SUSTAINABLE SUPPLY CHAIN PLANNING FOR FOOD PRODUCTION ON A GLOBAL LEVEL

DELMIA Quintiq helps Amy’s Kitchen efficiently produce and distribute wholesome, quality food to the world
The seeds that would grow into Amy’s Kitchen were sown in 1987 with a batch of vegetable pot pies, made fresh in Andy and Rachel Berliner’s kitchen in Petaluma, California. The community’s response to the Berliners’ pies was immediate and overwhelming. People who loved the pies but suffered from food allergies wrote in to request for gluten- and dairy-free options. Others asked for more variety such as soups and pizzas.

And just like that, what had started as a fun family activity quickly blossomed into a thriving business. Amy’s Kitchen embarked on a new mission.

Defined by the three Fs of family, farm and food, Amy’s Kitchen combines the time-honored values of community, sustainability and dignity with the latest trends in food production. The company is also a pioneer in organic food production, having been around even before there was an industry.

Amy’s Kitchen is privately owned by the Berliner family till this day. Not beholden to shareholders, the company continues to provide wholesome, nutritious food to the world in a way that respects and protects its customers, employees and the environment.
See the need, take the lead

Amy’s Kitchen is a major player in the food manufacturing industry with over 250 products sold in 30 countries and over 1 million meals produced each day. It is also the second largest tofu producer in North America, producing over nine metric tons a day.

Amy’s Kitchen now has 2,400 employees (2017) at facilities in California, Oregon and Idaho. It plans to open new facilities in New York and Portugal.

The Berliners, however, haven’t allowed success to change the values that have brought Amy’s Kitchen this far. Cooking is still done by hand, sauces are still made from scratch and, most incredibly, hundreds of recipes are still personally taste-tested by Andy and Rachel themselves.
As the scope of a mission grows, so does its complexity

It hasn’t been an easy road for Amy’s Kitchen. Quite the opposite, in fact. The Berliners have very strict, self-imposed standards of quality for their food. After all, the brand carries their daughter’s name. They also have a reputation among farmers for being too picky. These exacting standards have resulted in supply chain planning challenges that, if left unattended, would be impossible to manage in the long term.

The Berliners’ insistence on using fresh produce for their recipes means that as much as 60% of Amy’s Kitchen’s raw materials comes from contracting growers. It can be a tense and risky game, in which sourcing crucial ingredients can be difficult. Sudden changes in weather can destroy as much as half of a contracted crop volume. All these disruptions would profoundly affect any production schedule, never mind one that has to account for 330 suppliers, 1,687 SKUs, 61 processes with 78 ingredients and 37 inventoried WIPs — per single product.

At the time, Amy’s Kitchen was still using Excel spreadsheets, which were becoming more ineffective with each passing day. Response times were too slow to meet changes in demand, and worse, monthly planning cycles could take as long as six weeks to complete. Amy’s Kitchen’s systems were simply unable to cope with the rising level of complexity.

If there’s one thing that passionate people with big dreams hate, it’s getting tripped up by the little things that keep them from focusing on the real priorities. Suboptimal planning processes were now actively holding Amy’s Kitchen back from further growth. It needed a better solution, and fast.

“Our goal is to make the most delicious food with the best quality ingredients, and this brings complexity into our supply chain.”
– Nigel Batchem, Senior Director of Planning, Amy’s Kitchen
If you can’t take the heat, get out of the kitchen

The first planning system that Amy’s Kitchen tried to use did not quite measure up. There were problems from the start – implementation was met with many obstacles and the evaluation process was becoming hopeless. If something could go wrong, it did. Recipes were misinterpreted, production days were mixed up and material quantities and dates were often incorrect. It was a nightmare for the planners who had to constantly check on the system. Simply put, it couldn’t get the job done.

However, Amy’s Kitchen couldn’t afford to just sit around. The search was on to find a planning solution that could meet all of its needs. Unfortunately, it was soon apparent that this wasn’t as straightforward as it would have hoped. A number of vendors were consulted, but none of them were up to the task. It was one problem after another. Nobody seemed to have the solution. One by one, they would inevitably concede: “Our software doesn’t do that.”

The situation was starting to look grim. It was then that the DELMIA Quintiq team reached out to Amy’s Kitchen to request for a meeting. Weary from one disappointment after another, but still hopeful, the team from Amy’s Kitchen agreed.

The team arrived at the meeting fully prepared for DELMIA Quintiq’s confidence to shatter upon finding out the true extent of its supply chain planning complexity. Imagine the team’s surprise when this news just made the DELMIA Quintiq team more excited. For the first time, the answer wasn’t “our software doesn’t do that”. Instead, it was: “We’ve heard enough. When can we start?”

As the meeting progressed, the team from Amy’s Kitchen was impressed by DELMIA Quintiq’s ideas and enthusiasm. This was a vendor that not only accepted the challenge, but really seemed to want it. The gloom lifted and it became clear that DELMIA Quintiq fully understood Amy’s Kitchen’s challenges, could model its business processes and could provide an end-to-end platform that would scale well into the future. The choice was as easy as homemade, organic, vegetarian pie.
A chef’s work is never done

Amy’s Kitchen is very happy with how DELMIA Quintiq has enabled it to meet its planning goals, cut costs, increase visibility and improve its ability to adapt to disruptions.

In addition to business benefits, Amy’s Kitchen employees experience improvements as well. DELMIA Quintiq’s optimized scheduling means that Amy’s Kitchen can now improve the work life and happiness of its workers as well as guarantee a stable future for them. For this company, it is not enough to simply produce high-quality food; the quality of the work experience of those producing the food has to match.

Most importantly, Amy’s Kitchen now faces far fewer obstacles in its mission to bring nutritious food to the world.

Plans have been made for DELMIA Quintiq to assume full planning responsibilities over Amy’s Kitchen, completely taking over from the company’s previous planning system. Additional phases of implementation are also in the works, beginning with a labor scheduling upgrade. With DELMIA Quintiq’s optimized planning solution, the future for Amy’s Kitchen is brighter, fresher and tastier than ever.
The perfect planning recipe

The DELMIA Quintiq solution was implemented over several phases. At first, the waters were tested with a small project. DELMIA Quintiq then proceeded in earnest with a system that would not only lay the groundwork for future improvements, but also transform an entire planning methodology in the process.

**Phase 0: Labor Scheduling**
- Live April 2014
- Simple, standalone product
- No interfacing with preexisting solutions necessary

**Phase 1: Scheduling & MRP**
- Live January 2016
- Demand schedule is known up to 13 weeks in advance
- Assembly schedule is locked for 3 weeks
- Product and line configurations are optimized to match daily labor requirements
- Achieves same service levels with 2 weeks less inventory
- Improved response times to demand changes
- Improved communication within the planning team

**Phase 2: Macro Planner**
- Live October 2016
- Produces a 3-year monthly production plan, capacity utilization analysis, product mix plan, labor forecast and materials forecast
- Optimized freight to warehouse costs
- Optimized labor costs
- Optimized materials costs
- New inventory balancing functionality and lot size to improve materials forecasting

**Phase 3: Distribution Planner**
- Live May 2017
- Handles daily planning of medium-term shipment and trucking plans, customer order fulfillment plans, safety stock maintenance plans and target inventory planning and rebalancing
- Optimization of freight to RDCs, truck utilization and transport costs
- Inventory balancing functionality will now also maintain inventory levels across Amy's whole network
- Shortages are highlighted to create signals to increase production of certain products
“We required a supply chain planning and optimization platform that could accommodate our intricate scheduling requirements, which stems from our unique approach of assembling and cooking products simultaneously.

“DELMIA Quintiq has an outstanding track record in the industry and its software platform will enable us to maintain the high quality and fulfillment standards our customers have come to expect.”

– Andy Berliner, CEO, Amy’s Kitchen
What’s cooking?

Visit us at 3ds.com/DELMIA and get in touch. We’d love to help you solve your food production planning puzzles — no matter how complex they may be.
Our 3DEXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.