



Advanced Analytics Tools Utilized to Drive 2-3% Gross Margin Through SKU Rationalization



SITUATION

A leading price point retailer approached AArete to develop a SKU rationalization strategy for their department stores. The client's existing strategy focused on rationalizing SKUs on the basis of simple KPIs without appropriately accounting for market basket characteristics, inter-departmental associations and other hidden relationships.



APPROACH

AArete developed a custom SKU rationalization model leveraging multiple algorithms, most notably an association rules algorithm, focusing on market basket analysis. Using an open-source analytics software called R, we developed product clusters to identify complementary products based on a number of variables. Through defining these relationships, we were able to determine which SKUs should be retained or removed, with a bias on enhancing overall assortment productivity. We then used Graph Theory to further enhance insights from the model and identified SKU hierarchies and relationships. This was incorporated into a custom dashboard visualization tool to improve interpretation and streamline decision-making processes.



RESULTS

The modeling output resulted in the ability for our client to visually represent findings to further understand SKU relationships, eliminate unproductive items from their assortment, and improve product placement strategies to further capitalize on complementary item relationships. Ultimately, our model identified the potential to drive a gross margin increase of 2-3% while also improving profitability and efficiency.

