

# Demand Forecasting for Decision-Making in Marketing and Supply Chain

Customer Case Study-  
A top home appliance manufacturer



## Business Need

Our client, a large global home appliance company was interested in predicting the future amount of sale using seasonal patterns and historical data of pricing and competitors in order to manage marketing activities.



## Customer Challenges

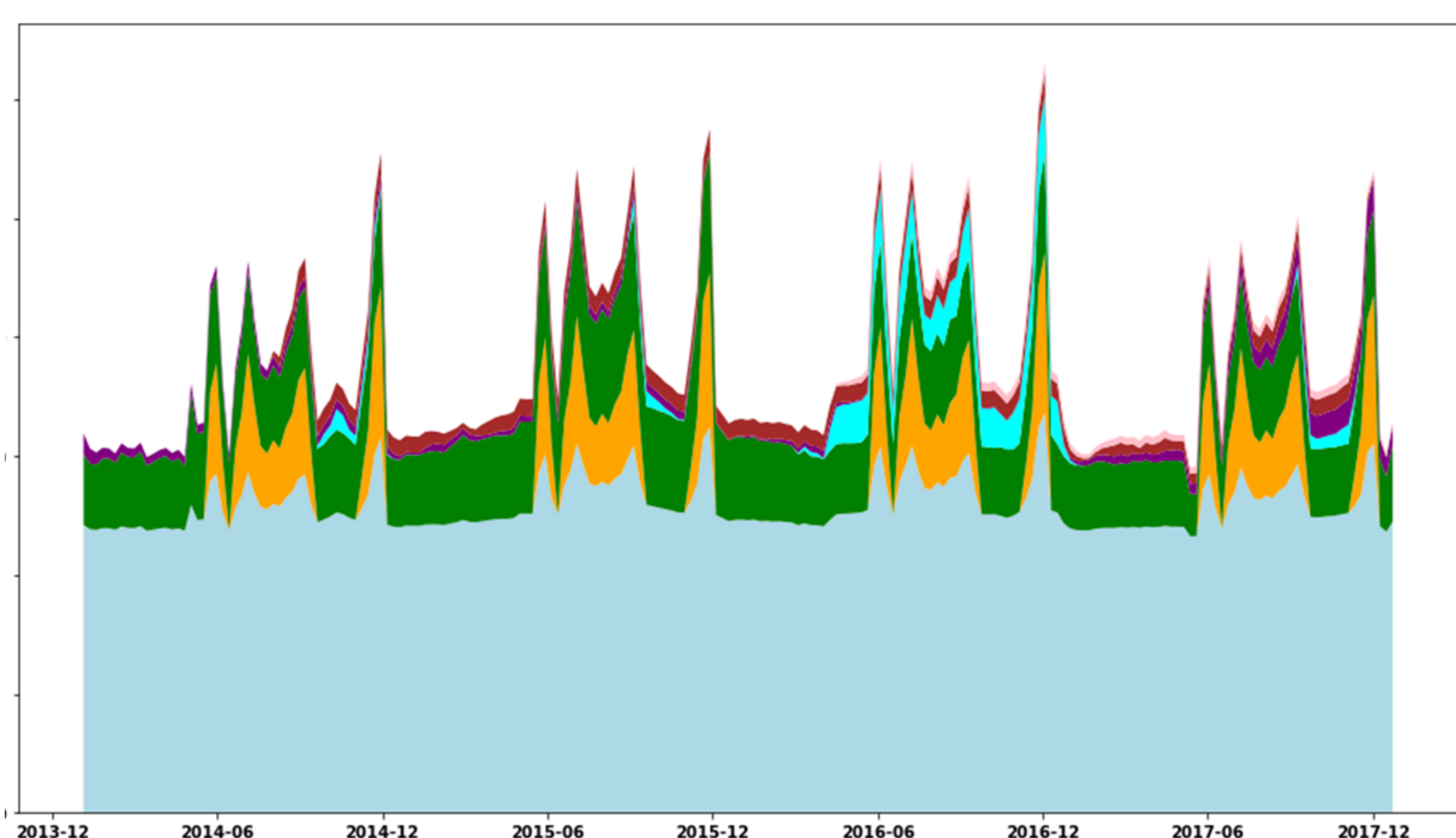
- Lack of insights into effective marketing models, resulting in increased ad spend without understanding linkage to revenue.
- With high number of marketing channels and seasonal effect, it was necessary to use a machine learning approach to determine the main contribution to sales individually and collectively.



## Solution Provided

Syntelli Solutions provided APIs to extract the marketing data from external resources. The sale units, pricing of competitors and our client's promotions and product information were acquired from relational databases.

A predictive model was built using econometric and machine learning approaches and solved using constrained optimization method. Using this model, the contribution of sale of each predictor and seasonality are quantified. All these calculations are moved to spreadsheets such that the client managers can easily project the future sales based on planned marketing activities.



Contribution of sale based on each predictor



## Impact of Solution

The model allowed the customer to:

- Predict units sold in each quarter to provide a realistic goal for each product line
- Quantify deterministic trend and seasonal effects on units sold by product line
- Quantitatively model the effect of seasonality on sale which helped to better plan future promotions and supply chain activities



## Technology Used



Power BI

