

Success Story

Blum: Vertical integration in production with ERP & digital twin



Introduction / Background

Blum GmbH is a company in the furniture industry based in Austria. As part of an Industry 4.0 project, **production was fully vertically integrated** – from machine control to the ERP system. The goal was to digitize manufacturing processes and make **production more efficient, transparent, and flexible.**

Challenge

When restructuring production and introducing a new machine, **media discontinuity and manual entries had to be avoided.** The aim was to transfer **production orders** and all relevant parameters **directly from SAP** to the machine, minimize sources of error, and optimize material provision for workers. In addition, **commissioning of the new machine** had to be as smooth and risk-free as possible.



Solution

The solution was to fully **vertically integrate production:** the machine was connected directly to the ERP system (SAP) so that production orders and parts lists could be transferred automatically. **Modern pick-to-light** and **drop-to-light systems** provide visual support to workers when picking up and putting down materials. In addition, a **digital twin of the new machine** was developed to simulate and optimize processes virtually.

Implementation / Technical realization

Production data is collected in **real time by the machine** and **automatically reported back to SAP**, for example, quantities, scrap, or material consumption. The pick/drop-to-light systems guide workers via light indicators and are linked to order control, minimizing errors and increasing productivity. The **digital twin** made it possible to virtually test and optimize all process steps and the interaction with SAP in advance. Potential errors or bottlenecks were thus identified and eliminated at an early stage.

Use & Benefits

- Complete vertical **integration from machine to ERP**
- **Automated data transfer** & feedback in real time
- Pick/drop-to-light systems for error-free material provision
- Digital twin for process simulation and optimization
- Higher efficiency, quality, and traceability
- **Faster commissioning** through virtual testing
- **More agile production** with better responsiveness
- Transparency & **real-time overview for management**
- Seamless digital documentation

Conclusion & Outlook

Thanks to complete vertical integration and the use of innovative technologies, Blum has been able to take a **major step towards becoming a smart factory**. Production is now networked, transparent, and agile, enabling the company to respond more quickly to market requirements and ensuring it is well equipped for the future. Further digitalization steps are already in the planning stage.

Quote

“Thanks to the complete vertical integration of the production process, we have been able to achieve **a very high level of quality and flexibility in manufacturing.**”

Hannes Berger, Head of IT

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