

operations¹



Schwäbische Härtetechnik Ulm

Success Story

How Germany's largest contract hardening company is standardizing the maintenance process sustainably and reducing machine downtimes through digitalization



About SHU

Founded in 1979, Schwäbische Härtetechnik Ulm GmbH & Co. KG is Germany's largest contract hardening company with over 120 systems for heat and surface treatment.

As an owner-managed family business, SHU employs around 600 people at its Ulm site and sees six pillars for its continued success: quality, delivery reliability, price, innovation, service and environment / occupational health / safety and energy.

Another success factor is the broad service portfolio: With a total area of 65,000 m² and capacities for order volumes of all sizes, SHU customers have access to all

standard heat and surface treatment processes.

This success is also reflected in the broad customer base from the automotive and construction machinery sectors, roller and ball bearings, mechanical engineering and connection elements.

ULM -
DONAUTAL
Germany



Challenges

The idea of digitizing the maintenance processes for SHU's diverse machine park had been on the mind of Mr. Mautsch, Management Assistant, for several years. As he was convinced of the potential for improvement that could be achieved by digitizing processes, an attempt was made to introduce a maintenance software for mobile devices before Operations1.

However, the first attempt failed as the maintenance software was not well accepted by employees.

In particular, older employees, who were not familiar with the use of mobile devices and apps at the time, were not able to accept the digital maintenance solution.

Similarly, the lack of user-friendliness of the immature maintenance software and the poor performance of the hardware used at the time meant that the paper-based maintenance process was kept in the end.



The paper-based process before Operations¹

The problems with the previous paper-based maintenance process:



High effort in document management

The maintenance manager used Word to create, update and distribute the paper-based copies.

Due to the wide variety of machines, this meant a great deal of manual work for the maintenance manager.



Delayed updating of maintenance documents

When maintenance technicians had feedback or change requests to update the maintenance checklists, it often took several days before a new version was available to them.

To avoid falling behind, the maintenance staff continued to work with the old or outdated document version.



Lack of process reliability

There was a separate maintenance folder for each machine group: annual, quarterly, monthly or weekly maintenance planning was organized and carried out by the responsible employees themselves. This led to discrepancies in the planning and execution of maintenance for each system group and different maintenance qualities and standards.



Unsatisfactory documentation quality

Information on the maintenance work carried out was only available in analog form or in paper form in folders and in handwritten format. On the one hand, paper-based maintenance checklists could not guarantee compliance with the required documentation quality of the recorded information. On the other hand, illegible handwriting meant that notes and comments were not traceable when the documents were later analyzed.



Lack of transparency for maintenance manager

Due to the paper-based process and the large number of machines, there was no proper overview of the planning and maintenance documents for the maintenance manager.

The current status and progress of the maintenance work and documentation could only be viewed directly in the folder of the respective employee.

On the way to the digital process

SHU saw the greatest need for action in preventive maintenance and the area where Operations1 could deliver the greatest added value from the start.

Another objective was to lay the foundations for a uniform IT landscape and to provide better system support for maintenance.



„Initially, we saw the greatest added value in maintenance. But Operations1 is software for the entire company.“

Jürgen Mautsch
Management Assistant
Schwäbische Härtetechnik Ulm GmbH & Co. KG

As tablet and smartphone hardware and usability had increasingly improved over the years and older employees were also using smartphones more and more in their private lives, SHU felt the time had come in summer 2019 to launch a new attempt to digitalize maintenance.

Mr. Mautsch became aware of Operations1 through a presentation at Ulm University of Applied Sciences by the company Hirschvogel, which also uses Operations1 in maintenance.

Mr. Mautsch saw the opportunity to provide employees in maintenance with assistance through technological change.

Mr. Mautsch introduced the Operations1 software to the responsible persons in the maintenance department, involved all interested employees from the very beginning and thus got the maintenance staff on board at an early stage.

From the test phase to the rollout

A three-month test phase was prepared in collaboration with Operations1 and the first machine groups were defined for a three-month test run. As no connection to a leading system was necessary, the introduction of Operations1 was agreed as a stand-alone solution. The internal exchange within the maintenance team provided very positive feedback, whereupon Operations1 was successively rolled out to other plant groups. Operations1 has now been used 100% in maintenance at SHU since the end of 2022.

A working student was deployed to support the rollout in maintenance. As Operations1 is very easy to use, the young employee was able to create and manage the digital maintenance checklists for all machine groups in the software.

On the way to the digital process

Reasons for Operations1

- ✓ Easy integration of media (images, videos, etc.) into the digital checklists
- ✓ Excellent usability on tablets and smartphones
- ✓ Simple use of the software
- ✓ Display of real-time data and the current maintenance status
- ✓ Very good project management by the Operations1 team and good feedback exchange



Already in use in the training center

Operations1 is also used at SHU as part of training in the training center: Apprentices have to carry out 5S checklists for the purpose of workplace cleanliness and document their results in Operations1.

This means that trainees are familiar with Operations1 right from the start.

Digitalized maintenance process with Operations1

The problems that existed in the paper-based maintenance process were sustainably solved by the introduction of Operations1:



Reduction of effort in document management

Maintenance managers can create and update maintenance instructions very easily using the Drag & Drop Editor in Operations1.

In addition, maintenance orders can be assigned directly to employees, who can see their assigned orders clearly on the dashboard. Maintenance technicians no longer have to search for the right document, but can start carrying out maintenance immediately.



Centralized and simplified maintenance planning

Maintenance planning is no longer the responsibility of the individual maintenance technician, but is carried out centrally by the Head of Maintenance.

Thanks to the Rules feature, Operations1 offers the option of automatically creating recurring activities such as regular inspections and maintenance of machines as orders in the software.



Improved process reliability and increased quality in maintenance

The standardization of maintenance documents and the use of mandatory interactions in the digital maintenance instructions ensure a uniformly high level of quality for the maintenance of all machines. Individual deviations from the standard are thus avoided.





“Giving the maintenance management the opportunity to have a real-time overview of all maintenance activities is a great added value..”

Jürgen Mautsch
Management Assistant
Schwäbische Härtetechnik Ulm GmbH & Co. KG



Real-time transparency of maintenance tasks

Whereas the Head of Maintenance was previously only able to find out the current status of maintenance by consulting with employees or checking the maintenance folder, information such as status, progress, due date, etc. is now available at a glance in real-time.



Collecting employee feedback

To continuously improve processes and increase operational excellence, SHU now collects employee feedback directly in the digital checklists.

This enables employees to make suggestions for improvement through image documentation and comments in a convenient and standardized form.



“Operations1 is very well received by both our customers and the certification authorities in terms of its professional documentation.”

Jürgen Mautsch
Management Assistant
Schwäbische Härtetechnik Ulm GmbH & Co. KG

Increased documentation quality and improved analysis capability

The digital work instructions and checklists, which are now made available to employees in a standardized form, have greatly improved the quality of documentation: Important work steps are no longer skipped due to mandatory interactions, observations and measured values are recorded in a traceable manner and process steps are documented digitally without gaps.

Digital reports, which are automatically generated by the software, have further increased the company's ability to provide evidence to customers and auditors. Previously high research efforts, such as manual browsing and searching in DIN A4 folders, have been greatly reduced by digital search functions and filters in the Operations1 software.

Additional added value

- ✓ Increased operational excellence through rapid response to problems and efficient execution of maintenance activities
- ✓ Know-how transfer to employees in a structured and comprehensible way
- ✓ Reliable prevention of machine downtimes through automated maintenance planning
- ✓ High acceptance among employees and positive feedback from staff on software usage

Outlook into the future

Due to the numerous advantages that SHU experiences on a daily basis through the digitalization of maintenance activities, Operations1 is to be introduced not only at SHU but also at Erbacher Härtetechnik:



Further rollout of Operations1 at SHU in production: multilingual work instructions for non-German-speaking employees (Turkish, Serbian, Romanian, etc.)

Successful results and positive experience transferred to EHT: rollout of Operations1 in maintenance at Erbacher Härtetechnik GmbH & Co. KG, which has been part of the group since 2004 and collaborates with SHU



Market leaders trust Operations1 in maintenance



operations¹

Operational Excellence on the shopfloor

With Operations1, your employee-led processes become more secure, efficient and transparent. Increase your productivity, reduce error rates and optimize your operational processes flexibly and continuously.

Do you have any further questions?

Contact us!

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