

## Quality downtime and line balance improvements at a major salads supplier



### Background

A salad products supplier to the UK retail market, this client supplies direct to major supermarkets. Within this market, lead times are short with a need to react rapidly to end customer demands much of which may be weather driven.

### The Challenge

Daily product demand has to be based on start of day short term forecasting with final order confirmations well within the preparation process lead time. The perishable nature of the products precludes smoothing customer demand by holding any significant volume of ready to ship stock. The client recognized that the efficiencies of their equipment, as measured by Overall Equipment Effectiveness (OEE) provided an area of opportunity to support improved productivity. This would enable increased responsiveness and reduce the risk of processing product that was not demanded.

### The Objectives

The improvement objective defined by the client management team was to improve the OEE by an average 10% points on each line through;

- Identifying and eliminating the primary causes of equipment downtime
- Identifying and eliminate causes of quality loss
- Improving the line balance in the packing area

The client wanted to use an initial activity to drive improvement on a focus line whilst developing the internal capability to deliver further improvements without external support. This pilot also needed to establish the development of a continuous improvement culture within the business.

### The Industry Forum Solution

Industry Forum worked initially with the client management team to identify the focus area within the business that would deliver maximum business benefit whilst supporting the capability development and culture change needs. The proven MasterClass structure would best support the customer needs.



At the Pre-Diagnostic event the Industry Forum engineer set up the detail of the activity programme, ensuring that client expectations were clearly defined and support requirements understood. A cross-functional team of six was chosen from across the business including line management, operatives from the focus area and support functions. A 'Learn by Doing' training programme was designed to guide the team to discover the opportunities in their processes and be able to identify and implement their own solutions. The programme timing was developed to ensure that resource requirements could be managed within the daily business constraints.

The Diagnostic phase the team were trained to collect, collate and analyse data to provide meaningful information about their process. The analysis revealed that the largest contributor to downtime was caused by 'short stops' linked to operators not being able to keep pace with machine processes. This analysis contradicted preconceptions that the major down time causes were connected to break down. The main quality issues were found to be linked to the packaging equipment where heat sealing processes were leading to reject bags.

During the workshop phase the team learned and implemented root cause problem solving techniques to eliminate the bagging rejects. They then used waste elimination and line balancing tools to identify an improved operating task sequence and area layout. Following initial trials to validate their improvements the team then developed the standardised work required to sustain the revised process and trained the remainder of the line team prior to a managed implementation.

During each of the three follow up visits the team were supported through the implementation phase, to manage any barriers identified and ensure that the improvements were sustainable. The team developed their own role out plan for the next priority production line, using the capability gained to lead their own activities and to further cascade the know-how for continuous improvement.

The pilot activity delivered an OEE increased by 19% points and a People Productivity (part per operator hour) increase of 20%.

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