Product
SIMATIC IT Preactor APS

Business challenges
Improve on-time delivery to enhance customer experience
Eliminate manual scheduling and firefighting due to short-term visibility
Overcome scheduling limitations of existing ERP system

Keys to success
Implement tight integration between SIMATIC IT Preactor AS and ERP systems
Account for shop floor constraints like material, yield and changeovers in finite capacity schedule (FCS)
Use SIMATIC IT Preactor AS to provide visibility and flexibility for re-scheduling throughout the manufacturing process
Improve responsiveness to customer demand changes

Results
Increased top line revenues in 2016 by 10 percent
Increased production output without increasing headcount
Improved on-time delivery

Elmwood Reclaimed Timber
Floor panel manufacturer improves sales by 10 percent with advanced planning and scheduling solutions

Elmwood improved production planning and scheduling using SIMATIC IT Preactor Advanced Scheduling.

Prioritizing on-time delivery and efficient resource utilization
Elmwood Reclaimed Timber Inc., based in Kansas City, Missouri, manufactures and markets the highest-quality reclaimed wood products that adhere to standards embracing the company’s deep respect for the environment. Every product created by Elmwood, including wide plank flooring, counter tops, beams and cabinet lumber, is manufactured using wood salvaged from sustainable sources.

Out of respect for cultural heritage and architectural history, only structures that are condemned, abandoned or beyond repair are deconstructed for reclaimed wood. All of Elmwood Reclaimed Timber’s products are certified by the Forest Stewardship Council’s Recycled accreditation. The recognition adds validity to an already green, environmentally conscious team.

Elmwood is committed to efficient manufacturing of its custom products and assuring on-time delivery to customers. With this priority, Elmwood began its digitalization journey by searching for tools that would complement its existing enterprise resource
planning (ERP) system and improve the planning of manufacturing operations to synchronize demand and supply.

Elmwood began looking for a scalable and flexible capacity planning and scheduling package that would integrate with the existing ERP system and the homegrown shop floor data collection system. The answer was SIMATIC IT Preactor Advanced Scheduling (AS) solution, a part of the Siemens SIMATIC IT Advanced Planning and Scheduling (APS) solution family. The APS solutions help manufacturing industries improve the synchronization of manufacturing processes, giving greater visibility and control to increase utilization and on-time delivery while reducing inventory levels and waste.

In addition to leveraging specialized skills required to identify high-quality wood, Elmwood had to consider the complexities of accurate scheduling of its manufacturing operations.

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The entire manufacturing process sequence depends on the allocation of green lumber with large variations in sizes and the requirements of customers. Elmwood used the advanced pegging features of SIMATIC IT Preactor AS to link the green lumber output to further cutting processes, laying the foundation of a sound planning and scheduling process.

To arrive at accurate schedules, SIMATIC IT Preactor AS enabled production teams to consider labor, material and capacity constraints. “SIMATIC IT Preactor AS exceeded expectations and became the key software that helped us expand our capacity and automation,” says Connor Burns, vice president of production. “SIMATIC IT Preactor AS moves the manufacturing shop floor.”

Tightly coupled integration
The implementation of SIMATIC IT Preactor Advanced Scheduling at Elmwood included the entire manufacturing process and two-way integration with the ERP software, a critical need at the company.

Currently, the ERP system is used to manage bills of materials (BOMs), routings, planned and production order generation, and to send the necessary data to SIMATIC IT Preactor Advanced Scheduling. The use of SIMATIC IT Preactor AS provides detailed, real-time visibility and order traceability throughout the
manufacturing process, feeding information back to the ERP system upon completion. Elmwood sends detailed serial information to its customers.

“We have configured SIMATIC IT Preactor AS to take our specific constraints and challenges when we are going to communicate with ERP,” says Callison.

Benefit beyond expectations
With SIMATIC IT Preactor Advanced Scheduling, Elmwood integrated key business decision support systems for managing its operations.

All of Elmwood’s manufacturing is custom in nature. The company uses SIMATIC IT Preactor AS to help decide what to manufacture because the cutting of reclaimed wood requires consideration of specific data for accurate scheduling. Elmwood uses this data to help make predictive decisions and identify problems before they occur.

“SIMATIC IT Preactor AS is integral to Elmwood’s successful business processes and is a key enabler of its continued growth.

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President
Elmwood Reclaimed Timber, Inc.
Solutions/Services
SIMATIC IT Preactor Advanced Scheduling (AS)
www.siemens.com/Preactor

Customer’s primary business
Elmwood Reclaimed Timer, Inc. manufactures products like custom-milled reclaimed antique wood flooring, stair parts, paneling, cabinet lumber, countertops, bar tops, table tops, beams, fireplace mantels, shelves, barn wood, lumber and antique tin.
www.elmwoodreclaimedtimber.com

Customer location
Peculiar, Missouri
USA

Elmwood has realized the benefits in many business areas. In manufacturing operations, the use of SIMATIC IT Preactor AS has provided real-time visibility into work-in-process (WIP), machine and operations loading plans for all areas of manufacturing, identification of operational bottlenecks, and the ability to use calendars and set manpower and machine constraints.

For production planning and scheduling, Elmwood can now balance key performance indicators for sales and production using what-if scenarios; develop a single unified plan for better coordination of sales, production and purchasing; and predict problems instead of reacting to them.

The use of SIMATIC IT Preactor AS has also helped enhance general business management with better visibility of customer delivery and sales, improved material planning, and reductions in work-in-progress inventory.

Expert service and support from partner S Nic Solutions
In complex technology implementations, a critical success factor is finding a partner with combined knowledge of domain and technology and practical experience at the right price. Manufacturing teams have understand their requirements but are seldom able to prioritize them. At Elmwood, the skills and knowledge of S Nic Solutions, a Siemens PLM Software solution partner, played a key role.

Elmwood selected S Nic Solutions as a preferred strategic partner to implement SIMATIC IT Preactor AS. “S Nic Solutions’ knowledge in manufacturing operations, supply chain, production planning and scheduling and deep expertise in manufacturing operations management and digital manufacturing was key to our success,” says Callison. “Moreover, they delivered a very high-quality solution remotely at affordable cost which has truly has made them our strategic partner to get ready for Industry 4.0.”