COMPANY NAME	INDUSTRIAS ALEGRE, S.A.

GENERALITAT VALENCIANA · IVACE · Centro Europeo de Empresas e Innovación de Valencia

CHALLENGE SHEET

CHALLENGE CODE	07.1 Industrias Alegre

TITLE	Digital plant twin for operational improvement

DESCRIPTION

3D design of the entire manufacturing plant from the entry of material and components, initial-intermediate and finished product warehouses, production, production and logistics processes. Where we can impute the real movements and times of people and products, so that we are able to create changes (in the virtual environment) that allow us to see and understand their implications in order to define the final movements without having to harm the production (real environment) and its potential waste and cost overruns.

HOW COULD WE

Rendering of the entire plant in 3D. It is necessary to impute: number of operators, forklift movements, takt time of parts and processes, material inputs and outputs, operators imputed to each process, etc.
In short, it is a matter of recreating everything that happens in the real world and transferring it to the virtual world.

SELECTION CRITERIA

- Flexibility.
- Ease of use.
- Cost.
- Execution timing.
- Reliability.

TARGET INDICATORS

- Implementation time since having the system versus implementation before the system.
- Number of implementations per year before the system versus after the system.
- Estimated costs of trial and error versus actual costs due to errors in the implementation.

REQUIREMENTS

No specific technical requirements or limitations are detected.

The solution provider's capacity to implement it in other countries will be assessed.

CHALLENGE TYPOLOGY	✔ Process	Technology	Business	✔ Product

KEYWORDS	Digital twin, industry 4.0, virtual operations validation, simulation, 3D.