

CASE STUDY FOOD & BEVERAGE

MORANDO

The history of **Morando**, a pioneering Piedmontese company in the pet food industry, is a journey almost 70 years long, originating from the entrepreneurial genius of founder Enrico Morando. He was indeed the first to obtain authorization to produce industrial food for dogs and cats, paving the way and writing the story of a market that was until then unknown in Italy.

Today, Morando is a modern, dynamic company equipped with the most advanced technologies and in continuous evolution, while maintaining a strong connection to the territory. Despite outsourcing being an advantageous choice for many, the company has opted to enhance and defend the entrepreneurial fabric of Piedmont, choosing the path of internationalization. Production remains concentrated in Italy, but there is a constant increase in the presence in international markets.

The Made-in-Italy excellence is ensured by continuous research and innovation in our internal laboratories. Our teams of veterinarians and technicians are consistently dedicated to developing new recipes based on natural and innovative ingredients to ensure the well-being of our four-legged friends, without ever compromising on quality and without conducting any tests on animals

A journey, an idea, the will to realize it before anyone else, the success.

ANALYSIS

The basic need, which led to the formalization of the collaboration between Morando and Atomos Hyla, a company of the sedApta group, was to implement, for its Molfetta plant, a real-time executive management system for production and warehouses.

This system needed to be integrated with the existing management systems in the company and allow for the achievement of the following through the use of advanced technology:

- » Efficient generation and management of production sequences
- » Completion of field integration from an Industry 4.0 perspective
- » The ability to collect and control data on production progress
- » Monitoring of production plants and the transformation process
- » Support for Quality control processes
- » Control of raw materials, semi-finished goods, and finished product warehouses
- » Improvement of material acceptance processes and shipment of finished products.



COMPANY
MORANDO SPA



SECTOR
PETFOOD



SIZE
4 PRODUCTION PLANTS
110 EMPLOYEES



TURNOVER
€ 186 MIO (2022)



MODULI SEDAPTA
FACTORY SCHEDULING
SHOP FLOOR MONITOR
SCADA & PLC SYSTEMS

SOLUTION

The implemented solution covers different aspects and needs: from production management to quality monitoring, from line automation through SCADA and PLC systems to warehouse control.

To meet the needs related to real-time executive production management, the sedApta MES (Manufacturing Execution System) solution was employed, integrated with modules from the sedApta suite: Shop Floor Monitor, for monitoring data from the field and performance measurement, Check List for quality process management, and Factory Scheduling, to refine production sequences through constraint adherence and the execution of simulation algorithms.

On one hand, the integration with the ERP system makes it possible to obtain the master data of components and the bill of materials. On the other hand, thanks to the automatic communication mechanisms among the modules of the sedApta suite, it is not only possible to collect real-time production data, controlling and monitoring all production parameters, but also to perform performance monitoring through reports, OEE calculation, and relevant KPIs made available in different graphical formats. The system is interconnected with machinery, adhering to Industry 4.0 requirements.

The solution also allows the generation of a short-term scheduling plan, referencing individual processing phases, taking into account priorities, setup times, and production times.

Through the use and integration of a third-party product, the issue of warehouse management (WMS - Warehouse Management System) has been addressed and solved. This includes gaining control over goods receiving, their storage, and internal movement, as well as production warehouses, even at the level of individual batches. The process extends to the picking and shipment phases of the finished product.

A separate discussion concerns the management of technological processes for the preparation of the various types of food required and executed in different production departments. The solution involved the installation of both new Control and Supervision Systems and revamping interventions on existing ones, and where necessary, the supply of new control and power electrical cabinets.

Through a sophisticated functional and operational architecture of PLC units and distributed SCADA/HMI systems, it was possible to achieve the management of all plant units and the control logics and functions of transformation processes. The key element of the entire project was to have centralized visibility (control room) of the status and most significant parameters and variables of the various production machines, supporting precise diagnostics of the production lines.

The solution revolved around sedApta's Data Acquisition System (DAS), serving as a physical interface layer with the machines and lines for the automatic acquisition of relevant data. Some of this data is shared with the MES, while others are utilized for HMI functionalities.

BENEFITS

Depending on the different needs and the impact of the solution across the different business areas, the obtained benefits range from the digitization of production and warehouse processes to the streamlining of production through reduced manual operations and the ability to react in real-time to disruptions. Other benefits include continuous monitoring of production status and performance, support for quality processes, advanced management of warehouse logistics processes, and the recording of production traceability.

Further advantages are related to real-time supervision and diagnostics of the state of plants and transformation processes, as well as the automatic control of logic and adjustments in technological processes. This is achieved through the implementation of a standardized, user-friendly operator interface and a flexible and scalable interface for machine/plant communication and data acquisition, allowing for potential future integrations. Finally, it is worth noting the Industry 4.0 certification for the production line dedicated to trays.



MORANDO
La storia del pet food in Italia