

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**Small-batch manufacturing****REVENUE****£2.4M / yr****TEAM****25 staff, 8 handling paperwork****WORKSTATIONS****4****STACK****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: $\sim 3 \text{ hrs/week} \times 46 \text{ weeks} = 138 \text{ hours}$, plus ~ 12 after-hours despatch pushes at 1 hr each = 12 hours → 150 hours at £20/hr = £3,000
- of 1,200 jobs a year, about 7% ship late enough to need intervention → 84 jobs
- premium next-day carriage instead of standard on those consignments at $\sim £55$ extra: $84 \times £55 = £4,620$
- overtime to recover the schedule: 350 hrs at a £10/hr premium (time-and-a-half on a £20 base) = £3,500
- goodwill on the worst cases — carriage waived or a credit — on ~ 18 orders averaging £380 = £6,840
- $£4,620 + £3,500 + £6,840 = £14,960$ — cross-check: 0.625% of £2.4M turnover = £15,000; $£3,000 + £15,000 = £18,000$

≈ £18,000 a year — split across a carriage bill, an overtime line and credit notes, so it never reads as one problem.

TOTAL, PER YEAR

£71,000

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.

The free Operations Leak Audit does this exercise on your actual operation: where it leaks, what that costs, and what closing it would involve. No commitment — you keep the findings either way.

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