

### THE CUSTOMER

The most important Italian milk production chain with direct participation by producer cooperatives.

Granarolo is the major agro-food group in Italy, comprising two divisions: Granlatte, a consortium of milk producers operating in the agricultural sector responsible for milk collection, and Granarolo S.p.A., a limited company that processes and markets the finished products through 12 production sites located all over Italy and 2 production sites in France.

The Granarolo Group counts on 1,000 dairy farmers, 70 vehicles for the collection of milk from the farms, 1,200 trucks for distribution. They handle 850 thousand tons/year of milk and every day deliver to more than 60 thousand points of sale, reaching 11 million Italian families. The business portfolio was increased in 2004 with an increased quota of yogurt – thanks to acquisition of the Yomo Group – and of cheese products, with the acquisition of Lat Bri in 2011. The Group has also become the first Italian importer of hard cheese and the second importer of fresh cheese in France with the acquisition of CIPF Codipal in 2013. Since then, various other acquisitions have followed with the idea of fully promoting milk produced in Italy and making derivative products popular also in other countries around the world. Today, Granarolo sells into more than 50 countries and it has added many PDO cheeses, baby and toddler milk, ice cream, ham and pasta to its traditional dairy products.

### NEEDS AND PROBLEMS

The laboratories of the group used to manage the analytical process using in-house tools developed using spreadsheets and text documents. Such a system, however, proved limiting for the management of the entire laboratory work within Granarolo. The main requirement for Granarolo was to manage the constant flow of data coming from the analysis for the Payment Quality Milk and guarantee customers full compliance with the rules of accreditation. Fundamental was to manage all laboratory activities, especially those related to their main partner Granlatte. It was, therefore, necessary to computerize the Central Laboratory of Quality Control to improve both the procurement process and all of production and processing of milk.

### THE SOLUTION

After careful analysis, EuSoft.Lab LIMS was chosen for the laboratory management. It was selected as the most appropriate to the specific needs of the company for ISO 17025 accreditation. They chose a SaaS (Software as a Service) solution on Microsoft Azure cloud computing platform.

The first processes to be managed were those relating to input, registering associates and products. This interfaces with their ERP system and output, export of test data in .csv format for their main shareholder Granlatte. A module has been specified and developed for the ad hoc sample fat assessment test.



### THE RESULTS

In order to align the registration of the raw materials, semimanufactured and finished products a software interface was created between the LIMS and SAP. This interface has enabled a "bilateral" dialogue between the LIMS and ERP business systems. The same was also for the registration of associates.

A module was developed for sample fat and protein tests run every day and at the end of every month only on samples that have been supplied by Granlatte, as included in the service provided for the qualitative assessment of the data. The module allows Granarolo to either accept the milk shipment or to place it on hold for further investigation. A sample is compared with agreed range for classification from the same farmer to determine if the fat and protein content is within the limit defined by their agreement, this sample is accepted. A sample is on hold when results are out of limit. In this case the sample can be re-assessed comparing the fat and protein content with the average of previous samples with agreed range for classification. This module, in general, allows a detailed quality test of milk assigning them a value. Then, sample data are extracted from the system in a text file and sent to Granlatte. Granlatte acquire this file in SAP to match quality value with the price to pay to the farmer.

Enhanced sample acceptance has been implemented using barcodes. This speeds up the recording of the samples as they are provided with a "smart" label that associates the information relating to the producer and the product in a sample template with the associated tests. This is useful especially for the large amount of samples being analyzed using the associated tests. Automated data acquisition by the instruments has been implemented, completely eliminating the manual entry of the results.

Currently the Central Laboratory of Quality Control has been computerized with the LIMS. The LIMS is going to be extended to all sites of the group in Italy that will use it to control the production and processing of milk and also for samples to be sent to the Central Laboratory.

**Implementation:** 2014

**N° of LIMS users:** 10

**Architecture:** SaaS on Microsoft Windows Azure cloud computing platform