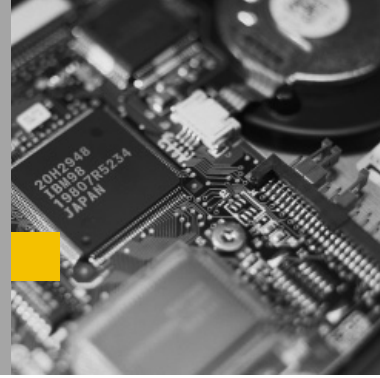


SAP Customer Success Story Industrial Machinery and Components – Industrial Tools and Metal Working Machinery



“Trumpf has been able to increase its production output by 25% to 30% without expanding the production facilities.”

Jürgen Mörk, Senior Systems Analyst, Trumpf GmbH & Co. KG

AT A GLANCE

Company

- Name: Trumpf GmbH & Co. KG
- Location: Ditzingen, Germany
- Industry: Industrial machinery and components
- Products and services: Sheet metal processing
- Revenue: €1.65 billion
- Employees: 6,500
- Web site: www.trumpf.com

Challenges and Opportunities

- Reduce costs
- Reduce waste
- Increase production output
- Increase flexibility

Objectives

- Support lean manufacturing processes
- Accelerate innovation
- Integrate manufacturing with enterprise resource planning software

SAP® Solutions and Services

- SAP® ERP application
- SAP xApp™ Manufacturing Integration and Intelligence composite application

Implementation Highlight

- Completed on time and within budget

Why SAP

- Satisfied SAP customer
- Availability of a tightly integrated software environment to link shop floor with back-office functions

Benefits

- Replacement costs lowered by 25% to 30%
- Production output increased without expanding facilities
- Traditional warehouses eliminated
- Material availability improved

Existing Environment

- SAP software
- Proprietary software for HR, time management, engineering, and production

Third-Party Integration

- Database: Oracle
- Hardware: Hewlett-Packard
- Operating system: HP UX

TRUMPF

The Transparent Shop Floor – SAP® Software Supports Lean Manufacturing

Getting detailed insight into production processes from a business perspective has been a challenge for the manufacturing industry for some time. While corporate administration is typically quite transparent nowadays thanks to integrated software applications, processes on the shop floor tend to escape full centralized control. Trumpf GmbH & Co. KG was no exception. Hard-to-control material inventories; insufficient schedule transparency; cumbersome, error-prone, paper-based processes all the way down to the machine operator level; disproportionate administrative effort involved in handling small batch sizes; changing customer requirements – not to mention frustrated employees – were all factors causing Trumpf unnecessary cost and headache.

Streamlining Production

Based in Ditzingen near Stuttgart, Germany, Trumpf is an internationally recognized manufacturer of industrial sheet metal processing machinery, advanced industrial laser equipment, specialized electronics, and medical equipment. The company employs approximately 6,500 people and generates annual sales of €1.65 billion. To maintain its competitive edge, Trumpf developed a lean manufacturing strategy called “SYNCHRO” that is supported by SAP® software.

Key objectives of Trumpf’s SYNCHRO methodology were to eliminate waste, simplify and standardize all manufacturing processes, lower inventory costs, improve quality, eliminate paper-based order processing, and improve visibility into the manufacturing organization. A fundamental concept of lean manufacturing is the “pull principle”: The manufacture of a

product is initiated from the customer end; each individual production step is triggered on an “as needed” basis. Trumpf’s SYNCHRO system ensures that all parts required for a specific end product are available at exactly the time they are needed.

SAP Supports On-Demand Production

Having optimized its production through SYNCHRO, Trumpf needed to reduce the associated administrative effort for employees by replacing paperwork with electronic processes. “Once our synchronized-flow production model had been implemented technically, the logical next step was to bring the SAP ERP application to the shop floor and introduce lean, electronic order processing as well,” reports Jürgen Mörk, senior systems analyst at Trumpf. The SAP ERP application supports all of Trumpf’s production modes: kanban, serial, and single-piece production. Each stage of the manufacturing process is confirmed by the respective employee, who interacts directly with the SAP software. This ensures high data quality, transparency, and responsiveness throughout the supply chain. Production management is kept up to date on material usage and the parts manufactured so component availability can be planned precisely.

“Without SAP software providing the structural backbone of our synchronized-flow processes, our production would be clearly more complex and expensive and less efficient,” says Mörk.

“The SAP solution tracks our streamlined processes to deliver comprehensive information at the right time and place.” The productivity improvements achieved through the lean manufacturing environment supported by SAP software are impressive. “Trumpf has been able to increase its production output by 25% to 30% without expanding the production facilities,” says Mörk.

On-demand production has allowed Trumpf to eliminate traditional centralized warehouses while improving material availability. Buffer stocks have been reduced to small storage racks at each manufacturing station; some have been eliminated altogether. “This has freed up capital previously tied up in real estate, buildings, material handling equipment, personnel, and material inventory,” says Mörk. “At the same time, delivery cycles have been accelerated. A machine that used to take us 46 days to complete is now ready to ship within 21 days.”

An important aspect of the SYNCHRO concept is the machine operators’ increased responsibilities. From the current mix of short-term and long-term work orders, each operator must decide what needs to be done next so that the parts he is responsible for will be ready in time. This allocation of responsibility guarantees optimal utilization of production capacity while increasing employee satisfaction. “Increased flexibility and accountability have boosted employee motivation, morale, and creativity,” says Mörk. “And paperless interaction with the SAP software allows our people to focus on being productive, rather than doing paperwork.”

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Adaptive Manufacturing: An Example

A recent addition to the SAP software environment at Trumpf is the SAP xApp™ Manufacturing Integration and Intelligence (SAP xMII) composite application. Using large-screen displays visible to each shop floor employee, SAP xMII integrates data from various sources to present up-to-the-minute process status information. It helps employees better organize their work, be ready for process changes, and keep track of the manufacturing pace. SAP xMII closes the last gap in the information flow between enterprise resource planning and manufacturing.

By automating synchronized ordering, provisioning, maintenance, and quality assurance processes between the factory floor and the SAP ERP application, and by enabling dynamic responsiveness through comprehensive, real-time information, SAP software has factually made Trumpf a pioneer in adaptive manufacturing. And Mörk and his staff are looking further ahead. “SAP offers many attractive options, such as supply chain management functionality. We have seen it happen with SYNCHRO and in other areas – it is the SAP software that ultimately ties it all together and makes our enterprise adaptive and controllable.”