



The drive for
*visibility and
transparency:*

How to enable resilient, sustainable,
and data-driven supply chains

Capgemini  × Prewave

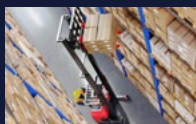


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Where are we now?

In today's complex and dynamic global supply chain landscape, organisations face ever-shifting challenges – from geopolitical disruptions and economic instability to environmental concerns and compliance risks. The need for end-to-end visibility and proactive risk management has never been more critical.

As procurement and supply chains constantly react to emerging threats and unpredictable disruptions, it is imperative to invest in comprehensive transparency. The challenges are broader than ever, encompassing

compliance risks, trade tariff wars, nearshoring, delivery issues, natural disasters, and environmental concerns. The use of technology and data is now essential, not optional.

This point of view, co-authored by Capgemini and Prewave, unpacks the current industry challenges, the growing necessity for transparency, and how AI-driven technology can provide resilience and agility to global supply chains.

Our partnership, which combines vast experience with innovation and

collaborative solutions, is helping globally recognised organisations become insights-driven and agile in the face of ever-changing global uncertainty. Within these pages, we aim to help you – supply chain leaders and procurement practitioners – become proactive, responsive, and data-driven.



Disruptions, Disasters, and Regulatory Demands: *the supply chain practitioner's toughest challenges*

Global supply chains are more interconnected than ever, yet they remain vulnerable to numerous disruptions.

Expert insight:

Operational fault lines:

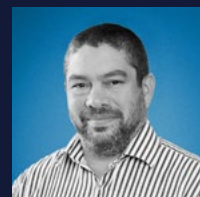
Geopolitical and economic uncertainty: Trade wars, tariffs, and sanctions create uncertainties that disrupt sourcing strategies and demand forecasting.

Disruptions and unprecedented events: COVID-19, natural disasters, and regional conflicts have all highlighted the fragility of global supply chains.

Regulatory compliance and ESG requirements: Governments and consumers are increasingly demanding ethical sourcing, sustainable practices, and compliance with environmental, social, and governance (ESG) norms.

Lack of real-time visibility: Traditional supply chains rely on fragmented data sources, leading to delays in decision-making and response.

Cybersecurity and data integrity risks: As digital transformation accelerates, organisations must secure their supply chain data against cyber threats and ensure its accuracy.

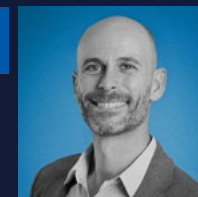


“The geopolitical environment is fraught with tensions between major economies amidst the renewed risk of trade wars, tariffs, and protectionist policies that can reshape the global trade map. These tensions are posing significant challenges for global supply chains, placing a stronger focus on de-risking supply chain operations and forcing businesses to rethink their strategies.”

Mike Dwyer

Head of Intelligent Industry UK,
Capgemini

“The last five years have shown that supply chain disruption is the new norm and supply chain leaders must now balance five dimensions: cost, cash, service, sustainability, and resilience. Industry winners will be those that invest in AI-driven technology to enable the visibility, agility and responsiveness that will be required to build resilience and balance these five dimensions.”



Phil Davies

Executive Vice President, Global Head of Supply Chain,
Capgemini Invent

Expert insight:

“ Our 2025 global investment trends report found that 63% of business leaders plan to increase investment in supply chain transformation in 2025 – a notable rise from 48% in 2024. This surge in investment is driven by the need to enhance resiliency, adaptability, and competitiveness in an increasingly volatile environment.”



Mike Dwyer

Head of Intelligent Industry UK,
Capgemini



Risk, Compliance, and Changing Expectations: *why end-to-end visibility isn't just preferable, it's paramount*

Supply chain leaders must embrace end-to-end visibility to mitigate risks and drive efficiency.

Transparency is critical for:

Early risk detection: Identifying disruptions before they escalate.

Operational efficiency: Optimising logistics, warehousing, and procurement.

Compliance and sustainability: Ensuring suppliers adhere to ethical and regulatory standards.

Customer satisfaction: Reducing delays and improving service delivery, setting the foundation for agentic AI in the supply chain.

AI & Technology:
*how do we enable
the future of
transparent and
resilient supply
chains?*

Artificial Intelligence and advanced analytics are having a hugely transformative effect on supply chain management by providing predictive insights and real-time monitoring.

Key technology enablers include:

Predictive risk intelligence:

Machine learning models assess supplier reliability and suggest alternative sourcing strategies.

AI-driven tools, such as Prewave's risk monitoring platform, can analyse global news, social media, and regulatory data to detect early warning signs of supply chain disruptions.

Digital supply chain twins for real-time monitoring:

Digital twins simulate supply chain scenarios to optimise operations and mitigate risks.

Prewave's probabilistic multi-tier supply chain models track shipments and spot local and regional risks early, so teams can act on potential problems before they grow.

Advanced data analytics and decision support:

AI-driven analytics process vast amounts of data to provide actionable insights.

Dashboards powered by AI assist decision-makers in scenario planning and strategic sourcing.

Expert insight:



“In today's volatile global landscape – where geopolitical disruptions, compliance issues, environmental concerns, and regulatory changes are the new norm – achieving full transparency in real-time over supply chains is paramount. Leveraging AI-driven technology enables organisations to make data-driven and informed decisions with agility, ensuring resilience, sustainability and adaptability in the face of ever-evolving challenges. This proactive approach not only mitigates risks but also empowers supply chain leaders to navigate uncertainties with confidence and precision.”

Laurence Noël

EVP-Head of Global Automotive Industry,
Capgemini

Expert insight:

“Quality data is the lens of transparency. Our global supply chain graph consists of 2.6 million sites and site groups, with 100,000 more added every month. Mapping the connections between these sites is equally important. Prewrite connects the dots between 10 million supplier relationships: key to understanding a supply chain’s big picture.”



Thomas Moser
VP Engineering,
Prewrite

By combining AI with structured supply chain intelligence, Prewrite empowers businesses to make data-driven, resilient decisions and reduce the cost of disruptions before they occur.

01

Gain deeper visibility with Prewrite’s Exposure Analysis feature

Managing supply chain risk is complex, especially when dealing with multi-tier networks. Often, companies do not have visibility beyond their direct suppliers, making it difficult to detect risks on deeper tiers.

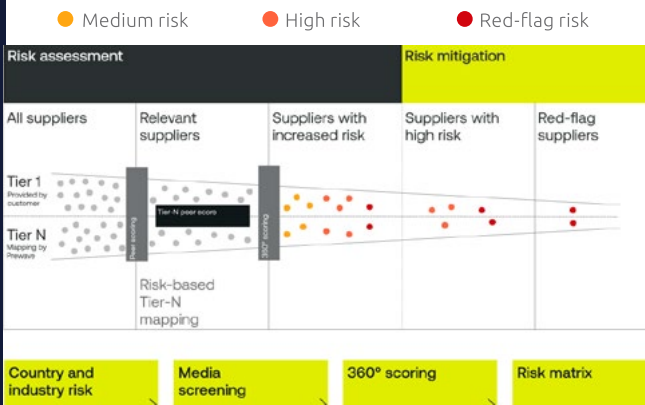
Prewrite’s Exposure Analysis addresses this challenge by helping you understand how your supplier base is connected to risk concentrations such as sanctioned companies or regions affected by natural disasters.

The Exposure Analysis offers:

Visibility: See your tier-1 suppliers’ connection to high-risk entities and proactively manage risk.

Risk-based prioritisation: Given the size of multi-tier networks, it’s impossible to address all tier-N risks. With detailed data about the connections, you can make informed decisions on where to focus your mitigation efforts.

High-level precision: Achieve parts-level visibility into how risks connect to your products. Our structured approach combines advanced AI with deep supplier engagement across our network of over 1.5 million suppliers, continuously refining accuracy. By validating risk connections through collaborative insights, you can confidently focus mitigation efforts where they will have the greatest impact.



Expert insight:

02 Proactively manage supply chain with Prewave's Proactive Resilience

Supply chain disruptions are inevitable, but their impact can be minimised with proactive risk management. Companies often struggle to quantify risks and determine the right mitigation strategies, leaving them vulnerable to unexpected events.

Prewave's Proactive Resilience approach helps you anticipate and mitigate disruptions before they impact operations.

Proactive Resilience offers:

Granular risk insights: Understand detailed probability scores for natural hazards and insolvency at the most precise levels, e.g. specific supplier locations for natural hazards and entity-level financial risks.

Revenue at risk calculation: Identify which suppliers contribute to the revenue of each product, ensuring you understand the financial impact of potential disruptions.

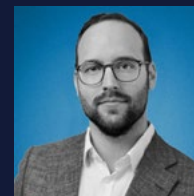
Time to recovery prediction: Estimate how long it will take suppliers to restore operations after a disruption, allowing for strategic decision-making.

Tailored mitigation strategies: Based on the unique risk profile of each supplier – whether it's exposure to earthquakes, floods, or insolvency – you can define safety stock levels, dual sourcing, or other mitigation measures to protect your supply chain.



Prewave 360° Score: A single, actionable risk score that unifies real-time alerts, historical data, benchmarks, and supplier assessments into one powerful view of supplier risk.

“ The development of global events since the pandemic has unveiled a harsh truth: risk is infinite, and your budget to protect your supply chain is not. Proactive resilience is about focusing resources where they matter most, and mitigating the risks that have the biggest impact on operations and revenue.”



Marco Felsberger
Senior Advisor Supply Chain Resilience

Transformation in Action:

Case studies from Capgemini and Prewave's strategic partnership for supply chain transformation

Capgemini and Prewave are collaborating to help organisations harness AI, data analytics, and digital innovation to build resilient and transparent supply chains.



You can benefit from:

AI-powered risk intelligence:

Predictive analytics to mitigate supplier risks proactively.

End-to-end visibility solutions:

Digital platforms that integrate data from multiple sources to provide real-time monitoring.

Sustainability & compliance frameworks:

Solutions that ensure adherence to ESG and regulatory standards.

Agile supply chain strategies:

Transformational consulting to optimise supply chain operations and enhance resilience.

Business integration:

Design and support with advisory services to ensure the investment in technology is returned quickly and has a sustainable business use. Our approach assures organisational and operating design to maximise any return on investment.

We've shared numerous successes over the last 12 months with various clients from the Automotive, Aerospace & Defence, and Consumer Product sectors. Through combined innovation, the partnership continuously evolves to support organisations in these enormously uncertain times.

Real-world applications:

European Prestige Automotive OEM:

Capgemini and Prewave partnered to design and implement a database for tier-N information, seamlessly integrating Prewave data with internal client knowledge.

This innovative approach not only ensures compliance with the Supply Chain Due Diligence Act but also facilitates the early detection of incidents at the tier-N level, enabling the swift identification of alternative suppliers and resources.

British Aerospace OEM:

Capgemini and Prewave developed a unique approach for the client which leveraged AI through all phases of the design and build phases for an MVP.

Utilising AI and large language models (LLMs) to create insights from unstructured data, it further augmented Prewave's probabilistic supply chain mapping capability to create structured data to identify emerging risks in the tier-N supply base.

Get in touch

As supply chains continue to evolve, organisations must leverage technology and AI to navigate uncertainties, enhance visibility, and ensure resilience. By combining Prewave's AI-driven risk intelligence with Capgemini's deep expertise in digital transformation, you can proactively manage disruptions and build more transparent, sustainable, and agile supply networks.

Together, Capgemini and Prewave are shaping the future of supply chain management. Get in touch to find out how we can partner with you to create an intelligent, resilient, and future-ready supply chain.



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About the contributors

Expert teams delivering innovation in global supply chains



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About Capgemini

Capgemini is an AI-powered global business and technology transformation partner, delivering tangible business value. We imagine the future of organizations and make it real with AI, technology and people. With our strong heritage of nearly 60 years, we are a responsible and diverse group of over 420,000 team members in more than 50 countries. We deliver end-to-end services and solutions with our deep industry expertise and strong partner ecosystem, leveraging our capabilities across strategy, technology, design, engineering and business operations. The Group reported 2025 global revenues of €22.5 billion.

Make it real
www.capgemini.com

About Prewave

Prewave leads a new era of supply chain transparency, resilience, and sustainability, revolutionising supply chain risk management with its AI-powered intelligence platform. Founded in 2017, Prewave uses advanced AI technology and deep industry expertise to deliver unparalleled visibility and control over supply chain risk. Prewave's platform analyses data from over 200 risk categories and 400+ languages, enabling businesses like Lufthansa, Ferrari, and Siemens to anticipate and mitigate disruptions before they impact operations. From tier-1 suppliers all the way to raw materials, Prewave's solution ensures resilience, transparency, and sustainability at every step. Discover how Prewave is helping to protect people, the planet, and businesses. To learn more about our solutions and impact, visit our website.

Supply chain superintelligence
www.prewave.com

