

Multi-Site Manufacturing



The Challenge

A rapidly expanding local manufacturing company, with whom we had previously collaborated with on numerous projects, approached us to enhance their existing order management, lead time service, configuration management, and logistics software. The company was transitioning from a single manufacturing and shipping location to a complex multi-site manufacturing and distribution network. To sustain their continued growth and streamline operations across multiple locations, they required a robust and efficient multi-site solution. Leveraging our extensive knowledge of their systems, we were able to expedite the implementation process to meet the urgency of their needs.

The Solution

We began by conducting a comprehensive inception sprint to identify stakeholders, understand core business requirements, evaluate current state and technology, and define the Users and Personas impacted by the changes. Following these extensive business and technical discussions, we proposed a collaborative work plan that included both our direct updates and additional tool changes managed by other teams.

Our solution consisted of three main components: Order Planner, Lead Time Service, and Logistics Calculations. Each element was designed to enhance specific aspects of their operations and support their transition to a multi-site network.

Order Planner: We implemented a feature and options-based Order Planner that processed all new orders to determine the primary and secondary manufacturing locations for each line item. Given that certain products could only be made at specific locations, and considering the varying capabilities of production lines, it was crucial to allocate items accurately to a primary manufacturing location. The secondary location served as a backup, enabling the business to shift production when needed.

Lead Time Service: We migrated their existing manufacturing lead time logic from their ERP system into a dedicated Lead Time Service. This service allowed for more precise refinement of

feature and option rules by location, ensuring accurate lead time calculations for every item.

Logistics Calculations: With multiple distribution locations, we developed a user interface to define logistics coordination data, including shipping durations and processing times between manufacturing sites, distribution centers, and final delivery points. These data points enabled us to calculate final delivery dates and backdate key production milestones, such as when items need to be completed, shipped from manufacturing sites, and dispatched from distribution centers. These logistics calculations cover both primary and secondary manufacturing locations, empowering support users to make informed decisions when production shifts are necessary.

The Results

Our solution has empowered our customer to automate order logistics and calculate milestone dates for each line item on every order. They can now review alternative manufacturing options within their network and assess the impacts of any changes before implementation, enhancing their operational efficiency and decision-making capabilities.