invent.ai

Planning for changing cost conditions

When costs change, know what inventory is at risk and where plans can still adapt



invent.ai

A change in cost ripples through your retail plan.



Retail plans are built on assumptions. What will customers buy? What will they be willing to pay? How much inventory will the business need? What will it cost to bring that inventory in? How much has already been committed, and what can still change?

Those assumptions don't stay fixed for long. Product costs change. Freight costs move. Tariffs and duties can change. Vendor terms shift. Retail prices get adjusted. Promotions perform differently than expected. Supply constraints affect what can arrive and when. Customer demand responds.

When one of these inputs changes, the effect usually doesn't stay within one part of the planning organization. A change in product cost can affect more than margin. It can influence retail price, customer demand, inventory economics and the quantity a retailer should buy. A change in price can change the demand pattern the forecast is based on. A change in demand can then affect the amount of inventory planners need to account for. And if some inventory is already committed, the options available to the buying team may be more limited than they would be at the start of a new planning cycle.

That's where planning gets complicated. One team may be working from a new cost assumption while another is still using a forecast based on the previous price. A buyer may be looking at inventory that's already committed while the inventory plan treats the future requirement as completely flexible. Each decision might make sense on its own, but together, they may no longer reflect the same view of the business.

For retailers, the challenge really isn't about predicting exactly what will happen next. It's about being ready to adjust when something changes. That starts with understanding what the change means for demand, inventory, pricing and purchasing, then figuring out which decisions can still move.

The goal isn't to predict every change in advance. It's to shorten the distance between what changes in the business and what changes in the plan.

Start with the demand signal

Historical sales are the foundation of retail forecasting, but sales aren't always a clean measure of demand. A product may sell fewer units because customers are less interested in it. But it may also sell fewer units because it was out of stock, because supply was constrained or because the retailer raised its price.

Those situations can produce the same sales result while telling very different stories about what the retailer should expect next. The same thing happens in the other direction. A promotion can create a temporary increase in sales that won't hold true at the regular price. A new assortment, store expansion or one-time event also creates unique sales patterns that shouldn't blindly be carried forward.

Understanding those differences becomes especially important when a change in product cost leads to a change in retail price. Imagine a product that historically sells 1,000 units at a $50 retail price. The retailer's cost increases, so the retail price moves to $55. Sales fall to 900 units.

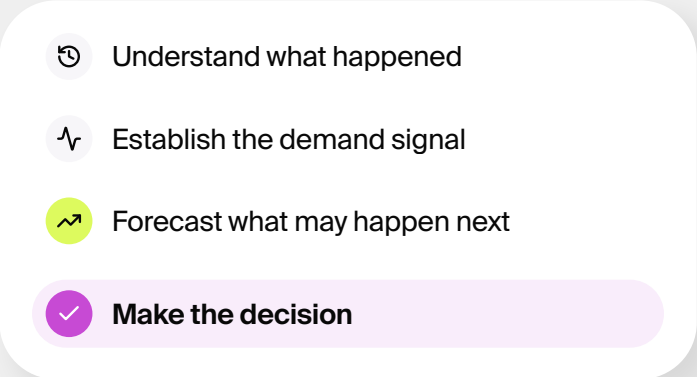
The new sales history is useful, but it doesn't automatically mean that 900 units is the new baseline. Some of the change may be a response to the higher price rather than a lasting shift in underlying demand.

If that price response isn't considered, the next forecast could miss the actual demand opportunity. The retailer could end up buying too much or too little based on a sales history that doesn't tell the whole story.

The question isn't simply what the retailer sold. It's what the sales history can tell planners about demand under the conditions in which those sales happened.

A stronger forecasting process looks at the factors behind the sales history, including price changes, promotions, stockouts, supply constraints, assortment changes and unusual events. Once that context is understood, planners have a better starting point for estimating what customers are likely to buy next.

That creates a more useful sequence:



invent.ai

Cost of inventory

Same coverage. Different economics.



10,000 units × $4 =
$40K

10,000 units × $6 =
$60K

Put cost into the inventory decision

Demand is only one part of the inventory decision. Retailers also need to understand what it costs to hold too much inventory, what it costs to have too little and how those economics change when product costs move. A simple weeks-of-supply rule might recommend the same number of units whether an item costs $4 or $6. The coverage is the same. The economics aren't.

If the retailer holds 10,000 units of a $4 product, that's $40,000 of inventory cost. At $6 per unit, those same 10,000 units represent $60,000. That doesn't mean the retailer should automatically buy less of the higher-cost product. A long lead time, high service requirement or high cost of being out of stock may still justify holding more inventory.

It does mean that planners need to consider more than a coverage target when evaluating inventory requirements. A retailer may need to consider expected demand, lead time, current inventory, open purchase orders, landed cost, service requirements, expected selling price, the cost of excess inventory and the cost of being out of stock. And those factors don't exist independently.

If expected demand falls because a higher retail price changes customer behavior, the inventory requirement may change too. If a large quantity is already on order, however, the retailer may have limited ability to change the original purchase decision. If future inventory hasn't been committed, there may be much more flexibility. So the question becomes: Given what we know now, how much inventory do we actually need, and how much should we still commit?

That's where inventory optimization can help connect demand with the financial and operational realities of the buy decision.

invent.ai

Know where the exposure sits

Once a cost assumption changes, the next question is where that change matters most. That can be harder to answer than it sounds.

The information a retailer needs may sit across several parts of the organization. Country of origin and tariff classification might live in import systems. Vendor terms may sit with procurement. Landed cost information may be managed by finance or supply chain. Sales and margin history may sit somewhere else. Purchase commitments may be managed separately from the demand plan.

The information is there, but planners may not have the connections between these data points when they need to make a decision.

That makes it harder to understand which products are most exposed. Retailers have to ask:

- **Which vendors or categories are carrying the greatest exposure?**
- **Which products already have a significant amount of inventory committed?**
- **Where could a cost change affect the future buy?**
- **Where might pricing need to change?**
- **Which decisions still have room to move?**

Answering those questions manually can take a lot of time, especially when the analysis needs to be repeated across hundreds or thousands of products.

invent.ai

Look at the merchandise in context

A product's cost rarely tells the whole story. To figure out what to do, planners need to see the product alongside the other information that affects the decision. That might include the product's category and lifecycle, the vendor and country of origin, the lead time, the current and landed cost, historical sales, the forecast, inventory on hand, inventory on order, future receipts, retail price and expected margin.

Each piece of information answers a different question.

- Product information helps explain what the item is and where it fits in the assortment.
- Supply information helps explain when inventory can arrive and how much of it is already committed.
- Cost information shows the economics of the inventory.
- Demand information helps explain what customers are likely to buy.
- Inventory information shows what the retailer already has and what it's expecting to receive.
- Commercial information puts the decision in the context of price and margin expectations.

Bringing these pieces together isn't about creating another dashboard for planners to look at. It's about giving them enough context to assess whether a change requires action and, if it does, which response makes the most sense.

One product, viewed in context.

Demand

Price



Cost

Supply

Inventory

invent.ai

Separate what is committed from what can still move

One of the most important things to understand when conditions change is that not every decision can change at the same speed. Some inventory has already been received. Some is in transit. Some purchase orders have been placed and may be difficult or impossible to change. Other future buys haven't been committed yet.

Even when the original purchase decision can't change, the retailer may still have other options. Replenishment settings can change. Inventory can be transferred. Open-to-buy can be redirected. Pricing or markdown decisions can change the economics of the inventory that's already coming in. That's why exposure and flexibility aren't the same thing.

A product can have significant exposure to a cost increase but very little ability for the original buy to be changed because the inventory has already been committed. Another product may have the same cost exposure but much more flexibility because future purchases haven't been placed yet.

> The planning question changes from **"What would we do if we were starting over?"** to **"What can we still change?"**

Answering that requires visibility into what's already been received, what's in transit, which purchase orders are committed, what future buys remain open and which other levers are available.

The point isn't to treat every part of the plan as equally flexible. It's to focus attention on the decisions where there's still an opportunity to do something different.

invent.ai

Connect the decisions that influence each other

Cost, price, demand and inventory don't operate independently. A cost change can lead to a pricing review. A pricing change can affect demand. A change in demand can alter the inventory requirement. A change in inventory can affect replenishment, transfers or markdown decisions.

In practice, though, these decisions are often made by different teams using different planning processes. That's where things can start to drift.

Imagine a retailer increases the price of a product after receiving a higher cost from its supplier. The pricing team updates the new price, but the demand forecast continues to rely heavily on sales generated at the previous price. The inventory team then uses that forecast to determine the future buy.

The pricing decision might be reasonable. The forecast might also be reasonable based on the information it received. The inventory calculation might be correct based on that forecast. But the three decisions aren't based on the same assumptions. That's the bigger planning problem.

Retailers don't just need accurate calculations within each planning function. They need the assumptions behind those calculations to stay connected when conditions change.



invent.ai

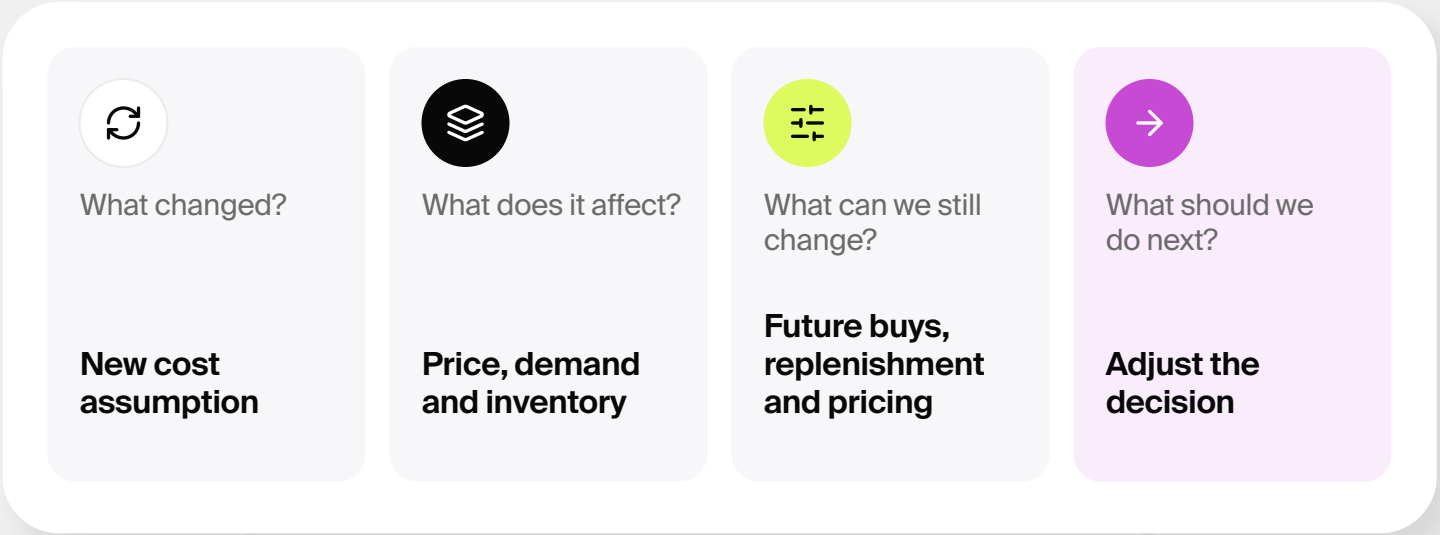
Turn scenarios into decisions

Scenario planning gives retailers a way to look at what could happen under different conditions. That's useful, but it's only part of the process. The next question is what the retailer should actually do with that information.

Suppose a product receives a new cost assumption. The retailer might want to understand whether the expected selling price still makes sense, how demand could respond, whether the inventory requirement has changed and whether future purchase commitments should be adjusted.

The same analysis could also point toward a different replenishment strategy, an inventory transfer or a pricing or markdown review. There isn't one response that makes sense for every cost change. What matters is having a process that can connect the new information to the decisions that may need to change.

Planners can start with the new cost, evaluate what it means for price and demand, review the resulting inventory requirement and determine which decisions are still open. The output shouldn't just be another analysis for a planner to interpret manually.



invent.ai

From signal to decision

A repeatable process for responding to changing conditions can start with something as simple as a change in cost, price, demand or supply. The first step is understanding what changed and where.

From there, planners can examine the context around that change. Was the sales decline caused by a price change? Is the inventory position the result of a deliberate buy or a set of purchase orders that were already committed? Is the cost increase concentrated in a particular vendor or category?

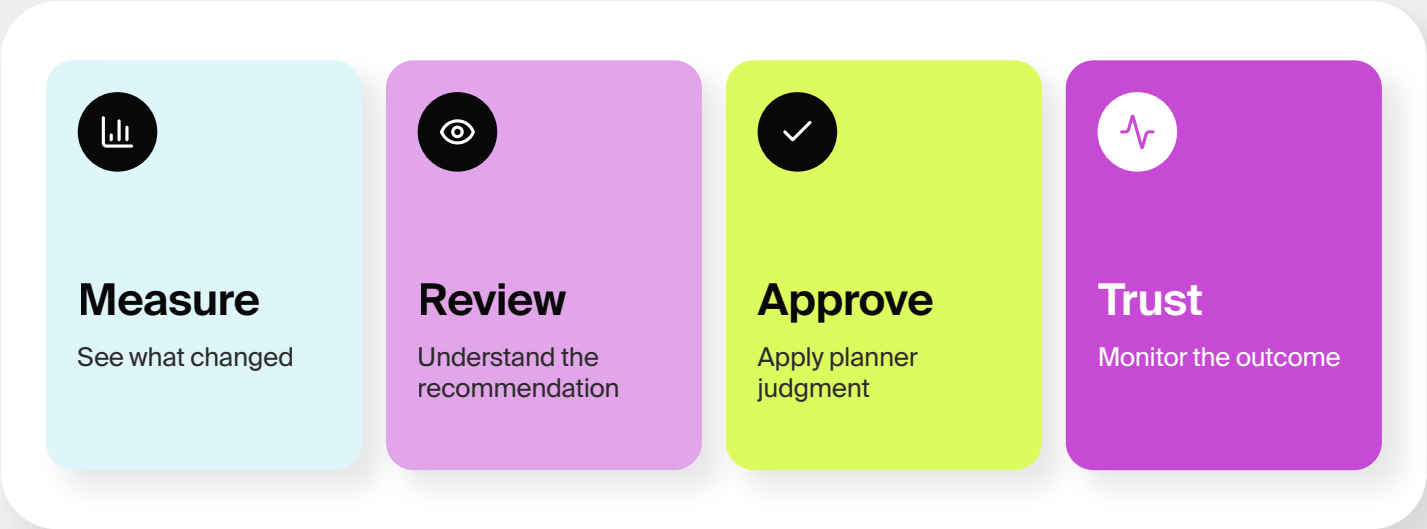
Once that context is clear, they can evaluate the options. Does the forecast need to change? Does the inventory requirement change? Should the future buy change? Does pricing need to be reviewed? Is there an opportunity to transfer inventory or change replenishment?

The planner can then review the resulting recommendation, make an adjustment if needed and decide what should move forward.

The process doesn't end with the decision. The result should also be monitored so planners can see whether the assumptions behind their decisions continue to hold. In that sense, planning becomes less about creating a static plan and more about maintaining a connected set of decisions as the business changes.



invent.ai



Build a planning process that can respond to change

The specific source of change will vary: Costs move, supply changes, customer behavior shifts, prices change, promotions perform differently than expected, lead times extend and assortments evolve. Retailers can't prevent those changes.

Planners need access to demand, inventory, cost, supply and commercial information when they're evaluating a decision, rather than having to piece it together from different systems.

They also need a consistent way to evaluate what those changes mean. A higher product cost, for example, shouldn't be evaluated in isolation. The retailer may also need to consider expected demand, price response, lead time, service requirements and the economics of excess inventory and stockouts.

And planners need a repeatable way to work with the resulting recommendations. They need to understand why something changed, review the recommendation, make adjustments when appropriate and monitor what happens next.

This doesn't mean taking planners out of the process, but the opposite. When relevant information and decision logic come together, planners can spend less time piecing together the analysis and more time applying their judgment to the decisions that matter.

invent.ai



From planning signals to retail decisions with invent.ai

Invent.ai brings demand forecasting, inventory optimization and pricing decisioning together so retailers can respond as conditions change. The AI-decisioning platform helps retailers build a forward-looking view of demand that considers the factors behind historical sales, including price and supply conditions.

That forecast can then inform inventory decisions that consider demand, cost, service requirements and the economics of holding too much or too little inventory. Pricing decisioning helps retailers understand how price changes may affect demand and identify where pricing or markdown decisions may need to be reviewed.

By bringing related planning decisions together, a change in one area can inform the decisions that follow instead of leaving each planning function to work from a separate set of assumptions. Planners can review recommendations, understand the reasoning behind them and approve, adjust or override decisions based on their knowledge of the business.

The result is a planning process that keeps demand, inventory, pricing and related decisions connected as conditions change.

invent.ai

Preparing for what changes next

Changing cost conditions are one example of a much broader planning challenge. Retailers will always make plans based on assumptions that may change. What matters is how quickly their teams can understand those changes and respond.

- **If a cost changes, can planners quickly see which products are affected?**
- **Can they assess whether the original demand signal still holds?**
- **Can they see which inventory is already committed and which purchases are still flexible?**
- **Can they determine whether the change should affect price, demand, inventory, replenishment or another decision?**
- **Can planners act on those changes without rebuilding the analysis from the beginning?**

A planning process built around these questions can help retailers respond more effectively as conditions change. The purpose isn't to eliminate uncertainty or predict every future condition. It's to help the people making retail decisions understand their options, weigh the trade-offs and act on the changes they can still influence.

invent.ai

About invent.ai

Invent.ai is an AI-decisioning platform that enables retailers to turn data into real-time decisions and intelligent actions across inventory, pricing and merchandising. Powered by a multi-agentic AI architecture, the platform predicts outcomes, refines strategies and executes merchandising decisions at scale—driving measurable sales, revenue and margin performance. By combining advanced AI with deep retail expertise, invent.ai helps retailers across the globe navigate dynamic markets, improve operational efficiency and achieve sustainable financial outcomes.

Invent.ai is recognized in the Gartner® Market Guide for Retail Forecasting, Allocation and Replenishment Solutions and for Retail Unified Price, Promotion and Markdown Optimization Applications – Short Life Cycle. The company has also received the RetailTech Breakthrough Awards' Customer Experience Award, SupplyChainBrain's Great Supply Chain Partner recognition and Supply & Demand Chain Executive's Top Supply Chain Projects award. With SOC 1 Type II, SOC 2 Type II, and ISO 27001 certifications, invent.ai ensures security and data protection across all AI-powered solutions. For more information visit www.invent.ai

Philidelphia
100 S. Juniper St. Floor 3
Philadelphia, PA 19107
USA
+1 484 423 4433

London
293 Green Lanes
London, N13 4XS
United Kingdom
+44 20 7096 5488

Amsterdam
Krijn Taconiskade 430, 1087 HW
Amsterdam
+31 97010260098

Istanbul
ITU Teknokent, ARI-2 A Blok
No:302 Maslak, Istanbul
Turkey
+90 212 286 10 25

www.invent.ai

Get in Touch

www.invent.ai/get-in-touch/