OPERATING MODEL & DECISIONS

Why Supply Chains Require So Much Effort, And Why That's Not Changing Anytime Soon

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For decades, we've been optimizing supply chains—investing in better forecasting, APS tools, and AI. But if our technology is so advanced, why do we still need so many people manually fixing plans every day?

We assume planning is complex because of demand volatility, supply constraints, and logistics disruptions. But what if that's not the full reason? What if the real issue is something we never questioned—the way planning itself is structured?

Supply Chains Don't Just Struggle Because of External Shocks—They Struggle Because of Structural Design

Most companies believe their supply chains are difficult to manage because of demand swings and external disruptions. These challenges are real, but they don't fully explain why companies still need armies of planners, expeditors, and operational teams constantly adjusting plans.

Even in stable conditions, companies still need:

Teams of planners manually fixing system-generated plans Local heroes firefighting last-minute execution issues Constant overrides and adjustments between planning layers

If planning systems worked as intended, why do we need so many people constantly fixing them?

The Real Problem: Supply Chains Are Designed in Layers That Don't Synchronize

Supply chains are not one system—they are a collection of disconnected planning layers that don't naturally align.

S&OP operates at a strategic horizon but doesn't account for execution constraints. **Supply planning runs on a tactical horizon** but doesn't sync with production realities. **Production scheduling optimizes at a weekly or daily level** but doesn't integrate with real-time execution. **Execution operates in real time** but has to work around outdated plans.

At each handoff between these layers, data models change, assumptions break, and plans need manual intervention. The reality? Plans don't flow seamlessly—they jump from system to system, losing synchronization at every step. This is why companies need so many planners just to keep the system from breaking down.

The Wrong Fixes: AI, APS, and Forecasting Won't Solve This

Most companies try to fix this problem in all the wrong ways:

"We need better forecasting" → But forecasting improvements won't fix the fact that execution plans are disconnected from reality. **"We need a more advanced APS"** → But APS systems still operate in silos, optimizing within their own horizon without solving cross-system misalignment. **"AI will fix this"** → But AI doesn't fix system design—it just automates the mess faster.

Instead of asking if AI can solve this problem, we need to ask: **What was the problem in the first place?**

The Structural Flaws That Keep Supply Chains Stuck

1. Plans Don't Synchronize—They Jump from One System to Another

Different APS layers don't share a common data model. Every system runs its own optimization, assuming everything downstream will adjust accordingly. The result? Planners are left to manually bridge the gaps.

2. Constraints Are Not Propagated Upstream or Downstream

True supply constraints don't flow upstream, so demand planning overcommits. Real execution constraints don't flow back down, so inventory allocation and scheduling keep making outdated decisions.

3. Supply Chains Lack a Natural Synchronization Mechanism

Replenishment intervals should drive production. Production cycles should be structured around real inventory thresholds. Instead, MRP generates fixed schedules that planners must constantly override.

The more complex a supply chain becomes, the more hidden effort is required just to keep it functioning.

What This Means for a CSCO

This isn't about better planning—it's about restructuring how supply chains work.

Process impact: Move from disconnected planning cycles to a continuously synchronized system. **IT system impact:** Rethink separate APS layers that create artificial silos. **Organizational impact:** Reduce the need for large planning teams manually fixing broken plans. **Data model impact:** Stop relying on forecast-driven planning and move to real-time execution synchronization.

Instead of constantly fixing the system, supply chains need to be designed to absorb complexity naturally.

What's Next: Fixing the Systemic Causes of Effort-Intensive Supply Chains

In the next article, we'll explore why traditional planning actually creates variability instead of reducing it—and how companies can escape this cycle.

Key Question for CSCOs: If our planning systems and AI tools are so advanced, why do we still need so many people manually fixing gaps every day?