



EMTyS: Thermal & Fluid- Dynamic Computing Simulation (CFD) and Discrete Event Simulation (DES) Multiprocessor Equipment

Digital twin development of a canned tuna production plant that allows measuring the impact, in terms of productivity, brought by the implementation of a thermal multiprocessor equipment. The project development has been based on Industry 4.0 technologies

R+D+I AREA

Development of the **digital twin tool** for process simulation and visualization in virtual reality.

PROJECT BUDGET

Budget of € 1,336,187.12, subsidised by the Galician Innovation Agency (GAIN). 80% co-financed by the European Regional Development Fund, under the ERDF Galicia operational programme 2014-2020 (OT1. "Promote technological development, innovation and quality research").

PURPOSE OF EMTyS

The consortium, led by TACORE, has developed a working methodology for the use of discrete event simulation (DES). Combined with the **Lean Manufacturing** approach, they allow the development of a **digital twin** that assesses, through simulations, the implementation of the new thermal multiprocessor equipment developed in any industry.

Soltec Ingenieros' team has participated in the design of the Thermal and Process **simulation tools** (digital twin), and their application in the development of a new and innovative thermal multiprocessor equipment, which allows defrosting, cooking, tempering and sterilising, very common processes in the food industry.

INNOVATION 4.0

Our proposal in this project has been based on the development of innovative **Industry 4.0 tools**, such as **digital twin** and **virtual reality**, in combination with the **Lean Manufacturing** approach.

The project, awarded with the support program Conecta PEME 2018 of the Galician Innovation Agency, culminates in the prototype phase, estimating an energy saving of 20% in the processes involved, such as thawing, cooking, tempering and sterilising, very common in the food industry.

Benefits that the digital twin brings to EMTyS:

- **20% energy savings**
- **Processes optimisation**
- **Calculation of return on investment (RoI)**