

The cost of tracking production on paper

A small-batch manufacturer turning over £2.4M a year, running 25 staff and four workstations on paper job travellers, with eight people handling the paperwork. Nothing is visibly broken — jobs get made, customers get their orders, the travellers are legible — which is exactly why the leak survives. Here is where the money actually goes, with every calculation shown.

VERTICAL	REVENUE	TEAM	WORKSTATIONS	STACK
Small-batch manufacturing	£2.4M / yr	25 staff, 8 handling paperwork	4	Paper job travellers + planning whiteboard + accounts package + spreadsheets

WHERE THE MONEY ACTUALLY GOES

Chasing job status across the floor

≈ £35,000

- production manager building and rebuilding the daily picture: 1 hr/day × 230 working days = 230 hours
- two supervisors fielding status questions: 2 × 40 min/day × 230 days = 307 hours
- two office staff going to find answers for customers: 2 × 25 min/day × 230 days = 192 hours
- four operators hunting for travellers, drawings and the right revision: 4 × 15 min/day × 230 days = 230 hours
- weekly production meeting overrun spent reconstructing last week: 8 people × 30 min × 46 weeks = 184 hours
- total ≈ 1,143 hours, call it 1,150 hours a year, at a blended £20/hr → £23,000
- plus decision drag — lead times quoted from a day-old picture, jobs started in the wrong order, a machine idle because nobody knew the previous op had finished — charged at 0.5% of £2.4M turnover → £12,000

≈ £35,000 a year — paid in salaries that would be paid anyway, so it reads as normal staffing.

Rework from lost or wrong paperwork

≈ £18,000

- roughly 1,200 jobs a year through four workstations
- paperwork-caused failures — wrong revision, missed amendment, skipped or mis-signed operation, lost wallet — affect 3.5% of jobs → 42 jobs
- cost of putting one right: 6 hrs shop labour at £20 = £120, materials remade = £190, displaced capacity on the workstation that runs it twice = £120 → £430 per job
- 42 × £430 = £18,060 — cross-check: 0.75% of £2.4M turnover = £18,000
- excludes design-caused defects, supplier material faults, machine-caused scrap and all external failure cost

≈ £18,000 a year — filed as a quality issue, caused by a sheet of A4 with no version on it.

Late jobs and expedited despatch

≈ £18,000

- unplanned re-planning and despatch scrambling: ~3 hrs/week × 46 weeks = 138 hours, plus ~12 after-hours despatch pushes at 1 hr each = 12 hours → 150 hours at £20/hr = £3,000

What closing it looks like

- "Where is it" stops being a question anyone has to walk to answer: the traveller becomes a job record each station updates as work passes through, readable from the office and the floor in the same second.
- Rework caused by a stale document stops: an operation running against a superseded revision cannot be booked complete, and a customer amendment attaches to the job rather than to somebody's memory of a phone call. Design-caused and material-caused defects remain — a different problem.
- Late jobs announce themselves early: a promised date beside real progress means the warning arrives with days of runway, recoverable with a schedule change rather than with overtime and a premium carrier.
- The Monday meeting stops being an archaeology session, and job costing stops depending on a Friday typing exercise.
- Not an MES and not a full ERP — a right-sized operations system fitted to the actual job flow and the accounts package already in use, owned outright.
- Payback, honestly: against a £71,000 annual leak the fix typically pays back inside the first year, usually on the chase time alone — but only if operators actually book their own work at the station. Keep the paper and add a screen and you have bought a second system to maintain and recovered nothing.

THE ASSUMPTIONS BEHIND EVERY FIGURE

- Blended labour cost of £20/hour across operators, supervisors and office staff — ONS ASHE April 2025 puts median full-time gross hourly pay excluding overtime at £19.67. With employer National Insurance and pension, the supervisor and manager hours cost more than £20, so this is the conservative end. Substitute your own.
- 230 working days per person per year — 261 weekdays less eight bank holidays and 23 days of leave — and 46 working weeks for anything counted weekly.
- Roughly 1,200 jobs a year through four workstations.
- Paperwork-caused rework on 3.5% of jobs at £430 each (6 hrs labour + £190 materials + £120 displaced capacity). This counts only rework whose root cause is paper being wrong, missing or out of date.
- About 7% of jobs ship late enough to need intervention, at £55 premium carriage each, plus 350 hrs of recovery overtime at a £10/hr premium and goodwill on ~18 orders averaging £380.
- Decision drag charged at 0.5% of turnover; rework cross-checked at 0.75%; lateness cross-checked at 0.625%. Total = ~3% of turnover.
- Source figures published in US dollars are converted at approximately 1.35 dollars to the pound and marked (converted).
- Figures are rounded and illustrative. They describe a representative operation of this size, not a named client.

How to read this. This is a worked example of a representative operation — not a named client. Every figure above is a transparent calculation, shown so you can substitute your own numbers and argue with the result. No testimonials, no invented results.

Run it against your real numbers.