



Digital Factory

Technology solutions for Industrial Digitalisation

The digital factory is a cross-cutting field of knowledge in AERTEC and a strategy that reflects our belief that digitalisation must be applied not only to our working methods, but also to our products. Digitalisation is a key element of development in all areas of the company. For over 10 years, this transformation of the production model has enabled us to create solutions and products with greater added value, to achieve more efficient production processes and to significantly improve both our and our clients' competitiveness.



Technological developments for engineering

Thanks to our in-depth knowledge of aerospace manufacturing activities, we can improve the application of technological developments in industrial environments.



Technological developments for production

Designing and developing tools that are compatible with the factory 4.0 concept to customise and optimise workstations in the aerospace industry.



Smart Testing Network

A flexible concept of smart production needs portable, versatile, autonomous and wireless devices that makes it possible to perform testing without moving elements among different stations. This concept eases a quick adaptation to facilities constraints, it is non-dependent of tech developers, simplifies the learning curve and it is elastic to new requirements / products. The security of the connectivity in this flexible testing environment is based on technologies such as Blockchain to assure the integrity of tests and the data retrieved feeds data analytics tools to support offline analysis. Eventually, a simulation environment is a key part of the testing process for the UUT allowing the testing of emergency and contingency set-ups.

Let's talk aeronautics



i-Workbench
Solution for the digitization of operator workstations

Commercialised under licence of Airbus DS
in Spain, Germany and Poland

Our products speak for us

Powerful intuitive tools
to **optimise processes**, boost
efficiency and enhance safety

Technological Developments for Engineering



Application of technological developments in industrial environments.

We analyse the initial situation and the problems faced by each client with the aim of improving each of their industrial processes; we then propose complete digital solutions.

Design engineering

- Model-Based Systems Engineering (MBSE)

Route engineering

- ID2 (Industrial Digital Desk)
- Data processing

Test engineering

- System for running functional tests

Support engineering

- AR/VR tools for troubleshooting
- Remote support



All functional requirements systematically verified in a traceable way.

In-house electronic designs that can be integrated with other systems, and in the development of real-time systems with intuitive human-machine interfaces (HMI) to monitor all types of parameters and all of the environmental variables.

- CHECKOUTER
- VESPA
- Multi/IO Board
- LVDT Board
- Synchro-Resolver Board
- DONGLE AIM

Test Benches

- Avionics Console
- Angle of Attack Measurement Console
- Brakes and Antiskid Console
- Fuel Tanks Rig
- Radio Frequency Rig

Technological Developments for Production



Design and development of tools to customise and optimise workstations in the aerospace industry.

i-Workbench

A defined workspace where, in addition to their resources and tools, the worker has a digital aid that can be adapted to each task, with the added benefit of being able to display additional information in the same environment. It includes optional add-ons to process graphic diagrams in different formats.

Digital kitting system

This system helps to optimise template cutting to reduce consumption when using composite materials and it enables the orderly placement of parts by providing operators with a digital record of the position of each part associated with their production order. These leads to material cost savings and shorter processing times.

IoT-BC (Blue Collars)

Portable system for monitoring the environmental and ergonomic conditions of workers to record context values in production orders, thus enabling full traceability of the process. This tool is not used to monitor ergonomics to a great extent, it monitors tiredness, stress and other types of health sensors.

DMT, Digitization Management Tool

Web application for tablets/mobiles, focused on visual inspections of final products or work areas (5S). It enables the standardisation of automated information collection with the option to add images and record voice notes, for subsequent offline processing and analysis. This information can then be used to create dashboards to enable agile decision-making.

Asset tracking systems

A solution that allows the client to locate and track the assets they wish in real time in a production environment. The system will incorporate different technologies, depending on the characteristics of the environment and the precision required for tracking: QR, RFID, BluetoothLE, beacons, etc. The collected information is exported and can be integrated with the client's systems to generate KPIs that enable better knowledge of the manufacturing processes.

Smart Testing Network



For more information:
aertecsolutions.com

