

## **BUILDING THE FUTURE AEROSPACE INDUSTRY**

Kaytek Platform digitalizes your industrial processes, providing real time control of your production and all the assets (machines, robots, people...)

# Take the decisive step for the digitalization of the Aerospace Industry

Blockchain, Big Data, IoT & Al technologies



#### AEROSPACE INDUSTRY

The aerospace sector is characterized by its innovative aspect and for being the most technologically demanding industry. It involves large engineering and production costs, being a factor to improve for the sustainability of the sector, digitization becomes a key tool.

The improvement of the sector is based on several concepts. More efficient aircraft; new propulsion systems, incorporation of systems that allow a more electric aircraft, advanced materials, or advanced manufacturing and design. In this last section, the existence of a global supply chain is essential, to be capable of managing the processes of the entire life cycle digitally, engineering and production. Kaytek Platform is specifically developed to meet the current and future needs of the aerospace industry. The use of the latest technologies allows us to achieve this purpose, digitizing the engineering and production processes in a simple way, and associating all the information in a single system.

We will automatically be able to evaluate processes, quality compliance as defined and have a partial and global vision of the product, thanks to the traceability that Blockchain provides us.





#### TECHNOLOGIES



BLOCKCHAIN

Kaytek is the ideal solution to make industrial environments more efficient, especially those where multiple companies work together to build a product. The processes become digitally defined and certified according to the standards of the regulations, being stored and managed by Blockchain and Smart Contract technology.

The execution of the works faithfully follows the process with its complete traceability, which allows us to ensure that they are carried out according to the regulations, giving confidence to all the actors. The technology is applicable to any type of process; engineering, manufacturing or maintenance.

Internet of Things (IoT) collects data from any type of asset; machines, robots, humidity sensors, tools or raw materials. This allows us to have a complete traceability system for assets, identifying alerts, registration and management.

Another main characteristic is obtaining the data in real time, without alteration and avoiding human error. The data is integrated directly into the manufacturing processes. Quality measurements, compliance with standards and other requirements are automatically executed, streamlining processes and decision making.





Industry 4.0 is making companies more complex and interconnected. The new generation of machines and robots generate huge amounts of data that traditional systems cannot handle.

Knowledge becomes an essential tool for correct decision-making. Kaytek's Big Data technology allows us to process large volumes of data in real time, providing us with a current view of our production processes and indicators.

**BIG DATA** 

Machine learning, pattern creation and anticipation of problems are some of the great future challenges of the industry. Another great challenge is the sequencing of jobs in an optimal way or the improvement of production processes.

With the data obtained through the platform, we are able to generate mathematical models that are applied to the industry in an autonomous way. We provide a tool capable of anticipating problems, that trains the improvement of processes and use of resources.



#### HOW DOES KAYTEK PLATFORM WORK

#### **Fase 1: DEFINE**

- Intuitively through the management system, the client defines the manufacturing processes with their phases, steps and assets involved; machines, robots, people...
- The processes become digital, eliminating paper and allowing any type of change and versioning.



# Production Data Characterization (Control Control) Rest Rest

#### **Fase 2: CERTIFY THE PROCESS**

- Once the process is defined, it is certified by authorized personnel using their Blockchain digital identity.
- Blockchain Smart Contract technology guarantees the immutability of the data and the execution of the process as specified.

#### **Fase 3: DEPLOY**

- The client creates the manufacturing and work orders by choosing the processes to be carried out.
- Jobs are automatically generated and sequenced over time by the platform, using artificial intelligence to optimize production.



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#### **Fase 4: EXECUTE**

- The instructions are automatically sent to the workstations. People, machines and robots are guided without human intervention to achieve manufacturing objectives.
- IoT and Artificial Intelligence technologies monitor any type of asset in real time, showing the complete traceability of the plant's operations.

#### Fase 5: MEASURE THE RESULTS AND IMPROVE

- The Big Data and Artificial Intelligence module constantly evaluates processes and jobs, providing a global vision of what is happening in our industry.
- Kaytek Platform facilitates optimized decision making for the improvement of production processes, product quality and early resolution of incidents.

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#### **KEY POINTS**

Collaborative Work



Traceability Controlling pieces



Certification Ensuring the control of the carbon footprint



Automatization Reducing the risk of failure, to ensure the quality of the pieces

#### **MAIN FUNCIONALITIES**



Automatic collection of information from machines and robots ΙοΤ



Real time data & Dashboards **OEE - Quality- Lead Time** 



Automatization y digitalization **Paper elimination** 



Control & reduction of the Costs and Stock **Supply Chain** 



Optimization of the planning **Artificial Intelligence** 



Geopositioning & full traceability of the work, tools, workers and equipment



Worker training, reducing manual labors



Changes in production and universal access from anywhere in the world



# CONTACT

www.kaytek.es/en/ marketing@kaytek.es (+34) 944 356 662

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