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Simulation use in Performance Optimisation

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Benefits of simulation

- Cost savings in testing
- Time savings by optimising turnaround times
- More flexible and versatile than field work
- Does not disturb production
- No need to construct separate testing environment
- Scheduling is flexible
- Personnel is not required for field tests
- Easy to test, add or remove different and even deviate functionalities
- Normal operations are not disturbed in any way

Simulation use in Performance Optimisation

By simulating reality we are able to analyse operations under many different conditions and test the viability of different solutions without the need for costly site tests. Operations can refer, among others, to a factory production line or the daily movements of hospital staff.

By analysing different situations, we gain more information and a deeper understanding of the target, its behaviour and functioning. A more profound understanding of the target supports decision making. Excellent results can be achieved e.g. in the following cases:

- When the target studied is complex or dynamic
- When actual real-life testing is not possible
- When different scenarios need to be tested (real cost savings achieved when it can be done virtually)

Simulation can be used to…

- Flexibly study operational details and complexities at different levels of accuracy
- Study operations characterised by uncertainty factors and dynamic events
- Study abstract operational network models for which initial data is based on several sources and assumptions
- Increase understanding of operational features and interfaces
- Identify defects and problems more easily even in the most complex entities
- Test the functioning of solutions before implementation (reliability, quality, flexibility)

Application areas

The application areas of simulation are practically infinite. Examples include:

How to proceed?

Together we define the functionality review that applies to your optimisation needs.

Based on the preliminary review, we are able to offer customised and cost-efficient simulation, analysis and optimisation.

Our commissions range from a study that lasts a few days to consultations that last a few months. **Contact us to book a time** for preliminary discussions.

Contact

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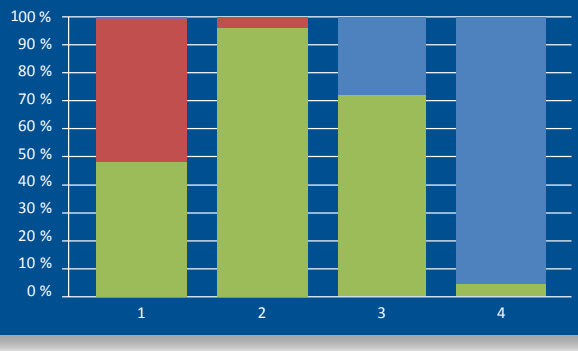

Figure. Identifying bottlenecks in production with simulation

Verifying the profitability of investments

- Analysis of investment need (bottleneck analyses, machinery usability analyses)
- Investment feasibility and profitability
- Support for supplier selection
- Support for plant design; evaluation of the effect of modifications in advance

Process simulation

- Developing existing processes
- Identifying process dependencies; lags in production or buffer storage
- Process performance; flow management, capability for different production programs
- Process behaviour; functionality diagnosis, utilisation rates, bottlenecks, capacity utilisation rates
- Effects of defective machinery and malfunctions on the process
- Effect of resourcing on production

Testing production optimisation measures

- Support for development work, capacity planning
- Improvement in process agility
- Simulating development ideas (Lean, Six Sigma)
- Testing production control strategies
- Optimisation of processes, resourcing and work

Network simulations

- Logistics and resourcing analyses
- Material flow analyses
- Personnel requirements & movements
- Logistic functioning and optimisation
- Simulation of supply chains

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We offer consulting, engineering, product development and project management services as well as products and turnkey solutions to industrial and public sector customers.

The cornerstones of our success are customers that are leaders in their respective fields and professional, customer-oriented and motivated personnel.

- Technical Consulting
- Engineering
- Project Management
- Product and Service Development
- Products & Turnkey Solutions
- Software Development
- Design Software Solutions

Key customer segments

- Pharmaceuticals
- Process Industries
- Energy
- Foodstuffs industry
- Starch and Potato Processing
- Machinery and Equipment Manufacturing
- Marine & Offshore
- Oil & Gas

Contact information

We operate globally and have clients in over 80 countries. Our offices are located in Finland, China, India, Italy, the Netherlands, Poland, Serbia, Russia and the UAE.

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