

Application range **Production**



Planning and optimisation in production

Complexity and dynamic in production are highly increasing by a close process integration from production to customers. This is leading to new and recurring tasks in planning and optimisation of means of production and processes. At this juncture statistic considerations and evaluations with average values meet its systematic limits.

With the help of dynamic simulation, which shows complexity and dynamic under realistic conditions, these limits can be removed. The simulation allows a unique transparency of your production processes already in advance , as cause-and-effect-relations can be presented clearly in a simulation model.

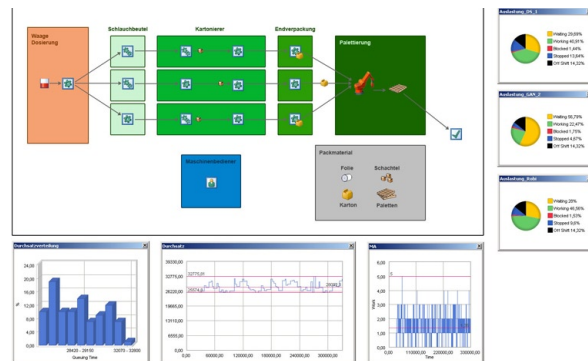
So you can analyse bottlenecks very fast and efficient and derive optimisation actions, which can be examined without risk in a simulation model afterwards. This will hedge your investments in machines and capital goods and differs to the classic investment budgeting, aimed for local optimisation.

Dynamic and complexity

The use of simulation in the range of production comprises the mapping of single lines for the dimensioning of production resources and buffer sizes up to the mapping of entire production halls. This includes intra-logistical systems for the adjustment of logistic areas and the optimisation of means of transport. Thereby the simulation considers dynamic - caused e.g. by machine malfunctions, variability of cycle times through manual processes or access to bottleneck resources - as well as complexity, resulting from the examination of whole production processes.

Input data for simulation

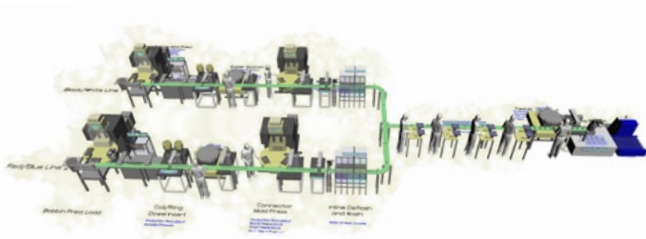
- Layout, e.g. of the production line
- Product data (parts list, variants, cycle time)
- Technical data
- Setting
- Rework and deficient product quota
- Downtime of machines (availability)
- Shift plan
- Employees incl. qualification



Modell of an interlinked production plant

Results of simulation

- Visualization of processes
- Capacity analysis for evaluation of bottlenecks
- Total flow rates of plants (incl. failures, reworking rejections etc.)
- Real total availability of plants
- Inventories in buffer and stocks
- Plant utilization (machines, buffer, materials handling, employees)
- Staff requirements for Multi-machine-operation



3D modell of a flow process

Aims and benefits

- Improvement and shortening of plant layout
- Increase of process quality, as bottlenecks are identified already in the planning phase and can be eliminated with suitable measures
- Optimisation of plant components under realistic terms
- Optimisation of buffer design to decouple plants and increase flow rate and total availability
- Riskless analysis of improvement strategies

The SimPlan group

We consider ourselves to be a cross-sector full-range supplier with regard to simulation, accompanying you with extensive know-how, experience and modern methods in the optimisation of business processes.

Our services range from process analysis and consulting through material flow and logistics simulation, simulation-based detailed production planning to support with the commissioning of control software.

Furthermore we are a neutral distributor of simulation software and we will lend you our support with the selection, training and implementation in your company.

Why SimPlan?

- Objective and independent analysis
- Detailed knowledge of diverse logistics and production processes over 15 years
 - Development and use of standards
 - More than 250 person-years experience in the field of simulation
- Sufficient capacities for prompt respond to your questions
- Close cooperation and project integration with high on-site part
- Development of innovative solutions for the efficient handling of questions

We are at hand

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