

# THE CHALLENGE



## **Relocate, Consolidate, and Optimize**

A confections manufacturer needed to relocate internationally, move its lines to an existing facility without interrupting operations, and consolidate and optimize the relocated lines to lower costs.



## **Confidential Plant Closure**

The engineering manager knew he needed to bring on an experienced partner to gain operational efficiency and better meet market demand. Since news of the plant closure was confidential, bidding the project out was not an option.



# Near Vertical Startup During International Relocation

## **Solution: Flexible, Detailed Relocation Plan**

To ensure a smooth relocation process, a conceptual plan detailed the groundwork for the international move. Engineering work, assessments on equipment, and consolidating assets from multiple packaging lines was completed to incorporate the former lines into the existing facility. Vendor management helped to resolve ingredient delivery issues, facilitate a near vertical startup, improve efficiencies in the new line, and reduce startup time by approximately 25% resulting in a successful relocation process.



# EXECUTIVE SUMMARY

## ▶ **Manufacturer Accomplishes International Relocation of Lines**

**Client:** Confections manufacturer

**Challenge:**

Relocation and consolidation of factory lines across international borders without internal staff support.

**Solution:**

- Flexible, detailed moving plan that anticipates challenges
- Engineering study to determine how/if relocated equipment should function in new plant
- Resolution of ingredient delivery issues from previous plant
- Conducting construction necessary to consolidate lines, including development of master plan and vendor management

**Results:**

- Near vertical start up in new location
- Improved efficiencies achieved in new lines
- Engineering manager free to focus on his job thanks to his trust in Polytron.
- Confidence and certainty of outcome

### **International Relocation Challenges**

To better meet market demand and gain operational efficiency, a confections manufacturer had come to the conclusion that it would need to close its Canadian facility and move its lines to an existing factory in the U.S.

The senior regional engineering manager was responsible for the move - a \$28 million project – and faced the substantial challenges without internal staff support. These included:

- Relocation of used assets across international borders
- Combining used and new assets in the U.S. facility
- Construction of the relocated lines without interrupting operations in the U.S. facility
- Consolidating and optimizing relocated lines to lower overall cost

The engineering manager knew he would need an experienced partner to pull this off, but with news of the closure being kept confidential, bidding the project out wasn't an option.

Fortunately, he had engaged Polytron for project management before and trusted their expertise and ability to work within the constraints the confidential project imposed.

### **A Reliable Model for Complicated Moves**

With a move this involved, a detailed plan is a make or break proposition. The engineering manager needed to conduct a situation analysis that could diminish uncertainty, and develop a program to deliver the project within the deadline and budget required.

Polytron's flexible project delivery model anticipates challenges and allows wiggle room for unanticipated events that can throw complex projects off target. A front-end engineering study provided the engineering manager options and recommendations for fitting the relocated equipment in the U.S. plant while optimizing cost, facilitating making the best decisions for the business.

### **Planning for and Conducting the Relocation**

The engineering manager had the situation analysis and recommendations he needed to move forward. Since Polytron has extensive experience delivering these types of projects, he saved months previously needed to negotiate with another provider to execute the plan.

At this point, the engineering manager could confidently turn the project over to Polytron and focus his energy on building an engineering team internally to take on future business initiatives and market demands.

## Ensuring a Smooth Relocation Process

Polytron worked onsite in both the Canadian and U.S. plants to lay the groundwork for a successful move:

- Verified assets to be relocated
- Took mechanical dimensions and checked against drawings
- Accounted for every item to be moved

## Combining Assets from Multiple Packaging Lines into One Line

The relocation plan included a program for the construction necessary to incorporate the former Canadian lines into the U.S. plant. Polytron was responsible for:

- Developing the upfront engineering work and master plan needed to expand U.S. facility
- Performing assessments on equipment from the Canadian plant to determine whether it was best to relocate equipment or purchase new
- Coordinating a phased construction approach in two major areas of the U.S. plant
- Combining assets from multiple packaging lines into one line in order to conserve floor space

## Construction in the Facility During Operation

To help the engineering manager minimize impact on the U.S. plant during the relocation, Polytron:

- Consulted with personnel to understand the requirements of working in its production facility
- Enclosed the construction area and established GMP procedures for contractors to follow
- Phased work for minimal impact on production

## Improving Process Efficiency

As part of the move, the engineering manager wanted to resolve ingredient delivery issues so they were eliminated in the new combined lines. Polytron helped achieve this objective by working with plant personnel and process vendors. Vendor management services ensured equipment specifications were met, including implementation of safety features required for the Canadian equipment to be compliant with U.S. regulations.

## Meeting and Beating Demanding Startup Requirements

Vendor management also helped the engineering manager facilitate near vertical startup. As part of combining the Canadian and U.S. lines, Polytron modeled a new batch deck that included four mixers, liquid ingredient, dry ingredient, manual adds, and discharge conveyor.

Using PolySim<sup>sm</sup>, a proprietary modeling and emulation tool, the team pre-tested PLC and HMI processes, getting everyone – including vendors – on the same page and reducing startup time by approximately 25%.



**Polytron's project management facilitated near vertical startup during international relocation, minimizing the impact on the existing plant and reducing startup time by approximately 25%.**

## Trusting Polytron's Approach

With this support, the engineering manager could maximize production inside the landlocked U.S. facility, saving the expense of expanding the plant. The plant was set up for success to leverage other facilities, including some outside U.S., and he could better support the manufacturer's production strategy.



At the same time, with Polytron managing all aspects of the relocation, he led his new engineering team on planning the manufacturer's next expansion.



Ultimately, Polytron's conceptual planning enabled a big picture perspective - a five to ten year vision - for production in a number of sites - from actual execution of each project to delivering the overall business plan.

## About Polytron, Inc.

Since 1983, Polytron has been an industry leading system integration and engineering consulting firm delivering a broad spectrum of innovative manufacturing solutions. Polytron serves manufacturers in the food, beverage, consumer packaged goods, chemical, and life sciences industries across North America.

To learn more about Polytron, visit us online ([www.polytron.com](http://www.polytron.com)) or contact us ([www.polytron.com/contact-us](http://www.polytron.com/contact-us)) to talk to a specialist today.

