



Assortment & Space Optimization

Predictix

Defining the optimal localized assortment for every store and every space

Every one of your stores serves unique customers. And not all of your stores have the same space. Yet traditional assortment solutions follow a one-size-fits-all approach to selecting products, and traditional space solutions manually force fit one assortment into many different spaces. What if you could instead define the best, localized assortment for each and every one of your stores and POGs?

Common assortment and space techniques select a mix of products for shelves, but don't put the best mix of products on each shelf:

- Assortment and space decisions are linear and disconnected, whereas they are in fact inseparable - you can only assort to the space(s) you have available
- Categories behave differently within a store - clustering by demographics at the total store level does not capture these differences
- "Assortment by sales" and "earn your space" techniques ignore product substitutability and the importance to the overall assortment - and to sales and margins - of slower moving or unique items, items key to the shopping experience
- Typical assortment and space tools don't take into account demand forecasts, cross-item effects, or replenishment requirements, so there's no way to iterate through assortment options to choose the optimum one
- An assortment based on the largest POG that has to be force-fitted to smaller POGs is not an optimized assortment - in fact, assorting the smaller POGs, with their inevitable trade-offs, represents much more of a challenge than the large ones

- Trying to accomplish all of this and also comply with business rules and objectives, for example, assorting private label items or dedicating a specific percentage of space to various vendors, is very difficult if not impossible to do manually

In contrast, an ideal assortment and space optimization solution:

- Starts with considering actual consumer buying patterns
- Takes into account demand, cross-item effects (brand loyalty, substitutability, lifestyle preferences, cannibalization), replenishment, and other inputs
- Lets users define business rules and objectives that must be met within the context of an optimized assortment
- Produces an optimized assortment for each and every store and each and every planogram
- Provides real-time financial forecasts of the assortment

Predictix delivers localized assortments that drive higher margins and meet business objectives

Retailers can expect category margins to improve 100 basis points or more from optimizing their assortments with Predictix Assortment and Space Optimization (ASO). These results may be even higher in categories with greater product redundancy, more new product introductions, and more underperforming items. On a qualitative level, customer satisfaction improves by having more robust assortments within the stores' existing space. Retailers can also consistently meet their category objectives and enforce desired rules without needlessly sacrificing sales or margins, since Predictix ASO explicitly takes all business rules, objectives, and constraints into account when optimizing each individual assortment.

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A more effective approach to ASO

Predictix ASO achieves truly optimized, localized assortments for every store, every category, and every POG by introducing many distinctive and unique approaches; we highlight a few below:

Substitutable Item Groups (SIGs)

Predictix ASO looks at actual consumer buying behavior to determine the optimal assortment of products. For example, instead of simply taking the highest selling products in a category and automatically placing them in an assortment, it groups products into SIGs. These are products that the consumer considers interchangeable. Our model might propose excluding some substitutable items, because sales won't suffer from their absence, and making space for other items which while slower moving will represent net new sales and margins. The assortment will also be more robust, which is key to ensuring consumers perceive that a store has a complete assortment of goods.

Behavioral Clustering

Grouping stores based on the similarity of their exhibited customer behavior – not demographics – is an important foundation to Predictix ASO. This ensures that the assortment is tailored to the customers' exhibited tastes, and not simply what their tastes are assumed to be. Predictix can provide this clustering capability as part of our ASO solution, or we can leverage existing clustering assets.

Customer insights

Insights into how customers shop individual stores and categories must be considered in your assortment planning process. The aim of Predictix ASO is to make these insights actionable, which we achieve by linking these into our science engine. A rule can be written to “include items in the assortment that are typically found in the largest and most profitable baskets”, for example. Predictix can help a client organization develop these using our analytical tools, or we leverage existing customer insight assets.

Net Contribution

Retailers typically look at gross profit as the benchmark for whether an item delivered value to the bottom line. Gross Profit doesn't burden that item with the real costs of it: handling,

transporting, stocking, carrying cost of inventory, and shrink. Predictix ASO lets merchants clearly see the Net Contribution of that item by loading all of those extra costs against it.

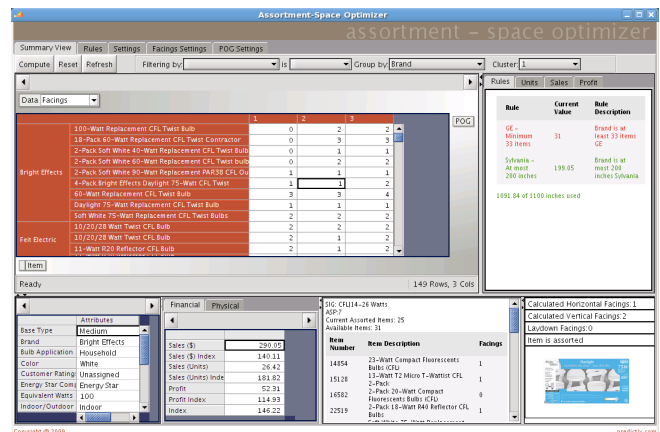
The optimal assortment for every shelf

Traditional assortment solutions typically assort to the largest POG. Planogrammers must then manually “trim” that assortment to smaller POGs. Instead, Predictix ASO automatically optimizes assortments for every cluster and each POG within each cluster, a task that would be impractical if not impossible manually.

Category objectives and rules built into the assortment

An optimal assortment isn't simply what the “math” says. It must also take into account the express objectives of the merchant. These may be to have at least “N” facings for every subcategory, or “X%” private label items, or at least “Y%” allocated to a strategic vendor. Predictix ASO lets merchants easily define rules and objectives, assign those rules and objectives to single, multiple, or all clusters and POGs, and calculate optimal assortments that meet these rules and objectives.

Assortment scenarios with optimization and business rules



Users can test changes to assortments, check whether they meet required business rules, and re-optimize assortments taking into account manual changes.

Assortments that account for what happens in the store

Products sell at different rates, on different days, can be stocked at different levels, and are replenished differently. ASO accounts for these differences when recommending optimal assortments, balancing inventory investment and in-stock conditions across product types, price points, and replenishment methods.

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Demand modeling

Changing even one item in a category's assortment will change the customer demand for multiple products across the category and possibly across the store. This impact will vary by product – some may deliver incremental sales to a category while others purely cannibalize other, similar products. Predictix ASO is built on a demand model that can quantify the effects of cannibalization, halo, and incrementality throughout the assortment. This provides the user with data-driven insights to ensure that the right assortment changes are made.

Scenario building

Core to identifying the best assortment plan is the ability to test a number of “what if” scenarios set up by the user. Predictix ASO enables this type of analysis by allowing the user to change high-level factors such as strategy settings and low-level factors such as an item's facings in a planogram. By modeling the impact of these changes and returning the financial results in real time to the user, Predictix enables the user to apply their “art” to the system's “science” to develop the best possible assortment for each store's consumers.

Real-time financial forecasts

An assortment is not an end in itself, but a way to drive sales and margins. Predictix ASO lets merchants model potential changes to assortments and see the impact of those changes on units, sales, and margins in real time.

Ability to integrate with other applications

Predictix ASO provides merchants and planners with a clear view into the upstream and downstream impacts of their assortment decisions through our integration with other Predictix applications. This provides a single version of the truth within the organization. Other Predictix applications include:

- Merchandise and Financial Planning
- Location/Channel Planning
- Item Planning
- Forecasting
- Regular Pricing
- Promotions Planning
- Clearance / Markdowns
- Replenishment

Leveraging existing investments in data

Predictix ASO leverages a retailer's existing investments in enterprise data. In cases where the organization doesn't have certain data, we can develop an alternate solution which may be internal to the client organization, from within the Predictix suite, or from a third-party provider.

Data typically received from our clients:

- Product: Hierarchy, attributes, new items, affinity groups
- Profitability: Price, cost, slotting fees, handling, transportation, stocking, inventory carrying cost, shrink
- Location: Hierarchy, clusters, planograms
- POS data: Typically item-store-week
- Strategic inputs: Category goals, category trends
- Customer insights: Loyalty card, market basket
- Optional data: Advertising plans, syndicated data

Data typically returned to our clients:

- Assortment: Items and facings per planogram or store, which serve as inputs into third-party space planning tools
- Financial performance: Expected item-store-week forecasts, which serve as inputs into planning systems

About Predictix

Predictix offers the only merchandising suite designed to take full advantage of the cloud to enable retailers, wholesalers and brands to make better forecasting, planning, assortment, pricing, promotions and replenishment decisions. The latest predictive technology and unified platform drive better results for our clients. Our agile approach and on-demand model allow us to rapidly iterate with our clients to a best-fit solution, delivering value early and sustaining and growing value over time.

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