Modelling and analysis of supply networks

Simulation of complex supply chains and logistics networks
Safeguard your supply chain management decisions by means of simulation and capitalise on our know-how to discover potential for optimisation within the field of logistics:

- Identify bottlenecks and potential savings:
  For example, analyse various transport options in one simulation model.
- Are there any pending changes to your bills of materials? The model can be used to depict time-dependent bills of materials and supply relationships.
- Utilise the openness of the simulation tools in order to let our optimisation tools carry out an automatic parameter optimisation.
- Bottlenecks and excess capacities can be recognised through clear diagrams already during the experiment. All relevant statistics are automatically set up and a scenario manager supports the experiment design.

Areas of application within the supply chain management

- Long-term structural and process planning
  - Layout of location concepts, (storage) capacities, transport relations
  - Evaluation of (individual) order policies and planning approaches
- Medium-term planning based on sales forecasts / production program planning
  - (Continuous) planning of safety stocks, resources, etc.
- Short-term planning
  - Bottleneck analyses (loss of transport relations, machines)

Issues
- Flexibility
- Service level
- Profitability

Own locations
- Storage / production capacity
- Production costs
- Planning / control

Suppliers
- Storage / production capacity
- Price
- Planning / control
- Delivery times

Supply relationships
- Bill of materials
- Transport options
- Planning / control parameters
- Service level
- Disturbances

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Our service: Analysis, intelligibility and know-how

We offer you continuous support with your supply chain management within the scope of carrying out complex simulation studies:

• Joint performance of a process analysis and determination of relevant operating figures
• Support with data acquisition
• Modelling using a simulation tool
• Visualisation of crucial process steps
• Determination of an experiment design
• Evaluation of the results and deduction of design proposals
• Parameter optimisation
• Presentation and documentation
• Migration of the results into SCM planning and collaboration systems

References

• Planning of the European distribution network of ZF Trading
• Analysis of the supply chain of Hella Innenleuchten-Systeme
• Location planning for new products by the Dräxlmaier Company
• Review of the floating stock concept (Degussa)
• Development of a tool for supplier selection (Audi)
• Development of the European production and distribution network of the Beiersdorf 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
  ➢ Continuous advancement of simulation topics by research and development
• 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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