DATA SHEET

C3.ai

C3 AI Production Schedule Optimization

Improve Fill Rates, Line Utilization, and Profitability

10-20%
Improvement in OTIF planning and scheduling performance

5-15%
Reduction in scheduling costs

90%
Reduction in time to generate schedules

Thousands
of input variables and parameters considered and evaluated for optimization

C3 AI® Production Schedule Optimization helps production schedulers improve fill rates, line utilization, and profitability with dynamic production schedules. The application unifies disparate data such as demand forecasts, sales orders, and inventory data, applies best-in-class optimization techniques that account for thousands of constraints across capacity, materials, labor, and more, and enables schedulers to easily integrate optimized schedules with internal production systems. Schedulers can create near-term schedules and long-term plans, with flexible schedule horizon and granularity, and run scenarios to compare how changes to manufacturing parameters affect schedule performance.

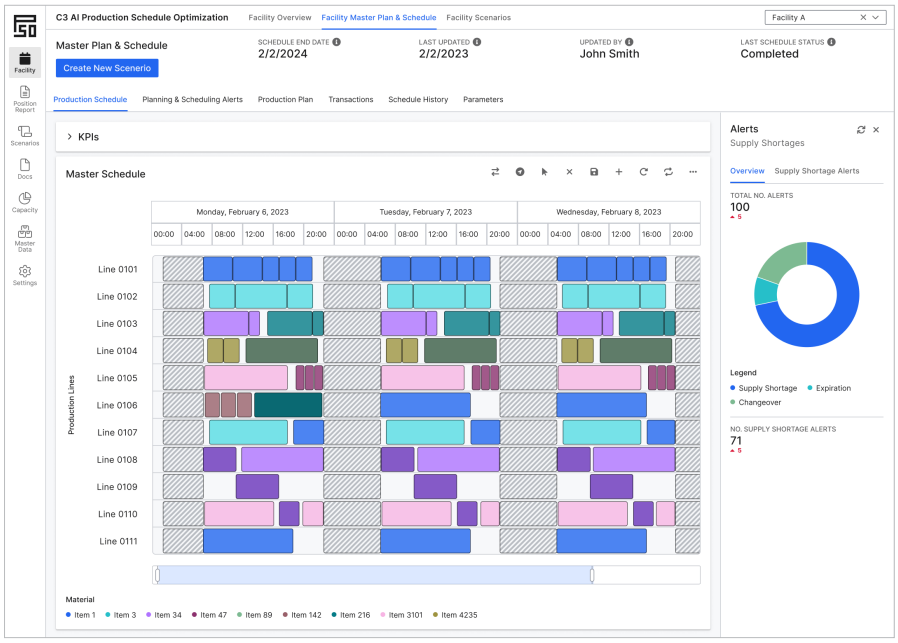

Figure 1. *C3 AI Production Schedule Optimization uses AI and optimization techniques to generate granular, accurate, and optimal industrial schedules.*

Feature Summary

- **Complex operations:** Plan and schedule any complex manufacturing or distribution system using an elastic solver across thousands of production lines
- **Comprehensive constraints:** Capture all planning and scheduling constraints that change over time, including cost, availability, asset performance, and process requirements for equipment, staffing, and transportation
- **Scenario analysis: C**onduct ad-hoc scenario analysis via flexible experimentation and optimization configurations and parameters
- **Integrated workflow:** Implement alongside existing planning and ERP systems such as SAP APO, O9, Kinaxis or others to seamlessly pull real-time data and execute on optimized schedules
- **Explainable AI:** Build trust in AI-generated schedules using an evidence package that provides visibility into major cost drivers, and production or distribution bottlenecks

C3 AI Production Schedule Optimization offers an alternative to legacy scheduling software with an AI-optimized approach, as opposed to heuristic-based and/or manual approaches. The application provides optimal manufacturing schedules according to configurable objective functions (e.g., maximize margin, minimize cost, maximize fill rate, and others) and operational constraints (e.g., production line capacities, storage policy, asset performance, staffing schedules, and others). The optimization approaches are flexible to enable immediate-term, execution focused scheduling as well as long-horizon supply and capacity planning. Further, contextualized and actionable insights provide near real-time adjustments that operators can seamlessly push to planning and execution systems.

C3 AI Production Schedule Optimization enables collaboration across supply chain and manufacturing operations, service providers, sales and marketing analysts, buyers and sellers, and schedulers. The application supports discrete, batch, semi-batch, and continuous manufacturing processes in network of facilities and third-party logistics, as well as service operations, delivering benefits across industries such as CPG manufacturing, automotive, retail, pharmaceuticals, food and beverage, and healthcare.

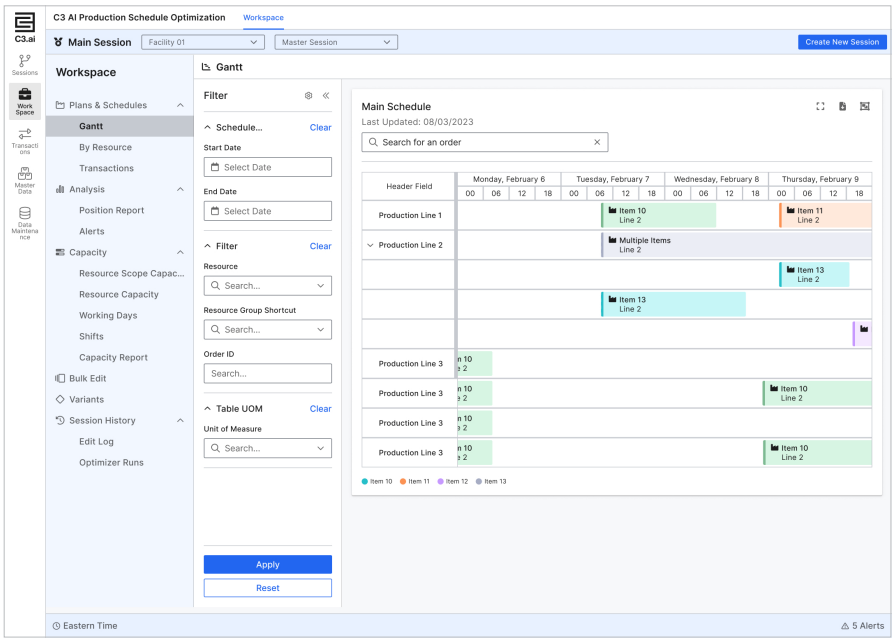

Figure 2. *C3 AI Production Schedule Optimization enables AI-based analysis for production schedulers to generate and evaluate optimal industrial schedules.*

Feature Summary (cont.)

- **Flexible granularity:** Generate optimal long-term, high-level plans to inform strategic supply decisions, or short-term granular schedules to drive shop-floor activities
- **Performance monitoring:** Run, save, benchmark, and analyze what-if scenarios to assess the impact of planning and production modifications on plant and distribution throughput and cost
- **Manage Data:** incorporate infinitely customizable constraints and considerations for scheduling and maintain master data for scheduling
- **Collaborate:** Benefit from, and help colleagues in improving schedules by sharing updates to master data, locking-in candidate schedules, and visualizing trade-offs
- **Supply Chain Digital Twin:** Integrate all relevant supply chain data and utilize unified data with other C3 AI applications for end-to-end production and supply chain management

Proven Results in 6-Month Pilot

Visit C3.ai/get-started