Plugging Out-of-Stock Gaps in Consumer Goods

A prescriptive guide to contain out-of-stock challenge that plagues consumer brand

In the era of omnichannel operations, a proactively managed inventory management strategy is not a nice to have- It's a must have. A well-tuned inventory management strategy allows consumer goods companies to allocate inventory towards millions of SKU locations and use rich the inventory time series data and insights to enhance sales, service-levels and supply chain activities. The challenge for brands is to figure out agile strategies to plug the varied gaps that exist in ordering, updating and replenishing inventory for multi-channel, multi-site and multi-tier sales and distribution. This eBook reviews and provides some fresh ideas to contain out-of-stock (OOS) challenge that continues to plague consumer brands and as a result their supply chain, last mile and retail partners.

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Mega Trends: The Continuing OOS Malaise

Despite years of research and development to root out inventory problems, OOS in the distribution centers and sales channels is costing the consumer goods industry billions of dollars every year.

- In North America, annual loss from OOS is estimated to be $129.5 billion[1] while in Europe stock-out lies between 7-10%[2]. Overstock and OOS together accounts for loss worth $1.1 trillion[3] every year.
- The average OOS rate is 8%[4] with sales loss accounting for 4% of total revenue.
- On promotional products, OOS rate exceeds 10% of total promoted inventory[5] and has a significant impact on consumer goods companies and their sales channel/retail partners.
- Successive OOS drives customer out with 70% customers[6] moving to a different store.
- OOS is mostly attributed to bad processes (such as inadequate refrigeration, improper training), people problems (such as employee mistakes due to laziness, inadequate skill-set and man-power), inadequate data systems (no systematic measurement of impact of overstock/OOS), theft and supplier issues (such as inability of suppliers to provide product at right time).
- Brand switching is more probable over store switching.

1 out of 13

items that a customer wants to buy is absent in the shelf

Only **15%**

of shoppers delay their purchase with more likelihood of shifting to a different brand when faced with an out-of-stock situation

For 3rd consecutive OOS

Only **30%**

of consumer looks for in-store substitutes while 70% moves to a different store

[1] http://www.retailwire.com/discussion/retailers-suffer-the-high-cost-of-overstocks-and-out-of-stocks/; [2] ECR Roland Burger data, http://www.biz-development.com/Sales/4.18.3.category-management-stock-out-effects.htm; [3] Study by IHL Group, http://www.retailwire.com/discussion/retailers-suffer-the-high-cost-of-overstocks-and-out-of-stocks/; [4] http://www.askuity.com/7-root-causes-out-of-stock-retail-intelligence-addresses-industrys-enduring-problem/; [5] Study by Genpact 'Maximize the impact of point of sale data with Data-to-Action Analytics, http://www.genpact.com/docs/default-source/resource-/maximize-the-impact-of-point-of-sale-data-with-data-to-action-analytics; [6] http://www.biz-development.com/Sales/4.18.3.category-management-stock-out-effects.htm

The Main Causes of OOS

There are many reasons why OOS has become an Achilles heel for brands. Some of it is self-inflicted and some of it is caused by factors that are sometimes out of the control of consumer brands as the OOS trickles downstream into distribution and field sales channels very quickly. The principal reasons that lead to OOS are outlined below.

- **Imprecise demand forecast accuracy:** Consumer goods companies need accurate demand forecasts to plan assortments more effectively for their sales channels. However, the prevailing demand forecasts leave a lot be desired as the average forecast accuracy stands at a mere 60%, irrespective of which forecast methodology one uses.
- **Inaccurate data management:** As new products are introduced, the old ones are discontinued. This does not always get reflected in system leading to a discrepancy between retailer and vendor records.
- **Low level of accuracy for Perpetual Inventory (PI) system:** Accuracy of PI system is low for 45% of the time.
- **Inappropriate shelf-space allocation:** Most companies do not use historical POS data and other unstructured location-based data sources to identify products which are prone to OOS. Increasing flexible fulfillment options and shelf-pace for fast-moving items can solve this problem.
- **Low planogram/floor set compliance:** High planogram compliance for fast-selling categories is much needed for optimum retail execution and sell-through. But for low categories, there is a high chance of OOS rate that needs solutions.

47%

of OOS occurs due to inaccurate demand forecasting[7]

Sales channels with accurate inventory records have an average OOS of

4.1%[8]

[7] *A Comprehensive Guide to Retail Out-of-Stock Reduction in the Fast-Moving Consumer Goods Industry, http://www.nacds.org/pdfs/membership/out_of_stock.pdf;* [8] *A Comprehensive Guide to Retail Out-of-Stock Reduction in the Fast-Moving Consumer Goods Industry, http://www.nacds.org/pdfs/membership/out_of_stock.pdf*

Key Business Performance Impact Areas

Everyday consumer good companies are dealing with operational, revenue loss, customer and branding problems due to OOS. Such problems impair supply chain and sales and operations process management as a whole not just locally but on a global basis as well.

- OOS leads to extra ordering and auditing which is time-consuming thereby decreasing efficiency and productivity in the supply chain.
- OOS has a negative impact on forecasting accuracy. Level of accuracy goes down leading to supply imbalances and erosion of brand loyalty.
- Promotions suffer on account of OOS leading lost sales opportunities and negative ROI on trade promotion dollars and brand erosion.

A **5%** reduction in stock-outs can increase revenue by approx. $20 million[9]

[9] *Wipro report titled 'Retail Out-of-Stock Management: An Outcome-Based Approach*

Strategic Solutions

- Machine learning, segmented and predictive data analytics for supply chain management.
- Real-time collaborative platforms and social media for better communication with trading partners to reduce stock-out rates.
- Robotic autonomous shelf-auditing and analytics solutions where robots can audit shelves for OOS items and other misplaced or wrongly priced items.
- Retail image recognition and analytics service where a smartphone app is used by store associate to take picture of shelf and sends it to cloud and gets a full shelf analysis in minutes for corrective actions.
- Voice-controlled Wi-Fi-enabled wearable devices that are designed for the hourly employee that work in the supply chain and field sales channels including stores to provide seamless request and respond communication between corporate, field, 3rd parties and other partners.
- There are multiple streams of web connected device data from mobile devices, Wi-Fi, embedded product sensors, smart TVs and other digital devices that can be used to better identify consumers and engage them during their buying journeys with the right product messages and offers. With such IoT data brands can provide:
    - Digital location based offers (location-centric email, in-app, social & mobile delivery to customers).
    - Sensor and digital content enabled shelf-level digital customer information that provide point-of-decision product features & benefits to customers.

Real-time data centralization across supply chain into integrated inventory visualizations to recognize supply chain/last mile OOS event-based lacunas

Recommendations

ST Short Term (0-6 months) MT Medium Term (6-12 months) LT Long Term (1-2 years)

Key takeaways and recommendations for consumer goods companies classified under short, medium and long-term implementation time frames.

ST MT Identify and alleviate the blind spots in inventory management throughout the supply chain via multi-echelon SKU hierarchy-driven, micro-segment and localized demand forecasting for optimum inventory management.

ST MT Develop demand and inventory plans by integrating Omni-channel demand influencing data (web, social, mobile and traditional) into the forecasting process to pick up the changing demand signals and make the required inventory plan adjustments.

ST MT Prioritize inventory and dynamic service-levels by identifying changes in the performance of local/regional sales and margin and employing such data to tailor SKU location service-levels. These performance changes help drive improved inventory productivity. The ranking of all product locations daily becomes a metric that can be used to drive inventory productivity improvements.

ST MT Adopt a mobile first strategy for its field workforce and adopt sales channel shelf image analysis and real-time stock-out analytics that are hosted in agile cloud-based platforms and applications to reduce and alert teams of stock-out incidences.

MT Reduce OOS and demand-supply imbalances by using supply chain, distribution channel and store machine sensor data that records inventory movement at all times. Additionally, companies can implement real-time data centralization across supply chain so that inventory imbalances related patterns can be identified well in advance of OOS events and visualized by the different internal and external stakeholders to recognize supply chain/last mile OOS event-based lacunas.

MT Create innovation budgets to drive incubation and pilot projects involving in-store RFID, robotics, drones and video intelligence to identify stock-out events and real-time alerts that go out to distribution centre and inventory planning teams.

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