



THE SPOTLIGHT ON "THE TRILLION-DOLLAR BLACK HOLE" OF ON-SHELF AVAILABILITY

FEATURING SPECIAL GUEST COMMENTARY AND SHELF DATA FROM

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FOR MANY YEARS PRE-COVID, THE RETAIL STORE SHELF WAS A BATTLEGROUND FOR BOTH RETAILERS AND CONSUMER GOODS COMPANIES, YET OUT-OF-STOCK (OOS) RATES IN GROCERY HAVE HOVERED AT 8% WITH ESTIMATES AS HIGH AS 10-15% ON PROMOTED ITEMS.

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Despite many years of good-faith efforts by manufacturers and retailers, the out-of-stock rate remains a stubborn eight percent, on average, with out-of-stocks for promoted items often exceeding 10 percent

– FMI/GMA Trading Alliance Report, 2019

Many grocery executives had essentially capitulated to the problem and accepted this On-Shelf Availability (OSA) problem as the operational norm. It had become so accepted that insiders have coined a phrase to refer to the problem –

“THE TRILLION-DOLLAR BLACK HOLE”

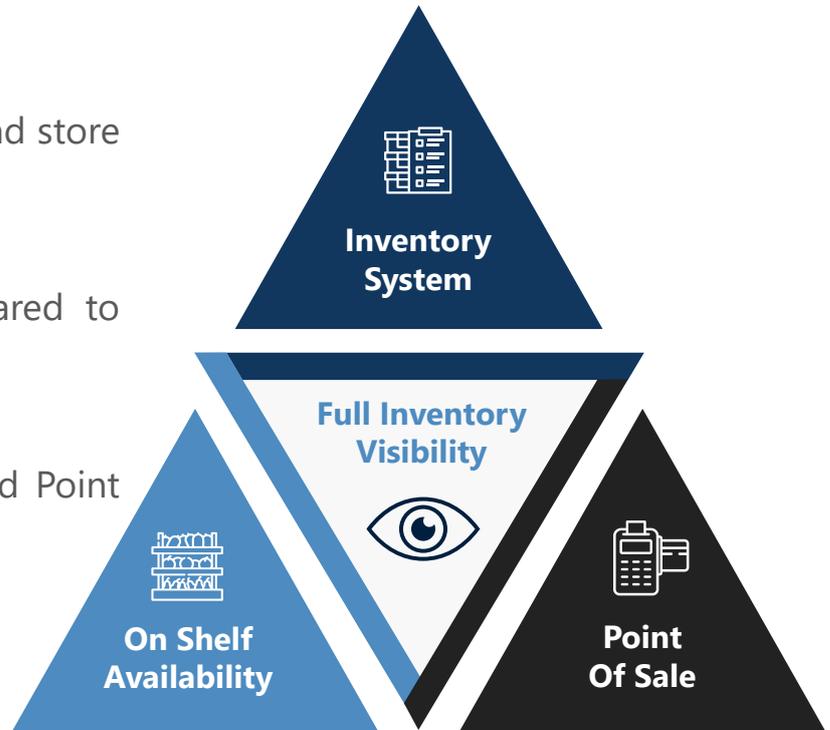


So why have retailers and consumer goods producers struggled for decades to improve OSA and treated it as an invisible or unfixable problem? The reality is that you cannot fix what you cannot see and measure. The visibility gap between

“inventory in” and “sales out” makes it virtually impossible to know what is actually happening on the shelf and what is available for sale in any given store on any given day.

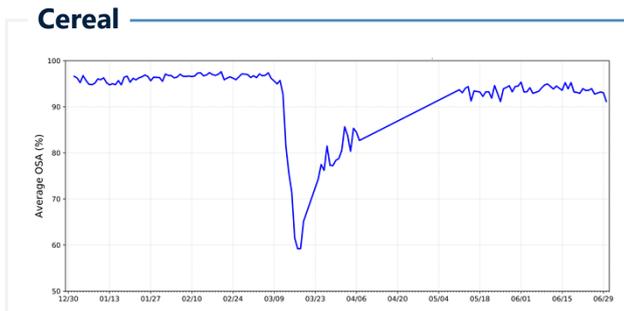
TO ATTAIN FULL INVENTORY VISIBILITY, A RETAILER OR BRAND MUST UNDERSTAND

1. Current system inventory and store receipts
2. Actual shelf facings compared to the allocated planogram
3. Item sold through front-end Point Of Sale (POS) system

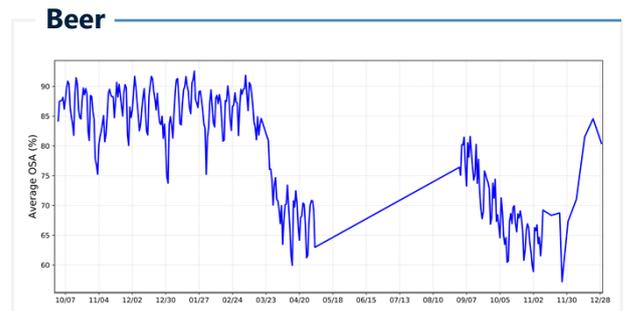


THE “COVID-19 SPOTLIGHT” – A PROBLEM THAT CAN NO LONGER BE IGNORED

In the early stages of the pandemic, unexpected spikes in demand and shocks to supply chains plummeted OSA to 60% or worse in many major retail product categories. Over time, OSA typically normalized around 80-90%, and in some categories not at all by the end of 2020, conceivably even doubling the size of the pre-pandemic “Black Hole”.



Source – Pensa Systems, 2020



Fear associated with these pandemic-driven OSA dips caused a unique phenomenon – consumer stockpiling and shifting demand to the largest sized SKUs available. This incredible demand put consumer goods and retailer supply chains under extreme stress to make new supply allocation and manufacturing capacity decisions. However, due to long refresh cycles in POS data and even fewer field rep shelf visits than pre-COVID, companies lacked the information and ability to make prudent real-time decisions. Companies rationalized assortments to focus on core items, and consumers were left with a sub-optimal set of choices – when their preferred products were not on-shelf, they substituted competing brands’ products; or worse for retailers and brands, consumers left the store empty-handed. In every scenario, all parties lost.

With reduced OSA:

- Consumers have fewer options and are frequently frustrated
- Consumer products companies lose consumer loyalty due to more frequent brand switching
- Retailers and consumer brands together lose sales

There has also been a massive pandemic-inspired increase in BOPIS (buy online, pickup in store), curbside pickup, and orders through last mile delivery providers like Instacart and DoorDash. According to Supermarket [News](#), the pandemic caused online grocery to more than double to 10.2% with expectations of 21.5% penetration by 2025. The biggest customer complaints from online grocery are bad substitutions associated with OOS or mis-stocked items. This has placed an even brighter spotlight on the OOS black hole and distorts industry conclusions about consumer purchase preferences.

“Grocery substitution shaming’ is now a trend on social media, with Facebook groups like ‘Supermarket Substitutions’ popping up to give shoppers a place to share stories of odd replacements from Walmart, Instacart, and other online grocery services”

– Miami Herald, July 2020

The problems with low OSA have become too big and important to ignore. Retail executives are finally embracing new solutions and positive results are starting to emerge.

INNOVATIVE COMPUTER-VISION AI TECHNOLOGY IS AUTOMATING “EYEBALLS” IN THE STORE

Coupling artificial intelligence (AI) and computer vision is the premise behind new retail technology solutions that translate visual input into data that can be used to analyze and directly improve OSA and a range of other use cases. By capturing the data in near real-time for the entire shelf, retailers can track shelf performance, operationally intervene, conduct OSA root cause analysis, and dramatically improve end-to-end operational planning and execution.



Source: Pensa E-shelf Scan - Computer Vision



The system visually learns as a person would, gaining a full digital understanding of each product on the shelf and what should be there. The system can quickly identify the many errors missed by human visual inspection. It identifies any variations – like products missing from the shelf, misplaced products, and planogram variances – that often account for 30-40% of hidden stock-outs and other sources of lost revenue.”



– Richard Schwartz
President and CEO of Pensa Systems

PUTTING IT ALL TOGETHER – THE TIME IS NOW

There are several AI/Computer vision-enabled platforms working to solve this problem – drones, phones, robots, fixed cameras – supported by a range of economic models to enable and monetize this data capture – DAAS, Subscription, etc. The ecosystem is rapidly unfolding, but we believe with real-time shelf data, companies should begin their OSA-improvement journey by focusing on 5 core value-driving use cases:

- 01 | **Next-generation demand planning and dynamic allocation** – provide supply chain teams with full inventory visibility to improve forecast accuracy and enable real-time dynamic allocation by store
- 02 | **Agile in-store operating processes** – use real-time scan data to alert store team members of OOS, face-overs, and mis-stocking for immediate intervention and perpetual inventory (PI) correction
- 03 | **Rapid planogram optimization** – dramatically improve and reduce cycle time of shelf layout and product facings allocation decisions using real shelf data
- 04 | **Demand-driven store-level assortment** – rapidly incorporate real shelf data to improve assortment decisions with true shelf performance including those periods when the item was out-of-stock (and hence had an artificially low sales performance)
- 05 | **Accurate on-shelf product availability for online ordering** – use real-time shelf data coupled with store-level POS data to provide customers with accurate BOPIS and curbside product availability and integrate into third-party systems – Instacart, DoorDash – to only offer what is available

Once ignored as a big problem with no real solution, the spotlight is now shining brightly on the “Trillion-Dollar Black Hole” that is OSA. CPG manufacturers and retailers need to realize that collaboration and actions based on new, innovative data sources can now not only begin to solve the OOS problem, but also unlock a range of inspiring use cases to improve customer experiences and drive more efficient operations.

Here at Alvarez & Marsal Consumer and Retail Group, we are helping retailers and consumer products companies be on the front-end of disruption and achieve their highest level of potential impact. Interested to learn more? Reach out to our team today.

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