



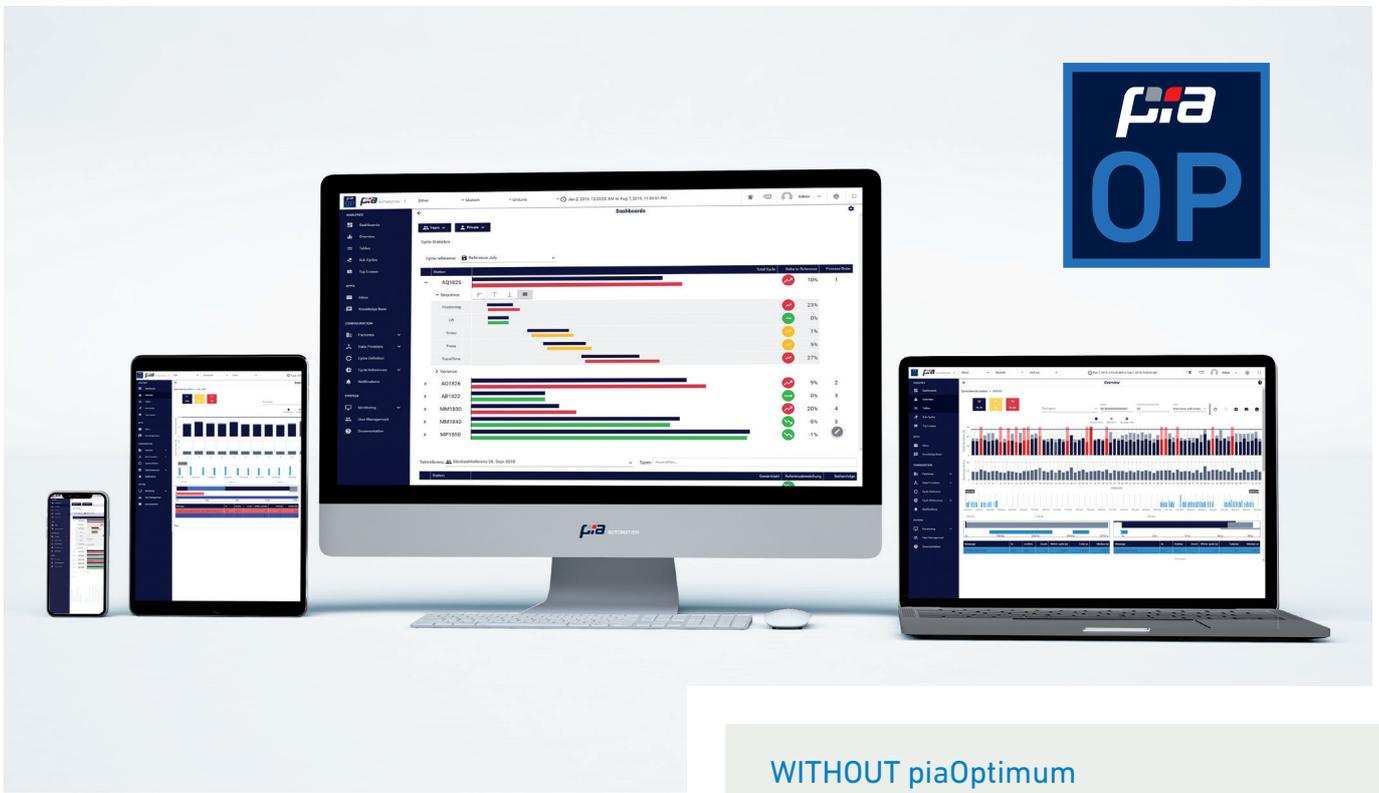
NEW WAYS TOWARDS OPTIMIZATION

# piaOptimum

An application to identify bottlenecks and optimize processes in complex, interlinked assembly systems

PIA 4.0 - MAKING BIG DATA SMART





piaOptimum

## NEW WAYS TOWARDS OPTIMIZATION

The piaOptimum software solution identifies bottlenecks in complex, interlinked assembly systems and allows fast and sustainable optimization of production efficiency thanks to state-of-the-art data transparency. This allows you to not only optimize the performance of individual stations but entire line segments and even total systems.

The simple yet flexible data connection of all existing PLC units allows for fast, time-saving recording of process and machine data as well as user inputs. This allows the system operator to visualize data in a clear and transparent manner and to run specific evaluations. Individual views are available for data evaluation whereby users can create individual dashboards.

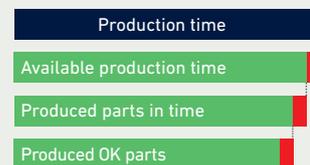
To identify the most relevant OEE losses (overall equipment effectiveness), it mainly uses sub cycles. piaOptimum promotes the system's overall effectiveness by means of visualizing and optimizing availability, performance and quality losses. Thanks to its high degree of detail piaOptimum allows you to analyze the entire system, from stations to partial movements within individual machines.

Using its simple web interface you can use piaOptimum to record and evaluate data on all relevant station or sub cycles. It thus makes it possible (enables) to efficiently monitor and analyze past and current assembly processes, providing full transparency and allowing the system operator to reliably identify.

### WITHOUT piaOptimum



### WITH piaOptimum



### INITIAL SITUATION

Sometimes, the cycle times of production systems change or they put out too many defective parts. Finding the cause can be a challenge. piaOptimum delivers answers to the following questions:

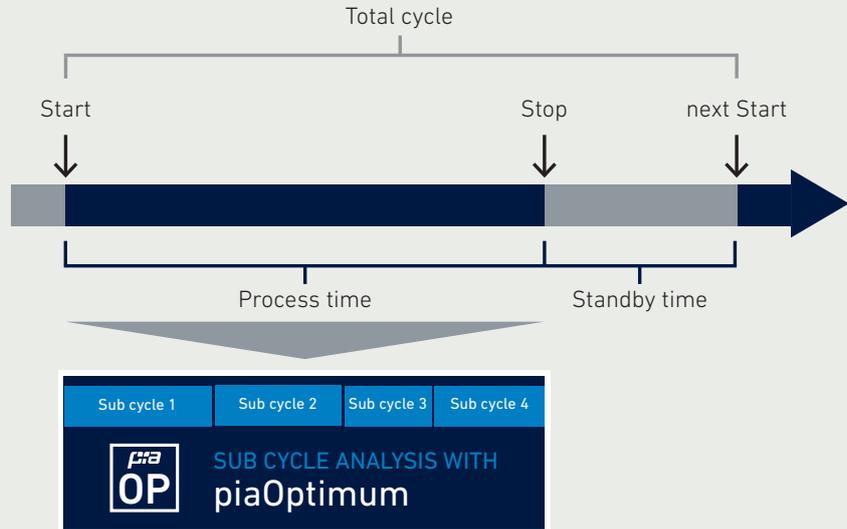
- Where can my system be optimized?
- How do cycle times change?
- How can I reduce downtimes?
- How can I minimize the NOK / rework rate?
- How can teams be warned early on?
- What kind of and how many errors were found in the system?
- How can I improve my production output?
- How can collected knowledge be centralized?
- What performance differences exist between different component types?
- How can key performance indicators (KPIs) be centrally compiled and visualized?

## OPTIMIZATION TOOL FEATURES

- Identification of bottlenecks in complex, interlinked assembly systems
- Optimization of production output by means of top loss analyses from individual stations to the entire system
- Comprehensive analyses, intuitive visualization and operation to facilitate the system operator's work
- Evaluations delivered by the piaOptimum analysis team (including notification center) regardless of location
- Central knowledge data base, e.g with all optimization measures implemented so far
- Flexible data connection of all existing PLC units by means of OPC-UA protocol
- Monitoring of sub cycles to identify most relevant OEE losses



Example of a station



## LICENCE OPTIONS

	BASIC	PREMIUM
Monitoring of station cycle times, units produced as well as errors and messages, Event and duration- tracker	✓	✓
Visualization and administration options	✓	✓
Central knowledge data base	✓	✓
Printable daily reports	✓	✓
Monitoring of sub cycles		✓
OEE throughput and loss analyses		✓
Notification center		✓

## HARDWARE & INSTALLATION

- Upgrade of the hardware & software equipment (if required)
- Installation of the PIA Factory Agents in the system network
- Project Development of the data connection & standard analyses by the piaOptimum team
- Administrator and user training on site

## SERVICES

### Maintenance and services

- Securing a stable system state
- Software updates
- Replacement of defective hardware components

### Supported optimization

- Regular analysis of the system optimization potential by PIA
- Identification of the top 5 optimization possibilities by means of standardized reporting
- Definition of measures and responsibilities

### Further possible optimization services

- Data analyses by the piaOptimum team
- Topic prioritizing with customer
- Definition of possible corrective actions
- Verification of possible causes on site
- Presentation of the analysis overview
- Documentation of measures including dates and responsibilities
- Offer submission and implementation of optimization measures by PIA



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