



Digital transformation for the maintenance and monitoring of machinery used in the food industry

IOT applied to machines used in the food industry

Daniele Salati Chiodini (engineer): "IOT gives us a different vision of more traditional mechanics. We have added value to our production through this research project and the relative development, establishing a different and long-lasting relationship in a win-win situation between customer and producer"

The basic idea

The large scale retail trade and collective market (canteens, hospitals, retail trade, preparation laboratories for markets and supermarkets) in which Minerva Omega Group works, was by now saturated and suffering from the competitive pressure of Asian companies manufacturing at low cost. The "typical" user, often not taking into consideration the total cost of ownership for machinery used in the food industry, but instead only the initial cost, tended to prefer cheaper products which however had higher maintenance costs over the medium and long term. The moment of truth came three years ago: either abandon certain areas of the market and/or relocate production thereby penalising partners, or alternatively expand the company's skills and give the products different value by incorporating the IoT.

Specialising through innovation to give the products and the company added value

The Minerva Omega Group's logic is to continuously innovate itself through the search for new processes and by adding value to the production. To develop the man-machine-network relationship (IoT and M2M) rationally and organically, the Minerva Omega Group decided to create a Spin-Off company for the purpose of carrying out specialised research and development in this sector. 2013 saw the launch of DSC Nexus, which today not only provides added value for company products, but also allows the Group to be a Partner with other companies, even its competitors, direct customers and customers requiring ad hoc projects. Thanks to this Spin-Off, in two years the business of both the company and the end customer has grown, with an increase in know-how that today allows the Group to provide customised, modular and scalable solutions and



to expand its target group of contacts. Today we not only dialogue with equipment Buyers, but also Energy Managers, H&S Officers, CFOs, etc.

A global answer to corporate needs: NEMOSY a broad-spectrum solution

One of the initial problems the Group had to face was the possibility of extending the project to new generation machines as well as to existing machines not connected digitally by network and not manufactured only by Minerva Omega. Dedicated hardware has been developed following the specifications of the IOT while for the software, using the Solair/Microsoft platform, the data captured by the machinery is extracted, processed with specific algorithms and synchronised with external systems as well (ERP, CRM, etc.), then integrated into the business processes.

The result was a broad-spectrum solution called NEMOSY, designed for and creating value for different players along the supply chain: those in charge of maintenance, equipment buyers, health & safety officers, financial and administrative controllers, distributors and importers. Due to the flexibility of the platform, the NEMOSY system is not only directed towards monitoring machines, but can also manage the entire maintenance cycle, from the incorporation of technical reports right up to producing all the documentation for individual machines. All this is available on a Cloud platform (Azure) on fixed and mobile devices.

The new business: greater competitiveness and new orders for systems and machines already set up

Three years on, after experimentation, recording and analysing the data, the benefits range from know-how to the acquisition of new customers and repositioning with consolidated customers. Today the Minerva Omega Group has been able to shift its focus from merely supplying machinery similar to that of other makers, to tailored solutions that are scalable and can be adapted to individual needs, guaranteeing regular updating gained through experience on a variety of markets and with different types of customers. Products and services today can be developed by pooling data and experience. In other words, today the Minerva Omega Group is more competitive on the market and acquires new orders for systems and machines already set up.

The company

Minerva Omega Group designs and manufactures a wide range of machines and systems for processing and preserving food products. The Group is now very well established in the food processing industry, being acknowledged at international level and maintaining a strictly Made in Italy production output. It started out in 1945 as La Minerva di Chiodini Mario and became an



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Industrial Group from the 2000s onwards. With over 70 employees and a turnover (for 2015) of around 15 million Euros, of which 70% from foreign markets, the company aims to offer increasingly innovative services and products in keeping with the market trends.

Minerva Omega Group
Industry: Food
Website: www.laminerva.it