

The 'game changing' potential of StoreLogIQ ("SLIQ")

Reversing Inventory Distortion in Retail

Research published by IHL Group¹ in 2015 exposed global retail inventory distortions, the combined effect of out-of-stocks and overstocks on retail operations and financial performance, reaching a \$1.1T cost to sector profits, and growing around \$60B annually. By early 2019, these costs to profit had reached \$1.3T annually.

The US and Europe retail markets contribute 61% of these global inventory distortion costs, with the food/grocery sector delivering 60%; a cost >\$450B annually across these two key markets.

In food/grocery, store salesfloor out-of-stock events have escalated in recent years; largely due to the pursuit of on-line sales, where order fulfilment, whether for store collection or home delivery, is realized from the salesfloor; the only store location exposing products already assigned in consumer units of measure; essential whether the customer is on-line or in-store. This salesfloor capability is the DNA of food/grocery, and, if properly exploited, provides an opportunity for the brick and mortar retailers to compete with Amazon.

The downside of on-line sales growth in food/grocery is that of the order fulfilment exhausting salesfloor shelf inventory while fully occupying those personnel who would otherwise be assigned to detect and replenish salesfloor shelves before they go out-of-stock. The result is a rapid increase of in-day salesfloor out-of-stocks, as high as 15% of salesfloor inventory, for extended periods during the shopping day, even those these same products may be available in the store's backroom. These in-day salesfloor out-of-stocks are mostly the fast-moving products from the fresh and perishables' categories; those delivering the highest sales and margin performance with a disproportionally negative impact on financial performance.

At a time where retail in general, and food/grocery in particular, faces a dynamic shift in both consumer expectations and competitive threats, problem resolutions are needed in days, the dependencies on existing information systems result in timelines of months, if not years, to deliver. With such information systems constraints, management options for improving financial performance are limited to the defaults of securing better supplier terms, further reductions in stores' personnel headcounts, or a combination of both. With very little in the supplier margins to have any material impact, the headcount reductions become the most evident pathway to improved performance. The outcome sees an absence of available personnel to address those in-store inventory management processes essential to assuring salesfloor availability for both on-line and in-store shopper purchase fulfilment, with the consequent growth of in-day salesfloor out-of-stocks that then erodes the point-of-sale data's value as an accurate guide to demand. With the PoS data feeds the only guide to demand, these unfulfilled sales are not exposed as customer demand when the central view of inventory suggest the product exists and is available to customers. This impacts demand forecast planning and, in turn, prevents the supply chain from delivering product quantities in balance with actual demand within DC/Supplier delivery cycles to stores. This is the source of inventory distortions, and the lack of resolution now reaching the point where neither on-line, nor in-store, shoppers are able to make purchases as fully intended, with the consequence progressive erosion of operating profits.

If inventory distortion losses do run at 7.5% of total sales, the problem can no longer be ignored in a sector where a 2.75% operating profit is acceptable, when a reversal of 33% of these losses will double operating profit.

¹ IHL Group (<https://www.ihlservices.com>), is a US based research and advisory firm providing guidance for retailers and retail technology vendors, with particular emphasis on supply chain and stores operations

² National Retail Federation – (<https://nrf.com/resources/top-retailers/top-100-retailers>) The National Retail Federation is the world's largest retail trade association. Its members include department stores, specialty, discount, catalog, Internet, and independent retailers, chain restaurants, and grocery stores. NRF represents the largest private-sector industry in the United States that contains over 3.8 million retail establishments with more than 29 million employees contributing \$2.6 trillion annually to GDP.

Today, in-day out-of-stock detections require personnel to visually gap-check aisles for low or empty shelves; an impossible task when fewer personnel are available. To always assure salesfloor availability when inventory exists in the backroom requires a different store inventory management; one that automatically triggers personnel task assignments to ensure customer availability within a supply chain exhausting all backroom product inventory coincidental with the next DC/Supplier delivery to the store.

When considering food/grocery retailers in North America, the top 26 have >56,000² stores with a collective, all stores, 1.24 trillion product stock-keeping-units (SKUs) offered to customers and subject to stores inventory management. Total revenue from these top US retailers exceeds \$1.12 trillion annually², with inventory distortion eroding sales and margins due to out-of-stocks, overstocks and shrink. If these losses equate to 7.5%¹ of total revenues as cited by IHL, this limited sub-set is delivering losses of \$84B annually. Reversing these losses requires store inventory management able to manage every store SKU, separately across salesfloor and backroom, so each delivers its optimal return-on-inventory. Reversing just 25% of these losses will, on average, lift the operating profit of such retailers by 1.875% of total stores' sales.

The ability to reverse these losses actually doesn't require much in the way of process change, but it does dictate the need to automatically initiate prescriptive personnel tasks in response to detected inventory events that manage, monitor, and measure the execution outcomes of the tasks. The benefits from, and support for, the deployment of a solution to inventory distortions reside with those executives responsible for Finance, Retail Operations and Supply Chain. Their respective motivations are listed below:

- Finance – a **>30% decline in operating profits** over the past decade³ where inventory distortions losses run near 7.5% total stores' sales¹. This is an avoidable loss that, if even partially reversed, will deliver improvements in financial performance at a cost fully afforded from within the savings delivered
- Retail Operations – overall **store out-of-stocks arising from supply delays comprise >4% of total store SKUs; further exacerbated by in-day salesfloor out-of-stocks often >15% for significant time periods within the shopping day¹, even when the SKU is available in the backroom inventory**. Management's drive to improve margins is too often limited to what can quickly be achieved, which defaults to labor reductions when resources are already too limited
- Supply Chain – the store out-of-stocks, when combined with those in-day salesfloor, out-of-stocks, make the **PoS data feeds an increasingly inaccurate guide to customer demand** resulting in supply imbalances with demand that undermine return-on-inventory performance. It is here we see **overstocks that further erode operating profit through their contribution to markdowns, shrink, and excessive capital invested in "non-moving" inventory**. When faced with the poor response-to-problem resolution timelines of existing IT operations, the defaults are to lower supplier pricing in an attempt to increase product margins; an approach that cannot fill the financial performance gap, and one that creates an adversarial relationship between the suppliers and the retailers. Today, **shrink-to-waste losses in perishables products deliver margin losses "at retail" equivalent to between 4% and 8% of perishables' sales, or 2% to 4% of total store sales⁴**. Recovering even 25% of the losses creates a massive benefit to financial performance

The optimal outcome is to have store DC/supplier product delivery quantities precisely balance with customer demand within these store delivery cycles; thereby maximizing return-on-inventory across all stores.

³ Company analyses of the top 10 food grocery retailers in each of US and Europe

⁴ Analyzed off Kroger actual shrink performance financial year 2016 in an area of operations where Kroger is considered as the "gold standard" for reducing shrink losses

Accepting store headcount reductions and renegotiated supplier terms can no longer offer a path to profit, we needed a rethink on how best to assure salesfloor availability while improving the demand forecasting to a point where the balancing of supply to demand is achievable within DC/supplier delivery cycles to the stores.

SLIQ's store inventory management addresses the inventory distortion problem; providing store managers with the tools required to maximize the performance of their store while improving group-wide return-on-inventory performance. SLIQ differs from all other solutions in ways that have impact on all retail segments, but most significant in food/grocery, where the supply chain failures to balance supply with store' demand expose the highest levels of inventory distortion and the largest erosion of return-on-inventory.

Current store inventory management solutions expose only the store's total balance-on-hand inventory counts, without differentiating salesfloor availability from inventory retained in the store's backroom warehouse.

In a sector where DC/supplier deliveries vary as much as 5% from their planned quantities, general adoption of good-faith-receiving further introduces errors in inventory counts. The outcome of good-faith-receiving is a consistent introduction of store inventory errors that remain inaccurate until a cycle count is applied. So, in addition to the point-of-sale deficiencies in representing true customer demand, we see the other major datapoint of inventory balance-on-hand further undermine the effectiveness of the central demand forecasting algorithms; and outcome IHL exposes in its analyses of inventory distortion.

Inventory distortion is a supply chain problem, but its solution resides in the stores, and only SLIQ is cognizant of the need to detect and continually correct inventory distortion to finally extend the supply chain efficacy to the salesfloor. The impacts of this store focused optimization are best illustrated in the three primary areas of:

Finance

- Ability to **lift operating profit potentially by 40% (on average >1.5% of store sales revenue)**
- Containable within a solution production deployment cost **<10% of annual profit lift delivered**
- **Proven via a 75-day implementation** without changes to the existing IT systems

Retail Operations

- Enforces **best practice processes and tasks assignments** uniformly across all stores
- Creates an **operational model** uniformly measurable across all stores
- **Assures salesfloor availability** so long as product exists in backroom
- **Delivers accurate salesfloor and backroom inventory**, which is not available in any current central SIM (SIM) system
- Potentially **eliminates perishables' shrink margin losses** outside of damaged items or theft
- Significantly **reduces markdown margin losses** across all products
- **Reduces labor** costs of gap checking, cycle counting and backroom picklist journeys

Supply Chain

- **Restores the PoS data as an accurate guide to demand**
- **Exposes and corrects imbalances between store demand and supply**
- Provides better demand forecast data that balance supply to demand **within DC/supplier delivery cycles**
- **Maximizes GMROI** of all store products while reducing overall inventory-carry

Here SLIQ is unique, in that it can be implemented as a stand-alone capability optimizing store performance within an existing retail ERP infrastructure, or implemented as the SIM component in an existing supply chain stack.