How a CPG conglomerate leveraged advanced analytics to uncover the value of innovation and assess the impact of new product launches



Aays

Ability
to measure and track innovations

Assessment
of cannibalization, incrementality and competitive steal

A multi-billion-dollar global consumer goods company sought to measure the true value of its innovations and the value of incremental sales generated from new product launches. Facing the challenge of understanding the impact on sales while considering competition and potential cannibalization effects, the company turned to advanced analytics to drive their decision-making process. Through the power of data and ML, they could achieve an effective measurement and tracking, portfolio transformation, and improvised assessment of cannibalization, leading to enhanced decision-making, and overall innovation value for the organization.



COMPANY

The client is a multi-billion-dollar global consumer goods company, producing some of the world's best-known brands in confectionary. They have operations in over 80 countries; and their products are being sold in over 130 countries.

Given its massive portfolio across products viz. confectionaries, gums, candies, mints, pet foods etc., the innovation team was tasked to track the true value of innovation so that they are not only able to track and focus on the key consumer trends evolving but also drive ROI on the new product launches.

CUSTOMER NEEDS

Measuring the true value of innovation and understanding the incremental value of new launches was one of the primary needs. This would enable the innovation team to establish meaningful measurement criteria for evaluating their strategies and priorities. This involved assessing additional sales generated within the specific category because of new product launches.



CHALLENGES

The project presented several challenges that required careful considerations. These challenges included:

Complex Portfolio Evaluation: Evaluating the impact of innovation in a diverse portfolio posed difficulties due to numerous product variants.

Incrementality Assessment: Accurately measuring the additional sales generated by new product launches while considering competition and cannibalization was challenging.

Competitive Steal and Conquest Analysis: Understanding the value of capturing market share from competitors required comprehensive analysis.

Performance Evaluation Across Dimensions: Assessing the effectiveness of innovations across brand, category, and region levels demanded thorough evaluation.

Aggregated Organizational Performance Assessment: Evaluating the overall impact of new product innovations on sales, market share, and profitability involved analyzing extensive data sets.

OUR APPROACH

Our approach involved defining key performance indicators (KPIs) to assess the performance of innovations at various levels - brand, category, and region. These KPIs included core products, PPG mapping, product innovation, conquest, cannibalization, and incrementality. Here is how we approached the case study:

A. Defining PPG Mapping and Innovation

PPG Mapping: The dataset was segmented into core products (with over 24 months of data) and innovations (more than 6 weeks old and less than 24 months old). PPG mapping was done for products (SKUs/UPCs) that were grouped together based on similar pricing and promotion. The criteria for forming these groups differed depending on the category. For instance, all the SKUs belonging to a particular sub-brand and pack size were grouped together under one PPG.

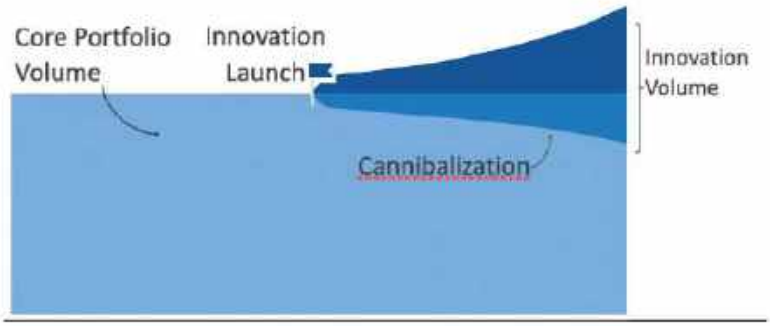
Innovation mapping: To create a combination of innovation, cannibalization, and conquest mapping, each innovation was associated with specific core PPG groups. The objective was to identify and narrow down features to generate a product basket that resembles the target group. Utilizing a fuzzy logic approach and heuristics, a look-alike product basket group was prepared.

B. Perform causal analysis to compute cannibalization and conquest

By harnessing the power of causal AI and ML models, the estimation of cannibalization and conquest value was made possible. Initially, the base sales were forecasted, projecting the sales value if no innovation had been launched. This forecasted value was then subtracted from the actual sales, enabling an understanding of the innovation's impact through the utilization of conditional probabilties.

C. Compute incrementality and total value of innovation

Incrementality was determined by subtracting the cannibalization rate from the expected innovation volume. Once aggregated, total value of innovation resulting from new product launches was estimated.



Computing cannabalization and incrementality



Measuring the impact of innovation on sales

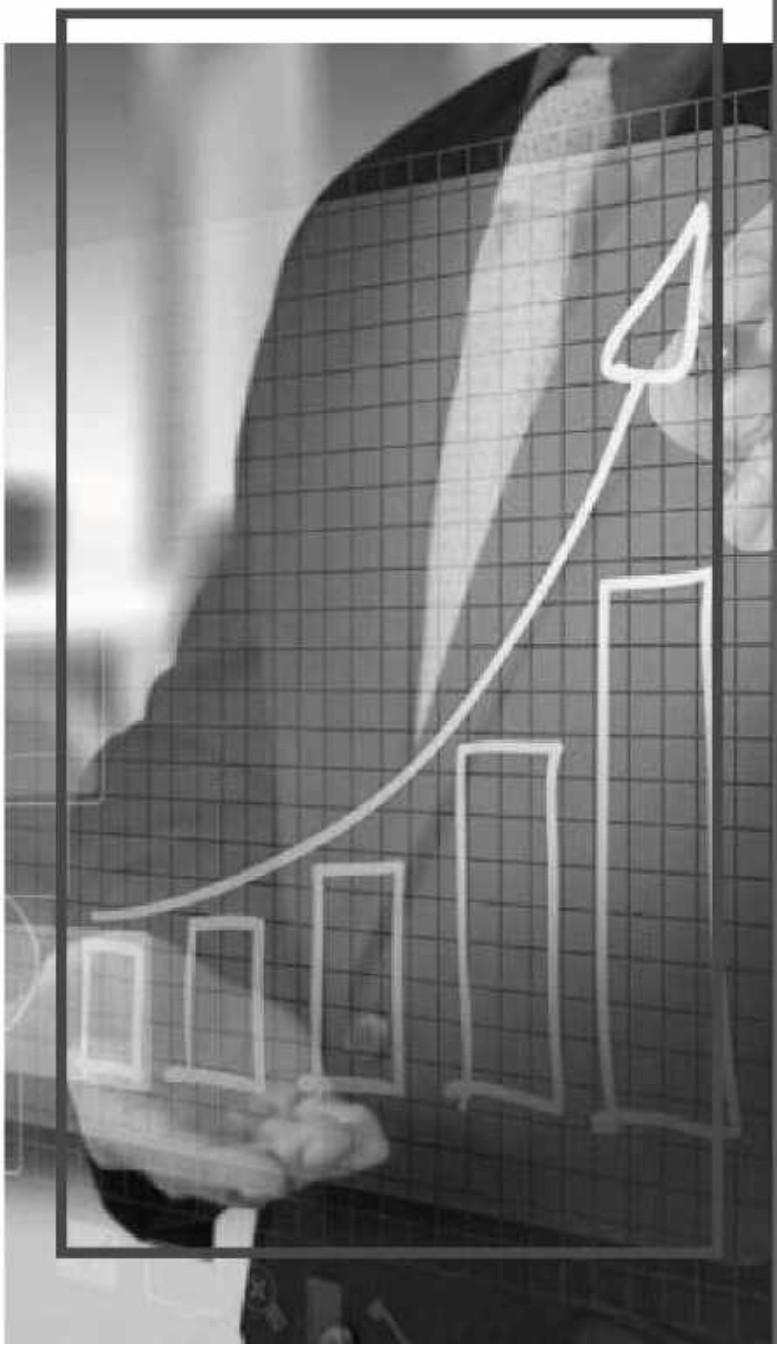
KEY FEATURES OF OUR SOLUTION

Aggregated Innovation value:
The solution offers the capability to assess the overall performance of the organization in relation to new product innovations (NPIs). By evaluating the collective impact of new products on sales, it is able to provide an estimate on the value of innovations taking place in the organisation.

Evaluation of Incrementality:
The solution offers the capability to measure the incrementality of new product innovations, ensuring they contribute to overall sales growth even after accounting for cannibalization. Additionally, it allows for the analysis of sales cannibalization, helping the customer to understand the potential effects on existing products within the portfolio.

Value of competitive steal:
The solution empowers the user to comprehensively understand how new products capture market share from competitors. By determining the value of conquest and measuring the extent to which new products attract new customers to the brand, the solution helps to strategically expand the customer base.

Performance across brands, product segments and category:
The solution provides the capability to evaluate the performance of new product innovations across multiple levels, including brand, category, and region. It further helps in identifying areas where the innovations are most successful, allowing the customer to capitalize on those strengths. Additionally, we assist in pinpointing areas that require improvement, ensuring the customer can strategically enhance the product offerings.





Business Outcomes:

Effective measurement and tracking:
The company gained the ability to measure and track innovations with precision. This allowed them to identify that 22% of innovations contributed to over 75% of the overall incrementality. Armed with this knowledge, they were able to align their promotional spends with the high achievers in the innovation bucket, optimizing their marketing investments for maximum impact.

Portfolio Transformation:
Leveraging the tool, the company successfully transformed its portfolio towards high-growth segments, categories, and regions. By allocating resources to high-value creating opportunities such as trade-up and value migration, they strategically positioned themselves for growth and profitability.

Improvised assessment of cannibalization:
By understanding the dynamics between products and their impact on each other, the company was able to measure cannibalization. This insight enabled them to make informed decisions regarding product launches and marketing strategies, minimizing the risk of cannibalizing their own sales.



Aays

Aays Analytics is a boutique AI & data consulting firm which specialises in democratising data science and ML in corporate finance space. We partner with global conglomerates having large, complex data footprints and help them contextualise their data science journey with deep functional focus. Since our inception in 2018, we have solved some of the most complex business problems faced by fortune 1000 and fast-growing companies in the world utilising big data, cloud computing, and AI/ML.

We are backed by a strong management team with IIT/IIM background and over a decade of industry experience with fortune 100 companies. We are ranked among the top 5 fastest growing companies in Analytics India magazine's (AIM) list of the best data science providers in India for 2022.