SHELF ENGINE

Inflation Will Disrupt Grocery Retail in 2022

Beyond cost-cutting, here's what you need to know to stay ahead of the shock

A perfect storm of labor shortages, rising commodity prices, supply chain disruptions, and numerous other factors have led to the highest rate of grocery food inflation in decades.

The 5.4% increase in food producer prices in October 2021 over the previous year marks the highest spike in over a decade, according to the US Bureau of Labor Statistics. That new record was then surpassed a month later as November 2021 data revealed another all-time high.[1] The projected 8% inflation in grocery CPG in the first half of 2022 is prompting retailers to examine their pricing strategy in anticipation of consumer price sensitivity impacting demand.[2]

Several near-term trends have helped maintain consumer demand in the face of rising prices. First, the increased time spent at home created more need for grocery necessities with fewer meals being consumed away from home. Second, ongoing supply chain disruptions[3] have prompted 36% of shoppers to choose alternatives[4] to their standard grocery selections due to unpredictable availability and shifts in brand loyalty. Third, some shoppers receiving COVID relief subsidies have been temporarily insulated from rising prices, though the ongoing financial strain of the pandemic makes this purchasing power tenuous at best.

While these near-term consumer demand factors are promising, rising producer prices[5], labor shortages[6], supply chain disruptions, and dynamically evolving public health are coalescing in such a powerful and timely way that even the retailers who have held back their price hikes may be forced to reconsider their approach this year.

[1] https://www.winsightgrocerybusiness.com/fresh-food/wholesale-fruit-vegetable-prices-soared-november

[2] https://www.winsightgrocerybusiness.com/cpg/8-inflation-packaged-goods-what-iri-sees-year-ahead

[3] https://www.supermarketperimeter.com/articles/7468-ftc-to-study-supply-chain-disruptions

[4] https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-great-consumer-shift-ten-charts-that-show-how-us-shopping-behavior-is-changing

[5] https://www.bloomberg.com/news/articles/2021-09-10/u-s-producer-prices-increased-in-august-by-more-than-forecast

[6] https://www.yahoo.com/now/retail-worker-shortage-why-companies-040113310.html

Grocery retailers have options to help them face inflationary pressure.

Despite this unique convergence of external factors, grocery retailers can proactively prepare for what's coming. Harvard Business Review recently gathered strategies most likely to help businesses hedge the impact of inflation given the nuances at play this time around.[7] Cost-cutting remains the predictable cornerstone of the approach, while two specific strategies—elimination of low-value work and automation—map directly to value creation through efficiency gains and improvements to customer experience.

While the tried and true measures of spend reduction and automating/reducing low-value work will no doubt drive incremental value, there is a hidden lever that can surpass other tactics to help retailers combat rising food costs. This lever is automated ordering to eliminate the 30% of food that is over-ordered and ultimately wasted by grocery retailers.[8] Many other facets of grocery operations have already leveraged automation to achieve the dual objective of efficiency and customer-centricity. E-coupons, self-checkout, e-commerce, and omnichannel retailing were once novel in grocery retail and have now matured into optimized strategic pillars.

Automated ordering, the next boon for the industry, also advances efficiency and customer-centricity. It does so by reducing the operating expenses associated with previously manual—and therefore expensive—ordering functions while also delivering a more accurate order to reduce food waste and the associated costs. Today, ordering is also the next frontier to achieve the margin expansion necessary to weather economic instability.

> Automated ordering eliminates the **~10-50% of food that is over-ordered** and ultimately wasted by grocery retailers.

[7] https://hbr.org/2021/09/6-strategies-to-help-your-company-weather-inflation

[8] https://www.rts.com/resources/guides/food-waste-america/

Why is ordering ripe for improvement through automation?

Because it's undeniably complex, and increasingly so in an omnichannel environment with rapidly evolving consumer preferences and supply chain evolution. SKU proliferation of short-shelf-life items, varying expiration dates, seasonality, and volatile consumer demand create a web of forecasting and ordering challenges. With all of this complexity, the fundamental problem is that manual processes, even when coupled with traditional software, fail to provide real-time intelligent inventory prediction and demand forecasting that is both accurate and possible to implement in an automated fashion.

So how are the leading retailers solving this problem? With two primary solutions:

01. Achieving 'the perfect order' by using machine learning and artificial intelligence to most accurately predict current inventory levels and future demand, then order the volume of fresh items that maximize sales while minimizing food waste.

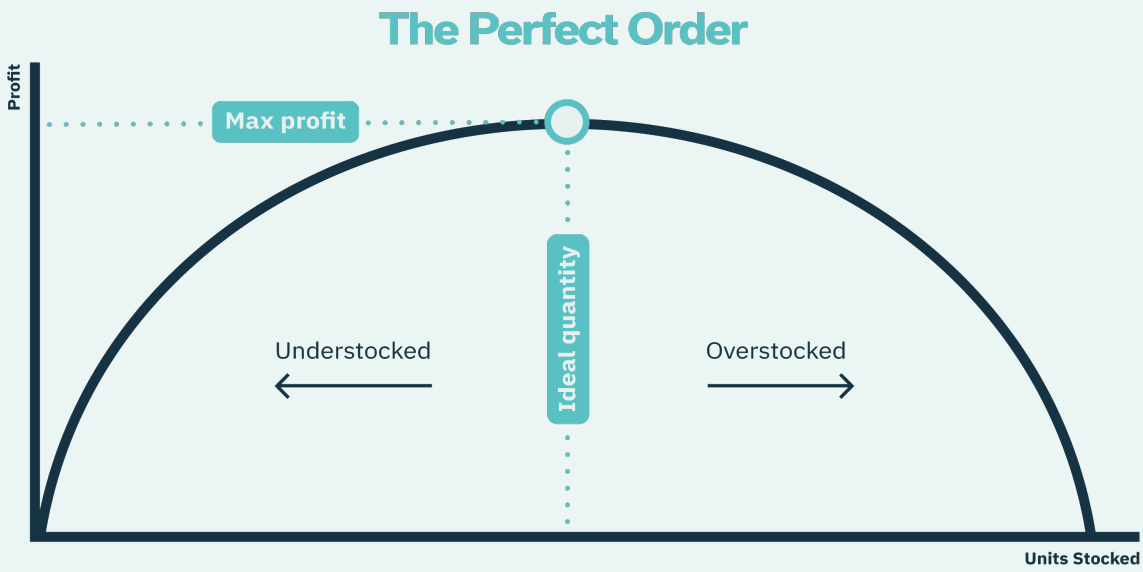
02. Partnering with vendors who price their service on a 100% pay-for-performance, scan-based trade model, thereby guaranteeing the retailer margin expansion and 0% food waste costs.

Achieve the perfect order with predictive analytics and order automation.

Retailers have access to more data than ever before. Yet leveraging the insights hidden within the volume is far from easy despite being especially important in times of disruption when scanning for patterns and predictions is crucial.

The first step in calculating the perfect order is understanding how much product is already on your shelves. Achieving this accuracy requires leveraging data science and predictive algorithms that can factor for vendor shorts, short-dated products, and other inventory discrepancies that other methods of tracking and manual processing fall short of achieving.

Once you properly estimate existing inventory levels, attention then shifts to understanding how much demand exists to order the additional food stock to ensure product availability to maximize sales. Intelligent demand forecasting is made possible by machine learning models that factor for hundreds of variables from news trends and weather, to holidays and black swan events. This data is used to predict consumer demand with high precision for every managed SKU, every day, in every store with a degree of accuracy that no human could manually replicate. One output of this technology is profit-maximizing models that create ideal orders, automated at scale, to minimize the out-of-stocks that frustrate customers and the shrink that erodes margins.



At Shelf Engine, we've spent the better part of the last decade building this exact solution. Our data science team closely studies the relationship between price changes and demand at a level of precision that no legacy software or manual process can match. Advanced algorithms and sophisticated machine learning models are deployed to accurately predict retailer inventory and consumer demand, resulting in superior forecasting.

Not only do these insights deliver orders that maximize sales and profits, this information becomes the backbone of value creation informing a number of downstream activities such as SKU optimization in the wake of supply chain disruptions, understanding which vendor partnerships to amplify as buying habits change, and optimizing how much shelf space is allocated to various food categories.

There's a strong business case to leverage automation to improve ordering even in the most stable economic conditions. In preparation for historic inflation and hyper-competitive market dynamics, technology that synthesizes innumerable data points into useful, digestible insights becomes a differentiating superpower. The ability to automate high-confidence orders that meet consumer demand at the lowest possible price will be what distinguishes the market gainers from the losers in 2022.

Guaranteed margin expansion through scan-based trade.

Vendor managed inventory and scan-based trade relationships are familiar fixtures in the grocery retail industry. They show up primarily among products delivered through direct store distribution, yet are rarely deployed for fulfillment center distribution and within the commoditized, highly perishable categories representing the highest rates of shrink for grocers. Finding platforms and partners that enable scan-based trade storewide has the potential to unlock enormous value for grocers heading into this inflationary cycle.

Shelf Engine's solution increases a retailer's gross margin on all managed products through a unique Results-as-a-Service (RaaS) business model.

How do we do this? Shelf Engine becomes the vendor of record and automates the purchase order sent to the retailer's food suppliers per existing pricing and terms. However, Shelf Engine's platform only charges the retailer for the products that were verified as sold through their POS system, enabling scan-based trade on any product Shelf Engine manages.

The whole process is completely automated and secure. The combination of intelligent forecasting, automated ordering, and scan-based trade gives retailers an average gross margin dollar expansion of more than 15% while eliminating 100% of the traditional inventory risks including food waste. The unit economics example below illustrates how this works.

The advanced retailers adopting this model can develop a significant and sustained cost advantage versus their competitors still utilizing legacy ordering systems that leave them bearing the full cost of food waste. Not only does this help retailers combat the impact of inflation, over time they're able to leverage this cost structure advantage to deliver greater value to consumers in the form of better prices (as a result of expanded margins) and more selection (by experimenting with new products and planograms without taking on any inventory risk), leading to significant market share gains. In one partnership with a leading national retailer, Shelf Engine enabled a 3x market share gain in a strategic produce category. This impact is in addition to the dozens of engagements where Shelf Engine has delivered expanded gross margins of 15% on average across multiple categories.

Combat inflation by automating the perfect order while eliminating the cost of shrink.

More than ever, retailers must be cost-competitive within their food supply chains. Consumer loyalty is already volatile and is likely to become more inconsistent should inflation continue to grow by 5-10% or more. The winning retailers will be those who prioritize the most impactful levers for reducing costs and share a portion of that cost reduction with consumers.

There is no more timely, valuable cost reduction lever in fresh food than automated ordering that guarantees margin expansion. By applying such solutions, retailers will not only successfully combat runaway inflation costs, they'll also eliminate food waste and deliver invaluable impact on the local environments in which they operate.

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About Shelf Engine

Shelf Engine forecasts and orders highly perishable foods for the nation's top grocers. Using AI, Shelf Engine's platform predicts inventory and demand with precision and automates The Perfect Order every day, in every store. Shelf Engine simplifies grocery operations by automating the purchase orders sent to suppliers and distributors, paying them directly for the products they deliver, and only charging retailers for what they sell. This performance-based model reduces labor requirements, eliminates inventory risk, and guarantees profit expansion from day one. Launched in 2016, Seattle-based Shelf Engine has more than 200 employees and manages orders at thousands of locations nationwide.

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