CASE STUDY

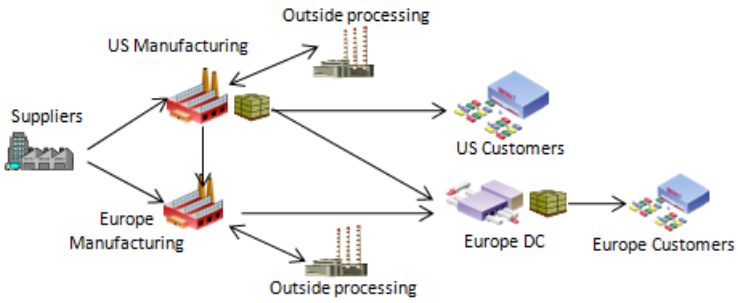
Cascade Designs

Company overview

Cascade Designs is one of the most respected outdoor and camping equipment manufacturers in the world. The company is headquartered in Seattle manufactures most of the goods in US and Europe. The company's enduring brands include Therm-a-Rest, MSR, SealLine and Platypus. It sells products to the military, medical companies, and to outdoor enthusiasts around the world through retailers such as REI and Sports Authority.

Supply Chain Context

Cascade Designs has manufacturing facilities in Seattle, USA and Cork, Ireland. The products meant for the US market are manufactured in Seattle and distributed to retailers in USA. The products for the European market are manufactured in both Cork and Seattle. These products are then shipped either



directly to customers or to Distribution Centers. Due to geographically distributed manufacturing, there is a need for strong collaboration and information sharing between the manufacturing plants in Seattle and Cork. A multitude of constraints that include raw metal lead times, outside operations that occur locally and internationally, and heavy sales seasonality drive the requirement for manufacturing and distribution planning to occur well in advance and at SKU level detail. Cascade Designs runs a JD Edwards ERP solution and needed an advanced planning solution that could integrate well.

Challenges

The system in place was inadequate to meet Cascade's increasingly complex operations. The following are a few of the challenges the company was facing:

- *Cascade was mired in a "Stockout-Expedite-Airship" cycle. Frequent and unforeseeable raw material stockouts disrupted production, ultimately impacting customer service as finished goods supply ran short of demand. Expedited orders from Seattle to Cork for sub-assemblies were common.*
- *The systems in use were very manual, all but eliminating flexibility and prohibiting comprehensive what-if modeling. This inflexibility was unacceptable.*
- *The planning system was not capable of performing constraints-based modeling. The result: unstable schedules, spiky manufacturing orders, underutilized capacity, lost productivity, excessive use of a seasonal temporary workforce, overtime. In short, high costs and missed profits.*
- *There was a lack of supply and demand information sharing between the plants in Seattle and Cork. Manufacturing plans could not properly reflect the flow of materials and finished goods between facilities.*
- *Seasonal fluctuations were not adequately taken into consideration in the capacity or inventory plans. Consequently, Cascade often carried too much inventory during the off season and not enough during the high season.*
- *The demand for products such as snow shoes could be especially unpredictable and spiky. A sudden snow storm can send the demand for these products sky high. Long procurement lead times and surface transit times to Europe resulted in recurring stock outs and air freight solutions.*

Cascade was in search of a collaborative system that could help synchronize the plants and DCs across the continents, and deal with spiky demand and lead time differences.

"iPlanner enables us to prevent and resolve problems closer to the planning horizon, averting costly disruptions to our operations."

Damon Wills, Senior Master Scheduler, Cascade Designs



Why InSync?

After consulting with various vendors, and performing proof-of-concepts, InSync was chosen for the following reasons.

- *InSync's capability to align manufacturing and distribution at multiple sites via a single collaborative planning solution.*
- *InSync's capability to provide reliable, detailed, time-phased, constraint-based modeling.*
- *The solution is nimble and easy to use. It is possible to run 'what-if' scenarios in minutes.*
- *The solution has a familiar Microsoft Office look and feel, making it easier to understand, learn and use.*
- *Implementation and management are straightforward, delivering faster ROI than comparative solutions.*
- *InSync's staff had deep expertise in supply chain. Cascade Designs was comfortable in knowing that they will get responsive and insightful guidance when needed.*

The Solution

The solution implemented at Cascade Designs was iPlanner. iPlanner reads all forecast and order information from the ERP solution and generates plans for purchase, manufacturing, and distribution orders via integration workflows. Cascade is now able to use these rich and detailed plans to execute work orders, conduct purchases at the right time in the right quantity, and to ship material to distribution centers from the right source at the right time. Specifically, the multi-site planning solution provided by InSync was implemented to perform the following:

1. Synchronize supply, demand and manufacturing between Seattle and Cork.
2. Handle complex Manufacturing processes such as simultaneous resources, outside processing, phantoms, engineering change order implementation, and alternate routings.
3. Generate the annual budget plan shared by Finance and Operations
4. Generate one year rolling production plans that are updated daily and continuously adjust to the changes in demand, supply, capacity, and execution constraints.

A sand-box environment which allows quick and easy modeling of 'what-if' scenarios was also created. Some scenarios that are regularly modeled here include demand fluctuations such as contract manufacturing, the addition or removal of capacity, and high/low side demand conditions.

Benefits Summary

- *Cascade now performs material, manufacturing and distribution plans across all sites. US and Europe operations are working off the same plan, enabling the company to streamline their disparate operations.*
- *Inventory was reduced by 20% while fill rates were held to above 98%.*
- *Cascade is able to identify raw material and finished good shortages far in advance – instead of chasing problems, they are able to proactively prevent them.*
- *A smooth and accurate manufacturing plan has reduced the need to run overtime shifts.*
- *Inventory levels are optimized at lower levels while stock outs are minimized.*
- *Cascade now has the ability to generate accurate annual budget plans from iPlanner. The budget plan forecasts the needed material and asset purchases, labor requirements, and target inventory levels for the year.*
- *Re-generating plans is much quicker, enabling adjustment and optimization of material, capacity, and demand.*
- *Root cause analysis to troubleshoot problems such as inventory target violations or manufacturing delays.*
- *Timely and accurate procurement information allows Cascade Designs' procurement team to secure the right quantities at the right time, realizing cost savings and increased inventory integrity.*
- *Cascade uses iPlanner's sand-box environment to model and analyze 'what-if' scenarios.*