

## Simulation Engineering Technologies

Simulation Engineering Technologies (SET) is a supplier of the various simulation and optimisation software packages, including Simio® in Africa, Canada and the Middle East.

Our professional services include the application of various industrial engineering techniques and principles like process simulation, capacity planning, operations improvement, systems optimisation, production scheduling, work studies, training etc.



## What is Simio® Scheduling?

Risk-Based Planning and Scheduling (RPS) with Simio simulation software. You generate a schedule by simulating the flow of the planned work through a model of your system.

Traditional scheduling is deterministic and does not account for unplanned events or process variation. Therefore it yields optimistic and unreliable outcomes and your schedule goes from being feasible to unfeasible over time.



**The Problem?** There is a vast discrepancy in your planning because your predicted schedule does not represent actual performance and is therefore buffered with **inventory, capacity, or time...**

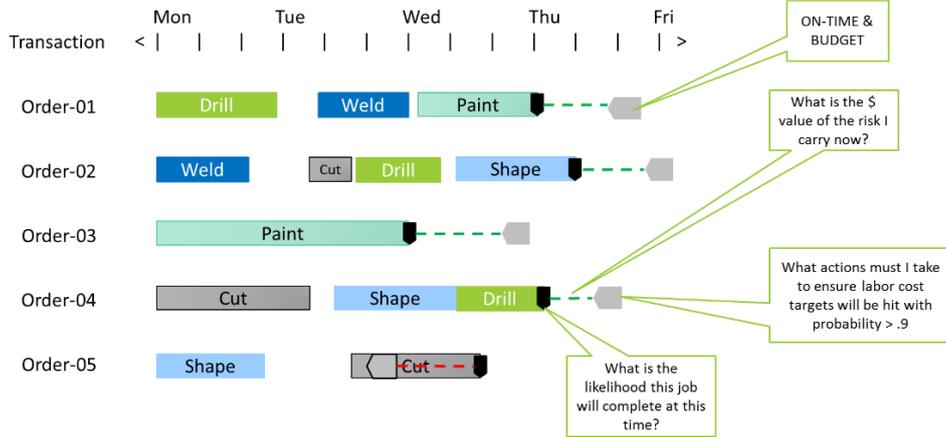
**The Solution?** Simio Scheduling – It extends the current advanced planning and scheduling practices to fully account for variation and system interdependencies allowing you to mitigate risk and uncertainties!

## How does it work?

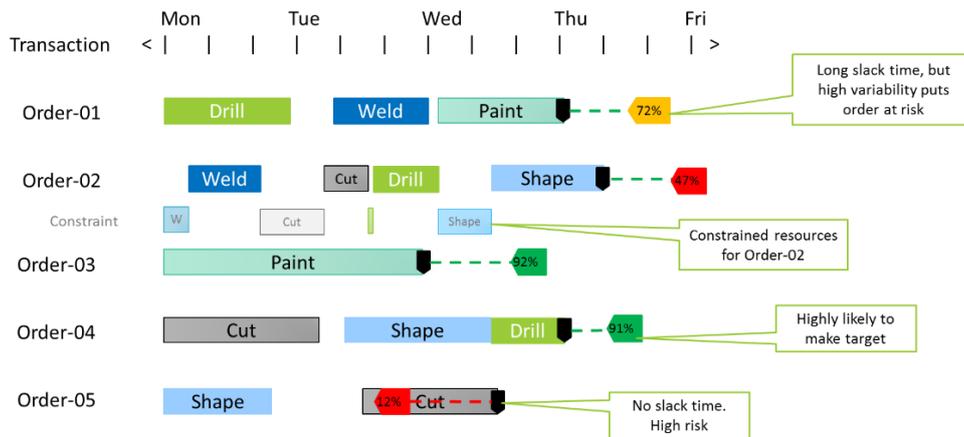
1. Develop a Simio simulation model of your system that includes:
  - System processes and operational rules
  - Real world variation
  - Facility layout
  - Material handling
  - Supply chain
  - Orders
  - Resources and constraints
  - ERP and database integration
  - 3D animation
  - Gantt charts and reports



2. Run your simulation model and generate a deterministic schedule and results:



3. Re-run your model a number of times including variation in order to analyse your risk (probability to achieve targets):



4. Identify risks in your schedule before they happen and make informed decisions to address them.

5. Make changes to the planning/operations in order to test and generate an optimal, realistic schedule.

6. Run and share schedule plans in the cloud with Simio® Portal.

## What about real-time scheduling?



Make real time decisions with Simio Scheduling automates comparing a deterministic MRP schedule with a variation adjusted schedule to let you effectively deal with breakdowns, unplanned events and material shortages. Simio integrates with various MES systems including Wonderware.

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