



Process Mining Pilot at a Glass Refiner

Supporting production and identifying potential with process transparency and real-time information



Process mining for data-driven manufacturing

vandaglas Eckelt GmbH, headquartered in Steyr, is a subsidiary of the vandaglas Group and specializes in the manufacture of complex XL glass panels for facades.

To comprehensively analyze the production data collected since 2003 for the first time and systematically identify opportunities for optimization in manufacturing, the company turned to process mining.

Rothbaum Consulting developed a process mining data model, created product-specific use cases, and analyzed selected process areas. The insights gained enable data-driven optimization of production processes and lay the groundwork for the sustainable use of process mining.

Process transparency as the foundation for production optimization

Challenge

The extensive production data spanning more than 20 years was to be analyzed comprehensively for the first time in order to provide transparency regarding process flows. The goal was to identify opportunities for optimization and automation in selected focus areas and to demonstrate the added value of process mining for the company.

Implementation

Initially, the pain points were identified, the data connection was established, and the data was reviewed to ensure its suitability for analysis. The project team then prioritized the most relevant use cases and analyzed them in detail to identify specific opportunities for optimization. Finally, the results were evaluated and categorized based on their long-term value.

Results

By developing a data model based on more than 6.5 million manufactured products, a solid foundation for data-driven analysis was established. An examination of key areas of focus identified four specific application areas in which process mining provides continuous added value.

2003

First-ever comprehensive analysis
of production data

6.5 million

Evaluated Products in the
Production Data Model

4

Use Cases for Process Mining

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By implementing Celonis and with Rothbaum's support, we have identified many useful starting points for further optimizing our manufacturing processes. The rapid establishment of transparency and the focused work on defined use cases were crucial to the project's success.



Christian Lechner
CEO
vandaglas Eckelt GmbH



Detailed Results

- By analyzing the theoretically possible machine occupancy, it was possible to show that the operating time and thus costs could theoretically be reduced at a workstation with a very high energy requirement (oven).
- An algorithm was developed to determine the actual production costs of each product. In the future, this algorithm can be used to compare actual costs with calculated production costs.
- The generated transparency of throughput times shows that there is considerable potential for optimization in the buffer times in front of the systems.
- By analyzing the breakage reports, it was possible to identify product characteristics that lead to increased scrap.
- By analyzing the product mix since 2003, it has been possible to derive starting points for trends in demand based on product characteristics.

Data-driven analyses provided transparency regarding production costs, lead times, and product characteristics, and identified specific opportunities for optimization.



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