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SUPPLY CHAIN MANAGEMENT 4.0

SAVINGS IN THE MILLIONS FOR FOOD MANUFACTURERS WITH DIGITAL PLANNING APPROACH

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THE TIME IS RIGHT: WHY YOU SHOULD RELY ON DIGITAL SCM AND APS

Supply chains in the food industry have been and continue to be put under extreme stress by the Corona pandemic. Overstocked or depleted stocks, supply blockages and plant shutdowns are aggravating existing specific challenges which characterise the food industry.

1. Distribution strategies such as cross-channel, multi-channel and omni-channel strategies compliment traditional retail trade and demand the adaptation of supply chain concepts

2. The increasing level of globalisation of production and value chains is increasing the complexity of supply chains – and not just in terms of supply chain length and regulatory requirements

3. New trading requirements with regard to shipment and delivery concepts

4. Achieving an efficient consumer response (ECR) requires the optimisation of the entire value chain, from distribution to procurement to production – especially for fast moving consumer goods (FMCG).

5. Increasing expectations for high product availability plus decreasing predictability of customer needs with a steadily increasing variety of products

6. Increasing efficiency and flexibility in production and logistics through lean management

7. Rising requirements for sustainability: implementation of organic, carbon footprint and green logistics trends

8. Increasing regulatory and consumer demands placed on freshness and food safety

Good supply chain planning, starting from demand recording right through to production planning, is the essential factor. This is because, from an economic point of view, a standstill in production is just as unwelcome as an overflowing warehouse and high waste rates. Above all, one must bear in mind that the goal of 100% delivery capability is always the highest priority in all considerations. There is nothing worse than when consumers cannot find the product they want on the supermarket shelf or when the best-before date has expired.

But hardly any other industry poses as many planning challenges as the food & beverage industry.
The following parameters must be taken into account in SCM planning and analysed as close to real time as possible:

- → Supplier delays
- → Volatile consumer consumption that prevents stockpiling of large quantities and the concurrent observance of defined, dynamic ranges
- → Utilisation of bottleneck plant that underutilises production capacity
- → Planned and unplanned maintenance and cleaning of production facilities
- → Shelf life monitoring
- → Availability and correct allocation of storage and buffer tanks
- → Level of service required to meet customer orders

The combination of complex parameters mentioned above prevents you from using your production line in the most efficient way possible – and this means lost revenue. It is, however, not possible to truly optimise your plant productivity without the use of intelligent planning software.

The diversity of parameters makes software solutions for planning, supply chain management and scheduling an absolute necessity for food and beverage manufacturers who want to realise their full potential and be prepared for the future.

Advantages of using a supply chain management and APS software solution:

- → Reduction of raw material and packaging inventories by more than 10%
- → Reduction of finished goods inventories by up to 20%
- → Increased throughput by up to 20% on account of optimisations
- → Reduction of unplanned additional work
- → Total inventory savings in the tens of millions of euros
- → Reduction of transport costs

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5 REASONS WHY TRANSPARENCY IS A MUST IN THE FOOD INDUSTRY

According to Innova Market Insights, supply chain transparency is the number one trend in the food industry in 2021. This can be attributed primarily to consumers' increasing desire for product traceability.

Transparency in the supply chain, however, not only offers traceability to the end consumer, but also decisive advantages for companies. It is only by having a constant overview of your processes and those of your suppliers that you will gain an in-depth understanding of the performance of your production operations and the potential for optimisation.

Intelligent SCM and advanced planning and scheduling are indispensable for your food production for the following five main reasons:

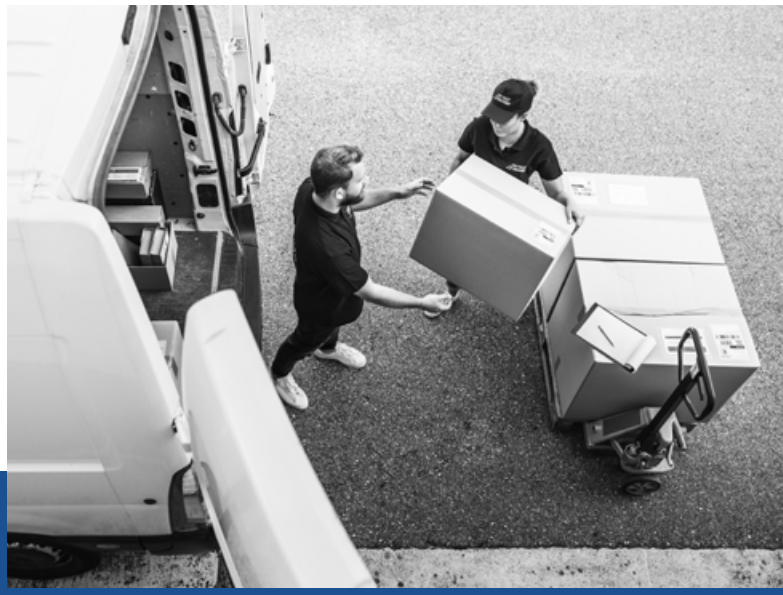
1. **Simultaneous material and capacity planning:**
   access to data provides clear insights into current and expected capacity utilisation coupled with availability statements of all materials required in the process. This makes it easy to model the utilisation of and demand for resources – and allows you to optimise your use of resources.

2. **Increased trust:**
   a real-time flow of information is much more efficient than analysing data collected in the past. The resulting ability to adapt and communicate streamlines your production processes all the way down to the customer. This not only allows you to start the next production day feeling more relaxed, but also increases your customer's confidence in your reliability.

3. **Reduction of inefficient production time:**
   wasted time is a significant problem for many production facilities. Real-time insights into delays and automatic identification of ramifications enable a faster response, thus reducing downtime and increasing the rate of on-time delivery.

4. **Identification of potential risks:**
   identifying risks is key to getting your production in perfect flow. Access to performance data allows you to identify potential risks and adjust the production plan accordingly. This knowledge enables you to be prepared for many eventualities in everyday production and therefore not only to keep production running, but also to keep an eye on your costs.

5. **Improved decision making:**
   transparency in combination with system-supported simulations of solution scenarios enables faster and more informed decisions to be made. Without reliable data, it is impossible to make effective and reliable decisions. Decisions made in isolation and without regard for the bigger picture often lead to unexpected and undesirable consequences. With an integrated flow of information, you and your staff are equipped to make the best decision for the situation at hand.



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YOUR SUPPLY CHAIN IN PERFECT FLOW: OUR SOFTWARE SOLUTIONS FOR END-TO-END SUPPLY OPTIMISATION

Complex structures, a multitude of different parameters, and rapidly changing production logistics conditions make supply planning particularly challenging for food manufacturers. ORSOFT offers software solutions to meet all of your challenges, from demand forecasting and procurement planning to detailed planning.

"ORSOFT Enterprise Workbench"

With our "ORSOFT Enterprise Workbench" software, you can plan and control your global value chains end-to-end and in real time. As defined by Gartner, this system constitutes a "supply planning system of record" and supports our customers in achieving a higher level of efficiency.

With the help of artificial intelligence and machine learning, the demand planning module creates reliable demand plans based on current and historical data. EdgeOne's standard interfaces, such as those to SAP BW, simplify access to this information. This results in a significant increase in forecasting accuracy, and moreover forms the basis for financial planning.

The S&OP Planning module of the "ORSOFT Enterprise Workbench" shows its strengths in more complex production and distribution networks. Planning ahead over a longer period of time allows for capacity forecasting that takes seasonal fluctuations in demand into account. This means that the appropriate levels of stock can be built up before the season begins in order to be able to deliver at a later date. This of course takes limited storage capacity into account during planning and facilitates the anticipatory leasing of additional storage space. In the same way, production quantities can be distributed across several plants and transport costs can be optimally allocated from production plants to distribution centres using advanced analytics. This makes it possible to react flexibly to the current demand situation and to achieve significant savings in transport costs. Seasonal price fluctuations of raw materials or volume discounts are used for cost optimisation in purchasing. Make or buy decisions can then be made based on this to ensure cost-optimal production. Similarly, the inventory optimisation module generates cost-optimised procurement proposals and continuously optimises safety stocks.

The solution is therefore based on the production logistics model of SAP ERP or SAP S/4HANA and creates a digital supply chain twin based on this, which is also continuously updated with this data. The capacity check is not based on coarse volume-time requirements, but on scheduling, taking into account relationships, shifts and other restrictions. Interactive, simulation-based planning processes replace the previous batch-oriented processes and the rough planning is seamlessly offset against the detailed planning.

The advantages of the "ORSOFT Enterprise Workbench" at a glance

- → Real-time planning based on a digital supply chain twin
- → Security through certified integration in SAP ERP and SAP S/4HANA
- → Vertical integration of demand planning and S&OP planning with detailed planning level featuring two-way interaction
- → Horizontal integration with network planning, purchasing and distribution planning
- → Same KPIs at all planning levels
- → Reliable results with compact throughput times, even for long-distance logistics chains, by using scheduling technology

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“ORSOFT Manufacturing Workbench”

Our “ORSOFT Manufacturing Workbench” software enables simultaneous material, capacity and personnel planning. Industry-specific features are of course also taken into account in detailed scheduling, be it the scheduling of multi-product storage tanks or the determination of batch sizes according to dynamic product ranges, best before dates and remaining lead times. The determination of optimal production sequences cuts down the necessary set-up times, and horizontal and vertical campaigns can be mapped in the tool. No more will last-minute orders from customers, time pressure for promotional goods, delayed or limited deliveries of raw materials throw your production out of balance. Our blending optimisation calculates variable parts lists in order to ensure consistent product quality with natural raw materials.

The ORSOFT Manufacturing Workbench is at its core an advanced planning and scheduling tool that offers interactive multi-resource planning with the ability to create and compare planning scenarios. The optimal scenario is then selected based on key figures. Based on SAP ERP or SAP S/4HANA data, the software provides an immediate overview of capacity utilization, material flows, delay situations and material key figures – even across different locations.

The advantages of the “ORSOFT Manufacturing Workbench” at a glance

- → Easy to administer software and interface
- → 100% integrated in SAP ERP, and uses existing SAP ERP and SAP S/4HANA PP/DS data
- → High-performance response through local RAM database with the possibility of planning in real time
- → Minimization of the project risk through piloting based on customer data

“ORSOFT LabScheduling”

AAs part of an integrated planning process, the “ORSOFT LabScheduling” software includes the laboratories when examining the logistics chain, making late deliveries of goods due to quality controls that were carried out late a thing of the past. All necessary inspection lots are generated in advance based on current production planning and the expected quality situation, and are automatically planned taking deadline and workstation restrictions into account so that possible bottlenecks can be identified and eliminated at an early stage. It is possible to react flexibly to operational disruptions and changes based on real-time data processing in short-term planning.

ORSOFT LabScheduling enables integrated laboratory planning on the basis of production planning in ERP up to the evaluations from the LIMS. At the process level, capacity analysis, capacity planning and detailed planning are supported. The planning horizon in laboratory planning is similar to that of production planning. This allows for precise capacity forecasts and the early detection of capacity bottlenecks in the laboratories. In detailed planning, on the other hand, real-time data processing allows flexible reactions to changing business events and agile detailed planning of the laboratories. This achieves a high level of planning transparency and takes into account the entire business process along the long, medium and short-term planning horizon.

The advantages of “ORSOFT LabScheduling” at a glance

- → Integrated planning of production and laboratories
- → Certified SAP interface
- → Flexible connection to external databases and the LIMS system
- → Short, medium and long-term capacity forecast
- → Out-of-the-box functionalities such as simulated inspection lots, individual prioritization of inspection lots, dynamic pegging or interactive and automatic leveling
- → Less capacity bottlenecks and maximum throughput in laboratories

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“ORSOFT Master Data Workflow”

Efficient master data management with “ORSOFT Master Data Workflow” accelerates the preparatory processes of your production line. The many last-minute product launches can lead to considerable additional work in production planning if the necessary master data is not available. As many specialist departments are involved in the creation and verification of master data, the workflows provide an overview of tasks and deadlines, delays in processing are quickly recognised and countermeasures can be implemented.

Our solution “ORSOFT Master Data Workflow” is an extension for SAP ERP for workflow-based, quality-assured master data maintenance. The software enables the storage of provisional, simulated or incompletely maintained master data outside of SAP ERP objects, whereby the data is stored in structures identical to SAP ERP. Thanks to the possibility of defining your own test rules, the solution is also suitable for cross-national applications with differing legal requirements.

The advantages of the “ORSOFT Master Data Workflow” at a glance

- → Simplified, clear recording of rapidly increasing and frequently changing master data objects
- → Ensures the quality of master data before it is created in SAP ERP
- → Support for mass changes to master data objects – with statically or dynamically rule-based definitions
- → Governance, supervision and reporting of the master data maintenance processes
- → Batch-oriented import of master data from external systems with database, XML and CSV interfaces
- → Re-validation of the SAP data set through evaluation and correction algorithms

Do you have specific questions about how to take your supply chain management to the next level?

Get in touch →

ORSOFT is part of the Germanedge Group.
Germanedge is a leading provider of Manufacturing Operation Management (MOM) software that brings Industry 4.0 into the perfect flow. Together with its four product providers (GEFASOFT, New Solutions, ORSOFT, and QDA SOLUTIONS) the brand offers a complete solution portfolio for the manufacturing industry: international, cross-plant, maximum efficiency.