

**kinaxis**<sup>®</sup>

# Navigating the deep waters of supply planning

4 mission-critical capabilities



# Fighting the current of supply planning



Aligning supply with demand is tough. Everyone else's problems always end up becoming your problems.

Take your colleagues in demand planning: With increasing customer demands, product proliferation and globalization, getting anything close to a realistic forecast is a challenge. But no matter how accurate demand planners are in predicting the future, you're the one who must create a supply plan based on their educated guesses. And it doesn't stop there.

# Getting to the bottom of the supply chain iceberg

Suppliers don't always ship on time, and operations run into overload conditions. Engineers change configurations, and inventory planners strive for multi-level optimal safety stock policies. But it's you, the supply planner, who has to bring it all together.

Then, you need to account for all the rules and regulations. Some products for certain customers can only be sourced from specific suppliers or regions. Shelf life, minimum buys, contractual obligations, capacity limitations – these things make up just the tip of an extremely complex supply planning iceberg.



The rest of the iceberg lies below the surface and is difficult to see. It includes those unexpected disruptions that seem to be the new norm in supply chain planning.



## Catastrophic disasters

Catastrophic disasters leave supply planners dealing with increased demands, limited supplies and risk to transport networks – which could include physical damage or people supporting the network not being able to get to work – along with pricing hikes to fuel and other limited commodities.



## Traditional complexities

That's on top of the traditional headaches like scrap issues, machine breakdowns and late deliveries. Add it all up and you're dealing with a lot of complexity that's deeply challenging to navigate.

# 4 mission-critical capabilities to navigate supply planning complexities



Similar to nerves sending signals to the brain, you need to connect supply planning to the rest of the supply chain community for everything to function properly. In today's global landscape, there are four critical capabilities crucial for effectively planning supply and keeping a pulse on your network so you can pre-emptively respond to changes and events in real time.

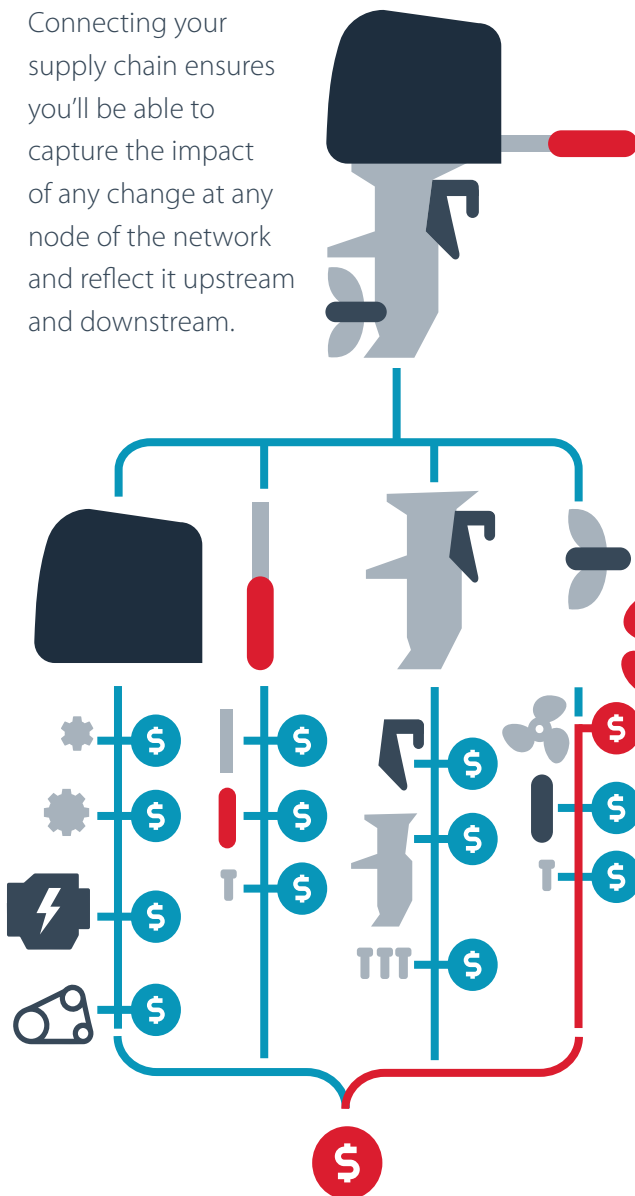


**Observe the entire  
landscape at once**

# Instant multi-level, multi-site BOM explosion

Things happen quickly in your supply chain, at every level and location, across multiple borders, affecting large communities of people. It's imperative you can link your entire network together, from the customer down through your distribution centers, factories and suppliers.

Connecting your supply chain ensures you'll be able to capture the impact of any change at any node of the network and reflect it upstream and downstream.



With real multi-level, multi-site bill of material (BOM) explosions, demand cascades down through the BOM in seconds, recalculating demand and supply across the network. Make sure your cascading demand also considers planning variables like order policies, lead times, safety stock, current inventories and open and in-transit orders, so you'll have instant demand and supply balancing at every level. The result will be significantly reduced planning cycle times.



**Go full speed ahead  
with confidence**

# Eliminate guesswork with analytic horsepower

It's not enough to model the part-site relationships in your network. You need to include the behavior of the supply chain along with the governing rules and regulations for true, accurate end-to-end supply chain visibility.

Failure to do so could lead to shortages, inventories in the wrong place, missed revenue opportunities or breaking contractual obligations. The list of rules and regulations – particularly in industries like pharmaceutical or aerospace – often reads like an encyclopedia, but you need to incorporate them into your BOM explosions to achieve accurate demand and supply balancing.

A few examples:



## Part substitution

There are times when primary components aren't available. If you can use an alternative component to maintain delivery schedules or reduce inventories, make sure you can define how and when you can use part substitutions.



## Alternate sourcing

Suppliers don't always deliver on time. If your primary source can't deliver, you may need to work with another supplier to fulfill customer commitments. However, those alternate suppliers may be more expensive or not yet certified. As with substitutions, it's valuable to capture the rules associated with alternate sources and suppliers as options to maintaining your own promises.





A few more examples:

## **Constraints**

There are limits to your materials, labor and machine capabilities. Making a plan without considering these limitations is no more than a wish. Simultaneously considering constraints during your BOM explosions is key to getting a realistic supply plan

## **Attribute-based planning (ABP)**

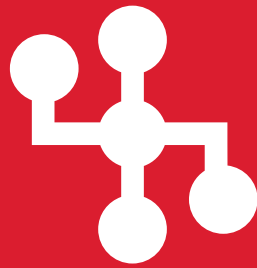
Attributes are like following the rules of the road while driving. For example, in some countries you drive on the right side, but in others it's the left side. In your supply chain, some customers may have approved supplier X but not supplier Y. A customer may require lots be tested no more than nine months ago or be manufactured with a specific technology. You may also need to consider the expiry dates on products. Accurately capturing attributes of your supply chain and including them in your planning calculations will ensure you avoid significant hits to your margin and reputation.

## **Multi-level search (MLS)**

Finding the optimal path to ensuring the best customer delivery isn't always obvious. MLS iteratively evaluates different supply paths through multiple levels in the product structure to choose the one that provides the best availability. The challenge is being able to run these iterations in a timely manner. You need some significant analytic horsepower, but the result is ecstatic customers.

This is only a small sample of the analytic horsepower required for accurate supply planning, but it's easy to see that even in the best of times supply planning is intimidating. Effectively and efficiently managing these analytic complexities can turn your supply chain into a competitive advantage.





**Optimize human  
intelligence**

# Augment planning with AI + machine learning

Seeing the acronym “AI” may make you automatically think about the future. However, there are uses for artificial intelligence and machine learning in supply chain planning that you can implement today. Most current, practical examples focus on automated intelligence. Best-in-class supply planning requires you to automate certain decisions, while still being aware when the system makes them.

For example, you may have defined an expiry attribute for a product. In a situation where inventory will expire, you’ll want the option to tell your planning system to automatically plan additional supply to cover the loss due to expiration. You’ll also want the system to alert you in advance that you’ll have expired materials unless you do something about it.

In this case, you’re automating when to invoke the analytics in your planning engine. You can automate decisions around when to use an alternate source or parts. If you’re modeling constraints, you can automate a decision to prebuild inventory to avoid work center overloads.

Automated intelligence also includes the ability to spot anomalies or trends. With new products, changing demands and new supplier relationships, data is always moving and changing. There’s a good chance data integrity issues exist. Automatically prioritizing data issues and alerting you on which problems to solve first creates a solid foundation for your supply plans.

Other planning policies like lead times may be trending away from the values you’re using for planning. In these situations, automated intelligence can flag the occurrence before it causes too much disruption.



Supply planning has a lot of moving parts. Automating decision support helps you focus on planning strategies and navigate during times when things don’t go as planned.



## Learn how AI helped Schneider Electric shine a light on complexity

In an on-demand webinar with Kinaxis and SupplyChainBrain, Brian Tessier, VP Global Supply Chain, Schneider Electric, explains of his company's foray into artificial intelligence, "We found very quickly we had some very poor assumptions about lead times, both from suppliers and interplant shipments from within our supply chain. Given the number of transactions we do, the complexity of our product portfolio and the number of entities involved, there's no way we would have found this any other way."

[WATCH NOW](#)



**Course correct at the  
first sign of trouble**

# Turn on a dime with “what-if?” scenarios

Supply planners have questions – lots of them. Getting answers quickly means you can keep your supply planning engine running as smoothly as a finely tuned engine. The bulk of supply planning questions revolve around two primary situations: planning and responding.

In either situation, it’s valuable to be able to evaluate before you execute. During planning, you may want to test supply plans, and in cases where you can’t meet on-time delivery targets on the first pass, you can consider alternatives against other key performance metrics like margin, inventory turns and revenue. You could also evaluate a change to order policies or other planning parameters like safety stock to ensure the change will have the desired effect on your planning strategies and goals. By analyzing before you act, you’re pre-empting excess and shortage conditions as well as delays and expedites.

Even the best supply plans will get hit with change – it could be anything from an unexpected late delivery to a quality issue or a natural disaster that physically destroys your supply chain.

In many cases, the right answer to handling supply planning disruptions isn’t easy to identify. What-if capabilities are required to collaboratively test for the right decisions. And this almost always needs to happen fast. The longer you let the fire burn, the more damage there will be. That means what-if decision support has to be easy and ready to go at any time to keep your supply plans on the right track.



# RapidResponse makes supply planning easy



The Kinaxis Supply Planning application helps supply chain planners, schedulers and buyers across the supply chain continuously and concurrently balance demand and supply – material and capacity – to meet critical operational goals.

Activate configurable, intelligent algorithms and analytics, and get instant alerts of any misalignment between supply and demand. Simulate and evaluate multiple issue resolution or plan alternatives with virtually unlimited scenarios. All of this and more on a single planning platform that facilitates collaboration with stakeholders so you can solve problems and implement profitable, effective solutions faster.

# Powerful capabilities drive impressive results



Concurrently and continuously balance demand and supply plans with always-on, in-memory analytics



Automate manual tasks with configurable and expandable intelligent algorithms and analytics



Empower users to be more productive with a simple, easy-to-use user interface



Resolve issues quickly with configurable, collaborative exception resolution workflows



Proactively identify gaps or issues with demand forecasts, sales orders, material, capacity, shipments and other elements of supply with exceptions-based alerts



Simulate and understand trade-offs between various plan options at the functional, strategic or any level with what-next scenarios



Seamlessly connect your supply planning with S&OP, demand planning, inventory planning and production scheduling processes



Ensure your planning and execution processes are tightly coupled by integrating with your existing enterprise resource planning (ERP) system



# Supply planning done differently



So here's the thing. The way we handle supply planning within RapidResponse is different – really different. But don't be scared. Since it's way less complicated and time-consuming thanks to the power of concurrent planning, after seeing how easy it is to balance and supply, you'll be wondering how you did it the old-fashioned way.

## 1 Do a reality check

Check distribution and material plans to see if life's thrown any curveballs your company's way.

## 2 Adjust plans to reflect real life

Make any needed changes to your plans – demand, inventory, capacity, production.

## 3 Watch the magic of concurrent planning happen

Blink and you'll miss it! Your entire supply chain automatically rebalances in seconds, alerting you to any exceptions that need your attention.



## 6 Sit back, relax and wait for life's next curveball

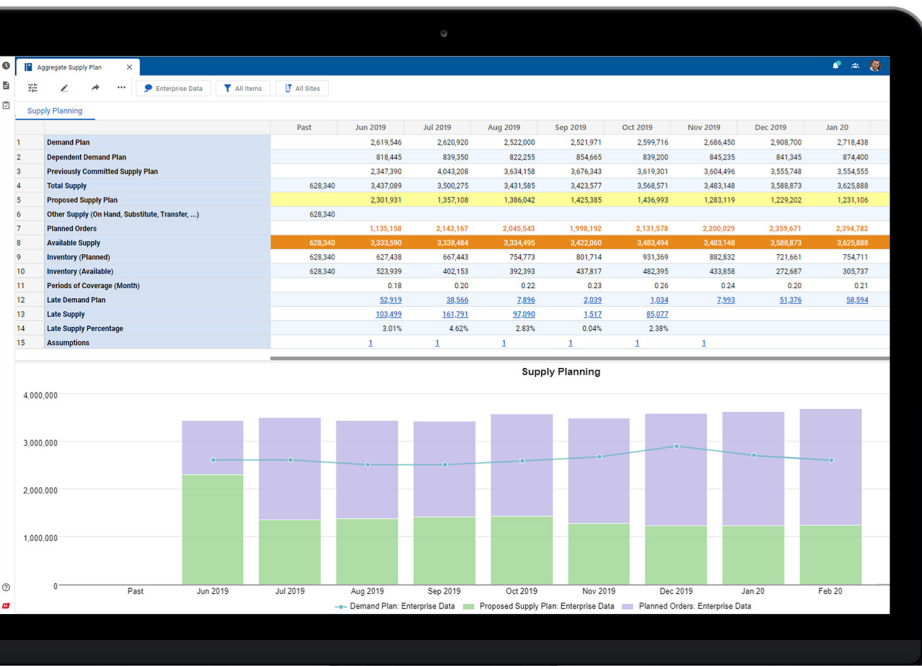
Rest easy knowing no matter how fast or frequent things change across your supply chain, you've got the agility to respond quickly and confidently.

## 5 Put your plan into action

Secure signoff, push the chosen scenario live with a single click and head down the path to execution glory.

## 4 Weigh your options

Spin up any number of scenarios in real time to evaluate trade-offs and options, comparing them all to each other, the current plan and critical KPIs.



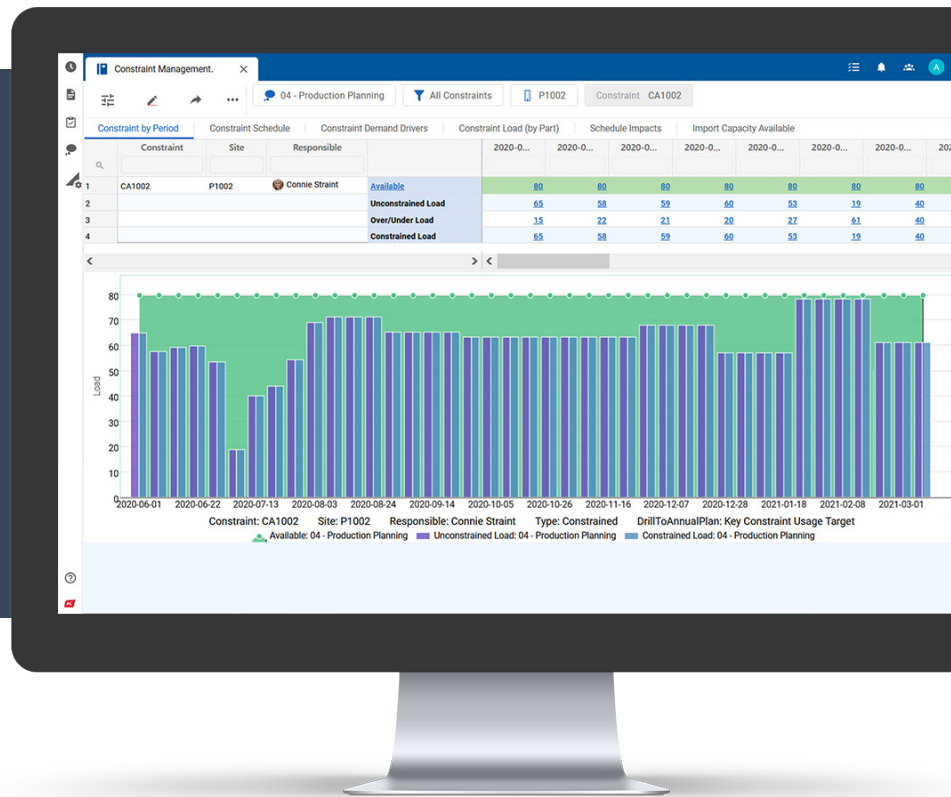
With the intuitive planning sheet, easily view, evaluate and make decisions about trade-offs among supply, demand and inventory across the supply chain, all within a single platform.



“The connection of planning centres and people on a single platform with transparency in real-time is a great value add. It is a foundational platform that enables us to break down silos and connect the supply chain and related functions end-to-end.”

– ZOLTAN PEKAR, HEAD OF SUPPLY CHAIN,  
ROLAND DG CORPORATION

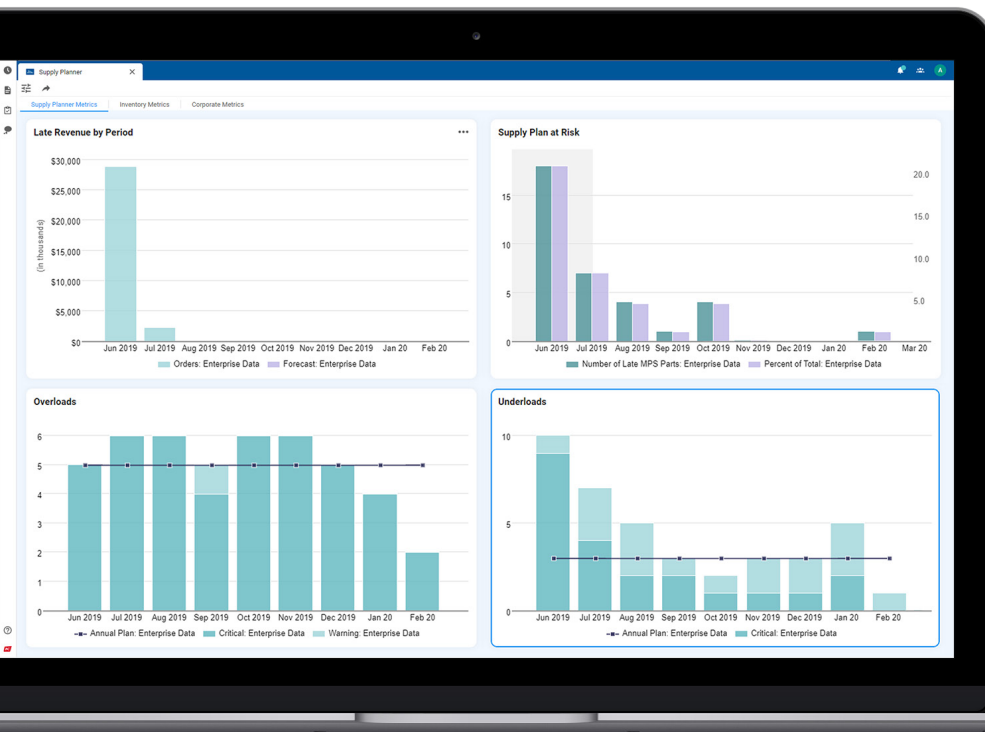
Easily understand the impact that various production planning strategies will have on inventory, capacity and customer service across the entire supply chain with the Kinaxis Production Planning add-on.



“

“Kinaxis RapidResponse provides the data in a way that allows you to accurately determine and anticipate issues in the supply chain.”

– SUPPLY PLANNING,  
FORTUNE 500 TELECOMMUNICATIONS EQUIPMENT COMPANY



At a glance, view late revenue by period, supply plan at risk, over/underloads and more with the supply planner dashboard.

“

“Inventory turns have doubled and our excess/obsolete inventory is at an all-time low. Our customers feel secure in knowing that we are managing the supply chain and not letting it manage us!”

– TOM ROSSI, DIRECTOR OF PROCUREMENT & MATERIALS,  
MC ASSEMBLY



With the fastest end-to-end go-live process on the market, Kinaxis RapidResponse can quickly and effectively provide a supply planning solution tailored to meet the specific needs of your business, no matter how complex your supply chain.

[LEARN MORE](#)

## About Kinaxis Inc.

Everyday volatility and uncertainty demand quick action. Kinaxis delivers the agility to make fast, confident decisions across integrated business planning and the digital supply chain. People can plan better, live better and change the world. Trusted by innovative brands, we combine human intelligence with AI and concurrent planning to help companies plan for any future, monitor risks and opportunities and respond at the pace of change. Powered by an extensible, cloud-based platform, Kinaxis delivers industry-proven applications so everyone can know sooner, act faster and remove waste.

Don't believe us? Ask us to prove it. Learn more at [Kinaxis.com](https://www.kinaxis.com).

## Here's more to discover on this topic:

- [A communication revolution fueled by supply chain transformation](#)
- [Thinking differently about supply chain planning](#)
- [The signal for change: Building a hyperconnected supply chain at TrinityRail](#)



This publication is accurate as of the date published and may be updated by Kinaxis from time to time at its discretion. Copyright © 2021 Kinaxis Inc. All rights reserved. Kinaxis, the Kinaxis logo and RapidResponse are registered trademarks of Kinaxis Inc and its affiliates. All other brands and product names are trademarks or registered trademarks of their respective holders, and use of them does not imply any affiliation with or endorsement by them. 11.21