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ADVANCED TECHNOLOGY SERVICES

Productivity improvement - Lean Manufacturing

We have extensive experience in the deployment of 5S, SMED, TPM, and KAIZEN for companies; we analyse and propose improvements on plant layouts, optimise warehouse logistics and design reliability-based maintenance systems (RCM) mostly for small and medium enterprises.

Industrial Safety

ITCL is a national reference in this field, with extensive experience in working with national companies of every size and from every sector.

We help companies obtain mandatory and voluntary certifications of products, the CE Marking, as well as auditing occupational risk prevention systems.

Industry 4.0: Connected industry

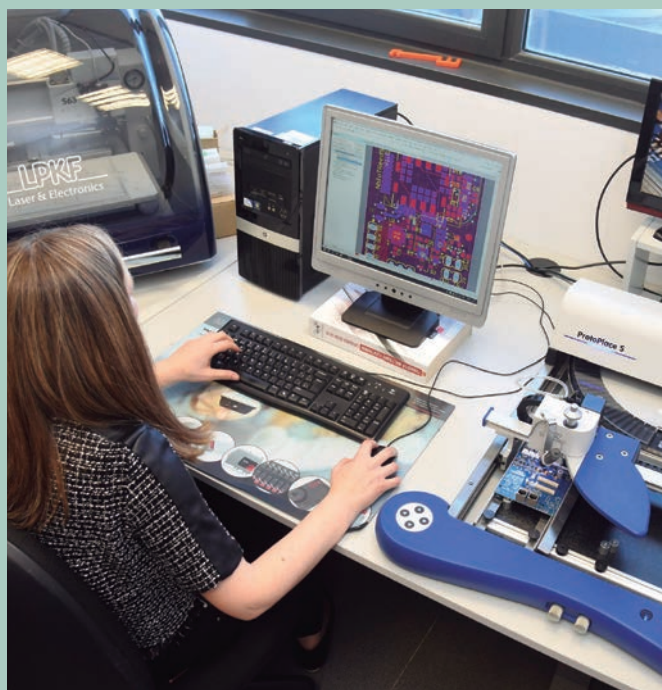
We have large experience in different enabling technologies of Industry 4.0:

- Design and deployment of MES solutions, e-factory and SCADAS.
- Digital twins.
- Big Data, Smart Factories and IoT.
- Business Intelligence and Business Analytics for plant decision making.

BUSINESS STRATEGY SERVICES AND COMPETITIVE INTELLIGENCE

We rely on methodologies and experience that allow companies to offer valuable services in the following fields:

- Strategies of industrial diversification and identification of new business areas for the company.
- Technology market surveillance, information through personalised alerts.
- Project proposals for research and innovation funding and application of tax incentives for investments in R&I.
- Analysis of the results of innovation in the company, preparation and processing of patent applications and utility models.



R&I AREAS

Virtual Reality (VR) and Augmented Reality (AR) Research Group)

Development of simulators for training in industry, transport, defence and health sectors.

- Technical user manuals and 3D interactive manuals for industrial maintenance.
- Virtual Reality and Augmented Reality applied to Serious Games, training, heritage, marketing, tourism and museums.
- Computer vision and Machine Learning: advanced recognition algorithms - defect detection, classification, surveillance and biometrics, facial reconstruction, 3D model capturing, indoor tracking and environment recognition, visual odometry



Energy Technologies Research group

- Expert systems for modelling, supervision and integrated control of energy consumption (industrial refrigeration, heating, steam, compressed air) in large industrial facilities or tertiary sector.
- SIGE energy management systems. Decision making software based on Artificial Intelligence.
- Innovative systems for the implementation of renewable energies.



Applied Electronics and Artificial Intelligence Research Group

- Design and prototyping of Printed Circuit Boards and advanced electronic devices for industrial equipment and for telemedicine, including biosensor.
- Microprocessor programming for data acquisition, monitoring and communication.
- Data analysis in intelligent systems: Custom algorithms and Experiment design. Predictive Maintenance.
- Blockchain
- Custom developments for sustainable mobility of domestic and collective Electric Vehicle Charging Systems, load demand analysis, carpooling, car sharing, etc.
- Intelligent system design for Precision Agriculture, infrastructure and cities (SmartCities).



ITCL is a foundation established in 1989 in Burgos, by Associations of Industrial Engineers. Its Board consists of major regional and national industrial companies. It features a cross-sectoral approach, with regional, national and international scopes.



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