

PSIqualicision AI: Web- and Cloud-enabled

Today, companies use decision support software to optimize business process objectives such as short throughput times, balanced utilization of resources or high degree of adherence to delivery dates, which are managed as profitability indicators in the companies. PSIqualicision AI is a web- and cloud-enabled software that can optimize your business process objectives. The software is provided via the PSI Industrial App Store. It offers the Qualitative Labeling of business process data whereby interactions between KPIs (Key Performance Indicators) are machine learned and explainable visualized.

Qualicision AI Technology stands for qualified decision support applied to the business process optimization and to data-based analysis and forecasts. Using adequate AI methods, the web-enabled Qualicision software automatically recognizes interdependencies between performance indicators, balancing goal conflicts while taking into account adjustable optimization priorities.

Decision support by combining process data and process knowledge

Based on the combination of process data and process knowledge, the resulting decision support is able to optimize business goals in real time and for planning.

Since Qualicision generally works with all types of performance indicators, sustainability KPIs are directly considered as optimization goals and, on an equal level with profitability KPIs, can be integrated in the optimization strategy.

With PSIqualicision AI optimization algorithms different individual decisions can be combined into efficient overall KPI decisions. This is done by means of data-based KPI evaluation of automatically machine learned interactions within the business processes to be optimized. From the PSI Industrial App Store the



Figure 1: PSIqualicision AI Web GUI Dashboard.

web-enabled PSIqualicision AI software can be installed and started via the PSI Cloud directly by click, among others.

via drag & drop. The software uses a special machine learning technique to set system parameters as preferences in a way that corresponds to

Advantages of a cloud deployment are obvious for customers:

- No effort for cloud environment setup
- No effort for hardware and cloud infrastructure
- Less to no process intervention of system admins necessary

By means of PSI Click Design, results and modelling can be edited in the PSIqualicision AI dashboard. Special widgets finally allow customizing and visualizing the results

the current data situation, and automatically recommends suitable settings of the criteria to be optimized (see Figure 1). Referring to the current data situation, a goal

conflict matrix explainably visualizes which of the KPIs can be optimized with the remaining KPIs either in a supporting way (green) or in a conflicting way with potential for improvement (red).

Using “Integrated Didactics” (integrated dialogs and exercises) the user is able to test and understand the different application options the PSIqualicision AI software offers (see Figure 2). The exercises and examples supplied in the software provide useful explanations to get familiar with the functionalities of PSIqualicision AI quite easily.

Interactive and explainable AI-based decision support

The software allows defining manually the KPIs that are used to evaluate the business process data. Then, the Qualicision labeling functions for AI-based optimization prepare the KPIs (see Figure 1). The result is an interactive and explainable AI-based decision support that by now is part of a number of PSI use cases. Examples are products for the optimization of production processes in the metal industry or in the au-

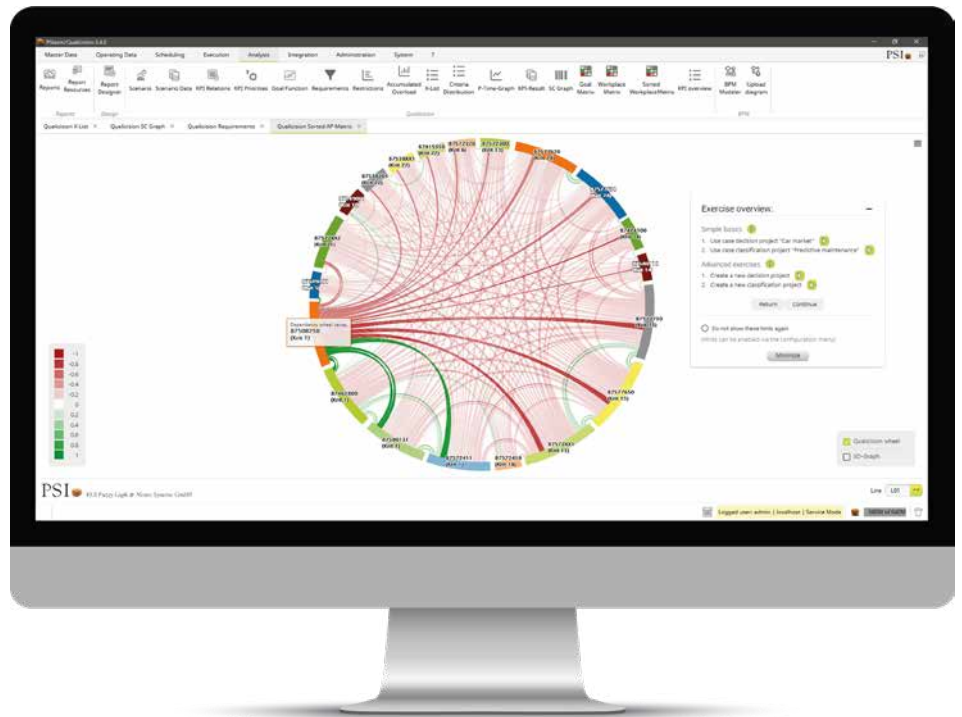



Figure 2: Integrated Didactics and exercise examples.

tomotive OEMs, cyber security applications in network management and optimization in the field of local public transport. A further use case is energy trading in the intraday business and its linkage to production processes and the optimization of energy efficiency.

Integration with further software products like PSiasm/Qualicision or

PSIup/Qualicision for applications in production planning und control as well as for process monitoring and predictive maintenance is in the pipeline. 

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PSI presents bundled software intelligence for optimized and sustainable production and energy supply at the Hannover Messe.

We are looking forward to your visit.

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