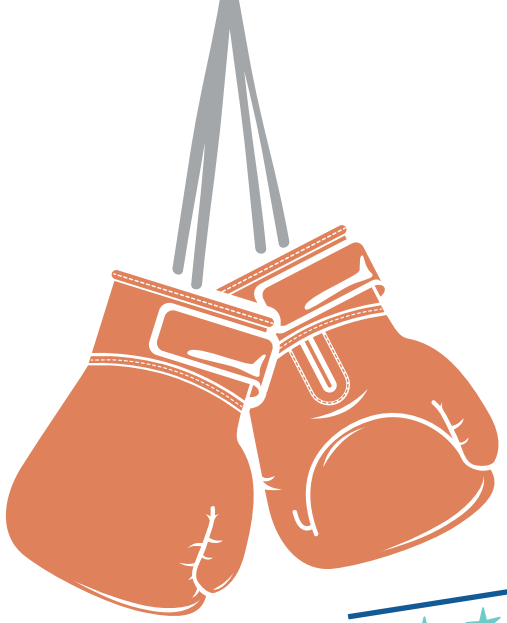
HOW TO KNOCK-OUT A STOCK-OUT

The latest advances in exception-based reporting produce the most effective ways to locate, value and minimize stock outs and overstocks.

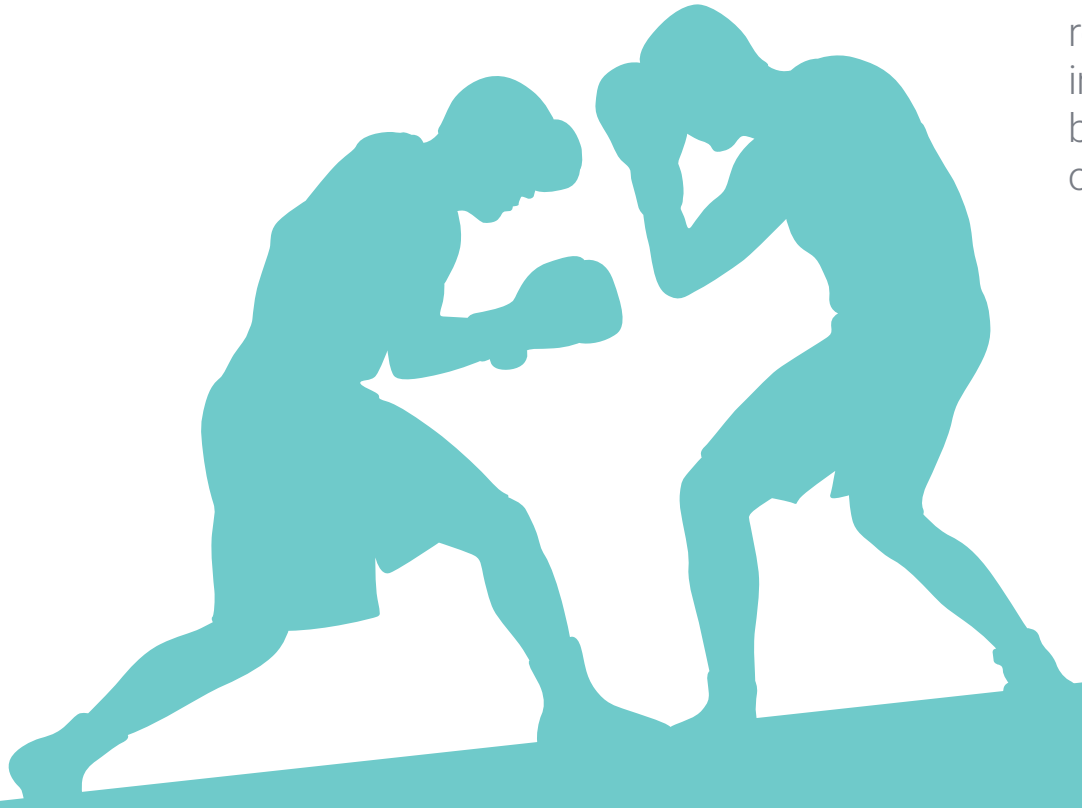
aptos™

Engaging Customers Differently.



"I just missed **two million dollars** of sales in my top style because I didn't buy enough of size small."

Sound familiar? Merchandising, at times, can feel like a heavyweight bout between customer preferences in one corner, and open to buy budgets in the other.



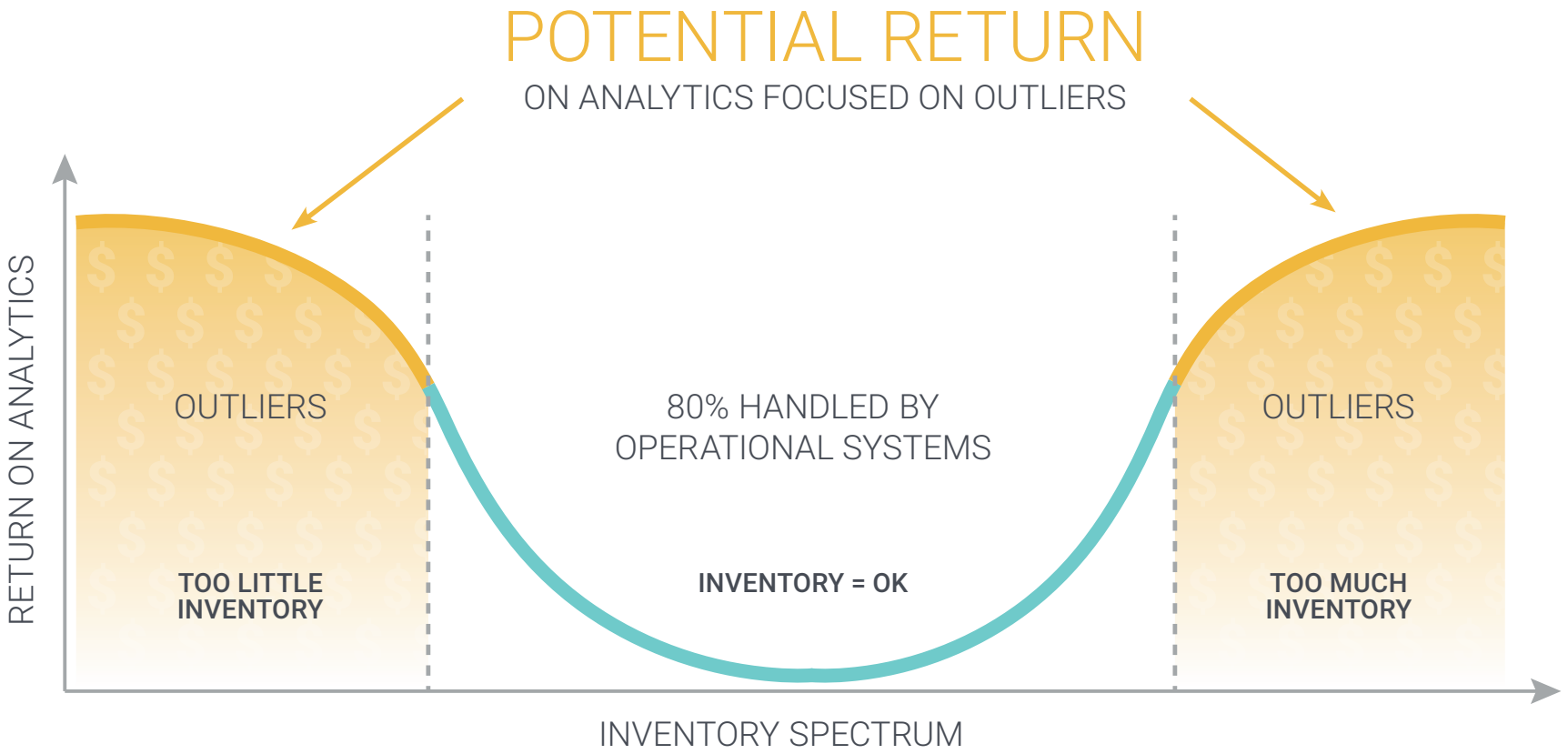
Every merchant strives to have the correct inventory in the right quantity on the shelves precisely when the customer wants it. In an attempt to grab hold of this title belt of retail merchandising, enormous effort is focused on inventory management, allocation, and replenishment processes. As in boxing, getting inventory levels just right requires a delicate balance of timing, coordination and execution of a well-defined game plan.

Most retailers begin by creating a plan based on the big picture of their business process, and then they purchase the inventory, and allocate it to stores. Then customers buy it in exactly the same quantity as planned. This strategy would be nice if real life actually worked that way.

But let's face it, forecasting is never fully accurate. Because purchases happen months ahead of the season, changing consumer trends, unpredictable economy, bad weather and more can wreak havoc on even the best plans. **That's why the classic 80/20 rule applies:** No matter what you do, 80 percent of your daily merchandising and inventory management "punches" will typically land; 20 percent, however, often due to no fault of your own, are a swing and a miss.

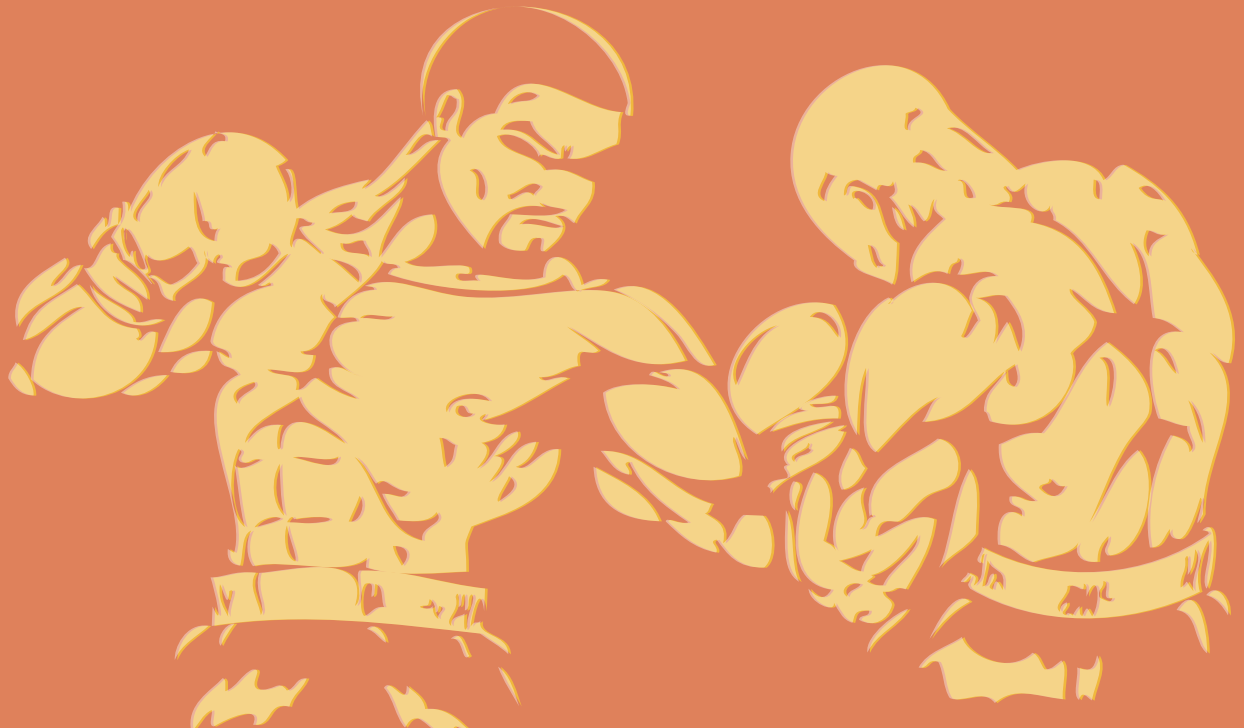
The Tale of the Tape

No matter how good your retail forecasting is, **the classic 80/20 principle** shows that for various reasons retailers will experience a significant amount of overstocks and stock-outs.



A Knock-out Punch: The 80/20 Rule may be Costing us $1.75 Trillion Annually

While a little inventory distortion (20%) may not seem like such a big deal on the surface, in reality, it can have a serious impact on your bottom line. According to a recent report by the IHL Group, "**Retailers and the Ghost Economy**," inventory distortion costs retailers $1.75 trillion annually. The total cost of overstock and out of stock inefficiencies in the Ghost Economy equate, on average, to losses that would be the equivalent of increasing same store sales by a whopping 7.3 percent.



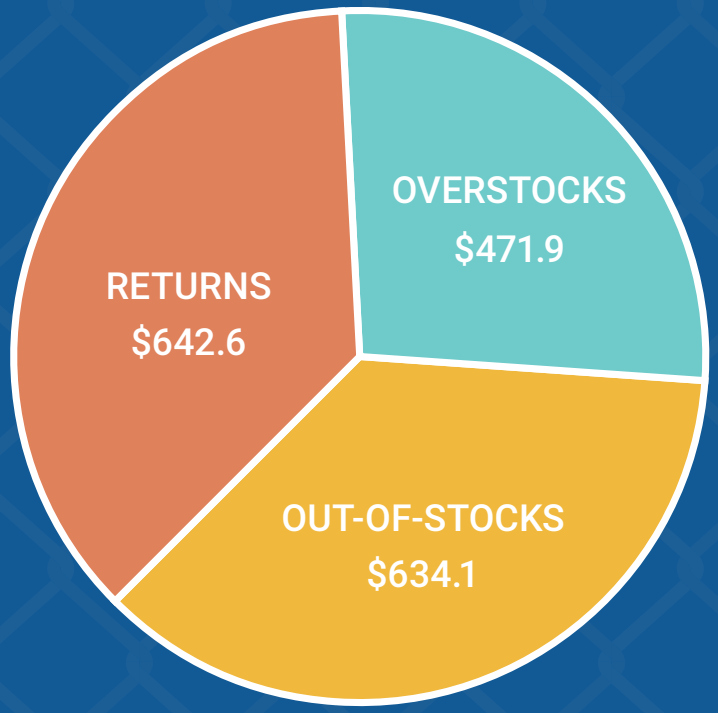
The High Cost of Swinging and Missing

Stock-outs and overstocks represent 2/3 of total inventory distortion

Ghost Economy - $1.75 Trillion

IHL Group

(USD Billions)

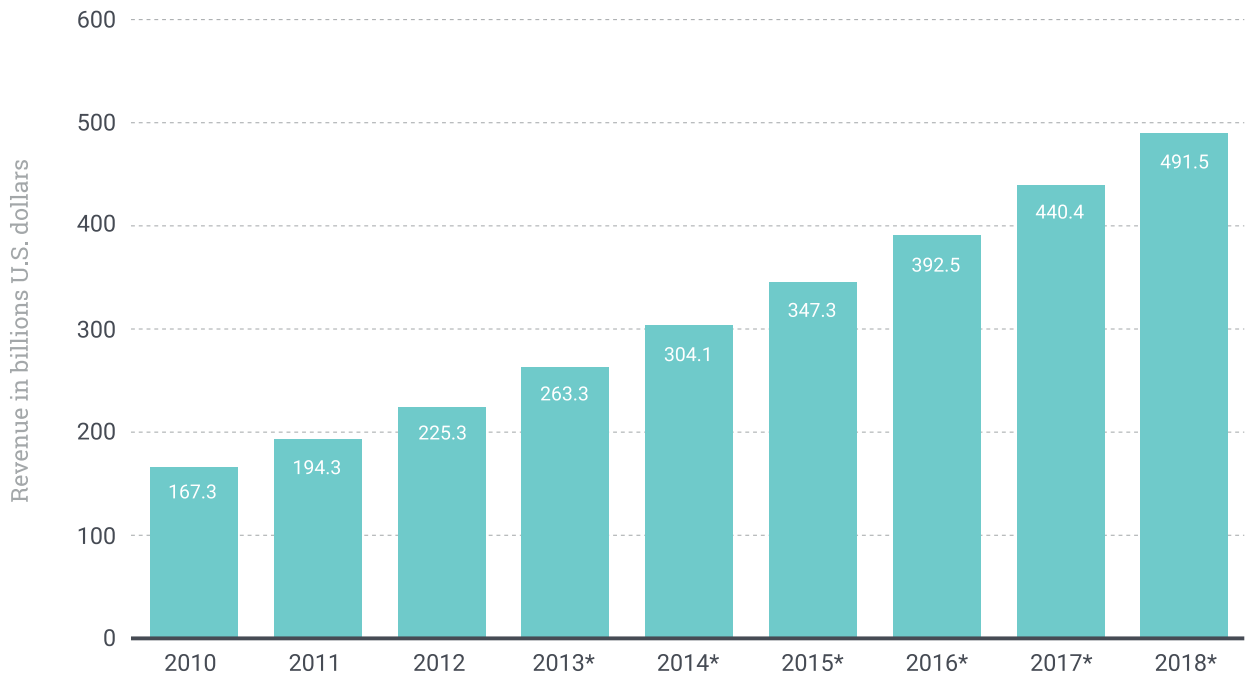


The growing magnitude of this problem is forcing retailers to look at new ways to deal with inventory management. Technology, especially exception-based reporting, is starting to make inroads and slowly push against the 80/20 rule. This eBook will make the case for exception-based reporting and shows how savvy organizations are already using it to reduce inventory distortion.

Retail Buyers have been Sucker-Punched by Too Much Data

With ever-increasing amounts of data and an expanding volume of commerce via online and mobile channels, retailers today are drowning in their efforts to deal with the combination of channels and data in order to organize inventory management in a way that boosts their bottom line. The rapid growth of the online channels has certainly complicated inventory management, and big data promises a better understanding of customer demands, preferences and trends. But to date, all that data has been difficult to consolidate, sort and combine with inventory data so that the insight can be applied to this challenge.

The rapidly growing eCommerce market is creating more inventory complexity for retailers.



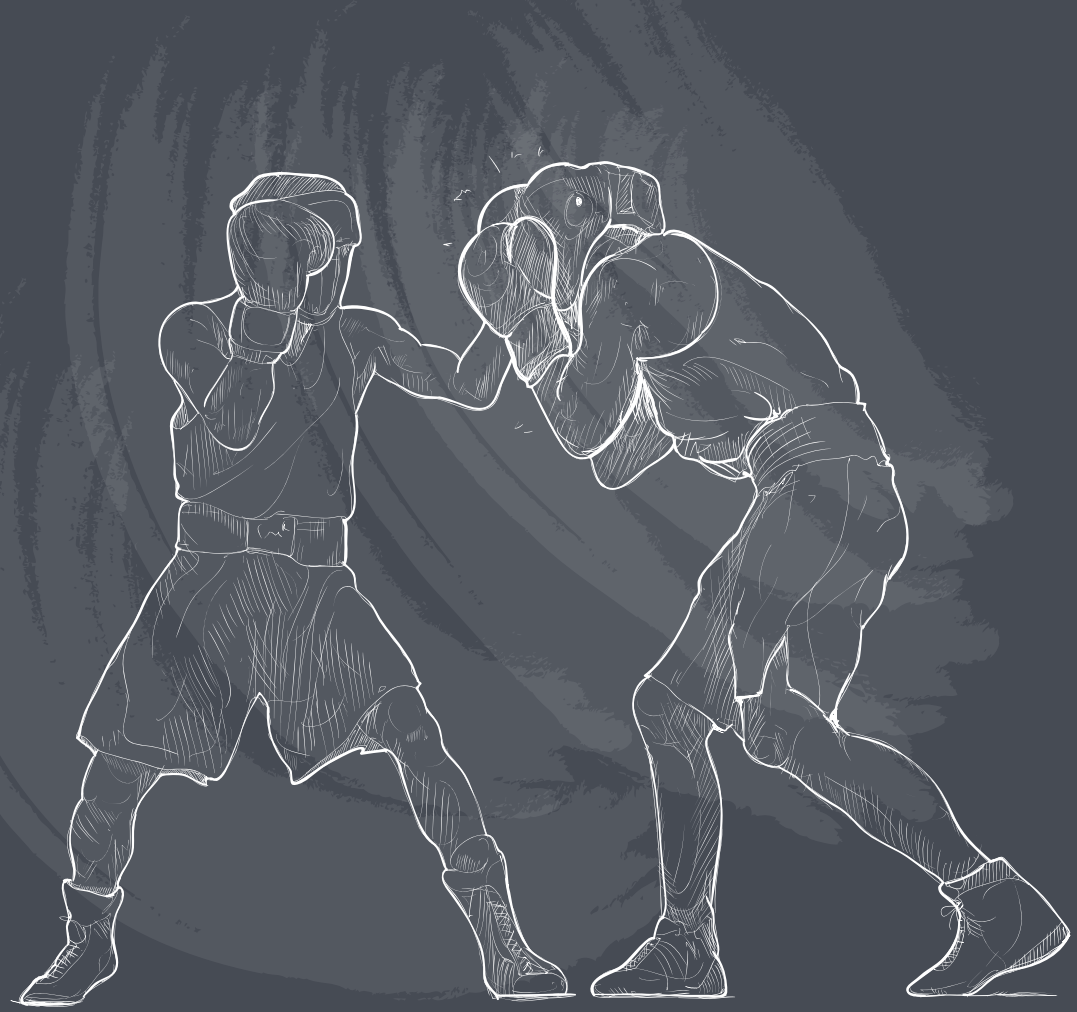
Consider the plight of a typical merchant for a mid-sized women's fashion chain with 500+ stores:

The buyer manages inventory for two active seasons, is buying for a third and planning for a fourth. In each season, she has hundreds of styles in dozens of assortments or collections, and the typical style has at least three colors and comes in a range of sizes. At any given time, the number of SKU-store combinations for each active season exceeds 1.5 million.

Now remember the 80/20 rule. No matter what, her allocation systems are just not keeping up with demand 20% of the time, even with the correct minimum and maximum thresholds configured.

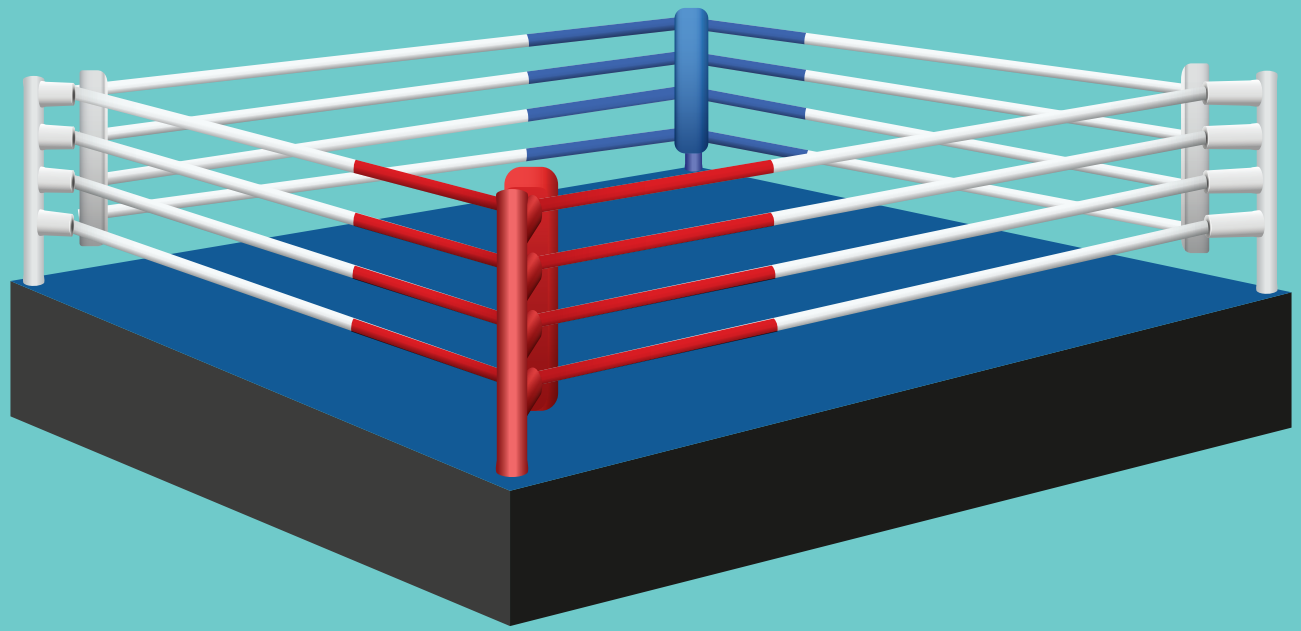
Every week, she has to search for problems and opportunities manually or react to store managers' pleas for more or different inventory.

Ideally, she could analyze every store/product combination, reflect the demand variances to current and past performance, and improve the buy amount balanced by local customer preferences. (By the way, this would take forever).



Too Many Times, Merchants are Up Against the Ropes

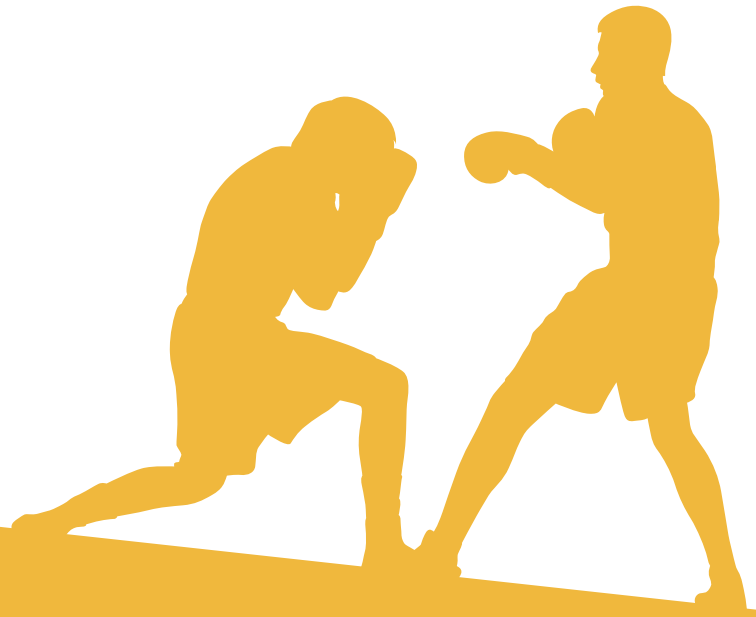
Do summary reports give her a high-level view of how each item is performing? Not really. It doesn't make sense to have her plan an entire inventory based on high-level, aggregate data points, riddled with false-positives and other diversions which don't offer a true picture of customer demand at the store level where the inventory stock-outs and overstocks really matter. Also, the highs and low of inventory productivity cancel each other out at aggregate levels so inventory distortion can't be measured using traditional metrics like weeks of supply or sell through.



Oh, and by the way, none of these exceptions are stored historically, so when it comes time to build pre-season retail plans for next year, she often is left repeating the same problems season after season.

The Traditional Way of Solving the Problem: Bob and Weave!

As noted, it's extremely difficult for a planner, allocator, and buyer to search for problems. Rules and thresholds are not telling the real story. They are simply the starting point. Additional information must be taken into consideration in order to determine if this exception is real.



When a merchant does get a flag for a significant out of stock, she tends to go through the process of drilling down (and around) from the top of some particular metric such as location or product hierarchy embedded within an extremely complicated and long spreadsheet. This is a very time consuming process, often done after hours. Plus this "inexact" method of identifying problems is often ineffective because it may be a red herring, or not always uncover the highest value problem or opportunity.

False Positives Skew the Judges' Scorecards

False positive exceptions, which are usually not accommodated for by planning tools, muddle the results because they don't take into account the maturity of the product lifecycle. For example, when a product first lands in a store, a merchant doesn't want to immediately flag it as overstock, because it hasn't had a chance to sell yet. Or when a product is at the end of its lifecycle, she doesn't want it to be tagged as out of stock, because she does want the inventory to stock out.

The “Sunday Night” Experience of an OshKosh B’gosh Retail Merchant:

“First, you download your spreadsheet so you can understand your information. I usually spent hours digging into each style that we were showing high stock-out rates for, such as a stock-out rate of 40% at a style level. I would then drill into that information, probably at the size level and see what size is stocking out the most. Then I would look at that size by location, by region and by district to see if it is specific to that location.

It didn’t end there. I would look at mall versus outlet versus strip center to see if that makes a difference. It would take forever to get down to that level of detail. Then I would need to figure out how much I would need to support the next sales cycle, say four weeks.

I couldn’t do all this during the week, because then I would miss my sales plan for the week and my manager would not be not OK with that. So, for me, it’s definitely been a Sunday night process.”

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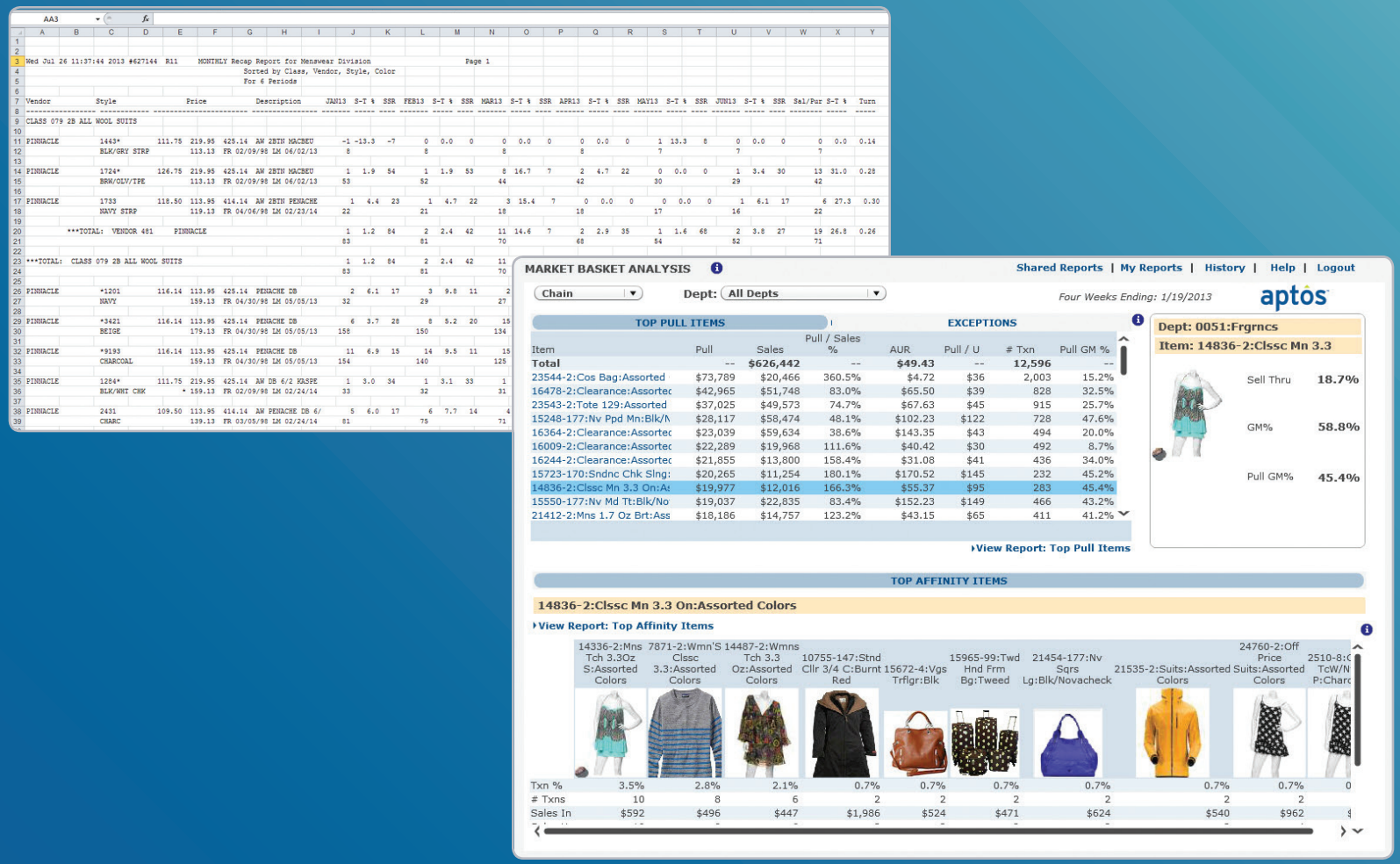
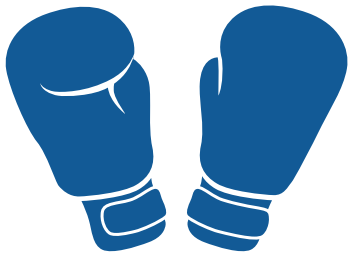
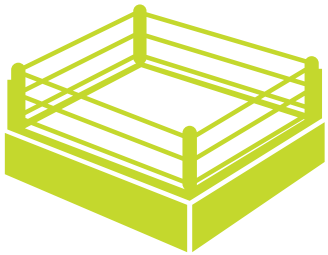


Highly tuned exception reporting is a quicker, more detailed way to dive down to the store and SKU-level compared to traditional business inventory reporting.

Many BI Reporting Solutions Produce Only Routine Reports and Take a Dive When it Comes to Flagging Exceptions

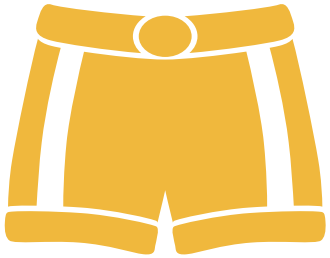
Traditional operational and business intelligence systems are excellent for reporting overall performance and trends for well-established key performance indicators, but they are poor at handling retail exceptions when they arise. Although these summarized reports and dashboards provide some visibility in general, they rarely help identify or correct the root cause of the exceptions. Complicated drill-downs are still required.

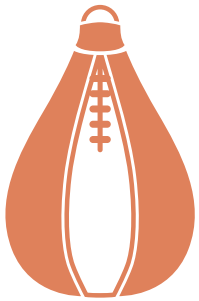




Many of these solutions also use a “one and done” approach to exceptions. They will provide an exception as of right now, but then the exception goes away and is not preserved for historical analysis.

Say a merchant stocked out of a popular product at one of its stores this year. If she bases next year’s plan on this year’s unit sales, and does not take into account the ups and downs of exceptions, then she may not have an accurate plan for product to meet the store’s demand next year. Essentially, she’s punishing the store for performing better than anticipated.





Retail Exception Reporting is the Most Effective Way to Battle Stock-Outs

Retail Exception Reporting allows merchants to see both current and historic exceptions and enables them to better manage inventory at SKU level, per store and channel, present and future.

The Aptos Analytics Retail Exception Engine™ (REE) employs an "engine" that sits outside a data warehouse and evaluates daily data at the lowest product level. It tags exceptions, assigns value to them and then stores exception data within the data warehouse.

This approach allows exception data to be aggregated at the appropriate level to highlight problems. It also assigns lost sales value and identifies those exceptions with the greatest opportunity to recoup sales, which could be acted upon immediately.

Stored data will tell merchants how stores and customers acted at a local level in the past, and how to adjust inventory forecasts and purchasing accordingly in the future.

Exception "Playbooks" Provide Actionable Plans as a Counterpunch to All that Data

Working in tandem with the Retail Exception Engine, Aptos Analytics Playbooks™ are a set of action-oriented retail analytics that highlight and quantify hidden inventory problems and opportunities typically buried in the details of mounds of retail data.

Playbooks combine descriptive, predictive, and prescriptive analytics to enable actionable insights. Exceptions values are calculated and stored, and exception data consumed in reporting and/or dashboards.

The following pages outline the key metrics obtained in the Playbook Stock-Outs and Overstock “Plays.”

Stock-Outs: A Tale of the Tape

Key metrics and possible corrective actions

Lost Sales Units or $
Estimates the weekly lost sales due to stock-outs assuming sold at predicted sales rate

Predicted Sales Units or $
Indicates the average amount sold per week in units or $

Service Level
Gross sales amount as a percentage of gross sales and lost sales

As far as "actions" that can be taken from this out-of-stock data, retail merchants can:

- Order more product
- Replenish from warehouse
- Accelerate existing orders
- Adjust allocation quantities
- Plan for future seasons
- Review trends
- Substitute inventory with similar items

Overstocks:

Key metrics and possible corrective actions

Overstock Inventory Units
On hand inventory units above the over stock threshold

Overstock Carrying Cost
The cost of carrying the overstock

Predicted Sales Units or $
Indicates the average amount sold per week in units or $

As far as “actions” that can be taken from this overstock data, retail merchants can:

- Cancel or delay open orders
- Mark down inventory
- Adjust allocation quantity
- Return to vendor
- Plan future seasons
- Promote products

Multi-Billion Dollar Sporting Goods Retailer Recoups 15.6% in Lost Sales

In the highly competitive sports fashion retail world, having just the right inventory is critical for the discriminating omnichannel shopper, who may have many other purchase options at the touch of a button. Footlocker's Champ Sports brand realized that a more proactive, more automated approach to tuning inventory would help capture additional sales, not just at its largest stores, but throughout all it channels. Champs turned to Aptos Analytics Playbooks for the inventory productivity solution.

> We believe this system can be a key factor in further enhancing our inventory productivity by delivering the ‘rights’: the right product, in the right store, at the right time, in the right size, and in the right quantity.

– Richard Johnson, CEO, Foot Locker

Foot Locker

Existing Foot Locker processes for making replenishment changes and allocations

- Feedback from stores was manual, personal and reactive
- Only focused on the highest selling Items at chain level
- Only focused on largest store
- Sell through analysis–only very high or very low product sales

Observations

- No analysis of locations by size
- Always felt there was opportunity for savings in the middle
- Allocation “Play” ensures right inventory levels store-by-store by prioritizing in season and next season allocations.
- 15.6% Reduction in lost sales
- On $1B sales, this is a $6.7M gross margin benefit

Dashboard shows predicted lost sales by item and by store

Aptos:
Your Retail Analytics Partner

In an era of virtually limitless choice, sustained competitive advantage only comes to retailers who engage customers differently—by truly understanding who they are, what they want and why they buy. At Aptos, we too, believe that engaging customers differently is critical to our success. We are committed to a deep understanding of each of our clients, to fulfilling their needs with the retail industry's most comprehensive omnichannel solutions, and to fostering long-term relationships built on tangible value and trust. More than 500 retail brands rely upon our Singular Commerce platform to deliver every shopper a personalized, empowered and seamless experience… no matter when, where or how they shop.

Learn more: **www.aptos.com** and **info@aptos.com**.

One Customer

CRM • Clienteling

One Interaction

POS • Mobile POS • Digital Commmerce

One Order

Enterprise Order Management

One Secure Platform, in the Cloud

Singular Commerce, Seamless Experiences.

One Product

Planning • Merchandising

One Truth

Audit Operations Management

One View of the Enterprise

Analytics

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