

Procurement and Logistic Support for modern Armed Forces: Simulation helps to handle complexity

Modern Armed Forces need highly sophisticated materiel to accomplish their missions, but the procurement processes are challenging even using standardized NATO ILS processes and LSA methods. Also, the logistic support system that ensures timely, effective distribution of supplies and worldwide maintenance is extremely complex. Many stakeholders have to coordinate their capabilities and processes because of separated responsibilities within the Armed Forces, multinational and military-civilian cooperation.

Simulation helps to analyze, understand, communicate and solve the complexity. It can support logistic support and life cycle analysis for complex systems. Military planners can simulate logistic support structures for the domestic stationing or prior to deployments of forces in missions to ensure the optimization of capabilities and efforts. Potential critical items and room for optimization of processes are easily understood and can be impressively visualized and communicated. In addition, simulation supported training environments assist classroom training for both young students and experienced officers.

KONEKTA Simulation Models demonstrate capabilities

KONEKTA has developed a variety of demonstration models, adaptable to customer requirements.

The **SIMIO Maintenance Models** can simulate:

- the materiel with relevant characteristics like preventive maintenance schedules, typical damages, maintenance personnel's qualification, and time needed for repair
- recovery and maintenance processes based on available capabilities with its personnel, infrastructure, tools, and schedules
- depending on the type of damage, the time, effort, and spare parts needed for maintenance, available maintenance capacities, their actual workload, and related costs

For specific systems and units, the influence of different factors on the service level and combat readiness can be analyzed or trained.

The **SIMIO - Supply Model** simulates for different scenarios the planning and optimization of complete distribution systems, including the locations, stocks in relation to consumption, transportation, personnel capacities, processes, and potential losses for all kinds of supplies. **SIMIO 3-D** models simulate procedures for single logistic installations.

(Picture copyrights: KONEKTA CONSULTING GmbH, Waldweg 11, D-50321 Brühl)

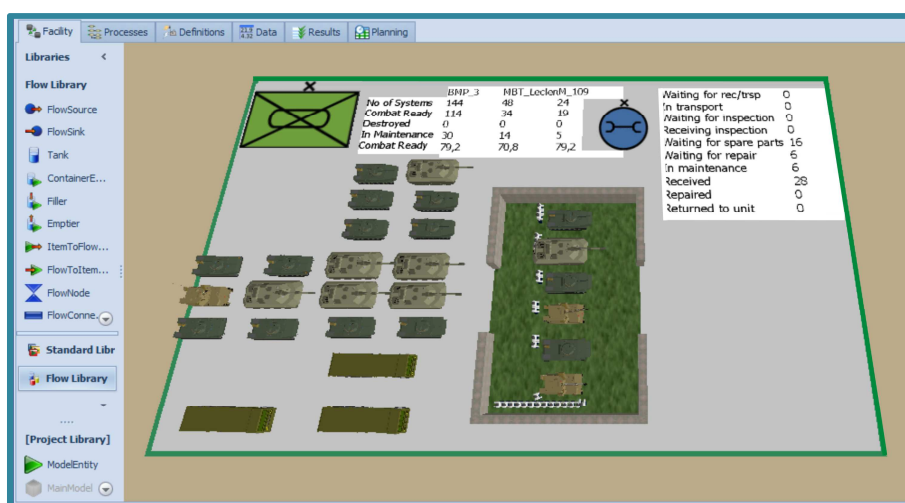


Figure 1 Brigade Maintenance Point with statistic information



Figure 2 Supply Point

Why SIMIO?

SIMIO is a state of the art commercial off the shelf software used for simulation, visualization and optimization of complex production and logistic systems. The drag and drop – GUI allows fast and easy modeling in 2D or 3D with reusable objects. For continuous verification and validation, the user can easily display and analyze the processes or analyze the properties of objects and data at any time. A link to SAP or other data sources can be established as required.

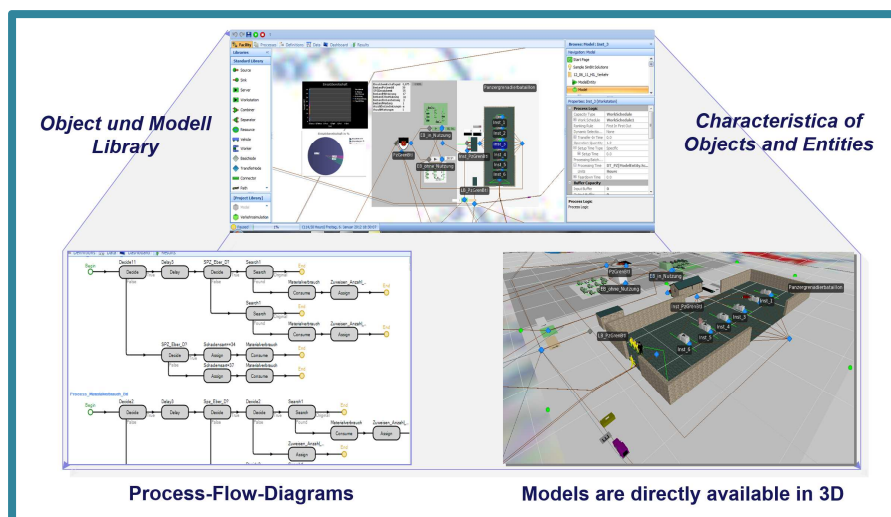


Figure 3 SIMIO supports continuous verification and validation

Way ahead

We have already convinced important German military stakeholders that SIMIO is an excellent tool for the modeling, simulation and optimization of complex, dynamic military environments. The plan is to create a research environment, involving soldiers from the start, to identify valid solutions, prepare them for hand over and integrate the solutions into the IT at the workplaces of the soldiers. This capable, cost effective and user friendly toolset could be quickly integrated into the German or other Armed Forces as soon as funding is provided to start the procurement.



Contact:

KONEKTA CONSULTING GmbH
 Waldweg 11, D-50321 Brühl
 Mobile: +49-(0)177-6485584
 Web: www.konekta-consulting.de