SUPPLY CHAIN

What generative AI is *actually* doing to supply chain planning

Every planning vendor now ships an AI copilot. After fourteen years of watching capabilities get renamed and re-sold, here's what the technology genuinely changes — and what it doesn't.

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For fourteen years I have watched the same pattern in supply chain technology: a capability gets renamed, repackaged, and re-sold. "Demand sensing" became "AI forecasting" became "ML-driven planning" and is now "generative" or "agentic" AI. The vendor decks change faster than the optimisation maths underneath them.

So I started the research for this piece as a sceptic. I came out of it as a qualified one. Generative AI in planning is real, it is shipping in production, and it is the most genuine improvement in planning-software usability in two decades. But the value it actually captures is narrower — and more boring — than what the keynotes promise. It is mostly *planner time saved on analysis and explanation*. It is not better plans, and it is not an autonomous supply chain.

Here is the distinction, and why it matters for where you spend money in 2026.

What it actually does, stripped of the marketing

Strip away the language and generative AI is doing seven distinct things in production planning environments today. None of them is "make a better forecast."

> *7*
>
> distinct production use cases for genAI in planning — none of which is generating the forecast itself
>
> ZULOMA ANALYSIS OF 2024–2026 VENDOR RELEASES

The first is **natural-language analytics on planning data**. SAP's Q2 2025 IBP release added an add-in that lets planners generate IBP formulas in Microsoft Excel using plain language. The benefit is a shorter learning curve, not a better number.

The second is **exception and disruption summarisation**. SAP's later 2025 analysis capabilities *summarize complex optimization, inventory, and forecast results, translating intricate calculations into clear, natural language*. The plan is unchanged; the explanation of it is faster to read.

The third is **scenario generation in natural language** — describing a disruption ("our primary steel supplier shuts for three weeks") and getting a downstream impact analysis without building the scenario by hand.

The fourth is the **planner copilot**, or "digital co-worker." *Kinaxis launched Maestro Agents* in October 2025, positioning them as context-aware assistants embedded in the live planning environment.

The fifth is **composite, multi-step agents** that retrieve, reason, and act across systems. *o9 enhanced its Digital Brain platform with generative-AI-powered composite agents* built on its enterprise knowledge graph.

The sixth and seventh — **synthetic data for cold-start forecasting** and **supplier-risk sensing from unstructured documents** — are earlier in maturity but real. *Blue Yonder launched new AI agents and a supply chain knowledge graph at its ICON 2025 event* in May 2025, combining predictive, generative, and agentic approaches.

What generative AI is conspicuously *not* doing in any credible production deployment: replacing the optimisation engine, generating defensible numerical forecasts on its own, or making accountable plan-commit decisions. Every serious vendor keeps a human in the loop and stresses "explainability" — not for marketing reasons, but because regulated industries cannot delegate plan commitment to a model that cannot show its work.

The vendor scorecard

The arms race is real and it happened fast. Here is what has actually shipped, as opposed to what has been demoed.

VENDOR	PRODUCT	SHIPPED	HEADLINE CLAIM (VENDOR-STATED)
SAP	Joule + Joule Agents, in IBP	2024–25	350 AI features, 2,400+ Joule skills by Q4 2025
Kinaxis	Maestro Agents	Oct 2025	Inventory-risk steps cut from 40 clicks to 4 (pharma)

o9	Specialized AI Agents	Jun 2025	First genAI pilot moved into production
Blue Yonder	Cognitive Solutions + 5 agents	May 2025	Built on a $2B AI investment; knowledge-graph backed
Anaplan	CoPlanner for Demand Planning	Sep 2024	Context-aware generative AI in planning
OMP	UnisonIQ	Oct 2025	Orchestration framework + always-on gen AI assistant
Microsoft	Copilot in Dynamics 365 SCM	2025	Demand insights + cell-level explainability

The pattern across all of them is identical: the AI sits at the *interface and orchestration layer*. It helps the planner ask questions, read results, and trigger workflows. The forecast engine and the optimiser underneath are largely the same deterministic maths they were three years ago.

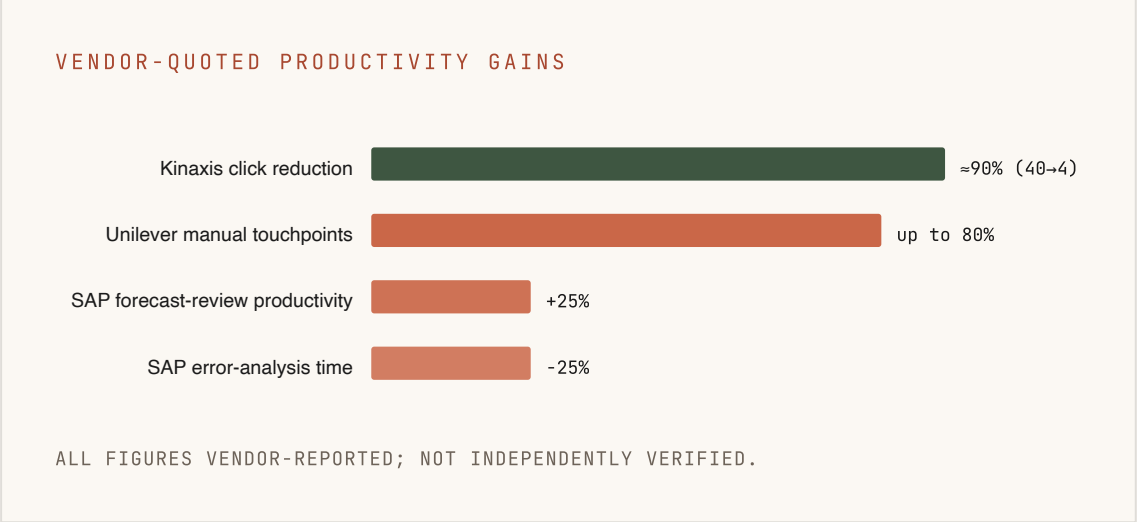
The numbers, handled honestly

This is where intellectual honesty separates analysis from stenography. The single most-quoted statistic in this entire category — that AI reduces forecast error by 20 to 50 percent — traces to one McKinsey article. *McKinsey found AI-driven forecasting can reduce errors and that warehousing costs can fall by 5 to 10 percent, and administration costs by 25 to 40 percent*. That range is real, but it gets recycled through vendor decks, back into analyst slides, and into the trade press, often stripped of its original context. Treat it as an illustrative ceiling, not a benchmark you should expect.

The 2025 case-study layer is more concrete but almost entirely vendor-attributed:

- **Kinaxis × top-10 pharma:** planner productivity up to 10×, with inventory-risk identification cut from 40 clicks to 4.
- **SAP IBP × Joule:** planner productivity in analysing forecast runs improved by a vendor-quoted 25%.
- **SAP Digital Manufacturing:** up to a 25% reduction in error-analysis time.

Read those carefully. "10× planner productivity" and "40 clicks to 4" are the same claim stated twice — and what they describe is *click reduction*, not forecast quality. That is a genuine and worthwhile productivity gain. It is also not the same thing as a better plan.



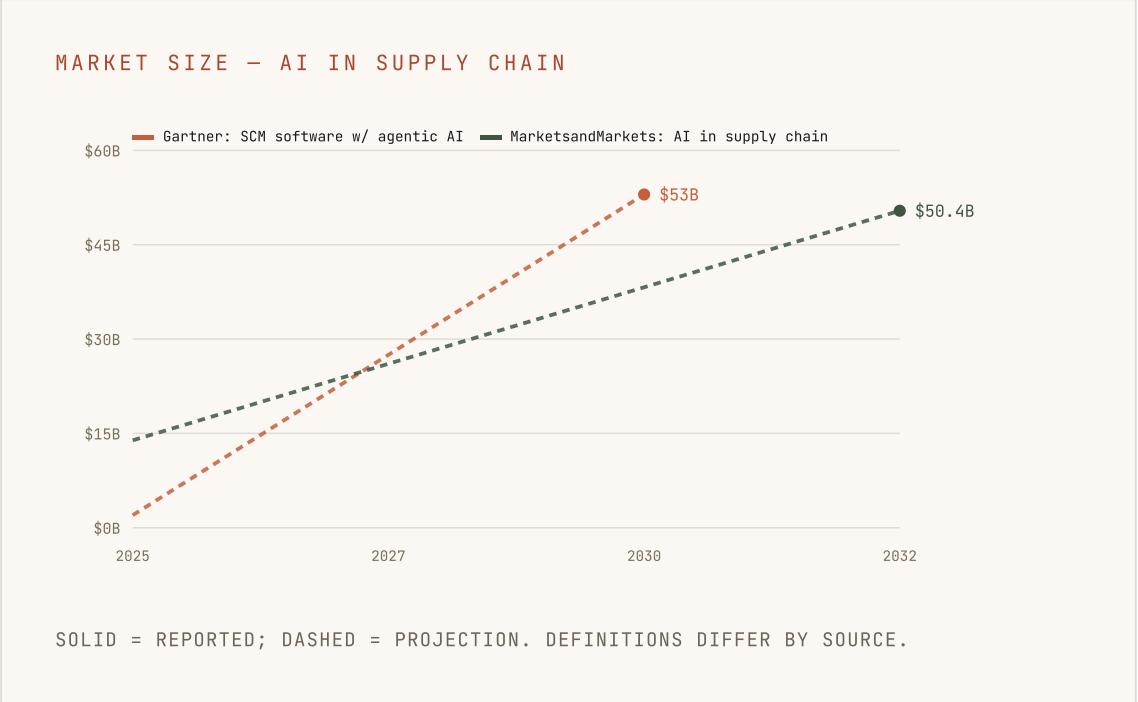
How big, and how fast

Market sizing in this category is close to useless unless you anchor to who is counting and how they define the category. The defensible

anchors:

Gartner forecasts that supply chain management software with agentic AI capabilities will grow from less than $2 billion in 2025 to $53 billion in spend by 2030. Separately, the broader "AI in supply chain" market is put at roughly $13.9 billion in 2025 rising to $50.4 billion by 2032 by MarketsandMarkets, *with North America holding the largest share*.

On adoption, *McKinsey's 2025 State of AI survey found 88% of organisations now use AI in at least one business function, up from 78% the prior year*. But the same survey contains the detail that should keep you honest: only a minority attribute any measurable bottom-line impact to it yet. Adoption is near-universal; value capture is not.



Where I would not deploy it yet

The forecasting literature is unusually candid about generative AI's weak points, and the candour comes from people with no incentive to undersell. The most sobering data point: in the M5 retail forecasting competition — the discipline's most rigorous public benchmark — the winning method was not a large model but an equal-weighted combination of gradient-boosted trees, submitted by an undergraduate. That result should temper any vendor claim that large language models improve forecast *accuracy*. They improve forecast *explanation*.

Five failure modes I would underwrite as real in 2025–26 deployments:

1. **Hallucination on numerical reasoning.** LLMs are poor at arithmetic and constrained optimisation. Vendors mitigate by routing the maths to deterministic engines — but the moment the model narrates the result, it can drift from it.
2. **Data-quality dependency.** Pilots succeed on curated data and die in production on the master-data mess underneath. The hard upstream work — governance, master data — is the precondition, not the afterthought.
3. **Accountability gaps.** This is why every vendor stresses explainability. A regulated planner cannot commit a plan they cannot defend in an audit.
4. **The pilot-to-production cliff.** *Gartner predicts over 40% of agentic AI projects will be canceled by the end of 2027*, citing escalating costs, unclear value, and inadequate risk controls.
5. **The enablement illusion** — buying the capability without preparing the workforce or the data to use it.

> *The vendors selling 10× productivity multiples are mostly selling click-reduction. That is real. It is not an autonomous supply chain.*
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The uncomfortable conclusion

Generative AI is the best usability improvement planning software has had in twenty years. A planner who can ask "why did the forecast change for this DC last week?" and get a coherent answer in thirty seconds is genuinely more productive, and that gain compounds across a team.

But that same planner is not automatically producing a more accurate forecast or a better supply plan. The engine that generates the number has not changed. The model just explains it faster and lets you interrogate it in English.

So the buying logic for 2026 is straightforward. Pay for the productivity — it is real, and it is available from your incumbent vendor without a moonshot. Do not pay for the autonomy, because what is being sold as autonomy is mostly click-reduction wearing a more expensive name. And do the unglamorous data-governance work first, because that is the variable that actually determines whether any of this survives contact with production.

The technology is real. The transformation is more modest than the keynote. Both of those things are true at once.

Sources

- SAP News Center. (2025). *SAP Business AI: Release Highlights Q2 2025; Q4 2025.* news.sap.com
- Kinaxis. (2025). *Kinaxis Accelerates Agentic Era for Supply Chain Orchestration with the Launch of Maestro Agents.* kinaxis.com
- o9 Solutions. (2024–2025). *Composite Agents; Specialized AI Agents for Planning and Execution.* o9solutions.com
- Blue Yonder / Business Wire. (2025). *Blue Yonder Transforms Supply Chain Management With New AI Agents at ICON 2025.* businesswire.com
- Anaplan. (2024). *Anaplan CoPlanner for Demand Planning.* anaplan.com
- OMP. (2025). *OMP Unveils UnisonIQ.* omp.com
- Microsoft Learn. (2025). *Dynamics 365 Supply Chain Management 2025 Release Wave 1.* learn.microsoft.com
- McKinsey & Company. (2021). *AI-driven operations forecasting in data-light environments.* mckinsey.com
- McKinsey & Company. (2025). *The State of AI in 2025: Agents, Innovation, and Transformation.* mckinsey.com
- Gartner. (2025). *Gartner Predicts Over 40% of Agentic AI Projects Will Be Canceled by End of 2027.* gartner.com
- Gartner. (2026). *Gartner Forecasts Supply Chain Management Software with Agentic AI Will Grow to $53 Billion in Spend by 2030.* gartner.com
- MarketsandMarkets. (2026). *AI in Supply Chain Market.* marketsandmarkets.com
- Makridakis, S., Spiliotis, E., & Assimakopoulos, V. (2022). *The M5 Accuracy Competition: Results, Findings and Conclusions. International Journal of Forecasting.*