GL GarvinLabs | AI Modernization & Process Intelligence

CASE STUDY · PROCESS DIAGNOSTIC

Manufacturing AI Fit Analysis

A structural steel manufacturer's order cycle ran 55 to 70 days against an ideal of 25 to 28. Before recommending a single tool, I mapped the business end to end to find out where the time was actually going.

ENGAGEMENT	SCOPE	PREPARED BY	DATE
Process Diagnostic	26 processes, 2 plants	Garvin Chanderia, GarvinLabs	August 2026

Most modernization conversations start with the tool: which AI copilot, which automation platform, which ERP module. That skips the step that determines whether any of it works: knowing, in verifiable detail, how the work happens right now. Skip it, and you're not modernizing a process. You're automating a guess, faster.

The industry in this case study is manufacturing. The method isn't industry-specific: map the real process, name an owner for every step, measure ideal against actual, sequence the fixes by impact before touching a tool. That's what I run on every engagement, D2C or otherwise, and this is what it looked like on one of them.

⚠ Client and location names below are anonymized ("Meridian Engineering", "Plant A", "Plant B"). Every process, number, and finding is real.

What I found

The gap between ideal and actual cycle time traced back to three failures, none of them about the workers or the equipment: **no real-time job tracking, no documentation at point of work, and no minimum-stock enforcement.**

Those three compound. **Fixing just the top two recovers an estimated 12 to 25 days from the cycle.**

55–70 days	+9–10	+2–15
Actual order cycle, vs. an ideal of 25–28	Days lost before production starts (material shortage)	Days lost at dispatch (documentation delays)

METHOD

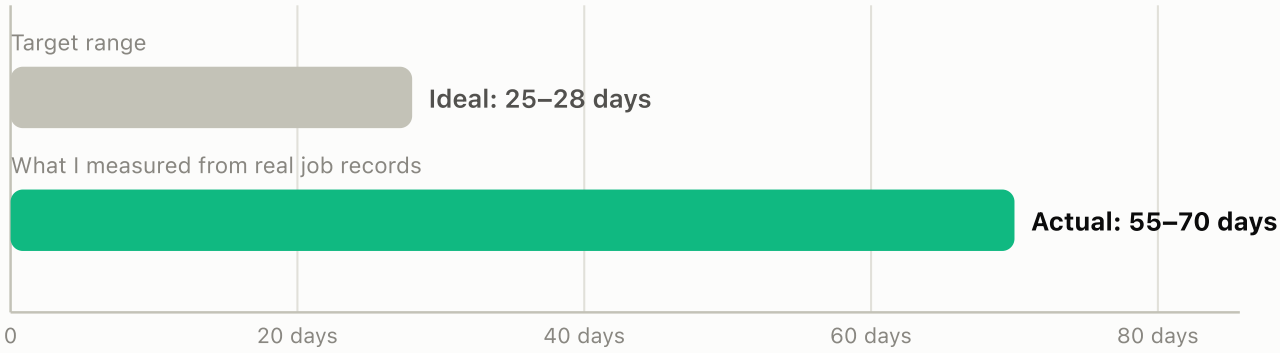
How I approached it

- Walked and documented all 26 steps of the order-to-cash cycle, from first RFP to final payment, based on what actually happens on the floor
- Built the org chart and a responsibility matrix so every step had a named owner
- Spent 48 hours in direct interviews with the Director and management to get every operational complaint on record, not guessed at
- Measured ideal vs. actual duration per process, from real job records

THE DATA

Where the time actually went

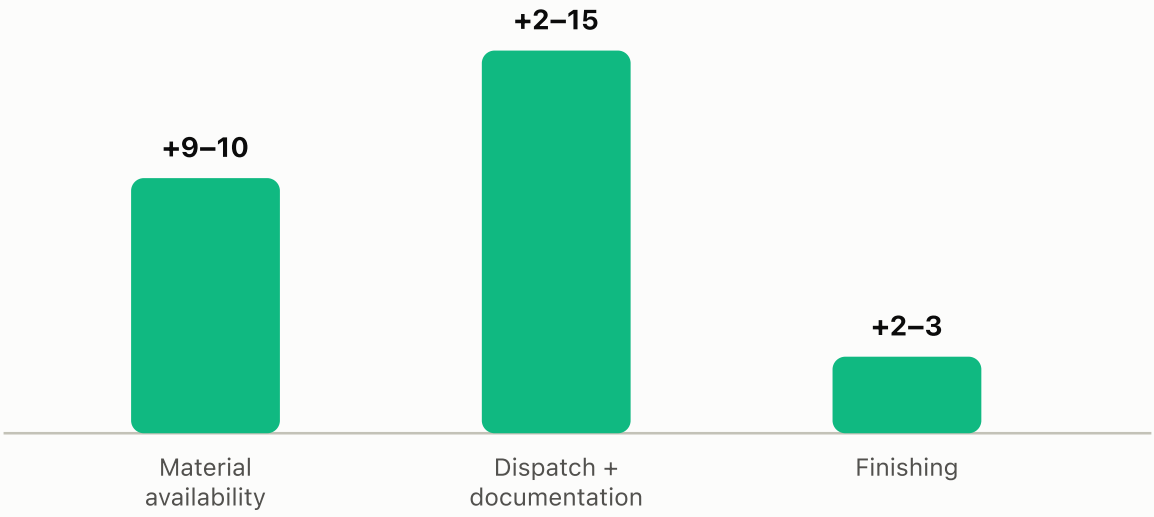
Order cycle: what I found vs. what's possible



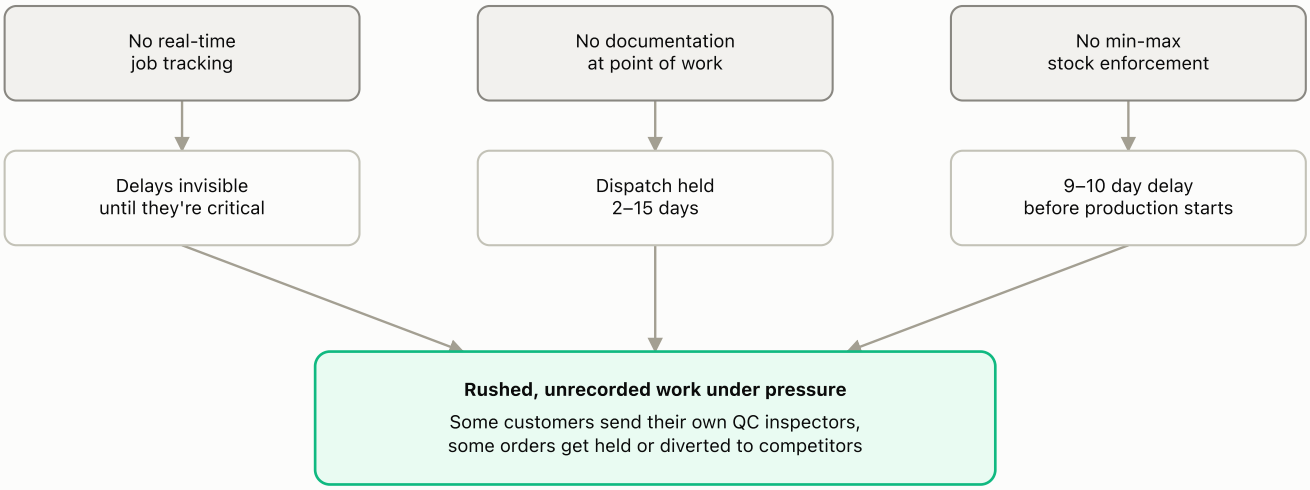
Where the days actually went

Days over ideal, per process step

Bar height = high end of range



How three invisible failures compound



What I recommended

1. Tracking first

A daily job tracking matrix and an outsource follow-up log: visibility, with no new tools required.

2. Documentation gates

Plus standard email templates for customer communication.

3. Fix the root cause

Minimum-stock enforcement and a finishing-capacity review.

4. Fix the org last

A span-of-control restructure, since one plant head was carrying roughly 45 direct reports and no tracking system survives that.

WHERE AI FITS

AI solutions

Build the manual process first. The data comes from discipline, not from technology. Once that discipline is in place to feed them real data, four automations are scoped and ready to build, each 2 to 6 hours of build time on tools the business already had:

- Live job-status dashboard
- Payment-clock tracker with automatic escalation
- Material reorder alert
- Templated email automation for customer communication

THE NUMBERS BEHIND IT

Ideal vs. actual, by process step

PROCESS STEP	IDEAL	ACTUAL	ROOT CAUSE
Raw material availability	2–3 days	12 days	Min-max stock policy existed but wasn't enforced
Dispatch + documentation	Same day	2–15 days	Records filled in retroactively, not at point of work
Finishing	1 day	3–4 days	Understaffed relative to job volume; rework from upstream defects
Payment collection	≤45 days from GRN	>45 days, consistently	Every upstream delay pushes the payment clock later

What this doesn't claim: this covers the diagnostic and the roadmap it produced, not what happened after. A process map and a prioritized plan are a real deliverable on their own.

Get in touch

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