

A man with a beard, wearing a yellow hard hat and a high-visibility yellow vest over a grey polo shirt, is looking upwards and to the right. He is holding a tablet computer. The background is an industrial setting with metal structures and pipes. A large light blue diagonal shape is overlaid on the left side of the image.

KINAXIS®

INDUSTRY SPOTLIGHT

Five key challenges for industrial manufacturers



The manufacturing industry is undergoing profound changes, as companies look to leave outdated processes and legacy systems behind and capitalize on the promise of groundbreaking innovations in generative AI, robotics, automation, and Industry 4.0.

At the same time, a host of internal and external factors are putting pressure on supply chains and the bottom line. The economic disruption that occurred in the aftermath of the pandemic has not fully subsided and continues to create challenges for manufacturers.

The rising costs of doing business is one such challenge. When everything is more expensive – from raw materials to labor to transportation – manufacturers see their profit margins shrink. In addition, while interest rates have started to come down from their post-pandemic highs, the threat of recession still looms globally.

Geopolitical factors are another major source of disruption in manufacturing supply chains, as they are in every industry. With at least 64 countries holding national elections in 2024, regulatory changes are a near certainty when new governments take office, as are fluctuations in existing trade relations. These outcomes have the potential to severely disrupt the smooth flow of materials and goods across borders, hampering compliance efforts and introducing delays and financial risk for manufacturers.

Outdated technology is holding industrial manufacturers back

Balancing these disparate factors is particularly difficult for companies whose operations rely on an aging IT infrastructure, labor-intensive manual processes, and in many cases an assortment of convoluted spreadsheets that are older than some employees. Kinaxis research shows 58% of companies reported still using Excel spreadsheets for their supply chain planning needs.

How can you hope to run a sophisticated, modern manufacturing operation on an outdated and elementary technological foundation? The fact is you

can't. Fortunately, forward-thinking manufacturers understand that building a solid supply chain planning foundation is critical for accelerating future innovation. Unfortunately, past attempts failed as many package apps don't understand the complexity of industrial manufacturing and can't support its unique requirements. Companies need sophisticated systems and processes in place that will enable them to excel and be productive, profitable, and competitive in the face of disruption, volatility, and uncertainty.

Here are five industry challenges that manufacturers have to overcome to transform their supply chains, streamline their operations, and excel in the market.

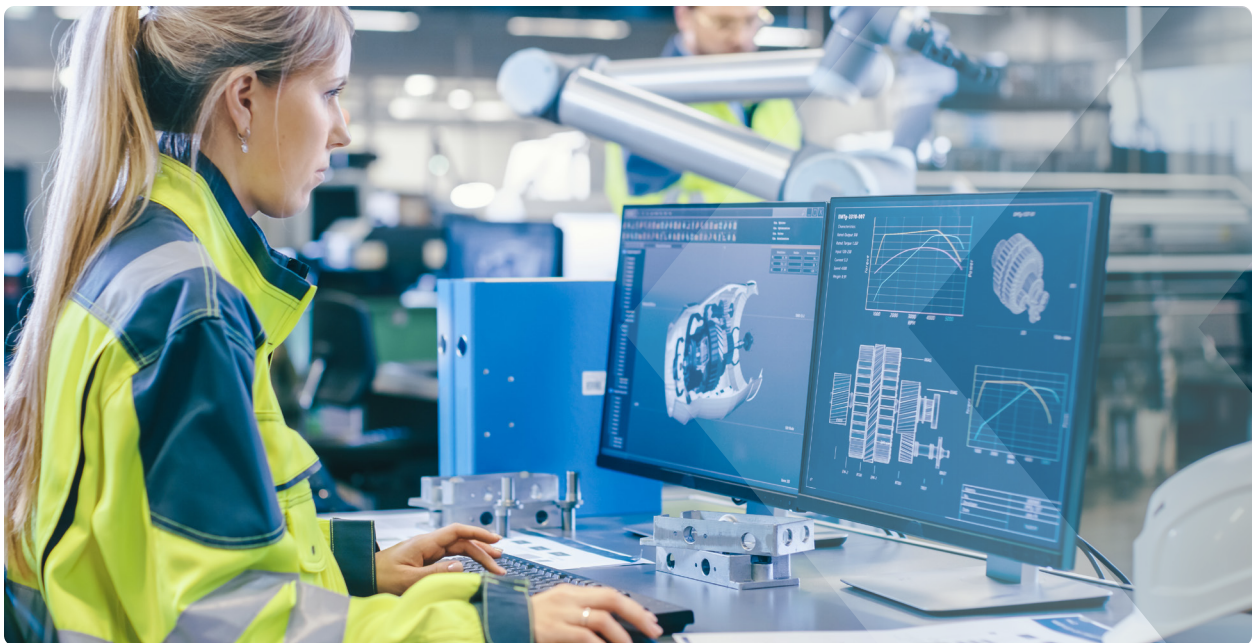
Kinaxis research shows 58% of companies reported still using Excel spreadsheets for their supply chain planning needs.

1

Lack of real-time supply chain visibility and connectivity

Too many manufacturing organizations continue to operate in highly disconnected environments, with inventory and production planning functions most often reported as operating in silos. When each function within your organization operates under its own KPIs, within its own systems, it's a tall order to satisfy stakeholders, including your customers. And, without a system of record and the ability to exchange data in real-time across the company, your ability to respond to disruptions, demand changes, or supply shortages is severely limited.

When they have limited visibility across the supply chain, decision makers must make do with outdated or incomplete data, which can lead to overproduction or misaligned inventory, both of which can be extremely costly. And without collaboration and connectivity to the supplier network and tools that support real-time collaboration, manufacturers don't have insight into delays, shortages, or quality defects, placing their ability to deliver at even greater risk.



Badly outdated systems that don't scale

Many industrial manufacturers still rely on a mishmash of aging homegrown and legacy IT systems, often precariously held together by spreadsheets and a great deal of manual effort. In this environment even the simplest tasks are time-consuming, while a new product launch or onboarding a new supplier can become a monumental feat.

With minimal automation and scalability, these outdated systems are no match for today's highly complex industrial supply chains. As businesses grow and market conditions change because of economic or geopolitical disruptions, legacy systems become bottlenecks, requiring even more human intervention and effort just to meet basic requirements. The resulting delays make it difficult to respond to customer needs, driving down customer satisfaction and hampering your ability to compete.

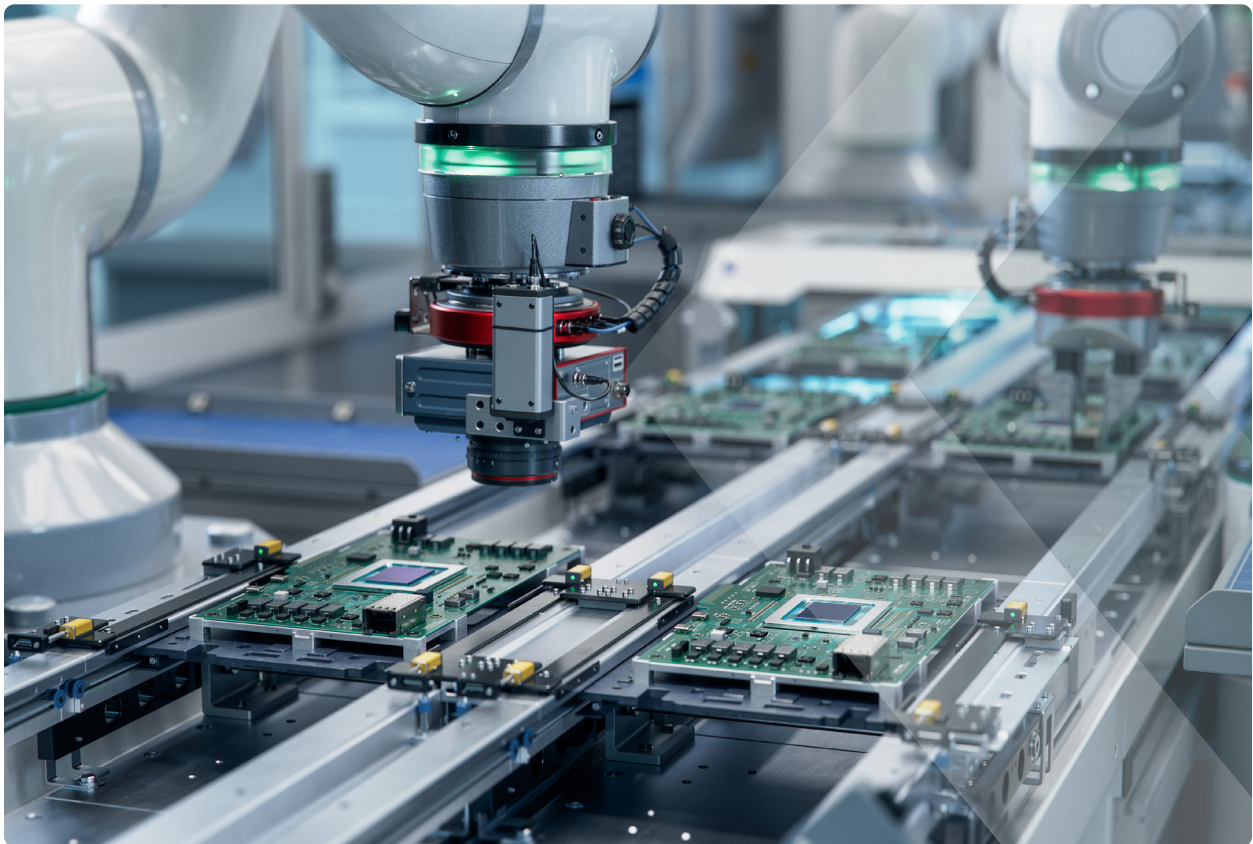


3

Difficulty in raw material planning due to market volatility

Industrial manufacturers routinely deal with deep BOMs and a high level of general complexity in their operations. When you add in external factors like economic uncertainty, global trade disruptions, changing consumer behavior, and natural disasters, it's not hard to see how less advanced supply chain systems can be easily overwhelmed.

Most systems lack the ability to accurately explode finished goods forecasts and supporting bill of materials to determine semi-finished raw material and capacity requirements. This results in offline process or ERP-based material plans. The inability to have an accurate material plan results in shortages, expedites, manufacturing disruptions and poor on-time delivery.



Forecasting based on history resulting in high inventory carrying costs combined with high transportation costs

Relying on historical data to forecast demand won't cut it because it tends to lead to excess inventory or stockouts, both of which have costly impacts. An inability to accurately forecast can also cause organizations to underutilize production facilities or overburden resources, including talent. Solid demand planning requires incorporating additional factors such as new products cycles, end of life, and customer inputs.

Inventory carrying costs for industrial products are typically high, as are the costs to transport them. For manufacturers that struggle to contain these costs, inefficient supply chain practices and outdated IT systems are often the culprit. Poor demand forecasting, long supply lines, and a reliance on inefficient transportation routes can all be contributing factors.

Inaccurate forecasting or rushes incurred due to parts delays could lead to manufacturers needing to expedite delivery on products. This is extremely costly – both to your bottom line and to the planet. Improving forecast accuracy to reduce expedites and minimize obsolete stock, can provide significant cost reduction.



5

Site-level production scheduling and suboptimal resource allocation

Imagine trying to play a game of football when every player on your team is working from a different playbook. With everyone running in different directions, barring extraordinary luck or an extremely weak opponent, winning the game is a remote possibility.

For too many industrial manufacturers, this is the standard approach to production scheduling. Each manufacturing site acts independently of the others, making it extremely difficult to allocate resources effectively across other sites. Without a centralized strategy, using shared production capacity to overcome constraints is impossible.



How Kinaxis transforms your industrial supply chain

To overcome these and other challenges in your industrial supply chain, you need a planning solution that delivers agility, resiliency, and orchestrated efficiency.

Kinaxis has spent decades working with industrial manufacturers and understands the unique and complex needs of industry and has built the solutions to address them. Maestro provides supply, demand and inventory planning capabilities that enable you to achieve true supply chain orchestration while increasing revenue, decreasing costs, improving resource efficiency, and exceeding customer expectations.



BUILD A STRONG PLANNING FOUNDATION OF SUPPLY, DEMAND, INVENTORY, AND CAPACITY

Many industrial manufacturers are still managing their operations on home-built systems and spreadsheets, not to mention navigating the complexity and risk of a multi-site, multi-production plan operating model. The only way to advance supply chain operations is to create a solid foundation with advanced planning capabilities. From next-level scenario management to world-class collaboration, Maestro delivers the planning capabilities you need to streamline work, drive end-to-end efficiency and connect your planners across every function in your organization.



IBP

Integrated Business Planning (IBP) allows for a true enterprise-wide planning cadence. Maestro provides sophisticated scenario analysis, which enables different functions to collaborate and assess KPI tradeoffs in real time, helping you determine the optimal strategy for meeting your business objectives and understanding the cost trade-offs of each approach.



REAL-TIME SUPPLIER COLLABORATION

Given the complex web of suppliers most industrial manufacturers work with, increasing visibility into the supplier network is a key risk mitigation strategy. Greater visibility helps companies and their suppliers work faster and more efficiently. By collaborating with suppliers within Maestro, you can enact real-time changes to plan and eliminate the latency that comes with the old method of emailing spreadsheets back and forth.



AFTERMARKET PARTS PLANNING

Probabilistic forecasting that uses machine learning (ML) and artificial intelligence (AI) combined with traditional statistical forecasting takes the guesswork out of determining sporadic demand patterns for spare parts. Inventory management and optimization solutions are vital for keeping assets in operation, and attribute-based planning capabilities automatically tailor spare parts inventory to customer-specific demands.



ENGINEERING CHANGE MANAGEMENT

Make-to-order and configure-to-order business models, common in industrial manufacturing, can have a significant impact on production lines and lead to costly downtime. Production lines are meant to be producing, and if they're not, they're losing money.

With Maestro, manufacturers can evaluate the impact of engineering changes, simulate multiple cut-over dates to determine the optimal time to change over a production line, and create alerts to monitor the cut-over. This also empowers planners to validate the allowable feature combinations.





Proven results

Industrial manufacturing leaders including Doka, Edwards, Eaton, Hitachi, Johnson Electric and Schneider Electric rely on Kinaxis to orchestrate their supply chain for greater agility to conquer whatever lies ahead.

“Scheduling now is a breeze, and we can start utilizing that labor for more effective avenues.”

SCOTT LILLIAN, DIRECTOR, SUPPLY CHAIN SYSTEMS AND MASTER DATA MANAGEMENT, NOVOLEX



Collaboration

Breaking down siloes across a digitally connected supply chain of 20K suppliers, 160 factories, and 80 DCs globally.

“We have a big and complex supply chain and we needed a scalable tool to manage that. All S/OP decisions are about simulating... and we needed that value. For those reasons, we selected Kinaxis.”

PROGRAM DIRECTOR, SCHNEIDER ELECTRIC



To learn how Kinaxis can be implemented quickly to accelerate the strength of your supply chain, request a personalized demo.

KINAXIS[®]

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