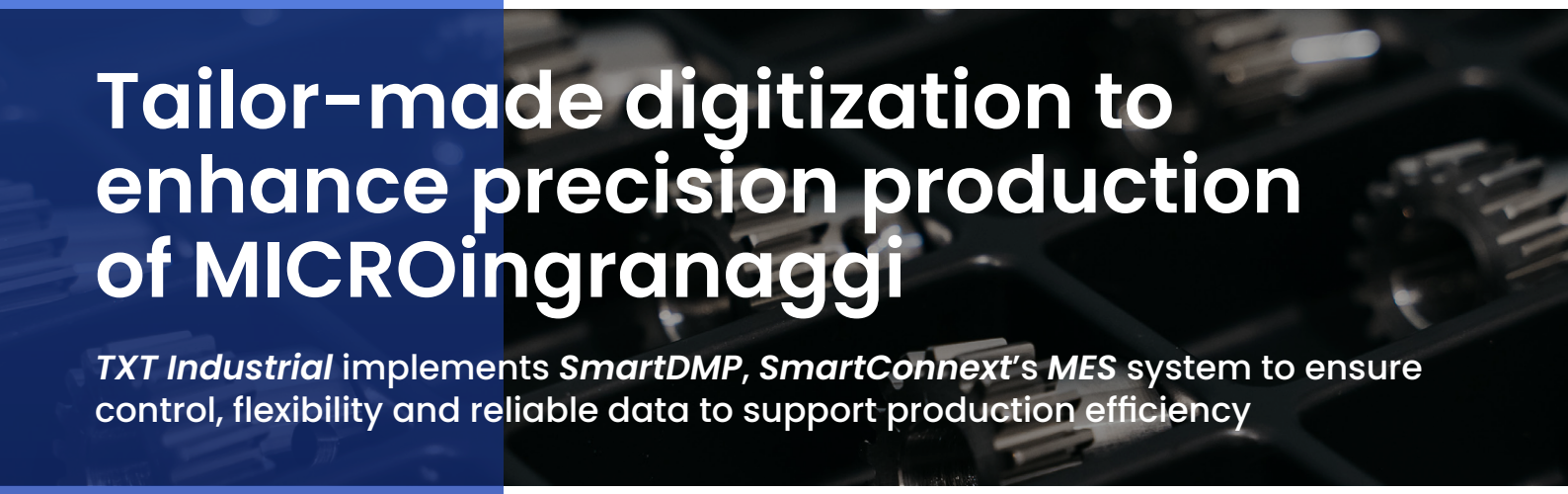
MICROingranaggi

Buccinasco, Milano
Precision Micromechanics and Electromechanics

Tailor-made digitization to enhance precision production of MICROingranaggi

TXT Industrial implements ***SmartDMP***, ***SmartConnext's MES*** system to ensure control, flexibility and reliable data to support production efficiency



Project Details

Customer name:

MICROingranaggi

Location:

Milano, Italia

Sector:

Precision Manufacturing (Automation, Avionics, Aerospace)

Solutions:

Software MES - SmartDMP

Output:

Real-time monitoring of 21 work centres and quality integration

MICROingranaggi

Founded in 1973, MICROingraggi is a leading Italian company in the design and production of precision mechanical microcomponents. Active in highly critical sectors such as avionics, aerospace, industrial automation and home automation, the company combines artisanal skills with advanced technologies, certified by the EN 9100 and UNI ISO 45001 standards. In a production environment characterized by medium-small batches and high operational variability, the company has embarked on a digital transformation journey to overcome the rigidity of standard market solutions.

The Technological Solution

MICROingranaggi chose **SmartDMP**, **SmartConnext's MES** system, **TXT Industrial's** modular ecosystem designed to adapt to complex manufacturing processes without imposing rigid models. The project included:

- **Real-time monitoring:** direct integration with 13 dentistry machines and 8 lathes for automated data collection.
- **Complete integration:** replacement of the previous platform with a system capable of bringing together production, planning and quality department.
- **Operational flexibility:** a "tailor-made" solution capable of managing the frequent tooling changes typical of contract production.

TXT INDUSTRIAL

Year of completion 2026
industrial@txtgroup.com

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"The collaboration with MICROingrnaggi embodies our vision of a truly tailor-made MES, designed to adapt and not to force companies into rigid models. It is a virtuous example of how technology and flexibility can coexist in precision manufacturing".

Mirco Mariani,
Managing Director TXT Industrial

21

Monitored machines (13 gear hobbing machines and 8 lathes)

5-7

ooling changes per week per resource

6 months

Duration of project development since the assessment

Key Achievements

The adoption of **SmartDMP** has provided **MICROingranaggi** with greater data robustness and superior process control

The main benefits include:

Reliability:

Elimination of uncertainties thanks to real and objective production data

Scalability:

The system provides a solid basis for future developments in the assembly and warehouse departments

Strategic Vision:

Implementation is the first step towards an integrated digital ecosystem that will include Product Lifecycle Management (PLM) systems and Business Intelligence solutions

"The ability to customize the MES, combined with the constant technical support of TXT Industrial, has allowed us to create a tool truly suited to our needs. We now have the first real production data and are close to setting standards and targets: from here we can concretely measure future organizational efficiency and improvements".

Marco Garavaglia
Innovation & Marketing manager | MICROingranaggi

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