

USED IN REAL IMPROVEMENT WORK

When a machine fault wasn't a machine fault

Joe Campbell, Operations Manager, completed SimplicityHub's Green Belt course and used 16 templates and 4 calculators to run a structured improvement project on a live manufacturing problem.

CSSC REVIEW ★★★★★

·Green belt course was really decent! Very thorough content and I also have really decent tools to take away and use in my place of work, brilliant for the price!·

Joe Campbell, Operations Manager · Verified on CSSC · 19 August 2026

**1. Problem**

Recurring machine jams and repeated reactive fixes.

**2. Root cause**

Data and Gemba observation exposed the damp-floor and draught pattern.

**3. Fix**

A simple no-cost change stopped the recurring jams.

THE PROBLEM

A labelling machine on Line 2 kept jamming. Maintenance replaced the sensor, replaced the feed motor and recalibrated twice. After three weeks of repeated downtime and a significant parts bill, the underlying cause still had not been identified.

THE BREAKTHROUGH

The team plotted when the jams happened using a structured data-collection template. The machine jammed almost every Tuesday and Thursday morning. Those were the early cleaner's mopping days: the floor was still damp, a side door was propped open, and the draught lifted the edge of the label stock as it fed through.

“We have had this issue for months and couldn't figure out what it was, as I was going through the Green Belt course I had a urge to put what I was learning to the test and low and behold, by applying the correct methods we figured it out!”

— Joe Campbell, Operations Manager

THE RESULT

The fix was simple: move the mop rota and stop propping the door open. The change cost nothing, and the machine has not jammed since.

The project used 16 SimplicityHub templates and 4 browser-based calculators, including data-collection sheets, a cause-and-effect matrix and a Five Whys walkthrough. No specialist software or licence fees were required.

The toolkit in action

Joe used the following 16 templates and 4 calculators during his DMAIC investigation. The resources below show exactly how each one supported the project.

DEFINE

Frame the problem

Problem Statement, Project Charter and SIPOC clarify the recurring Line 2 jams without assuming the machine is at fault.



MEASURE

Find the pattern

Data Collection Plan, Simple Tally Sheet and a Run Chart help reveal when jams cluster. The Gemba Walk Checklist and Process Observation Sheet support direct observation while collecting evidence.



ANALYSE

Trace the cause

Fishbone Diagram, Process Map Template, Cause Validation Matrix and 5 Whys trace the issue from lifted label stock back to the mop rota.

IMPROVE

Choose the fix

Impact vs Effort Matrix and Cost Benefit Analysis support a simple, no-cost intervention.



CONTROL

Keep it fixed

Control Plan and Before and After Comparison provide a way to check that the improvement holds over time.

CALCULATORS USED

Joe used these SimplicityHub calculators during the investigation described in this case study:

- Pareto Chart Calculator — identify the biggest contributor in a list of symptoms.
- Cost of Poor Quality Calculator — make downtime, maintenance, parts and labour costs visible.
- OEE Calculator — examine equipment availability and performance.
- Cycle Time Calculator — quantify the effect of delays on the process.

THE LESSON

The root cause had nothing to do with the machine. Structured methodology helped the team investigate when the problem happened, observe the process at Gemba and trace the issue back to its source.

LEARN · APPLY · EXCEL



Train as a LSS Green Belt and fix your pain points!

simplicityhub.co.uk