

LEAN SIX SIGMA

Project Report Template

Part A - Worked Example

A DMAIC storyboard report — with a completed worked example and a blank fillable version for your own project

Companion template to the Lean Six Sigma Yellow Belt Guide

Define · Measure · Analyse · Improve · Control

How to Use This Template

This report follows the same structured, DMAIC-based storyboard used throughout the Yellow Belt Guide: Define, Measure, Analyse, Improve, Control. It is designed to be completed alongside a real improvement project and shared with your sponsor, process owner, and wider team at each stage of the project, and at closure.

The template is split into two parts:

Part A — Worked Example: a fully completed sample report, built around a single running case study (products arriving without the correct certification paperwork). Use it as a model for the standard expected at each step — what a well-written problem statement, root cause analysis, or control plan should look like.

Part B — Your Project Report: a blank version of the same template, structured identically, ready for you to complete with your own project's data, diagrams, and findings.

Tips for getting the most out of this template

- Complete each phase before moving to the next — Define before Measure, Measure before Analyse, and so on. Resist the temptation to jump to solutions early.
- Keep it visual. Paste in your own process maps, diagrams, and photos wherever you see a placeholder box — a picture of a real whiteboard is more powerful than a tidy description.
- Treat it as a living document. It is normal to revisit and refine earlier sections (particularly the Problem Statement and SMART objective) as you learn more in Measure.
- Share it. A storyboard is a communication tool as much as a record — use it to keep your sponsor and team aligned at every stage.

WHERE THIS FITS

This report template complements the A3 and generic storyboard templates provided with the Yellow Belt Guide. Use whichever format suits your organisation's culture — the thinking underneath is the same.

PART A

Worked Example

A fully completed sample DMAIC project report

Follow this project from Define through to Control as a model for your own.

Project Overview

This worked example follows a single Yellow Belt project from start to finish, used throughout this report to show what a well-completed storyboard looks like at each stage of DMAIC.

Project Title:	Reducing Missing Certification Paperwork Between Process X and Process Y	Project Lead:	Gerald Jones
Sponsor:	Sarah Mitchell	Process Owner:	Alan Turner / Penny Holt
Start Date:	Week 0	Target Date:	Week 8
Current Phase:	Closed	Status:	Complete — benefits realised

DEFINE — Identify the Problem and Set the Boundaries

Problem Statement

After Process X is complete, the line operator is expected to inspect the product and certify that the process has been completed correctly before it moves on to Process Y. The Process Y Team Leader reported that products regularly arrive without the required certification paperwork, and the team believed the situation had worsened since a recent computer system change.

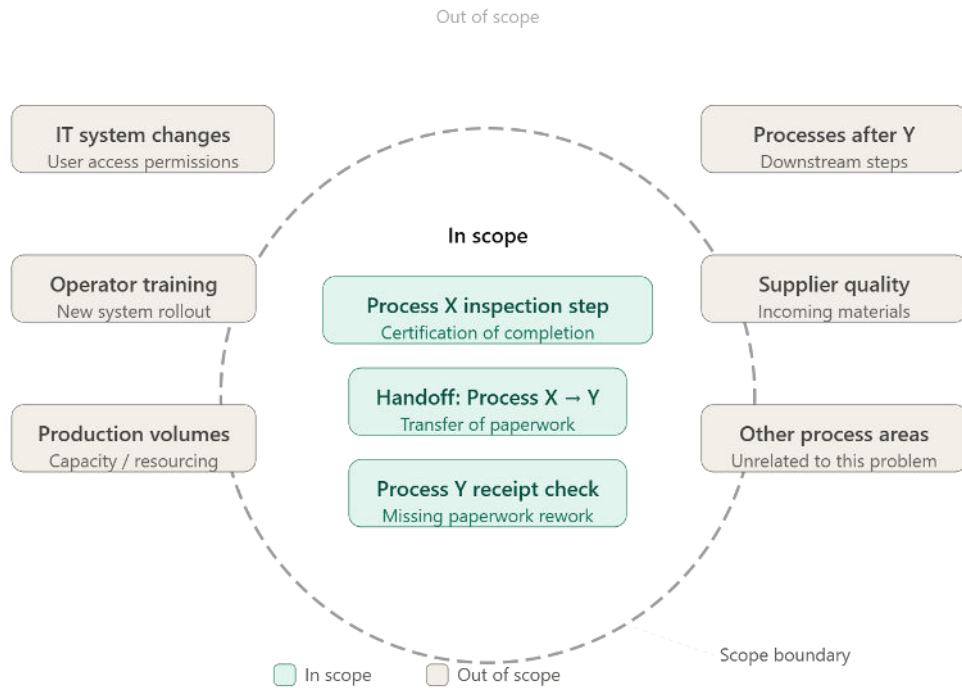
PROBLEM STATEMENT

In the last six months, 50% of products arriving at Process Y have been missing the required certifications, causing on average two hours of rework per occurrence and delaying downstream production.

This statement was tested against three questions before being finalised: does it contain a cause? No. Does it suggest a solution? No. Could it be verified with data? Yes — it is based on six months of incident records.

Scope

The project boundary was agreed with the sponsor and both process owners using an in/out of scope exercise, to keep the project tightly focused on the certification handoff between Process X and Process Y.



In / out of scope map, agreed with the project sponsor and process owners.

Voice of the Customer

The internal customer for this project is the Process Y team. Their stated requirements were translated into a measurable Critical to Quality (CTQ) characteristic.

Customer says (VOC)	Translates to (CTQ / measure)
"I need the right documents with every delivery."	% of deliveries with correct paperwork attached
"When it's missing, it stops my whole shift."	Hours of rework / delay per missing-paperwork incident

SMART Objective

OBJECTIVE

Reduce the percentage of products arriving at Process Y without correct certification from 50% to 25% within eight weeks of project start.

Element	How the objective meets it
Specific	Targets the certification issue on the Process X → Process Y handoff
Measurable	50% reduced to 25%
Achievable	A 50% relative reduction in 8 weeks is realistic given the identified causes
Relevant	Directly addresses the Process Y team's CTQ

Time-bound	8 weeks from project start
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Team

Role	Name	Contact / Notes
Sponsor	Sarah Mitchell	
Process Owner	Alan Turner	Process X
Process Owner	Penny Holt	Process Y
Project Lead	Gerald Jones	1 day/week agreed
Subject Matter Expert	Jeremy Sykes	
Operator	Matthew Dark	
IT Representative	Melanie Roberts	As required

Estimated Benefits

Hard Benefits (Financial)

Benefit Type	Annual Impact	Notes
Cost Reduction	—	
Revenue / Throughput	£3,000	Assumes 50% reduction in delay-driven lost throughput
Waste Reduction	£4,500	More efficient process / less rework
TOTAL ANNUAL BENEFIT	£7,500	

Soft Benefits (Operational & Strategic)

Benefit	Measure / Impact
Reduced Rework / Errors	Less rework resulting in less frustration and fewer escalations
Better Customer Satisfaction	Improved handoff reliability between Process X and Process Y
Opportunity to Increase Throughput	Time freed from rework can be redirected to production

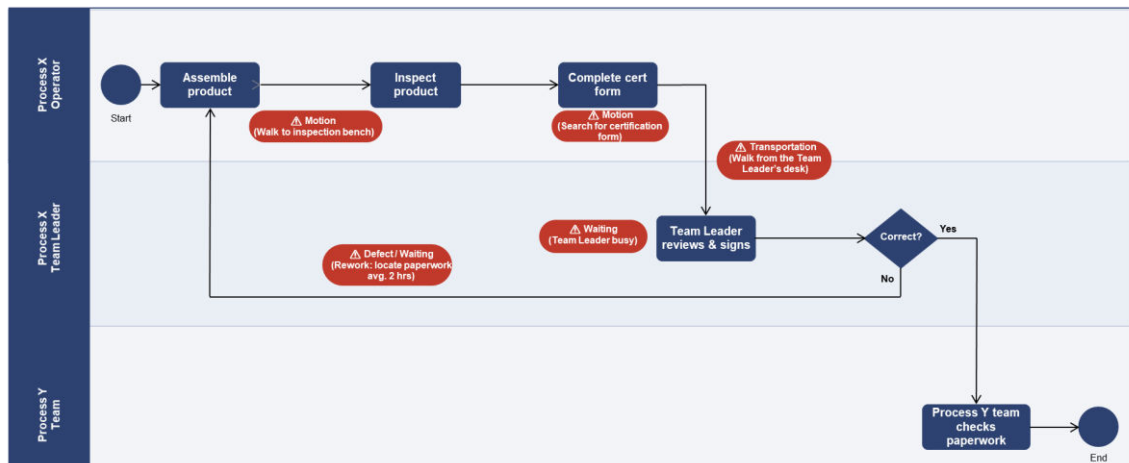
MEASURE — Map the Process and Quantify the Problem

Current Process Map (“As Is”)

Mapping the process revealed multiple handoffs between stations, unnecessary printing and re-checking of documents, and a waiting step between each assembly stage. Colour-coding showed that fewer than a third of steps were value-adding.

As-Is Process Map

Certification Paperwork — Process X to Y | Current state with waste identified



Waste Waste

As-Is process map, colour-coded by value-adding (green), non-value-adding but necessary (amber), and waste (red).

Waste Walk (TIMWOODS)

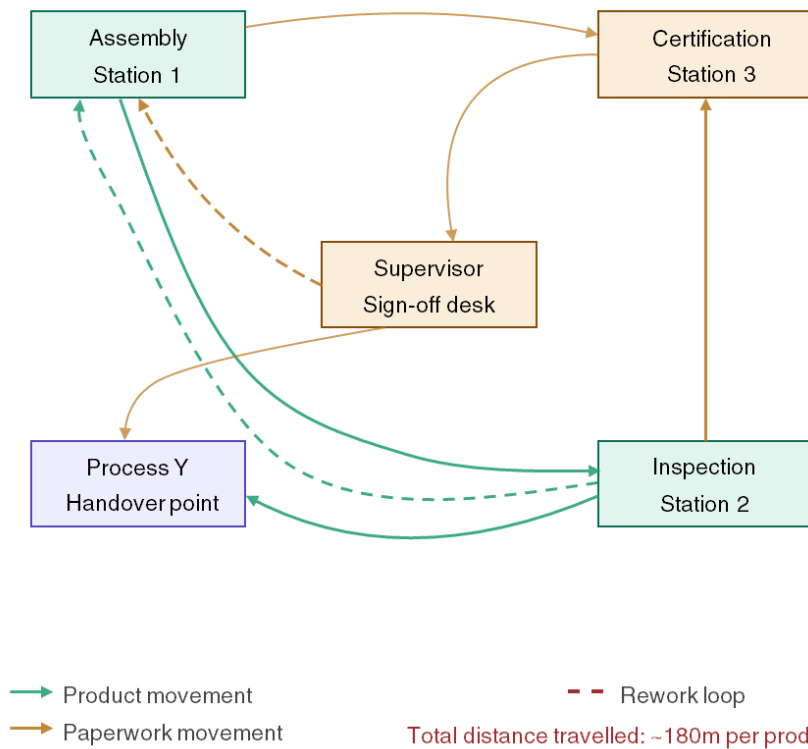
A structured waste walk was carried out alongside the process map, looking for each of the eight wastes.

Waste	Observed on this process
Transportation	Paperwork and product travel separately between Assembly, Inspection, and the Supervisor's desk
Inventory	Certification paperwork queues at the Supervisor's desk awaiting sign-off
Motion	Operators walk between Station 1 and the Certification desk multiple times per shift
Waiting	Process Y waits an average of 2 hours when paperwork is missing
Overproduction	Not significant on this process
Over-processing	Paperwork is printed, re-checked, and re-printed when errors are found
Defects	50% of handoffs missing correct certification (the headline metric)
Skills	No agreed standard method — each operator does it differently

Spaghetti Diagram

Because Transportation and Motion waste were significant, a spaghetti diagram was drawn to trace the physical movement of product and paperwork.

Process X — production floor



Spaghetti diagram tracing product and paperwork movement across four stations.

The diagram revealed that product and paperwork travel completely out of sync, crossing paths multiple times and covering roughly 180m before being reunited at Inspection — a layout problem rather than a people problem. Simply resequencing the stations could reduce travel by over 60%.

Data Collection Plan

What data?	Why?	When?	How (method)?	Where in process?	Who?
Certification present / missing	Establish baseline defect rate	Every handoff, 6 weeks	Tally sheet at Inspection	Process X → Process Y handoff	Process Y team
Rework time per incident	Quantify impact / cost	Each occurrence	Time log	Process Y	Process Y Team Leader

Two team members independently logged the same 20 handoffs to confirm consistent counting before the baseline period began — both recorded matching results, so the tally method was adopted as-is.

BASELINE (MEASURE PHASE OUTPUT)

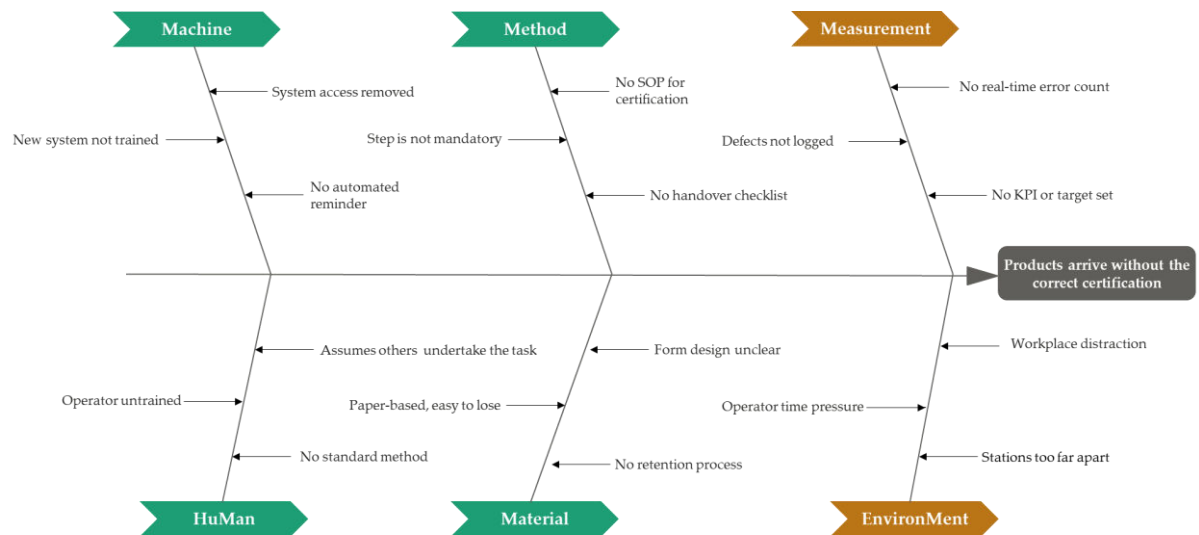
50% of products arrived at Process Y without correct certification, at an average cost of 2 hours' rework per occurrence.

ANALYSE — Find and Verify the Root Causes

Review of the Process Map

Revisiting the As-Is map alongside the waste walk findings pointed the team toward three areas worth investigating further: the lack of a standard method at Station 1, the absence of real-time feedback on completion rates, and the physical distance between stations.

Fishbone Diagram



Lean Six Sigma Yellow Belt | Flenstall Consulting Limited | Fishbone Diagram – 6M

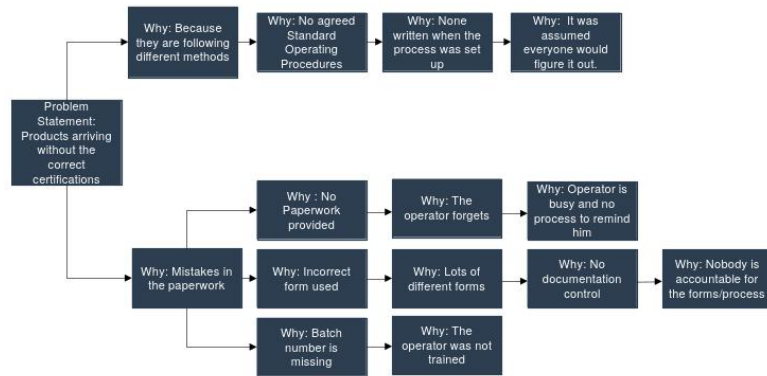
Cause-and-effect (fishbone) diagram for missing certification paperwork.

Key branches identified by the team:

- Method: No agreed Standard Operating Procedure — each operator worked differently.
- Measurement: No real-time feedback on order completion rate, so teams did not know they were falling behind.
- Environment: Stations too far apart, increasing travel time and encouraging batching of paperwork.

5 Whys

Problem: Products arriving without the correct certifications.



5 Whys drill-down from the symptom to the verified root cause.

Pareto Analysis

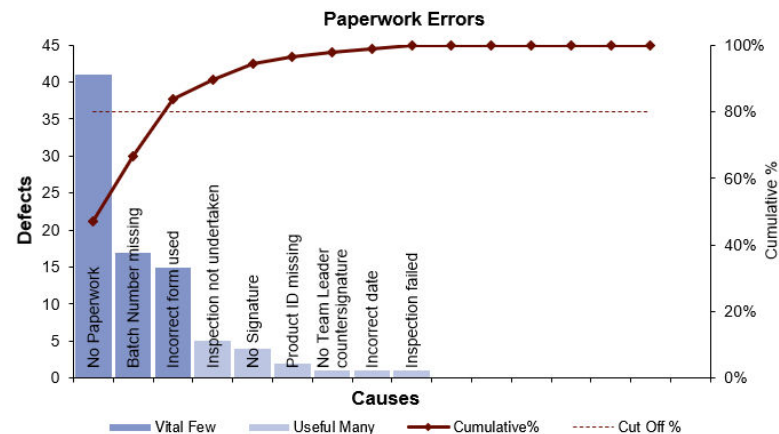
Six weeks of missing-paperwork incidents were categorised and counted to identify where to focus improvement effort.

Pareto Analysis

[Gerald Jones]

[Certification Paperwork]

[17th July 26]



Cumulative Percentage Cut-off: 80%			
#	Causes	Defects	Cumulative%
1	No Paperwork	41	47.1%
2	Batch Number missing	17	66.7%
3	Incorrect form used	15	83.9%
4	Inspection not undertaken	5	89.7%
5	No Signature	4	94.3%
6	Product ID missing	2	96.6%
7	No Team Leader countersignature	1	97.7%
8	Incorrect date	1	98.9%
9	Inspection failed	1	100.0%

Pareto chart of missing-certification causes, ranked by frequency with cumulative %.

Verified Root Causes

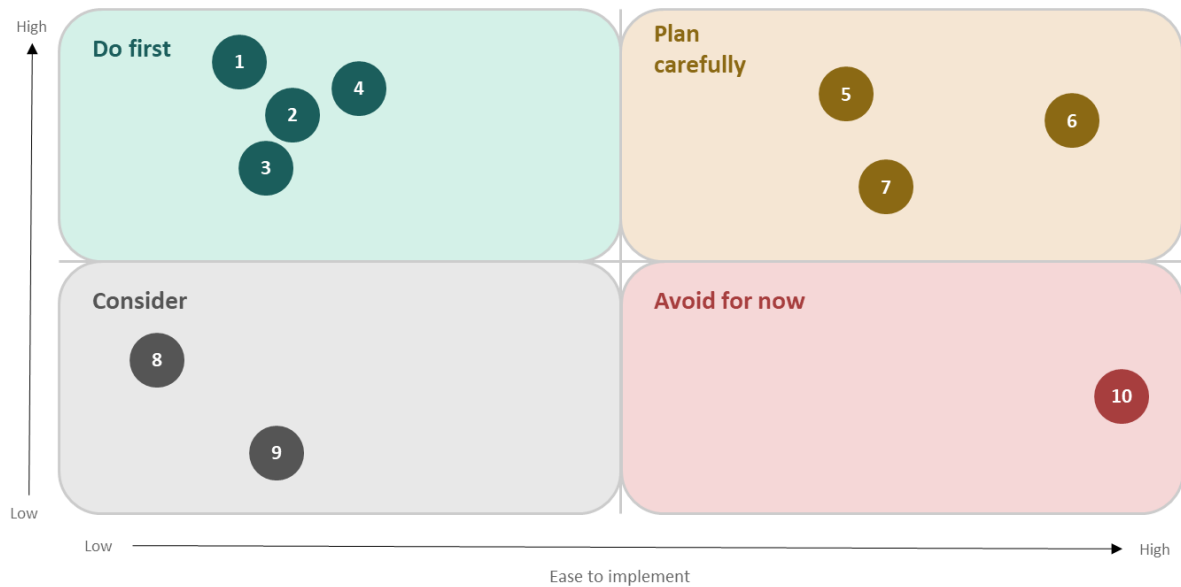
- No standard, agreed method for completing certification at Station 1 (confirmed by Fishbone and 5 Whys).
- No real-time visibility of completion rates, so lapses went unnoticed until Process Y was already affected.
- Physical layout separates product and paperwork, encouraging batching and increasing the chance of mismatch (confirmed by spaghetti diagram).

IMPROVE — Generate, Test and Implement Solutions

Idea Generation

A one-hour brainstorming session was run with the full project team, using the verified root causes from Analyse as the starting point. Ten ideas were generated and captured without filtering, then assessed using an ease/benefit prioritisation matrix.

Prioritisation Matrix

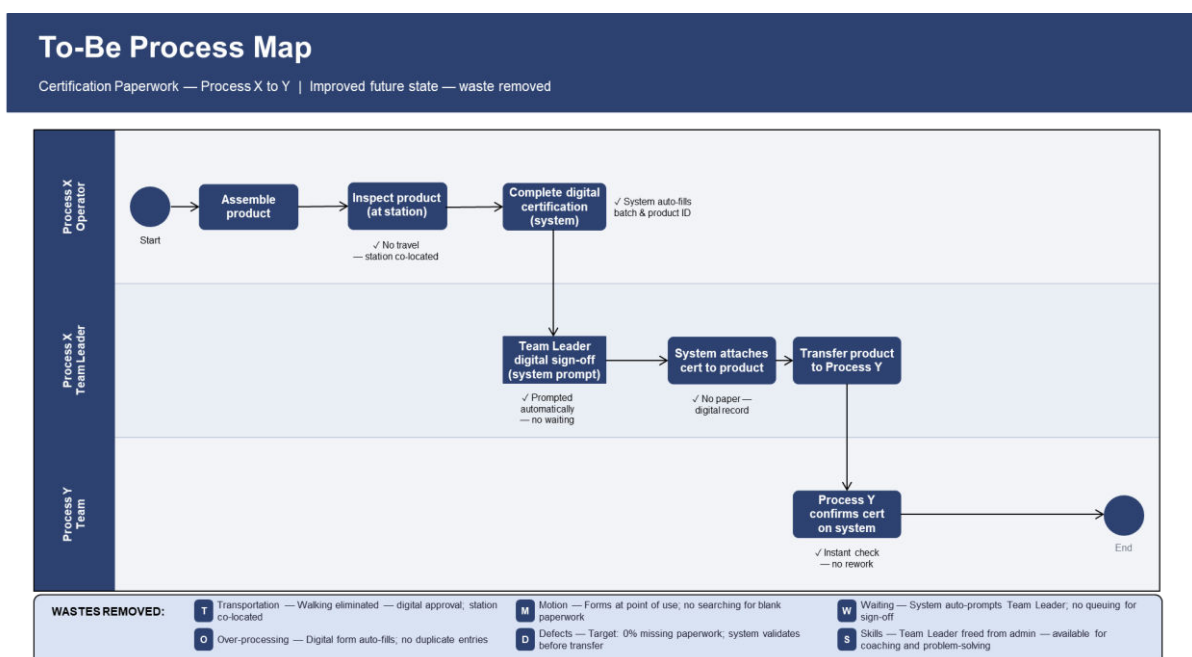


Ease/Benefit prioritisation matrix for the ten improvement ideas generated.

Quadrant	Actions
Do First (High benefit / low effort)	Write SOP-PX-004; brief all operators; laminate certification checklist at Station 1; start a weekly missing-paperwork tally at Process Y
Plan Carefully (High benefit / high effort)	Digital certification system; co-locate Station 1 and the inspection bench; system auto-prompt for Team Leader approval
Consider (Low benefit / low effort)	Reminder note on the forms storage box; Friday PM email reminder to operators — kept in reserve only
Avoid For Now (Low benefit / high effort)	Full ERP integration — high cost and lead time for limited incremental gain over the digital certification system

The four “Do First” actions were zero or near-zero cost, addressed the verified root causes directly, and became the basis of the Control phase actions on the To-Be map.

“To Be” Process Map



Future-state (To-Be) process map, redesigned around the verified root causes.

The To-Be map removes the round-trip between Station 1 and the Certification desk, introduces a mandatory checklist at the point of certification, and adds a weekly completion-rate check — directly addressing all three verified root causes.

Pilot

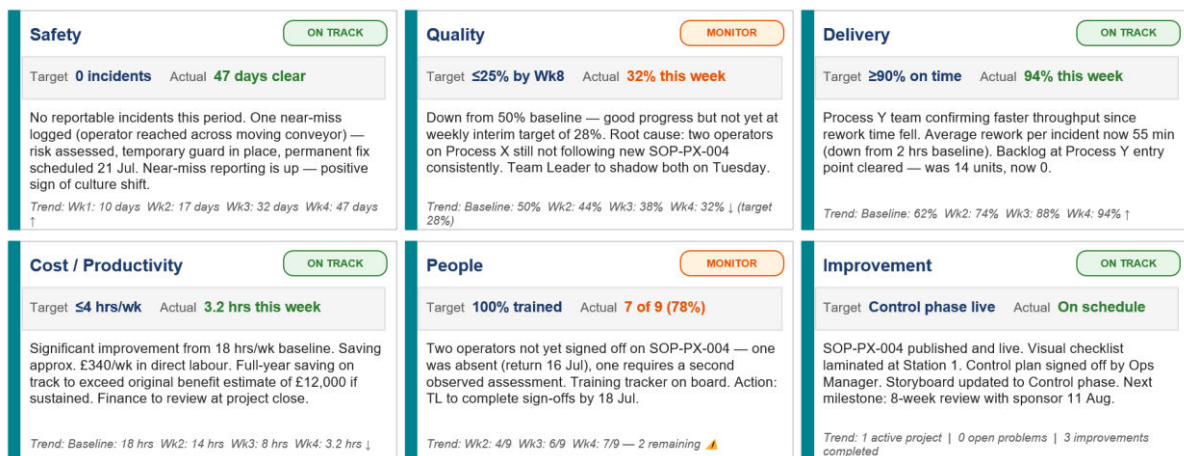
The redesigned process was piloted for two weeks on one production line, using the same measurement method as the Measure baseline for a like-for-like comparison.

Metric	Before (Measure baseline)	After (2-week pilot)
% missing certification	50%	18%
Average rework time per incident	2 hours	45 minutes

The pilot confirmed the solution worked in practice and was ready to be rolled out to the remaining production lines, with the SOP and checklist adopted as standard from week 6.

CONTROL — Embed the Change so it Sustains

Visual Management



Daily visual management board at Process X, reviewed by the team each morning.

The board is reviewed by the team for 10–15 minutes each morning, working through Safety, Quality, Delivery, Cost, People, and Improvement in the same order every day, with any red indicator triggering an assigned action and owner on the spot.

5S and Mistake-Proofing

A light-touch 5S pass was carried out at Station 1 alongside the SOP rollout, and the certification checklist itself acts as a Control-level mistake-proof: the product cannot proceed to Process Y until every field on the laminated checklist has been completed and signed.

Standard Operating Procedure

Product certification — handover to Process Y

Standard operating procedure · Process X, production floor

DOCUMENT REF SOP-PX-004	VERSION 1.0	REVIEW DATE Jan 2026	OWNER Process X TL
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Scope: Applies to all products leaving Process X that require certification before transfer to Process Y. Every operator on Station 1 must follow this procedure without exception.

PROCEDURE STEPS

- Complete the assembly inspection**
 Check the product against the inspection checklist before leaving Station 1. Confirm all components are present and correctly assembled.
☐ Line operator — Station 1
- Complete the certification form**
 Fill in all fields on form CF-01: product ID, date, batch number, and inspection result. Sign and date in the operator box.
☐ Form must be fully completed — no blank fields
☐ Line operator — Station 1
- Obtain Team Leader sign-off**
 Pass the completed form CF-01 to the Process X Team Leader for review and countersignature before the product is moved.
☐ Process X Team Leader
- Attach form to product**
 Securely attach the signed form CF-01 to the product using the designated document pocket. Do not transfer without the form attached.
☐ Product must not leave Station 1 without paperwork attached
☐ Line operator — Station 1
- Transfer to Process Y handover point**
 Move the product to the Process Y handover station. Notify the Process Y Team Leader of the transfer and confirm receipt.
☐ Line operator — Station 1

APPROVAL AND SIGN-OFF

Authorised by		
Written by	Reviewed by	Approved by
Process X Team Leader	Quality Manager	Operations Manager

SOP-PX-004: Certification at Station 1 (excerpt).

Control Plan

DMAIC Control Plan												
Project:	Certification Paperwork — Process X to Y Handover			Core Team:	A. Turner / P. Holt / J. Sykes / M. Dark			14 Jul 2026				
Key Contact:	Colin Weemes				14 Jul 2026							
Phone:	x4521							Authorised By:	14 Jul 2026		Date:	
Sponsor:	Sarah Mitchell — Operations Manager							Signature:				
Department/Individual	What must be controlled?	Project Y, X, or other?	Requirements (specs)	Ongoing Control Mechanisms	Measurement Technique	Sample Size	Frequency	Who Measures?	Action	Timing	Owner	SOP Ref.
Process X — Line Operator	Certification form (CF-01) completed and attached to product	Y	100% of products to arrive at Process Y with a fully completed, signed CF-01 form attached	Visual check by operator before transfer; Team Leader countersignature required	Manual check at point of transfer — form present, all fields complete, signed	100% (every unit)	Every transfer	Process X Line Operator + Team Leader	Hold product at Station 1; contact TL immediately; do not transfer until form is complete and signed	Immediate — before product leaves Station 1	Process X Team Leader	SOP-PX-004
Process X — Team Leader	% of products arriving at Process Y without paperwork	Y	Target: ≤5% missing paperwork within 4 weeks; ≤0% within 8 weeks	Weekly tally of missing paperwork incidents logged by Process Y team	Incident count — Process Y team records each arrival without CF-01	All transfers in the week	Weekly (reported every Monday)	Process Y Team Leader	If >5% in any week: convene Process X/Y TL meeting within 48 hrs to review; re-brief operators; escalate to Ops Manager if >10%	Within 48 hours of weekly report	Process X Team Leader	SOP-PX-004
Process Y — Team Leader	Time spent resolving missing paperwork (rework hrs)	Y	Target: average rework time reduced from 2 hrs to ≤30 min per incident within 8 weeks; ≤0 incidents within 12 weeks	Rework log maintained by Process Y team for every missing paperwork incident	Time log — operator records start and end time for each missing paperwork resolution	All incidents	Every occurrence; reviewed weekly	Process Y Operator (log) / Process Y TL (review)	Log incident; request paperwork from Process X TL; do not commence Process Y until CF-01 received	Immediate on receipt of product; weekly review of log totals	Process Y Team Leader	SOP-PY-011
Process X — Line Operator	Operator adherence to SOP-PX-004	X	100% adherence to certification and transfer procedure for all operators	Monthly SOP compliance audit by Team Leader; spot-checks at point of transfer	Structured observation against SOP-PX-004 checklist (10 steps)	Minimum 3 spot-checks per operator per month	Monthly audit + random spot-checks	Process X Team Leader	If non-compliance observed: immediate re-brief against SOP; if repeated, escalate to Ops Manager for formal review	Immediate on observation; monthly audit report by last working day of month	Process X Team Leader	SOP-PX-004

Control plan handed over to the Process X and Process Y process owners at project closure.

Metric	Type	Control method
Certification form attached	Y	100% check by operator with TL countersignature; product cannot leave without it
% missing paperwork	Y	Logged by Process Y team; TL reviews weekly; escalation if >5% in any week
Rework time	Y	Time log per incident, reviewed weekly; target ≤30 min by week 8, zero by week 12
Operator SOP adherence	X	Monthly audit plus 3 random spot-checks per operator; non-compliance triggers re-brief

CLOSE — Results and Handover

Results Summary

Metric	Baseline	Target	Result at closure
% missing certification	50%	25%	14%
Rework time per incident	2 hrs	≤30 min (wk 8)	22 min

Benefits Realised

Benefit Type	Estimated (Define)	Realised at closure
Revenue / Throughput	£3,000	£3,200
Waste Reduction	£4,500	£4,900
TOTAL ANNUAL BENEFIT	£7,500	£8,100

Benefits were reviewed and confirmed with Finance at project closure, in line with the project's benefits governance.

Transfer of Ownership

- Process owners Alan Turner and Penny Holt have accepted the control plan and SOP-PX-004.
- All Station 1 operators have been briefed and trained on the new checklist.
- The weekly missing-paperwork tally and visual management board are live and in daily use.

Replication

The Station 1 checklist and weekly tally approach are being reviewed for use at two other product-to-inspection handoffs in the same building, where a similar certification pattern has been observed.

Sign-Off

Role	Name	Signature / Date
Project Sponsor	Sarah Mitchell	
Process Owner	Alan Turner	
Process Owner	Penny Holt	

