sedApta group
smart manufacturing made easy

CASE STUDY LIFE SCIENCES
ALTERGON

Altergon Italia S.r.l. is a center of excellence and Innovation for the biotechnological production of ultra-pure Hyaluronic Acid and medical plasters.
In 2001, due to the success of some products licensed to multinational companies in the sector, the Swiss company Altergon SA strategically decided to start production and R&D activities on the Italian territory, and more specifically in the Altergon Italia site based in Avellino.
The key asset of the Company is to combine strict compliance with the standards and ethical principles that regulate drug production with a focus on innovation and scientific research. Production processes, packaging, and R&D activities are supported by innovative and modern technologies and Human Resources with a high technical professional profile. Altergon Italia's core business is represented by its advanced production facilities for medicated plasters. The uniqueness of the processes implemented by Altergon Italia allows the company to be identified as a European leader in the production of Hydrogel, Drug in Adhesive and Edible Systemic Release Film (ODF) medical plasters.
The production site covers a total area of about 50,000 sq. m., 20,000 of which are dedicated to production departments and warehouses, 1,000 to technical and management offices, 10,000 sq. m. to outdoor technical areas and services, 4,000 sq. m. to equipped green areas, and 15,000 sq. m. for future expansion.
The site so far consists of 4 production plants, 3 R&D laboratories (800 sq. m.), 2 pilot plants: biotech (350 sq. m.) and medicated patches (200 sq. m.), a modern Quality Control and an intensive automated 7,000-pallet warehouse, as well as a general service center (training and conference room, refectory).

The pharmaceutical division of Altergon Italia owns not only the know-how but also modern facilities to produce medical plasters and Hyaluronic Acid for different applications.

The products can be divided into the following categories:
- Hydrogel water-based plaster
- Drug-in adhesive matrix certch
- Double layer patch
- Odf films
- Hyaluronic Acid
- Medical devices.

ANALYSIS

From the analysis conducted on the customer, the main need of Altergon Italia was to identify a tool that could provide higher value and greater evidence of data in order to create close coordination between planning, production, sales and purchasing, within its planning model.

The main difficulties experienced by the customer were:
- Infinite-capacity management planning; the Altergon Italia Planner had to identify work overloads, level the distribution of orders, and follow work center schedules;
- Although production proceeded by product campaigns, these had to be defined externally to the management system thus increasing the margin of error by having to be entered manually, forcing constant verification between sales order and purchase orders;
- Lack of immediate visibility on material availability for production orders set on a certain date, e.g., for a missed delivery or delayed quality control. Planning had to act on reports generated by the production dept. to change the production plan resulting in delayed reminders to

COMPANY
ALTERGON ITALIA

SECTOR
LIFE SCIENCES

SIZE
4 PRODUCTION PLANTS
3 LABORATORIES
2 PLANTS
1 QUALITY CONTROL CENTRE
1 INTENSIVE WAREHOUSE

TURNOVER
50 MLN € (2021)

SEDAPTA MODULES
FACTORY SCHEDULING

suppliers and quality control for materials missing in the production cycle;
- IT decoupling due to the use of spread sheets that had to be constantly updated to avoid misalignment between the production and planning systems;
- Management of the two macro phases of production by requirement-based MTS strategy with the need for refinement of the production order steps, did not allow sufficient accuracy regarding the times indicated in the cycles for carrying out this activity.

From the analysis of the main critical issues that emerged, the inclusion of the sedApta suite scheduling tool implemented by partner **Techedge** was identified as the possible solution.

Through this solution, the following goals were achieved:
- Have a tool that allows Altergon Italia to perform a feasibility check of production plans;
- Decrease human error through a tool that could be fully integrated with the SAP environment;
- Replace the excel file currently used for scheduling with more sophisticated tools;
- To be able to schedule production lines at finite capacity;
- Improve the current production and purchasing planning processes by streamlining operations and improving data quality, enabling more reliable responses to the logistics and sales structure;
- Consolidate, in the scheduler database, process knowledge currently managed independently by production managers.

SOLUTION

Mapping the Altergon Italia requirements with the functionality of the sedApta solution, it has been possible to understand how the scheduling process is started once the data is received from the SAP ERP system. The program sequentially places, with configurable rules and constraints depending on the scope on the various resources, the planned productions to minimize setup times, create product/package/material campaigns, and comply with constraints on components. The resulting plan is sent back to the management system to release production orders, update delivery dates, and distribute it to departments to enable production progress.

From a more operational level, this is what happens:
- Daily, the system updates data on the border tables, and after importing them into the sedApta database, the scheduling process is started to update the plan according to quantities produced, arrivals from suppliers, or new work orders (WOs).
- The scheduler, then, automatically generates work plans that are sent to a supervisor to be evaluated: these plans can be saved or modified, appropriate forcing can be made, and, if possible, re-scheduled to observe the effects and results of a new simulation. Once the sequence of LODs has been chosen and saved, proposals are sent, automatically, to the SAP system to be confirmed and transformed into shared and fixed work plans.
- Once the production sequences have been defined, it is up to the Production Department to make the declarations related to this phase and to check their correct progress.
- In this project, **Techedge** -a sedApta Partner- played a key role in the implementation of the solution due to its in-depth knowledge of SAP management. Functional members of the **Techedge** team, experts in both SAP and sedApta products, saw to the design of a data exchange model that integrated all areas of the management system. Difficulties arose in relation to the quality of the data considering that, in the previous, non- integrated context, they were not an obstacle. These were corrected at source or with appropriate logic that extends the capabilities of the standard SAP and reflect some peculiarities of the client Altergon Italia.

BENEFITS

The benefits achieved by Altergon Italia thanks to the use of the sedApta solution are:
- Alignment between production demand and production capacity;
- Immediate detection of new uncovered customer orders (on the MRP system this function is done manually and there is no evidence of new uncovered customer orders);
- Improved usage of production resources;
- Generation of feasible and optimized work plans;
- Optimize production sequences in the short – or very short term (e.g., format, bulk, active ingredient campaign management);
- Reduce setup/boning/cleaning times by optimizing campaigns;
- Perform manual forcing to production sequences with recalculation of set-up times;
- Simulate disruptive events on the schedule by defining specific priorities, optimizing resource capacity, defining production constraints;
- Synchronize the production of various production steps;
- Coordinate the arrival of materials with their use in production by drawing up reminder plan and any critical issues, and by making warehouse inventories more efficient;
- Analysis of shortfalls;
- Increased quality and timeliness of supplier reminders;
- Decreased queue times at the foot of the line;
- Synchronization of bulk and finished goods production, along with analysis activity, by managing links between batches;
- Immediate recalculation of the work plan in the presence of disturbances;
- Freezing and releasing scheduled plans in the short term;
- Improve the reliability of scheduling.