INDUSTRY SPOTLIGHT Complex configurations, specialized suppliers and big BOMs: Plan your industrial supply chain with precision





To remain productive, profitable and competitive in a fast-shifting world, industrial companies need more efficient supply chain planning processes and transparency.

When your products are complex and highly configurable, planning for a global supply chain can be tough. But with global industrial supply chains and customers demanding "more, better, faster" – the challenges are bigger than ever, especially as automation and digitization continues to expand.

Every day, the industrial supply chain requires precise management of resources while controlling transportation costs, often within multi-tier distribution channels with regulatory differences. Finally, when all of this must be managed through unprecedented disruptions and new suppliers must be quickly vetted and onboarded, it's clear today's reality is too much for old, step-by-step, traditional and siloed planning.

Key forces driving change in industrial manufacturing



Slowing OEM growth

- Growth is now driven by emerging market and over-aged fleets rather than OEM suppliers
- The increasing importance of aftermarket, but more solutionbased regarding how to improve the efficiencies of customer operations

Digitalization (Industry 4.0)

- Increasing data variety, volume and velocity provides the infra-foundation for building even stronger sense and response capability
- New business model: as a service/ solution provider instead of a pure product manufacturer



Connected products

- Leverage IoT data to become more responsive and automate supply chain
- New parts and new suppliers add even more complexity

Increased supply chain risk

- Prolonged global pandemic (COVID-19) causing high uncertainty on demand and capacity availability
- More frequent review of the sourcing and supply chain network strategies
- Real-time visibility and transparency of supply chains, especially those affecting critical materials and components

Three big technology and process problems industrial manufacturing supply chains are facing

We partnered with International Data Corporation (IDC) to survey over 300 industry professionals to study current and future pressures on supply chain planning and how modern digital technologies are driving supply chain transformation initiatives. This survey was conducted across six industries, with industrial manufacturing being one of them.

Based on this data, we identified three key trends that we believe are shaping the future of supply chains for industrial manufacturing companies.

Industrial companies are still not seeing the results of their digital transformation.

Industrial companies are in varying stages of their transformation journey, but most are still not seeing results. Not only were industrial companies least likely to report their current capabilities as being a competitive advantage, they also reported not being able to adapt to changing business requirements. Only 52% of industrial companies reported that their supply chain has the built-in agility to adapt to any changes, the lowest among all six industries surveyed.

Industrial companies are still using legacy systems.

As products become more connected, industrial supply chains become more complex. A growing bill of material across multiple suppliers – some even working on a digital supply chain of their own – further aggravates the situation for industrial companies that rely on more traditional legacy technology. Our research shows 58% of companies reported still using Excel spreadsheets for their supply chain planning needs. Furthermore, only a fifth of the companies reported using a fully integrated supply chain planning platform, the mark of a more mature digital transformation.

Industrial companies are breaking down the silos.

It's no secret that collaboration is integral to all supply chain processes, yet it is not always handled at optimal efficiency when silos come into play. Over 67% of respondents rated their inventory planning and production planning capabilities as best-in-class, but these functions are also reported as being most likely to be performed in silos. The most integrated processes cited in our research were control tower and integrated business planning with 21% of industrial manufacturers saying they were integrated, with only 10% citing their inventory planning and optimization as fully integrated. The benefits of collaborating for industrial companies include earlier identification of risks, reductions in inventory levels and even shortened lead-times. The more collaborative people and processes are, the better the results.

When business units align around a single source of truth, the entire organization becomes more strategic

An end-to-end planning platform creates seamless operations, from the board room to the data center to the factory floor.



Manage your company like never before. With better visibility and collaboration across business units, your company responds to volatility without wasting time or resources. Accurate, cross-network data improves forecasts, so you can monitor trends and maximize gains. The end result is a business that seizes on opportunities slowmoving, siloed companies can't even see.

Create smarter, more confident plans with a connected and collaborative network. Collapsed silos ease friction between teams while cross-company, synchronized data reduces errors and delays. Without these obstacles, planners spend less time troubleshooting and more time advancing business outcomes.

Outdated processes and software shouldn't slow your supply chain. On an end-to-end planning platform, you only need to make updates in one place. Built-in features keep data secure and up-to-date while customizations guarantee that a variety of user needs are met. Without multiple, disconnected systems, the IT organization can be confident it's driving lasting transformation.

Complacency in innovation can be destructive to your company. Stay competitive with endto-end supply chain visibility so you can know sooner and act faster. Leveraging new technologies allows you to respond instantly and securely to change. Lay a foundation for bestin-class supply chain transformation, so you can operate efficiently and become more agile in a volatile marketplace.

Concurrent planning is the key for industrial manufacturing companies

Traditional, siloed planning is like playing a game of telephone: information gets passed from one person to the next and hopefully still makes sense by the time it reaches you. Concurrent planning is like being in a virtual meeting: everyone is part of the same conversation, boosting agility, speed and efficiency. Kinaxis[®] revolutionizes planning by delivering the agility you need to make fast, confident decisions in an unpredictable world. We combine human intelligence with AI and our unique concurrent planning technique so you can plan better, live better and change the world.

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A recognized Leader by Gartner, Kinaxis offers an unmatched 12-week RapidStart go-live process that's proven to transform CFO and supply chain metrics for companies of all sizes.

Know sooner.

Break down silos, eliminate redundancies and cultivate trust with end-to-end visibility and transparency across your supply chain network.

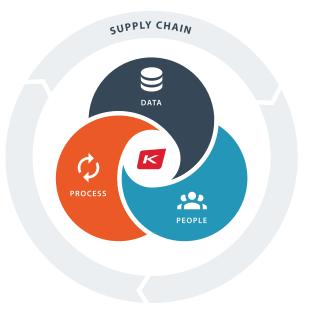
Act faster.

Embrace volatility, build resiliency and seize opportunities with the agility to execute – no matter what comes your way.

Remove waste.

Leverage AI, machine learning and prescriptive automation to maximize efficiency and eradicate wasted time, resources and talent.

CONCURRENT PLANNING





THE RAPIDRESPONSE DIFFERENCE

A more efficient, responsive way to manage your end-to-end supply chain, no matter what happens.

In today's volatile global market, traditional planning techniques are no match for the complexity and uncertainty that can occur at any time. Issues such as material shortages, logistics challenges and market volatility can quickly lead to massive supply chain disruptions. It can be impossible to reliably deliver on promises when you're locked into disconnected, cascaded planning processes that generate second-rate results.

Stop settling and start succeeding with a new, more intuitive way to plan. Our concurrent planning engine lets you instantly and continuously balance your end-to-end supply chain. With secure, cloud-based integration capabilities, you can connect all your internal and external supply chain data sources and algorithms.

With Kinaxis RapidResponse[®], it's easy to implement and meld your existing resources into a configuration that works best for you. Use RapidResponse to run one or more of our customer-proven supply chain planning applications, even if you have existing enterprise resources planning (ERP) instances. Or, build your own custom apps and embedded algorithms, with or without code using our developer capabilities. We give you the flexibility you need to create the supply chain you want. If you can dream it, we can build it.

Industrial manufacturing-focused functions

Kinaxis brings decades of experience to supporting the supply chains of some of the biggest industrial companies around the world. Those years of experience have enabled us to build out functionality to best serve the unique challenges and needs of industrial manufacturing supply chains.

With Kinaxis, industrial leaders have the functionality to support:



Order to delivery

- Orders across the production network and provide end-to-end visibility
- Validate allowable feature combinations
- Materials and constraints simultaneously
- Order fulfillment workflows to provide promise dates, order edits and simulation capabilities to improve delivery promises



Industry forecasting

- Top-down forecasting with flexible hierarchies
- Time varying segment, brands and market shares inputs
- Automatic aggregation and disaggregation
- Multiple features/attachments options forecasting
- Time varying take rates



Concurrent planning

- Supplier collaboration
- Global and regional S&OP
- Long-range planning
- Inventory optimization



Multi-level supply planning

- Integrated planning across market, stock exchanges, production and all tiered suppliers
- Simultaneous evaluation of constraints across all levels
- Multiple sourcing and balancing supplies across network
- Inventory management across the tiers



Constraint management

- Units and time-based constraint modeling
- Flex lines modeling to create mix loading
- Machine and feature level constraints
 modeling
- Multi-scenario constraints modeling using various options like adding, run rates, prebuild and balance across resources

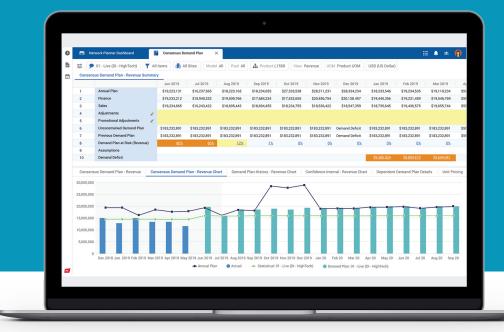


Allocation management

- Flexible construct to manage constraints across the network using priority or fair-share strategies
- Management of these strategies across any level of the supply chain – from customer to region to model to brand

A platform built to fuel strong performance

From data synchronization, smart collaboration and Al-enabled "always learning" algorithms, you can do more with your supply chain planning processes than ever before. Craft and test elaborate "what-next" scenarios and make decisions in real-time with partners so every challenge is met and not a single opportunity is missed.



End-to-end synchronization

Our single cloud-based platform, code base and data model let you synchronize all aspects of your supply chain for dynamic supply and demand balancing.

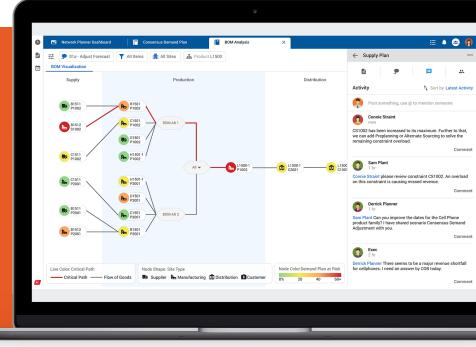
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Key Constraint Utilization 88.7% 93.8% 93.8% 90.9% • 77.9%	10.0%
Ending Inventory \$21,292,611 🔺 \$23,123,534 🔺 \$24,959,422 🔺 \$24,553,654 🔺 \$23,442,544	10.0%

What-next scenarios

Run any number of scenarios, create infinite supply chain digital twins and capture historical context in seconds for accountable decision-making based on key performance indicators (KPIs).

Smart collaboration

Our responsibility matrix shows you who to work with, delivers the context you need and archives your decisions – all within the platform – for faster, smarter collaboration.





Planning and execution alignment

Our ERP-agnostic planning solution lets you connect all internal and external data sources, including multiple ERPs, without duplication. The result is a unified, connected digital enterprise.

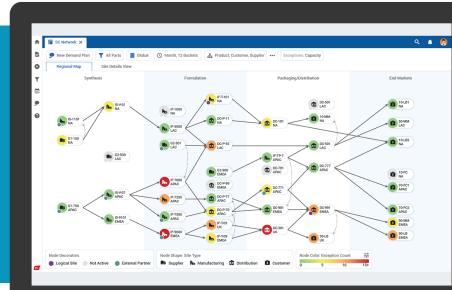
Automated intelligence

Automate routine tasks and escalate exceptions with AI and predictive algorithms that are always on, always learning and always synchronized. Let machines do the heavy lifting so you can focus on what really matters.



Personalized user experience

Our responsive role-based user interface lets you tailor metrics and data, and guides you through your day with personalized workflows, playbooks and alerts.





INDUSTRY LEADERS DEPEND ON KINAXIS FOR CONCURRENT SUPPLY CHAIN PLANNING



LIXIL





Kinaxis delivers the agility you need to build resiliency into your industrial supply chain. Get started now with the fastest successful end-to-end advanced planning go-lives on the market. Learn more at **www.kinaxis.com**.



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