zensar
An RPG Company

Supply Chain AI Control Tower 2.0

Powered by Cognitive Intelligence Center

Advanced intelligence driving seamless supply chain operations.

The Challenge:
Why the shift from control tower 1.0 to 2.0

The strategic imperative has shifted from the mere acquisition of a supply chain control tower, a milestone already achieved by over 90% of large-scale enterprises, to the critical evaluation of its efficacy. The prevailing challenge is no longer deployment, but ensuring these systems possess the requisite agility to navigate today's increasingly volatile global landscape.

The Disruptions that exposed the control tower

Geopolitical: Four Red Sea and South China Sea Disruptions

Houthi-led attacks on Red Sea shipping routes forced major carriers to reroute around the Cape of Good Hope - adding 10-14 transit days and inflating spot freight rates over 300%. Simultaneously, escalating tensions in the South China Sea - a corridor carrying over $3 trillion in annual trade and the primary route for semiconductor and electronics supply chains - have placed procurement and logistics continuity under sustained strategic risk and legacy dashboards delivered delayed ETAs.

HBM: Memory price surge

AI infrastructure demand drove HBM3/HBM3e prices up by more than 200% over in 18 months. Without real-time commodity signal ingestion and prescriptive buy/hedge recommendations, procurement teams are locked into unfavorable contracts, creating both cost disadvantage and production continuity risk.

The capability gap

90%

Enterprises deployed
have a control tower in place.

<25%

Rate it truly capable
of autonomous or prescriptive action.

What control tower 1.0 was built to do - and where it ends

Control Tower 1.0 was engineered for a more stable world. Its architecture reflects the assumptions of that era - and those assumptions no longer hold.

Control tower 1.0 vs. 2.0 : The transformation

Dimension	Control tower 1.0	Control tower 2.0
Signal response	Reactive alerting after breach	Predictive intelligence 2-6 weeks ahead
Decision Model	Human interpretation of raw data	AI-ranked, explainable action recommendations
Data latency	Batch feeds 24-48 hr lag	Streaming IoT, market and geopolitical signals
Adaptability	Static rules; no learning	Continuous ML feedback loops
Network depth	Tier-1 visibility only	Tier-1 to Tier-N risk propagation
Signal scope	No external integration	Geopolitical, tariff, weather and market signals fused

Supply chain AI Control Tower 2.0: The four-stage operating model

Supply chain AI control tower 2.0 is an AI-driven enterprise operating layer that continuously senses, reasons, decides, and acts across the end-to-end supply chain - unifying data from planning, procurement, manufacturing, inventory, logistics, and external ecosystems, while continuously ingesting and fusing real-world signals: geopolitical shifts, economic movements, manufacturing intelligence, and live market dynamics. Every signal feeds a scenario model, every scenario drives a recommendation, and every recommendation is ranked, explainable, and traceable.

Sense

Unified enterprise visibility: Real-time data unified across inventory, supply, production, logistics, and revenue into a single governed view. Every function operates from one version of truth.

Think

Cognitive intelligence and prediction: Continuous learning using live signals. Disruptions predicted 2-6 weeks ahead. Every signal feeds a reasoning layer that builds and updates models in real time.

Decide

Intelligent decision orchestration: AI prescribes ranked, explainable decisions across cost, service, and resilience - with quantified trade-offs replacing manual data interpretation.

Act and learn

Governed autonomous execution: Approved actions executed automatically with human oversight calibrated to risk. The system improves prediction accuracy and prescriptive quality with each cycle.

Real-world scenarios: Where control tower 2.0 delivers maximum impact

Predictive supplier risk and PO re-planning

AI detects early risk signals, including financial distress, capacity alerts, and geopolitical exposure, and automatically maps affected SKUs. Prequalified alternates activated and POs re-planned within 48 hours.

Logistics exception and SLA protection

AI detects logistics anomalies before breaches, simulates alternate routes with cost and time trade-offs, and triggers automated carrier re-allocation. SLA impact is projected before it occurs.

Backlog and revenue-at-risk prediction

AI continuously analyzes demand, backlog, and fulfillment signals to surface revenue-at-risk weeks in advance. Business teams reprioritize orders and protect committed revenues before exposure becomes a financial event.

Inventory imbalance and working capital optimization

AI continuously scores inventory health by SKU and location, and recommends inter-plant transfers, accelerated sell-through, or controlled disposition, freeing working capital proactively.

Demand volatility and forecast accuracy improvement

AI fuses real-time signals, POS data, channel inventory, social trends, and macroeconomic indicators to continuously self-adjust demand models. Proactive re-allocation recommendations before stockouts or overbuilds occur.

Strategic technology ecosystem

Supply chain AI control tower 2.0 is built on a deliberate ecosystem of best-in-class technology partners, each fulfilling a distinct and non-redundant role in the intelligence stack.

Three partners. One unified intelligence stack

snowflake®

The global data exchange and governance foundation

- Data clean rooms
- Supply chain data cloud
- Enterprise-grade security, and compliance

Outcome: Reduced TCO by eliminating fragmented data silos and legacy on-premise infrastructure.

databricks

The advanced AI and data intelligence engine

- Lakehouse architecture
- Databricks Genie
- ZenseAI.Data Accelerator

Outcome: 30% higher accuracy in longrange forecasting and production planning.

sigma

The business-driven ad-hoc analytics interface

- Spreadsheet-native interface
- Direct-to-warehouse live connectivity
- Secure write-back and scenario planning

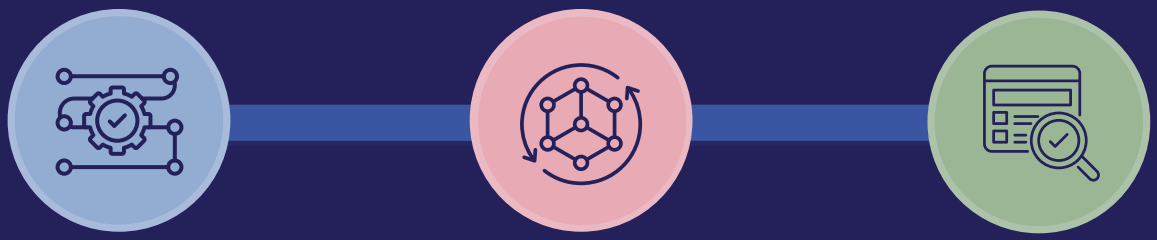
Outcome: 40% faster decision-making cycles by empowering business users to analyze live supply chain data.

Platform	Elevating supply chain intelligence with control tower 2.0
SAP IBP Integrated Business Planning Deep ERP integration, strong demand planning and wide enterprise adoption	AI is the core architecture, not an add-on. Control tower 2.0 layers directly above SAP IBP, adding autonomous execution, live signal ingestion, and prescriptive recommendations without replacing the SAP investment.
ORACLE Supply Chain Management Cloud Broad supply chain suite, mature cloud infrastructure, strong financials integration	Zensar brings the real-time external signal layer and autonomous decision engine. Oracle SCM is deployed on top without disrupting the existing Oracle investment.
BlueYonder Strong demand forecasting, solid fulfillment, and logistics capabilities	Our solution extends Blue Yonder's visibility into supply-side risk, external signals, and autonomous execution — dimensions where Luminate does not operate.
kinaxis® Best-in-class concurrent planning and scenario simulation; strongest of the four on this dimension	Control tower 2.0 adds autonomous signal ingestion, AI-generated scenario triggering, and governed execution. The agentic digital twin surpasses rapid response's manual capability with one-click, AI-driven simulation.

Zensar and Adago: Agentic digital twin

Zensar's partnership with Adago brings an agentic digital twin to the supply chain control tower — an integrated AI solution accessible to everyone, from supply chain planners to data experts. It combines end-to-end transparency with simulation and optimization capabilities, eliminating the need for fragmented tools and enabling the entire supply chain to be modeled, tested, and optimized in a single interface.

Three core capabilities



End-to-end transparency

All in one place. No fragmented tools and complete supply chain visibility from raw materials to finished goods in a single unified view.

Simulation

Simulate scenarios and identify root causes. Test the impact of disruptions, supply changes, and demand shifts before they happen with precision and speed.

Optimization

Find the optimal solution with one click. AI evaluates trade-offs among cost, service, and capacity to instantly recommend the best course of action.

Success story

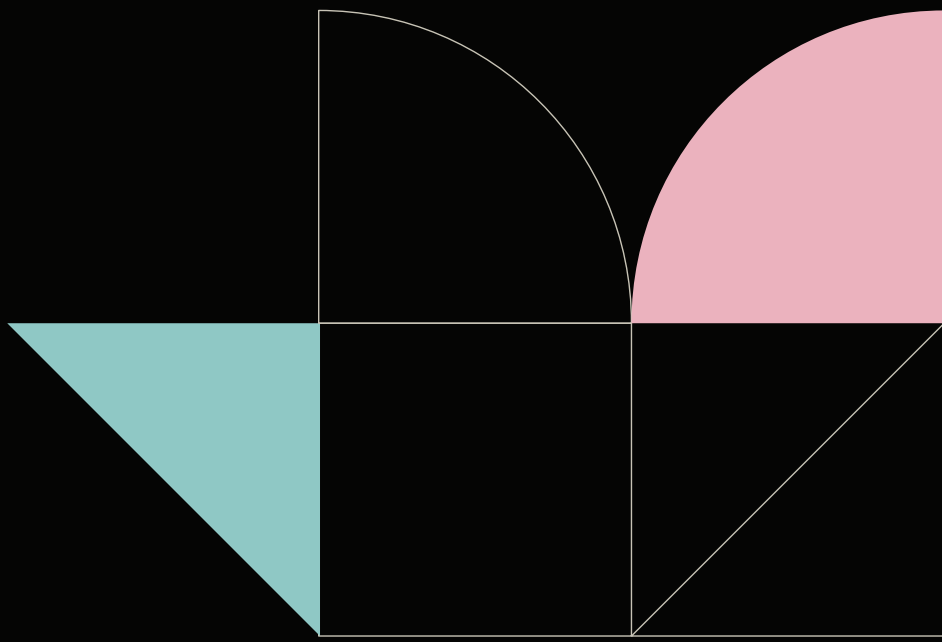
AI-driven supply chain risk intelligence

A leading semiconductor infrastructure provider faced fragmented supply chain data across multiple source systems, limited real-time risk visibility, and an over-reliance on manual planner effort for exception triage and resolution. Risk identification was reactive, data quality was inconsistent, and planning teams spent most of their time on low-value data reconciliation rather than strategic decision-making..

AGBA Star Innovation Certification awarded
by the Ministry of Electronics and IT, Government of India, in partnership with Swissnex, recognizing the solution's applied AI innovation in supply chain risk intelligence.

Impact delivered

- **10X** faster risk identification
- **40%** planner workload reduction
- **$1M+** in annual savings
- **95%** data accuracy improvement



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At Zensar, we're 'experience-led everything.' We are committed to conceptualizing, designing, engineering, marketing, and managing digital solutions and experiences for over 145+ leading enterprises. Using our 3Es of experience, engineering, and engagement, we harness the power of technology, creativity, and insight to deliver impact.

Part of the $4.8 billion RPG Group, we are headquartered in Pune, India. Our 10,000+ employees work across 30+ locations worldwide, including Milpitas, Seattle, Princeton, Cape Town, London, Zurich, Singapore, and Mexico City.

For more information, please contact: **info@zensar.com | www.zensar.com**