



DIAGNOSTIC GUIDE

The EPC Project Management Health Check

Are your projects set up to deliver on time and within budget — or are the warning signs hiding in plain sight?

80%

of major EPC projects exceed their original budget

McKinsey Global Institute, Reinventing Construction

20 months

average schedule overrun on large capital EPC projects

McKinsey Global Institute, Reinventing Construction

This diagnostic guide is designed for EPC leaders, project directors, and operations heads. Work through the seven challenge areas, answer the checklist questions, and identify exactly where your delivery risks lie.

PART 1: THE SEVEN PRESSURE POINTS

What's Really Behind EPC Cost and Schedule Overruns?

These pressure points accumulate quietly through disconnected systems, manual processes, and reactive workflows.



Fragmented data across teams

Engineering, procurement, finance, and construction teams operate from different systems and spreadsheets. Without a shared source of truth, data mismatches cause rework, delayed decisions, and errors that compound throughout the project lifecycle.



No real-time cost and budget visibility

By the time budget overruns surface, they're already entrenched. Without live budget vs. actuals tracking and margin monitoring, cost control becomes a post-mortem exercise rather than a real-time capability.



Scope creep and uncontrolled change management

Every untracked scope change carries a cost and schedule impact that accumulates invisibly. Without formal review workflows, the compounding effect of small changes drives project overruns that only become visible when it's too late to course-correct.

1 in 10 large EPC projects hit both their time and cost targets

An Oxford study of 16,000 major capital projects found only 8.5% were delivered on time and within budget.

Flyvbjerg & Gardner, How Big Things Get Done



Procurement delays and supply chain gaps

Delayed material procurement, uncoordinated vendor management, and poor tracking of long-lead items are leading causes of schedule slippage. When procurement isn't tied to BOQs and project budgets, overspend and delivery misses are almost inevitable.



Poor schedule and resource visibility across sites

Managing multiple sites, contractors, and workstreams without centralised schedule visibility means project managers are perpetually reactive. Delays cascade silently — discovered only when a deadline is already at risk.



Risk registers that gather dust instead of driving action

Most EPC teams have a risk register — but it typically lives in a spreadsheet, updated sporadically and disconnected from live data. Without real ownership and escalation triggers, risk management stays reactive long after the damage is done.



Billing complexity and revenue leakage

EPC billing — milestone, RA, T&M, retentions, advances — is inherently complex. Manual processes lead to invoicing delays, missed milestones, inaccurate WIP accounting, and revenue recognition errors that hit profitability directly.

PART 2: DIAGNOSTIC CHECKLIST

Is Your Project Delivery System Efficient?

Mark YES or NO for each question. Count your 'NO's. Every NO is a delivery risk and a gap this diagnostic is designed to surface.

How to interpret your score?

0–3 NO Strong foundations. Low risk. Review specific gaps.

4–7 NO Moderate risk. Identify risk areas and take necessary action to build a connected project lifecycle.

8+ NO High risk. Your project lifecycle is disconnected, inefficient, and actively eroding margin across projects. Review your technology setup and consider investing in an end-to-end project management solution.

DIAGNOSTIC QUESTION	YES	NO
01 Data, visibility & cost control		
Do your engineering, procurement, finance, and construction teams all work from a single, shared system of record — not siloed spreadsheets?	YES	NO
Can project managers view live budget vs. actual spend at any point in a running project?	YES	NO
Do you have real-time visibility into project margin and profitability — not just at close?	YES	NO
Are cost overrun alerts generated automatically before the overrun becomes unrecoverable?	YES	NO
02 Procurement & supply chain		
Is every purchase requisition and order validated against your approved BOQ and project budget before it goes out?	YES	NO
Do you have full traceability from RFQ to vendor selection to delivery — with no manual handoffs?	YES	NO
Are procurement delays flagged to project managers in time to act — not after the fact?	YES	NO
03 Risk, scope & change management		
Is every scope change formally evaluated for cost and schedule impact before approval?	YES	NO
Do you have a structured risk register — with owners, mitigation plans, and live status — connected to real project data?	YES	NO
Are schedule deviations automatically surfaced to project leadership before they escalate?	YES	NO
04 Billing, compliance & quality		
Is billing triggered automatically by milestone completion — without manual chasing or spreadsheet tracking?	YES	NO
Are WIP accounting and revenue recognition handled accurately and in real time across all projects?	YES	NO
Do quality checks, HSE inspections, and non-conformance logs live in the same system as project execution?	YES	NO

PART 3: THE NORTH STAR STANDARD

When EPC Companies Operate with the Right Technology







This is what well-run EPC operations look like across the full project lifecycle. Use this as your benchmark.

What good looks like	Business outcome
Enquiry, BOQ, and bid data flows directly into engineering and planning	Shorter bid-to-build cycle, fewer errors in handover, faster mobilisation
Every procurement order validated against approved BOQ and budget in real time	No budget surprises — fiscal discipline built in at the point of purchase
Live budget vs. actuals with margin tracking visible on every running project	Cost control becomes a daily management habit, not a monthly shock
Risk register connected to live project data with owner assignment and alerts	Teams address risks before they become costs — not after the damage is done
Milestone and RA billing triggered by system completion — not chased by finance	Faster invoice cycles, accurate revenue recognition, no missed billing windows
Quality, HSE, and non-conformance logs live alongside project execution data	Compliance embedded in daily work — auditable, traceable, and real-time
Portfolio-level visibility across all projects, entities, and geographies	Leadership makes decisions on verified data — not manually assembled reports

Explore EPC365

EPC365 by Alletec is a comprehensive, AI-powered solution covering the full project lifecycle — from bid and pre-construction through procurement, execution, billing, and handover. Built on Microsoft Dynamics 365, purpose-built for EPC and project-based companies.

It directly addresses every gap in this diagnostic — connecting operations, finance, procurement, and project execution in a single, unified system.

 Project Planning & Cost Control	 Procurement & Vendor Collaboration	 Risk Management
 Quality & HSE Compliance	 Milestone, RA & T&M Billing	 AI & Agentic Capabilities

Take the next step

Explore EPC365's full capabilities and talk to an expert to learn how each diagnostic gap can be resolved.

Book a Discovery Session →