

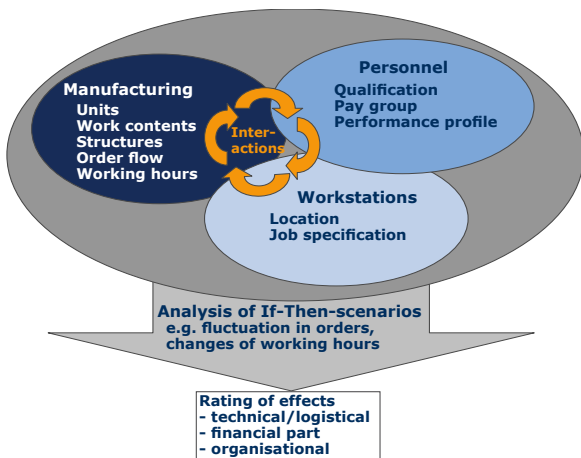
Application range

Personnel simulation



The initial situation

Today's optimisation methods of the digital factory as well as of simulation aim for the improvement of technical operations within manufacturing and logistical processes in general. However, in most of the processes the manpower still forms the essential factor of success, but it is unusual that it is integrated in the consideration of optimisation.



The objective target

The personnel simulation can be used because of different aims, e. g.

- Support on manpower requirements planning,
- Support on personnel allocation,
- Analysis of the effects of changes of working time models (e. g. conversion of 3- to 2-shift operation),
- Long-term consideration of the development of the age structure in order to derive measures for recruiting and further training

Diagram of the considered process elements within personnel simulation

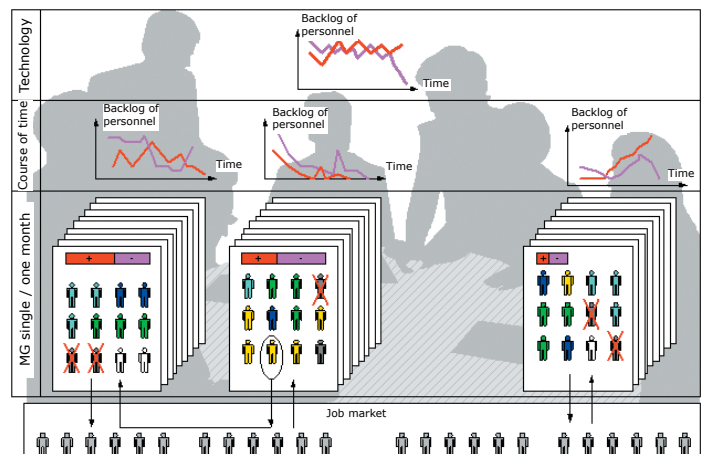
On principle the simulation of workforce provides the opportunity to analyse the dynamical interactions between the manufacturing / logistical processes, the working station and the available employees regarding the following standpoints:

- Technical / logistical (e. g. in which way affects the availability of personnel with logistical indicators like capacity, cycle time or adherence to delivery dates?)
- Financial (e. g. which cost savings result from the transition to flexible availabilities of personnel in case of fluctuating demand?)
- Organisational (e. g. is it possible to get a higher efficiency with the help of dynamic personnel allocation in an order picking system?)

The simulation of workforce provides the opportunity to search for an optimal solution without any risk and with variation of all relevant factors.

The search for this solution can be multidimensional. That means the conditions of the manufacturing processes (e. g. strategies for the control of the order flow) must not be taken for granted, but they can be varied as well as the definition of employees and work places.

Thereby the planning of workforce may have influence on the process planning and contrary, for example.



Example for an appliance concept in the automotive industry

Aims and benefits

The benefit in principle is the validation of decisions regarding the personnel requirements and the personnel allocation as well as the determination of the optimal interrelation between manufacturing / logistical processes, workstation and employees. Concrete examples for projects:

- Evaluation of the backlog of workforce after changeover of a 3- to a 2-shift operation.
- Search for an optimal combination of permanent employees and temporary workers because of fluctuating demand.
- Long-term determination of personnel requirement based on predicted volume of orders.

Fields of application

- Planning of personnel requirement
- Personnel allocation

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 logistics and production processes with over 25 years project experience
 - Development and use of standards
 - More than 350 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

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