

Product report: *PSIpep* 7.0 powered by Qualicision®

Staff planning as a key success factor

The optimal deployment of human resources is crucial to the success of a company. Workforce planning is therefore a key challenge. Amongst other things, it is important to plan according to demand, take qualifications into account, and respect employee needs and contracts while minimising the overall costs. For this purpose the well-established optimisation component Qualicision® was integrated into the new version 7.0 of the *PSIpep* planning software.

Current challenges faced by all industries include resource efficiency and demographic change, and personnel management has therefore become of central importance. The forward-looking, demand-based personnel planning of the established *PSIpep* software enables far-reaching standardisation of personnel planning processes—both for short-term planning on a daily basis and for long-term, utilisation-based strategic budget and capacity planning. Planning of the permanent workforce and temporary workers is on the one hand based on the anticipated workload and on the other hand on individual deployment options, contracts and the expectations of employees.

Operational and strategic workforce planning

Operational workforce planning with *PSIpep* is based on previously determined personnel requirements for each period and work area. Demand is broken down to individual employees and shifts. The shift or team leader can find all the relevant information in an interactive planning table. Coordinating the required workforce capacities with the available pool of employees creates planning transparency and allows potential bottlenecks or idle times to be identified early so

that appropriate action can be taken at the right time.

In particular, forward-looking personnel planning as part of management and controlling focuses on long-term budget and capacity planning with a planning horizon based on quarterly or fiscal year requirements. This is

PSIpep IN A NUTSHELL

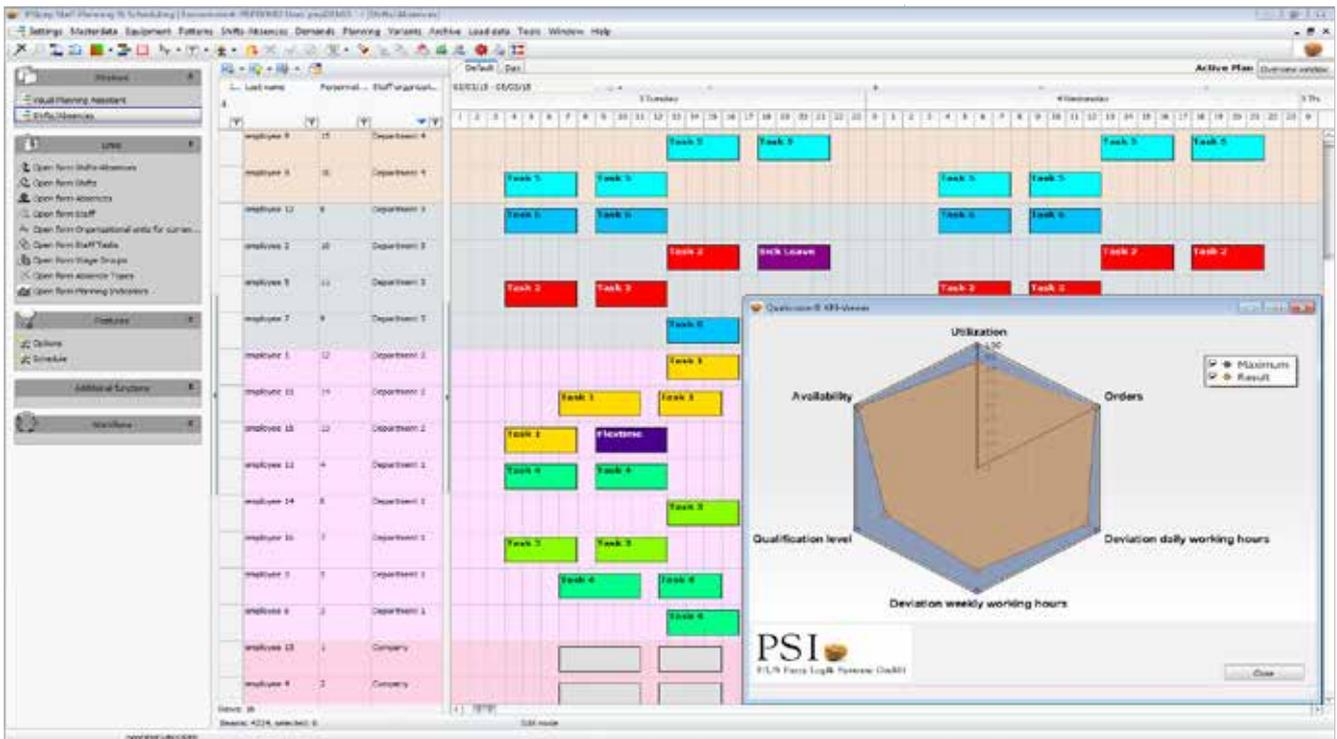
- Operational and strategic workforce planning
- Electronic planning table
- Simulation of shift and working time scenarios
- Detailed KPI and cost analyses
- **New in Version 7:** Automated generation of staff schedules with Qualicision®

based on demand forecasts. Reconciling the personnel available in the future with the expected demand curve allows managers to identify how many temporary workers will be needed in each case. Recurring shortages of specific skills can lead to the introduction of recruitment or training measures at an early stage. Furthermore, long-term capacity planning in *PSIpep* includes demand-orientated shift and

holiday planning, and evaluates the development of the flexitime accounts of the permanent workforce and the expected wage costs.

Automated planning with Qualicision®

A whole range of conditions must be taken into account, both in operational and long-term workforce planning. In addition to varying demand, these conditions include the respective availability of employees in accordance with attendance and absence patterns, skills profiles, contractual agreements and other conditions. Various criteria determine the quality of a plan. For example, in addition to quantitative factors such as costs, distances covered or the efficient use of tools, qualitative aspects such as the rolling distribution of tasks and individual scheduling preferences also play a role. Other planning objectives may be to minimise deviations from the long-term plan in the event of short-term rescheduling. This is where Qualicision® comes into its own—an optimisation component that allows automatic scheduling while taking into account multiple criteria in *PSIpep*. A target function can be assigned to each criterion in order to describe which characteristics are to be evaluated and how. For example, exceeding the daily target time by 10% could still be deemed acceptable, while overshooting the weekly working time by the same amount is unacceptable. Users can control the relative weighting of criteria themselves using a slider. The planning result is illustrated in a radar chart to give an impression of how well each of the criteria



PSIpep with Qualicision® integration.

can be met. Customised extensions to the scheduling logic are possible. The planner always has the option of interactively changing the plan.

Qualicision® technology

The Qualicision® technology is based on advanced fuzzy logic and enables the planning, optimisation and control of company processes. The different planning and process objectives are expressed as key performance indicators (KPIs), forming a basis for assessing the planning runs. In practice,

it is often found that the objectives are completely contradictory—for example, demand for high employee availability versus efficient utilisation. For Qualicision®-based optimisations, interactions are derived from the process data in the form of impact matrices. Based on this, the actions that are best suited to achieving all of the planning objectives are then determined using a mathematical conflict and compatibility analysis. In technical terms, this analysis makes the combinatory variety of KPI control options manageable.

This allows the software to make qualified and targeted decisions. ☺

F/L/S Fuzzy Logik Systeme GmbH
Dr Tobias Gerken
Manager Key Accounts
Planning and Process Optimisation
Phone: +49 89 14818490
tgerken@fuzzy.de

Pascal Kätzel
Senior Consultant
Phone: +49 89 14818480
pkaetzel@fuzzy.de
www.fuzzy.de



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