

ELECTRONICS AND SEMICONDUCTOR

SUMIDA Lehesten

Improving delivery reliability and lead time with Siemens solutions

Product

Opcenter

Business challenges

Address complexities of a broad product portfolio

Reduce manual effort in planning

Improve adherence to deadlines

Unify planning on a single system

Keys to success

Implement precise, intelligent planning logic with Opcenter APS

Rely on expert support from Siemens Smart Expert partner MCP

Optimize lot sizes based on capacity

Results

Improved on-time delivery by 35 percent

Reduced lead time by 75 percent

Improved KPIs including inventory levels, productivity and work-in-progress

Opcenter APS helps electronics manufacturer reduce lead time by 75 percent

Founded in 1965, SUMIDA Lehesten has more than half a century of experience specializing in electronic manufacturing services (EMS). The company's longstanding customer base includes clients from the fields of automotive, medicine, industry, measurement and testing technology, communication and consumer electronics.

Leading-edge production facilities and a well-coordinated team of employees make SUMIDA Lehesten a leader in assembly of printed circuit boards. The company uses both surface mount and through-hole technologies to produce electronic assemblies and devices, and also offers painting,

coating, electrical testing, assembly and logistics services. As part of the globally active SUMIDA AG, with approximately 21,000 employees and an annual revenue of more than €770 million, SUMIDA Lehesten is a stable business partner.

In addition to electronics manufacturing services, SUMIDA Lehesten offers prototyping, selective soldering, components management and International Material Data System (IMDS) services.

Broad product portfolio challenges planning and scheduling

SUMIDA Lehesten's broad product portfolio adds complexity to the planning and scheduling of electronics manufacturing operations. The focus of the project was the Lehesten site, which manufactures approximately 150



“With Opcenter APS we have a common database. This makes the entire manufacturing process transparent.”

Markus Herckner
Controlling
SUMIDA Lehesten



different assemblies per month. Around 3,000 processes per month must be coordinated and planned in compliance with the target dates. Despite many years of experience, a lot of process knowledge and many buffers in time and material, planning of these complex processes was insufficient. In addition to a high material inventory, the planning led to frequent delivery delays because the wrong processes were carried out at the wrong time.

In the past, SUMIDA Lehesten planned its production operations based on spreadsheets, meeting notes and other personnel input. Planning required a great deal of manual effort. This approach had little transparency and hindered a common understanding of priorities and bottlenecks, often resulting in capacity overloads in production.

The company used its already implemented enterprise resource planning (ERP) system for production planning and scheduling. With limited planning logic, the ERP system did not provide an accurate overview and transparency and could not effectively coordinate the manufacturing departments. This resulted in poor adherence to schedules and too much manual effort in planning.

SUMIDA Lehesten aimed to improve planning and scheduling using its enterprise resource planning (ERP) system in conjunction with the Opcenter™ Advanced Planning and Scheduling (APS) solution, part of the Xcelerator™ portfolio of integrated solutions and services from Siemens Digital Industries Software. The goal was to adopt proactive and forward-looking planning to replace short-term, reactive planning.

“ Opcenter APS supported us in significantly improving our adherence to deadlines and productivity. This strengthens our profitability and our competitiveness. ”

Markus Herckner
Controlling
SUMIDA Lehesten

Developing a solution with an expert partner

SUMIDA Lehesten partnered with MCP, a Siemens Smart Expert partner specializing in Opcenter APS, in a project to develop an innovative solution to address these problems and improve key performance indicators (KPIs). Opcenter APS offered sophisticated planning logic that provided a more realistic model of shop floor operations and recognized actual plant capacity limits in real time.

SUMIDA Lehesten and MCP introduced a more precise and intelligent planning logic using Opcenter APS. Instead of considering production orders in their entirety, planners used Opcenter APS to examine each work step individually, calculating start, end and throughput times depending on the lot size. Planners use the software to accurately determine the critical ratio – the remaining time to due date divided by the shop processing time that is still available. The critical ratio provides a clear indicator of the status of each process (ahead of, behind or on schedule) that guides planners in prioritizing job orders and making resource adjustments to address bottlenecks. Planners can also adjust schedules manually if necessary.

Carefully planned implementation

For the implementation project, MPC and Sumida Lehesten established a link between Opcenter APS and production workstations and automated report creation and printing to make the product plans available to the workstations. The reports list all of the machines and equipment on a daily basis, separated into early, late and night shifts, with planned production orders including all related information. Progress reports of each production order are now visible to the planning department, drastically reducing the planners' workload, since control during production is no longer necessary.

"Successfully implementing a solution like Opcenter APS requires not only software customization, but also requires a partner who understands the existing business and can assist with the necessary organizational change," says Markus Herckner, Controlling, SUMIDA Lehesten. "MCP has these competencies." Additional requirements that arose during the course of the project could be easily integrated thanks to the systematic implementation methodology.

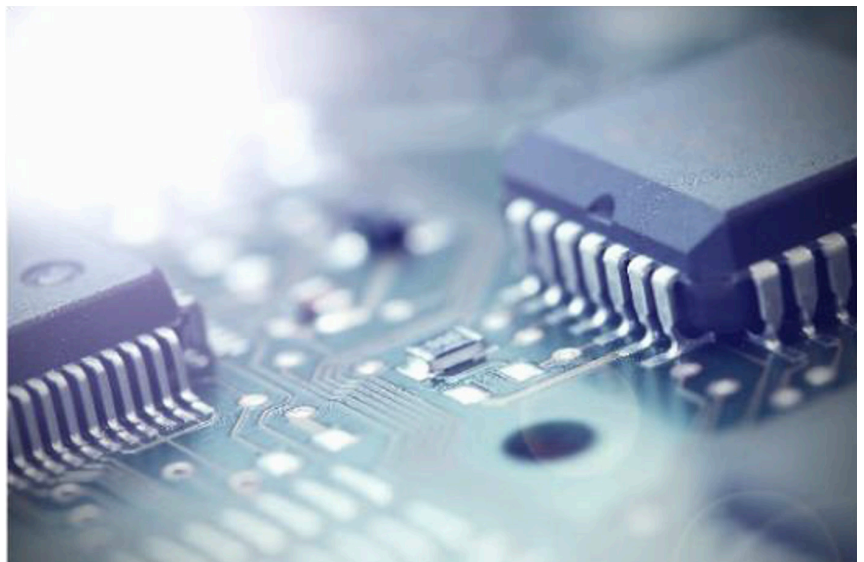
Ease and flexibility

Opcenter was a good fit for SUMIDA Lehesten. "With Opcenter APS we especially liked the easy connection to our existing ERP system," says Herckner. "Furthermore, many adjustments can be realized directly in Opcenter APS with little effort. Using our ERP system's planning and scheduling tools would have been much more complex and therefore more costly."

Opcenter APS helps optimize lot sizes based on the availability of employees and systems to make the best possible use of capacity. These complex rules improved the overall system effectiveness of the site.

"If we have a common understanding of which orders are really important or where bottlenecks exist, we can take appropriate remedial action earlier, faster and in a more targeted manner."

Markus Herckner
Controlling
SUMIDA Lehesten



Solutions/Services

Opcenter APS
siemens.com/opcenter-aps

Customer's primary business

SUMIDA Group is a global manufacturer of high-quality inductive components and modules used in a number of applications within the consumer electronics, automotive and industrial markets. SUMIDA Lehesten specializes in electronic manufacturing services.
www.sumida-ems.com

Customer location

Lehesten
Germany

Solution Partner

MCP GmbH
www.algorithm-factory.com

Realizing benefits

"The successful implementation by MCP and the positive impact of Opcenter APS have convinced the management of SUMIDA Lehesten to continuously implement new developments within the program," says Daniel Walkiewicz, partner and project manager, MCP. The business benefits include a 35 percent increase in delivery reliability, from 60 to 95 percent. Lead times have been reduced from 20 days to five days, a 75 percent reduction.

"Before we implemented Opcenter APS, our production planning was based on Excel lists, meeting minutes and personal notes from employees," says Herckner. "With Opcenter APS we have a common database. This makes the entire manufacturing process transparent. If we have a common understanding of which orders are really important or where bottlenecks exist, we can take appropriate remedial action earlier, faster and in a more targeted manner. Improving delivery reliability is then a logical consequence."

"By using Opcenter APS, many discussions regarding production planning and control can be significantly shortened," says Herckner. "The increase of delivery reliability and the reduction of lead times are points from which our customers directly benefit. The reduction of internal effort while increasing the service level increases our competitiveness."

All of these improvements have resulted in the new planning solution gaining trust among SUMIDA Lehesten employees and increasing their satisfaction. Instead of working with two systems, all production plans are now created in Opcenter APS. The relevant performance indicators, such as inventory levels, productivity and work in process, have been significantly improved because Opcenter APS optimizes utilization and less time is lost due to constant changes.

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Daniel Walkiewicz
Partner and Project Manager
MCP

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