

Robust Production Planning Use-case



Within the use case, the objective was to increase the robustness of the production plans, focusing on the processes in a single plant.

The production environment is a multi-stage system with machinery and assembly segments, producing several different product variants. In order to sustain the service level expected by the customers, robust plans are required to avoid the negative effects of possible changes and disturbances.

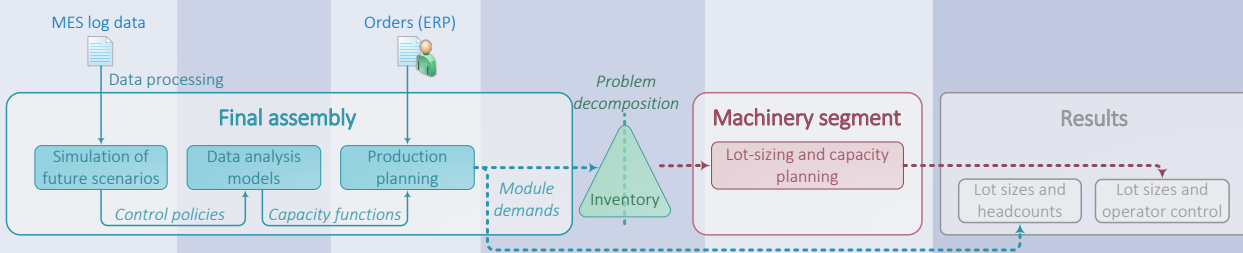
- Unbalanced workloads
- High inventories
- Capacity calculation issues
- Changing market conditions
- Large product portfolio
- Complex material flows
- Pull production strategy

PROBLEM

Detailed, realistic analysis

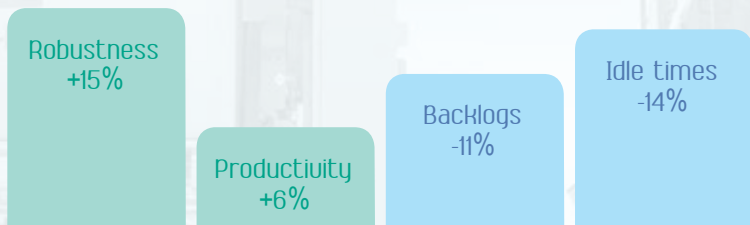
Analytical functions

Robust solutions



SOLUTION

- Comprehensive planning workflow
- Integration in existing processes
- Analysis of alternative solutions
- Reduced planning efforts
- Shorter response time



RESULTS



Shock-robust Design of Plants and their Supply Chain Networks

Project Summary

The overall platform, the supporting tools and methods defined and implemented within the Robust-PlaNet project aim at supporting the decision makers at different hierarchical levels of production enterprises to react or even to proactively plan and manage their activities in a more robust way than it used to be in the traditional practice.

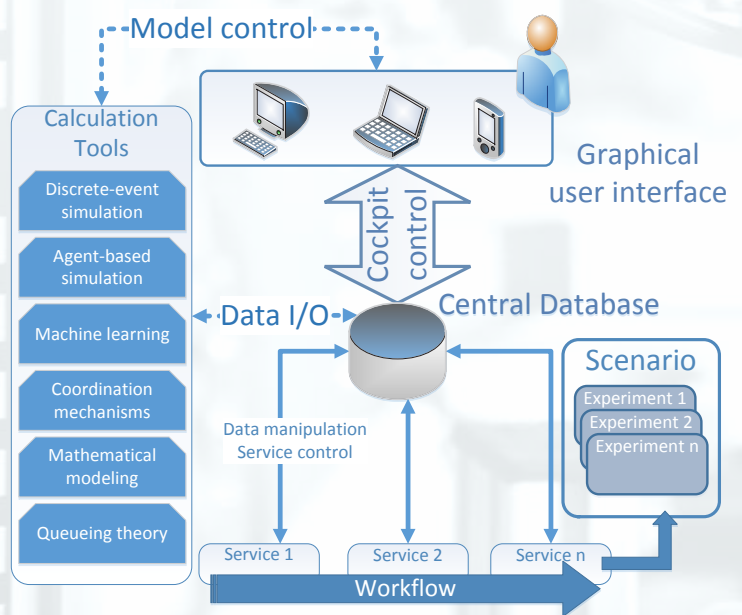


Robustness in RobustPlaNet involves refined approaches that aim at handling both predictable and unpredictable changes and disturbances, responding to the occurrence of uncertain events (reactive approaches) or protecting the performance of the production plans by anticipating the occurrence of uncertain events (proactive approaches).

RobustPlaNet covers both the operational, the mid-term tactical, and the long-term strategic decision layers and provides a set of new mathematical and simulation based algorithms and tools, which strengthen the planning loops within the operation of industrial partners' companies of the project.

Simulation and Navigation Cockpit

Built on a workflow based approach, the functional modules are chained together in the RobustPlaNet Simulation and Navigation Cockpit, tailored for different industrial cases. This cockpit constitutes the central web-based framework assisting the final users to define scenarios, construct what-if experiments and evaluate their impacts before a final decision is taken.



www.robustplanet.eu



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