CASE STUDY:

DESIGNING AN INTERNATIONAL PROCESSING FACILITY FOR SUNSWEET IN SOUTH AMERICA
A STELLAR CASE STUDY: Designing an International Processing Facility for Sunsweet in South America

CHALLENGES:

Sunsweet, a grower-owned cooperative based in California, is the world’s largest and most famous brand of dried tree fruits. The company needed additional land to grow its popular prunes and looked to Chile as a new destination for growing its business. Sunsweet already had a small operation for growing and drying prunes in the South American country, but it wanted to expand that presence to include a larger prune processing facility.

The leadership at Sunsweet realized it would need an experienced partner to design the complex, full-scale processing facility they envisioned. Sunsweet needed both a food industry expert, who could translate U.S. food safety standards to overseas countries, as well as a company with international experience who could address the challenges of designing and building in Chile. They turned to Stellar to help them make that bold, strategic investment in South America.
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SOLUTIONS:

1. Site selection and due diligence planning
2. Designing a facility across borders, cultures and regulations
3. Advising on process engineering and equipment

SITE SELECTION AND DUE DILIGENCE PLANNING

Stellar began by analyzing possible locations for the new facility and advising on the preferred location from a transportation and logistics standpoint. The team considered three other sites in Chile before determining that Sunsweet’s existing property there would make the most strategic sense for multiple reasons.

The Chilean government requires builders to secure a significant number of environmental permits before starting a new project — a process that can take years. However, the Stellar team determined that by building on Sunsweet’s existing property, which already had the necessary permits established, the project would be classified as “remodeling and expanding,” thus saving the company time and money.

While Sunsweet initially decided to work with Stellar because of its food industry expertise and international experience, the connection the firm created quickly confirmed it was a perfect fit. The Stellar team flew out for in-person meetings with company leadership, and Spanish-speaking architects and engineers from Stellar were able to easily relate to and communicate with the teams on the ground in Chile.

“The Stellar team was very engaging and so well-spoken when meeting with company leadership,” said Matt Kelly, Vice President of Manufacturing Operations at Sunsweet.

“Engineers who can translate technical complexity and be comfortable in a boardroom is unique and impressive — that was huge for us.”
DESIGNING A FACILITY ACROSS BORDERS, CULTURES AND REGULATIONS

Designing a food plant in another country comes with its share of unique challenges, both for the food company and the contractor. Stellar encountered and managed several such issues for Sunsweet in South America.

DIFFERENT ENGINEERING STANDARDS — AND EARTHQUAKES

Due to frequent seismic activity, Chile uses both European and United States engineering standards. The design team from Stellar seamlessly adapted to these unique standards and translated the design work to meet them. (In fact, the job site experienced an earthquake at 80% project completion, but structural engineers confirmed the building was okay and had been properly designed to withstand such events.)

“The Stellar team selected a passionate structural engineer who went above and beyond to ensure the facility would be safe,” said Harold Upton, Chief Information & Analytics Officer at Sunsweet. “Honestly, they identified issues we hadn’t even considered.”

“We have no qualms about future earthquakes, because we know the structure was designed right.”

FIRE PROTECTION AND ELECTRICAL SYSTEMS

Chilean building standards don’t rely on sprinkler systems, but Sunsweet’s insurance underwriter required them at the facility. Therefore, Stellar designed and specified a sprinkler system as well as a fire-resistant paint coating for the structural steel systems.

In addition, electrical systems in Chile operate on a 220V current, compared to the U.S. standard of 120V. The Stellar team was able to navigate this hurdle and specify the proper transformers to ensure any imported processing equipment would function properly.
CULTURAL DIFFERENCES

When it came to project documents and scheduling, the Stellar team had to address a number of issues to ensure consistency and accuracy.

First, all calculations and drawings were completed using the metric system.

Second, Stellar created documents and drawings in both English and Spanish so the client’s teams on both sides of the border could collaborate and be on the same page.

Finally, the Stellar team was sensitive to additional holidays unique to Chilean culture, and they adapted the timeline accordingly to ensure the project stayed on schedule.

Ultimately, Stellar’s ability to understand the culture, speak the language and bridge the gaps — both in terms of technical specifics and relationship-building — made for a successful design phase.

PRIORITIZING FOOD SAFETY

Sunsweet wanted to create a state-of-the-art facility that met or exceeded industry standards for sanitary design. The Stellar team worked with the company to identify vulnerable product zones, streamline processing and eliminate food safety risks. This included locating utility and mechanical infrastructure in the ceiling interstitial space so that future maintenance could be performed without posing a contamination threat to product zones below. Stellar also helped Sunsweet specify processing equipment that met or exceeded food safety standards.

COORDINATING ON CONSTRUCTION

Even though a local contractor licensed to build in Chile was required for construction, Stellar was a key partner in advising Sunsweet throughout the process.

In addition to navigating site selection and permitting, Stellar vetted architectural partners and construction contractors. The Stellar team assembled the construction documents and provided drawings to the small group of local general contractors. Representatives from Stellar led the conversation, completely in Spanish, and helped Sunsweet vet an appropriate contractor.

Ultimately, Sunsweet selected Stellar’s top recommendation for a general contractor.
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3 ADVISING ON PROCESS ENGINEERING AND EQUIPMENT

Sunsweet’s prune processing operation had been established — and successful — for more than 80 years. Stellar was now tasked with modernizing that process and making it even more efficient at this new facility overseas.

The Stellar team met with Sunsweet and established a list of strategic improvements and other “low-hanging fruit” opportunities to streamline the company’s processing.

EQUIPMENT PROCUREMENT AND TESTING

Stellar’s processing team worked with Sunsweet to define requirements for original equipment manufacturers, procure the equipment, conduct testing and more. Stellar also advised on ways to anticipate future growth and maintain efficiency in utility usage over time.

“Meeting with the Stellar team at their Jacksonville campus added immeasurable value as well,” said Kelly. “We could easily meet with engineers across various disciplines because they were all there under one roof. That means we got answers quickly and were able to keep the project moving forward without typical communication delays.”

FULL-SERVICE AUTOMATION

Stellar also provided a complete automation solution for the new facility, from conceptual design and vendor procurement, to installation and commissioning. The leadership at Sunsweet wanted an advanced, fully automated system that would allow them to monitor and control operations remotely from the company’s California headquarters. Once a preferred software platform was chosen, Stellar established a modern automation system that will serve the facility for years to come.

“This was about more than just knowing software,” said Upton. “Stellar understood how the data and automation meshed with the equipment, infrastructure and context of the entire facility. They integrated these features into the design and ecosystem of the whole building, allowing it to function as a holistic, streamlined operation.”

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THE RESULT:

A MODERN, SUCCESSFUL PROCESSING PLANT

Stellar’s incredibly detailed design drawings were invaluable during construction and allowed Sunsweet to achieve their vision for the facility, without compromises.

“Thanks to the detailed specifications of these drawings, there was no room for misinterpretation by vendors and subcontractors,” said Kelly. “Those plans served as the foundation and ultimate authority for the project, and that ensured we got exactly what we wanted.”

Today, Sunsweet’s processing facility in Chile is a full-fledged operation supporting the company’s ongoing growth. Given its complexity and the company’s investment in cutting-edge features, the plant also serves as a “learning lab” where Sunsweet can test ideas and experiment with different processing efficiencies that will be applied to its future facilities.

“Without a doubt, I would recommend Stellar to any food processor looking to build a facility internationally. In fact, I already have! The rigor and attention to detail they gave to this project was incredible — and that’s not even including all the behind-the-scenes work that we didn’t have to worry about.

This facility is a game-changer for us, and we wouldn’t partner with anyone else.”

— Matt Kelly, VP of Manufacturing Operations, Sunsweet