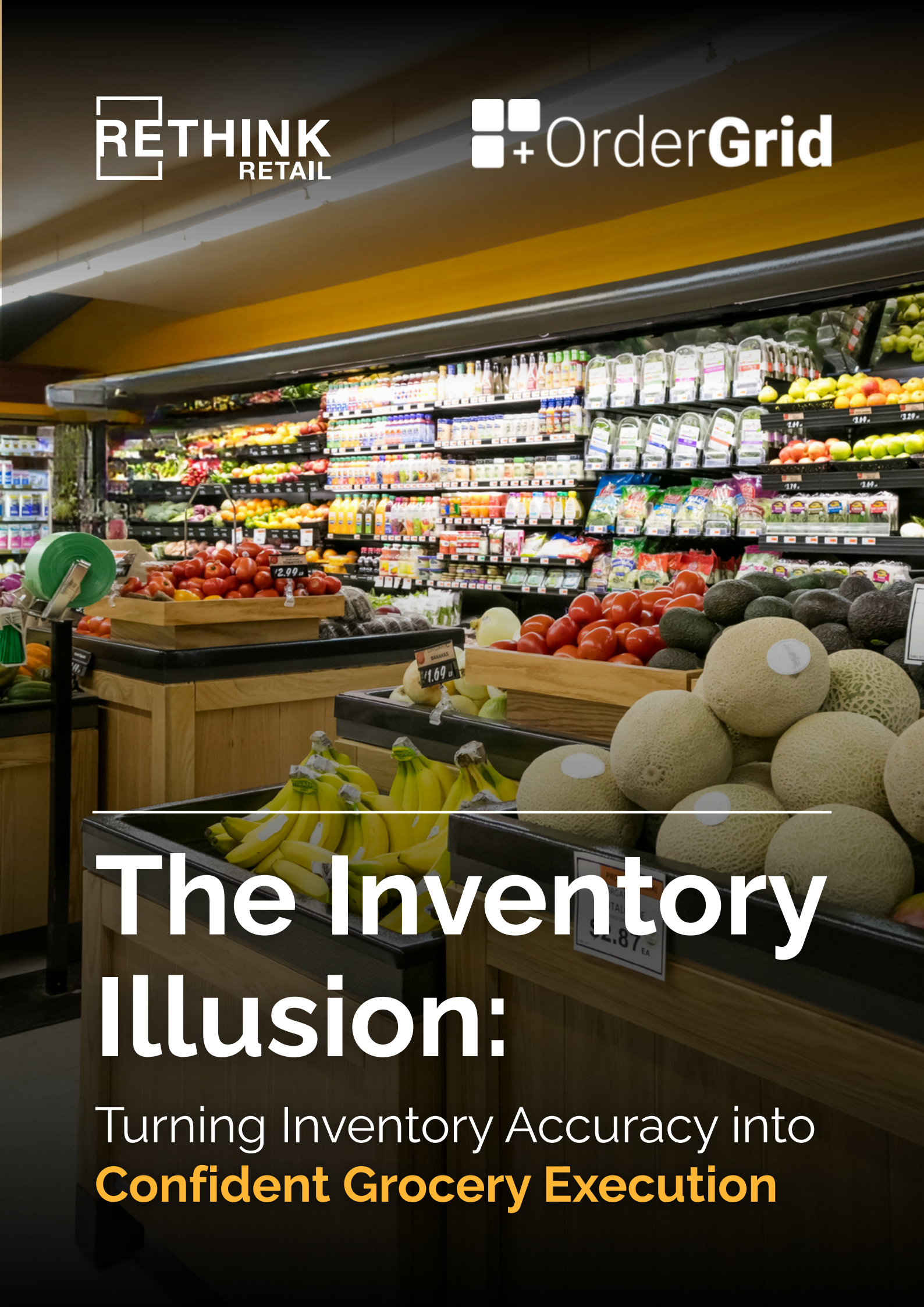
RETHINK RETAIL

OrderGrid



The Inventory Illusion:

Turning Inventory Accuracy into **Confident Grocery Execution**

TABLE OF **CONTENTS**



03

Executive Summary: The Inventory Illusion

05

The Cost of Blind Spots

06

The Commitment Gap





07

Forecasting Needs a Reality Layer

09

Inventory as a Leading Indicator



10

From Defensive to Orchestrated Operations



Executive Summary: The Inventory Illusion

Grocery retail runs on precision. Promotions, replenishment, fulfillment promises, and customer satisfaction all depend on inventory data being reliable. Yet even as systems have modernized, a persistent contradiction remains: products appear “in stock” in the system while customers and store teams experience stockouts, substitutions, and failed fulfillment.

The average retail store operates at approximately 91% inventory accuracy, and 95% is often considered a world-class rate, according to the Institute for Supply Management.

At face value, that performance appears strong; but in practice, it leaves deep exposure, as some of the lowest-performing retailers average 67% inventory accuracy. This is particularly evident in the grocery industry, as research estimates that roughly 11% of edible packaged consumer products are out of stock in store, resulting in an average substitution rate of 10–15% across pick-from-store fulfillment orders.





The issue is not simply inaccurate counts; it is the gap between what systems record and what operations can execute.



In grocery, where perishability, short sell-by windows, and high SKU velocity amplify risk, even small disconnects quickly compound.

This is where the inventory illusion, or phantom inventory, takes hold. “In stock” does not necessarily mean sellable, findable, or fulfillable. Inventory may be allocated elsewhere, expired, damaged, misplaced, or operationally inaccessible. Traditional inventory platforms were designed to track valuation and financial ownership, not to function as real-time operating systems across stores, warehouses, and digital channels.

In modern grocery environments, where demand flows continuously across physical and digital touchpoints, static records are no longer sufficient. Inventory must evolve from a historical ledger into a live operational signal that reflects, in real-time, what is usable and executable in the moment.

The most common missing signals are “the ones that reflect what actually happened on the ground in the store in the last few hours,” explains Aidan Mittra, Co-Founder of OrderGrid. Forecasting and replenishment systems rely on sales history and on-hand balances, but when “execution truth” is absent, those inputs become distorted.

That execution truth includes whether what was received matched what was expected, whether put-away was completed, whether inventory remained in staging, or whether product ever reached the shelf instead of sitting “stranded somewhere in the back room.”



The Cost of Blind Spots

Limited real-time visibility creates blind spots inside grocery operations, as physical conditions evolve faster than systems can reflect them. Execution delays accumulate quietly. Inventory becomes stranded between processes. Shelf availability drifts from system availability. Yet, planning systems continue operating as though nothing has changed.

Research shows that 70 - 90% of stockouts originate from internal operational breakdowns rather than supplier failures, highlighting that the vulnerability is not upstream, but within store execution.

These blind spots are rarely alarming on their own. Instead, they accumulate through small, ordinary lapses, such as a replenishment task being delayed, or a picker being unable to locate an item that the system insists is available.

Individually, these incidents appear manageable, but collectively, they distort the integrity of inventory data, surfacing at the moment of demand, when a customer places an order for curbside pickup or a promotional item is advertised but stock doesn't match the number of orders received. As a result, labor is diverted from proactive management to reactive searches and last-minute workarounds.

In fresh categories, this risk is amplified, as expiry, spoilage, and product damage can alter sellability faster than systems are able to reflect these stock changes. Without a mechanism to reflect these conditions in real time, inventory can appear viable long after it has become operationally compromised, resulting in profound financial consequences.

According to the USDA, U.S. grocers lose $15 billion annually in unsold fruits and vegetables alone, with an average spoilage rate of 11.6%, highlighting the cost of uncertainty and inefficient practices. For retailers, these inventory inaccuracies materially increase their supply costs and capital exposure, with poor performers spending up to 3x more in inventory costs over top performers.



To mitigate this uncertainty, some retailers adopt defensive behaviors, relying on buffers, overrides, and third-party marketplaces to absorb complexity, though these measures ultimately erode margins and weaken direct customer relationships.

In grocery stores, blind spots are not minor inefficiencies; they represent structural exposure in a margin-sensitive industry, defined by perishability, high SKU velocity, and regulatory requirements, where execution precision directly determines profitability.

The Commitment Gap



Approximately **60% of retail SKUs** are **affected by** some level of **inventory record inaccuracy**

On average, approximately 60% of retail SKUs are affected by some level of inventory record inaccuracy, according to ECR Retail Loss. In grocery environments where turnover is rapid and sell-by windows are short, these discrepancies can contribute to overstocks and spoilage that, in 2023, cost retailers $562 billion globally.

AI-driven demand forecasting has become a strategic priority, with 80% of grocers identifying it as a top investment focus, alongside ongoing investments in supply chain automation. McKinsey estimates that automation in grocery supply chains could generate more than $20 billion in value in the next three to five years.

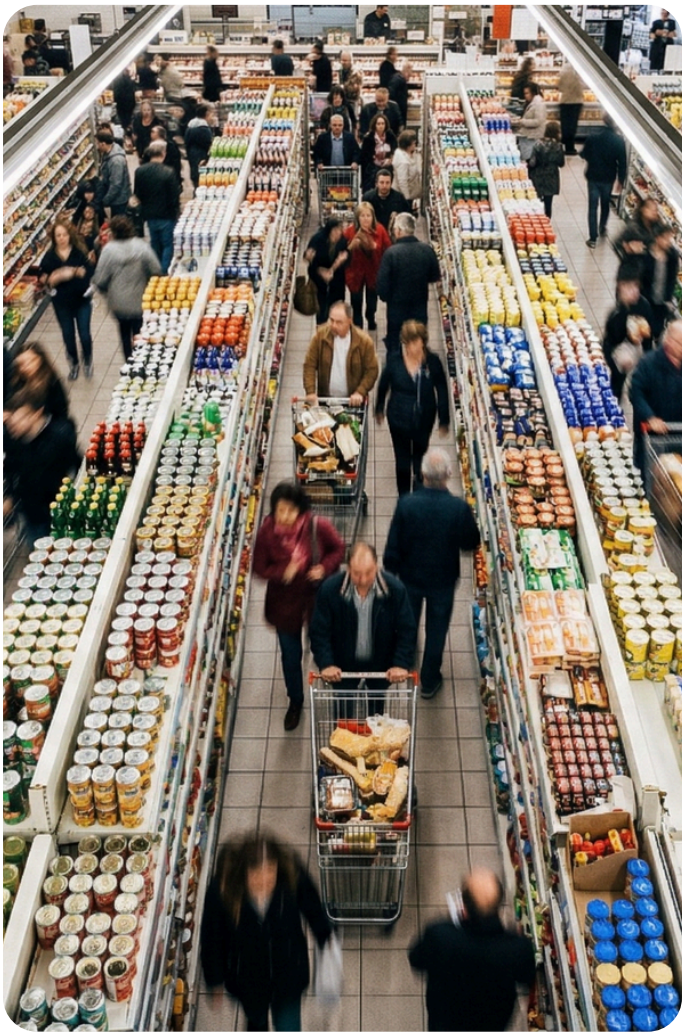
Yet even as planning advances, execution variability remains, creating a disconnect that can be described as the commitment gap.

While many grocers continue to invest in forecasting and AI-driven demand prediction, the underlying data sources feeding those systems often receive less scrutiny. As a result, significant investment flows into tools that operate independently from real-time store conditions, weakening stock accuracy and distorting replenishment recommendations.

Inventory commitments made during ordering or checkout frequently fail because systems lack awareness of what inventory is actually accessible and fulfillable in the moment.

"When those signals aren't feeding back into planning and replenishment, decisions are essentially based on assumptions and there are some gaps there," said Aidan Mittra, Co-Founder of OrderGrid. "But when you do feed those signals back into forecasting and replenishment, you get a much tighter loop between what you plan and what you can actually execute."





Forecasting Needs a Reality Layer

Demand forecasting remains essential for anticipating customer needs, planning promotions, and guiding replenishment strategies in grocery retail. By definition, forecasting is predictive, grounded in modeled patterns and historical sales data, and therefore cannot account for real-time execution disruptions such as delayed deliveries, labor shortages, incomplete put-away, damaged goods, or products quietly expiring in the back room.

“Forecasting and replenishment rely on sales history and on-hand inventory,” said Mittra. “But if you miss the execution truth, then you’re also distorting those inputs.”

Across retail industries, nearly 50% of omnichannel shoppers will abandon a retailer if delivery expectations are not met, according to research from McKinsey, reinforcing a critical shift in risk. For grocery retailers this demand is particularly compressed, as food and grocery is expected to be delivered in less than a day. These findings underline that fulfillment failure, not demand unpredictability, has become the primary threat to grocery retailers.

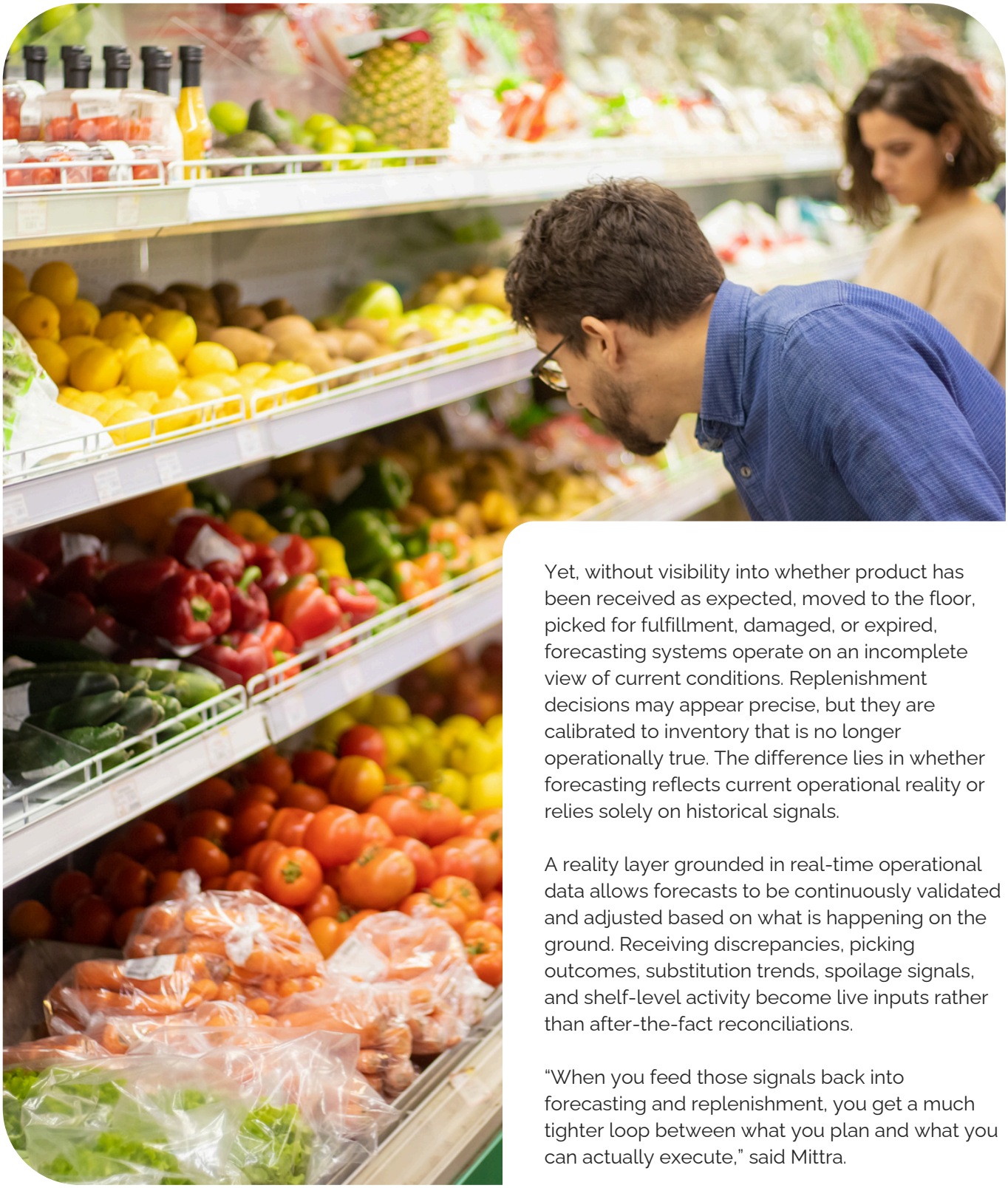
Inventory commitments made at checkout, whether in-store, online, or through third-party platforms, assume that inventory is accessible, fresh, and executable, but when execution-level visibility is incomplete, commitments outpace operational reality.

The gap becomes most visible during peak demand periods. Promotions, holidays, and seasonal shifts introduce variability precisely when tolerance for error is lowest. To reduce risk, retailers tighten availability thresholds, introduce buffers, and limit fulfillment promises. Revenue opportunity is suppressed in order to protect service levels.

The result is an environment where growth is constrained not by demand, but by confidence in execution.

In execution-heavy grocery operations, these commitment failures rarely stem from flawed forecasting models alone. More often, they arise because systems cannot reliably distinguish between inventory that exists and inventory that is truly fulfillable in the moment.





Addressing that risk requires more than better projections. When forecasting is aligned with execution, its impact becomes measurable. Modern AI-driven demand forecasting solutions enable retailers to improve forecast precision, strengthen product availability, and reduce waste exposure, reinforcing the link between inventory accuracy and financial performance.

Yet, without visibility into whether product has been received as expected, moved to the floor, picked for fulfillment, damaged, or expired, forecasting systems operate on an incomplete view of current conditions. Replenishment decisions may appear precise, but they are calibrated to inventory that is no longer operationally true. The difference lies in whether forecasting reflects current operational reality or relies solely on historical signals.

A reality layer grounded in real-time operational data allows forecasts to be continuously validated and adjusted based on what is happening on the ground. Receiving discrepancies, picking outcomes, substitution trends, spoilage signals, and shelf-level activity become live inputs rather than after-the-fact reconciliations.

"When you feed those signals back into forecasting and replenishment, you get a much tighter loop between what you plan and what you can actually execute," said Mittra.

That loop reduces overcorrection, improving forecast relevance, strengthening confidence in replenishment decisions, and most importantly, aligning planning with execution in real time. Operational data from store-level workflows represents a feedback mechanism that is often missing from traditional forecasting systems. Without it, even advanced AI models optimize against incomplete truth.

Inventory as a Leading Indicator

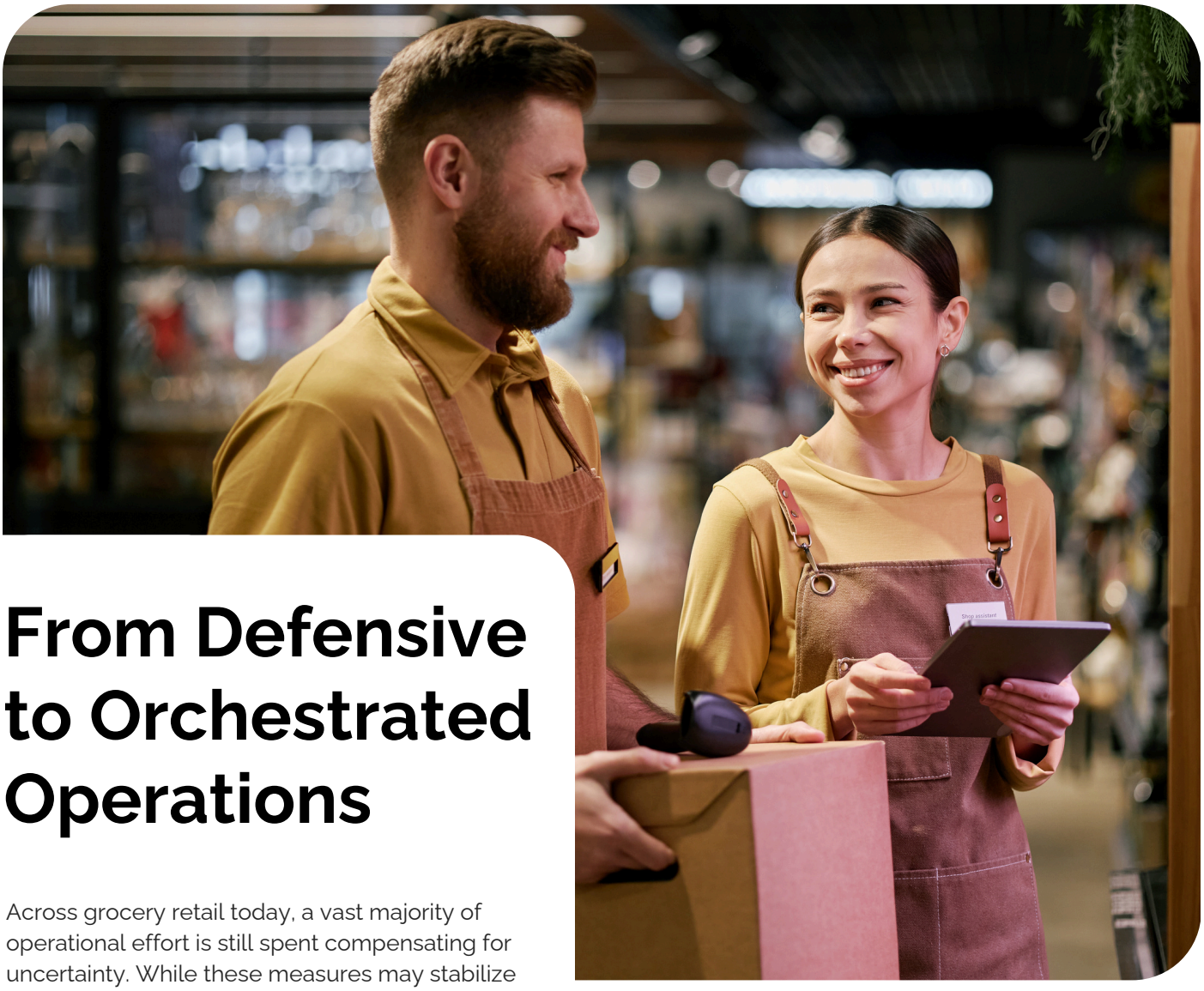
When inventory reflects real-time execution truth, it shifts from a passive record to a predictive signal. It becomes an early indicator of operational risk and opportunity rather than a historical ledger of discrepancies.
Much of that shift begins with recognizing what signals have been overlooked.

“On top of (live signals on the floor), there are fulfillment execution signals that tend to be missed,” said Mittra, “Item not found data and substitution data are immediate indicators that the system view is starting to drift from reality.”
These signals are not peripheral exceptions. They are early warnings. Rising substitution rates, repeated item-not-found incidents, and inconsistencies between backroom and shelf inventory reveal strain before it escalates into visible failure.

“And then in grocery, sellability signals also tend to be underweighted, especially in fresh, like expiry risk or damages or items that have been pulled from the shelf,” Mittra continued.
Retailers are increasingly turning to real-time execution tools and automation technologies to close persistent visibility gaps and reduce labor burden. AI-driven warehousing and orchestration systems are improving both inventory accuracy and operational resilience, enabling faster response to disruptions and tighter coordination across fulfillment networks.

By monitoring inventory conditions continuously, retailers can dynamically route orders, adjust fulfillment locations, and prioritize tasks based on live constraints. Real-time signals surface stockout risk, spoilage exposure, or labor friction before they result in failed orders or lost sales.
When treated as a leading indicator, inventory becomes more than a stock count. It becomes a measure of operational health, and a lever for sustained growth.





From Defensive to Orchestrated Operations

Across grocery retail today, a vast majority of operational effort is still spent compensating for uncertainty. While these measures may stabilize performance in the short term, they increase complexity, inflate labor demands, and gradually compress margins.

Grocery retailers today are not short on tools, investment, or ambition, as forecasting models, automation, and AI adoption reshape the industry. Despite this, the core constraint remains the same: the distance between what is planned and what can actually be executed in the moment.

“Traditional inventory systems weren’t designed to support real-time tasks in the store as well as digital channels,” said Mittra. “They were built to track ownership and valuation. But once you start operating across stores, fulfillment, and digital channels at the same time, you need inventory to function as a live operating system. Otherwise, planning and execution drift apart.”

The warning signs remain the same: Blind spots distort visibility. Distorted visibility weakens commitments. Weakened commitments constrain growth.

As a result, retailers begin to respond defensively, tightening availability, increasing buffers, and introducing manual overrides, but those measures don’t provide enough support to an orchestrated operational structure.

“When you feed execution signals back into planning,” Mittra continued, “you create a much tighter loop between what you plan and what you can actually execute. That’s where confidence comes from. Not from assuming inventory is accurate, but from knowing it reflects what’s usable and sellable right now.”

In high-velocity grocery environments, that distinction matters. Profitability is no longer determined solely by forecasting precision, but by alignment between what is planned and what can be executed in real time. Inventory is no longer simply a record of what exists; it becomes the connective system between demand and delivery, between promise and performance.



RETHINK RETAIL

www.rethink.industries