



Exceeding Expectations

- Significantly improved production efficiency without capital investment
- Quickly gained the trust of front-line operators and management
- Positive results within one week of implementation

“ Demand is exceeding the output of our most popular products. We need help improving the performance of our packaging line quickly without a large capital investment!”

The Situation

A leading food manufacturer in the United States, was already producing premium quality products but market demands changed rapidly in 2020. With more and more people eating at home, demand for their most popular product had increased dramatically. One of their packaging lines wasn't achieving the production efficiency (PE) needed, and they were at risk of missing sales opportunities. The need for improvement was urgent, and they wanted to improve line efficiency without sacrificing their high standard of quality.

A customer employee who had worked with LSI on a previous project connected the Plant Manager with Mike Reams, one of LSI's Operations Directors. As always, LSI started with listening. After understanding the situation, LSI proposed a three-day audit to identify readily attainable improvements (low hanging fruit) that would increase the existing line's PE.

The Solution

LSI's team performed an audit on the packaging line at the customer's facility. Throughout the 3-day audit, LSI's team identified several opportunities for immediate improvements. They reviewed OEM documentation and monitored each piece of equipment on the line to determine the proper speeds and rates, measured the equipment cycle time, and developed a V-curve that illustrated the line's equipment capabilities. Following the audit, LSI proposed an execution plan for solving the packaging line's highest priority issues. It included a plan for overall line control, optimization, and operator training.

The project's first step was line balancing, which required the adjustment of line controls to set equipment speeds based on the line's recipe (product type being run). Inventory accumulation levels were also modified, resulting in a more consistent, balanced flow through the line vs. frequent stops and starts. Next, the LSI team improved communication between equipment on the line, reducing operators' need to manually adjust equipment speed. Finally, LSI identified the retort machine as the line's primary bottleneck (bottom of the V-curve), not the filler/capper as initially suspected. In the end, LSI's improvements increased the packaging line's efficiency by almost 20% with no capital expenditure.

LSI provided:

- Resources with extensive operations, engineering, and maintenance experience
- On-site packaging line audit
- Proposal/action plan
- Line control and optimization
- Line efficiency process chart
- Equipment cycle time measurement
- Maintenance training and planning
- Operator training

The Results

Exceeded production efficiency expectations

The customer hoped to see an incremental one percent improvement in the production efficiency of their packaging line (which would have allowed the project to pay for itself in three months). LSI's improvements resulted in a gain of nearly 20%.

Results within a week of LSI's visit

Following LSI's audit and action implementation, the customer experienced positive results within the first week. With the line running at optimal speed, the hour-by-hour throughput (PE) improved, resulting in an overall increase in capacity.

A partnership formed through positive results

Due to the project's success, the customer asked the LSI team to form an action plan to improve the performance of another one of their lines—the facility's fastest and most productive packaging line.

"LSI is different than other consultants. They are more of a partner that will listen and work closely with the operators and management," said the Plant Manager, "and their ability to get quick wins develops trust and gets people on board with plant improvements."

Higher expectations and improved workplace

This project resulted in the facility's operators becoming more engaged and informed about the line operation. They now understand that studying and resolving problems can keep a line running at optimal speed rather than slowing it down to compensate for inefficiencies.

"At the beginning of the audit, operators were excited to be running green (65% throughput). When we talk to the operators now, they are disappointed if they aren't running more than 70-75% throughput. They have increased their own expectations and it shows."

– Mike Reams, LSI

Let LSI listen to your production efficiency challenges. We will help you identify the root cause of your production constraints and provide you with a plan to increase production.

© Logical Systems, LLC. • www.logicalsystinc.com • 877-735-6905

Tags: food and beverage, packaging, depalletizer, rinser, filler/capper, loader, shuttle, unloader, labeler, tray former and wrapper, palletizer, stretch wrapper, conveyors, OEE, production efficiency, process optimization

03/16/2021



LSI listened,
then we put our operations and maintenance experience to work, performing a detailed packaging line audit and creating an action plan to increase overall production efficiency. Following implementation, the plan improved overall line control and optimization that resulted in a nearly 20% increase in production efficiency.

"We normally don't like outside consultants coming in to tell us what to do but LSI is different. They listened and understood before suggesting changes."

-Plant Manager