The Manufacturing ERP Diagnostic Starter Checklist

A practical, platform-independent reality check for how your factory actually operates.

Core premise: Your ERP can be technically configured yet still produce poor operating decisions when physical processes, product data, planning rules, transaction discipline and cost controls do not match reality.

ZENTHESYS | Make Your Operations Work as One System.

How to use this diagnostic

1. Score each statement 0, 1 or 2 based on the operation today - not the written procedure.
2. Use a representative sample of physical observations, ERP records, exceptions and user interviews.
3. When functions disagree, use the lower score until the gap is understood and supported by evidence.
4. Mark critical red flags regardless of the total score. One traceability or inventory failure can warrant immediate action.
5. Assign owners and choose no more than three 90-day priorities with measurable outcomes.

Scoring scale

Score	Meaning	Field test
0 / Uncontrolled	Wrong, inconsistent, ignored or dependent on workarounds.	Users regularly bypass the system.
1 / Partially controlled	Process exists, but ownership or execution is inconsistent.	Recurring manual correction is required.
2 / Reliably controlled	Accurate, owned, measured and used in normal operations.	Users generally trust the system answer.

Suggested starter evidence

- 2 recently completed production orders and 2 currently open orders
- 1 representative multi-level assembly and 1 purchased critical item
- Latest planning messages, cycle counts, supplier exceptions and inventory valuation
- Recent engineering changes, cost adjustments, KPI reports and exception logs

10 domains | 50 checkpoints | 100 possible points | 3 priority actions

50-CHECKPOINT OPERATING REALITY CHECK

01 / Item & Planning Master Data

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
01	Each active manufactured or purchased item has a named owner for planning-critical fields. Evidence: Item/SKU owner list; recent changes to item records.		
02	Units of measure, conversion factors and purchasing or stocking units match physical practice. Evidence: Three sample items; receiving, issuing and production records.		
03	Supplier, transfer and manufacturing lead times reflect observed performance. Evidence: Actual PO and production lead times vs. master records.		
04	Order policies, safety stock, minimums, multiples and lot sizes are intentionally maintained. Evidence: Planning policy settings; exception or override log.		
05	Duplicate, obsolete and inactive items are controlled so they cannot distort transactions or planning. Evidence: Item status list; duplicate and obsolete-item report.		

02 / Product Definition, BOM & Change Control

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
06	Released product structures reflect components, quantities and units actually used on the floor. Evidence: Current BOM and a completed production order; physical build.		
07	BOM versions, effectivity dates and approvals prevent unintended use of obsolete revisions. Evidence: Revision history; approval and production-release controls.		
08	Subassemblies, kits, alternates and substitutions are represented with explicit rules. Evidence: Multi-level BOM; substitution records; kit policies.		
09	Engineering changes update purchasing, production, quality, drawings and work instructions together. Evidence: Recent ECOs and related downstream changes.		
10	Standard and nonstandard configurations are governed, including service and replacement parts. Evidence: Configuration records; service kits; customer-specific changes.		

50-CHECKPOINT OPERATING REALITY CHECK

03 / Routings, Work Centers & Capacity

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
11	Routings and process steps reflect the real sequence of work and external operations. Evidence: Sample routing; observed process flow; subcontract steps.		
12	Setup, run, labor and machine standards are checked against actual performance. Evidence: Standard times vs. completed-order actuals.		
13	Work-center or resource calendars, shifts and downtime assumptions are current. Evidence: Capacity calendars; actual staffing and downtime.		
14	Material constraints and physical bottlenecks are visible in planning decisions. Evidence: Constraint log; capacity load; schedule misses.		
15	Changes to routings, resources and capacity assumptions are approved and retested. Evidence: Routing revisions; ownership and change records.		

04 / Inventory, Locations & Material Flow

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
16	Book-to-physical inventory accuracy meets agreed targets for planning-critical items. Evidence: Recent cycle counts by item class and location.		
17	Locations, bins, statuses and material ownership correspond to actual physical flow. Evidence: Warehouse map; bin contents; status setup.		
18	Receipts, issues, transfers and adjustments are recorded at the point of activity or promptly after. Evidence: Timestamp sample of physical moves vs. system posts.		
19	Cycle counts trigger root-cause corrections rather than only repeated balance adjustments. Evidence: Count variance trend; cause and corrective actions.		
20	Quarantined, blocked, consigned or staged material is not incorrectly treated as available supply. Evidence: Hold locations; reservation checks; exception cases.		

50-CHECKPOINT OPERATING REALITY CHECK

05 / Demand, Supply & MRP Planning

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
21	Demand included in the plan is explicitly defined and reconciles to customer requirements. Evidence: Forecast, sales backlog, service demand and plan policy.		
22	Open purchase, production and transfer dates are actively maintained and realistic. Evidence: Aging and past-due order reports; reschedule history.		
23	Planning horizons, reorder policies and exception thresholds fit the actual operating model. Evidence: Policy values for representative A/B/C items.		
24	MRP recommendations are trusted enough that manual overrides are exceptional and explainable. Evidence: Planning messages and override reasons over 4 weeks.		
25	A named owner maintains one executable schedule and reviews changes with operations. Evidence: Master schedule; daily or weekly planning cadence.		

06 / Procurement & Supplier Performance

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
26	Approved suppliers and sourcing rules reflect current capability, price, quality and capacity. Evidence: Approved supplier list; sourcing exceptions.		
27	Supplier lead times, MOQs, price breaks and order multiples are periodically verified. Evidence: Vendor/item records; recent shipment performance.		
28	Past-due POs and unconfirmed receipts are corrected so planning does not treat them as valid supply. Evidence: PO aging; confirmation and expedite records.		
29	Delivery, quality and responsiveness are measured and inform purchasing decisions. Evidence: Supplier scorecard; corrective-action follow-up.		
30	Subcontracted operations and materials at suppliers have controlled status, quantity and cost. Evidence: Outside-processing orders; vendor inventory balances.		

50-CHECKPOINT OPERATING REALITY CHECK

07 / Production Execution & WIP Control

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
31	Production orders are released with accurate BOMs, routings, dates and required instructions. Evidence: Released-order packet; latest controlled instructions.		
32	Component issues and consumption are posted in line with actual material use and approved rules. Evidence: Consumption entries; floor observation; backflush setup.		
33	Output, labor or capacity, scrap and rework are recorded with adequate timing and detail. Evidence: Output and scrap entries; operator records.		
34	Physical WIP can be reconciled to open orders, system transactions and locations. Evidence: WIP count; open order and value records.		
35	Completed, aged and canceled orders follow timely review, correction and closure rules. Evidence: Open-order aging; finish and closeout procedure.		

08 / Quality, Traceability & Nonconformance

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
36	Inspection and acceptance requirements are linked to material and process risk. Evidence: Receiving, in-process and final inspection plans.		
37	Nonconforming material is identified, segregated and controlled before release or disposal. Evidence: Hold samples; blocked inventory; disposition record.		
38	Required lot or serial genealogy can be traced backward and forward within an agreed response time. Evidence: Sample trace exercise for one finished product.		
39	Quality events prompt corrective action to product, supplier or process controls. Evidence: Recent NCR/CAPA; recurrence and closure evidence.		
40	Quality, supplier, production and cost data can be connected for operational decisions. Evidence: Issue record linked to item, order, lot and financial impact.		

50-CHECKPOINT OPERATING REALITY CHECK

09 / Manufacturing Costing & Working Capital

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
41	The ERP costing method and cost updates are understood by Operations and Finance. Evidence: Costing policy; item costs; review cadence.		
42	Actual material, labor, machine and overhead costs can be explained against plan. Evidence: Two completed orders; expected/actual cost detail.		
43	Purchase and production variances are analyzed for causes and assigned actions. Evidence: Price, quantity and efficiency variance reports.		
44	Inventory valuation and production WIP reconcile to the ledger with controlled adjustments. Evidence: Valuation report, WIP balances, GL, reconciliation.		
45	Slow-moving, obsolete and excess inventory exposure has an owner and disposition plan. Evidence: Inventory aging; SLOB reserve; owner and actions.		

10 / Reporting, Governance & Automation Readiness

#	Diagnostic checkpoint / sample evidence	0-2	Evidence / notes
46	Manufacturing KPIs have agreed definitions and reconcile across Operations, Finance and ERP reports. Evidence: KPI definitions; sample cross-functional report.		
47	Critical master-data fields, process exceptions and system changes have named owners. Evidence: RACI; approvals; periodic access/change review.		
48	Teams know the authoritative source for demand, inventory, order status, cost and quality. Evidence: System/data map; conflicting report examples.		
49	Offline spreadsheets and manual workarounds are measured, controlled and retired when possible. Evidence: Spreadsheet inventory; rework hours and owner list.		
50	Automation and integrations have stable input data, exception handling and human approvals. Evidence: Interface monitoring; failure queue; approval design.		

INTERPRET YOUR RESULTS

Scoring & domain scorecard

Add all 50 answers for a total of 0-100 points. Each domain has five checkpoints and a maximum of 10 points. Use the total to prioritize discussion - never to cancel a red-flag investigation.

Total	Working label	Interpretation	First response
0-35	ERP Fiction	System records are materially disconnected from operating reality.	Stabilize physical and transactional controls.
36-60	Reactive Control	Work is completed, but spreadsheets and overrides compensate for gaps.	Fix ownership and high-risk data/process domains.
61-80	Operationally Aligned	ERP supports work but material gaps create cost, disruption or delay.	Target constraints and improve governance.
81-100	Potentially Automation Ready	Reported foundations are strong; validate independently before scaling automation.	Verify controls, exception design and benefits.

Domain scorecard

Domain	Score	R / A / G	Owner	Next action
Item & Planning Master Data	___ / 10	R A G		
Product Definition, BOM & Change Control	___ / 10	R A G		
Routings, Work Centers & Capacity	___ / 10	R A G		
Inventory, Locations & Material Flow	___ / 10	R A G		
Demand, Supply & MRP Planning	___ / 10	R A G		
Procurement & Supplier Performance	___ / 10	R A G		
Production Execution & WIP Control	___ / 10	R A G		
Quality, Traceability & Nonconformance	___ / 10	R A G		
Manufacturing Costing & Working Capital	___ / 10	R A G		
Reporting, Governance & Automation Readiness	___ / 10	R A G		

Suggested domain status: Red 0-4 | Amber 5-7 | Green 8-10. Critical red flags override.

CONVERT FINDINGS INTO ACTION

Red flags that override the score

Check any item that represents actual conditions. These should receive immediate review even when the aggregate diagnostic score appears strong.

- [ ] Physical inventory or WIP cannot be reconciled without material manual correction.
- [ ] Production is building to a product structure or revision different from the released record.
- [ ] Planners systematically ignore MRP or operate from a separate uncontrolled schedule.
- [ ] Past-due POs, production orders or transfers continue to appear as valid incoming supply.
- [ ] Quarantined or nonconforming stock can be issued as available material.
- [ ] Lot or serial genealogy cannot be reconstructed where required.
- [ ] Operating and financial reports materially disagree on inventory, WIP or cost.
- [ ] Critical item parameters, master data or override policies have no accountable owner.
- [ ] Cost assumptions are too stale to support meaningful price or product-mix decisions.
- [ ] Automation is planned on a workflow with unstable data or uncontrolled exceptions.

Prioritize the next 90 days

Select three actions with the highest operational or financial impact and a feasible first milestone. Define the measure before starting the work.

#	Root cause / problem	Business impact	90-day target	Owner / first step
1				
2				
3				

A practical order of operations

01 Stabilize physical material and transaction accuracy.
02 Correct item, product, BOM, routing and planning master data.
03 Clean open order dates and assign schedule ownership.
04 Restore production, quality and WIP transaction discipline.
05 Reconcile valuation, costs and management definitions.
06 Only then scale targeted automation and AI with human controls.

A low score does not automatically mean you need a new ERP. Separate process, configuration, data and governance failures before replacing software.

Discuss your operations: zenthesys.com/operations-diagnostic/