# T4SM
## TOOLS FOR SMART MINDS

## BMC ELETTRICA

# Case Study

# A well-conceived solution to monitor foundry ovens in an extremely easy way

## Aluminium Bozen

### Challenges

♦ Create a control system capable to manage multiple procedures easily

♦ Saving data on network servers, implementing the current plc-based technology

♦ Remote monitor of oven status in case of alarm

♦ Create a friendly and easy-to-use interface

### Solutions

♦ Create an application based on iDaq, an innovative signal platform, capable to interact with the majority of PLCs

♦ Realization of a high-performance communication module

♦ Data coming from PLCs saved on network servers

♦ Quick setup and user-friendly application

## The goals

Aluminium Bozen, a foundry specialized in extrusion for industrial application, required an extremely easy solution to manage multiple functions such as:

♦ monitoring heating and cooling of billets during the entire process;

♦ collecting data on network servers;

♦ creating an automatic report of the collected data;

♦ remote monitoring showing potential alarms occurring during the process;

♦ managing multiple ovens with a single machine.

At present, ovens installed in the majority of plants have control systems based on PLC, whose technology does not permit to manage multiple procedures easily; in addition, data saving on network servers (i.e.: specific oven zone temperature, burners status, fans, etc...) is usually very complex and limited.

## Resources

- LabVIEW 2014
- iDaq 2015
- PLC Rockwell



**aluminium bozen**

The Bolzano Plant was built in 1936 to produce primary aluminum; later, it was transformed into an extrusion facility. It has long experience in the industrial application market. The main products are heat-treated rods and bars and forging stock pre-material, produced in all the alloys and large profiles specified in customer drawings.

With its sales coverage, it is present in main European and worldwide markets.
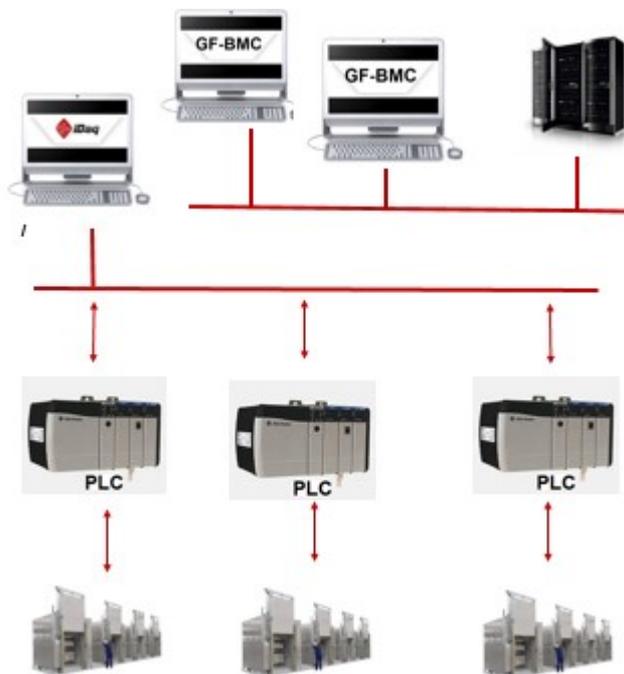
**www.aluminiumbozen.com**

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# The solution

To meet all these specific demands, T4SM realized an application (GF-BMC) based on iDaq, an innovative signal management platform capable to acquire signals coming from thousands of sensors and capable to interconnect with the majority of PLC, such as Siemens, Omron and Rockwell.

Together with BMC Elettrica, T4SM has developed a high-performance communication module which can receive and transfer data coming from PLC to all computers connected to the network, to manage oven cycles.

The solution can be installed everywhere on the LAN and can manage from one up to three ovens simultaneously. At the end of the heating cycles reports are automatically created in PDF format and saved in the company server.

BMC Elettrica is founded on the combination of its partners' significant knowledge and experience in various sectors such as electrical design, cable construction, software design and mechanical assemblie.   Thanks to its highly qualified and productive heterogeneous team, BMC Elettrica has achieved significant goals after just a few years in operation. At present BMC Elettrica owns a 2000 square metres facility organised in different areas (cable construction, assembly and production) all of which are equipped with leading-edge technology equipment.

**www.bmcelettrica.it**

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TOOLS for SMART MINDS (T4SM) is a system integrator that develops software solutions for manufacturing companies.

T4SM is Alliance Partner of National Instruments and the development team consists of Certified LabVIEW Architects (CLA) who have long experience in LV Real-Time Programming and LV-FPGA.

T4SM designs from scratch to high-quality solutions easily integrable with third-party products, which help customers to shorten time-to-market of their systems.

T4SM uses the AGILE methodology for the development of software projects and the co-design of applications with immediate benefits for customers, helping them to gain a competitive advantage over competitors.

For technical support and product information:

**www.toolsforsmartminds.com**

TOOLS for SMART MINDS
Corporate headquarter
Via Padania, 16



# Benefits and results

GF-BMC is a ready-to-use application as its installation time is definitely short. Thanks to its intuitive and clear interface, users can set it up in complete autonomy.

To make a long story short, the daily usage, the easy management and the flexibility of this solution represent an unprecedented satisfaction factor.

To find out what is behind iDaq innovative technology, visit us at www-idaq-datalogger.com and download a trial version for free.