

# THE CHALLENGE OF DIGITIZING THE MANUFACTURING INDUSTRY

The digital automation and data scientist team of IDEKO is in charge of digital transformation of the manufacturing industry by means of digital twins and artificial intelligence for manufacturing.

## IDEKO OFFERS THE SOLUTION THAT ADAPTS TO YOU:

01

### HYPER CONNECTED FACTORIES *The Digital Factory*

- Smart Connected Products.
- Connected Machines.
- Smart Factory.
- Digital Services.



02

### DIGITAL AUTOMATION *Ubiquitous Access Distributed Control Based on IoT Data*

- Data Acquisition, Persistence and Visualization.
- Digital Twin. (Software / hardware in the loop for virtual commissioning).
- Control System.



03

### AI for MANUFACTURING *Data Driven Business Models*

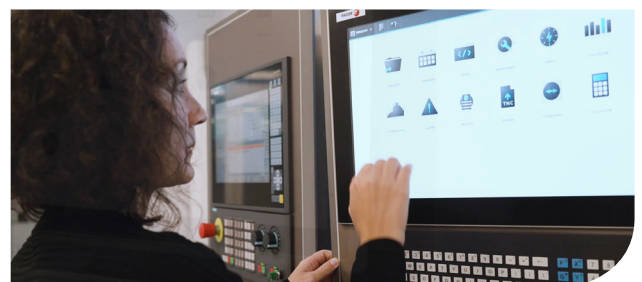
- Smart Monitoring
  - Condition Monitoring.
  - Process Monitoring.
- Smart Maintenance
  - Predictive Maintenance.
- Zero Defect Manufacturing
  - Autonomous Quality.



04

### SMART HMI *Extended Machine Functionalities*

- Maintenance Apps.
- Machining Apps.
- Production Scheduling Apps.
- Machine Utilization Apps.
- Factory Integration Apps.



IDEKO is a **Research Center** that specialises in industrial production and manufacturing technologies. Our **4 Research Groups** make up the backbone of our center's activity:

### A.

#### DYNAMICS & CONTROL

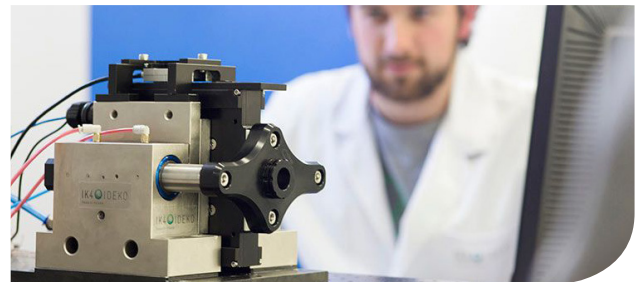
Description and optimisation of dynamic behaviour of machines and processes.



### B.

#### DESIGN & PRECISION ENGINEERING

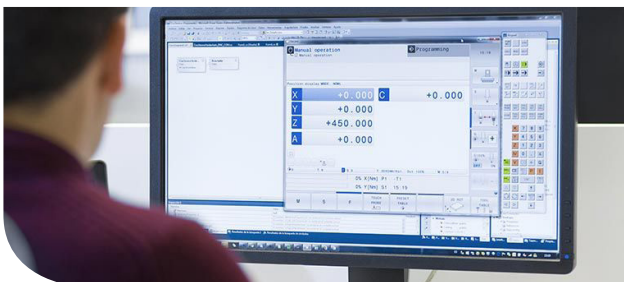
High-performance product design and development.



### C.

#### ICT & AUTOMATION

ICT for manufacturing and industrial production technology.



### D.

#### MANUFACTURING PROCESSES

Advanced technologies for manufacturing and process improvement.



## CNC & DIGITAL FACTORY LABORATORY



### Develop and experiment

within the environment of

### industry 4.0

comprehensive automation solutions in the context of the current ongoing shift toward digitization of production processes.