

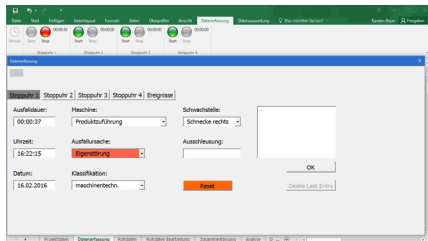
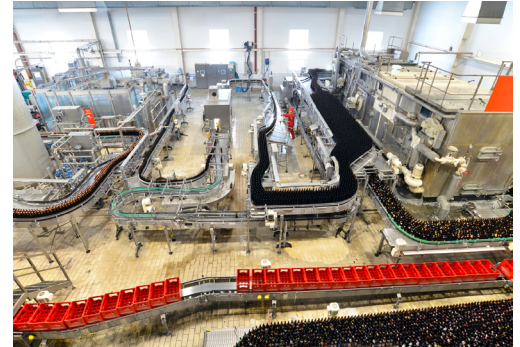
## Processing & Packaging Plants Analysis and Optimisation



### Goals

When optimising processing and packaging plants the goal is to achieve increased productivity and effectiveness by specifically identifying and rectifying sources of lost time and volume.

On one hand these can be caused by shortcomings in the structure of the system and in reliability, and on the other hand by incorrect coordination and control of the individual elements. Additional goals include improving changeover processes, the way personnel are deployed, production planning and logistics.



### Plant analysis

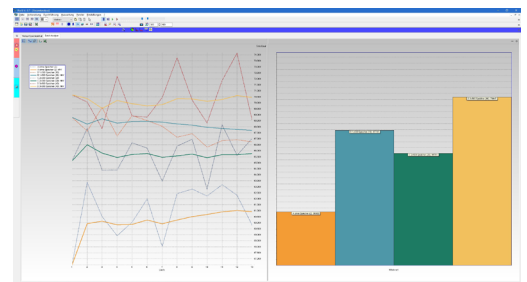
To analyse the behaviour of operations in the plant all events (outages, defects, bottlenecks, waiting times, rejects, idle cycles, etc.) are recorded within a specific period of time with time, location, duration and cause data, and statistically evaluated. The indicators (KPI) derived from this, e.g. according to DIN 8743, form the basis for an assessment of the plant and the quantification of improvement potential.

All the key data and indicators (e.g. degree of efficiency, availability, outage time, number of outages, interval between outages, etc.) are depicted in charts for better comprehension.

### Plant optimisation

After that, based on an analysis of the data ascertained on the operating behaviour of the plant, suggestions for preventing or reducing losses are developed. The effects of these on the efficiency of the plant is estimated and in some cases tested through simulations.

The improvement measures suggested can relate to plant structure, plant control systems, physical design and adjustments to positions of application, properties of the processed materials and products, the way production is organised, behaviour of operators, and the design of interfaces. Including preparation, implementation, evaluation and presentation the duration of such an analysis and optimisation project is usually around 4-6 weeks.



### Plant simulation

The PacSi simulation system was developed by SimPlan as tool for carrying out analysis and optimisation projects for the food, confectionery, beverage, pharmaceutical, cosmetic and packaging industries. Because of its ease of use and high efficiency it was also licensed for a variety of machine manufacturers and branded companies.

Goals of simulation projects include ensuring the highest in planning security for complex plants, reducing investment and commissioning costs, determining the most effective plant configuration, developing and examining control strategies, optimising the coordination of machines, buffer design, studying worst-case scenarios and optimising how personnel are deployed.

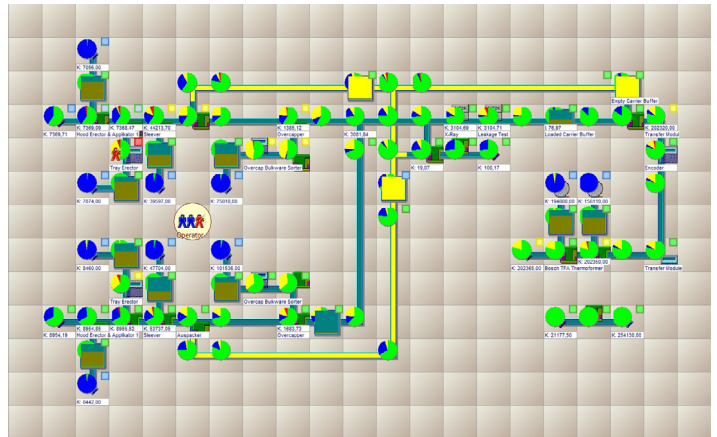
## Benefits of PacSi

In typical simulation projects with PacSi manufacturers and operators of processing plants receive already in the planning stage the kind of information about efficiency and available productivity reserves which would never have been apparent without the help of a simulation or could only have been identified with the help of enormous technical and time-consuming effort.

The simulation enhances the ability to make decisions, allowing detailed integration of performance parameters in the context of supply contracts, this way reducing investment risks for both parties.

The special thing about the PacSi simulation system is how little effort is required to prepare models as well as its very high simulation speed, so even extensive and complex plants with multiple levels of production can be simulated.

This ensures high quality results and successful completion of even complex simulation studies within two to four weeks.



➤ More information about PacSi can be found here: [www.PacSi.de](http://www.PacSi.de)

## Why SimPlan?

- Objective and independent analysis
- Detailed knowledge of logistics and production processes with more than 25 years of project work
  - Development and use of standards
  - Continuous further development of simulation topics through research and development
- Excellent resources for prompt responses to your questions
- Close cooperation and project integration with high on-site quota
- Development of innovative solutions, efficiently solving challenges during project work

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