

SAMPLE REPORT — Calder Vale Coatings, its people, its vessels and every figure are invented. It shows the format and depth of an Optira diagnostic, delivered as a few short calls. The prices are for this invented plant; yours is quoted to your site and problem. The numbers come from Optira's diagnostic model, run on an invented four-week SAP extract.

LETDOWN VESSEL SEQUENCING

Cleandown in the week of 7 September:
what it cost, and what it could have cost

Calder Vale Coatings Ltd
Diagnostic day 17 Sept 2026
Report 18 Sept 2026
For Mark Pearson, Operations Manager
and Paul Walsh, Production Planner

SUMMARY

- In the week of 7 September, cleaning between batches used 2,824 L of solvent, cost £7,484 in solvent and waste, and took 58.5 vessel-hours across 64 works orders.
- 4 of the 64 changeovers caused 44% of that cost. All four were full strips: two on V6 crossing between waterborne and solventborne, and two into a white.
- Re-sequencing the same week, with the same vessels and due dates, gives £3,996, 32.2 vessel-hours, one strip, and no late orders. That saves £3,487 a week. Across the four weeks you sent, the saving ran £2.2k-£3.5k a week. We would budget £100k-£160k a year (page 2), and V6 gets back about 22 hours a week.
- We recommend a £12,500 fixed-price build. Paul gives it his Friday Excel export of works orders, and it returns a run order for each vessel (page 3).

1 The decision we looked at

Every Friday afternoon Paul turns next week's SAP works orders into a run order for the six letdown vessels. SAP issues the works orders and holds the batch cards, but it does not decide which vessel a batch goes on, or in what order. Paul does that in Excel, a day at a time, keeping colours together where he can. Grind and filling were out of scope.

THE VESSELS

VESSEL	LITRES	QUALIFIED FOR
V1	6,000	Alkyd, PU
V2	6,000	Alkyd, PU
V3	10,000	Alkyd, epoxy, PU (cleans 20% slower)
V4	10,000	Epoxy, PU (cleans 20% slower)
V5	4,000	Waterborne acrylic only
V6	8,000	Waterborne acrylic and alkyd: can change base

Two shifts, Monday to Friday: 80 hours a week per vessel. Twelve formulations ran, from brilliant white to jet black.

HOW YOU DECIDE THE CLEAN, IN YOUR WORDS

RULE, AS STEVE (SHIFT SUPERVISOR) AND PAUL PUT IT	CLEAN	VESSEL-HRS	SOLVENT	SOLVENT + WASTE
"Same product again, straight back in."	NONE	—	—	—
"Water after solvent, or solvent after water, is a boil-out. Every time."	STRIP	6.0	320 L	£848
"Anything into a brilliant white gets stripped, unless it was white before."	STRIP	6.0	320 L	£848
"Change of resin — alkyd to epoxy, epoxy to PU — is a full wash."	WASH	2.5	120 L	£318
"Going a long way lighter, black to magnolia say, is a full wash."	WASH	2.5	120 L	£318
"Same family going darker, we just flush it with recovered solvent."	FLUSH	1.0	40 L	£106

Costs per clean on a standard vessel. Solvent is £2.10/L (August invoices) and waste uplift £0.55/L (your contractor). Steve corrected two of our rules on the call, and his corrections are included. Your log queries one more (page 2).

Magnolia after brilliant white is a flush. Brilliant white after magnolia is a strip: eight times the solvent and six times the vessel time. It is the same two batches in the opposite order.

2 What it is currently costing

We replayed your batch log for the week of 7 September (64 works orders, 320,000 L) in the order it actually ran, and applied your cleaning rules to every changeover. **The sequence is fact, from your log. The cost of each clean comes from your rules and your invoices.**

THE WEEK AS IT RAN

CLEAN	COUNT	SOLVENT	SOLVENT + WASTE	VESSEL-HRS
NONE	39	—	—	—
FLUSH	13	556 L	£1,473	13.9
WASH	8	1,020 L	£2,703	21.2
STRIP	4	1,248 L	£3,307	23.4
Week	64	2,824 L	£7,484	58.5

£5,930 solvent purchase plus £1,553 waste uplift. V3–V5 adjusted for their clean times.

One rule to check. On Tuesday, V1 went from PU black to PU traffic blue (W01021) in 18 minutes, but the rule says a 2.5-hour wash. We have costed it as a wash until Steve confirms. If it was a flush, the week cost £212 less.

THE SAME WEEK, RE-SEQUENCED

Same orders, vessels and due dates, timed at each vessel's pace from your log; the model chose the vessel and the order. **We recommend the middle column, which holds delivery:** no order more than 30 minutes past its due shift. The right-hand column shows what the extra saving costs in late orders. In the build, Paul sets that trade-off himself.

	AS IT RAN	RE-SEQUENCED, DELIVERY HELD	CHEAPEST FOUND
STRIP / WASH / FLUSH / NONE	4 / 8 / 13 / 39	1 / 6 / 8 / 49	0 / 1 / 12 / 51
Cleaning solvent	2,824 L	1,508 L	656 L
Solvent + waste	£7,484	£3,996	£1,738
Vessel-hours on cleandown	58.5	32.2	15.8
V6 hours used, of 80	79.6	57.4	53.7
Orders finishing after their due shift	1 (2 h 25 min)	None	5 (32 hours in total)

V6 AS IT RAN: 12 BATCHES, 79.6 H			
NONE	W01006	WB mid green	Mon
NONE	W01034	WB mid green	Mon
FLUSH	W01043	WB deep blue	Mon
NONE	W01008	WB deep blue	Tue
STRIP	W01040	Alkyd brilliant white	Tue
FLUSH	W01035	Alkyd magnolia	Wed
NONE	W01052	Alkyd magnolia	Wed
NONE	W01056	Alkyd magnolia	Wed
STRIP	W01019	WB mid green	Thu
NONE	W01036	WB mid green	Thu, late
WASH	W01015	WB pastel	Fri
NONE	W01033	WB pastel	Fri

THE FOUR STRIPS

VESSEL	FROM	INTO
V6	WB acrylic deep blue	Alkyd brilliant white W01040
V6	Alkyd magnolia	WB acrylic mid green W01019
V2	PU traffic blue	Alkyd brilliant white W01032
V5	WB acrylic mid green	WB acrylic white W01061

Four changeovers out of 64 caused 44% of the week's cleaning cost. None was a mistake in a day-at-a-time plan: each was the cheapest next batch on that day. V6 took solventborne work because it could, then had to strip back to waterborne on Thursday. That boil-out is why W01036 finished 2 h 25 min late.

V6 RE-SEQUENCED: 11 BATCHES, 57.4 H			
NONE	W01008	WB deep blue	Mon
NONE	W01043	WB deep blue	Mon
NONE	W01038	WB deep blue	Mon
FLUSH	W01036	WB mid green	Mon
NONE	W01034	WB mid green	Tue
NONE	W01006	WB mid green	Tue
NONE	W01019	WB mid green	Tue
NONE	W01062	WB mid green	Wed
WASH	W01028	WB pastel	Wed
NONE	W01033	WB pastel	Wed
NONE	W01015	WB pastel	Thu

V6 stays waterborne: deep blues, a flush into mid greens, a wash into pastels, done by Thursday afternoon. The alkyd work moves to V1–V3. The one strip left is deliberate: V1 strips once, then runs six brilliant whites back to back. **Paul will recognise the pattern.** What's new is applying it to six vessels and five days at once.

WHAT THAT IS WORTH IN A YEAR, AND HOW SURE WE ARE

Over 46 production weeks, £3,487 a week is **£160k a year**, plus about 1,210 vessel-hours. **We would not budget on one week.** Your other three weeks saved £2,290, £2,364 and £2,237: 7 September, your busiest, is the top of the range. **Plan on £100k–£160k a year**, tested against twelve months of your log (page 3). The 22 V6 hours are extra, and count only if Sales can fill them.

3 Proposal: a weekly run-order tool for the letdown vessels

A small tool that fits Paul's Friday routine. He exports the open works orders from SAP to Excel; it returns a proposed run order for each vessel, with the clean before each batch and the cost against his own plan. **Paul keeps the decision:** he can accept, edit or ignore it.

BUILD, FIXED PRICE

£12,500

50% on order, 50% on acceptance

SUPPORT, MONTHLY

£550

Starts at acceptance. Cancel on 3 months' notice

PAYBACK AT OUR PLANNING FIGURE

~6 weeks

At the low end, £100k a year (about £2.2k a week), before any V6 value

WHAT YOU GET

- **Your cleaning rules as a model:** page 1's rules, vessels, qualifications and costs, refreshed from invoices each quarter.
- **Input: an Excel file of open works orders** in the SAP export you already use. No SAP integration, no IT project.
- **Output: an Excel run order per vessel**, laid out like Paul's sheet, showing the clean before each batch, the finish shift and the cost against his plan.
- **One page on why this order**, for Paul to show the shift supervisors. A schedule they can't follow gets overridden.
- **A delivery setting:** how much lateness, if any, the tool may accept to save a clean.
- Runs on Paul's PC. Nothing hosted, no database.

THE MONTHLY SUPPORT COVERS

- Re-tuning when you add a vessel, resin family or product range.
- A one-page value report each quarter: cleans avoided, solvent saved and hours freed, against your own history.
- First-line support by email, with a response within two working days.

NOT INCLUDED

- Writing back into SAP, a web app, user accounts, or real-time re-planning.
- Mill scheduling and the shared cleaning crew. These are phase-two work, quoted separately if the letdown tool proves itself.

NEXT STEP

A 30-minute call with Mark and Paul to go through page 2, followed by a written quote you can put to your MD. We can start within two weeks of an order.

HOW IT IS PROVED BEFORE YOU RELY ON IT

1. **Week 1.** We replay twelve months of your batch log. The model must reproduce the cleans your shifts logged; where it can't, we fix the rule with Steve.
2. **Weeks 2–3.** Build, then review with Paul on two past weeks he knows well.
3. **Weeks 4–7.** Parallel run: Paul plans as normal, the tool plans alongside, and we compare solvent, hours and lateness each Friday.
4. **Acceptance** when Paul signs off four parallel weeks. If they show no saving, you don't pay the second half.

WHAT COULD MAKE THIS WRONG

- **Four weeks is not a year.** The twelve-month replay tests it. If the figure comes out smaller, you hear it in week 1.
- **The rules come from conversations** with Steve and Paul. The replay checks them against the gaps between batches in your log, and it has already queried one (page 2).
- **None of the rules is new.** Paul already chains colours. The saving comes from applying his rules to the whole week and all six vessels at once.

YOUR DATA

Your batch log and costs are handled as set out in the data note you agreed. Any AI tool sees only data with names and identifiers replaced by codes. Everything is deleted at the end of the engagement or on request. We are happy to sign your NDA.

Alex levins
Optira Systems Ltd

Prices exclude VAT and are valid for 60 days. The diagnostic fee of £1,500 is deducted from the build if you order within that period.