CUSTOMER-CENTRIC ASSORTMENT CLUSTERING

Perspective

What is Assortment Localization and Clustering?

For retailers, the stakes have never been higher to have the right product in the right stores at the right time. Intense competition from online retailers and the slowing pace of new store openings have refocused efforts on increasing productivity from their existing store base/square footage. The result: retailers are chasing merchandising localization harder than ever before.

The concept of localization is simple: optimize the merchandising assortment to the unique demands of consumers in each market. Think of the much publicized ‘My Macy’s’ initiative launched to drive same-store sales. Executing a localized assortment can be difficult in practice, as there are many questions: Do you assort each store individually? How do you group stores into clusters? What are the costs and benefits of each additional assortment? Every retailer chooses its own localization path, typically landing on a clustering approach that groups stores by sales volume or geography and then localizes the assortment for each cluster of stores.

Why is It Important Now?

In today’s highly competitive omni-channel environment, brick and mortar retailers are under intense pressure to ensure the right products are available in the right stores. Holiday sales from 2015 illustrate that while overall sales increased 7.9% year over year, they were bolstered by a 20% rise in online sales indicating the continued preference in shopping where customers are confident they will find the product they want. Failure to establish a tailored assortment will drive customers to competitors who offer a more compelling product-line or to online sources where they can tailor their assortment with the click of a mouse or the tap of a phone. The challenge for brick and mortar retailers is finding the ‘optimal’ clustering approach to drive assortment decisions. That is, the clustering approach which balances the cost needed to achieve maximum revenue lift.

“We want to really understand what are the items they are looking for for the home and really customize our assortment of things like patio grills, recognizing that they’re living downtown and they’re probably not looking for a five-burner grill, but you want something that fits on your patio.”

- BRIAN CORNELL, TARGET CEO
Consider an example of two stores located within five miles of each other in a major U.S. market. The retailer may very well have assigned those two stores the same assortment of products due to close proximity. However, looking further at those stores’ demographics reveals that each store’s customers are quite different and would benefit from carrying different assortments. Further, it is possible that the issue is compounded due to the fact that the retailer is not reviewing performance at the store level, but relying on cluster level data to drive decisions. Because the stores were not properly clustered, one location suffers while the other prospers.

There are several other reasons why consumer centric assortment clustering is important to brick and mortar retailers:

- Competition increasing from online retailers with unconstrained shelf space and wide assortments
- Consumers’ need for instant gratification is increasing lost sales from product unavailability
- Reduced chain expansion rates are driving the need to increase sales out of the existing store footprint
- Frequently changing assortments are making store specific assortment plans prohibitively expensive to manage
- Consumer preference variation is rendering the approach of carrying products at the ‘national level’ ineffective

JULY, 2015 RETAIL NUMBERS:
TRAFFIC: -11.0%
SALES PER STORE: 4.7%

DESPITE FOOT TRAFFIC IN STORES DECREASING, SALES PER STORE CONTINUES TO REMAIN POSITIVE, INDICATING THAT WHILE THERE ARE FEWER SHOPPERS, THOSE THAT REMAIN ARE PURPOSEFUL. ASSORTMENTS SHOULD ACCOMMODATE THESE SHOPPERS TO MAXIMIZE REVENUE.
Our Localization Approach for Optimal Store Clustering

Through our work with several leading big box retailers, North Highland has developed a unique, data-driven approach to product localization. This approach leverages data analytics to arrive at optimal store clustering strategies based on multi-dimensional product and store attributes, allowing retailers to truly cluster stores based on the behavior of the customer and not on geography. We believe our strategy better reflects true buying preferences, accounting for the qualitative view of the customer journey and customer preference to weigh and rank attributes.

Clusters Based on Customer Behavior – By modeling the assortments based on product attributes, the buying preferences of the customer will be revealed across products.

Data Defines Clusters – Rather than dictate the number of clusters or size or each cluster, we allow the data and the modeling process to drive the true clustering and adjust the model to best fit the retailers’ needs.

Multi-Dimensional Models – It is important to combine additional demographic data with store and product performance to ensure the clusters are driven by the customer and customer preference rather than by geography alone.

Broad Data Set – Combining online sales data with qualitative social and search data can improve the understanding of true buying preferences and influence the right product to stock on the shelves in the store.

Qualitative Customer Input – While sales data and store data are good, it is imperative to understand customer behavior to build a better model. Understanding why a customer chooses the product they do allows us to properly weigh the factors of a model and better predict what product assortment will meet customers’ desires.

How Advanced Clustering Works

To perform advanced clustering, North Highland works with a retailer to identify and collect appropriate data sources. Inputs include in-store demand by product, product attributes such as color, style, and size, and store attributes such as location, volume, and shelf space.

To identify blind spots in the retailer’s current in-store assortment, we collect market sales data from the retailers’ vendors and online sales from the retailers’ online division. North Highland combines the retailer’s data with demographic and economic condition information from sources such as Neilson, Simmons, and the U.S. Census Bureau along with a qualitative understanding of the customer buying journey and attribute importance.
Analyzing all of these data sources gives a complete picture of customers’ product attribute preferences and demographics, allowing for statistical grouping of like customers and stores, regardless of geography. Finally, North Highland performs regression analysis to illuminate demand drivers within each cluster to help retailers better understand and market to the customers each store cluster serves.

**What are the Benefits?**

Benefits of utilizing analytically based clustering to assort products include increased revenues and margin, improved customer shopping experience, and minimized costs associated with inventory and management of the assortments.

If we consider the example stores mentioned in this piece, properly clustering two geographically similar stores would have allowed the poor performing store an opportunity to offer the products that the shoppers truly wanted, thus increasing sales for the store. Those additional sales would have, in turn, reduced the inventory carrying cost by increasing turns on the products that sell and not allowing the incorrect product to sit as unproductive inventory on the shelf. Properly clustering can also reduce potential markdown dollars needed to move the poor performing product off the shelf. While it may increase support cost to manage separate assortments for these stores, it would be outweighed by the increase in sales driven from the improvements realized.

In this extremely competitive retail market, customer-centric assortment clustering needs to be a focal point of the business. This kind of analysis and action can drive upwards of 3 to 6 percent in top line growth for the category as part of an assortment optimization initiative. Retailers who optimize their localization strategy will have the competitive advantage in the future.

Sources:


**ABOUT NORTH HIGHLAND**

North Highland is a global management consulting firm that delivers unique value, relevant big ideas and strategic business capabilities to clients around the world. The firm solves complex business problems for clients in multiple industries through an integrated approach and offers specialty services via its Data and Analytics, Managed Services, and Sparks Grove divisions. North Highland is an employee-owned firm that has been named as a “Best Firm to Work For” every year since 2007 by Consulting Magazine. The firm is a member of Cordence Worldwide (www.cordenceworldwide.com), a global management consulting alliance. For more information, visit northhighland.com and connect with us on LinkedIn, Twitter and Facebook.

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