

BEYOND MEAT

Demand Planning Optimization

Student Team:

Xuhao Dai – Master of Science in Engineering in Industrial & Operations Engineering
Sameer Kumar Reddy Gurijala – Master of Business Administration

Project Sponsors:

Chris Peyre – Vice President of Global Supply Chain
Sanjay C. Shah – Chief Operating Officer

Faculty Advisors:

Ekaterina Astashkina – Ross School of Business
Izak Duenyas – Ross School of Business

Beyond Meat, a \$7.8B company, is a food company that provides plant-based protein in the form of beef burger patties, ground beef, crumbles, and sausages. The company sells its products to various customers in the retail and food service channels in the United States and internationally. Beyond Meat's mission is to improve human health, positively impact climate change, conserve natural resources, and respect animal welfare. Beyond Meat is a 500+ employee company, with one production facility located in Columbia, MO, and several contract manufacturers spread across the United States and Canada. The Operations team is responsible for planning, procuring, manufacturing and delivering great products at an affordable price.

With the rapid growth, Beyond Meat's team has been challenged with manual demand planning activities, disparate processes, and lack of integrated systems leading to silos of information, inaccurate demand forecasts, inventory imbalance and last-minute planning changes. One of the biggest challenges for the company was that it was not able to produce and store finished goods close to the demand leading to significantly higher transportation and storage costs, and the Supply Chain team did not have any visibility on the magnitude of the problem.

The Tauber team approached this challenge by conducting interviews with SMEs across the demand planning process to understand the current process and the problem better. Following these interactions, the team gathered production and transportation data for each sales order and created clusters based on the relative locations of CoMans, Warehouses and Customers to each other. The team developed two KPIs – In-cluster Fulfillment rate and Out-cluster Fulfillment rate - which helped assess the inefficiency of the process by extra costs and extra miles incurred. The Tauber team recommended to Beyond Meat to work with customers to gather regional demand (or apply a distribution methodology developed by the Tauber team in case customers can only provide aggregated forecasts). Then, using regional level demand, the team recommended to adjust production plan to minimize tolling and transportation fees. The back-tested pilot the team ran using a linear programming model yielded \$1.25M+ in annual saving across one production line.