The Great Supply Chain Reset

5 top trends revealed

Supply chain planning is on the precipice of a great reset.

The way we've always planned and the technology we've used for decades is no longer enough. The very fundamentals upon which we plan are shifting at a time when planning has never been more important. Resilient supply chains must continue to do the same things well while adapting in new directions as disruptions – large and small – challenge businesses around the world.

Where will this reset take us? What are we learning about the new state of supply chain today and what should we be thinking about for the future? Fortunately, supply chain leaders, analysts, academics and thought leaders are offering up valuable insights on the trends taking us into 2022 and beyond.

Let's have a look at five top trends driving the future of supply chain and what leaders can do now to be ready.

Supply chain has become a board-level topic.

01

CEOs and boards are charged with the long-term growth and strategy of a company, so they are concerned about barriers to future growth. According to the KPMG 2021 CEO Outlook, these priorities shifted in 2021 for a three-way tie between supply chain, sustainability and cybersecurity. These issues are hardly separable. A company's supply chain contains on average 5.5 times as many greenhouse gas emissions as its own operations. Growing use of IoT (Internet of Things) and automation on the factory floor has hastened the convergence of OT (operating technology) and IT, and increased the attack surface for cyber criminals. These incursions are no longer confined to customer data and can quickly bring down a supply chain.

Supply chain has risen to the top of many lists of corporate concerns and into the headlines. But this attention hasn't been all positive, as supply chains have received blame for the snarls we face but little credit for our success.

Now is the time to showcase the competitive advantage supply chains bring so we can increase investment needed to deliver those advantageous results. However, to operate at the board level, supply chains need to be ready and able to connect their value to the wider enterprise – sales, marketing, operations, finance. For example, CSCOs need to speak the CFO's language and show how they can not only deliver operational success, but also translate it into financial results.

Supply chains must be connected and collaborative, so all links can align to business strategy, and oriented toward a common set of the most important metrics (and not functional metrics that drive siloed behavior). This alignment will drive the results that get the CFO's attention and get reported in the boardroom and on earnings calls.

The role of AI and humans is on the increase.

02

According to the 2021 MHI Annual Industry Report, over last year, the number of supply chains adopting AI (artificial intelligence) increased by 42%, from 12% to 17%, one of the largest increases they've seen, with another 24% expecting to adopt AI in the next one to two years. The challenges of managing the unpredictable demand signal have driven greater interest than ever in improving forecasting, but supply constraints are a nearly equal challenge. Planners are more overwhelmed than ever, and yet their expertise has never been more valuable. The opportunity is for AI to augment human intelligence with as much automation as possible, so planners can apply that expertise to the most pressing and complex problems that cannot be predicted or automated.

AI can find patterns in massive amounts of data that far exceed the cognitive capacity of humans. Once planners set parameters, AI models can predict lead times or yields and automatically update them according to those parameters, thus saving humans the tedium of manual updates and problems caused from incorrect assumptions. As demand surges (or falls) far outside past sales patterns, AI-driven techniques like demand sensing find new insights by bringing in signals like weather, social media or even commodity prices to update the short-term forecast. Planners remain in the driver's seat, validating decisions and applying their own expertise, while AI increases accuracy, automates the mundane and learns from decisions to recommend future actions.

The role of AI is on the ascendancy in supply chains, but so should be the role of the human. The best opportunity is not to replace humans but to accelerate their intuition with AI-powered insights. As the level of disruption in supply chains is only expected to increase, planners are more critical than ever to bring expert judgment to bear and deal with the volatility we cannot predict. So, more than ever we need to be ready to automate decisions that don't need planners' attention, such as forecasting a high-volume, low-variability and low-margin product, and instead focus their time on new product introductions, on high-margin, volatile products and on inevitable disruptions. AI can increase planner efficiency as well as plan accuracy, so that supply chain leaders are prepared to make better decisions.

DID YOU KNOW?

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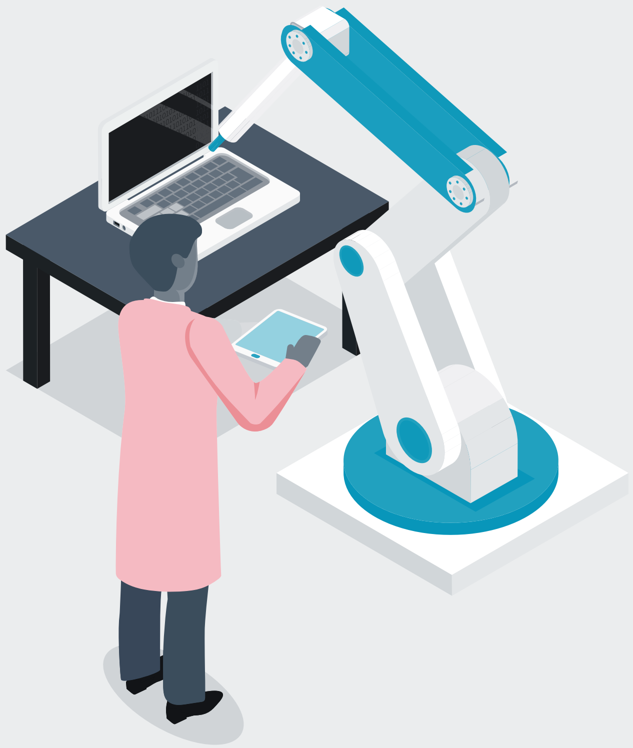
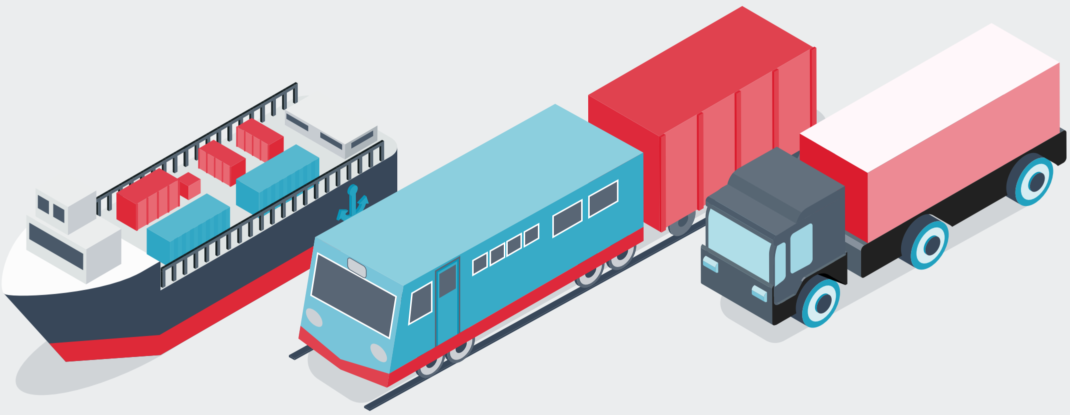
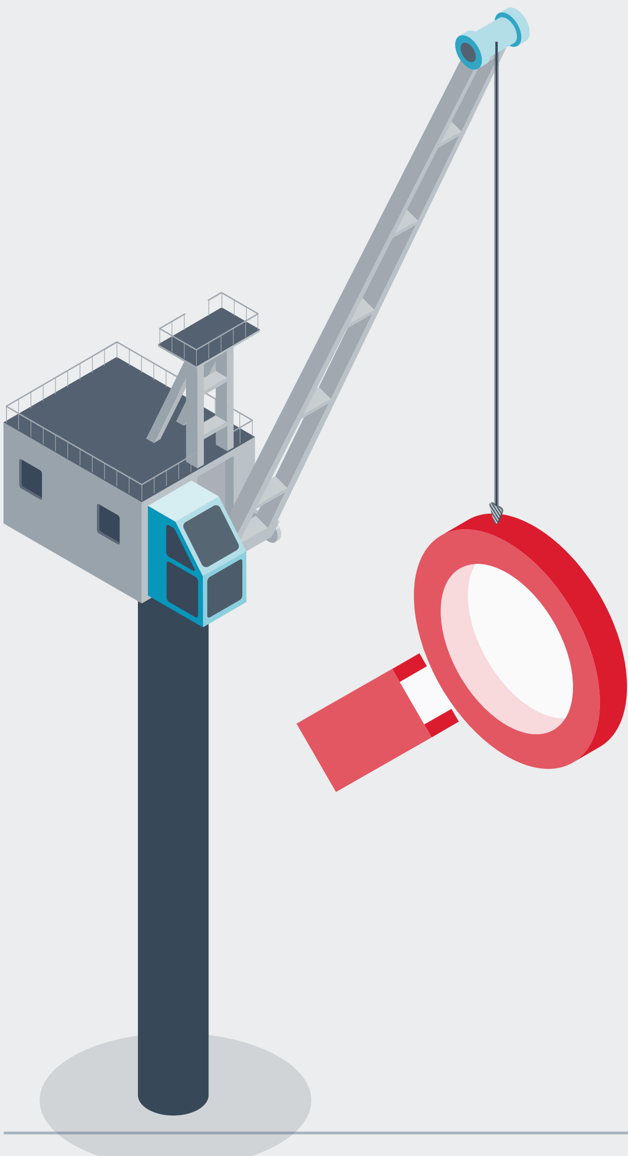


Supply chains are linked, so effects of disruption are cascading and combinatorial.

03

Predictions from the US Federal Reserve Chair Jerome Powell (and many other economists) are that the current supply chain woes will continue well into 2022 and bring accompanying inflation. Powell cites the bottlenecks resulting from factors like supply shortages due to factory closures in Asia and clogged ports. Add to that list labor shortages, rising energy prices, increasing disruptions from climate change (droughts causing crop shortages, wildfires, floods, rare winter storms) and continued high consumer demand in regions like in North America and Europe. With fears of shortages looming, consumers and even businesses are engaging in hoarding, which further disrupts the demand signal.





The combinatorial effect of these global constraints leads to cascading impacts that are difficult to untangle. Connecting beyond a company's four walls with multienterprise collaboration is one critical direction to pursue, since today's global value chains require tighter integration. Another opportunity stems from the struggle to forecast near-term consumer demand as well as the longer-term impacts of the initial effects of the pandemic. Demand sensing is one approach that can help supply chains manage the complex effects of both supply and demand shifts. Incorporating additional signals into the forecast may help us sense possible disruptions in the supply chain and then respond more quickly. For example, a planner might get an updated forecast or alert that would allow them to secure raw material for a limited price increase. Supply disruptions also become signals in the demand forecast, which means AI methods will adjust the forecast by constraining or limiting it according to the impact on the data.

Shrinking the time between planning and execution is crucial.

04

Planning cycles vary considerably by industry and even company, but whatever cadence a company had, it most likely shortened in recent times. Monthly plans became weekly, weekly plans became daily, and in some cases daily became hourly. While professor Jan Fransoo of Tilburg University likes to say that planning and execution will always be separate functions as long as lead times are not zero, these functions have grown closer together as volatility continues, along with evolving but insistent consumer demand. Customer expectations, even in B2B companies, remain high but require fulfillment in increasingly complex channels.

Readiness to respond faster includes creating living, learning digital twins – virtual models designed to accurately reflect the physical supply chain and enable the testing of an infinite number of possible scenarios. With that in place as a foundation, capabilities can be added, such as a command and control center approach to monitor disruption signals to ensure supply chains are better equipped to manage a shorter loop of sensing a signal and executing a response. Whether you're facing supply side disruptions of unexpected customer demand, or latency in response to increases in supply chain instability, preparing for even greater agility increases the ability to synchronize supply and demand and satisfy customers.

Sustainability is a business imperative.

05

According to the KPMG 2021 CEO Outlook mentioned earlier, CEOs also view sustainability as a critical priority at the top of their agenda, and it appears on the top of many other similar lists. More than 21% of the world's largest public companies have made corporate commitments to sustainability in the form of net zero targets. Yet the Chartered Institute for Procurement and Supply (CIPS) surveyed supply chain managers and found that 80% had little to no involvement in sustainability planning or awareness of a corporate sustainability strategy. For the impact on climate change to be real, we must move from C-level commitments to operational execution.

Key to supply chain sustainability is a shift to circularity. Most supply chains today are linear, starting with raw materials we make into products and then discard at the end of their life. Moving toward a circular supply chain means finding ways to reduce (e.g., Jabil's multifaceted efforts to use less packaging), reuse (e.g., Cisco's Takeback and Reuse Program), and recycle (e.g., Procter & Gamble's commitment to use all reusable or recyclable packaging by 2030). These kinds of shifts toward a circular economy can save costs and even generate revenue.

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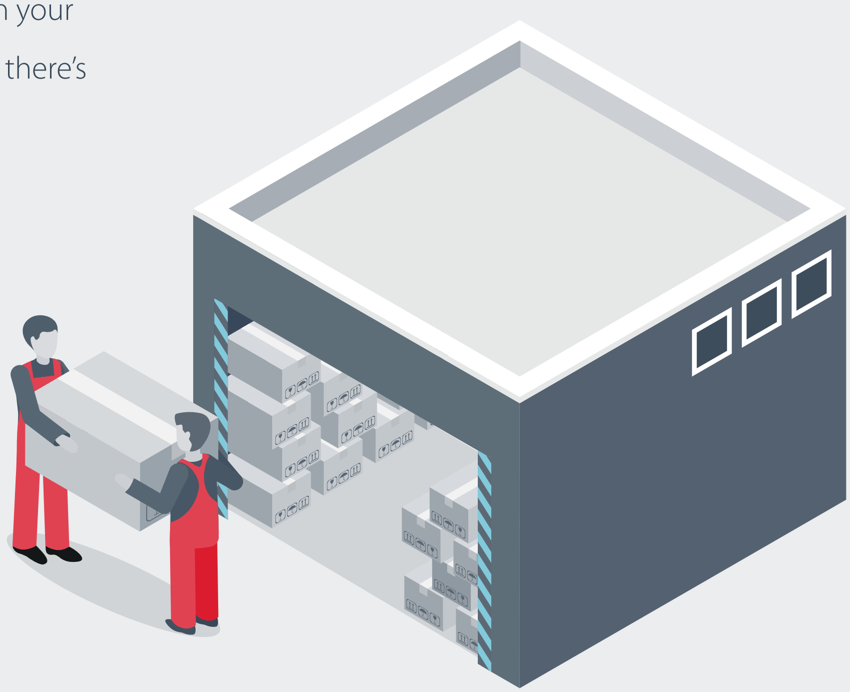
Most importantly, shifting to a circular model increases resilience by mitigating the risks from climate change, which the McKinsey Global Institute predicts will be more significant than the pandemic. Reducing reliance on scarce raw materials, reusing existing materials and recycling those at end of life alleviates strain on sourcing in a constrained world.

Sustainability is no longer just a moral imperative; it is also a business imperative. We cannot afford to merely make trade-off decisions on the basis of cost and margin. We must be ready to incorporate cost, margin and carbon into our scenario planning and the core KPIs built into our scorecards.

Making sustainability core to planning and not a separate workstream is what can help move it into operations, where execution makes the daily impact.

Make your supply chain future-ready.

From the boardroom to the shop floor, the state of supply chain is changing. While we can't predict the future, keeping pace with top supply chain trends can help pave the way to ongoing competitive advantage and future success. Many companies are turning to digital transformation as a way to "reset" how they plan – trading traditional processes and old technology for modern-day solutions and techniques. By undertaking this great reset, organizations will be perfectly positioned to address emerging trends, mitigate risk and disruption, and embrace exciting new opportunities. If you're ready to begin your supply chain transformation journey, there's never been a better time.



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