

## Case Study: Harbin Hafei Airbus



### ABOUT HARBIN HAFEI AIRBUS

Harbin Hafei Airbus Composite Manufacturing Centre (HHACMC) is a joint venture between Airbus and its Chinese partners, responsible for manufacturing and assembly of the carbon fiber Rudders, Elevators, Belly Fairings for A350 XWB and also Rudder for A320 using the latest composite manufacturing technologies based on Airbus's standards and processes.

### THE CHALLENGE

HHACMC used to extensively rely on paperwork, and cutting-machine original software to create their cut plans, track and manage material, parts and assets, as they move on the factory floor from one station to another. Pre-preg rolls, kits, assemblies, tools and other production floor assets were managed and tracked using a paper-based 'travel document', where ETL (Exposure Time Left) was manually calculated and recorded at each station. The inevitable outcome was inefficient utilization of material, manual errors causing re-work and scrap, lack of real-time visibility, and no record of its impact on quality.



### Solution Benefits

- Real-time visibility of all parts & tools
- Improved product quality & quality control
- Full traceability of the Digital Thread, from raw material to end product (audit ready to be validated throughout field testing)
- Automated & optimized production plans
- Improved manufacturing yield
- Reduced re-work & waste
- Increased staff efficiency

## PLATAINE'S SOLUTION: INTELLIGENT MANUFACTURING AUTOMATION

Harbin Hafei Airbus partnered with Plataine to develop the best practices aimed at reducing the factory's reliance on manual processes and improving their decision-making capabilities across the entire production floor. Plataine's professional services team worked closely with HHACMC to successfully implement and integrate Plataine's solution with the factory's systems, allowing HHACMC to go live with Plataine within a period of just 3 months.

By tracking parts, material and tools using Plataine's software, HHACMC can accurately monitor items' movement on the production floor. 'In & out of freezer' times are automatically calculated by Plataine's software, including material expiration date and exposure time. This automation can increase quality and enable staff to optimize material selection and minimize waste. (Will be implemented in new warehouse organization in June)

Plataine's software solution continuously collects IIoT-based data, analyzes it and raises alerts such as material units that are close-to or exceeded expiration date and exposure time, tools that require maintenance, and more.

For the purpose of HHACMC's reporting and audit requirements, Plataine's solution builds a full part genealogy by creating and maintaining the Digital Thread for each stage of the production process. Additionally, Plataine's solution optimizes the Cut & Kit processes at HHACMC while considering all relevant production elements such as customer orders and inventory on hand. During the pilot phase, Harbin Hafei Airbus experienced significant material utilization improvement, as well as increased staff efficiency, while digitizing and automating the production environment, which is expected to improve both product quality & quality control.

**"It was our goal to optimize our processes and deploy an IoT-based solution that will allow us to cut-down costs, identify problems on the factory floor, and take necessary actions to prevent them from accruing", says Thierry Ducro, Head of Procurement and Supply Chain at HHACMC. "Together with Plataine, we are now confident we will set the best possible processes in place, that will allow us to gain full visibility and traceability over material, WIP, tools and finished products, allowing us to improve our manufacturing yield, reduce re-work, and improve our overall efficiency."**

*– Thierry Ducro, Head of Procurement and Supply Chain at HHACMC*

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**ABOUT PLATAINE:** Plataine's award-winning manufacturing optimization solution provides Material & Asset Traceability and Digital Assistants that empower advanced manufacturers to make optimized decisions every time. Plataine's patent-protected Industrial IoT-based technologies are used by top-tier manufactures worldwide, including Airbus, AVCORP, GE, IAI and MT Aerospace. Argosy International, one of the leading suppliers of materials for aerospace and commercial applications, supported this project and continues to strengthen its strategic partnership with Plataine to deliver advanced manufacturing to the aerospace industry.