BETTER BUSINESS ANALYTICS

# GLOBAL DAIRY AND PLANT-BASED FOOD AND BEVERAGE COMPANY

## Background

A ***global manufacturer*** and distributor of ***dairy and plant-based products*** must manage a very ***complex supply chain*** and often there are large mismatches between ***forecasted demand*** and ***planned production,*** leading to ***product waste*** or insufficient supply. These mismatches ***cost the company*** tens of millions of dollars each year.

The company needs to ***better manage supply and demand*** for their products across ***multiple production facilities*** and ***warehousing operations*** spread out throughout the globe.

## Highlights:

- Thousands of ***SKUs***
- ***Many production*** and warehousing ***facilities worldwide***
- A need for ***coordination*** among ***production plants and warehouses*** to deliver products regionally and ***globally***

## The Challenge

*The company was facing:*

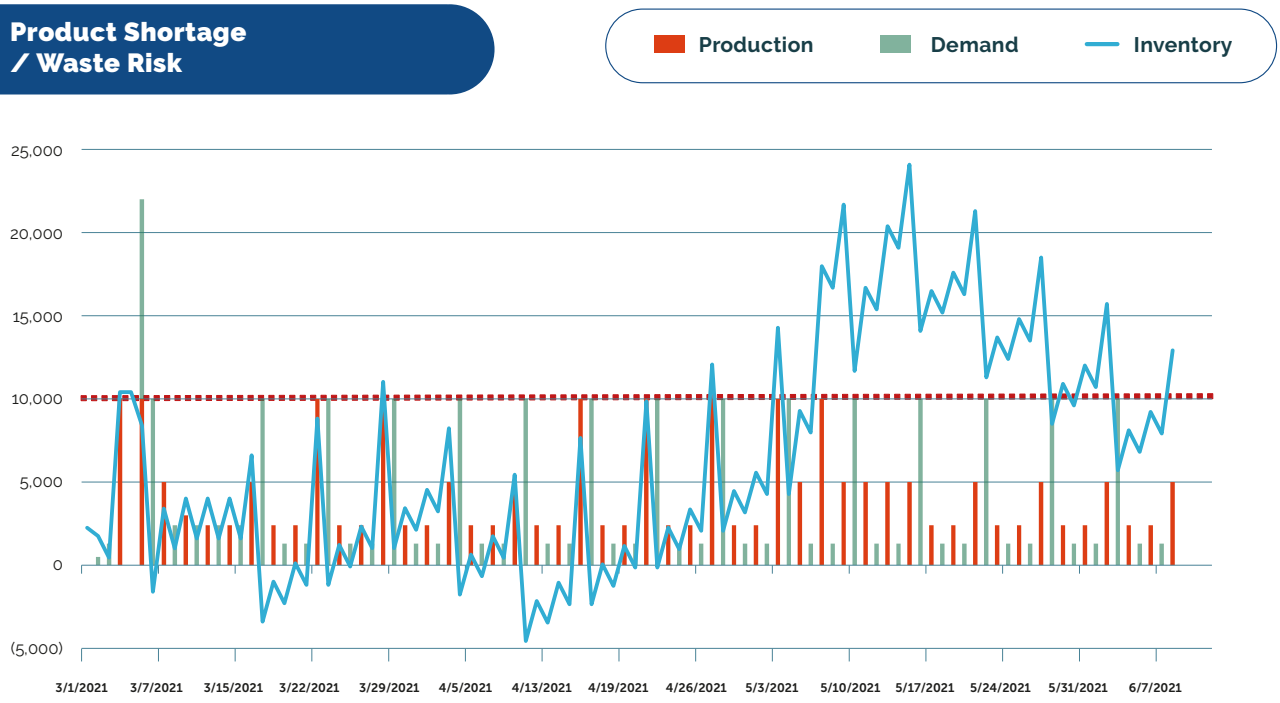
- Large ***mismatches*** between ***forecasted demand*** and ***planned production*** for many of its products
- Supply and demand ***planning*** functions were ***not well integrated***
- Planning capacity was ***too limited*** to keep track of all ***mismatched products***
- ***Little coordination*** among different ***manufacturing*** plants and ***warehouses***
- ***Perishable end-products*** cannot not be stored indefinitely to ***satisfy future demand***
- ***Perishable raw materials*** exacerbated the problems

## OptPro Solution

**OptPro** combines ***advanced analytics methods,*** including ***mathematical optimization*** and ***artificial intelligence,*** with a ***digital twin representation*** of the actual process.

In this case, the **OptPro** solution was utilized to ***implement a cloud-based system*** to ***compute mismatches*** between forecasted ***demand*** and planned ***supply*** at a level of granularity that includes the ***SKU, location, and assigned planner.*** The system proactively ***alerts planners,*** in a ***prioritized list,*** to their largest ***projected mismatches,*** and the type of projected mismatch ***(waste risk vs. shortage risk),*** so that each planner can take ***timely action to remedy the risk.*** The solution also ensures that ***actions are tracked from alert creation to follow-through,*** before closing an alert.

**Product Shortage / Waste Risk**




## Results

This application exemplifies the ***simplicity of using advanced analytics*** to ***solve complex problems*** in manufacturing and supply chain management.

By using the cloud based **OptPro** alert system, the company estimates ***annual savings of over $16 million*** through the ***reduction in product waste and product shortages.*** In addition, the company is already ***planning to enhance and add features to the solution*** for additional cost savings.

The system uses ***advanced analytics*** to set ***threshold levels for each product*** based on shelf-life and ***projected inventory levels*** to create the ***alerts for a given planning horizon.***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