CASE STUDY

Bottling warehouse efficiency

Carlsberg: International brewer leverages warehouse simulation to drive efficiency across global supply chain operations.

Introduction
Carlsberg, one of the largest brewers in the world. Their supply chain network is managed in-house by Carlsberg Supply Company (CSC). “Global efficiency is vital to us at Carlsberg, we manage the all European warehouse operations through CSC, we are also responsible for the promotion of best practice across the globe” explains group warehouse senior manager, Svetlana Pavlova. The aim of the CSC is to ‘be the best customer and consumer driven supply organization in the beverage industry.’

CSC chose Infios Warehouse Modeling & Simulation to help them improve the efficiency of their warehouse by testing a variety of ideas across their warehousing operations.

The challenge
PCSC needed to assess new layouts for its warehouse operations, including Carlsberg specific layouts in their bottle yards ensuring optimum efficiency across all operations. They wanted to create best-practice across its global estate to lower its overheads, while retaining customer service levels for their global customer base.

The team needed to develop ways to increase capacity during peak periods and wanted to know if, making changes to the routing within the warehouse could improve efficiency and offer other benefits, such as safety improvements or savings associated with staff and material handling equipment (MHEs) making shorter journeys, leading to a reduction in MHE requirements. The team needed to prove the business case before any change could happen.

Company: Carlsberg

- Headquarters: Copenhagen, Denmark
- Number of employees: 41,000
- Market: 25 across Western Europe, Asia and Eastern Europe
- Solution: Infios Warehouse Modeling & Simulation (K.Sight CLASS)

Features and benefits:

- Ensured optimal operational efficiency
- Standardized & communicated best practices globally
- Overcame change resistance by demonstrating real-life impact
- Increased capacity during peak periods
- Reduced travel distances
- Identified cost savings by optimizing headcount and MHE usage

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Previously CSC used spreadsheets or drawing programs to test ideas and show the best way to tack Carlsberg's products on pallets and into containers. This method proved very cumbersome, time-consuming and resulted in unexciting 2D visuals.

The solution
Carlsberg chose Infios's Warehouse Modeling & Simulation solution, CLASS, to easily simulate different layouts for its warehouses and bottle yards. This enabled them to select the optimal designs to ensure project goals were met and KPIs (such as productivity) were improved on.

"Our CLASS model of a best-practice bottle yard particularly helped efficiency in our Asia operations where it greatly improved storage and organization" commented Pavlova.

One of their most effective results and innovative ideas, was to make key aisles one-way during peak times. CLASS modeled these changes and by adding in real-life activity patterns CSC were able to roadtest ideas in a real world environment. This change allowed an increased speed limit for MHE on these aisles during particular periods. It also had the added effect that the aisle width could be reduced during peak so that the warehouse could hold more SKUs; helping to increase overall capacity, reduce the over-frequency of replenishment and scale down the size of the pick-snake and operative's travel time, making the whole process more efficient. Pavlova added "The aisle adjustment is a low-cost and flexible solution and isn't one that would be naturally considered without having CLASS to model its effectiveness."

"The CLASS models are famous within the organization, and we are frequently asked to create models and movies to show the real tangible benefits of adjustments to the way we currently work."

Svetlana Pavlova
Group Warehouse Senior Manager
Carlsberg

By creating to-scale visuals of best practice packing for pallets and containers, the team were able to show exactly how all pallets and containers should be packed, creating 'cheat sheets.' CLASS' easy customization and personalization meant that the team could even add details such as product branding and precise dimensions. Due to their visual nature multi-language versions were not required.

One of the most valuable benefits the team at CSC found by implementing CLASS is their ability to challenge reluctance to change. By assessing models of their warehouses, the team is better equipped to ask pertinent questions about the use of space and make suggestions for improvement. A picture paints a thousand words and with CLASS they have the visually engaging evidence showing how the improvement would work in-action, including cost benefits and return on investment.

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