Five common pitfalls in MES planning

And how to avoid them

If implemented at the right time and by a skilled team, Manufacturing Execution Systems (MES) transform operations with real-time visibility, traceability, and smarter production control. Yet, many MES projects stumble and often not during the rollout itself, but long before implementation begins. Here are five common pitfalls in MES planning, and how to avoid them.

TOO VAGUE OBJECTIVES

PITFALL

Too often, MES projects begin with the vague idea of "digital transformation." Without concrete objectives, projects drift and ROI evaporates.

AVOIDANCE TIP

Define measurable goals (reduce downtime by X%, improve yield by Y%). Prioritize setting business objectives early to secure executive sponsorship.

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UNCLEAR PROCESS OWNERSHIP

PITFALL

When no one owns the processes being digitalized, there's only so much MES can do. If roles, responsibilities, and escalation paths are not well-defined, the system will not be able to fix this organizational confusion.

AVOIDANCE TIP

Establish clear process ownership before implementation. Even if workflows aren't harmonized across every site, assign coordinators for each core process so that MES has a structured foundation to build on.

CHASING BUZZWORDS

PITFALL

From AI-driven analytics to digital twins, buzzwords can hijack MES planning. The risk? Over-scoping and investing in features with little business relevance.

AVOIDANCE TIP

Prioritize value-driven capabilities based on your specific needs and production processes rather than general industry trends and use cases. This will help address your pain points while avoiding unnecessary complexity.

UNDERESTIMATING CHANGE MANAGEMENT

PITFALL

MES adoption changes how people work daily. Ignoring the human element leads to resistance, low adoption, and shadow processes.

AVOIDANCE TIP

Plan for training, communication, and ongoing support. Create trusted process owners and leaders inside operations early.

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IGNORING ORGANIZATIONAL READINESS

PITFALL

Sometimes, MES is simply premature. Companies with poor master data, unclear governance, or an ERP that already covers basic needs may not be ready.

AVOIDANCE TIP

Be sure to understand the extensive capabilities of MES before selection. This will help you assess your company's readiness honestly. If needed, phase the rollout or postpone until foundations are stronger.

MES planning is less about software and more about strategy. Avoiding these pitfalls requires self-honesty, foresight, and discipline. The companies that turn their competitive advantage into an industry leadership role treat MES as a digital journey, not a quick-fix project.

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If you're thinking about your own MES journey, don't stop here.

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Best practices for the pre-RFI phase: 5 research tasks before talking to a MES vendor

Five red flags you're writing an RFP too early: Warning signs you might be moving too fast

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