Challenge

In recent years, a major Australian brewer has undergone tremendous change—acquiring additional breweries and brands, merging with a dairy foods producer and then being bought in turn by a multinational beverage company. At the same time they continued to launch new products and gained brewing and distribution rights to more imported brands. With this increase in volume and change in product mix the company needed to analyze its network design to increase efficiency. Among the issues to explore were balancing and redistributing production and packaging capacity between existing breweries and evaluating the potential impact of extended drought in Australia on the network.

Increase in volume and change in product mix

Need to analyze network design to increase efficiency

- Explore balancing and redistributing production and packaging capacity between existing breweries
- Evaluate the potential impact of extended drought in Australia on the network
Solution

Working with LLamasoft, the brewery’s dedicated solutions team was able to address the network design and optimization, and risk analysis and contingency planning issues. First, a baseline model of the existing network was created and then optimized. With the baseline models in hand, the design team could examine multiple scenarios modeling a variety of risks. This process allowed them to understand the implications of shifting capacity from one facility to another either partially or completely in the event of a plant closure. They were also able to analyze the network’s sensitivity to changes in fuel cost and the impacts of demand shifts and changes.

Results

Armed with the results of the baseline optimization and the various contingency scenarios, the brewer was able to re-configure its production and distribution network to increase efficiency and improve service levels. The company used LLamasoft to model variable lead times and demand curves in order to design a better future network. Using these inventory models, the brewer was able to optimize safety stock levels, minimizing both out-of-stock situations and waste from aged product.