



*Optimize your fabrication process –
Dr. Production offers a holistic
solution consisting of consecutive
steps:
consulting and conception,
production process analysis and
data collection,
intelligent algorithm
development.*

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DR. PRODUCTION®

WE MAKE YOUR EQUIPMENT SMART!

Dr. Production supports you in paving the way for implementation of „Industry 4.0“ ideas into your production.

Consulting and conception

Take your advantage of Dr. Production's consulting offer and let yourself be convinced of a concept individually developed for you. The concept is aligned by practical software elements and flexible self-learning solutions.

Production process analysis and data collection

Dr. Production comes up with software solutions providing intelligent production data analysis for your company.

Profit from the fact that Dr. Production addresses the challenges of manufacturing by combining data analysis related knowledge with system overview and technological understanding.

Intelligent algorithm development

Benefit from our many years of experience in equipment and process control, from proven procedures and our toolbox of well-tested and verified solutions.

Put your production equipment in the position to either inform you about necessary control or maintenance steps or enable it to initialize such steps in a self-controlled manner.

Fraunhofer IISB

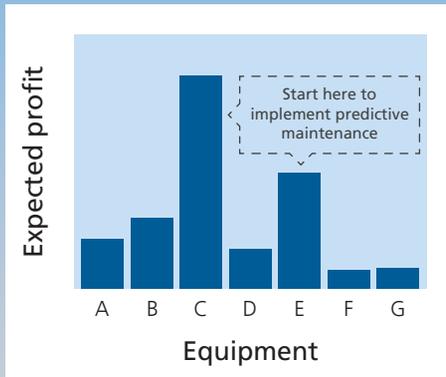
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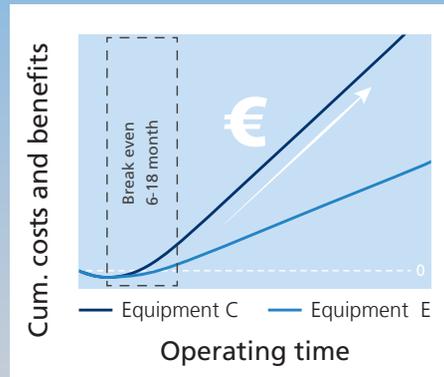
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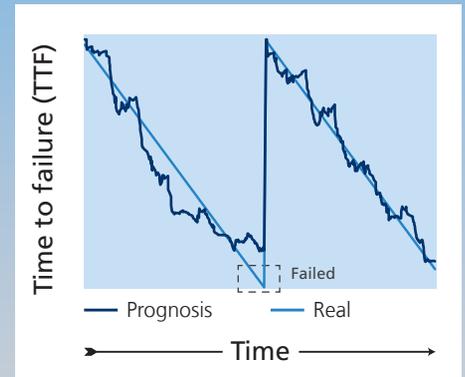
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Take profit from an individual solution for the implementation of data-driven production optimization into your company.

At the present state, your production equipment and related machine-data already provide information about the current state of your tools. Make use of the information contained in these data by automatized detection of the equipment state, thus enabling you to improve your productivity and product quality by default.

Dr. Production supports you in **selecting a tailored approach** towards data-driven production optimization with a variety of optimization methods. Collaborating with us means receiving an **individual concept** for implementation of data-driven production optimization into your production environment. During the process you are informed about necessary prerequisites for the realisation, showing you for which of your manufacturing facilities an upgrade is best and why. The prerequisites for data analysis and implementation are clarified and the next steps are discussed.

In close cooperation with your experts, Dr. Production collects, analyzes and evaluates your production data. This iterative decision-making process and Dr. Production's approach is guided by **approved standards** (e.g. CRISP-DM). Thus you get to know how to prevent unscheduled downtimes, idle maintenance times, interruptions of quality control, or fluctuations of product quality. Dr. Production does not only facilitate predictive maintenance, but also offers expertise in fault detection and classification, run-to-run control and virtual metrology.

As a result of cooperating with Dr. Production, intelligent algorithms will analyze your production data in real-time and suggest or initiate necessary corrective actions. Through **predictive maintenance solutions** e.g. maintenance tasks thus can be scheduled exactly and no "mere" preventive maintenance after a predetermined operating time or number of processes needs to be carried out. System failures owing to missed maintenance steps are prevented.

Optimize your production with the help of Dr. Production: from essential solutions to the overall concept! Begin with fault detection or predictive maintenance for a bottleneck equipment and further extend our optimization solutions to entire production chains – step by step and as required.

1 Identification of the most promising starting points based on multifaceted arguments

2 Payback period < 2 years for predictive maintenance implementation (incl. hard- and software and implementation process)

3 A common use case – Application of predictive maintenance in order to forecast component failure.

Applied approach in this case:

- Continuous collection and analysis of relevant data using a Bayesian network
- Prediction of time to failure by the network

Your Benefits

- 1-5% Increased production capacity
- 10-30% Reduced maintenance costs
- 100% Facility-state monitoring

Dr. Production®