

Demand Forecasting

Predict future trends and get granular demand insights at SKU and store level to make better-informed decisions across supply chain.



CPG manufacturers are under constant pressure to be adaptable due to rough competition and low switching costs. In today's globalized and digital world, unforeseen demand shifts, changing consumer behaviour, disruption in supply chains and new product releases are posing big issues making it essential for organizations to leverage the availability of data and the power of cloud computing to move forward with agility and accuracy.

Benefits of our demand forecasting solution



Improve forecast accuracy
Enhance your forecasting capabilities



Data-driven planning
Take better sales and inventory decisions using critical insights



Efficient production and storage
Achieve leaner holding and production costs



Optimize supply chain
Synchronized demand across all supply chain processes



Improve customer service
On-time distribution and deliveries.



Reduce lost sales
Anticipate demand and avoid stock-outs

Process Overview

● Collaborative
 ● Managed service

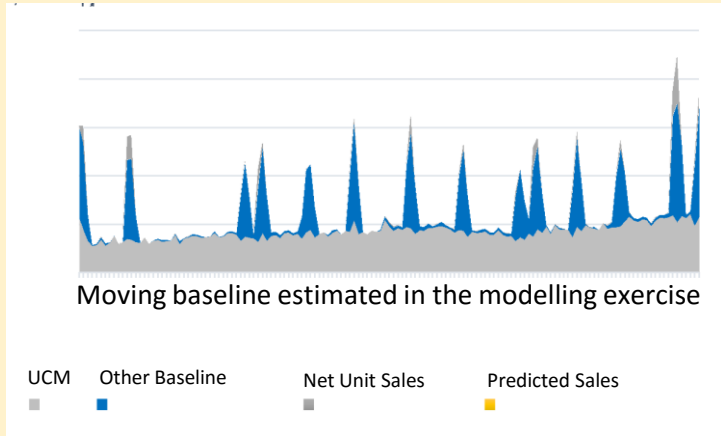


Our end to end approach

The approach estimates Elasticity and Baseline sales using historical data based on traditional econometrics modelling and applies Machine Learning techniques for future prediction.

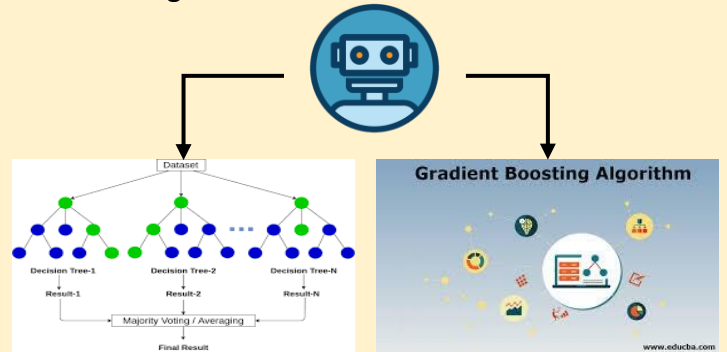
Traditional Econometrics Technique

- Consider historical data to estimate elasticity
- Derive insights on:
 - Variable importance
 - Seasonality, Weekday and Holiday impacts



Machine Learning Approach

- Generate elasticities for newly launched products based on historical look-a-like products considering
 - Products attributes like Product Type, Color, Fabric etc.
 - Regular Retail Price



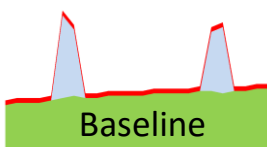
Random Forest is a collection of single trees that are grown in a specific manner. A large number of trees are developed using bootstrapping and variables sampling methods.

This ML technique is based on the theory that “weak learners” when combined gives a far superior performance. In gradient boosting the trees are grown sequentially.

Major modelling techniques

Econometric Models

We use State Space models to generate a statistical baseline that can include seasonal, cyclical and trend patterns. These models are multiplicative to control for seasonality, interaction effects and capture the impact of other causal factors such as promotion, cannibalization and Forward buy



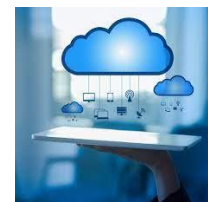
ML Models

The predictive models based on machine learning have found wide implementation in time series forecasting like Random Forest, XG Boost, and Neural Networks. These models are quick to implement and have high accuracy and computational relevance.



Intelligent Cloud

Cloud-based solutions can capture itemized sales data and execute statistical demand forecasts. These solutions allow real time integration, lower cost and enable scenario data-driven decision making.



About TransOrg Analytics

TransOrg Analytics is a Big Data and machine learning solutions and services company transforming businesses. Our solutions and products encompass advanced analytics, data engineering, data science, machine learning, artificial intelligence and smart data visualization. We come with tenured experience of 11+ years across multiple geographies like North America, Middle East, APAC and India and have delivered millions of dollars in incremental top line revenues via 300+ projects of varying complexities for 60+ India and international clients.