

AI Fabricates Phantom Vendors, Ghost Contracts, Fake Compliance

How structural decomposition eliminates AI hallucinations in supply chain — with real incidents, real costs, and a proven architectural solution.

AI in Supply Chain Market: \$14.49B (2025) ' \$50.01B by 2031 (CAGR 22.9%)

THE PROBLEM

Why General-Purpose LLMs Fail in Supply Chain

REAL INCIDENTS

AI agents confidently generate phantom vendor contracts, ghost supply chain parts, and imaginary compliance documents. MIT Sloan research shows hallucination-induced vulnerabilities propagate across hundreds of downstream projects within 48–72 hours. AI code hallucinations represent a \$250B security risk (Trax).

\$250B \$250B AI supply chain security risk (Trax Technologies)

48–72h for hallucination 'contagion' to propagate across projects

KEY PAIN POINTS

AI fabricates phantom sanctions violations that freeze legitimate transactions and trigger regulatory disclosures

Hallucination 'contagion effect': errors propagate across hundreds of downstream projects within 48–72 hours

False demand forecasts lead to catastrophic over/under-stocking worth millions

AI-generated compliance documentation may reference regulations that don't exist

THE SOLUTION

Structural Decomposition: Specialists Beat Generalists

Supply chain queries span procurement, logistics, inventory management, compliance verification, and vendor management — each requiring access to different live data systems.

dhisolve routes each query type to a model grounded in the relevant operational system: procurement queries to ERP-connected models, logistics queries to shipment tracking systems, compliance queries to regulatory databases, vendor queries to verified supplier registries.

This structural separation makes it impossible for the AI to fabricate vendor contracts (the procurement model only knows real vendors), invent inventory levels (the inventory model connects to live stock data), or cite nonexistent regulations (the compliance model only references real regulatory frameworks).

The contagion problem is eliminated because each sub-model's outputs are independently verified before propagation.

COST COMPARISON

DHISOLVE

\$0.10–\$0.50

per 1M tokens

BIG LLMS

\$10–\$60

per 1M tokens

OUTCOMES

Measurable Results

Zero phantom vendor contracts or ghost inventory data

Zero fabricated compliance documentation

Every query grounded in live operational data

90% lower AI inference costs

ROI CASE

A single phantom sanctions violation can freeze millions in transactions and require costly regulatory disclosure. False demand forecasts worth millions are a regular occurrence. The MIT Sloan contagion research shows these errors compound rapidly.

With dhisolve:

- Every procurement query grounded in real ERP data
- Compliance checks verified against actual regulatory databases
- Sanctions screening: real-time, verified, zero false phantoms
- AI cost: 90% less than general-purpose LLMs

REGULATORY COMPLIANCE

Built for Compliance, Not Bolted On

Customs and trade compliance (export controls, sanctions screening)

CTPAT — Customs-Trade Partnership Against Terrorism

ISO 28000 supply chain security management

Industry-specific traceability requirements (food: FSMA; pharma: DSCSA)

ACADEMIC & INDUSTRY BACKING

MIT Sloan: hallucination contagion in software supply chains — 48–72h propagation (2025)

Compound AI: data-grounded routing eliminates fabrication by design

FrugalGPT: cascading queries for cost-optimized routing (Stanford, 2023)

Trax Technologies: AI code hallucinations as \$250B supply chain security risk

MARKET OPPORTUNITY

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