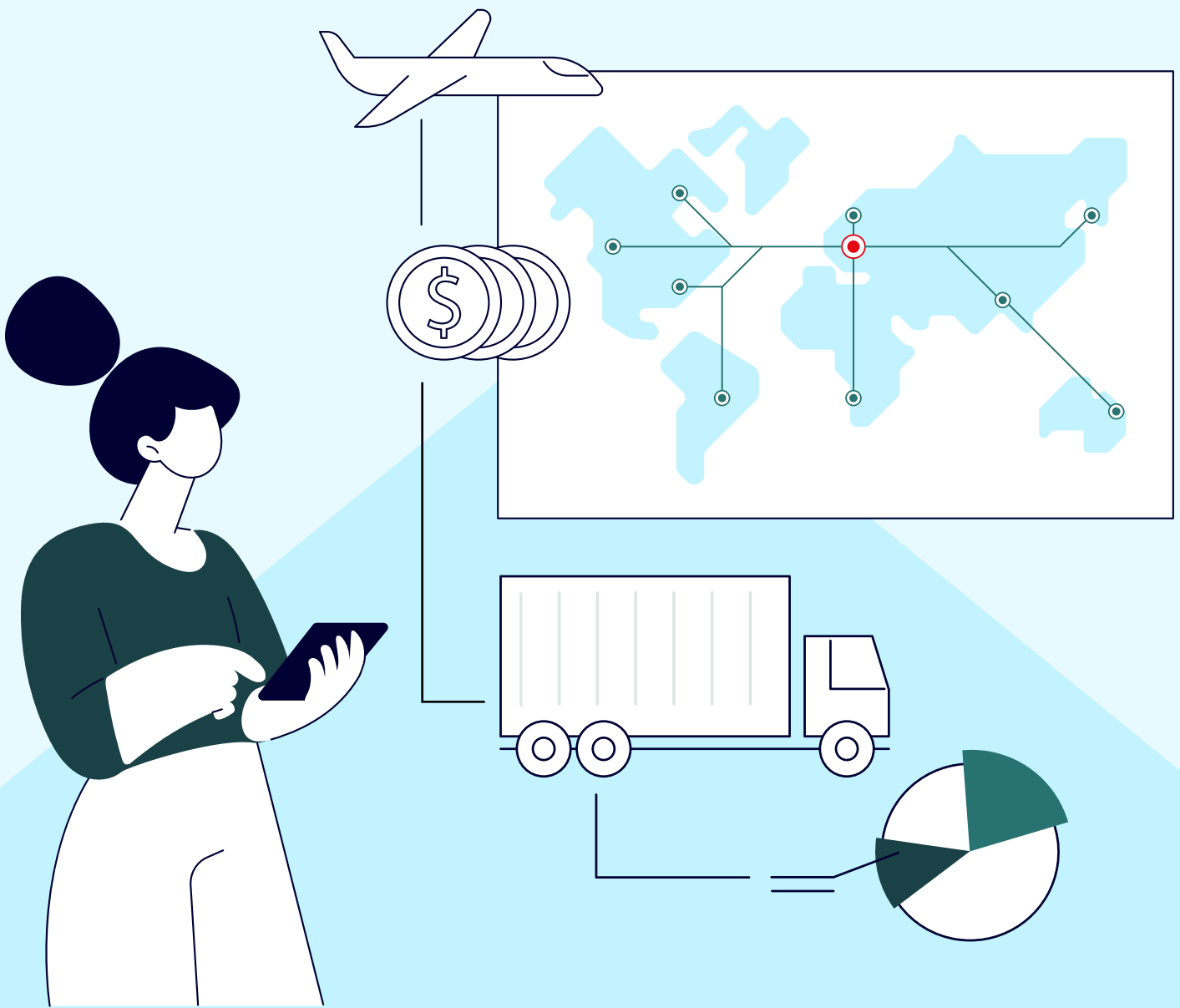


Navigating the deep waters of supply planning

Four mission-critical capabilities



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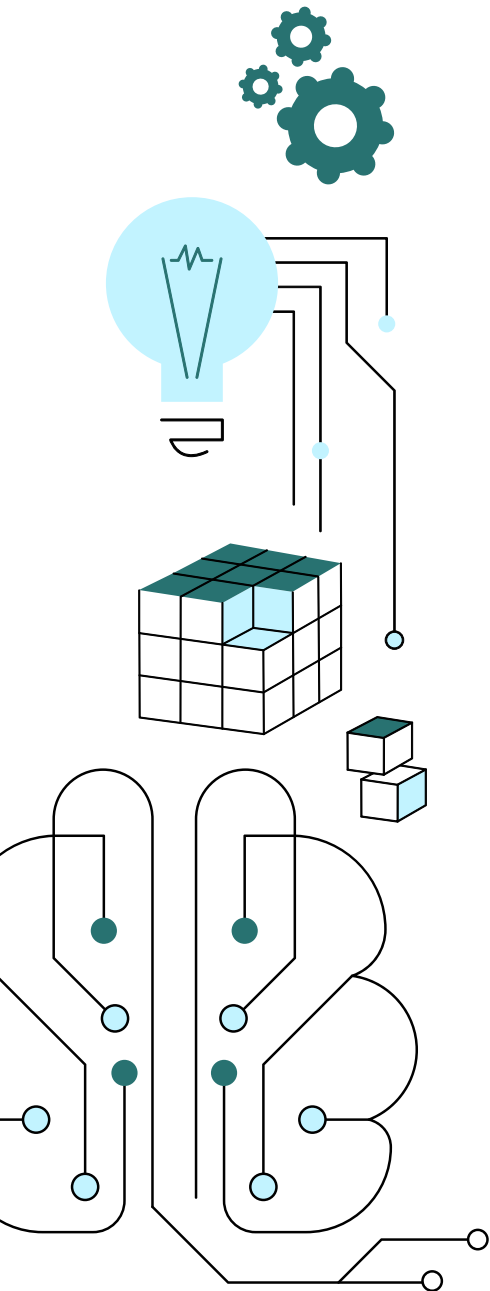
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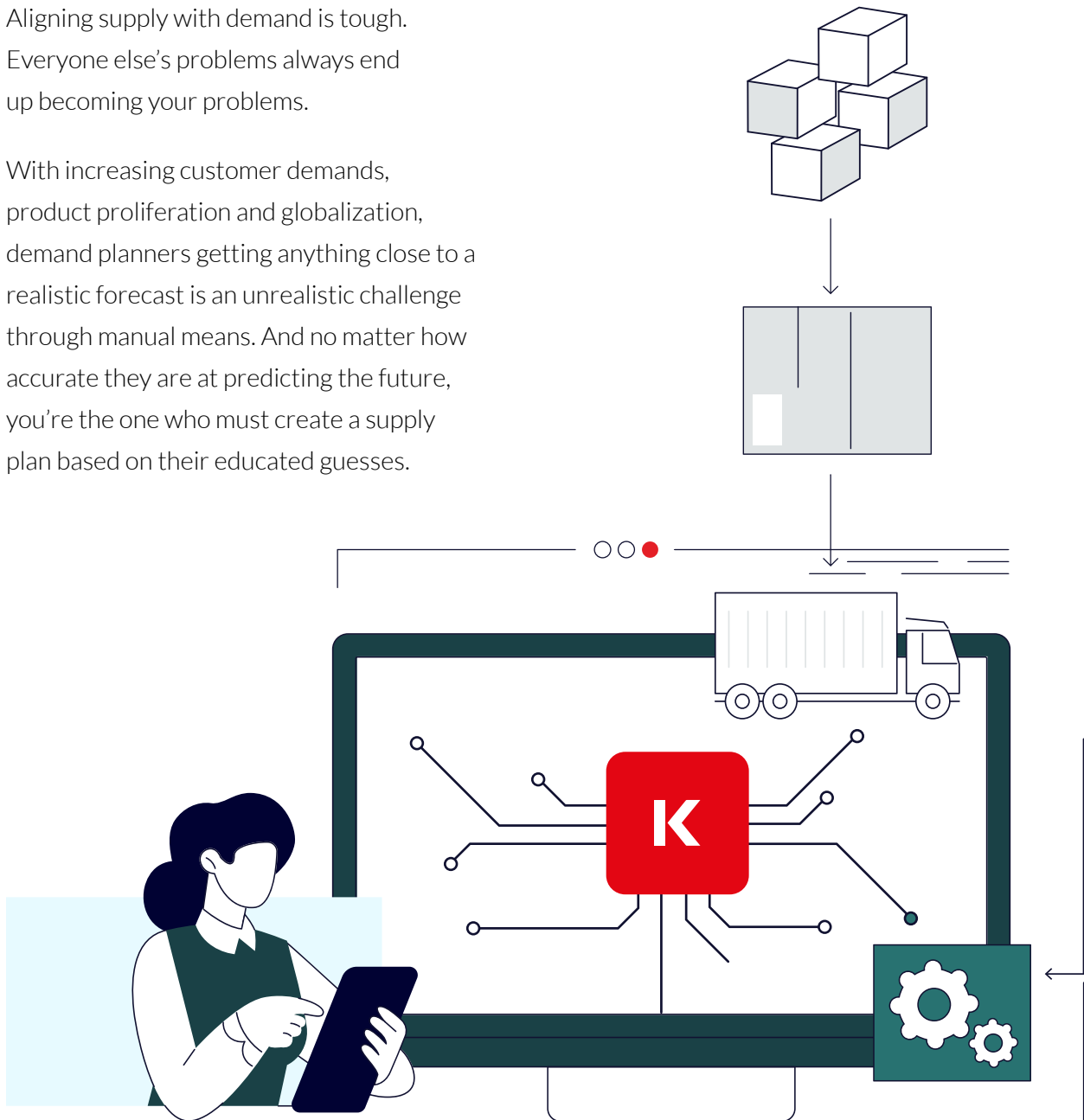
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Fighting a constant current

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

With increasing customer demands, product proliferation and globalization, demand planners getting anything close to a realistic forecast is an unrealistic challenge through manual means. And no matter how accurate they are at predicting the future, you're the one who must create a supply plan based on their educated guesses.



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.

You need to account for all rules and regulations. Some products for certain customers can only be sourced from specific suppliers or regions. Shelf lives, minimum buys, contractual obligations, capacity limitations – this is 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 supply and risk to transport networks. This could include physical damage to items, disruption to the labor force, and commodity and fuel price volatility.

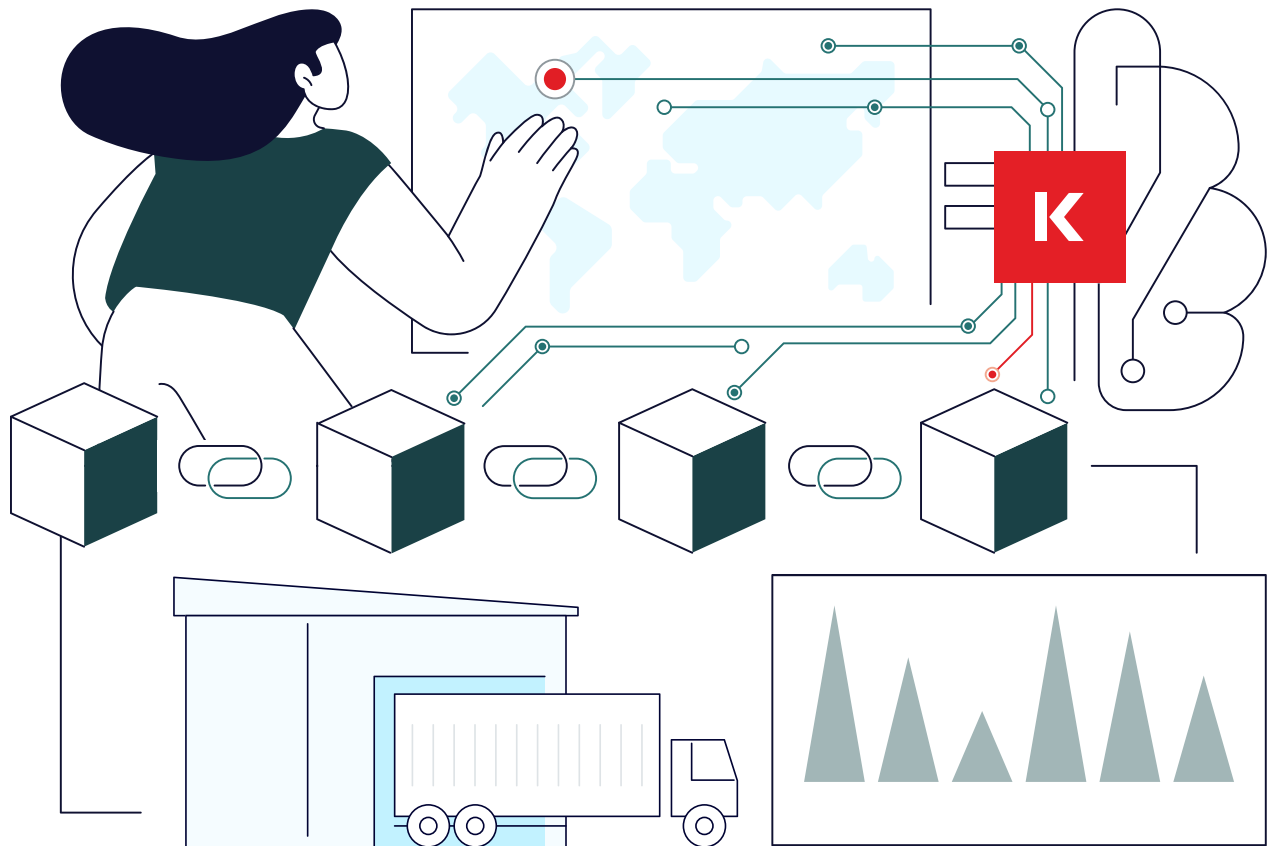
Traditional complexities

In addition, there are also traditional headaches such as scrap issues, machine breakdowns and late deliveries to contend with. Those challenging currents continue to create waves under the surface, as you swim against the tide.

Four mission-critical capabilities to navigate supply planning complexities

Just how nerves send signals to the brain, you need to connect supply planning to the rest of the supply chain ecosystem for everything to function properly. In today's global landscape, there are four critical capabilities crucial for

effective supply planning. Four capabilities that will keep your finger on the network's pulse, so you can pre-emptively respond to changes and challenges based on real-time data.





CRITICAL CAPABILITY #1

A view of the entire landscape

Instant multi-level, multi-site BOM explosion

Things happen quickly in your supply chain, at every level and location, across multiple borders, implicating numerous teams of people. It's imperative you can link your entire network together, from the customer down through your distribution centers and factories, all the way to your 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.





CRITICAL CAPABILITY #2

Full speed ahead with confidence

Flexibility means obeying the rules

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, inventory in the wrong place, missed revenue opportunities or the breaking of 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.

Part substitutions

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 important to capture the rules associated with alternate sources and suppliers, to maintain your own regulatory compliance.



Analytic horsepower to navigate your supply hurdles

There are limits to your materials, labor and machine capabilities. Making a plan without considering these limitations leaves you vulnerable to reactive scrambling once challenges arise, and the potential of broken promises to customers. Simultaneously considering constraints during your BOM explosions is key to fostering 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 to 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 revenue 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.



CRITICAL CAPABILITY #3

Optimise human intelligence

Advanced decision intelligence: the next level of AI

Artificial intelligence has become critical to the smooth functioning of modern-day supply chains. It is the only way to achieve end-to-end visibility, real-time decision making, and accuracy of decisions far beyond the capabilities of humans, no matter how experienced.

Automation in this sense represents the streamlining and optimization of often time-consuming, repetitive, or mundane tasks across the supply chain. From a supply planning perspective, however, it also reflects a level of data generation and analysis that gives you critical decision advantage (speed, accuracy, prioritization), based on a completely connected and automated end-to-end chain of information.

We call this advanced digital decision intelligence.

Through continuous post-game analysis, decision intelligence means learning from past resolutions to improve future outcomes, while also weighing up those aforementioned, real-time capacities, capabilities and disruptive events. Instant visibility of the real-time situation, complemented by proposed decisions

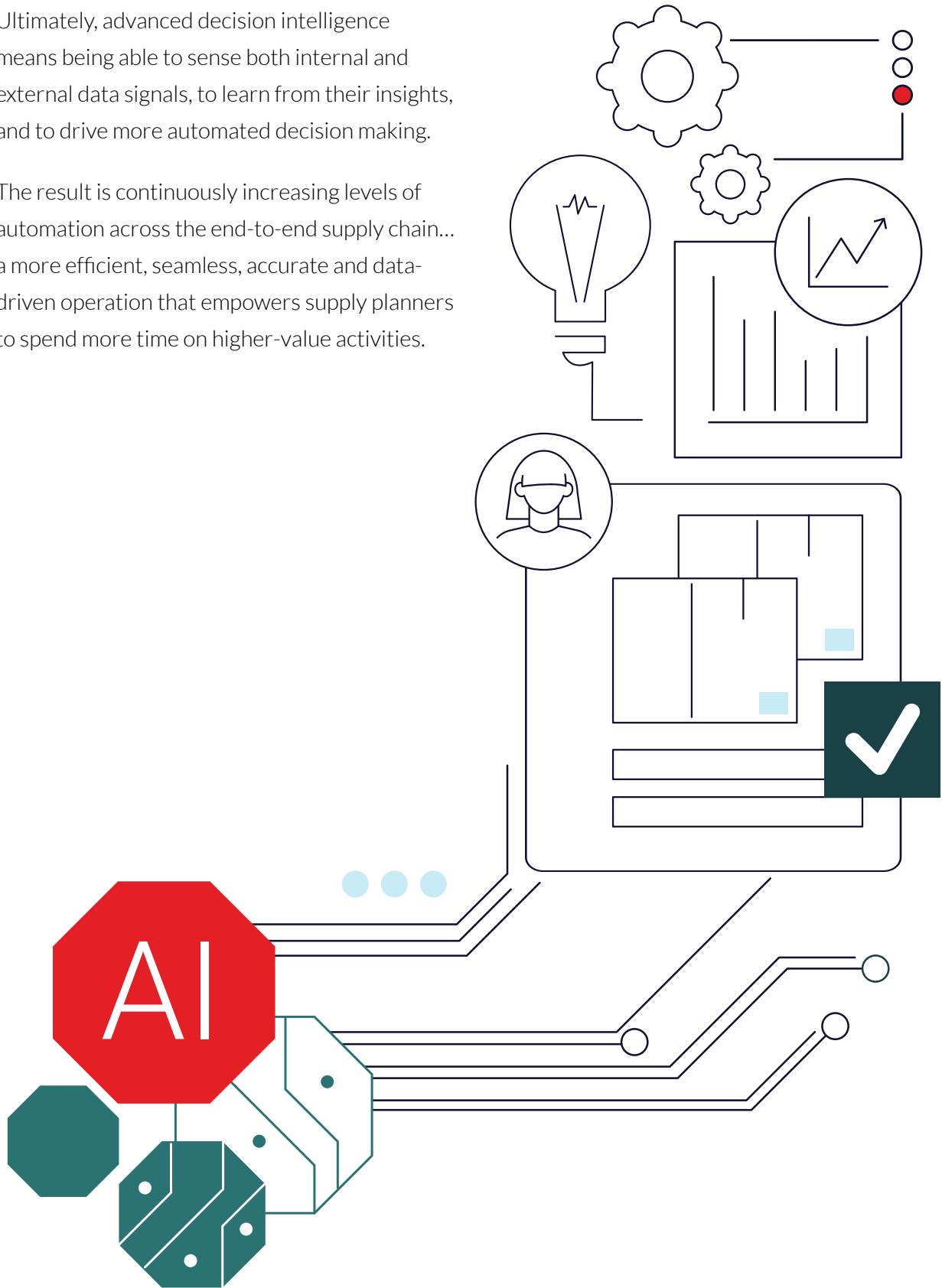
based on historic scenarios and outcomes, is also backed up by prescriptive KPI-driven recommendations. These recommendations are also prioritized according to both your KPIs and an analysis of real-time challenges.

Moreover, this decision intelligence operates on a granular level. 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 also automate a decision to prebuild inventory to avoid work center overloads.

Ultimately, advanced decision intelligence means being able to sense both internal and external data signals, to learn from their insights, and to drive more automated decision making.

The result is continuously increasing levels of automation across the end-to-end supply chain... a more efficient, seamless, accurate and data-driven operation that empowers supply planners to spend more time on higher-value activities.





CRITICAL CAPABILITY #4

Course correction 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 are subject to change – it could be anything from an unexpected late delivery to a quality issue or a natural disaster that physically disrupts 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.

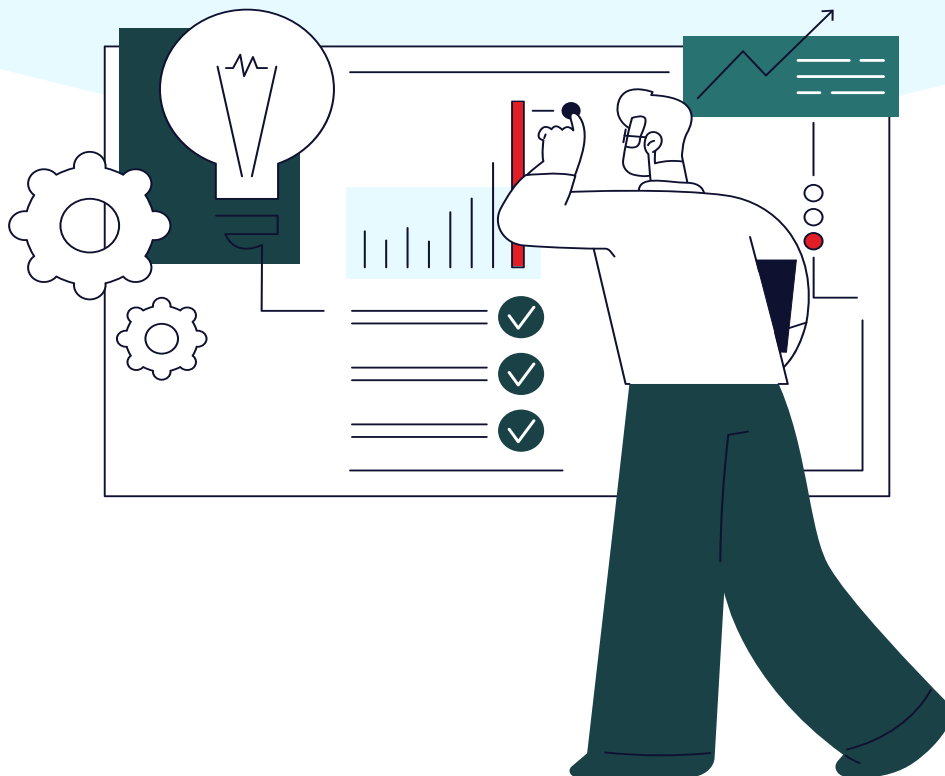


COURSE CORRECTION AT THE FIRST SIGN OF TROUBLE

Maestro makes supply planning easy

The Kinaxis® Maestro™ platform (formerly known as RapidResponse®) is the only AI-infused end-to-end supply chain orchestration platform for fast, intelligent decision-making. Maestro 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.

Fusing together multiple proprietary analytical technologies and techniques, Maestro empowers you with the right answer at the right time and speed for your business... an opportunity for you to move with agility and efficiency no matter the challenge, no matter the disruption.



An ever-evolving solution

Maestro is...

Connected

It uses our proprietary technique of concurrency, which propagates any change across the entire ecosystem with speed. Spanning multi-year strategic planning through last-mile delivery, teams become part of a seamless collaborative environment working towards a clearer vision of the future.

Intelligent

Our always-on, AI-powered intelligence engine continuously senses what's happening across your business and the world around you, to deliver the most accurate and predictive answers.

Adaptive

Maestro is an open architecture that enables diverse applications to run within the platform to fulfill distinct business operations. Seamless integration of business systems means the solution grows with you.

User friendly

Maestro takes you from visibility to explainability to action with a seamless UI so that you not only get an answer, but one you can trust, and one that was simple to reach.



All of this ultimately ensures new levels of:



TRANSPARENCY

Acquire new insights without being explicitly programmed to make decisions or predictions.



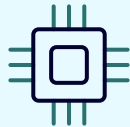
AGILITY

Extract features for more complex pattern recognition using multiple layers.



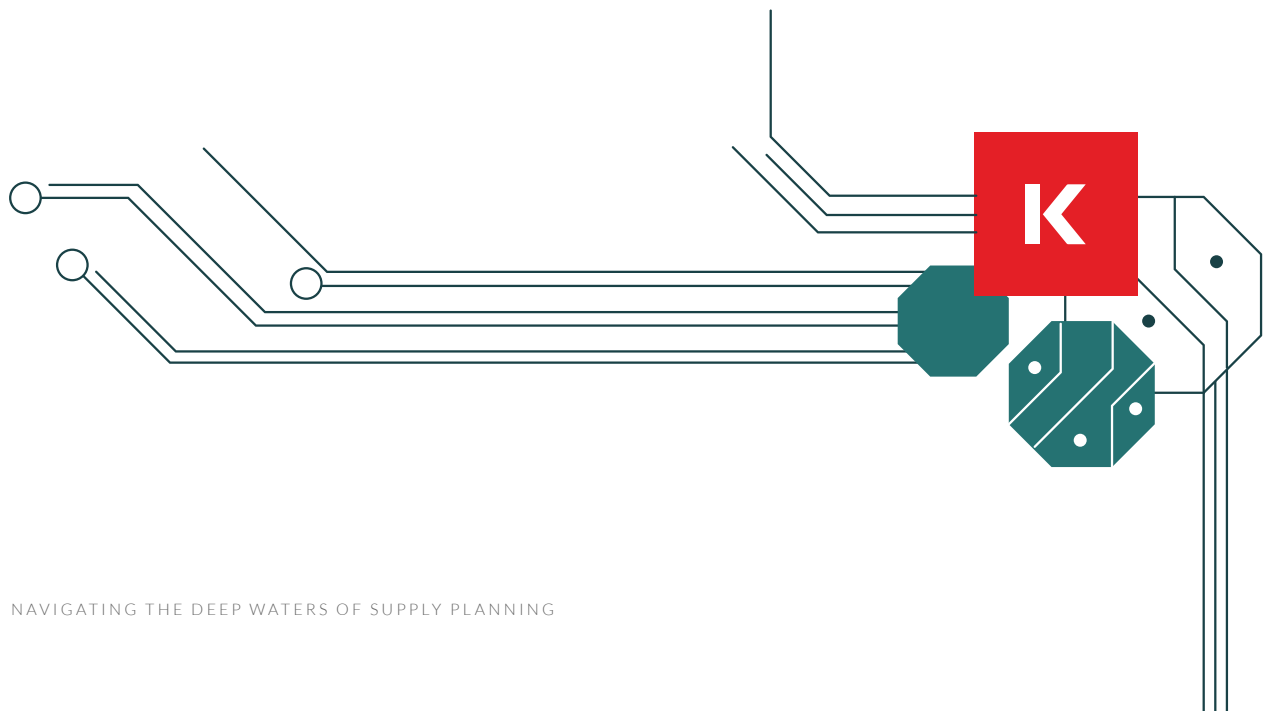
COLLABORATION

Learn from data patterns without human direction to generate seemingly new realistic content.



TRUST

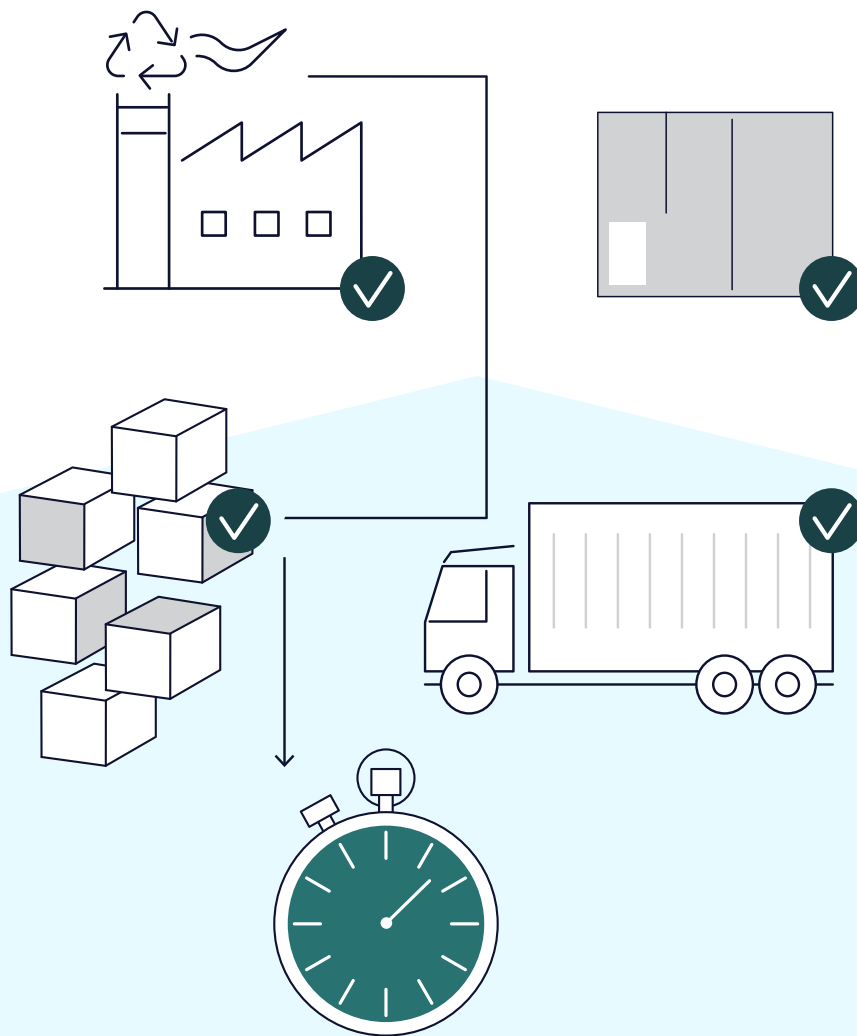
Having a single source of truth when it comes to data, removing guesswork, adding accountability, and ensuring kept promises to end customers.



Supply planning done differently

The way we handle supply planning within Maestro is different... really different! But 'different' doesn't mean 'difficult'. Its integration is seamless and quick, with its impacts almost

just as rapid thereafter. Thanks to the power of concurrency, after seeing how easy it is to balance supply and demand, you'll be wishing you'd made the switch sooner.

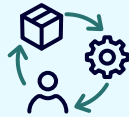


Maestro in action



1. DO A REALITY CHECK

Check distribution and material plans to identify real-time disruptions and challenges.



2. ADJUST PLANS TO REFLECT REAL LIFE

Make any needed changes to your plans and rules – 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.



4. AUTOMATED OPTIONS

Watch as a number of scenarios are presented in real time to evaluate trade-offs and options, comparing them all to each other, the current plan and your critical KPIs.



5. A DATA-DRIVEN DECISION

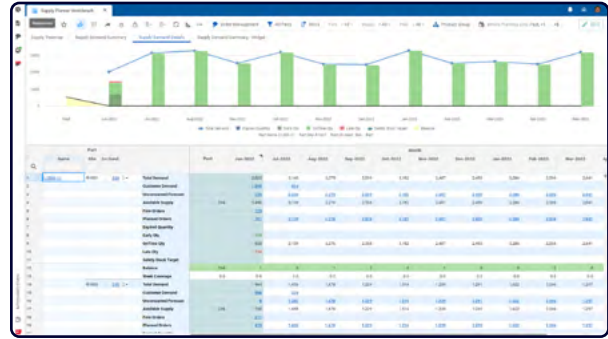
Capitalize on the solution's decision intelligence to select the best-case plan of action, safe in the knowledge that it has been assessed holistically.



6. ...AND REPEAT

Rest easy knowing that no matter how fast or frequent things change across your supply chain, you now have the agility to respond quickly and intelligently.

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



“The Maestro platform gives us the ability to leverage the accuracy of a digital platform while empowering our planners by removing repetitive and manual tasks to let them focus their skills on improving operations and customer service.”

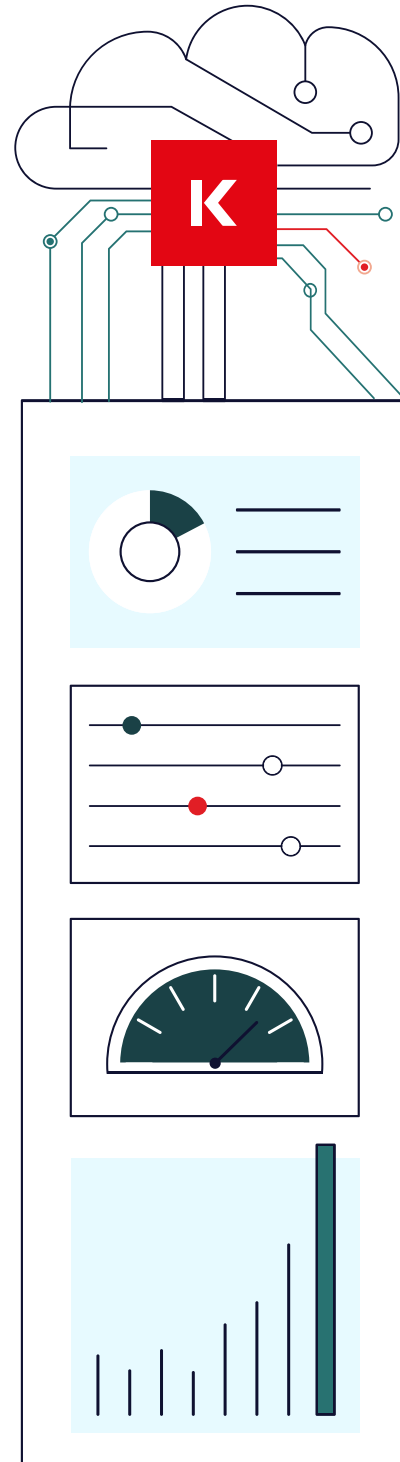
**VP OF CUSTOMER SUPPLY CHAIN
CARLSBERG**

“Since implementing Kinaxis and Maestro, we have streamlined our planning processes, gained deeper insight into our supply chain, and improved the pace and quality of our decision-making.”

**VP SUPPLY CHAIN
BELL FLIGHT**

Seamless synchronization, unmatched agility.
Futureproof your supply chain today with
Maestro – a solution that can take productivity
to the next level, ensure much-needed speed and
agility in a volatile sector, and ensure seamless
and secure utilization of your unique data.

[Learn More](#)



KINAXIS[®]
www.kinaxis.com

About Kinaxis Inc.

Kinaxis[®] is a global leader in modern supply chain management. We serve supply chains and the people who manage them in service of humanity. Our software is trusted by renowned global brands to provide the agility and predictability needed to navigate today's volatility and disruption. We combine our patented concurrency technique with a human-centered approach to artificial intelligence (AI) to empower businesses of all sizes to orchestrate their end-to-end supply chain network, from multi-year strategic planning through down-to-the-second execution and last-mile delivery.