

Lean / Operational Excellence Transformation of a UK Electronic Manufacturer

How FlowPlus helped a manufacturer to transform their operations to work in a smarter, leaner way



INTRODUCTION

Our client reached out to us with a specific problem to solve – the reliability of their equipment.

A team of FlowPlus consultants conducted a free assessment through a site visit and audit to better understand the problem and quantify the potential benefits.

The assessment revealed that the primary root causes for poor equipment reliability were related to a combination of insufficient visual management, unstable process control and the lack of a Total Productive Maintenance (TPM) strategy.

The primary aim of our client was to increase the daily throughput of the site by 20% within 6 months.

Find out how FlowPlus helped them achieve this and much more...



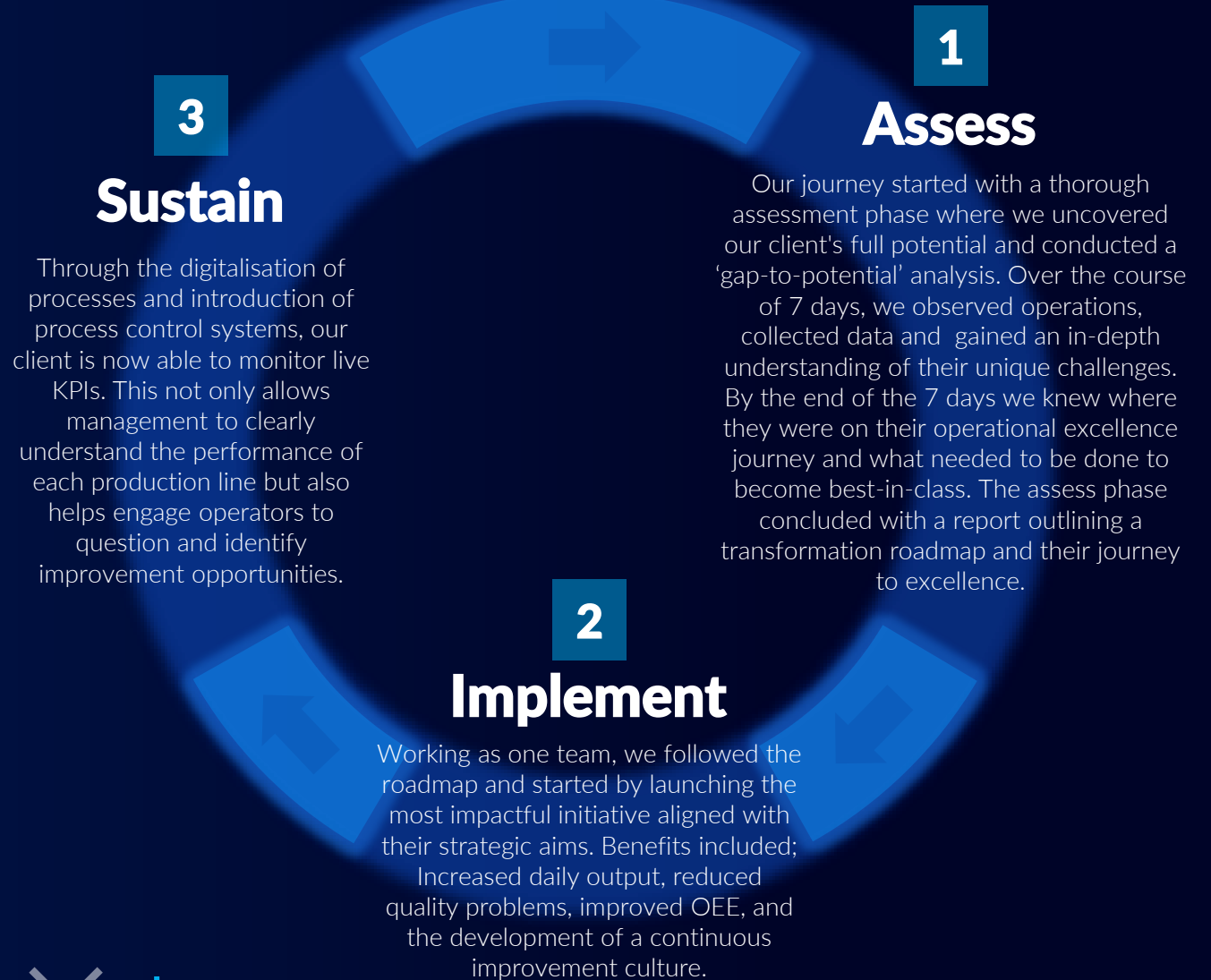
THE SOLUTION

THE FLOWPLUS TRANSFORMATION PROCESS

The 3-step FlowPlus transformation cycle is a tried and tested way of achieving sustainable, long-term results. Following the transformation cycle, FlowPlus and our client worked as one team on the journey towards Operational Excellence.



Assess





Assess



WORKING AS ONE TEAM

Our client's transformation process started with a thorough assessment phase to uncover areas for improvement and gain insight into current practices.

Working as one team, we collected data, observed operations, spoke with operators, and mapped the processes. Using specialist tools we transformed data into insights, uncovering large untapped improvement opportunities that focused on reducing waste, maximising productivity and increasing throughput.

IMPROVEMENT STARTS WITH DATA

We make data-driven decisions, using facts and insights to guide our solutions.

That's why we have confidence we can make such a big impact.



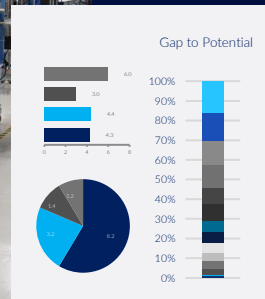
PAVING THE WAY TO OPERATIONAL EXCELLENCE

The Assess phase is all about identifying and quantifying problems, with the support of data. Taking a holistic view of the entire production operation, we used discrete event simulation to uncover bottlenecks and quantify improvement potential. The primary metrics measured include OEE, throughput rate, MTTF, MTBF and process variation.

Assess



Once all the improvement opportunities had been identified we developed a transformation roadmap – whereby the most impactful projects were prioritised.



INITIAL STATE PERFORMANCE (BEFORE):

OEE **64.9%**
(Overall Equipment Effectiveness)

MAXIMUM DAILY OUTPUT **186**
(Maximum number of products produced per day)

PROCESS CONTROL **6.3%**
(Quality defects %)

OPERATOR PRODUCTIVITY **58%**
(Value add %)

OPERATIONAL EXCELLENCE





Implement 

REAL RESULTS MEASURED

We don't count our days on-site; we judge our success by our results.

Increasing the maximum daily output by over 20% could only be achieved by drastically changing processes.

EXECUTING THE ROADMAP

Following the transformation roadmap outlined in the Assess phase, the projects with the greatest potential impact were launched. (These can vary significantly for different clients.)

1. OEE improvement workshops
2. Installation of process control measures
3. Installation of Poke-yoke (error proofing) devices
4. Incorporation of automated maintenance and visual management solutions
5. Development of a Continuous Improvement structure and culture

FINAL STATE PERFORMANCE (AFTER):		
OEE (Overall Equipment Effectiveness)	88.7%	+36.7%
MAXIMUM DAILY OUTPUT (Maximum number of products produced per day)	249	+33.8%
PROCESS CONTROL (Quality defects %)	2.1%	-200%
OPERATOR PRODUCTIVITY (Value add %)	73%	+26%

RESULTS

EXECUTING THE ROADMAP

OEE is a well-known but frequently miscalculated metric. Many organisations use their own interpretation to provide inflated OEE values that negate the importance of the metric – the ability to quantify the contributing factors. We work with a technical partner to install the required devices/sensors/counters that provide the greatest insight at the lowest cost. This enables us to easily target the factors that matter most – installing countermeasures that increase Availability, Performance and Quality factors. Our client had many metrics already available, we simply installed new IOT devices and collated the data into an intuitive dashboard. As a result of holding focused OEE workshops, we were able to increase the OEE of the bottleneck equipment by 36.7%.

Introducing a Continuous Improvement program across an entire organisation can be a challenge. Over 80% of employees hadn't been actively engaged in continuous improvement prior to our involvement. Using team-specific KPIs, and developing routines that enabled improvement suggestions to be raised and solved rapidly helped build confidence that the continuous improvement journey was a long-term change. Over the space of 6 months we tapered off our involvement and ensured the client was fully self-sufficient to drive improvements themselves.



ELIMINATING & MINIMISING DEFECTS

Through the design and installation of poke-yoke devices, certain processes became error-proof – incapable of producing defects. Embedding quality into processes provides confidence in results and eliminated the need for inspection. Machines that couldn't be error-proofed had visual management aids (andon system) to allow errors to be easily detected and countermeasures taken as soon as possible.



Annual Cost Savings

£650,000

Continuous Improvement Involvement

>90% of employees

DEVELOPING A CONTINUOUS IMPROVEMENT CULTURE

Improvements can only occur once performance can be measured. That is why we created digital and automated KPI dashboards for the operation. Now operators are able to hold daily CI huddles, review their key metrics and uncover additional improvement opportunities. Working closely with the client, we trained all supervisors to hold these daily meetings effectively, through engaging all team members and promoting a continuous improvement culture in everything they do.

Sustain



AUTONOMOUS PROBLEM SOLVING

Within the first month of introducing daily CI huddles with team KPIs, 5 initiatives have been launched and results are already improving. Identified by one of the operators, a new process for checking in stock has saved an estimated 60 hours manual handling per week.

WE BELIEVE EVERY ORGANISATION CAN BE IMPROVED

Right now, within your organisation, there are complex and apparently insurmountable challenges to solve.

Equally, there's hidden opportunity to tap into. If you're going to overcome those obstacles, unearth that potential and keep on improving as an organisation, change is essential. But where to start? How do you make the right changes? And how do you make them stick?

That's where we come in...

Contact us;

enquiries@flowplus.co.uk

