weather changes. Picture warehouses corresponding autonomously with distributors and regulating stock before shop managers are even aware there's a need to replenish it. Imagine self-driving cars and drones delivering products and being able to see where your order is in an app. This isn't distant science fiction: it's a reality that is taking shape and will become a reality in 2024."

THE LAST MILE WILL TURN GREEN WITH SUSTAINABLE INITIATIVES

Oleksander Ivanov, Digital Logistics & Supply Chain Technology Leader at Intellias

"As the last mile matures in 2024 there's going to be a huge focus on same-day or ultra-fast delivery. Consumers have got used to the Amazon-type model where an order arrives a matter of hours after pressing the buy button. However, alongside this increased expectation for speed comes pressure for sustainability. This is on everyone's agenda as we look to the year ahead. Today's eco-aware consumers want to be more environmentally focused. As a result, organisations are considering greener, more carbon neutral deliveries and increased fulfilment options such as click & collect and reduced split shipments, while also looking to reduce packaging.

The focus for retailers will be on finding a way to cost efficiently drive sustainability. Advanced supply chain technology will be integral to this. To avoid overstocking, with cash locked up in goods that sit in a warehouse unable to be monetised, retailers will be looking to improve demand forecasting to make the supply chain more efficient. This will ensure they have just-in-time-delivery for back-end replenishment as well as out to consumers. Balancing speed, sustainability and cost will be a juggling act that retailers need to master to thrive in the year ahead."

THE STORAGE INDUSTRY WILL START TO PRODUCTISE AI AND ML

Jimmy Tam, CEO of Peer Software

"AI and Machine Learning have so much promise, but they're not being adopted as quickly as anyone in the industry anticipated. There's a clear reason why: users simply don't know how to realise the technologies' full potential. Beyond ChatGPT, which is easy to use and incredibly popular, there's no real out-of-the-box product for enterprise storage customers. So unless organisations have a data scientist on hand to help them navigate the intricacies of AI and ML, they're very likely to hold off when it comes to implementing any kind of solution.

This presents a great opportunity for the storage industry and the smart companies are already starting to think about it. Through 2024, we'll see the beginning of the productisation of AI and ML. Ready-to-use packages will be developed so that users can easily understand what the technologies can help them achieve, while being straightforward to set up and run. Then watch, as AI and ML adoption increases."

THE RISE OF THE DIGITAL PRODUCT PASSPORT (DPP)

Lars Rensing, CEO of Protokol

"In 2023, we saw a definite uptick in textile businesses beginning to pay attention to the looming European regulation (the Ecodesign for Sustainable Products Regulation) that will mandate Digital Product Passports (DPPs) in the supply chain, as soon as 2027 for the textile industry. After a slow start earlier in the year, there's finally a

sense of urgency (especially among textile manufacturers) and the entire supply chain about understanding how to begin implementation of a DPP program.

In 2024, there will be a cascading effect - as bigger companies with the resources begin to arrange their solutions, their smaller competitors will also be firing on all cylinders to keep up, leading to huge demand on DPP developers and providers to create the best possible solutions for interoperability, transparency, and compliance with the regulation across the supply chain. As demand increases, early movers will reap the biggest rewards over those waiting for more clarity from the European Parliament on the exact DPP specifications.

Textiles companies could end up forming consortia, and tech providers will see huge demand for their whitelabel DPP solutions as soon as the first half of 2024, if the current trend we've been experiencing continues. My prediction for 2024 comes with a warning - those who don't act soon will quickly be left behind."

THE BENEFITS OF TRADING PARTNER COLLABORATION

Andrew Butt, Co-founder and CEO of Enable

"In 2024, trading partners will need to work together more closely than ever before. They will need to fill the 'bank of good will' by encouraging behaviours that benefit both customer and supplier. Likewise, it will become increasingly important for every supply chain company to build out customised rebate programs for their customers/suppliers. In the same way that airlines have their loyalty programs, rebates will drive increased loyalty, cohesion, and collaboration between trading partners. It is my belief that every company should be using rebates in this way, and it will absolutely become necessary as we move into the future. We will also see the rise of rebates being used to replace discounts. Discounts are quickly forgotten, but rebates are earned, making them much more impactful.

Savvy trading partners will leverage AI to make smarter business decisions surrounding their rebate programs. For customers, this might mean adjusting purchase volume to reach a new volume rebate tier. For suppliers, this might mean using an AI tool to find the perfect intersection of price point and rebate amount."

NATIONAL SECURITY WILL BEGIN PLAYING A LARGER ROLE IN SUPPLY CHAINS

Jag Lamba, CEO & founder of Certa

"We currently have a similar relationship with China as we did with Russia in the Cold War. With the threat of espionage, US countries are questioning if we should be purchasing products from China, such as Lenovo laptops. Some countries, such as India, have already banned Chinese manufactured goods. In 2024, the US will begin to tighten its supply chain in regards to China even more to mitigate any potential national security risks."

ESG WILL BE INTEGRAL TO RISK AND COMPLIANCE

"SEC regulations around ESG will begin taking effect in 2024. Companies will need to understand their carbon footprint and disclose their carbon emissions, particularly from their supply chain which makes up 70% of a company's carbon emissions. Suppliers that aren't able to meet ESG requirements are going to have trouble finding companies who will work with them. Even smaller companies will need to have a very clear position on ESG; it will not just be a requirement for larger companies."

CHANGING REAL ESTATE RELATIONSHIPS

Dan Benhamou, Senior Vice President at Brookfield

"The relationship between users and investors in the logistics sector will evolve over the next 12 months. While it has been a traditional tenant and landlord dynamic, this is moving to more ad-hoc solutions.

We are currently experiencing low capital market liquidity and as a result, new structures are likely to emerge such as joint ventures between logistics users and real estate providers. This is an opportunity for well-placed investors and users to engage in dynamic solutions that can adapt to the ever-changing supply chain landscape. Concretely, this means that we could see ourselves investing in our tenant assets with them as co-investors, therefore sharing the economics while also gaining insights into their business needs."

WAREHOUSING COMPETITION AS THE NEARSHORING TREND CONTINUES

Dan Benhamou, Senior Vice President at Brookfield

"In 2024, we expect to see a continued shift from global logistics strategies to re-regionalisation, in an effort to reduce reliance on a single global source by promoting local hubs. This aims to help organisations such as retailers, e-commerce providers and 3PLs increase the resilience of their supply chain and meet the changing habits of consumers.

However, the move towards nearshoring is not without its challenges. A key example is the battle for warehousing. We're already experiencing a shortage of warehousing space in the UK and Europe, driven in part by nearshoring but also the boom in e-commerce since the pandemic and fight for land by emerging sectors such as battery manufacturers and data centres.

The competition for warehousing space is mounting, especially from larger tenants, and we expect this trend to continue in 2024. Nearshoring strategies must be planned and take into account the challenges around obtaining these sought-after spaces, alongside other usual factors such as sourcing local raw materials and suppliers." ■

Transforming supply chain performance and security – the SI opportunity

WRITTEN BY
ERIC MÉNARD,
VP OF STRATEGY AND BUSINESS,
ASTROCAST

Supply chain disruption is predicted to cost organisations around the world an average of US$184 million per year and demand is surging for better end to end visibility to improve resilience and response to disruption. While IoT has transformed supply chain visibility over the past decade, only 15% of the world is covered by terrestrial networks which means vital insight about freight location and status remains uncaptured. With innovative Systems Integrators (SIs) adding Satellite IoT to extend asset tracking across the globe, the industry can now achieve timely interventions to improve security, reduce wastage and carbon footprint and manage customer expectations. Eric Ménard, Vice President Strategy and Business, Astrocast, explains why the shipping industry is on the cusp of a Satellite IoT enabled revolution.

> **"Adding IoT temperature sensors is particularly valuable, especially for containers (Dry and Reefers), to improve control throughout the supply chain"**
>
> *— Eric Ménard, Vice President Strategy and Business, Astrocast*

SYSTEMS INTEGRATOR OPPORTUNITY

For all businesses involved in transportation, from shipping to trains and road hauliers, accurate information about the location and working status of trailers and containers has become ever more vital. The accessibility of cost-effective Satellite IoT (SatIoT) solutions is opening the door for SIs to provide solutions to meet an array of operational demands across the supply chain.

Shipping lines can track containers not only at sea but on land, especially at ports. This helps to improve fleet management and optimise supply chains in the face of on-going disruption and unloading backlogs. Up to date information can support proactive maintenance, minimise asset downtime and improve supply chain resilience. Adding IoT temperature sensors is particularly valuable, especially for containers (Dry and Reefers), to improve control throughout the supply chain. If a power outage occurs that affects temperature within a reefer container, for example, the problem can be flagged to a control centre. If possible, an onboard engineer can then remediate the problem; if not, the cargo owner is immediately aware of the need to provide replacement goods to fulfil their obligations.

For high value cargo, including pharmaceuticals, adding satellite connectivity to operational IoT deployments is providing

> **“These Operational IoT applications, such as location tracking, do not necessarily require the continuous or real-time communication associated with high-cost, power hungry traditional satellite links”**
>
> — *Eric Ménard, Vice President Strategy and Business, Astrocast*

the ability to control the logistics chain from production through to end customer. It is minimising wastage, improving integrity and, as a result, reducing insurance costs.

DESIGN REQUIREMENTS

For SIs, the supply chain provides a compelling market opportunity. But how easy is it to add SatIoT to existing IoT solutions – and does the business case stand up? Certainly, the arrival of a satellite connection designed specifically for widescale IoT deployment is a vital component in creating Return on Investment (ROI). These Operational IoT applications, such as location tracking, do not necessarily require the continuous or real-time communication associated with high-cost, power hungry traditional satellite links. Reliable interim communication provided by modern cost-effective satellite services is good enough.

These solutions are also designed to use minimal power, a key consideration when attaching an IoT sensor to a shipping container which can cross the globe many times a year. Every part of the solution, from antenna design to robustness of equipment and battery life, must be optimised to ensure deployment is a one-off event. Ensuring battery life extends to 10 years can transform the ROI.

SIs can also explore the value of two-

way communication, such as remotely changing the temperature set point of a reefer container, changing the frequency of temperature recording or confirming data transfer has been achieved through an acknowledgement mechanism. Ensuring the data is actioned in the field is also key to the ROI. A single, fast intervention to repair power failure to a Reefer container at sea could repay the entire investment for the entire fleet immediately.

ADDED VALUE INNOVATION

There are a number of additional areas of potential innovation to consider. Theft and piracy, for example, where thieves use technology to 'block' cellular networks and compromise existing IoT based alerts and alarms. Adding SatIoT – which works on a different network – to the solution provides another layer of asset security and tracking to minimise loss.

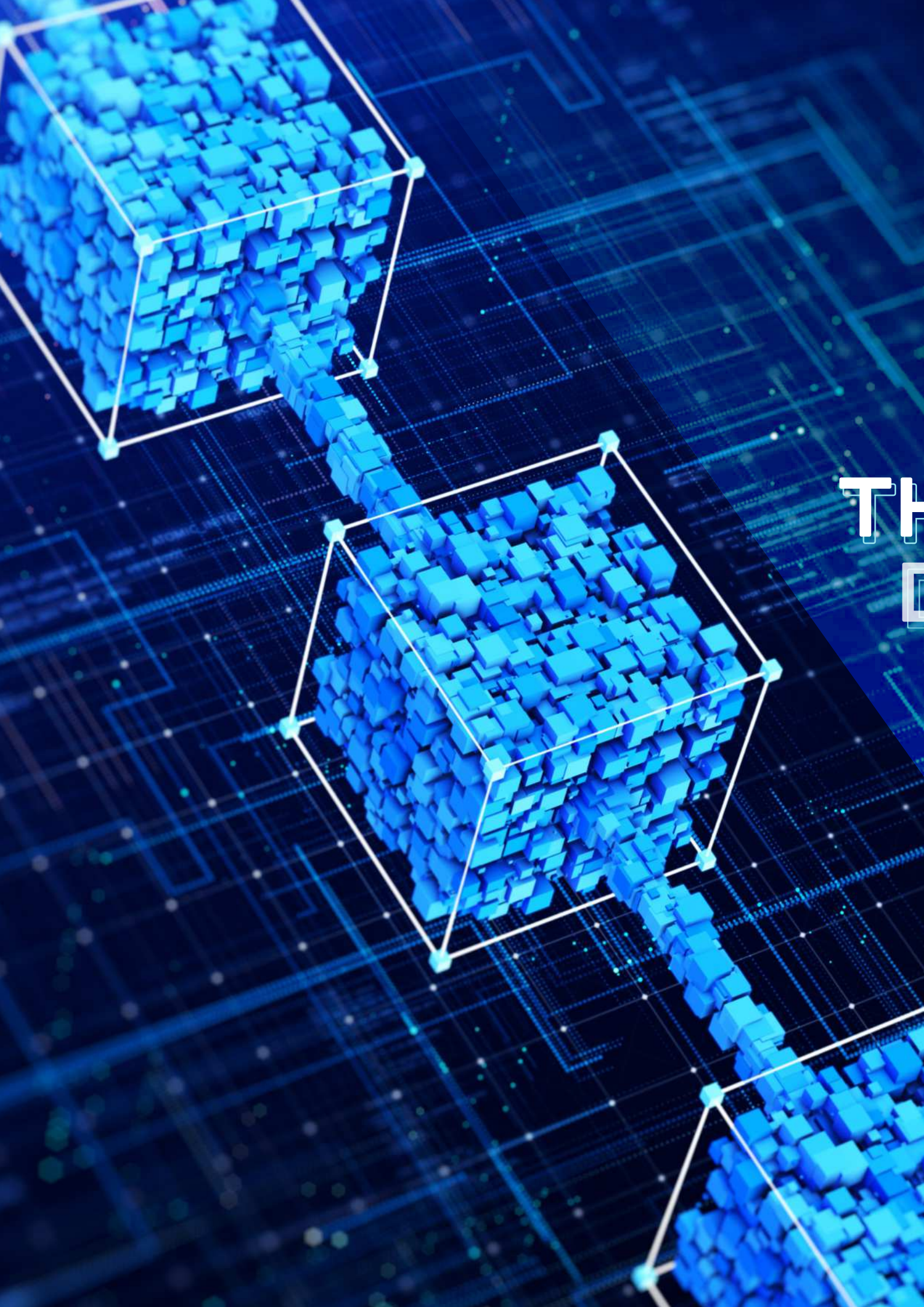
In addition, the ability to identify whether a container has been entered or tampered with in some way during the voyage, would support the war on piracy and drugs. Adding smoke detectors would raise the alarm when fire breaks out on board – an increasing concern if owners fail to inform the shipping company that the container holds self-combusting cargo such as Lithium-Ion batteries.

Indeed, the next step will be to extend the use of IoT from containers to individual loads, using tiny devices to track high value items all the way through the end warehouse or distribution centre destination. SIs can add even more value to this data, using Artificial Intelligence (AI) tools to offer customers more insight.

— *Eric Ménard,*
Vice President Strategy and Business,
Astrocast

CONCLUSION

The shipping industry has a massive demand for better information to mitigate the impact of global disruption. But this is just the start for a market that has an array of complex operational challenges in its management of 50 million containers across the globe. The opportunity is compelling: SIs need to build a solid foundation and business case today. ■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Stephane Crosnier, global supply chain resiliency lead for Accenture, explains how CSCOs can respond to current, and future, geopolitical crises...

WRITTEN BY
STEPHANE CROSNIER

HE NEED FOR DATA-DRIVEN, RESILIENT SUPPLY CHAINS

We must move away from patchwork fixes to data driven, resilient supply chains.

Global shipping has had a tough couple of months, as drought in Panama and attacks on commercial vessels near the Suez Canal cause diversions and delays. The vulnerabilities to these supply chains have been seen before, most recently when the Ever Given held up nearly $60 billion of trade when it blocked the Suez Canal for six days.

In recent years, organisations from every corner of the globe have had to deal with a seemingly relentless stream of 'once in a lifetime' disruptive events, from the pandemic, geopolitical shifts and extreme weather to technology breakthroughs and material and talent shortages.

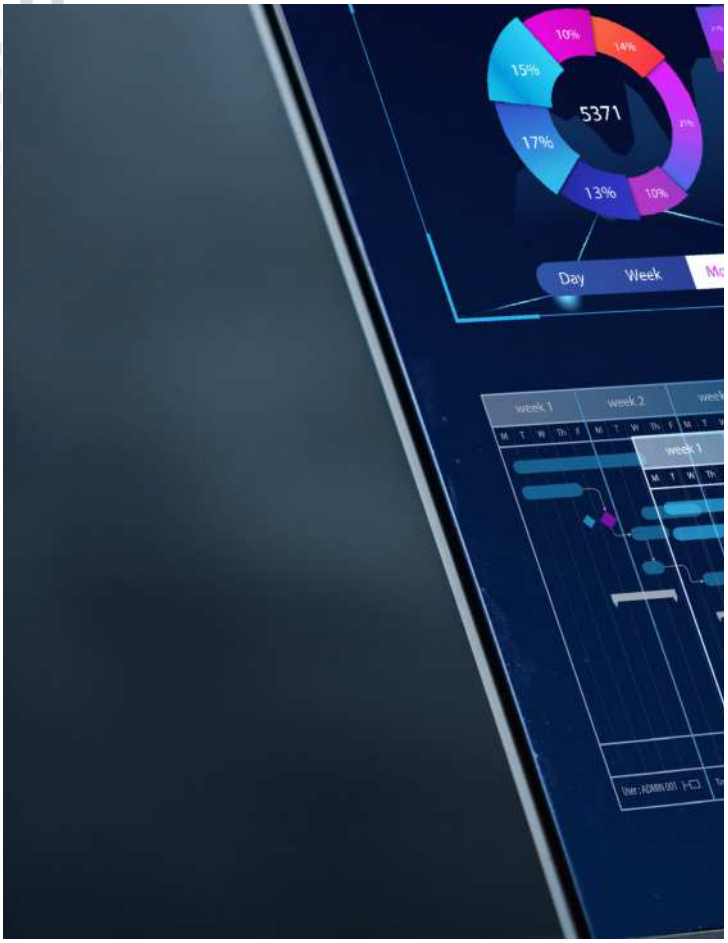
The impact on business performance is acute. In 2021 and 2022, companies missed out on £1.35 trillion ($1.6 trillion) in additional annual revenues because their engineering, supply, production or operations were disrupted. To put that into context, UK GDP in 2022 was £2.27 trillion. That gives a sense of the scale of the challenge, or opportunity.

In response to greater global shocks, many companies are ramping up regional suppliers as well as transforming end-to-end supply chain capabilities. Today's investments in facility relocations, automation and digitisation – which currently stand at 4.5% of average revenues – are forecast to continue increasing in the next three years by a range of 2.5x to 4x vs according to our research.

Indeed, by 2026, just over half of UK companies intend to buy most key items from regional suppliers, up from a quarter today. Even more UK-based organisations, about three quarters, plan to produce and sell most of their products in the same region by 2026. It's a trend we're seeing across Europe and has already boomed in the US, where half already buy, produce and sell within the same region.

While increased levels of regional sourcing can reduce some of the risk, it cannot be the only solution to creating a more resilient supply chain. Companies must also invest in technology infrastructure that will increase their digital maturity.

This is where it often gets a bit messier. The stresses and shocks to supply chains in recent years has forced companies to quickly apply a patchwork of short-term fixes to their technology stacks. While taking steps like this



can be essential to responding to a shock, in a complex global production and supply network, it is essentially like taping a leak when the whole pipe needs to be replaced.

Broadly, there are three levers companies should focus on to increase their resiliency: visibility, resiliency in design and new ways of working. Let's take each in turn.

Firstly, visibility. Companies should make supply chains and production processes more predictable and autonomous. For example, smart end-to-end control towers monitor processes, generate alerts and analyse different scenarios in real time to detect and correct issues early on. Today, only 11% have near real-time alerting and 78% of businesses need at least a week to fully understand the impact. This is time that is costly and hindering them from quickly and efficiently resolving issues. Identifying key vulnerabilities in companies current operations and extended supply chain through improved visibility and simulation is also important. In that regard, a number of leading companies have started to build digital twins of their extended supply chains & used simulation to "stress test" them against catastrophic scenarios.

Second is resiliency in design. Moving activities earlier in the development process allows companies to get products, processes and ways of working right the first time so that the production process is more resilient and sustainable. For example, plant digital twins – digital replicas of physical production facilities down to individual assembly lines and machines. These digital replicas allow product designers and engineers to identify and troubleshoot potential prototype issues or defects and iterate the design before production begins, reducing the chance of issues cropping up during production.

Finally, new ways of working. Nobody has been able to avoid the topic of AI in 2023, and they shouldn't try to. It has the ability to transform how business is done, and the impact on supply chains will be huge. Businesses should upskill and reskill the workforce in data, AI and other digital technologies so they can use predictive and visualisation tools to make data-driven decisions at the frontlines of business. For example, it's creating the skills and the talent to move from machine operators to autonomous production engineers.

By addressing these three steps, companies can strategically redesign the technology surrounding their supply chains, without creating unwieldy silos or new bottlenecks. This will, make supply chains more transparent and agile with data and AI to drive sustained resiliency. It will mean that while shocks will inevitably come along, they are more able to respond, and withstand, those shocks.

If we've learnt one thing from the past few years, it is you cannot anticipate what is going to come down the line next, and what impact that will have on global supply. Identifying key vulnerabilities in your company's current operations and extended supply chain through improved visibility and simulation, so that you're in the best possible position to respond, is key. ■

Digital Product Passports

and the circular economy

WRITTEN BY
LARS RENSING, CEO OF PROTOKOL

More than ever, customers have a watchful eye on the businesses they buy from and their sustainability initiatives. Fashion businesses, and by extension, the textiles industry, are often in the spotlight for the role they play in generating waste. With COP28 around the corner, businesses face increasing pressure to clean up their operations. To reach global net zero emissions by 2050, and limit global temperature rise to 1.5C, businesses, governments and individuals must start making decisions carefully to mitigate their impact on the planet.

The textile and garment industry is regularly cited as one of the worst offenders for overlooking sustainability and creating waste. It releases 1.2 billion tonnes of carbon dioxide per year, more than the shipping and aviation industry combined, and accounts for approximately 10% of global carbon emissions and is the third largest industrial polluter in the world, after oil and agriculture. On top of that, it is estimated that 92 million tonnes of textile waste is generated annually on a global scale. At the current pace, that number is expected to grow to 134 million tonnes by 2030. All this, and still 50% of the world's largest fashion brands disclose little or no information about their supply chain, leaving consumers in the dark about the textiles used to create their clothing.

With more and more consumers consciously choosing to shop sustainably as awareness grows on the footprint of fast-fashion, some fashion companies have started changing their unsustainable practices. Legislation is also catching up - by 2030, across Europe there will be a mandatory solution to the lack of transparency surrounding product lifecycles: Digital Product Passports (DPPs).

WHAT IS A DPP?

A DPP is a tool that will enable businesses to collect and share information regarding a product and its lifecycle. It is a digital record of a product's history, which can contain information such as the raw materials used in its creation, its journey through the supply chain, to its various ownerships, service, repair, warranty records and more. The information is added to the product's DPP throughout its lifecycle and can be accessed by relevant stakeholders.

DPPs are a vital part of the European Commission's Circular Economy Action Plan, with further details on requirements set out in its forthcoming Ecodesign for Sustainable Products Regulation. These will facilitate a process and tool for recording information on how garments are sourced, manufactured, sold and recycled within Europe going forward. The use of DPPs will be mandatory within the EU market for the industrial and EV battery sector as soon as 2027, followed by textiles and other industries in 2030.

The introduction of DPPs in the fashion industry could bring fantastic positive change, as garment supply chains and product lifecycles are often associated with a lack of transparency, particularly in terms of sustainability. DPPs can change this, as they can highlight the sustainability, environmental and recyclability attributes of a product, as well as its manufacturing process and sourcing. Stakeholders can then make informed decisions about whether a garment is produced sustainably or not.

HOW DO YOU USE A DPP?

DPPs can be cloud- or blockchain-based. However, even a cloud-based DPP is worth mirroring on blockchain, which by nature is decentralised, secure, immutable and easily accessed by the end-user. This means that businesses or relevant stakeholders cannot tamper with the data retroactively without it being clear that an edit has been made, ensuring the highest standards of data validity are maintained throughout a product's lifecycle.

It's not just internal stakeholders that could have access to the information stored in a DPP. In some DPP solutions the end customer can scan a QR code attached to the product to access information stored in the DPP. Information such as general information, manufacturing facility, types of materials used and their origins, as well as the product's carbon footprint and its various past owners. It could also include information on past repairs, repairability and recycling processes, to facilitate a more circular economy past the point of purchase.

FASHION BRANDS AND THEIR USE OF DPPS

Despite the 2030 DPP deadline for the textiles industry, some well-known fashion brands are already beginning to embrace them. Established names including Loro Piana, Nobody's Child, Burberry and Stella McCartney have gotten ahead of the curve by announcing DPP trial programs for their goods. Even universally known fast-fashion brands such as H&M are beginning to explore the use of DPPs under their sub-brand Arket.

It's comforting that some companies are getting started early, as implementing DPPs requires a good level of preparation. Businesses will need time for strategic

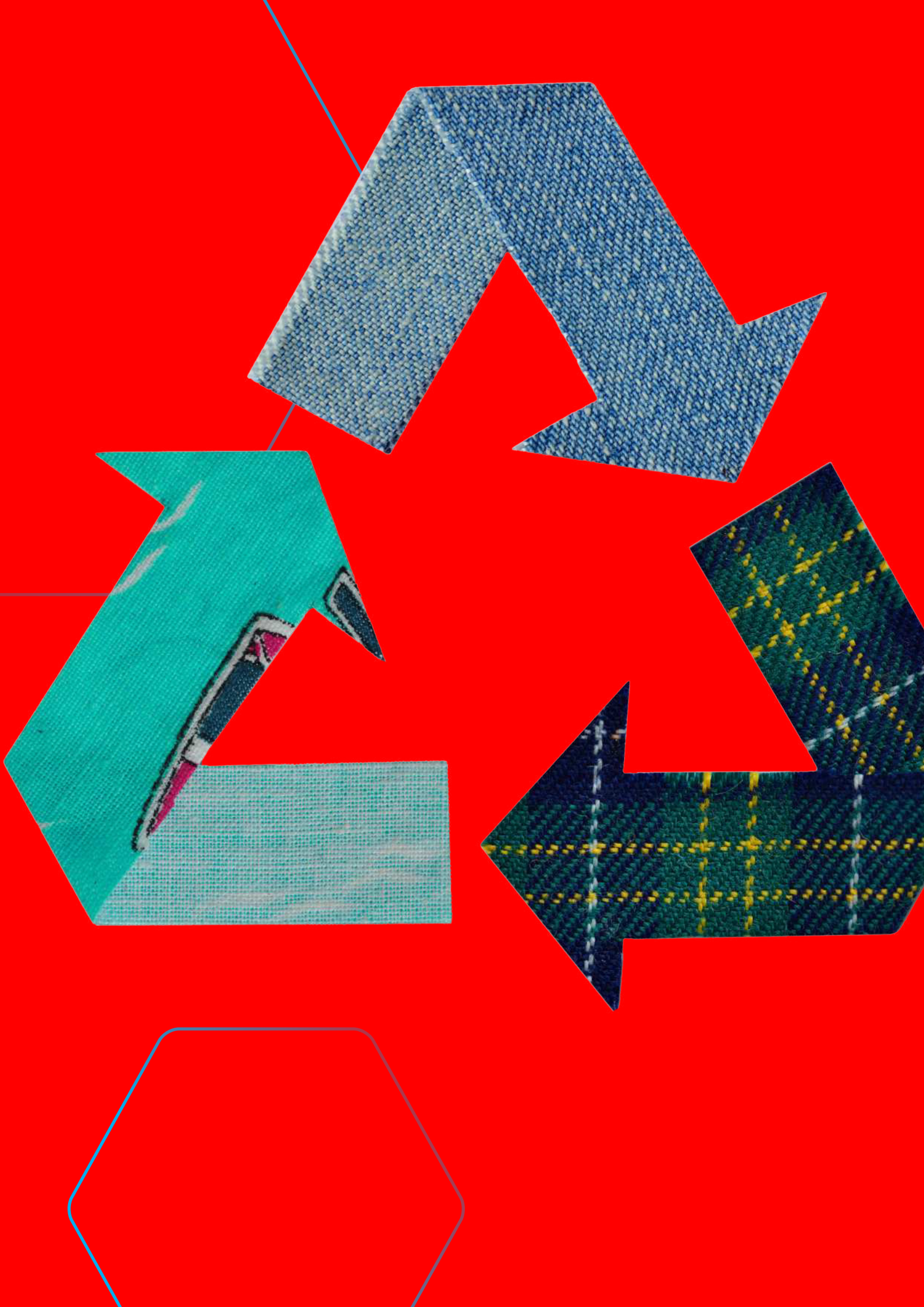
and well-executed implementation, from planning and testing internally to ensuring interoperability with suppliers ecosystems at rollout.

However, as often is the case with new technology, the preparation and implementation of DPPs does not come without challenges. Businesses will need to prepare with plenty of time before the regulation is enforced, so they can ensure compliance and become comfortable with the technology before it is mandatory. But with sufficient preparation, the task of collecting, presenting and updating all the required DPP information will become a regular part of operation. By starting now, businesses can take a measured approach to transforming existing supply chain processes and systems to ensure information for the DPP is collected appropriately, before the 2030 deadline.

Working in partnerships with DPP solutions providers can also provide reassurance that considerations around compliance and interoperability are well thought through, to protect businesses and bring the maximum benefit to consumers.

For consumers, DPPs will aid in the complex task of making informed purchasing decisions and give them peace of mind when shopping with a sustainable conscience. It will be harder for companies to greenwash. For businesses, DPPs can help maintain loyal customers and instill trust. They can also benefit from new revenue streams and business practices facilitated by DPPs, such as data on customer behavior, opportunities to participate in the resale market, as well as gaining the ability to validate their own green claims.

Tackling climate change and reducing unsustainable waste are some of our planet's greatest challenges. As we become more aware of the need to greatly reduce our impact on Earth's resources, and the downsides of fast-fashion companies are being more and more widely documented, DPPs signify a welcome change. Businesses should and must embrace DPPs with open arms, even if the regulation isn't finalised yet. Despite the hurdles, one thing is certain: DPPs represent a new way to manage supply chain transparency, provide information on product lifecycles and sustainability claims, and give more opportunity to the consumer to make conscious buying choices. ■



SECURING THE SUPPLY CHAIN:

strategies for mitigating third-party risk

WRITTEN BY
ROB POCOCK, TECHNOLOGY DIRECTOR,
RED HELIX

Supply chain attacks – those in which a hacker infiltrates one component of a supply chain and uses it to compromise the security of any other entities involved – have become a major cyber threat facing organisations. Not only because the number of attacks is rising, but also due to the amount of damage these attacks can cause, with any breach having the potential to impact all parties on the chain.

For example, a breach of MOVEit software earlier this year affected the likes of the BBC and British Airways. In September, Greater Manchester Police (GMP) officers' names were put at risk as the result of a ransomware attack on a small supplier. And probably the most prominent example is the 2020 SolarWinds attack, when hackers gained access to the networks, systems and data of thousands of SolarWind customers in Enterprises, Government Departments, and ironically, FireEye – a major cyber security and breach remediation vendor.

Yet, despite the severity of these attacks, it is an area of security that is often overlooked. In the most recent cyber security breaches survey, it was found that just over one in ten (13%) businesses review the risks posed by their immediate suppliers, and even fewer review the risks of the wider supply chain (8%). This indicates that, while the threat of a supply chain attack continues to grow, it still isn't being fully acknowledged by companies and their leadership teams.

For the more closely regulated industries, such as telecoms and finance, new mandates are being put in place to govern this. Both the Telecommunications (Security) Act and the EU's DORA now have stipulations in place requiring organisations to identify, disclose and reduce the risk of working with third party suppliers.

For other industries, where these requirements may not yet be in place, the need to act is still there. Not only do organisations need to protect their own assets, but they have a responsibility to protect others in their chain as well, or risk a breach that prevents them from being able to conduct business with their customers and suppliers.

UNDERSTANDING THE RISK

Today's digital supply chains have become longer and increasingly complex, with more SaaS solutions and cloud services being used than ever before. While these digital pathways have unlocked efficiencies, they also increase vulnerabilities, with every integration introducing a new potential point of attack. To mitigate the risk of a supply chain attack, it is crucial to understand where the threat lies.

One common oversight by companies is underestimating the risks associated with regular software updates, which, although intended to fix known vulnerabilities, could potentially serve as a vessel for malware introduction. The aforementioned SolarWinds hack stands as a stark testament to this, with what was thought to be a routine software update causing the monumental security breach. Factor in tools that require API access to pivotal systems like Customer Relationship Management (CRM) or accounting software, and suddenly you find yourself in a situation where any breach could unleash a domino effect of catastrophic data loss and operational disruptions.

This risk is further magnified with every new vendor or service provider introduced to the chain. Regardless of their own robust security protocols, a lax security posture from a third-party supplier can unwittingly create a gateway for cyber attackers and offer access to multiple companies' data and systems.

There is also threat of criminals posing as trusted clients and suppliers and sending deceptive emails. These may not always contain malware or links to a malicious website but can instead request that the recipient takes action, such as authorising a payment or sharing access to a system and its data. These schemes, while simple in their nature, can have damaging consequences for the recipient company, not to mention the potential to cause a great deal of distress for any individual deceived into action.

STRENGTHENING SUPPLY CHAIN SECURITY

Reducing these multifaceted threats requires a multifocal approach. Supply chains must be scrutinised, and businesses need to acknowledge the inherent and emergent risks. This encompasses a nuanced understanding that even routine, seemingly secure processes carry potential threats.

Fortunately, there are several steps businesses can take to help protect their supply chains:

Education and Awareness: Organisations should provide their staff with ongoing cyber awareness training, helping them to spot and thwart deceptive interactions, be they with trusted entities or otherwise.

Ongoing Security Audits: Rigorous and frequent security audits, especially before integrating any third-party, have become essential. Not only to protect a company's own assets, but also to demonstrate its security measures to others, with organisations that deal with sensitive data progressively demanding accreditation proof from entities conducting PEN tests. PEN tests are a crucial part of testing an organisation's security infrastructure and should be run, at the very least, annually.

Continuous Monitoring and Regular Updates: Establishing an unbroken monitoring mechanism for every component of the supply chain, paired with regular updates of security protocols and software, helps in maintaining a secure operational environment.

Collaboration and Threat Sharing: Facilitating information sharing about potential threats within the industry fosters collective threat awareness and fortification. When sectors share insights on encountered threats, they collectively enhance their defensive postures.

Introducing Robust Access Control Tools: Employing robust access tools, such as Zero Trust Network Access (ZTNA), strengthens supply chain security by ensuring third-party access to systems and data is meticulously controlled, authe-nticated, and restricted only to required resources and durations.

Email Domain Visibility: Maintaining visibility of your public-facing email domain and those within your supply chain reduces the potential for spoofing and allows quick identification of impersonation attempts.

Thorough Testing of Patches:
Before deployment in the live environment, patches and software updates should be scrutinised in a controlled setting to ensure they do not introduce new vulnerabilities.

Accepting and Preparing for Risks:
Understanding and preparing for the inherent risks of digital transformation is critical. A breach in your hosting provider, even if it doesn't directly target your company, can still lead to a loss of your data – as evidenced in the recent CloudNordic and AzeroCloud hack.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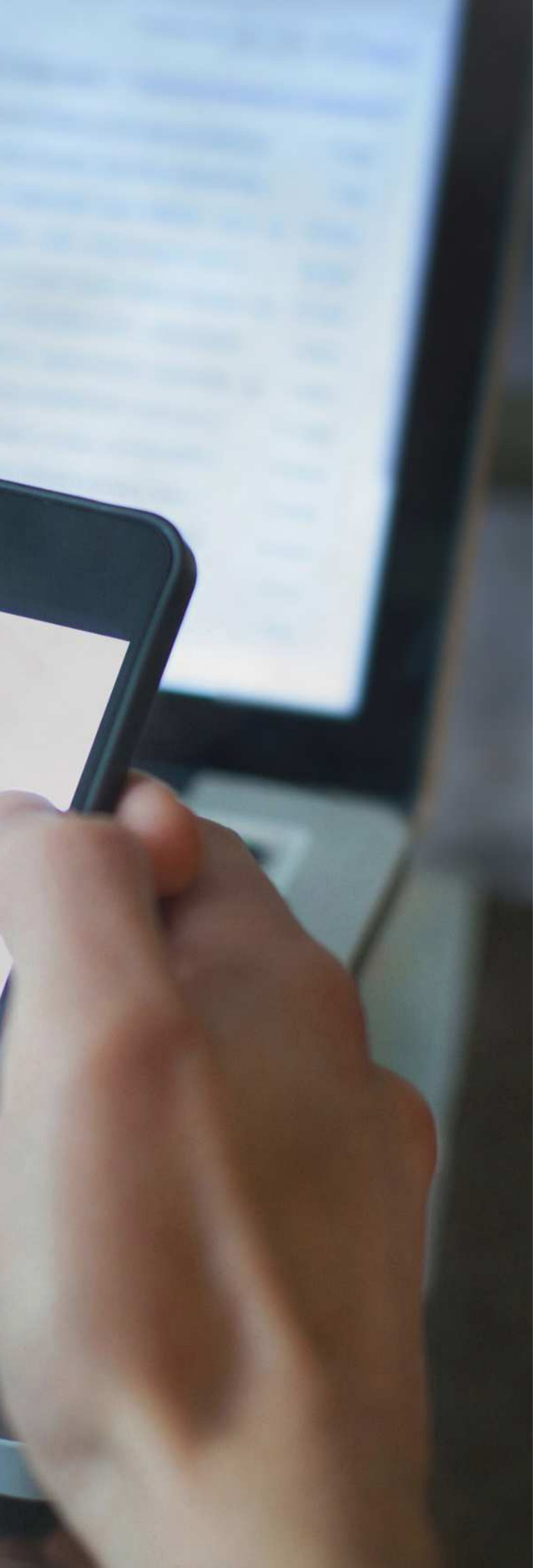


A COLLECTIVE COMMITMENT TO SUPPLY CHAIN SECURITY

The complexities of today's digital supply chains require further attention to be paid in protecting them. While more regulated sectors have seen mandates put in place to govern this, many other industries haven't, yet that in no way means they should be complacent in addressing supplier risk.

Supply chain security must become increasingly prioritised. By introducing rigorous security audits, continuous monitoring, sector-wide collaboration and the implementation of tools like ZTNA, companies can not only further protect themselves, but also help protect all the businesses they are connected to – which will become increasingly important as other organisations ramp up their own third-party risk assessments.

As supply chains have evolved, so too must our approach to safeguarding them. Failure to do so could result in severe financial and reputational damage that extends far beyond a single point of compromise, affecting a multitude of organisations and consumers alike. ■

TOP 5 OF THE BEST SUPPLY CHAIN EVENTS COMING IN 2024

With the in-person event circuit returning to pre-pandemic form, these five global supply chain and procurement events are must-attends for 2024

WRITTEN BY
HARRY MENEAR

Today, procurement teams and supply chain managers are being tasked with driving operational efficiency, cutting costs, and helping reach corporate social responsibility goals.

More than ever, success in the procurement and supply chain sector is reliant on staying up to date with developing technological trends and fostering strong connections within your ecosystem. The ascendancy of generative AI promises to automate, optimise, and increase the sustainability of supply chains, but harnessing this technology and the role that it is set to play in global procurement networks is far from certain. At the same time, economic pressures, an increasingly complex labour market, and the ever-present pressure to reach net-zero throughout the supply chain are all conspiring to make supply chain professionals' strategic objectives more challenging than ever.

In this climate, conferences and industry events offer an opportunity to network, share best practices, and learn from the industry's best and brightest. As we head into 2024, here are our top 5 global supply chain and procurement events for the year ahead.


TOP CINQ
CINCO PRIMEROS
LIMA TERATAS
PRIMI CINQUE
TOP FÜNF

5

GARTNER SUPPLY CHAIN SYMPOSIUM/ XPO™ 2024

Focused on meeting the proliferating challenges facing the procurement sector—from heightening expectations, geopolitical uncertainty, and economic volatility to talent burnout—the Gartner Supply Chain Symposium Xpo helps the industry's leading supply chain professionals "outperform and overdeliver".

The three day event is structured as a way for industry professionals to meet, network, and share ideas by participating in collaborative sessions and accessing the latest research—including Gartner's own Magic Quadrant Series, which breaks down the characteristics inherent to the Gartner Magic Quadrant™ methodology for supply chain planning solutions, transportation management systems, warehouse management systems and more.

The event will also host an exclusive series of small scale workshops, contract negotiation clinics, and the CSCO Circle, a program with an agenda designed for chief supply chain officers to explore new strategies, share innovative ideas and grow their community of peers.

WHEN: **JUNE 10-12**

WHERE: **BARCELONA, SPAIN**

PROJECTED ATTENDANCE: **1,600+**

VISIT WEBSITE

4

ISM WORLD 2024

One of the most elite gatherings of supply chain professionals from a wide range of industries—including hospitality, tech, and retail—ISM World is one of North America's biggest networking opportunities for the industry. Hosted by the Institute of Supply Management, the event takes place over the last weekend in April at the MGM Grand in Las Vegas.

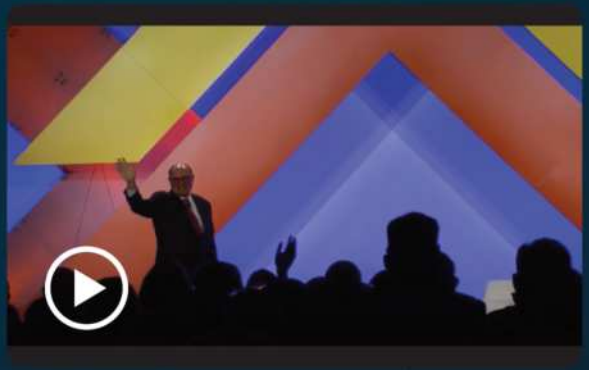
In addition to luxury accommodations, dining, and entertainment, ISM World focuses on creating an opportunity for supply chain professionals to learn from executives and thought leaders driving innovation in the sector from more than just a business perspective. The opening keynote this year will be delivered by political scientist Ian Bremmer, President and Founder, Eurasia Group and GZERO Media. Highlighted sessions will focus on subjects like building the Women's Supply Management Community, the role of Generative AI in Procurement, and negotiation strategies that minimise supply chain risk.

WHEN: **APRIL 29 - MAY 1**

WHERE: **LAS VEGAS, NEVADA**

PROJECTED ATTENDANCE: **2,000+**

VISIT WEBSITE



3

SUPPLY CHAIN USA

Hosting more than 100 speakers (primarily directors and members of the C-Suite), multiple interactive sessions, and 10+ hours of networking over a two day conference, Supply Chain USA is the largest supply chain and procurement professional industry event in North America.

While many supply chain and procurement industry events tend to skew towards over-representation of vendors—turning an event ostensibly about knowledge and skill sharing into something more akin to a trade show floor—Supply Chain USA boasts over 50% of attendees being from retailers and manufacturers, with executives and representatives fro, Dow, Walmart, Milwaukee, Michael Kors, Mattel, Nordstrom, Mars, and Honeywell (among others) in attendance.

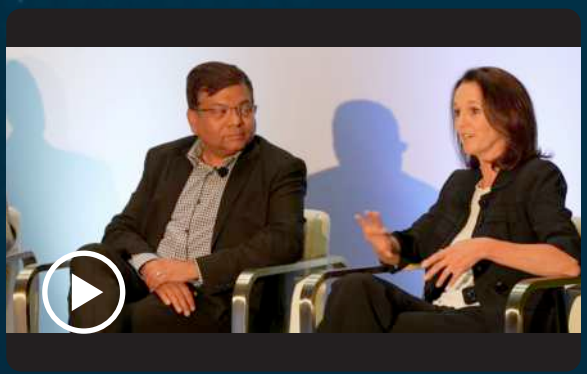
The 2024 event will focus on sharing industry expertise to increase organisational resilience through the industry. The defining themes for the event will include Risk Management, ESG Compliance, improving Cost Effectiveness, and increasing Data Driven accuracy, efficiency, and transparency in the modern supply chain.

WHEN: **MAY 22-23**

WHERE: **ATLANTA, GEORGIA**

PROJECTED ATTENDANCE: **800+**

VISIT WEBSITE



2

MANIFEST

Manifest bills itself as the premier gathering of supply chain, procurement, and logistics professionals that unites the entire ecosystem of Fortune 500 companies. Over 4,500 industry executives, entrepreneurs, and investors will gather for three days of keynotes, seminars, networking opportunities, and demonstrations.

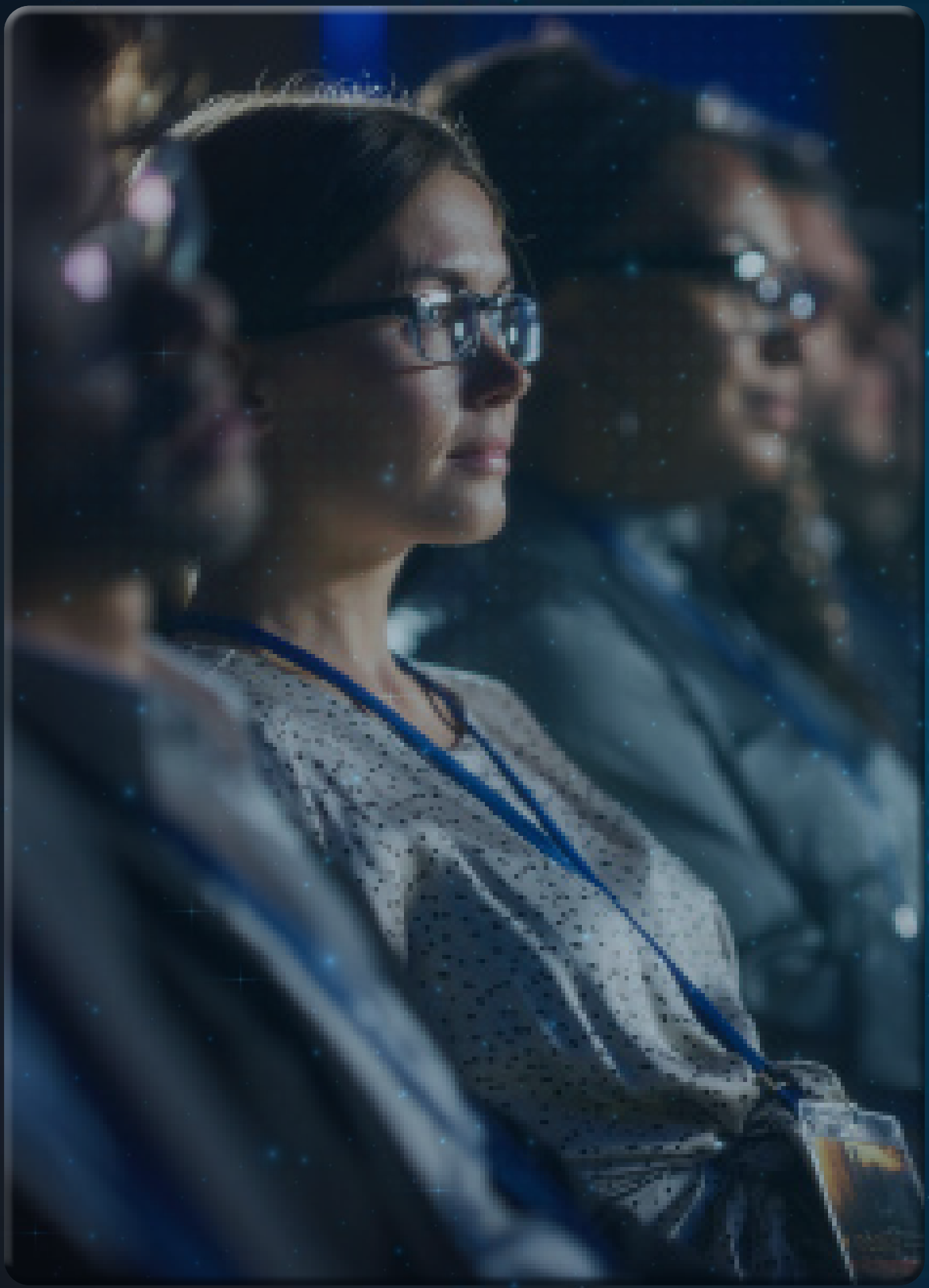
The world's largest brands, from Walmart and IKEA to Dell, CVS, and H&M attend, bringing insights from some of the world's largest logistical and supply chain structures to attendees. Expert speakers for the 2024 event will include Laura Maxwell, SVP of Supply Chain for PepsiCo; Kristen Siemen, VP and CSO at General Motors; and Harald Emberger, CSCO at Beiersdorf.

WHEN: **FEBRUARY 5-7**

WHERE: **LAS VEGAS, NEVADA**

PROJECTED ATTENDANCE: **4,500+**

VISIT WEBSITE



1

MODEX 2024

Attended by tens of thousands of industry professionals, experts, and thought leaders from the supply chain, manufacturing, and transportation sectors, MODEX is designed as a learning and networking event, but also a place for industry professionals to find solutions to existing pain points and challenges.

Featuring 5 keynote addresses, 150 educational seminars, and over 1,100 solutions "in person, in action". The event promises to be a way for supply chain professionals to discover what's new and what's next for supply chain optimisation, from traditional equipment to sustainability, automation, robotics, and emerging technologies.

WHEN: **MARCH 11-14**

WHERE: **ATLANTA, GEORGIA**

PROJECTED ATTENDANCE: **45,000+**

VISIT WEBSITE

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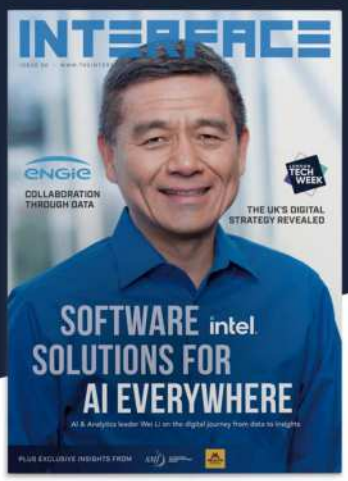
CPO STRATEGY

INTERFACE



Focused delivery

Through our multiple social and digital platforms we deliver your content directly to pre-qualified individuals and relevant market sectors to ensure the largest reach possible.

Bespoke creative

Combining your brand with our stunning in house, crisp, clean & modern style, we deliver a high quality, refreshing creative tone that is cleverly used to enhance the narrative to the story.

Passionate narrative

We have a unique approach creating a storytelling tone to our content, capturing C-Level personal narrative to deliver the most engaging, relevant and inspiring editorial.

Multi-channel storytelling

Using video, photography and our Podcast to enhance the personal narrative of the story, we're able to create several, valuable assets that allows the content to be consumed across multiple channels.