

esi

R O B O T I C S

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ESI ROBOTICS

ESI is a technology-based company, created in 2007, to support companies, making them **more competitive and profitable**. We create **custom solutions**, tailored for each client, which allow our partners to achieve high levels of competitiveness and performance, valuing time, increasing productivity and quality.

Research and Development (R&D) can and should be used so that industries improve their systems and methods, to progress in internal and organizational processes.

We carry out production studies for problem-solving, automation and process acceleration, resulting in **cost reduction and value creation**.





WHAT WE DO

INNOVATION AT YOUR SERVICE

R&D PROJECT

3D | 2D

We have a **Research and Development (R & D)** department, with a multidisciplinary engineering team capable of developing and designing any type of system, according to the specific needs of each client.



ROBOTICS

CUSTOM SOLUTIONS

We have a team of specialists, capable of designing the most complex mechanical and robotic systems.

We are official integrators of the main robot brands: **YASKAWA KUKA, ABB, FANUC, UR**, and so on. The robotics technology associated with our engineers' know-how has been a successful fusion, which allows us to increase our partners' profitability rates.

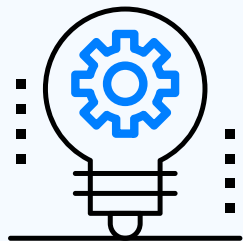


INDUSTRIAL AUTOMATION

Internally, we develop **electrical projects, electrical installations and industrial automation**. We integrate local/remote control and decision processes with the implementation of concepts related to Industry 4.0.



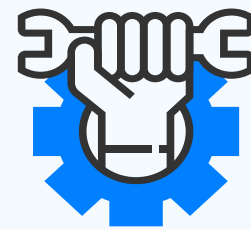
OUR PROCESS



01.

PROJECT

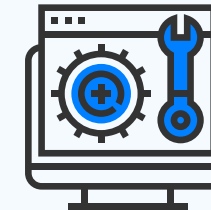
- Consultancy
- R&D
- 3D Project



02.

DEVELOPMENT

- Building
- System Installation



03.

AFTER-SALES

- Assistance Service

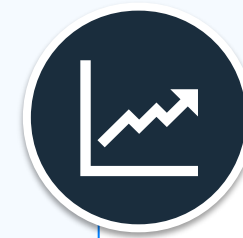
An **industrial solution, tailored to your needs**, to achieve high levels of competitiveness and productivity.

INNOVATION AT YOUR SERVICE

WHAT WE DO



PRODUCTIVITY



VALUE CREATION



CUSTOM SOLUTIONS



COST REDUCTIONS

DRIVING **AUTOMATION** EVERYWHERE

OUR COMPANY

OFFICES

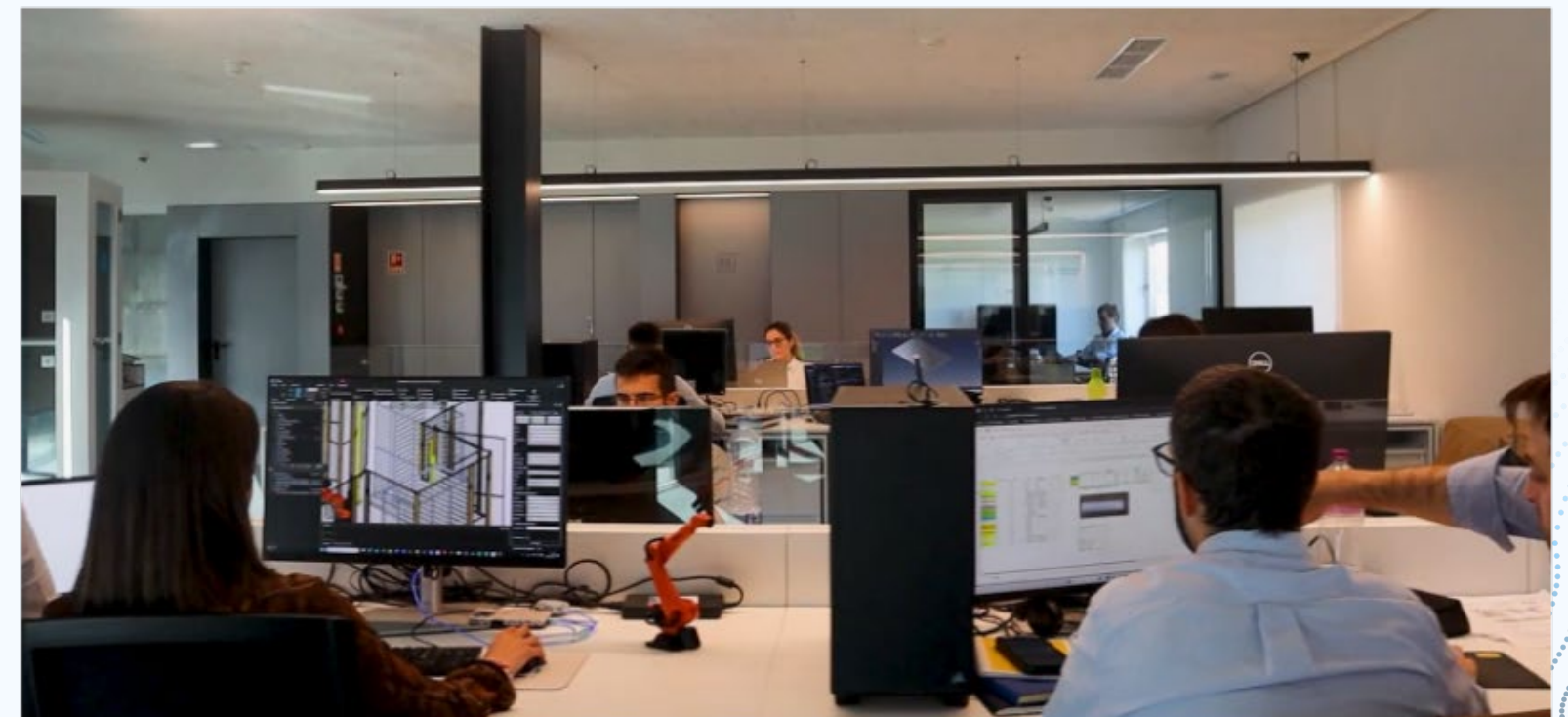


PRODUCTION SITE

OUR COMPANY

We have **offices** and a **production area** that reflect our commitment to **innovation** and **excellence**.

In the offices, we develop **tailored solutions** for each company. In the production area, these solutions are **assembled and rigorously tested**, ensuring quality and performance before being delivered to our clients.



ESI ROBOTICS

INTERNATIONAL



AREAS OF ACTIVITY

DRIVING AUTOMATION EVERYWHERE

All the **know-how** accumulated over the years of R&D projects in the most diverse industrial sectors, allows us to be a partner of excellent value in consultancy and project management.

We work together with our customers, in the **analysis of production processes**, for constant improvement. We apply our know-how to innovative systems that allow cost reductions and value creation. There is a Win-Win relationship, which results in increased productivity for our customers.



AUTOMOTIVE



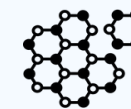
FOOD



METALWORKING



MEDICAL



POLYMERS



CONSTRUCTION



WOOD



CORK



CERAMICS



SERVICES

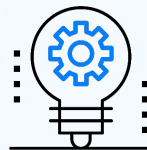
DRIVING AUTOMATION EVERYWHERE



CONSULTANCY | PROJECT MANAGEMENT

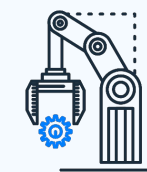
We offer a complete consulting service in the design and implementation of industrial units. We have a team with knowledge and experience in various industrial sectors, capable of developing a work of excellence from design, project, and planning.

We perform the global and integrated management of all necessary activities and parties involved.



R&D | RESEARCH AND DEVELOPMENT

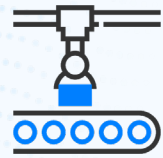
ESI develops Research and Development projects for the automation and optimization of production processes. We carry out R&D projects, providing our clients with a differentiating service tailored to their needs, ensuring greater profitability and competitiveness. Your obstacles are our challenges!



ROBOTIC CELLS

The integration of robots is key to preserving industries.

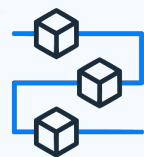
Robot integration is fundamental for the development and preservation of industries. At ESI we work with all the main brands of industrial and collaborative robots for the development of custom-made robotized cells. Robotics guarantees the competitiveness of your industry, production with reduced costs and fast amortization of investments. It can be applied in several industrial sectors and perform different tasks, such as assembly operations, transport, machine tending, cutting tasks, welding, and palletizing, among others.



INDUSTRIAL AUTOMATION

We design and implement complete industrial automation systems, from PLC programming to switchboard production, design, and installation of electrical and communication networks.

We keep track of the development and evolution of technology. We study the best options for the development of precise, reliable, and suitable solutions for your industry. We integrate the best equipment, the most appropriate machines, robotics solutions, and artificial vision for further digitalization and production control.



PRODUCTION LINES

We develop complete production lines or integrate equipment into existing ones.

We conduct production studies to identify the processes involved and understand the points for improvement. After a careful and complete analysis, we propose specific solutions. We design and produce specific machines, especially projected to improve performance and respond to the most adverse needs of our customers.



MAINTENANCE

After the commercialization of our solutions, we offer an after-sales service. We offer complete maintenance services; we offer high-quality technical service. We have developed a digital platform with which we can obtain information from machines and robots in real-time. This is an exceptional technological tool for predictive maintenance.

INDUSTRY'S DIGITALIZATION



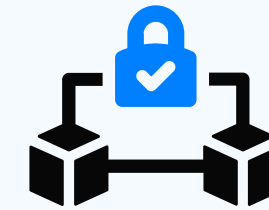
Real-time data



Custom Dashboards



Data collection for
predictive maintenance



Digital Safety



Remote Monitorization



SMART FACTORIES

Aiming to create more **efficient, automatic and flexible production processes**, through the connectivity and communication of machines and equipment, smart factories have emerged to promote more **sustainable and flexible production**.

The fact that it is possible to **collect data in real time** allows for more effective management, enabling informed decisions to be made. In essence, they reduce costs and speed up production processes.



SMART FACTORIES AND SUSTAINABILITY

ALLIES FOR THE FUTURES



Energy Efficiency



Intelligent Production



Circular Economy



MISSION

MAKING COMPANIES MORE COMPETITIVE AND PROFITABLE

We look at customers as partners in the constant evolution of methods and systems.
We develop projects tailored to each client, an exclusive service, which allows our partners to achieve high levels of competitiveness and performance

HOW?

RESEARCH AND DEVELOPMENT (R&D)

- ✓ Processes Improvement
- ✓ Improvement of systems/methods
- ✓ Product Innovation
- ✓ Process Innovation

RESULTS:

COST REDUCTIONS AND VALUE CREATION

- ✓ Increased product quality
- ✓ Problem solving
- ✓ Reduction of production costs
- ✓ Productivity increase

VALUES



PASSION

Personal commitment to our work.



EXCELLENCE

We are committed to quality, perfection is our constant goal.



HONESTY

All the relationships we establish are based on ethical and integrity principles. We establish bonds with trust.



AVAILABILITY

We accompany the customer for full satisfaction.



SAFETY

Full commitment to prevent accidents.



SUSTAINABILITY

Concern for the environment and the impact of our actions and equipment.



CERTIFICATIONS

SGS / ANI

WE ARE CERTIFIED BY SGS

QUALITY, ENVIRONMENT AND SAFETY MANAGEMENT SYSTEMS

ESI has successfully completed the certification process: **Quality, Environmental and Safety Management System** under ISO 9001:2015, ISO 14001: 2015 and ISO 45001:2019 by SGS. We were audited in December 2022, with no non-conformities recorded.



SEAL OF RESEARCH AND DEVELOPMENT – ANI

SUITABILITY IN THE PRACTICE OF R&D ACTIVITIES

ANI (Portuguese National Agency for Innovation) has granted ESI the recognition of suitability to practice **R&D (Research & Development)** activities in the following technical-scientific domains and areas of activity: Production Technologies and Product Industries; Development and efficiency of Production Systems.



SUSTAINABILITY

OUR ROLE

For ESI, **the sustainable development of the planet** is a priority. The solutions we develop privilege economic development combined with environmental protection. We recognize our role, and we are aware of the impact of our actions and through our capacity for innovation, we contribute to a more **sustainable and inclusive future**.



STRATEGIC PARTNERSHIPS

EDUCATION, TRAINING AND RESEARCH

- U.M. | TECMINHO
- FEUP | INEGI
- UNIVERSIDADE DE COIMBRA
- TÉCNICO LISBOA
- FAUP
- IPCA
- CITEVE
- CENTI



- RESEARCH / PATENTS
- INTEGRATED MASTER'S DEGREES
- CURRICULAR INTERNSHIPS
- PROFESSIONAL INTERNSHIPS
- ROBOTICS



ESI SOLUTIONS

SOME EXAMPLES OF OUR PORTFOLIO

CORK INDUSTRY

CORK STOPPER PACKAGING CELL

INTERNATIONAL PATENT

- 30% REDUCTION IN TRANSPORT VOLUME
- ARRANGEMENT OF CORKS IN BOXES
- FULLY AUTONOMOUS CELL
- ROBOTIC PALLETIZING SYSTEM
- CONTAINER-OPTIMIZED PALLET
- FOOD-GRADE COATED BOXES



Efficient and sustainable packaging

Patented robotic system

ROPE INDUSTRY

FULL AUTOMATIC LINE

- TRANSPORTATION
- HANDLING
- INDIVIDUAL PACKAGING
- BELTING
- PALLETIZING
- AUTOMATIC TRANSFER
- AUTOMATIC WRAPPING
- PALLET STACKING



**End-of-line
automation**

**Industry 4.0: Automatic management of
300+ product references**

CNC MACHINING LINE

AUTOMATIC LINE FOR MASS PRODUCTION

- PART HANDLING
- CNC MACHINE FEEDING
- WASHING
- QUALITY CONTROL



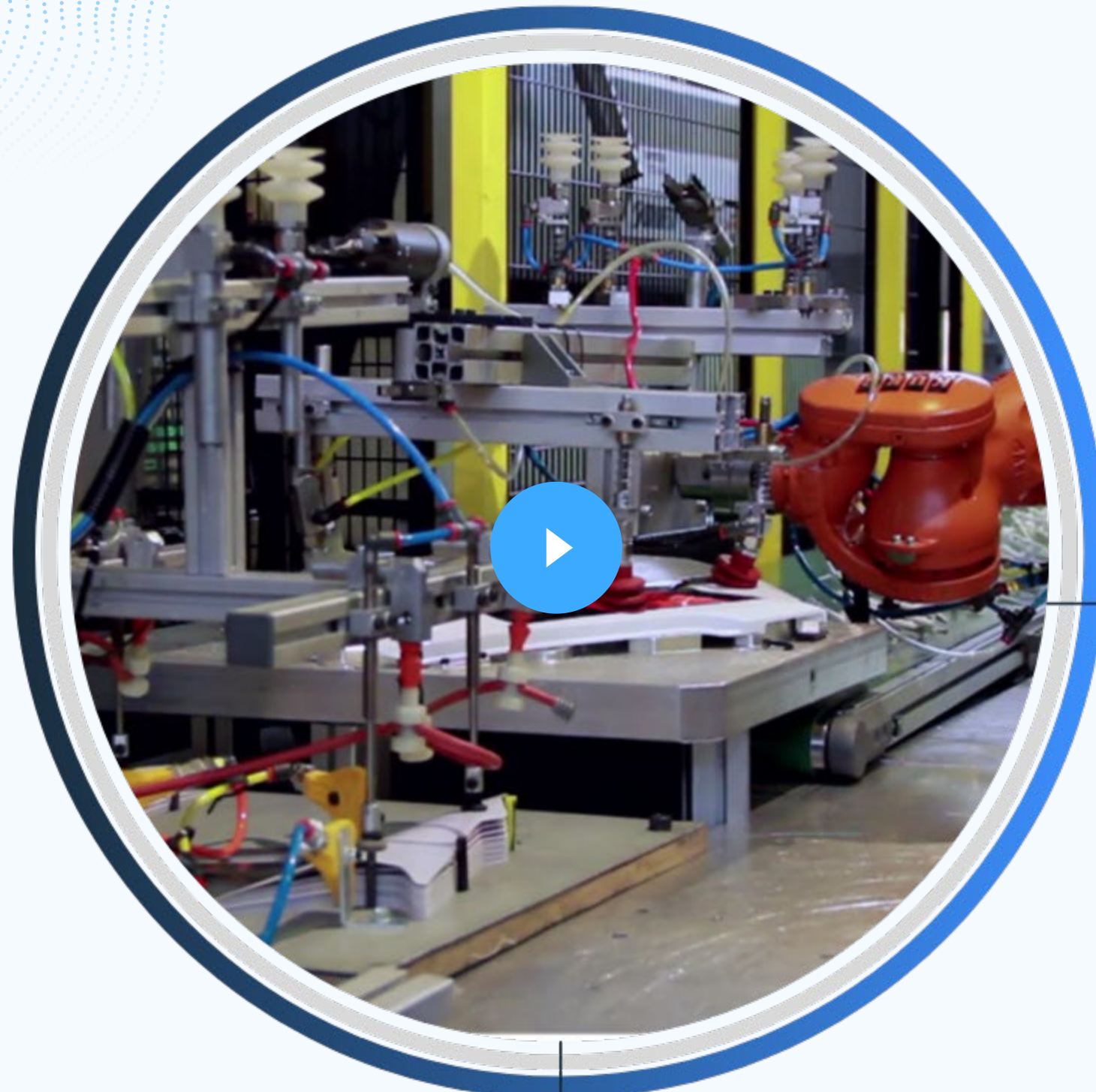
Aluminum parts for
the automotive
industry

Automated quality
control

PLASTICS INDUSTRY

IMPLEMENTATION OF IPD TECHNOLOGY INMOLD PLASTIC DECALS

- TRANSPORT
- MANIPULATION
- INSERT PLACEMENT
- CUTTING
- QUALITY CONTROL



Production of
motorcycle parts

Process robotization:
plastic injection

MULTI-PROCESS AUTOMATION

- Pick & Place
- Machine Vision | Quality Control
- Automatic Packaging
- Automatic Palletizing



**Two robots working in
coordination**

Multi-function grippers

FINAL ASSEMBLY LINE

METALLIC LOCK SYSTEM

- HANDLING
- WAREHOUSE
- MANAGEMENT
- ASSEMBLY
- REVITING
- QUALITY CONTROL
- INDIVIDUAL PACKAGING
- CODING
- ASSEMBLING PARTS
- FINAL PACKAGING



End-of-line
automation

Automated management
of multiple processes

ROBOTIC PACKAGING CELL

PAPER BAG PACKAGING

- Pick & Place
- Automatic Packaging
- Machine Vision | Quality Control



Handling of paper
bags

Robotics and computer vision

END OF LINE

AUTOMATIC MANAGEMENT OF 4 LINES

- ELEVATION
- HANDLING
- PALLETIZING
- PACKING



End-of-line
automation

Detergent industry

FOOD INDUSTRY

PICK & PLACE ROBOTIC CELL

- HANDLING OF MUFFINS FROM TRAYS TO "FLOWPACK" PACKAGING MACHINE
- AUTOMATIC TRAY MANAGEMENT
- RETURN LINE



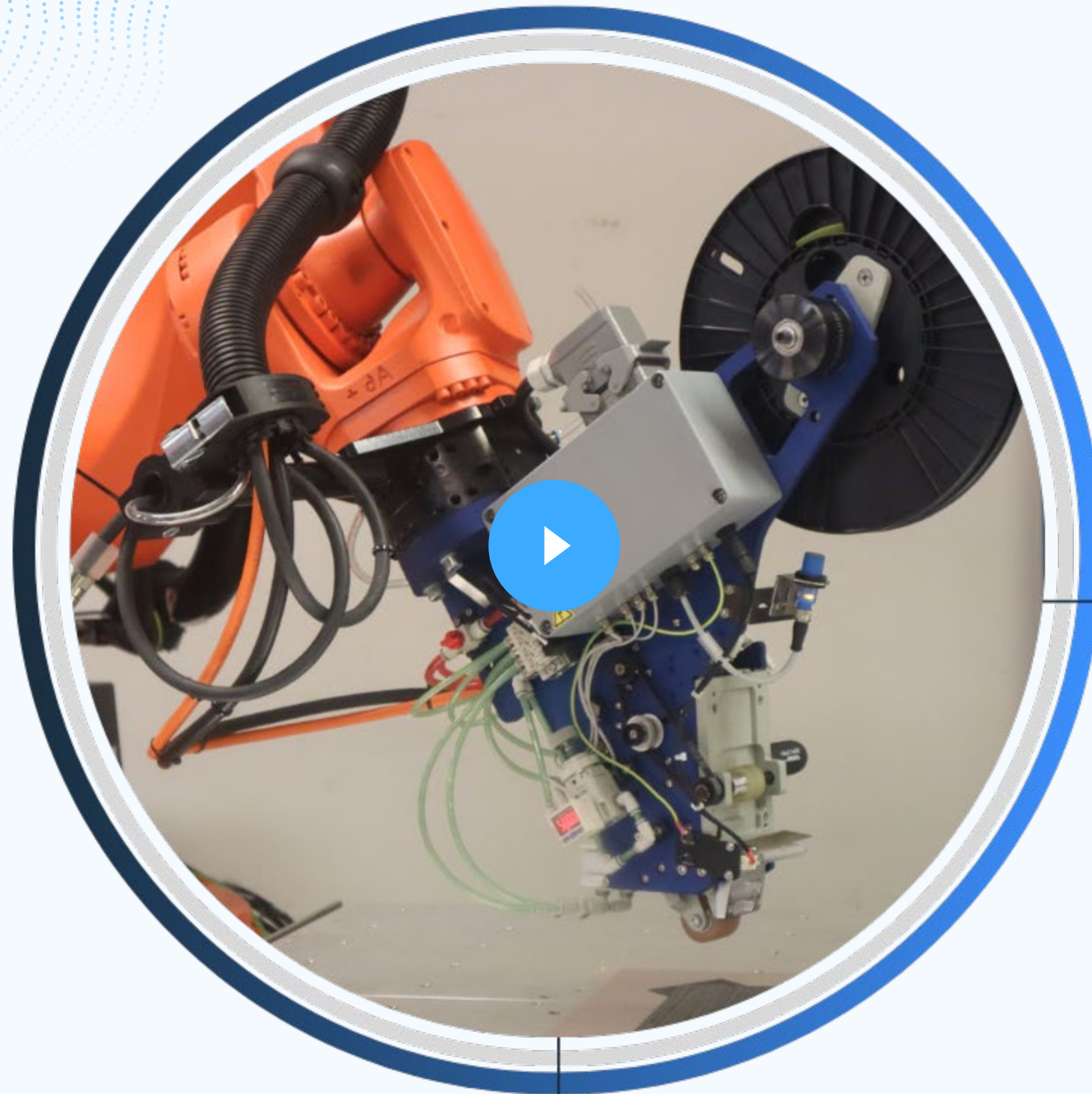
End-of-line
automation

End-of-line automation
Vacuum gripper for muffin handling

DIGITAL MANUFACTURING CELL

FIBER PLACEMENT

- FIBER PLACEMENT IN STATIC MOLDS
- FIBER PLACEMENT FOR REVOLUTION COMPONENTS.



Automation and
innovation

Carbon part production
Aerospace industry

DIGITAL MANUFACTURING

OUR ROBOTIC SOLUTIONS

- Additive Manufacturing (3D Printing)
- Subtractive Manufacturing (CNC)
- Fiber Placement
- Hot Wire Cutting



Automation and
robotization

Digital Workflow

CERAMIC INDUSTRY

- TRANSPORT
- MANIPULATION
- PALETIZING
- PACKAGING – MULTI-PIECE PACKS



**End-of-line
automation**

**Multi-process automation
Ceramics industry**

WOOD INDUSTRY

FULL AUTOMATIC LINE

- PARTS FEEDING
- PREPARATION
- PAINTING
- DRYING
- COOLING
- SANDING
- PAINTING



Automation and
robotization

Automation and robotization
Wood industry

METALWORKING INDUSTRY

AUTOMATIC CNC TUBE BENDING MACHINE FEEDING

- MANIPULATION
- QUALITY CONTROL
- WRAPPING



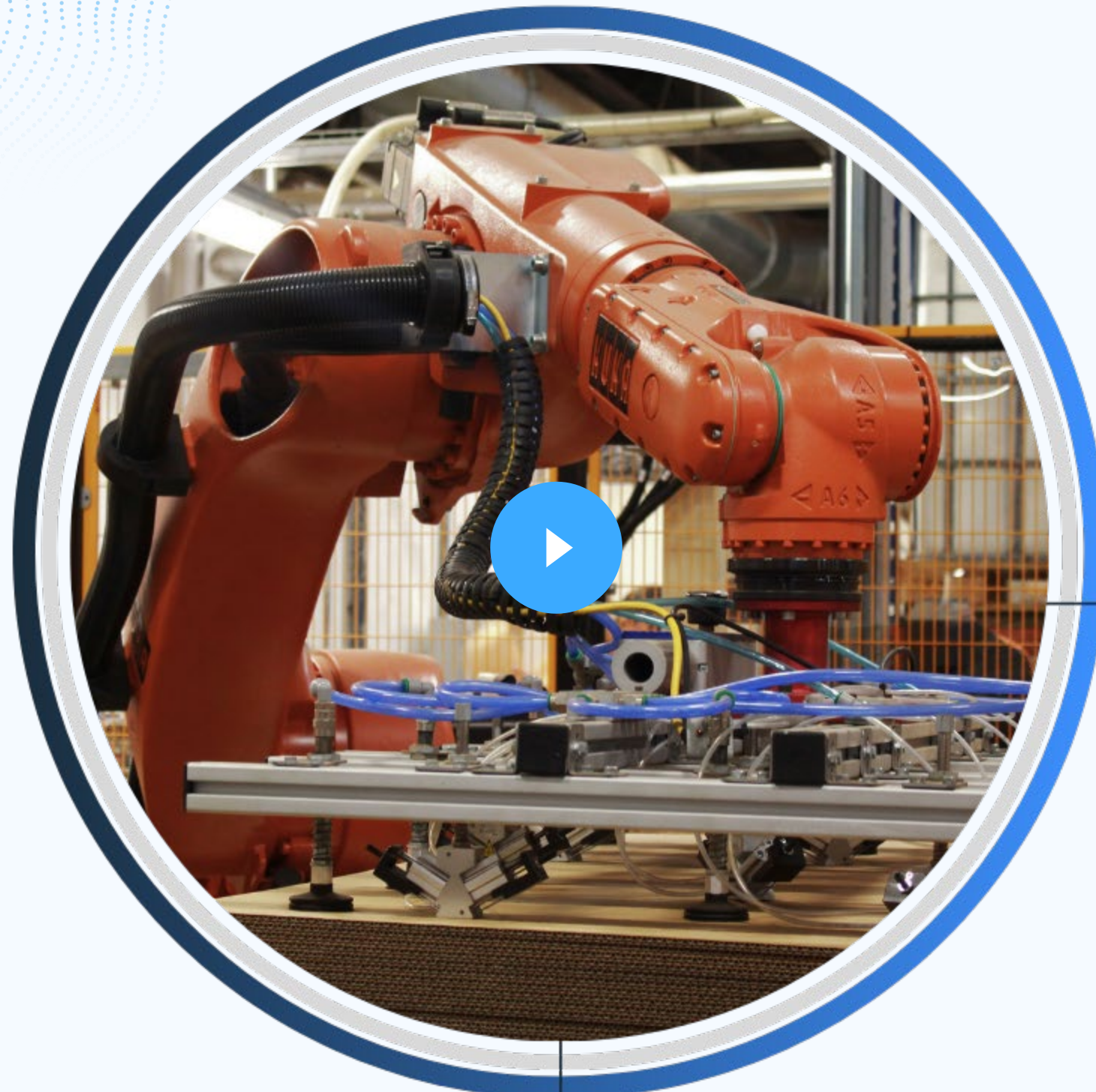
Robotic
cell

High-performance and comprehensive
tube bending process

CORK INDUSTRY

AUTOMATIC FEED CELL+ PALETIZATION

- MULTI-FUNCIONAL GRIPPER



End-of-line
automation

Robotic cells

ROBOTIC TUBE PALLETIZING

INDUSTRIAL SOLUTION FOR CARDBOARD TUBE PRODUCTION

- INCREASED PRODUCTIVITY AND PRODUCTION CAPACITY
- IMPROVED WORKER ERGONOMICS, REDUCING THE RISK OF INJURIES
- ERROR REDUCTION, LEADING TO LESS WASTE
- LOWER ENVIRONMENTAL IMPACT



End-of-line
automation

Automatic palletizing
Carton industry

ROBOTIC ADDITIVE MANUFACTURING

3D PRINTING

- 3D PRINTING WITH CEMENTITIOUS MATERIALS
- CONSTRUCTION OF BUILDING ELEMENTS: PILLARS, WALLS, BEAMS, ETC.
- THE ROBOT IS EQUIPPED WITH A CONTINUOUS CEMENT EXTRUSION SYSTEM WITH REAL-TIME DATA MONITORING.



Construction
sector

Synergy with the
University of Minho

ROBOTIC PALLETIZING OF MILK POWDER BAGS

INDUSTRIAL AUTOMATION IN THE FOOD INDUSTRY

- TWO TYPES OF BAGS: 10 KG AND 25 KG
- THE PALLETIZING PROCESSES VARY DEPENDING ON THE TYPE OF BAGS THE ROBOT IS HANDLING
- MULTI-FUNCTION GRIPPER.



End-of-line
automation

Palletizing of powdered milk bags
Food industry

BOX PALLETIZING

ROBOTIC CELL

- END-OF-LINE AUTOMATION
- ORGANIZATION OF THE PRODUCTS (BOXES) ON WOODEN PALLETS, ENSURING THE SAFETY OF THE PRODUCTS DURING TRANSPORT AND HANDLING



End-of-line
automation

Detergent industry



CONTACTS

*A TEAM OF PROFESSIONALS ALWAYS AVAILABLE TO
HELP*

CONTACTOS



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