

PRESS RELEASE

Ibermatica's Industry Division and Tekniker join forces in strategic Industry 4.0 projects

- *Through the Manufacturing Operational Management Expertise Center both organisations deliver integral 4.0 solutions to the industrial sector*
- *It reaffirms the open collaboration model established between manufacturers of digital solutions, production resources and technology centers the initiative is based on*

[Eibar, 21 October 2020] – In the Industry 4.0 environment, collaborative actions involving leading players in the Basque industrial environment are crucial to develop global solutions that improve competitiveness, production efficacy, quality and maintenance practices. Consequently, it is essential to further knowledge transfers between leading experts in areas such as automation, robotics, Big Data and MES systems, four of the most essential drivers required to digitise the industrial sector.

It was towards the end of 2018 when the Manufacturing Operational Management **(MOM) Expertise Center** was set up to achieve this goal via a collaborative action involving the industrial division of **Ibermática**, an IT company, and the **Tekniker** technology centre, member of the Basque Research and Technology Alliance (BRTA), that has provided a forty-strong multidisciplinary team together with facilities and equipment worth more than 2 million Euros located at the organisation's laboratories and currently focused on Manufacturing and Automation Technologies and Industrial Robotics.

The main challenge of this initiative is to offer the **industrial sector integral 4.0 solutions** and a single proposal covering different technologies and tools: automation systems, IT platforms TI, Big Data solutions, collaborative robots and smart machines.

It is in this context that new projects have been commissioned to underpin this dynamic value contribution based on an **open collaborative model** established between manufacturers of digital solutions, production resources and technology centres.

Flexible and adaptative monitoring in machining processes

The **TECH4CUT project** (HAZITEK programme) lies within the framework of the area of process engineering. Its aim is always to guarantee the integrity of machined components.

Consequently, research actions will focus on developing new process behaviour models based on theoretical modelling and real information for parts that have already been machined as well as on implementing new monitoring standards for any machines, systems and elements involved in a machining process. The spotlight will also be put on how monitoring must be performed in terms of the cutting process to obtain a model capable of predicting process outcomes more accurately and efficiently compared to what is currently available in the market.

4.0 solutions for the aeronautical sector

The **ABIO project** (HAZITEK) is focused on how the machines and systems to manufacture aeronautical components competitively can be developed. Therefore, attention has been paid to concepts such as quality, adaptability, proactivity and traceability in the aeronautical sector.

The purpose of the project is to identify, develop and evaluate new concepts, products, solutions and advanced services adapted to the aeronautical sector that will allow Basque manufacturers of machined components to improve their competitiveness and become the first purchase option in sector that operates in a global market.

Laying the foundations for the IoT platform of the future

Member companies of the so-called 'Smart Factory Alliance' are collaborating in the **PILAR project** (HAZITEK programme) whose aim is to investigate and develop an interoperable, deterministic and distributed system of connectivity, computation and artificial intelligence for the industry.

Within the scope of this initiative, actions will focus on investigating communications with the hardware/software nodes that will provide the foundations required to build future networks

and develop enabling AI technologies capable of adapting the models and parameters of industrial systems in a dynamic and continuous manner without human intervention that can run on a distributed infrastructure efficiently and safely.

Moreover, Virtual Commissioning options for these solutions will be analysed to speed up fine-tuning and implementation so as to minimise interferences with physical facilities.

Advanced AI technologies to improve manufacturing processes

Lastly, and within the scope of the European Horizon 2020 programme, Ibermática's industrial division and Tekniker are collaborating with the Continental tyre production plant located in Sarreguemines (France) via the **AI-PROFICIENT project**. The ultimate goal of this initiative is to implement advanced AI technologies for industrial manufacturing processes to improve production execution and planning and also enhance collaboration between human beings and machines.

By making the most of AI capabilities and human knowledge, AI-PROFICIENT will develop proactive monitoring strategies to improve manufacturing processes in terms of three main elements: production efficiency, quality and maintenance.

Concerning Tekniker

With nearly 40 years of experience in the field of applied research and knowledge transfer, Tekniker has achieved a high degree of specialisation in four major areas (Advanced manufacturing, surface engineering, product engineering and ICTs) and can now make available its cutting-edge technology to customers to meet their needs. The technology centre is a member of the Basque Research and Technology Alliance (BRTA).

Concerning Ibermática's industry division

Ibermática's industry division specialises in upgrading business development processes for industrial firms by implementing and integrating technological infrastructures and solutions and by also providing a number of services. After decades of sharing knowledge on process

integration with their customers, the organisation can now deliver a unique market value proposal that will greatly optimise production performance for industrial firms.

Further information:

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