

MEAT DISASSEMBLY THAT'S OPTIMIZED FOR LASTING SUCCESS

How JBS USA achieves better meat production
with real-time product availability





Global food demand is showing no sign of slowing down. As the world population continues to increase at a staggering rate, leading meat manufacturer JBS USA must continuously improve to stay on top.

JBS traces its origins to 1953 in Anápolis, a modest-sized city in the State of Goiás, Brazil. The company's humble beginnings saw founder José Batista Sobrinho processing only one or two heads of cattle per day and selling the meat to a local butcher. He slowly grew the business and in the late 1960s, José bought his first slaughterhouse and began to build what is today the largest animal protein company in the world by sales — JBS SA.

In 2007, JBS SA officially entered the US market with the purchase of Swift & Company under JBS USA. Today, JBS employs more than 230,000 people

and runs more than 400 offices and plants on five continents – the Americas, Africa, Asia, Europe and Oceania.

JBS USA is a major manufacturer of beef, pork and lamb in the country. The company processes and delivers fresh, further-processed and value-added meat products for sale to retail customers in more than 190 countries. The company also produces and sells by-products derived from its meat processing operation to customers in the clothing, pet food and automotive industries.

[Source: JBS Annual and Sustainability Report 2018](#)



Fast facts

Business	Meat product manufacturing
Headquarter in USA	Greeley, Colorado, USA
Size	Over 400 production facilities with over 230,000 employees
Presence	United States, Canada, New Zealand, Australia, Puerto Rico, Mexico and Europe.
Parent company	JBS SA



Source: JBS Annual and Sustainability Report 2018

Growing demand, growing complexity

While JBS USA was already one of the world's largest beef and pork processing companies, there was still room to grow.

Disassembly of livestock involved an extremely complex, calculation-intensive planning process. It required respect for the animal and a responsibility to maximize the value of dozens of individual products for different customers.

JBS USA's existing planning approach, however, made it challenging to make the most out of its operations. The company needed a planning solution that could provide full visibility of up-to-date product availability. This would help determine its ATP (availability to promise) and CTP (capability to promise) quantities in real time. JBS USA sought

a solution that could link order acceptance to the production schedule, which involved massive amounts of data including:

- Every stock-keeping unit JBS USA was producing at every plant on any given shift
- The varying brands under which JBS USA sold its meat, not to mention conversions, grades, product age and other crucial quality factors
- The bills of materials (BOMs), which could span several levels and contain multiple options within each level

This translated into millions of records. Furthermore, one change in production of a specific cut path could affect 20-40% of all production within a primal cut.

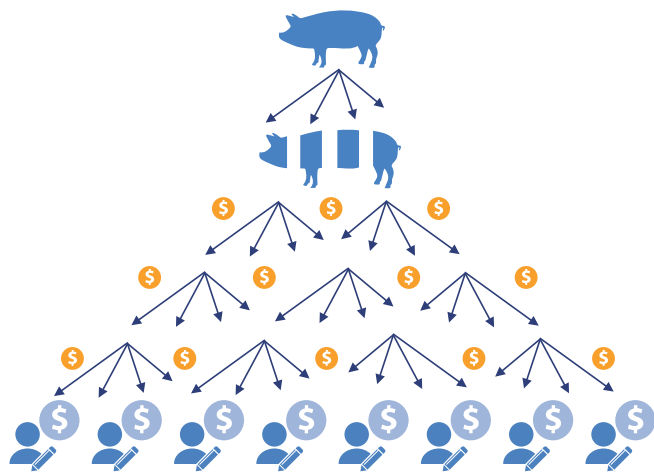
A system was needed to handle fast-changing data, at scale. This would allow JBS USA to confirm its ability to fulfill an order and reserve the necessary materials when needed.

The solution must also offer JBS USA flexibility in planning its meat manufacturing processes. The company wanted to account for 100% usage of the animal and handle thousands of different stock-keeping units. Additionally, it was important that the solution was compatible with JBS USA's existing systems that included an in-house custom order management system and an SAP ERP system.

The objectives were clear. What was also clear was JBS USA's solution provider of choice — DELMIA Quintiq.

Protein home run: A solution to cover all the bases

The DELMIA Quintiq solution was implemented at 10 beef processing plants and five pork processing plants in the US. The solution consisted of two planning modules: The first was a scheduling, product availability and margin optimization solution for the company's beef and pork division, while the second was a meat disassembly industry solution.



DELMIA Quintiq stood out for its ability to handle fast changes in big data and provide an effective solution to meet JBS USA's unique needs. The DELMIA Quintiq solution provided a full picture of JBS USA's operations, including real-time product availability, which was made possible with alternative cut path optimization.

Other key competitive advantages enabled by the DELMIA Quintiq solution included:

- Instant visibility into the perpetual inventory
- Precise access to alternative cut path's potential inventory that is updated when production schedules change
- Optimization of the production plan for higher margins
- More efficient decision-making processes through an integrated planning platform

"We chose DELMIA Quintiq for its team's deep commitment to understanding the complexities of our meat processing business," said Eric Wallin, senior vice president and head of beef finance and business analysis at JBS USA. "Throughout the project, DELMIA Quintiq never failed to identify a solution and deliver results, no matter how complicated the issue."



Optimization in action

The DELMIA Quintiq solution has brought a wealth of benefits to JBS USA.

Solid decision support

DELMIA Quintiq has made it possible for JBS USA to produce the best possible production plans based on real-time product availability, while working with time restrictions. Planners can work according to animal types, product types, cuts and plant locations. Cut paths are determined by the kind of meat cuts required, as well as where and when they're needed.

Making the right decision in the disassembly operation is now easier. DELMIA Quintiq runs nightly processes to create production plans, which are ready for planners to work on at the start of the day. These plans show the quantity at each location and planners can look for shortages. DELMIA Quintiq goes one step

further to show how the shortages can be solved and where the parts will come from. JBS USA can see specifics of the supply chain that it couldn't before, and track load date and inventory aging for higher adherence.

Planners are also able to change the production mix and review key performance indicators (KPIs) in real time. Because all data is managed within the system, millions of data points can be modified instantly. As a result, planners have real-time feedback on production mix changes anywhere in the supply chain. By comparing the KPIs across different scenarios, they are able to make the best possible choice for production mix. In scenario modeling, they have full control of all inputs such as forecasts for raw material, kill and demand.



Integrated and smarter planning

The integrated planning platform by DELMIA Quintiq enables JBS USA to optimize all processes based on the same data, whether it's to produce boxed beef, offal, rendering, trim, grinds, hides or tannery. Planners now have a complete picture of how inputs interact with one another. They can see current reality and change outcomes with ease.

DELMIA Quintiq helps JBS USA minimize manual planning processes as well as realign business processes and departments to improve performance and enhance customer service. Accurate product availability provides the company with a clear interactive approach to reducing waste, by lowering the volume and frequency of volatile markdowns. JBS USA now has a source of truth for production planning that its sales force can count on. The days of partial promises and delayed deliveries to customers are a thing of the past. With DELMIA Quintiq, JBS USA has also eliminated two legacy scheduling systems and manual spreadsheet planning for all processes.

Full visibility into operations

All important information is now visible — JBS USA can see actual supply versus potential supply that it can get based on specified cuts. Planners and salespeople get real-time insight into CTP quantities. JBS USA can now quickly tell a customer if it can fulfill an order of 60 boxes of a particular product, for example. With these enhancements, the company is able to standardize order placement processes and improve speed of order confirmation.

DELMIA Quintiq also provides visibility into products that are aging and their remaining shelf lives. Planners can then make a strategic decision to either freeze a product for extended shelf life, or sell the aged product at a lower price.





Ready to meet growing demand, the optimized way

With DELMIA Quintiq, JBS USA is equipped to strengthen its position in the market and fulfill its mission efficiently. The ability to access product availability in real time, address customer order queries immediately and optimize production to reduce waste — all these allow JBS USA to meet an ever growing meat demand for a long time to come.

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