

# Unmet Demand & Shopper Preferences



Syzen's demand-chain Analytics Reveals what shoppers want

## Executive Summary

“Unmet consumer demand is the holy grail of growth” in retail. Syzen worked with a supermarket chain to identify **shopper preference-based unmet demand (SPUD)** which allows CPGs to enhance their **consumer and market knowledge** in a quantitative and actionable manner. Using T-log data, Syzen’s BI Stack extracts Unmet Demand down to the SKU-level at each store.

1. Identified a ~17% unmet demand for one product category worth about \$1.5 Million in revenue.
2. CPGs and retailers can use SPUD “demand signal” to optimize the assortment and improve Brand strategy.
3. Over 200 Trillion calculations done in under one hour; heatmap & Brand charts free, SKU SPUD is a paid service.

[Syzen Analytics, Inc.](#)

Seattle, USA

Vendor of a *Prescriptive Analytics SaaS App*

- For retail DEMAND chain
- Unique store-specific & SKU-specific Shopper Preferences

*Syzen solution “automates” consulting and Prescriptive Analytics – a first for shopper product preferences!*

## Challenges

A well-known Brand in Yogurt product category was looking to optimize their ad and promo campaign spends for the coming year. Syzen stepped up to help using our Shopper Preference-based Unmet Demand (SPUD) “signal”. With SPUD, CPGs and Supermarket retailers can start digging to find which SKUs in which geos show significant unmet demands. As Susan Dunn of Nielsen says in her 2013 report, Identifying Unmet Demand: the Key to Long-term Innovation Success, “Enter the search for profitable **unmet consumer demand, the holy grail of growth**”!

In category management, Unmet Demand is the result of the interplay between what the retailer carries on their shelves (product assortment) and what multiple CPGs desire to put on the retailer’s shelves. A well-known supermarket chain on the East Coast of USA was interested in optimizing their product assortment, improve revenues and rationalize the SKUs that they carry.

The retailer had a revenue of \$23 million in 2014 from Yogurt category in a region that comprised 200 stores. They wanted to know which Brands and its SKUs had the highest shopper preference-based unmet demand or SPUD Index.

# Syzen SPUD “demand signal”

Surveys of customers are an unreliable proxy for shoppers’ purchase propensities due to self-selection and other biases. Syzen analyzed the supermarket store T-logs (with no customer ID info); out of a total of 50 million logs, over 20 million where transaction under “No-Promo” condition when shoppers’ pure product preferences are revealed rather than being affected by immediate discount incentives.

Comparing the transactions among the 1.5 million or so individual shoppers (which amounts to around 200 TRILLION proportion calculations!), Syzen BI Stack is able to discern how much shoppers at a store would have purchased other Brands and SKUs if they were available on the shelves.

Considering that past year records will reveal High and Medium preferences from the actual spends, the challenge is to estimate the “yellow” overlapping region in the Venn diagram – which is what Syzen BI Stack does!



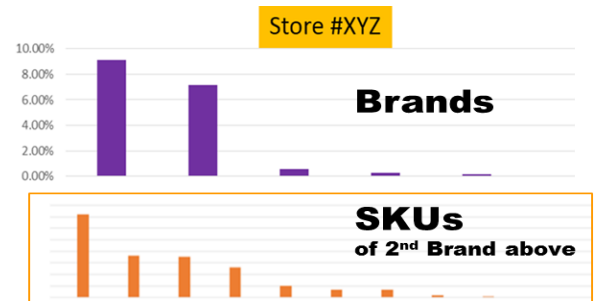
Syzen SaaS automates the 200 Trillion calculations in this case and does it under one hour.

**What is UNMET Demand or “SPUD”?** Say, we calculate X% SPUD for SKU-Q at Store-A = Chain-wide COHORTS of Store-A shoppers bought X% MORE SKU-Q units than Store-A shoppers. Which means -  
 → *Shoppers at Store-A can be expected to buy X% more units of SKU-Q if made available in Store-A!*

## Syzen SPUD Results

The Unmet Demand for all stores are shown on a heatmap on the banner. SPUD index for some Brands are shown here (in purple). When you dig down further for a selected Brand, one notices that only 9 (out of the 35 in this case) SKUs show unmet demand. Such SKU and Store-specific results are immediately actionable and represents what is known as “**Prescriptive Analytics**”.

The SPUD Index represented a revenue opportunity of \$1.2 to \$1.8 million (95% Confidence Interval) for the subset of stores processed. It should be noted that Syzen provides the heatmap and the Brand Unmet Demand bar chart FREE of charge; only the SKU SPUD is a paid service!



## Syzen SPUD Index for CPGs

**Unmet demand for your Brand across geos: Improve revenue, margins, customer satisfaction by “precision” brand management.**

- Pinpoint households/locations with the highest Unmet Demand where product trials have the best potential to acquire/retain customers.
- Cluster stores by shopper-preference for your Brand (Blue & Red store locations have different shopper preferences): Precision-target your ad and loyalty campaigns better than zip code based-targeting. Conserve on discount, promo and coupon spends.
- Unmet demand for specific Brand SKUs = Data to support more shelf space. Target specific store placement opportunities. Solution for “NULL” problem: know the demand for your Product in stores that do not carry it today.
- New Product Introduction: Conserve expenses for NPI using NULL problem solution.

