

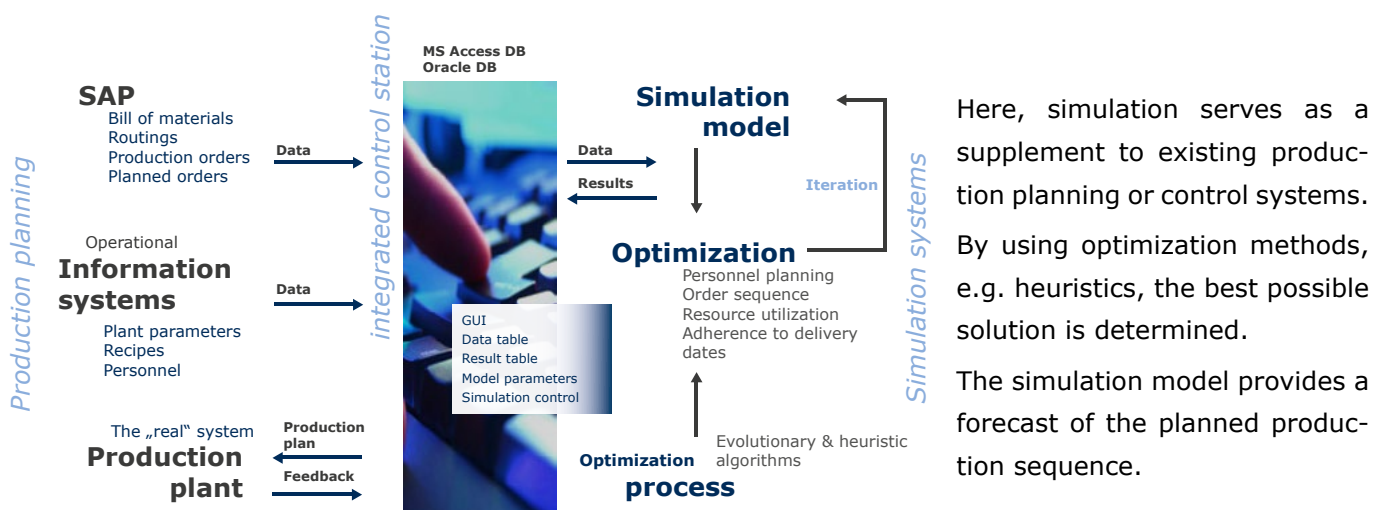
Application area: Detailed production planning

The initial situation

Increasing competitive pressure, shorter delivery times and a growing variety of products require fast and flexible reactions from today's production. Low inventory levels, high resource utilization and short lead times are the prerequisites for competitiveness in a fast-moving market.

The PPS systems used for capacity and lead time scheduling are only suitable to a limited extent for solving these problems, as they often only use static methods for calculation.

The goal of simulation-based detailed production planning is to optimize pre-planning while taking dynamic conditions into account, e.g. current availability, disruptions, resources, inventories, filling level of the plant.



Scheme of a simulation based production planning

Here, simulation serves as a supplement to existing production planning or control systems. By using optimization methods, e.g. heuristics, the best possible solution is determined.

The simulation model provides a forecast of the planned production sequence.

Even before the actual production begins, machine loads and bottlenecks situations for workstations, parts or people are displayed.

The scheduler now has the option of planning alternative capacities or setting up new production capacities. In this way, the execution time and feasibility of a production order can be realistically estimated.

Goals and benefits

The subject of optimization can be, for example:

- Order sequences
- Personnel scheduling
- Machine assignment
- Detection of capacity bottlenecks



Example of a result representation over the machine allocation

Fields of application

- Forecasting tool for production and manufacturing processes
- Coupling to operational information systems (e.g. SAP, BDE, production control centers)



SimPlan AG was founded in 1992 as a service provider for the simulation of operational processes and today, with more than 120 employees, it is one of the leading German providers of simulation services.

Why SimPlan?

We are a cross-industry full-service provider for simulation, supporting companies of all industries with extensive expertise in the analysis and optimization of their business processes

- Objective and independent analysis
- Detailed knowledge in logistics and production from over 30 years of project work
 - Development and use of standards
 - Permanent advancement of simulation topics through research and development
- Excellent resources to respond quickly to your issues
- Close collaboration and project integration with a high level of on-site involvement
- Development of innovative solutions for the efficient handling of problems
- Neutral distributor for simulation software
 - Support in software selection and implementation as well as training

Feel free to contact us

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