



## Case Study

# Breaking Records Together: Operational and Reliability Excellence

### Business Need

The client had started to see a deterioration in OEE on a critical bottling line, following the installation of a new automated case packer. The main assets on the line were approximately 10 years old and had been modified over the previous few years of production.

Following a review of the production line data and interviews with various Production and Maintenance personnel an action plan was developed to turn the OEE around within a 7-week window of operation. Customer orders were dependent on the successful outcome of this study.

### Goal

To Increase weekly output from an average 31t (37% OEE) to 63t (75% OEE) on one pack size within 7-week timeframe.

### Solution

A 'Manufacturing Improvement Team (MIT) were brought together, and a plan of action was developed.

The first activity was to carry out an Apollo Root Cause Analysis into the 'OEE Deterioration on the Production Line' which would identify the solutions to turn around this customer critical situation.

Following the RCA, several actions were performed:

- 1 OEE Detailed Loss Review
- 2 Red Tag the Line
- 3 Perform RCA on big losses
- 4 Develop PM and AM program through FMECA study application
- 5 Develop a 'Day in the Life' of a line operator
- 6 Develop a Visual Management Board and associated process
- 7 Confirm line capacity
- 8 Review Changeover process

## Results

The approach allowed the client to get control over the losses and identify solutions for increased, steady, and consistent production.

The approach consisted of both Operational and Reliability Excellence activities that culminated in delivering the required production goal within a very short period.

The FMECA study element was completed in 15 days and resulted in the analysis of:

- 16 Main Assets
- 277 Failure Modes
- 275 Maintenance Tasks
- 127 AM Tasks
- 148 PM Tasks

The study was performed using Isograph AWB Software.

## Conclusion

The fast track ‘Manufacturing Improvement Team’ were able to focus on the actual causes of the OEE losses in a structured way.

The RCA allowed for a dedicated plan and addressed the main causes of the OEE loss.

The FMECA study allowed for a failure mode driven optimised maintenance strategy that was designed to identify and minimise the losses due to asset failure.

The success of this approach is now being rolled out across other business units onsite.

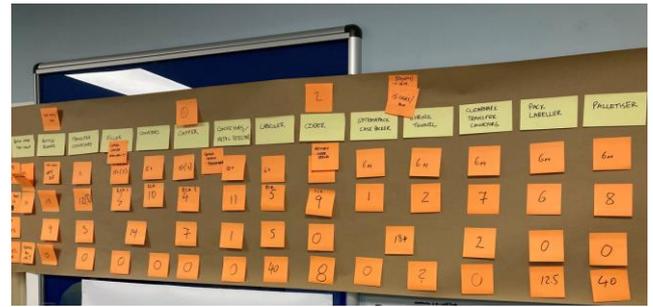
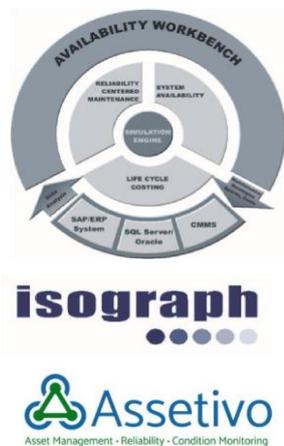


Fig 1: Manufacturing Map

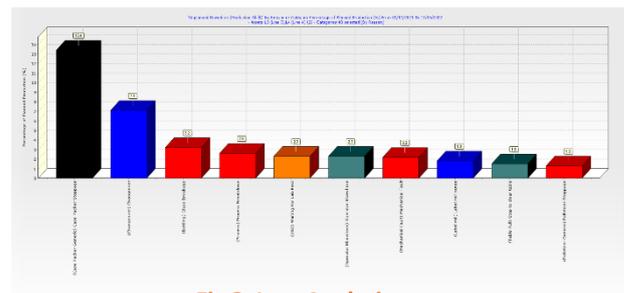


Fig 2: Loss Analysis

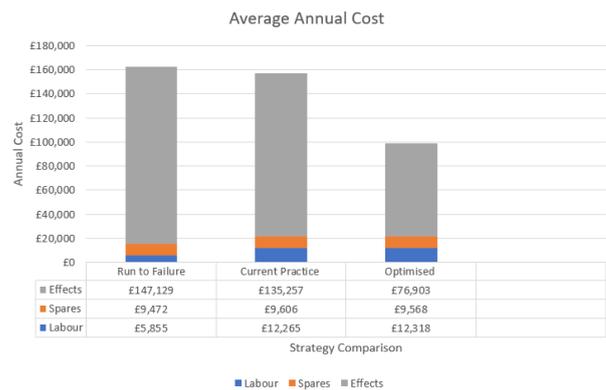


Fig 3: FMECA Strategy Comparison

## Testimonial

“As part of our excellence journey, we partnered with PRS to facilitate this rapid intervention. The PRS team provided the framework, tools, and facilitation to ensure we hit the ground running. The structured approach allowed the team to work on key improvement areas in an accelerated manner.

The FMECA tool demonstrated how quickly and professionally a company can determine their critical assets and model various strategies to ensure reliability.

This process yielded the team not only to establish a good reliability foundation, but they broke a three-year production record as an added bonus.

This was a great example of using an excellence intervention to deliver other benefits that lead to operational excellence as well.” – Site Manager – Food Oil Facility, UK

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