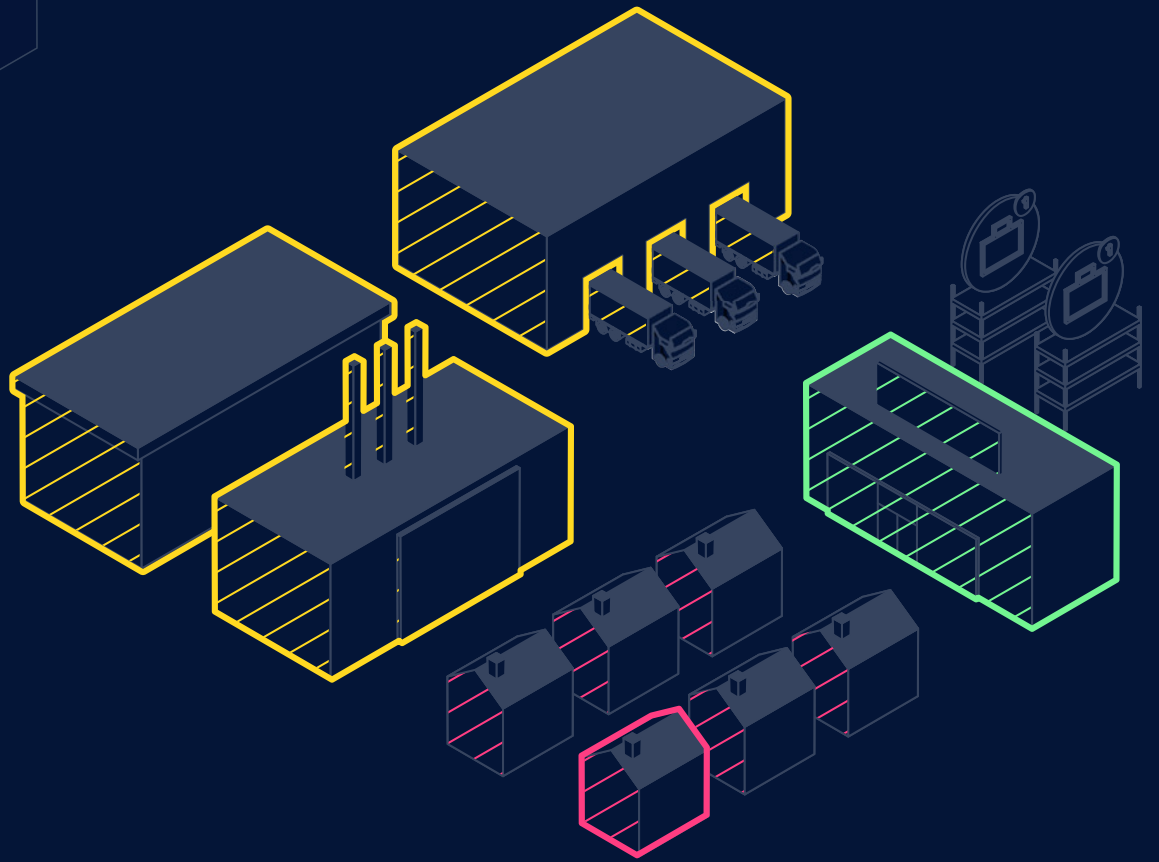




AI for inventory **Right stock, right place, right time**

Transform your forecasting
to drive demand and supply
efficiencies with AI



Introduction

Demand forecasting is hard

Let's talk about demand forecasting. Every aspect of an organization's operations will have a demand forecast at its core. It's a starting point for every decision — every single decision maker, from suppliers and manufacturers to merchandisers, demand planners and commercial teams — will make a call based on what they think will happen, and what they think the forecast is telling them.

Forecasting has always been hard. Ever-changing patterns and trends, plus difficulties in accessing and surfacing the right data, are just some of the most common headache-inducers for demand and supply teams. The issue in recent years is that forecasting is becoming not just hard, but really hard. Why?

Businesses are more complex than ever. More channels. More product ranges. More suppliers. More distribution centers. More international shipping.

Sounds tough already, right? Well, the craziness of the world right now makes it even tougher. Inflation. Macro-economic struggles. Brexit. Political uncertainty. War in Ukraine. Broken supply chains. Rising freight costs. Lack of product availability. Plus, there's COVID-19. The last few years' of data are not

at all typical or stable due to the disruption of the pandemic, making it hard to draw from the past to inform the future.

All of this comes at a time when customers are more demanding than ever before. They expect next day delivery. They expect huge choices in product ranges. They expect every item they want to be in stock, ready to ship, straight away.

This is the same across retail, consumer goods, wholesale, manufacturing, raw materials — everything. And, those companies that aren't able to keep up are paying the price — it's estimated that poor customer service threatens \$4.7 trillion globally in annual revenue. Disappoint your customers at your peril.

All businesses, no matter the sector, dream of being able to generate the perfect forecast; that crystal ball that tells you exactly what you need to know to navigate the aforementioned challenges.

The crucial thing to remember, though, is that you can have the most accurate forecast in the world, but... **it's what you do with it that counts.**

What you'll learn in this guide

Over the following pages, we're taking a deep dive into the wonderful world of supply chain and the role of both demand forecasting and **artificial intelligence (AI)**. We'll be breaking down what the journey of a typical product looks like, covering the four key stages:

1. Buying and inventory
2. Logistics
3. Allocation
4. Pricing

By looking at the supply chain step by step, we'll explain some of the current challenges that individual teams are facing, from archaic ways of working and siloed data to disruptive external factors and, of course, difficulties around forecasting. After reading this guide, you'll have gained a better understanding of the problems associated with each aspect of the supply chain journey and — crucially — the ways teams can leverage AI to overcome them. We'll explain why businesses need to put less focus on simply having an accurate forecast, and more focus on using their forecasts to their full potential — and uncover how an AI-driven approach to supply chain can drive real commercial value across multiple sectors, by **connecting the dots between demand and supply.**

Optimizing the supply chain journey, stage by stage

Every business is different, we get that. Unique data sets, unique ways of working, unique objectives.

But if we think of the general concept of a supply chain, there's a basic representation of a product's journey that will apply to just about every organization: from raw materials, to being manufactured, to buying stock, to being ready to sell, to sales channels and distribution.

Those working in these areas will be no stranger to the utilization of data in just about every aspect of demand and supply operations. Data has always underpinned these processes. Even in the days before multi-million dollar ERP systems were woven into the fabric of organizations — and even before there were spreadsheets! — supply chains were run with the manual logging of orders, stock holdings and production capacity, to name a few.

Businesses across all sectors are drowning in data these days. And it's difficult — some may say it's impossible — for teams to gain a true picture of what this data is telling them. While, once upon a time, the difficulty was around collecting the data they need, now businesses have so much data that they simply don't know what to do with it.

Across the supply chain, different teams all have their own ways of working, and their own systems. And these teams are faced with spreadsheet after spreadsheet of inventory data, sales data, supplier data — plus data all housed in their own systems, all doing their own thing.

On the surface, this might sound OK — separate teams for separate parts of the supply chain, using separate systems that leverage separate pieces of information. However, this is a suboptimal approach when it comes to decision making, often leading to the optimization of one area of the value chain to the detriment of another.

Decision makers need to get a better handle on their business-wide data in order to make fully-informed, truly data-driven decisions. The sort of decision that could help your business survive or thrive. In short, big data isn't the issue anymore; it's all about using the right data in the right way.

Many businesses today are being held back by static legacy systems and bulky, complex spreadsheets that weren't able to adapt as the business grew. One large CPG business that we work with at Peak explained that they "want to open in new territories, but we know our processes and systems will just fall over if we do." They're overly reliant on a complex ecosystem of point solutions that were introduced in silos to feed a specific business teams' need at a specific time — all of which are being held together by a piece of string that could snap at any moment.

"We want to open in new territories, but we know our processes and systems will just fall over if we do."

Large CPG business and Peak customer

Spreadsheets can only get you so far, so businesses also find themselves creating their own basic forecasts and making decisions purely based on intuition and years of experience in the trade. This means that they're unsure how to react to new uncertainties or unprecedented scenarios that appear, stuck in a cycle of purely reactive decisions when an issue or opportunity arises. Cross-team communication can be limited, with decisions often made with minimal view on how they may impact other parts of the chain.

Surely there must be another way?

Step forward AI

AI is changing the way the world works. From smart assistants in our home to self-driving cars on our roads, this game-changing technology is playing an increasingly prevalent role in our everyday lives. This is also happening in the commercial world, with 35% of companies now using AI in their business, and an additional 42% exploring the possibility. Once the preserve of the tech supergiants, now more and more organizations are able to tap into the benefits of AI.

At its core, commercial AI is focused on taking vast datasets, finding complex patterns and trends and making predictions and categorizations over that data that you can use to your advantage. From a supply and demand standpoint, not only does AI allow you to leverage all of your data so that you can create a great demand forecast, it also enables you to use that forecast to optimize specific parts of your business. Rather than just putting all your efforts into forecast accuracy, AI does this heavy lifting and number crunching for you, and allows you to focus primarily on driving outcomes across each area of the supply chain, from supplier to factory to customer.

By making sure you're leveraging every drop of data from across your organization, businesses can use AI-powered demand forecasting to optimize every aspect of the chain with a clear end goal in mind; actionable outputs that benefit each individual process and team. By connecting each stage of the supply chain, you can add huge value to your organization.



35% of companies now use AI in their business, while **42%** are exploring the possibility.



Step forward AI

Let's demonstrate this with an example...

Imagine if AI could connect all of your teams and slot perfectly into your existing architecture. For instance, if your marketing team finalized their promotional and events calendar, and this information was fed directly into your demand forecast for the year, AI could smartly predict the subsequent uplifts and stock needed to support this activity. From here, it can automatically suggest and push POs to your ERP system for your buying team to access, then feed all of this information into your logistics plan to ensure that the right stock is in the right place, at the right time.

In this AI-enabled scenario, everyone is connected by the underlying core forecast, but the outputs are based purely on the team's functions and their needs. This provides unrivaled levels of agility for your business. For instance, if there's a delay in the

supply chain, an unexpected uplift in sales or you open additional stores, AI can spot this happening, react instantly and feed information back into the central forecast underpinning all of your applications — and adapt the outputs accordingly.

Sounds like a dream, right? But this is currently reality for companies using the Peak platform. All of this connectivity isn't just happening in the background, either. Peak has the power to surface this information in customizable dashboards so that teams are able to fully understand and digest the predictions. This may sound pretty transformational, but it's always adapted to your business' ways of working, with outputs pushed directly into your execution systems — built in a way to make sure that there's little disruption to your status quo.



In summary...

The potential for AI in the supply chain is enormous. A full value chain, with each step fueled by data and optimized by AI, brings with it a wide range of benefits. It gives organizations added flexibility and agility, enabling them to reimagine, reinvent and reengineer themselves quickly — a very valuable attribute in the uncertain times we're currently facing.

Add in highly integrated teams, flexible manufacturing and distribution and being able to do what you need to do faster and at less expense, and AI seems like a no brainer.

This idea of 'AI with action' might sound like a pipedream, but it's not — in fact, for each stage of the supply chain, there's an AI application for that. Let's take a look at the AI-enabled journey...

Stage 1:

Buying and inventory

The problem

Uncertainty in the supply chain increases the risk of stockouts, missed revenue and poor customer service. This means that knowing how much to buy and reorder, how much to produce and what your optimal safety stock levels should be are the first crucial steps to supply chain efficiency for any business. But it's a complex challenge, and one that is difficult to address alone.

Teams have a lot of noise to contend with, with an overwhelming volume of data making it increasingly difficult to gain a thorough grasp of demand. Businesses continue to grow in complexity, too — contending with multiple sales channels, different global territories, multiple global suppliers and thousands of products and SKUs.

It's easy to miss important bits of product information or misinterpret demand signals and order too much, or not enough. In addition to this, suppliers often have lots of constraints, as well as different prices for bulk orders and various rules around shipping prices. This can often lead to businesses buying more stock than they actually require, or inflating stock of certain lines or stock from certain suppliers.

Added to this complexity is the macro-economic situation of inflation and supply shortages leading to longer lead times, with one billion pound retailer telling Peak that they couldn't keep on top of their ever-changing lead times — which was the main reason they weren't optimally stocked for the Christmas peak trading period.

There are multiple sources for demand uncertainty. For example, a customer's purchase behavior can change which alters the intrinsic demand for an individual SKU. Or a SKU might be subject to seasonality, or other macro-product trends. Typically, merchandising and planning teams use spreadsheets to track historical demand and estimate the buy/rebuy time and quantity — but this isn't efficient enough to cope with the fast-paced nature and demand of modern businesses.

The buying and rebuying processes differ based on the type of SKU: core product lines may have demand throughout the year, whereas seasonal products are in demand for a limited time period. The boundary between the two types of product varies from business to business, but all merchandisers and planners need to decide what to buy/order, when and in what quantity. In the case of seasonal products, this also includes a decision on which months they should be kept in stock.

If we think about how much data all of the above is producing at a rapid rate, it's undoubtedly a lot for teams to manage properly with traditional, manual processes — and many businesses still find themselves entrenched in Excel, spending hours combing through data row by row, column by column. One such business told us that they were having trouble recruiting, as a lack of Excel skills was a “dealbreaker” in their world. Merchandisers, planners and buyers spend a lot of time forecasting themselves, making decisions based on gut feel. And, data being siloed in different sheets and systems means that it's hard (and time consuming) to monitor and evaluate performance of their previous years' sales and know how much stock to hold next year — these kind of reports can take businesses days, if not weeks, to pull together.

“Having or not having inventory could be the difference between success and failure. It will be a test of retailers' supply chains and operational capabilities. With shortages of many key components for manufacturers as well as labor shortages — or stoppages in the global supply chain due to COVID-19 — retailers are facing a variety of different headwinds across different fronts. Having a strong inventory position while providing convenience to customers — in many ways, just basic retail fundamentals — will position local retailers to meet demand.”

Carlos Castelán, Managing Director at The Navio Group (a retail business consulting firm)

Stage 1:

How AI can help

The more data you consider when making a decision, the better that decision will be. And by leaving the number-crunching to AI, you can generate a forecast that takes into account all of your data, from all of your systems. Being able to anticipate future demand on many levels is a powerful way of making the most well-informed buying decisions. For example, you can forecast demand by department, sales channel, product, or even for the specific size/color/SKU of a product.

Teams can make major time savings, too. The AI-powered automation of data feeds means that data is pulled together automatically in a way that works best for an individual business; a way that puts you in the position to make the best call possible. On top of the automation, though, there needs to be an action — a recommendation of what to do and how to use your forecast in the most optimal way. What stock levels do you need to hold as a business to support brand levels? How much do you need to intake each week to keep up with meeting demand, while avoiding tying up too much cash in excess stock?

How can you set the correct safety stock levels for every product, when your business is dealing with hundreds or thousands of individual SKUs?

Utilizing AI in the buying and inventory phase of the supply chain empowers teams to fully reap the benefits of their vast amount of data; giving recommendations on what, when and how much you should be buying in order to fulfill your forward demand. It allows you to buy smarter, and buy tighter — by better understanding your demand and your customers' buying behaviors — to more efficiently manage your supply chain.

Naturally, all businesses want to offer products that appeal to their customers, to help you build and maintain a brand that people enjoy purchasing from and want to come back to. Achieving this while also buying tighter means you've got the best of both worlds; an enticing product offering that is in stock and available for customers who want it most, whilst reducing slow-selling lines that cost money to store, markdown and shift. That's the sweet spot you're aiming for.

Gone are the days of spending weeks stuck in spreadsheets. AI can automate some of your more time-consuming processes, such as reordering. If you feed it the data, it can automatically gauge initial sales reaction and action decisions around what to buy and in what quantity — spinning out the reports and information you need in a matter of minutes, not weeks, to give you a real-time view of what you need to know. This frees up time to focus on more strategic plays, like growing your category and product ranges and buying into new lines.

AI should act as your decision support tool; a central hub that empowers you with the information that you need to make decisions quickly and efficiently. And, crucially, it should be able to scale efficiently across your entire product portfolio to provide consistent data access so you can be confident that your team, no matter how large, are making consistent decisions without wrangling and updating formulas. AI should do the heavy lifting and let you focus your expert domain knowledge on making the best decisions.

AI also offers teams the chance to benefit from automated, custom flagging. If you're looking after thousands of products across multiple sales channels, AI can flag products and channels that require your immediate attention. This could be information on bestsellers, overstocks, stock movement suggestions, products that need rebuying or products that aren't selling too well and perhaps need marking down. These are all insights that AI can surface to ensure the buying and inventory stage of the supply chain is being run in the most optimal way possible.

In summary, using AI in the buying and inventory stage of the supply chain enables you to buy, or produce, the right products in the right quantity, at the right time, ready to sell.

“At KPMG we're seeing firsthand the impact that AI can have on a business' supply chain, particularly when it comes to inventory management and procurement. Leading organizations are placing trust in their data to achieve incredible outcomes in areas like cost reductions, gross margin enhancement and working capital velocity.”

Jonathan Attia, Partner, Head of Digital Products at KPMG

Stage 1:

A closer look at... safety stock

Safety stock is a crucial aspect of inventory management, and helps businesses deal with volatility and uncertainty. With too little safety stock, there's not enough buffer to sufficiently cover against the uncertainty, leading to stockouts and poor customer service. With too much, there's unnecessary capital tied up in stock as well as additional storage costs. If the stock is perishable, this is an even greater problem.

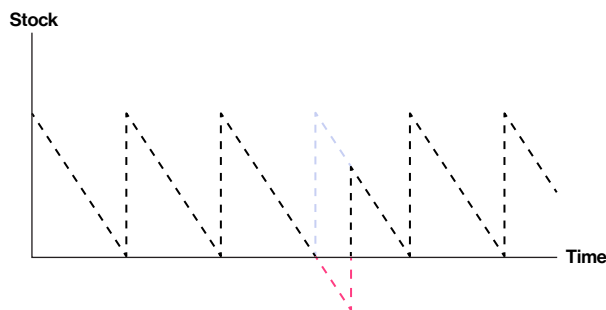
But, when the safety stock is just right, having the optimal balance between service level and stock holding is found to maximize monetary KPIs. So, how can you achieve this?

Every SKU is affected by supply chain uncertainty differently. Some customer demand is easier to forecast than others. Some suppliers are reliable and always deliver on time, while others are always late. Some production lines run like clockwork, while others are regularly out of action. And, some stock can last forever, while others have a very short shelf life.

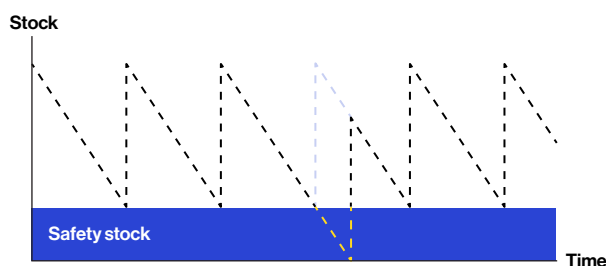
Because every SKU is different, every SKU needs a bespoke 'just right' safety stock level. This means safety stock must take into account SKU-specific uncertainty associated with demand, supply and production.

Rather than setting your safety stock levels for a particular product one or twice a year and never revisiting your initial forecasts, SKU-specific safety stock is not static. It changes dynamically as the uncertainty associated with a specific SKU changes.

Thanks to the power of AI, this is all happening in the background — so you know that you're leveraging your data to its full effect and will always have that crucial 'just right' safety stock level, freeing up valuable working capital in the process.



Without safety stock a late delivery from a supplier causes a stockout for several days as there is no safety stock.



With safety stock a late delivery from a supplier does not cause a stockout as the additional safety stock provides a buffer.

Peak works with a leading food manufacturer, using AI to maintain its high service levels while reducing safety stock levels by **40%**.

[Find out how](#)

Stage 1 success story:

AI-powered forecasting. Leaner inventory, major savings

Peak works with leading UK equipment and hire firm Speedy, providing highly accurate recommendations on what equipment and assets they should hold based on predicted demand.

We forecast demand for its 3,500 products and 200 depots at SKU-level, with AI-powered algorithms that factor in product popularity, seasonality, capacity, growth trends and historical data.

Peak powers decisions such as what products need to be at each depot to meet demand, and how much safety stock should be held in each location.

Thanks to AI, it now takes one hour, instead of over a week, to decide where products should go in the network to drive the most sales. Plus, every month, on average, the team makes a 4% saving on inventory whilst satisfying 8% more demand across the network.

[Learn more](#)



Stage 2:

Logistics

The problem

Logistics and distribution is the crucial second step on the supply chain journey. Teams working in this function, much like those in buying and inventory, are currently facing extreme pressures due to the ever-changing nature of the world around us, and the growing demands of customers — which are higher than ever. The e-commerce market accelerated by five years due to the pandemic, and many shoppers now see next-day, hassle-free delivery as a minimum requirement rather than a nice-to-have.

Logistics teams are now constantly playing catch up with unpredictable and fluctuating demand. It's tough for them to keep their heads above water, which leads to unnecessary (and costly!) stock movements in an attempt to meet customer expectations and adhere to agreed service levels. And, while these expectations are miles ahead of what many businesses can fulfill, fleet, fuel and staffing costs are all on the rise.

It's a familiar scenario for many businesses; you've got finished products sitting in your factories and multiple distribution centers across the globe, ready to ship products to and from different locations, or maybe even straight to the consumer. How do you most efficiently move this stock around your complicated and vast networks to ensure that you're meeting demand in any given area? While there are alternative solutions in the route planning space, they can't manage the complexity of specific business conditions or adapt to the unique demands of particular customers.

Multiple stores and multiple sales channels also means that you've got a lot of trucks on the road and ships on the ocean continually moving products around. This, coupled with increasing pressure to adhere to more sustainable practices, means that businesses need to take action to optimize their processes and become more efficient.

"Freight costs have been a huge burden to our industry over the past twelve months. Although this has now started to slightly decrease the rise in raw materials is canceling out any positives from this. As an industry sector, we have attempted to absorb as much of this as possible as certain product lines start to look expensive for the end consumer. However, we're now unable to cover these and the cost has to be passed on. This leaves us with difficult decisions moving forward and whether sourcing goods closer to home is now going to be a way forward for us."

Steven MacDonald, Managing Director at Scotlight Direct (an online and electrical view)

Stage 2:

How AI can help

You didn't see that coming — but no one could have. Uncertainty is the enemy of efficient logistics, with fluctuations in demand, network capacity limitations, driver shortages and messy, siloed data being just some of the challenges faced by logistics teams. While you'll never be able to entirely predict the future, leveraging AI can get you one step closer, combining data from multiple sources — order, inventory, location, stock, production — to power recommendations that cut costs, maximize availability and save time.

AI enables businesses to have stock in the right place to adhere to their SLAs but also, if you're direct-to-consumer, ensure you never disappoint them with late deliveries or irritating stockouts. By giving you a holistic view of your data, AI means you can predict demand at SKU location level, with highly-accurate forecasts that are dynamic, constantly evolving and providing you with much-needed granularity at scale and increasing your network capacity. This means that, if you understand demand in specific areas, you can move stock around intelligently to ensure you're meeting demand in the most optimal way. This is otherwise complex for businesses to do, especially in times of constrained supply.

Businesses need to make the right decisions at the right time in order to avoid stock ending up in the wrong place. This leads to stale stock — stock that then costs money to move around to places where it might sell. AI avoids this scenario, helping teams to better manage working capital and reduce the amount of stock they're holding in the wrong places whilst lowering transport costs significantly.

The sustainability benefits of an AI-driven approach speak for themselves, too — fewer unnecessary truck journeys between warehouses and distribution centers means fewer trucks on the road, fewer kilometers spent traveling and a reduction in CO2 emissions.

AI also provides businesses with a better way of managing resources. For example, with an optimized approach to logistics you can start to gain increased visibility and a better understanding of how many trucks you have in circulation, and who you need to staff them.

AI for logistics is all about making more informed decisions about stock movements; it means that businesses need to be less reactive and less reliant on continually moving stock around. By reducing movement, thinking more strategically, freeing up capital and powering more sustainable processes, an AI-driven approach has a lot to offer.

In summary, AI for logistics ensures optimal stock movements around your network, increasing your network capacity. By customizing the technology to your specific business constraints, you can efficiently meet the needs of your customers.

“Technologies such as AI and ML, analytics for big data sets and IoT-enabled devices have opened up avenues for logistics operations to be innovative and resilient. Businesses that are making good use of these technologies are becoming the new leaders in their markets. The availability of rich, real-time data within supply chains is allowing businesses to draw insights into their operations that were not possible in the past.”

Jonathan Attia, Partner, Head of Digital Products at KPMG

Stage 2 success story:

Lower mileage, lower transport costs

Peak works with a leading food and beverage company. With one of the most complex distribution networks in the UK, we've used our AI platform and suite of logistics-focused applications to enable the business to have more of the right stock in the right place, and at the right time to ensure it can efficiently meet demand whilst trimming down the number of unnecessary amount of stock movements. The results include significant reductions in truck mileage (100,000 KM+) and a huge 10% reduction in overall transport costs.



Stage 3:

Allocation

The problem

You've got the stock, and it's in your network, ready to sell. But how do you optimally allocate it to your customers, or into your stores? Manual and time-consuming, stock allocation and replenishment can be a nightmare. Too many orders, too many multi-item orders and unpredictable demand spikes mean that the entire allocation process is prone to human error.

This process is made more difficult in times of supply chain stress, when finished goods inventories are low and shipping is expensive. Customers who do not get their items when they want them are left disappointed, opening up avenues for your competitors to swoop in and steal market share.

Being able to optimally understand demand in the different places where you fulfill orders is challenging. Teams need to ensure they have the stock available to fulfill orders in the first place, and a lot of time is spent filtering through stock and trying to allocate orders manually or by using an unintuitive point solution.

Many businesses will be working with vast, complex networks of stores — perhaps hundreds across multiple geographies. How can allocation teams best allocate products out to those stores to ensure they've got optimal store fill; having enough stock in stores while avoiding overstocking and harming their profitability? This all gets even more difficult in times of constrained supply, which businesses have been experiencing regularly in recent years.

Additionally, replenishment through basic ERP systems is often not advanced enough to react to current trade and stock levels. This legacy approach often involves grouping stores or products, and setting parameters at this higher, non-granular level often means that you can't truly capture the buying behavior of a particular product, store or channel.

Often teams are being served by inadequate systems and have a heavy reliance on manual processes and copious spreadsheets. There aren't enough hours in the week to do this effectively, which can lead to suboptimal decision making and low morale. Of course, for replenishment decisions, there's always a trade off to be navigated. This is between demand fulfillment and inventory reduction — if you hold more stock, you're more likely to fulfill more demand. But this can also result in overstocking, driving up your working capital.

A leading beauty brand's supply director explained that their job consisted of 'fighting fires' with constrained delayed supply and a vast global network of retailers, distributors and direct-to-consumer channels to contend with — and that there's never enough stock to keep everyone happy.

"We're getting a huge influx of calls from clients we've never worked with before, asking us if we can fulfill large orders that their normal vendors cannot fulfill. On the good side, this is giving us more clients, but on the bad side, we have some of our clients looking elsewhere as well. In addition, costs are going up monthly with no end in sight, and transit costs are insane. Our suppliers' material costs have gone up, and the increases have been passed onto us. In the past we didn't have to pass this cost on to our clients, but now, we are being forced to."

Michael Nova, CEO at Nova Custom Printing (Provider of branding and marketing solutions across the US)

Stage 3:

How AI can help

AI allows you to unify, and generate new value from, a wide range of data. This could be your order book, your inventory data or your logistics data. By joining the dots between your data sets and adding a layer of intelligence to any existing systems or processes, allocation teams can reap the benefits of AI — using it to generate actionable recommendations on the optimal allocation of available stock versus customer orders.

Using AI in the allocation phase means you can better deal with complex situations such as multi-item orders, and other scenarios where the optimal decision of which orders to fulfill can be difficult for a planner alone to manage.

From a replenishment perspective, AI can also power optimal decisions on what quantities of stock to resend to stores that are already stocking and selling that item, based on forward demand forecasts that re-forecast based on current sales reactions. This allows you to free up working capital, avoid missing sales through stock outs and improve the productivity of your teams.

AI has the ability to help teams maximize not only rate of sale, but also maximize the profitability of stores. Optimizing your order allocation with AI means that you can maximize customer satisfaction, avoid penalties and increase your team's productivity.

Without AI, it's difficult for teams to know if they're sending the right stock to the right customer, and keeping as many customers happy as possible. But with AI, it means you can spend less time in spreadsheets on routine orders, and more time on complex edge cases. Bringing in real-time data from across your business, you can dynamically allocate orders using AI models that adapt to ever-evolving business constraints. The result? More orders fulfilled on time, in full, customer wait times minimized and sales completed to improve cash flow.

In summary, using AI in your allocation and replenishment decision making enables you to optimize the allocation of stock you're already holding to stores and your customers.

“At AWS, we learn how our customers and partners benefit from transforming their supply chain processes with AI and ML. Leveraging AWS's AI/ML services enable companies to gain allocation decision making agility. They incorporate complex interplays between variables such as inventory, demand, profitability and sales velocity. This agility is crucial during times of increased uncertainty, allowing them to adapt to supply and demand fluctuations and continually satisfy customers' needs.”

Dr Manish Govil, Global Segment Leader - Supply Chain at AWS

Stage 3 success story:

AI-powered order allocation

Allocating orders can be a very time consuming process, particularly when we're in times of constrained supply. Working with the UK's leading concrete and natural stone paving manufacturer, Marshalls, Peak has built a game-changing AI application that takes the pain out of this process. It's providing an incredible 4,000 daily AI-powered decisions, and automating the allocation of over 600 orders to trucks every day. In terms of upshot, there's a daily order value of \$358,000 being prioritized by AI.

4000

AI-powered
decisions daily

600

Orders allocated
to trucks per day



Stage 4:

Pricing

The problem

Setting the perfect pricing is a challenge. There's a constant need to strike the right balance between pricing that is seen as competitive and attractive to your customer base — but at the same time ensures that you're maximizing your profitability to its fullest potential.

In today's world, this balancing act is becoming more and more difficult for teams and, right now, there are two sides to the coin. Cost prices are going up due to continued freight issues, raw materials becoming increasingly expensive and energy prices soaring. The natural reaction for many companies would be to up their prices to offset these factors. But, due to the cost of living crisis, people are less willing to spend on particular items, and are more willing to shop around to find a bargain. This leaves businesses in a tricky spot.

The pricing problems faced by businesses can differ depending on industry. The sales cycle for businesses in sectors like manufacturing, for instance, is typically a Request for Quotation (RFQ) process — a process that is, more often than not, manual, slow and laborious. The latest list price and cost of materials information can be hard to find and are constantly changing. This lack of real-time information can result in lost sales to competitors who are quicker to respond, and your sales team — who have a degree of discretion of how much to discount by — leaving money on the table in order to hit their own quotas. Businesses need to be able to set the right price to quote in order to increase win rates without giving away too much discount and achieving more consistency with pricing. Higher conversion rates, higher profits — that's the goal.

Then there's the age-old issue of discounting and markdown, a common cause of headaches for those familiar with the world of retail, as well as launch pricing strategies and other forms of promotion. Consumers expect retailers to offer discounts throughout the year, with regular sales now commonplace amongst most brands. This expectation has been heightened since COVID-19, with the start of the pandemic signaling a shift in pricing strategies; retailers responded to disruption with heavy discounting as they battled with store closures and nationwide lockdowns affecting buying habits.

This has made it harder for retailers to sell at a decent rate of sale at full price; they now want to break out of the cycle, get more control over pricing and sell more with a higher margin. From a markdown perspective, at the moment, most retailers have a markdown schedule, where everything in the sale, or certain product groups, have the same 'X% off' offer. The markdown level is then increased as the sale period progresses. This one-size fits most approach results in giving away too much margin, pricing products far lower than may be necessary. Or, in some cases, not discounting enough — resulting in old, out-of-season stock stuck in stores or on websites.

But it's really difficult for merchandisers to get super targeted with their pricing strategies. This approach is only taken because these decisions are so time consuming, with merchandisers relying on generating and cross-checking multiple spreadsheets with the data available to them.

A large consumer goods business told us that they had no view of how effective their pricing was — and that the inability to monitor different exchange rates and truly understand different countries' spending power was significantly affecting their growth.

“All brands want to avoid all of that slow-selling stock in your warehouse that you end up wishing happy birthday to.”

Tom Summerfield, Retail Director at Peak

Stage 4:

How AI can help

Businesses that embrace AI-powered pricing can gain access to the recommendations that they need to set the perfect price, everytime. From a merchant being able to quickly respond to quote requests with the optimal price to win the deal, to a retailer looking to markdown a specific item to the exact level required to shift stock, AI for pricing is all about avoiding leaving profit on the table unnecessarily.

Collating real-time data from across a business, manufacturers can apply AI-powered models that automate and optimize the RFQ process to produce quotes in seconds, helping companies to maximize profit margins and win more business. With the power to estimate sale conversion probability on a range of prices, AI uses price sensitivity models to recommend a price that will convert while protecting margin. You can optimize for revenue, profit or a mixture of the two depending on your business' pricing strategy.

From a retail markdown perspective, AI means that you can make strategic markdown decisions using a retailer's unique data set, combining information from

across the business along with external data sources, too. This data can then be enriched with AI, taking into account any specific business rules and guardrails. Demand forecasting and price elasticity models can then be applied to data, with the latter simulating how demand and other key metrics would change depending on different price points.

With this added intelligence and with a clearer picture of business-wide data, merchandisers are able to define the objective they're looking to achieve (e.g. increase rate of sale, increase margin, etc.) and be presented with AI-powered, SKU-level markdown recommendations that take into account current demand and inventory levels. This helps the business drive gross profit and sell-through, optimizes the markdown process — and frees up valuable time for merchandisers to focus on more strategic priorities.

In summary, regardless of sector, using AI for pricing purposes enables you to set optimal pricing across all channels to maximize sales volume, sales value and — ultimately — profitability.

"Making pricing decisions based solely on gut feel or experience doesn't cut it - especially not at scale. Our customers are winning by driving value out of their data. Businesses have been trying to do this for years but until recently, it was difficult and expensive. The first step is simply the right people accessing the right data which is where Snowflake comes in! When you add in technologies like AI and machine learning from PEAK, organizations can automate their pricing processes & make a huge impact on their profits."

Paul Winsor, Head of Industry, Retail & CPG, EMEA & APAC Region at Snowflake

Stage 4 success story:

Higher margin, better win rate

Peak has a growing track record of using AI-powered pricing applications to drive real value for our customers. For a leading global retailer, we used AI to optimize markdown clearing pricing decisions. Those led to a margin increase of 5%, equating to millions of dollars in savings per season. As well as this, in the manufacturing space, we used our Quote Pricing AI application to increase an organization's quote conversion rates by over 20%.

+5%
Increase
in margin

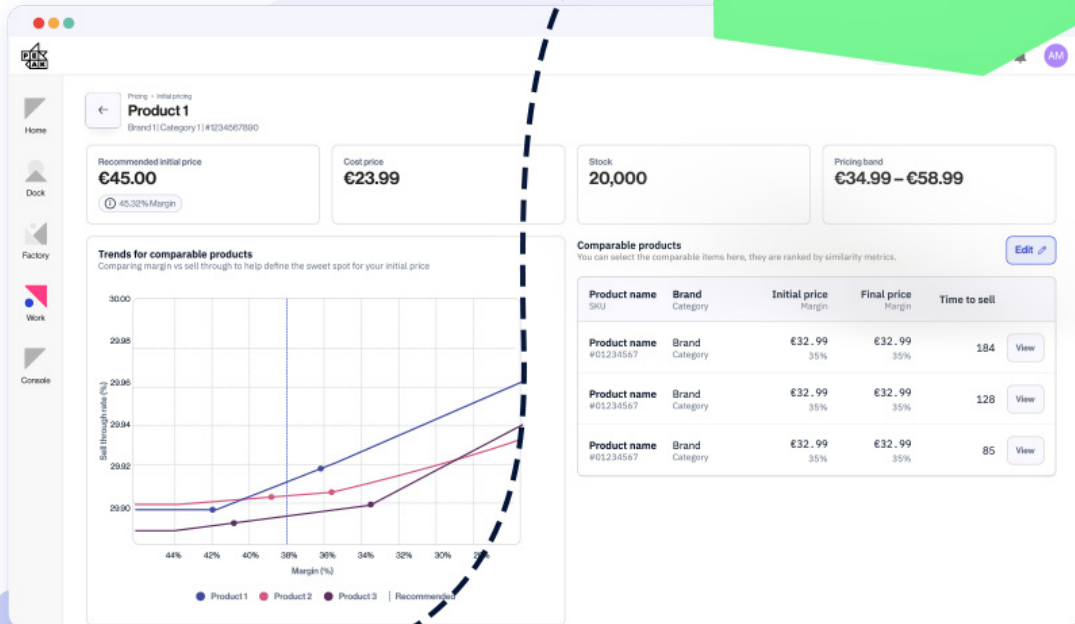
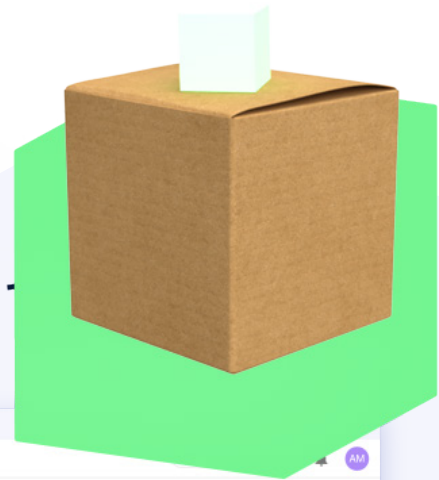
+20%
Increase in quote
conversion rates



More about Peak

Game-changing AI is here.

Peak's mission is to change the way the world works, and we're here to help businesses across industries thrive in the AI era. The journey to adopt AI can be complex and out-of-reach for many organizations, but we give you everything you need to harness the true potential of AI, in weeks not years. We do this with our unique, best-in-class AI platform and its suite of AI applications.



Meet Peak's inventory AI applications

AI for inventory



Dynamic Inventory

Dynamic Inventory puts AI to work on your inventory, order, product, location and sales data. It optimizes your demand forecasts to set ideal inventory levels across your network.

[Find out more](#) →



Reorder

Reorder enables teams to unlock working capital tied up in excess inventory and maximize availability with reorder recommendations and individual SKU-level demand forecasting.

[Find out more](#) →



Replenishment

Replenishment applies AI across your whole network, matching quantities of stock with demand to avoid overstocks and drive higher return on working capital through better distribution.

[Find out more](#) →

Value, accelerated. Our library of customizable applications drive value across use cases in industries where we have a proven track record of success. Our applications give you both the speed of adoption of an out-of-the-box solution and the power of a self-built one.

AI for pricing



Markdown

Stop leaving profit on the table and out-of-season inventory in the stockroom with SKU-level markdown suggestions — for teams that want to spend less time in spreadsheets.

[Find out more](#) →



Initial Pricing

Initial Pricing helps buying, merchandising, pricing and planning teams tackle the complex question of what price to charge, powered by an AI that's finely tuned to your business.

[Find out more](#) →



Promotions

The Promotions application lets you explore promotional strategies and choose the winning combination of discount, timing and customer profile to drive higher profits and revenues.

[Find out more](#) →

Growing customer base, proven track record

Peak works with businesses from across a wide range of industries, from retail to consumer goods to manufacturing. We empower our customers to make AI-powered, data-driven decisions that result in game-changing commercial outcomes.

Here's a quick overview of some of the success stories we've delivered across different stages of the supply chain. What would these results look like for your business?

Peak's customers include:



Conclusion

Connecting the dots with AI

With supply and demand more volatile and unpredictable than they've ever been, there are now two key areas that teams need to focus on in order to navigate this uncertainty: effective planning and agility. Rather than attempting to avoid the impact of current uncertainty, supply chain teams must instead lean into it, and plan for it as best they can.

The current state of play

The future is always going to be impossible to entirely predict. Who'd have foreseen the monumental impact of the pandemic, for instance, or a shipping container getting stuck in the Suez Canal! As the fallout from the COVID-19 pandemic continues, the new normal remains a mystery, with the cost of living crisis threatening to change buying behaviors even further. Supply chain issues, rising freight and energy costs and gas shortages also provide serious risks to profitability.

Every business is looking for that elusive crystal ball and the ability to know what's coming. Most companies now are beginning to turn and face the importance of having smarter, more agile forecasting available at their disposal — and a growing number recognize the importance of AI in achieving this.

Basic methods of forecasting that rely on human-based intuition aren't able to fully account for the unstable demand and unpredictability of the future. On a similar thread, existing tools designed to alleviate the strain are sub-optimal, with off-the-shelf solutions unable to adapt to change at the pace required. Excel spreadsheets continue to reign supreme in many businesses, but they've now reached the point where the data pulling, manual predictions and lack of automation is becoming a major time sap that is harming business growth, with teams unable to adapt to change in a timely manner.

And the data keeps coming, too. Most companies now collect so much of it that they simply don't know how best to leverage it, or how to gain that clear, holistic view of exactly what's happening across the business. Many data points just seem too out of reach to factor into day-to-day decision making.

Conclusion

Introducing the connected supply chain of the future

Businesses with large, complex supply chains, from suppliers to customers, need help to address the myriad of challenges they're currently facing. Peak's suite of Supply and Demand AI applications introduces a layer of intelligence into your decision making to facilitate exactly this.

Businesses need access to AI-powered decisions that drive value, increase efficiencies and enable growth — putting them in the best possible position to deal with uncertainty. AI offers unrivaled levels of agility for teams, with algorithms constantly learning and improving as new data is fed in. It detects uplifts and declines faster than a human could, enabling you to react quickly before it's too late. Optimization layers are always hard at work in the background, simulating thousands of combinations in seconds — all with the goal of providing you with the most optimal solution.

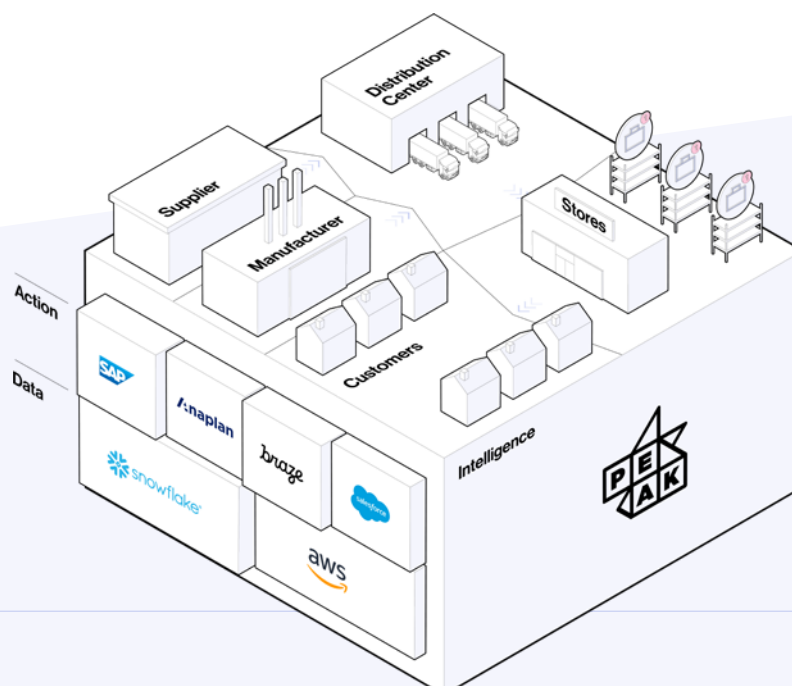
AI also makes siloed data a thing of the past, removing the need for teams to spend hours manually pulling data from multiple systems — and spending even longer manipulating this data in Excel. Teams can make huge time savings with automated data feeds, with Peak's platform seamlessly combining datasets from different sources and surfacing it in a handy way that allows you to make better decisions at the click of a button.

Building a robust demand forecast from this holistic view of your data gives you that much-needed visibility of the supply chain, from order to sale to supply and back again. It also allows you to forecast demand at specific stages of the supply chain, such as manufacturing and at individual distribution centers.

Our AI offering empowers teams with not just an accurate forecast, but guidance, recommendations and automation around outcomes. Optimized stock levels, more efficient logistics, perfect pricing; valuable outputs that are fed back into your existing systems and tools.

Start with one AI application, and add more over time to build a truly connected, data-driven, end-to-end supply chain. To achieve this, it's important that your AI applications are interconnected so that the same AI demand forecast can be used to underpin and optimize every single part of your value chain while providing different actionable insights for multiple teams across the same business.

By enabling businesses to take the action they need quickly in order to deal with whatever is thrown at them, a suite of AI applications, ideally all built on one platform, is the next best thing to that crystal ball you've been looking for.





About Peak

Peak is an AI company that provides the platform, applications and services to help businesses harness the potential of AI to grow revenues, increase profits and efficiency. With features to support both technical and commercial users, Peak makes AI applications widely accessible to everyone within a business, simplifying and accelerating AI adoption.

Follow Peak

