AI & PLANNING SYSTEMS

Why No APS Will Fix Your Supply Chain, Until This Changes

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Optimized outputs sitting on broken foundations. That's not planning—it's firefighting in disguise.

Companies continue to invest in APS platforms and AI, but planning remains unstable, effort-intensive, and disconnected from reality.

Why? Because we still try to fix structural flaws with optimization logic.

Many vendors now promote AI, some even promise "agentic AI." But what's sold as intelligence is often generative Q&A layered on top of the same rigid planning engines. The real-world reality couldn't be further away.

I see this across industries, from pharma to discrete manufacturing: Excel-based planning is still widespread. Data quality is poor. Planners often don't understand how their APS even works. And now, the market is promising autonomous decision-making?

We've been here before.

The Problem Isn't That AI Is Missing - It's That the Architecture Is Wrong

Supply chains don't need faster re-optimization. They need structures that absorb variability and prevent it from propagating.

Today's systems aren't built for that. Most follow the same logic: Demand is translated by MRP MRP creates supply requirements Schedulers try to make it work

MRP "bursts" through the supply chainig, ignoring buffer logic, stability thresholds, or segmentation principles. The result? Everything becomes urgent. Small changes trigger big shifts. Planning layers collapse under their own noise.

Agentic AI Sounds Good - But Let's Be Honest

Agentic AI isn't plug-and-play. It's early-stage, and it requires clean data, decision rules, and deeply integrated system logic.

Take a real-world case: You want an AI agent to adjust lead times based on actual production performance. It would need to:

Scan historical order data (e.g. in S/4) Identify where lead time deviation exceeds thresholds Adjust master data Recalculate dependent safety stocks, reorder points, and capacities Propose changes to scheduling and supply plans

That's not a chatbot. That's a fully trained, rule-based system with real decision authority. We're not there yet - not in most industries. And AI won't solve the problem if it's built on broken process logic.

What's Really Needed

We don't need a new monolith. But we do need systems that:

Decouple planning layers so variability doesn't cascade Synchronize production and distribution through buffers and rhythm Allow parameter-driven fine-tuning across all levels Support multiple

planning methods within one system (e.g. for handling ranges, not point forecasts) Provide segmentation capability (e.g. based on Cynefin or similar frameworks) Create transparency, simulate outcomes, and adapt in structured ways

And above all, systems must allow extensions. Because “adhere to standard” often means: don’t think, don’t build, don’t ask.

But complexity isn’t going away - and pretending one rigid model will solve it is more dangerous than admitting the need for tailored logic.

60 - 80% can stay standard. But the rest, 20 - 40%, needs to reflect how your supply chain really works.

Are You Ready for What You’re Asking For?

Before investing in “next-generation” planning, ask where your organization stands today. A few basic readiness questions:

Are your planners aware of how decisions flow across planning layers? Do you have planning rules documented - or just embedded in people’s heads? Is your data (e.g. BOMs, lead times, routings) clean enough to drive automation? Can your current systems handle planning within tolerance ranges - or just yes/no outputs?

If your team is still firefighting across spreadsheets, your first investment shouldn’t be AI. It should be structure, logic, and orchestration capability.

Another Use Case: Adaptive Inventory Logic

Imagine AI could adjust your inventory parameters. But not randomly—not just because demand dropped 3%. A real agent would:

Monitor volatility across a segment or SKU family Compare target service level vs. achieved Understand if variability is within expected range or a structural shift Then recommend adjusting safety stock—not just in units, but in planning policy (e.g. switch from reorder point to time-based review) And finally, simulate the downstream impact on supply, production, and cash flow

Again: this isn’t plug-and-play. It’s not “AI does inventory.” It’s decision automation under constraints—governed by rules, transparency, and accountability.

What’s the Path Forward?

There is no perfect APS system on the market today. But that doesn’t mean we should wait. The solution isn’t to rip out existing tools. It’s to:

Introduce synchronization layers above them Use AI where it adds structure - not just speed Enable orchestration logic that can stabilize planning and execution Accept that some parts must be extended - intelligently and purposefully

And above all: don’t think in IT solutions right away. Start with concepts. With process logic. With real operating models. **Ask yourself:**

How do we want to plan - strategically, tactically, and operationally? How do we serve our customers - consistently and competitively? How do we ensure this happens efficiently, end-to-end, using the mechanisms already in place? What decisions need to be made - and by whom? What ranges, buffers, and rules do we need to enable stability? What’s actually needed to improve operations - not just automate chaos?

Don’t look for the one-button trick just because it’s called “advanced planning.” And don’t follow the AI hype if it’s just the next “optimizer” disguised as intelligence.

There is no silver bullet. No vanilla fix. Just better thinking, better architecture, and the courage to design what your supply chain really needs.