

Constrained Inventory Management Skill

Optimize constrained material allocation to finished goods production across contract manufacturers with decision intelligence. Eliminate manual allocation work, respond faster, and boost capacity utilization at scale.

The Business Challenges

Effective material allocation is essential for maximizing production, yet constrained supply and disconnected planning often create uneven material distribution across sites.

Common challenges organizations face:

Manual allocation analysis

Teams manually evaluate material constraints and allocation options, slowing responses and limiting throughput.

Limited visibility into material constraints

Fragmented data makes it hard to surface constraints early or spot better allocation opportunities.

Siloed planning across sites

Suppliers and contract manufacturers often plan independently, reducing alignment and optimization.

Inconsistent capacity utilization

Ad-hoc, non-standard methods lead to underutilized capacity and lower production efficiency.



The Aera Solution

The Aera Constrained Inventory Management Skill™ identifies material constraints and determines optimal allocation strategies using real-time decision intelligence. It maximizes production capacity by distributing materials across the right sites at the right time.

How Aera addresses them:

Identifies material allocation needs

It matches material supply and demand at batch level to surface constraints and allocation opportunities.

Determines optimal allocation strategy

It evaluates supply, demand, capacity constraints, and site priorities to recommend the most effective allocation.

Generates actionable recommendations

It creates ready-to-execute recommendations for material distribution across sites based on priority and capacity.

Enables rapid execution

It assigns recommendations to planning, materials, and logistics teams with clear insights on demand, supply, and capacity.

Optimization Techniques


Aera applies a combination of techniques to optimize allocation decisions.

Material-Demand Matching

 Batch-level matching

 BOM consolidation logic


Allocation Optimization

 Sequential allocation logic

 Capacity constraint evaluation

Learning and Adaptation

 Rule-based eligibility

 Historical performance analysis

Real Business Impact

A global manufacturing company struggled with production inefficiencies driven by manual material allocation processes and siloed decision-making across suppliers and contract manufacturers.

After implementing Aera's Constrained Inventory Management Skill, the company automated material allocation planning across all sites. The skill generated dynamic recommendations that aligned constrained material supply with finished goods demand, optimizing distribution across priority contract manufacturers.

66%

reduction in time to generate initial allocation plans

60%

of recommendations auto accepted

~80%

reduction in manual effort to onboard new consigned inventory

The Aera Difference

Aera transforms material allocation from a manual, time-intensive process into a streamlined, intelligent operation powered by decision intelligence. It provides a smarter, more scalable approach through:



Unified decision intelligence

It integrates material supply, on-hand inventory, committed capacity, and demand projections within a single, connected platform.



AI-augmented workflows

It enhances team productivity through intelligent batch-level matching and sequencing that accelerates high-quality decisions.



Closed-loop execution

It enables end-to-end automation from identifying constraints to executing and tracking allocation actions for continuous improvement.

Ready to transform your supply chain loss management?

Discover how Aera helps you optimize material allocation and minimize constraints.

Schedule a demo