

# Virtual Workshop: Process modeling and optimization with system dynamics and the ToC



## What you learn:

If you face rather complex processes or projects where you depend on knowing the constraints and how they are evolving you need a tool to foresee possible developments to dedicate the optimal amount of resources at the right time. Linear process modeling tools won't help and dynamic simulation like system dynamics would be extremely complicated to model the competition for resources. The iMODELER features process modeling factors that allow you to simply connect resource and level-resource factors with process factors, project factors of milestone factors to simulate all possible dynamics.

The goal, according to the theory of constraints (ToC), is to identify constraints. You improve a process if you remove the constraints by increasing resources there or by saving costs reducing resources elsewhere.

The model allows you to simulate the process or project. In order to come up with the optimal set of resources to maximise your objective you probably have to consider thousands of possible combinations of resources. The iMODELER-Optimizer uses an algorithm (Operations Research) to try and improve the optimal combination of resources.

As an additional attribute of the special factors you can easily calculate true costs per process as well.

In the workshop you will model a small example step by step to get familiar with the unique process or project modeling features of iMODELER.

### When:

The virtual workshop takes 4-5 hours on an afternoon. Dates can be found here: https://www.consideo.com/dates.html

If you are interested in open workshops in another month or at another day please let us know.

To register simply send an email to info@consideo.com

### Organization:

A maximum of ten participants. The duration will be 5 hours with a break in the middle. The platform to be used will be Zoom. The iMODELER can be started in your browser. Since participants come from around the world we may adopt the time.

### Trainer:

Kai Neumann and/or Franc Grimm, both scientists and business consultants with more than 20 years of experience.

### Price:

The price will be 195 EUR/person (plus VAT if applicable). You need no license of iMODELER since you will use a collaborative link.

### **Background:**

There are a lot of dedicates process modeling tools that are difficult to use and that cannot handle non-linear developments (like learning curves, wearing of resources, etc.). System Dynamics is a powerful way to simulate complex systems but it is hall of a task to develop a formula that describes how many resources are left for a process by the other processes with higher priority for the same time step. iMODELER makes it fairly easy to just define how much of a resource is needed per unit of a process and with a hierarchy of priorities it will simply simulate the outcome of the processes over time indicating the constraints for each time step. It features theory of constraints and operations research and is the result from real challenges of practitioners. We have modeled factories, the global energy transition, the electrification of mobility and a lot more using the PROCESS-iMODELER features.



I model - therefore iM

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Shorten Meetings





Develop Ideas and Strategies



Foresee Developments



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Handle





Complexity



iMODELER, PROCESS-iMODELER - web based, bionic, collaborative, ...

- Revolutionary qualitative modeling: what are the levers, what the hinderances? Powerful quantitative modeling: how with what likelihood is something developing?
- Process modeling: what are the constraints within complex processes and projects? KNOW-WHY.net an expert system for cause and effect models
- Workshops
- Consulting
- Moderation
- Research



Processes

Optimize

