



ORTEC and Supply Chain Optimization

Structured decision making in a complex world

Managing Supply Chain Complexity



Supply Chain Optimization addresses business challenges that are related to the optimization of the performance of processes in the extended Supply Chain. This includes all processes from sourcing from the suppliers' supplier to delivering at the customers' customer.

Supply Chain Optimization can be very challenging. Processes between each of the Supply Chain stages can be complex on their own. Optimization of the processes through the entire Supply Chain is even more complex.

There are many processes going on, many performance objectives may be of importance and there are many dependencies. Supply Chain Optimization is about performance improvement. To achieve this, it is crucial

to obtain visibility of the current performance. That is a start, but not sufficient. Once you know the current value of performance objectives you may be able to identify need for improvement. To obtain improvement the right measures must be taken.

This can only be achieved if you also know how your Supply Chain behaves. How are the performance objectives related to each other, what are the levers to influence them and what is the likely impact of changing those levers? As long as this behaviour is not clear, the instinctive reaction may be to react on symptoms. Management by decibels is also often encountered.

Since many things are interrelated, it is very complex to make balanced trade-offs. Reacting on symptoms without understanding the behaviour through the Supply Chain may cause very unexpected consequences, and therefore lead to bad overall results.

To get in control, symptoms must be distinguished from causes and possible levers must be identified to influence processes in the desired way. The Supply Chain behaviour must be disentangled. Then the real business challenges can be identified, prioritized and addressed. Identifying underlying causes for undesired symptoms and the levers that may influence them will provide directions for solutions. These directions can be used to define promising scenarios that need further analysis.

Knowing the current performance and understanding how your Supply Chain behaves is crucial to achieve performance improvement. By bringing order to the chaos you get a grip on the complexity. An integral process view allows you to address the right challenges.

The ORTEC Approach

ORTEC offers a structured approach that guarantees to address the right challenges. The ORTEC approach starts with obtaining visibility by discovering the symptoms of your Supply Chain performance in terms of current values of the relevant performance objectives. Then, by disentangling the Supply Chain processes, the possible underlying causes of undesired performance can be identified. Based on the understanding of your Supply Chain and our experience with many Supply Chains, this will give insight in relevant levers to influence the performance or even change the behaviour of your Supply Chain. Moreover, it will provide insight into the improvement potential related to the possible measures. This valuable information enables us to identify the right business challenges and to prioritize them, based on needed effort and the likelihood to succeed.

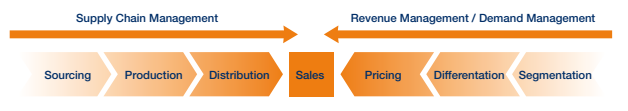


Once the right challenges have been identified and prioritized, and promising scenarios are defined, very often a quantitative analysis is called for to verify the

impact of a scenario. If a scenario turns out to be very promising, it can be optimized in more detail. Ultimately the obtained results must be capitalized upon by implementing the solution in the business. This approach can be repeated for every challenge.

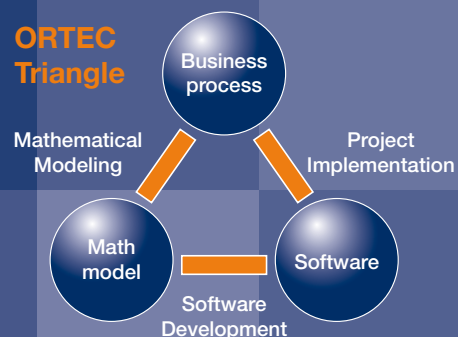
It requires good business knowledge, modelling and optimization skills and the right tools to analyze scenarios thoroughly and quantify the effects. ORTEC offers a unique combination of business knowledge, outstanding optimization skills, and state-of-the-art analysis and optimization tools. That way we support you in obtaining practical, tangible and sustainable results. This is what we call our unique ORTEC Triangle. (see diagram below)

Our integral approach allows us to really understand the complexity of your business and to perform a quantitative trade-off analysis of multiple Supply Chain performance objectives.



Advanced methods, tools and techniques to identify and address specific Supply Chain challenges support the ORTEC Approach. Moreover, in many cases our advanced planning and scheduling systems make it possible to capitalize upon the obtained solution. Each of the steps in the approach and each challenge may require specific support.

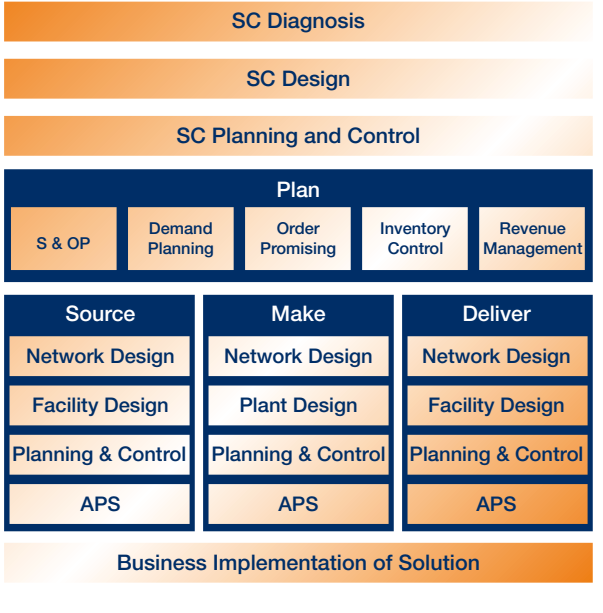
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Challenges and benefits

Examples of business challenges where our methods, tools and techniques can be used include:

- Increasing Supply Chain flexibility
- Reducing Supply Chain risks
- Improving delivery performance
- Reducing working capital
- Increasing asset utilization
- Optimizing your distribution and manufacturing network
- Managing volatility and variability
- Optimizing revenues by using dynamic pricing
- Visualizing Supply Chain performance
- Modelling the impact of future growth or shrink
- Setting inventory control parameters
- Forecasting future demands and generating orders to fulfil these demands
- Determining optimal campaign sizes and product wheels
- Evaluating planning and control strategies such as push versus pull or the planning cycle time
- Margin analysis of customers
- Product portfolio rationalization



Together we make it happen. By joining your business experience and our outstanding modelling and optimization skills, even the most complex Supply Chains will be unravelled. We help you to transform strategic advices into tangible implementations. The quality of your decision making will be substantially improved. Due to our intensive cooperation valuable knowledge will be built up in your company. You will obtain a competitive edge on your competitors.

Together we identify the real challenges behind the symptoms that catch the eye. This brings you tangible and sustainable results and avoids myopic behaviour.

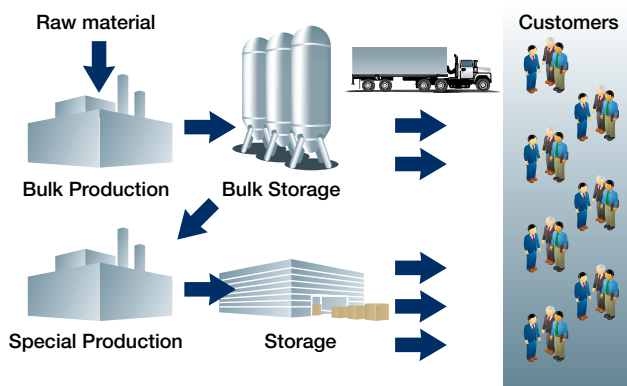


Join the companies that have profited from the ORTEC Triangle

ORTEC has a track record of over 25 years in supporting companies with their Supply Chain challenges. More than 700 customers from a wide variety of industries have proven that our approach leads to practical solutions that really work and are sustained! With many of them we have built long lasting relationships.

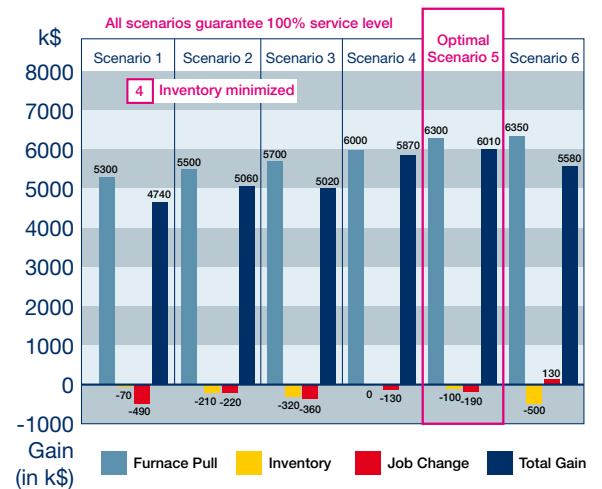
A big supplier in the food sector wants to integrate two supply chains after a merger. What should the new supply chain look like?

The integrated redesign of the two different supply chains offered various possibilities for improvement. ORTEC's analysis enabled the customer to choose the best scenario. The quantitative trade-off analysis of multiple relevant KPI's revealed that the service level could be increased while yearly supply chain costs could be decreased up to 20%.



A glass container producer was facing contradictory criteria for optimizing the manufacturing system. How should the plant be configured to achieve maximum performance?

The glass plant turned out to have a complex interaction between the push process of glass melting and the pull process of glass forming and packaging. Only an in depth analysis allowed the optimal trade-off to be made between several conflicting performance objectives. In the end the plant performance was globally optimized by a combination of measures, comprising strategic and tactical projects. The global gain has been estimated to \$4M per year.



“With the SAP implementation, we got tons of accurate data. But now, with ORTEC’s support we can make the right decisions”

Head of Manufacturing of a pharmaceutical multinational company



www.ortec.com
info@ortec.com

North America +1 (678) 392 3100

Germany +49 (0) 4431 7377 0

The Netherlands +31 (0)182 540 500

Belgium +32 (0)16 244 220

France +33 (0)1 44 25 05 25

Central and Eastern Europe +40 (0)21 31 10 227

United Kingdom and Ireland +44 (0)24 7632 3218

Asia Pacific +65 (0) 6322 0888

International +31 (0)182 540 500