

## MANUFACTURING SCHEDULING CASE STUDY

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### A REFINED PRODUCTION SCHEDULING APPROACH HELPS A MANUFACTURING PLANT INCREASE ITS PRODUCTION EFFICIENCY AND CUSTOMER FILL RATE.

With increasing cost pressures and a mandate to improve production efficiency, a manufacturing plant sought to reduce work-in-process inventory and increase its customer fill rate. Working with West Monroe Partners, it implemented a new scheduling tools and rules that not only have delivered the desired results—they enabled the plant to break production records for the first four months following implementation.

#### THE CLIENT.

The client is a manufacturing plant for a global leader in the metal transformation industry—a company with an industrial presence in 30 countries and commercial activities around the world.

#### MEETING A MANDATE FOR MORE EFFICIENT PRODUCTION.

With increasing cost pressures from overseas competitors and a mandate from its headquarters to improve its production efficiency and customer fill rate, the plant's management team sought a scheduling solution that would enable it to:

- ◆ Reduce work-in-process inventory
- ◆ Increase throughput without adding new equipment
- ◆ Improve the flow of people and material on its production floor
- ◆ Generate better visibility of its production orders

For assistance, the plant manager and production director turned to West Monroe Partners. West Monroe Partners offered expertise in planning and scheduling processes and technologies and production optimization. In addition, it had extensive experience designing and applying complex algorithms and decision-making tools.

#### TECHNOLOGY EMPLOYED:

- ◆ PREACTOR® Scheduling tool
- ◆ Operational research/advanced mathematics

#### FROM SELECTION TO SUCCESSFUL IMPLEMENTATION.

The West Monroe Partners project team applied its production and scheduling knowledge to help the plant design, select, and implement an appropriate solution for its needs. Key steps in this process included:

- ◆ Reviewing the plant's current scheduling process
- ◆ Putting in place a manufacturing execution system to control work orders
- ◆ Establishing a system to manage rework
- ◆ Building a scheduling algorithm to optimize throughput and minimize work-in-process inventory
- ◆ Cleaning production data—including routings, operation times, and set-up times—prior to converting it to a new system
- ◆ Implementing and configuring the PREACTOR® Advanced Planning Scheduling tool
- ◆ Training the plant's various system users

The project team utilized a robust project management approach, and it maintained open communication with the plant manager and other key stakeholders through regular status meetings and other forums. Together, these efforts helped keep the project on scope and on schedule for completion within five months.

#### A MORE ACCURATE, EFFICIENT SCHEDULING PROCESS.

With new scheduling tools and rules in place, the plant has experienced significant production improvements:

- ◆ Increased production efficiency to 90 percent, beating production records for four consecutive months following implementation
- ◆ Increased its customer fill rate to 95 percent

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