

**Client:** Global Food Manufacturer  
**Assignment:** Increasing product yield through processes improvement

## Process improvement makes food line £1million leaner

**Our client is one of the world's leading producers of manufactured casings for the food industry, supplying a wide range of products and technical support to manufacturers of sausages, salami, hams and other cooked meats.**

Historically, the company was a high performer with good profitability, but recent events had hit it badly. The major supermarket chains were increasing pressure on product pricing. A new product introduction had led to a decrease in overall process efficiency across the plant. A period of high turnover in the workforce was leading to a loss of control of production processes.

The company urgently needed to re-establish a higher level of control and improved performance in its manufacturing operations. Unacceptably high yield losses in the Continuous Food Process had put this particular area under review. Yields were as low as 70% but the reasons for the losses were not fully understood. Heavy investment in alternative technology was being seriously considered if the issues could not be resolved

### **Our Approach**

We needed an immediate and compelling case to demonstrate that process improvements could deliver the target yield without the need to invest in technology. Finding the root cause of the poor performance was crucial to reducing time, waste, variation and defects in complex extrusion, rehydration and storage processes.

To achieve this, we used best practice Lean tools and methodologies to assess the current state. We then developed the future state and implement solutions that would generate sustainable improvements in yield.

### Getting Started

We worked with the senior team to define the project team membership and project governance approach, establish improvement targets and benefit potential, define the project timescales and agree the level of Bourton Group support needed. Regular reviews ensured that the senior team remained in touch with progress.

### Lean Process Improvement

Working with the internal improvement team, we used a structured problem solving technique to fully understand the conditions that determined process performance, to measure losses first-hand and to quantify the process capability.

Early in the project, we proved that the areas being examined by the internal team were simply symptoms of inadequacies in "upstream" processes. An extensive shop floor study, backed by detailed statistical analysis and lab tests, enabled the team to show that one of the key product parameters was not being controlled as expected. A direct correlation between the out-of-control parameter and the downstream process failure could be demonstrated, giving a high degree of confidence in the analysis. A process phase map was developed to show the optimum conditions under which the process should be run.

The key parameter identified was traditionally measured by a 6 hour lab test, making real-time control impossible. The next phase was to develop a real-time online measurement method for this parameter. This was achieved and rolled out across all the dryers.

Once the key parameter had been identified and a measurement system devised, we then went through a rigorous process of identifying the key controls on that parameter and optimising the line settings. These were implemented and monitored to ensure stability.

### Value delivered

The roll-out of the new standard conditions led to a sustained and measurable rise in the area's performance, increasing the yield by approximately 10% worth the equivalent of nearly £1m turnover. In addition, extensive capital investment that would not have solved the problem was avoided.