WHAT'S NEEDED TO MAKE BOPIS A RETAIL WINNER?

INVENTORY PRE-POSITIONING, PREDICTIVE ANALYTICS AND STORE-BASED FULFILLMENT CAN STRENGTHEN BOPIS OFFERINGS

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WHITE PAPER

Consumers love buy-online, pick-up-in-store (BOPIS). Retailers love the way BOPIS allows them to drive traffic to stores and leverage their physical footprint as a competitive advantage against online pure-plays. But consumers bring higher expectations to BOPIS than they do to simply shopping in a store: The retailer has explicitly told them the item is available, so the bar is set high. So if a customer finds a BOPIS order is not actually there, she is much more upset than if she simply stopped by the store and discovered the item was out of stock. Unfortunately, for many retailers, BOPIS failures are alienating the very customers they most want to please, hurting them in both the short- and long-term.

Consider these stats from IHL Group:

- Currently **one in five (21%)** of online orders across age groups are picked up at the store level
- For customers ages 18-29, **30%** of orders are BOPIS, meaning **they use BOPIS 43% more often** than the average consumer
- **One of every five times** an 18-29-year-old customer orders via BOPIS, **at least one item in the order is out of stock,** and **22%** of the time, his order is not ready when he arrives
- When an item is out of stock in the store, Amazon Prime members — **55%** of U.S. households — are **52%** more likely to order it online; IHL estimates **24% of Amazon's current retail revenue comes from customers who first tried to buy the product in-store.**

Once a customer shifts the purchase of an item from in-store to online, it's hard to get that customer back. And when a customer is just starting to establish shopping habits that will span decades, that loss of lifetime value is substantial.

Retailers can prevent these failures and make BOPIS profitable for the retailer and satisfying for the consumer. To do so, they need to take a localized approach to correctly forecasting demand, using predictive analytics to pre-position inventory at the right levels in the right places. The same data and tools that make this possible can also help them model their supply chains, to ensure they have the right processes in place to optimize BOPIS fulfillment. With the right forecasting and optimization, retailers can leverage the full potential of BOPIS, driving revenue, profitability and customer lifetime value while lowering risk.

Where BOPIS Forecasting Often Goes Wrong

One root cause of out-of-stocks is adding a new demand stream on store inventory without properly planning for the impact on inventory levels. Among C-suite retail executives surveyed by HRC Retail Advisory, **66%** say that inventory inaccuracies make their BOPIS offerings inconsistent. Retailers take a variety of approaches to forecasting inventory levels when they add a BOPIS offering, and these can end up backfiring:

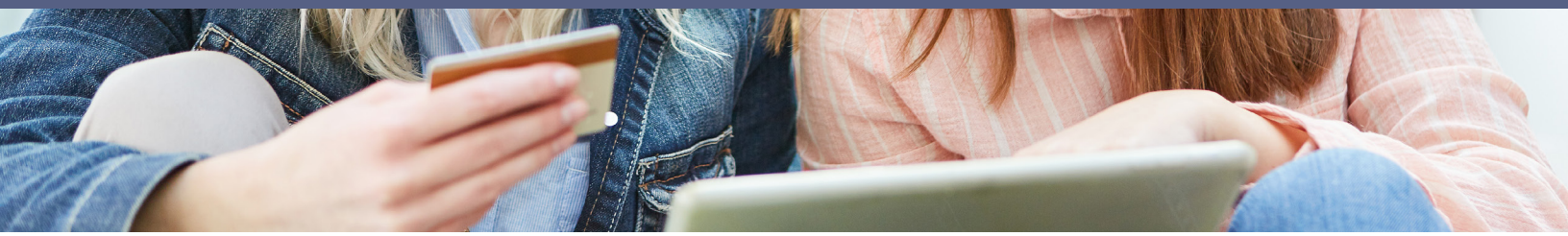
- **Adding in safety stock.** Increasing the amount of inventory is a blunt but often effective way to accommodate the increased demand. But its high cost can torpedo any increased revenue and profitability that BOPIS can potentially deliver. IHL estimates that safety stock, used to cover for a range of deficits, adds $24.4 billion to the annual $144.9 billion North American retailers lose from out-of-stocks. Excess safety stock also leads to higher markdowns.

- **Building in buffers.** According to Ken Morris at BRP, commenting on *RetailWire*, a common strategy is to mark an item as "unavailable for BOPIS" unless the inventory shows two or three of that item are available in-store. As a result, the retailer is prioritizing the local store demand — which represents a lower risk of causing customer churn — over BOPIS demand, which comes with a high risk of churn. This approach is typically caused by lack of confidence in inventory accuracy, but it ends up hurting BOPIS programs through lost sales.

- **Forecasting in-store and online demand separately.** Another approach has demand planning systems look at in-store demand, and then separately forecast out e-Commerce demand, lumping the latter into the BOPIS demand. Supply chain systems must then sort out how to ensure the inventory is in the right stores, in the right quantities, to satisfy both in-store and BOPIS orders. While retailers have the data on where BOPIS fulfillment is happening, they're not using it in forecasting, and most forecasting engines are not asking for it.

- **Not taking relative customer satisfaction risk into account.** The risk of losing a customer over a BOPIS out-of-stock is much higher than being out of stock for the in-store customer. This risk must become part of the forecasting algorithm.

Retailers' current approaches to forecasting and planning for BOPIS inventory, compounded by the challenges many face in achieving accurate, real-time, centralized perpetual inventory, are causing BOPIS failures that cost revenue, profitability and long-term customer satisfaction.



Optimizing BOPIS With Better Forecasts

A more effective approach is to combine in-store and BOPIS demand into a single forecast that accounts for how the two demand streams affect one another; the increased risks associated with BOPIS; and the impact of nuances like case packs and display minimums. A single forecast will also show how to make optimal use of the current supply chain footprint to fulfill the demand, maximize margins and lower the risk of customer churn.

This approach considers demand according to where the product is intended to be fulfilled instead of where it is generated, then applies machine learning and predictive analytics to generate a forecast that properly accounts for both streams. The algorithms integrate several disciplines of predictive analytics, which models the probability of different outcomes in a process that cannot easily be predicted due to the intervention of random variables. This helps account for the impact of risk and uncertainty in prediction and forecasting models. It also borrows from a financial portfolio modeling technique called the Markowitz model, which analyzes a potential inventory level based on the expected returns (mean) and the standard deviation (variance) to make the most efficient selection.

A predictive-analytics and risk-based demand-based approach accounts for things such as:

- **Cannibalization:** This occurs when a customer chooses to buy an item via BOPIS when she otherwise would have gone to the store to purchase the item without ordering it ahead of time. This must be correctly forecast to establish the proper inventory levels.
- **Halo Effect:** This comes into play when the customer places a BOPIS order, enters the store and sees additional items she wants to purchase. This happy outcome impacts the inventory levels for related items, such as the tools, exhaust hose and bracket needed to install stackable laundry appliances.
- **Must-Have Items:** Similarly, retailers can often identify items, like that exhaust hose or brackets, as components of a larger sale that must also be in stock to attract the BOPIS sale. A loss leader item, such as a fast-moving consumer good, may be an essential component supporting BOPIS traffic that must be accounted for in optimizing inventory levels for that item. Looked at another way, the risk of not having that item is a quantifiable factor that must be a part of the forecasting algorithm.

- **Case Packs and Display Minimums:** Items that must be ordered in case packs have long challenged retailers, particularly if the item has a long latency period to get the next shipment; the result is stair-step impact on inventory levels. Forecasting the in-store and BOPIS demand together can help normalize case-pack impact by drawing from that inventory for two different demand streams.

- **Risk of Customer Churn:** Because the risk of losing a customer from a failed BOPIS experience is higher than losing one in-store, this approach enables the retailer to set a higher target service level for BOPIS, say 98% or 99%, than for in-store inventory, which may be best set at 96%. The algorithm takes both risk levels into account, modeling the future potential value for a particular customer or like customers to ensure they are not disappointed by a poor BOPIS experience.

> The quicker and easier shopping experience that BOPIS enables requires real-time transparency. Not only must inventory be accurate, but on-hand quantity must also anticipate new demand profiles that result from the fact that BOPIS orders are twice as large as our regular in-store transactions. 4R is helping to ensure our reorder points take this new demand into account."
>
> WILL AUBUCHON, CEO, AUBUCHON HARDWARE

Supply Chain Modeling

The same approach that helps optimize forecasts can also help retailers enhance their supply chains to support the most efficient approach to BOPIS fulfillment. As the model reveals how demand can be met with optimal inventory levels according to fulfillment location, it also can expose opportunities to revisit aspects of the supply chain network to improve efficiency. For example:

- **Hub-and-Spoke/Mini DCs:** The impact of BOPIS and other demands on in-store inventory sometimes makes it clear that replenishment must be faster than the current fulfillment approach is capable of accommodating. Sometimes the best strategy for speeding up this process is to use a multi-echelon or hub-and-spoke approach, raising inventory levels at a larger store and drawing on that to fulfill demand at smaller, nearby stores. This type of fulfillment can occur faster than fulfilling each location from the DC, supporting the high service levels needed for BOPIS.

- **Changes to DC Locations/Sizes/Functions:** The impact of BOPIS demand can also expose requirements to reconsider the current fulfillment roles of existing DCs, such as replacing a large DC with several smaller locations closer to the points of demand.

- **Changes to Case Packs/Display Minimums:** Working with suppliers on these restrictions can also contribute to optimized inventory levels that avoid excess or understocks.

- **Changes in Lead Times:** Lead times required for some items can restrict the opportunity to optimize profits. Working with suppliers to shorten lead times to take a more just-in-time approach can also support profitability.

Case In Point: Supporting BOPIS With Hub-And-Spoke

When one automotive parts retailer with a multi-echelon supply chain structure began modeling a localized demand-focused approach that accounted for BOPIS demand, store demand and the risk of customer churn, the company discovered that this structure would not be capable of meeting its BOPIS requirement — to fulfill to any end point in less than four hours.

The retailer implemented a hub-and-spoke model, where larger stores act as fulfillment locations for smaller stores in the same area. Now, a van travels continuously among the stores, picking up and dropping off items throughout the day to meet demand. The hub-and-spoke structure proved itself as a far more efficient approach than sending all items through a longer supply chain cycle.

Leveraging Localized Demand-Based Forecasting For Better BOPIS

Many analysts cite real-time, centralized, widely visible perpetual inventory as a key enabler of BOPIS. It is true that the better the accuracy, visibility and timeliness of the data, the better the service levels. But proper forecasting is an often-overlooked element, one that helps even those retailers that are still working toward more frequent and visible updates. By starting with fulfillment demand rather than order location demand, then infusing risk assessment, AI and predictive analytics into the algorithms, retailers can set inventory levels that lower risk while driving BOPIS revenue, profitability and long-term customer satisfaction.

Learn more...

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