

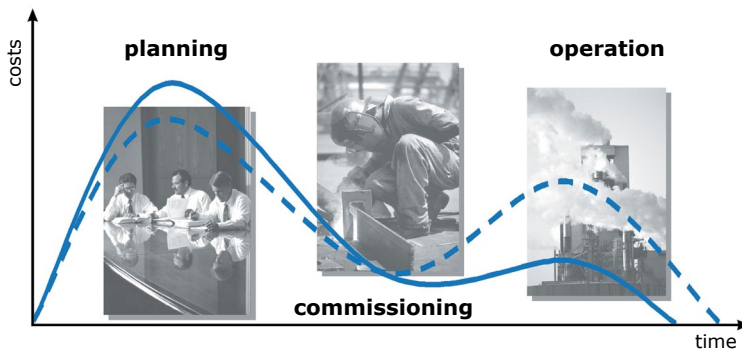
application area  
**Logistics**



**Complexity and dynamism**

Modern logistics processes are characterised by their high dynamism and complexity. For instance, in the design process of an optimal transport and conveying system, sequencing and consolidation strategies also need to be taken into account. Therefore, simulation tools and methods are increasingly used in various planning phases of a logistics project.

Application areas for simulation range from feasibility studies very early in the planning process to support during rough and detailed planning as well as in the realization and commissioning phase of the logistics system. Particularly in logistics projects, simulation technology can help to secure performance and decrease commissioning times, because with simulation, the interaction of all essential processes can be evaluated and optimised well ahead of time.



comparison of cost trends with and without simulation

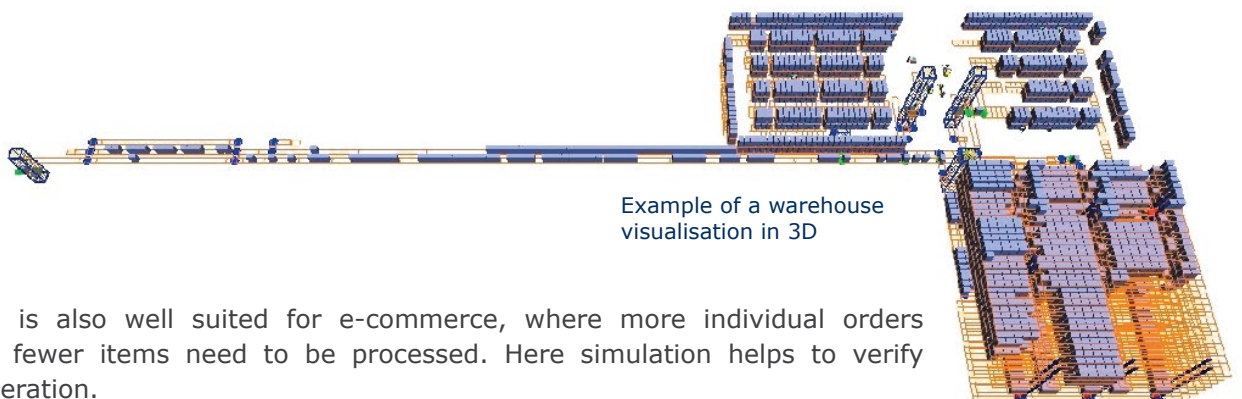
**Standard modules increase efficiency**

With shortening realization periods of logistics projects, simulation contributes to planning security and with that to the success of a project. The key factor for the effective application of simulation is quick and qualified modelling.

To ensure this, SimPlan consistently uses building block libraries and reference models, which include all conventional logistics elements and strategies used in this field of application. Additional tools support efficient modelling, as well as running and evaluating experiments. Database connections to collect planning, result and online data during the project are of course included, as are informative visualisations using 2D and 3D animation.

The consistent and largely tool-independent information management also contributes to the high clarity of the results. Already in a very early project phase, simulation runs show the influence of systems situated up- and downstream, like production, assembly, etc., on the overall system.

Using a modular structure, the simulation model can be quickly adapted to the latest planning state and therefore can play a vital role in the design and development of the logistics system.



Example of a warehouse visualisation in 3D

Simulation is also well suited for e-commerce, where more individual orders containing fewer items need to be processed. Here simulation helps to verify optimal operation.

## Aims and benefits

- Evaluation of various transport and conveying options
- Comparison of different storage and retrieval strategies
- Analysis of fault scenarios
- Minimisation of throughput times
- Planning security
- Optimization of individual sections of the system
- Effective resource management

## Application areas

- Rough and detailed planning
- Testing of WMS / MFC
- Control station / Build-operate-transfer

## References (operator / customer)

Ingram Micro, Veltins, Kaufland / VanDerLande, Förch / VanDerLande, Wesergold / IBH / SSI Schäfer Noell, Emmi / Westfalia, Krüger / P+L, BASF / Viastore, Otto Bock / Stöcklin, Hema / Witron, Softcarrier / Unitechnik, Ravensburger, E/D/E / Integral/ BSS, Parker Hannifin, Hermes Warehousing Solutions, WMF, Häcker/MLOG, Geberit/Rofa/Gebhardt

### SimPlan Group

SimPlan AG was established in 1992 as a service provider for the simulation of company processes. 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 to material flow and logistics simulation. Furthermore we are a neutral distributor of simulation software, helping you select the most suitable software tools for your projects, providing trainings and implementing the software in your company. Of course we also provide all associated maintenance and support services.

### Why SimPlan?

- Objective and independent analysis
- Detailed knowledge of logistics and production processes with over 25 years of project work
  - Development and use of standards
  - Continuous advancement 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

## Where to find us

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