

Member Communication Experience

Four Reasons Construction Logistics Technology Implementations Fail

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Most construction logistics and supply chain technology investments don't fail at go-live. They fail months earlier, in a planning meeting where a vendor hands over a 14-week implementation timeline, and nobody – not the operations director, not the project management team, not procurement – pushes back on what it will actually take to stand up a system across the complexity of a project-driven, multi-site construction business. By the time the implementation is six months in with no end in sight, the damage to jobsite delivery schedules, materials cost control, and project margins is already done.

This is not an edge case. According to Gartner's Logistics Functional Transformation Survey, 76% of logistics and supply chain technology transformations fail to hit their critical success metrics. McKinsey research adds a sobering corollary: even implementations broadly deemed "successful" still lose approximately 20% of their projected value post-launch. And despite these persistent failure rates, 80% of construction and building materials organizations have attempted four or more technology transformations in under five years, chasing materials cost and logistics ROI that keeps slipping just out of reach.

For a mid-to-large general contractor or building materials distributor with significant freight and procurement spend, a botched TMS or construction supply chain platform implementation typically amounts to a multi-million-dollar



mistake in hard remediation costs alone – not counting delayed jobsite deliveries, materials cost overruns, project schedule slippage, or the downstream impact on contract margins. For large national contractors and materials suppliers, that number scales into the tens of millions.

So, what keeps going wrong? Increasingly, construction operations and procurement leaders are recognizing that these failures don't originate during implementation. They are rooted much earlier – in how the system is scoped, how construction-specific logistics complexity is accounted for, and in how success is defined before a vendor is ever selected.

The same four failure patterns appear repeatedly across construction logistics and supply chain technology

deployments — and they are preventable, but only if you know to look for them before the project kicks off.

REASON 1: THE EXPECTATION VS. REALITY GAP

The most common root cause of a troubled implementation isn't a bad vendor; it's a misaligned one. Project managers and operations directors walked into a vendor demo, saw a polished feature set, and signed a contract for capabilities they'll rarely use in a construction environment and integration complexity they never fully planned for. Recent industry survey data makes the scale of this concern clear: 27.9% of logistics technology leaders cite fear of overpaying for capabilities they rarely use, while 26.5% flag underestimating integration complexity as a primary risk. These aren't abstract fears. They are the direct downstream consequences of a vendor selection process that prioritized feature breadth over fit with the realities of project-driven construction logistics.

When the technology meets the reality of day-to-day construction logistics — jobsite delivery windows that shift daily with project schedules, materials sourcing flows that don't fit the system's default configuration, trade partner and supplier relationships that require custom integration, and project-based procurement workflows the platform was never designed to support — the gap between what was promised in the vendor demo and what can actually be delivered on the ground becomes the defining story of the engagement.

REASON 2: PLANNING FAILURE

Vendors are ultimately incentivized to win contracts, which creates a natural bias toward optimistic timelines and simplified scoping assumptions. The result is a persistent and costly illusion: a system implementation scoped at 14 weeks that is actually a 14-month effort — one that plays out across active construction seasons, project handoffs, and procurement cycles that can't pause to accommodate a troubled rollout — presented with confidence and accepted without scrutiny. Industry experience suggests roughly eight out of 10 construction supply chain technology implementations are significantly underestimated in both cost and effort, because vendors are structurally incentivized to minimize numbers that could threaten the deal.

This failure is compounded by a chronic lack of business

case rigor. The industry research found that only 13.1% of logistics technology business cases are built using rigorous methodology. The rest are back-of-envelope calculations that rarely account for the true complexity of construction logistics — including project-by-project variability, multi-site coordination, seasonal demand swings, and the full cost of a delayed delivery when a crew is standing by — and they collapse under the weight of a real implementation.

REASON 3: THE DESIGN COMMUNICATION GAP

Even when technology is the right fit and the plan is reasonably constructed, implementations stall in the design phase because construction operations and procurement teams cannot effectively translate their project-specific requirements into vendor-ready specifications. The software vendor doesn't understand how jobsite delivery scheduling, trade partner coordination, and project-based materials procurement interact in a live construction environment. The operations team can't articulate those interdependencies in terms the vendor can configure.

Recent survey data reinforces how widespread this disconnect is. Only 8.2% of organizations report delivering training tailored to specific workflows and roles — project managers, site supervisors, procurement coordinators, fleet dispatchers, and logistics planners — while over 40% say their systems were designed with role-based intent but ultimately delivered in a generic, one-size-fits-all way that doesn't reflect how a construction business actually manages materials, deliveries, and suppliers across multiple active jobsites. This gap between intended design and practical usability is a direct reflection of breakdowns in how construction-specific requirements are communicated and translated into system configuration.

The result is what practitioners describe as a cycle of repeated requirement rework: the same needs are revisited repeatedly without resolution, stretching timelines to multiples of their original estimate while project budgets are consumed with little measurable progress — and active construction projects absorb the consequences of every delay.

One client recently described it this way: "The system is live. Suppliers are loaded, purchase orders are flowing, deliveries are scheduled. But our site supervisors don't trust what they see in the system, our project managers are still tracking

materials on spreadsheets, and we find out about a delivery failure when the crew calls to say the concrete didn't show." The software was installed. The construction logistics operation was never ready to run on it.

REASON 4: LACK OF CROSS-FUNCTIONAL ORCHESTRATION

A typical construction logistics or supply chain platform deployment touches project procurement, jobsite delivery scheduling, trade partner coordination, fleet and equipment management, materials tracking, accounts payable, and IT, while simultaneously coordinating the software vendor, ERP integration middleware, third-party development shops, building materials suppliers, and multiple carrier and trade partner environments. Without a dedicated orchestrator holding all these parties to a shared objective – one who understands both construction operations and technology implementation – the project fractures along functional lines.

Survey data highlights just how often this orchestration layer is missing or ineffective. Only 10% of organizations report having a single lead with clear authority driving the implementation, while nearly 49% say leadership was assigned but authority was fragmented across project management, procurement, operations, and IT. An additional 25% relied on vendors or systems integrators as de facto leads – a governance structure that consistently produces technology configured for a generic logistics operation, not a project-driven construction business. In other words, most implementations operate without a truly empowered central orchestrator.

This is the orchestration gap, and it's the most structurally misunderstood failure component in construction technology delivery. Every participant – the software vendor, the IT team, the procurement group, the project management function, the operations director – optimizes for their own workstream without a shared view of what the business is trying to achieve. Materials cost savings get traded away for deployment speed. Jobsite delivery automation and procurement workflow features get descope to make a go-live date. The margin improvement and operational efficiency gains promised in the business case evaporate one compromise at a time – and the next major project reveals every gap that was left unresolved.

CRAFTING A BETTER PLAN

These four failure patterns share a common thread: they are all front-loaded problems that surface in the back half of the project. The structural decisions that caused them were made months earlier, during planning, during design, during the framing of the business case.

Organizations that avoid these pitfalls invest upstream. That means building business cases with genuine financial rigor before selecting technology – including a realistic accounting of project-schedule variability, multi-site coordination requirements, trade partner integration complexity, and the full cost of delivery failures at the jobsite. It means pressure-testing vendor timelines against the real operational complexity of a construction business. It means establishing a pre-implementation readiness phase, aligning vendors, IT, project management, and procurement leadership to shared program objectives before a single system configuration is made.

It also means recognizing that systems integration and operational integration are not the same thing. Getting the software installed is the floor, not the ceiling – and in construction, the ceiling is the right materials, at the right jobsite, at the right time, without a crew standing idle waiting for a delivery that the system said was on track. The organizations that realize sustained ROI are the ones that fully operationalize the system, ensuring project managers, site supervisors, procurement coordinators, and logistics planners know how to use it, that SOPs, delivery performance KPIs, and materials cost metrics are built around it, and that knowledge transfer at go-live is treated as a project deliverable, not an afterthought.

The potential for a multi-million-dollar mistake in construction logistics and supply chain technology is almost always made before anyone realizes it's happening – in a vendor demo, a planning session, or a business case that never accounted for what project-driven construction logistics actually demands. The good news is that none of this is inevitable, but closing the gap requires genuine investment in the planning, construction-specific scoping, and cross-functional governance infrastructure that most implementations skip entirely. 🛠️



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