



TOOLS for SMART MINDS

Case Study



Complete control of the entire production process

Bonpress srl

Goals

- Complete control of the manufacturing process
- Digitizing data from operators and machinery
- Production cost expertise
- Facilitated interfacing with the company's management software
- Human error removal
- Agile data management between production departments and administrative offices

Solution

Mainly based on a system, consisting of iDaq and Digital Factory 4.0, which communicate with the machinery and the company's MES.

There were additionally developed Production Management and Operator Panel systems.

Resources

- iDaq
- Digital Factory 4.0
- Production Management
- Operator Panel

The challenge

For over 20 years **Bonpress** is a leader in the **brass hot forging industry**.

Bonpress requires **complete control of the manufacturing department**, including **order planning** and **data collection** from operators and machinery. Besides, there is a necessity to control the **production costs** in terms of electricity and gas consumption as well as **interfacing** with the company **management software**.

For this purpose, it is necessary to **interconnect** the **forging** and **trimming machines** in Bonpress's production department. TOOLS for SMART MINDS is asked to create a **complete solution** for the **360° control** of the entire **production flow**: from the order reception on CRM to the production planning and machine assignment, up to the machine launch.

Hot moulded and forged brass components

BP. BONPRESS

Bonpress has been for 20 years a leading player in the market of brass hot forging.

As a family business and thanks to passion, entrepreneurship, continuous technological investments, and manufacturing diversification, since 2002 Bonpress has entered a solid growth path and now is considered a reference company for hot stamped parts in brass and non-ferrous alloys.

Bonpress's strong points:

- Design and construction of custom dies.
- Exceptional customer care and availability.
- Guaranteed continuous control of every production detail.

Bonpress S. r. l.
Via Mondalino Sopra ,7
25070 Preseglie (BS)
Tel 0365 862396

info@bpbonpress.com

<http://www.bpbonpress.com/it/index.html>

The Solution

To satisfy Bonpress's request, we used the already developed and extensively tested **T4SM software: iDaq and Digital Factory 4.0**, reaching our goals with a **complete and scalable solution** in a short time. These software solutions allow respectively to **communicate with the machinery** and **control the entire plant in real time**. All solutions have been tailored according to Bonpress's needs to simplify and increase the efficiency of the entire company.

iDaq is the fastest **data acquisition and recording tool**. With its advanced **real-time diagnostics** functions, iDaq allows production managers to immediately **check the machine status** and its eventual **errors**.



Hot brass stamping



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
25030 Castel Mella
Brescia (Italy)

To have the **complete traceability** of the **production process**, obtain all the information to set up the **best business strategy** and to **manage** all the **production costs** promptly, all the available operating parameters are being measured for each machine.

Digital Factory 4.0 is the **T4SM's software solution** for **real-time control** of the **manufacturing plant** that allows simple and intuitive **visualization** of any available **data**.

Thanks to Digital Factory 4.0's versatility, the communication between machines, corporate CRM or MES, and operator panels on various machinery is fast and efficient, facilitating the work of the entire staff.

It is a **modular** and **intuitive solution** that can be easily used by different company members:

- **by the administration** for the machinery **orders scheduling** as well as for the **production data** and **costs analysis**.



Robotic blanking of brass castings



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

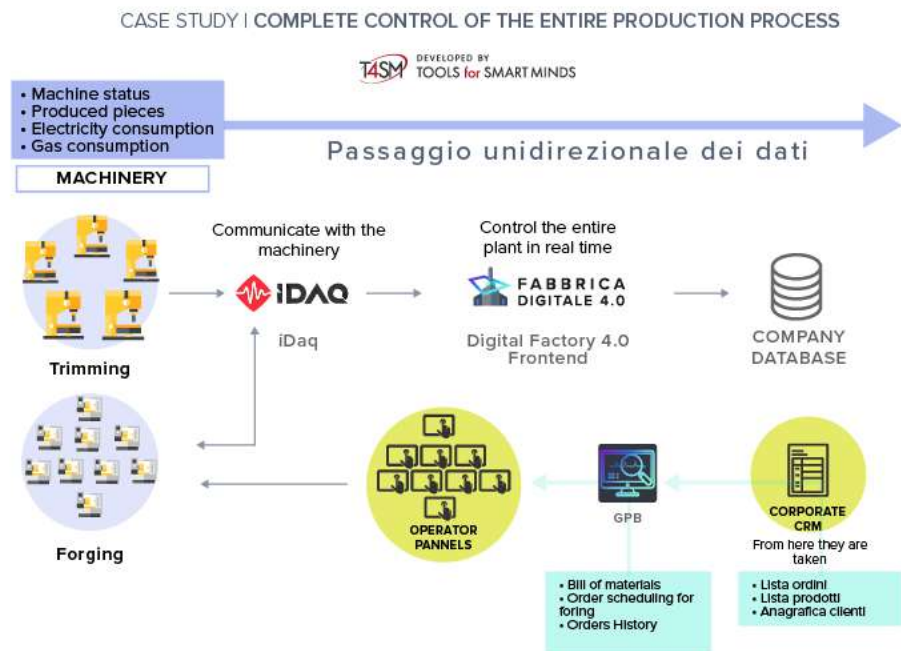
Corporate headquarter
Via Padania, 16
25030 Castel Mella
Brescia (Italy)

- by the technical department to optimize the mechanical machining and die control of the items to be produced, previously defined, and planned by the administration.
- by the manufacturing department to optimize the brass bar preparation procedures prior to production launch.

In addition, the **bill of materials** is synchronized with the company's management software, while the estimated dates of order completion are based on the work schedule. Digital Factory 4.0 includes the **warehouse management** system with the raw materials (brass bars) estimated supply, based on the scheduled orders.

Digital Factory 4.0 includes a tool for the collected data analysis to trace and track manufacturing timings, machinery downtimes, consumption, and efficiency of each interconnected machine.

All operators can easily run orders directly on the machine board and access multimedia files (schematic machinery designs, user guides, etc.).



Bonpress's complete solution diagram



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
25030 Castel Mella
Brescia (Italy)

Benefits and Results

All the objectives set have been achieved, allowing Bonpress to gain multiple benefits immediately:

- **360° control of the entire production flow:** all the work phases information (order reception on the CRM/MES, planning and machine assignment, machining process) are at managers' disposal to define the best strategies.
- **Human error removal:** the digitization of process data has improved production efficiency at all levels.
- **Hold time removal:** the data are immediately available for inspection.
- **Traceability of everything that happens:** with a single click, you can view all the information you want, available over time.
- **Workflow simplification:** All T4SM solutions feature easy and intuitive interfaces to make users productive from the very beginning.

Client's Feedback

"Thanks to T4SM, we've integrated within our process a system, able to control the production status, to monitor energy consumption, and to control product and order costs and margins.

The System developed by T4SM is able to offer a complete overview of the operations progress and business results, facilitating the property's decision-making processes.

T4SM understands the company's needs and quickly meets them by using a highly professional staff. "

Roberto Cimaschi
Operation Manager
BONPRESS Srl