



How AI Can Add Value to Composite Manufacturing Operations

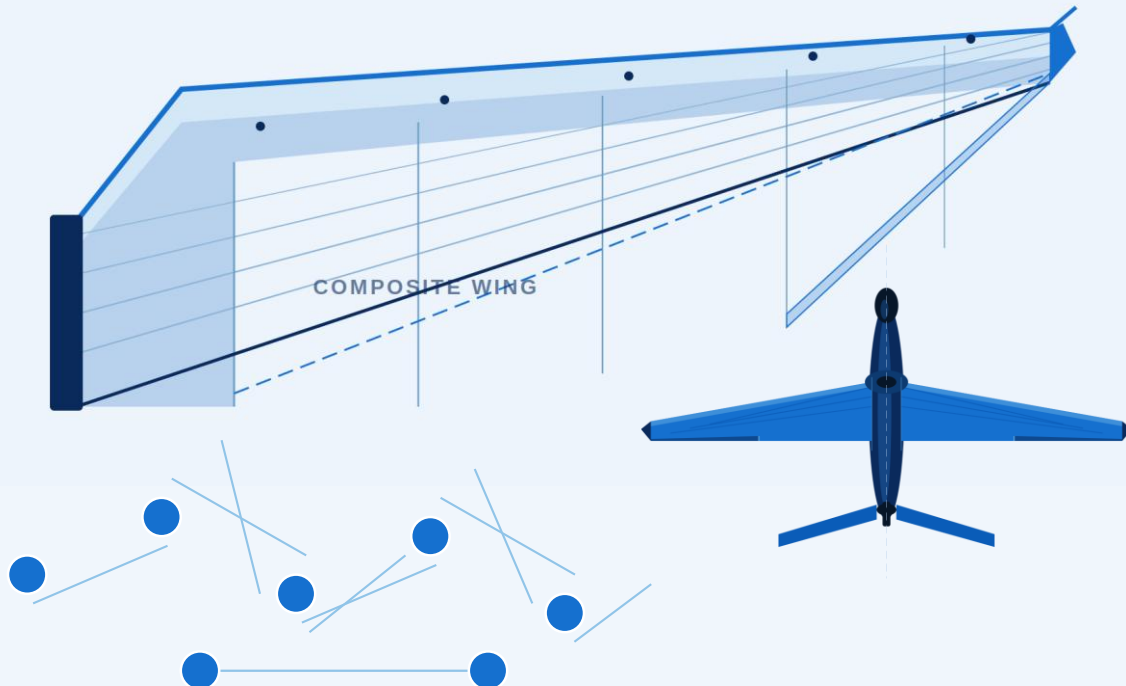
AIDC AIoT SOLUTION

AIxWARE by AIDC



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President – AIDC

"Composite manufacturing is becoming increasingly complex. The challenge is no longer collecting data, but transforming data into actionable decisions."



AI NETWORK



COMPOSITES



UAV



AUTOMATION



AI DIGITAL

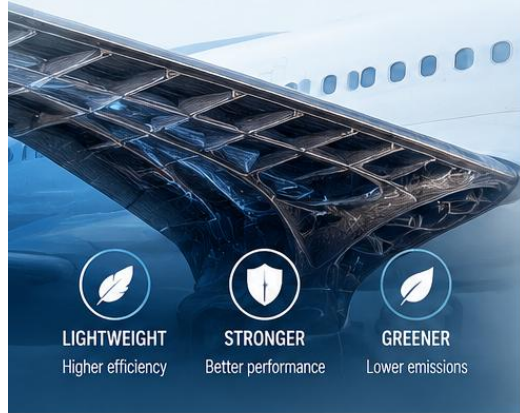
The Future of Composite Manufacturing

Three Powerful Industry Drivers



1. Next-Gen Aerospace

Demand for higher strength, lighter weight, and more sustainable aircraft.



LIGHTWEIGHT
Higher efficiency



STRONGER
Better performance



GREENER
Lower emissions



2. UAV Sector Surge

Explosive growth in UAV markets drives demand for scalable production and cost efficiency.



RAPID GROWTH
Expanding markets



MASS PRODUCTION
Volume & consistency



COST PRESSURE
Competitive pricing



3. Advanced Mobility

Lightweight composite solutions are expanding into eVTOL and high-end mobility platforms.



ELECTRIFICATION
Higher energy efficiency



SUSTAINABILITY
Lower carbon impact

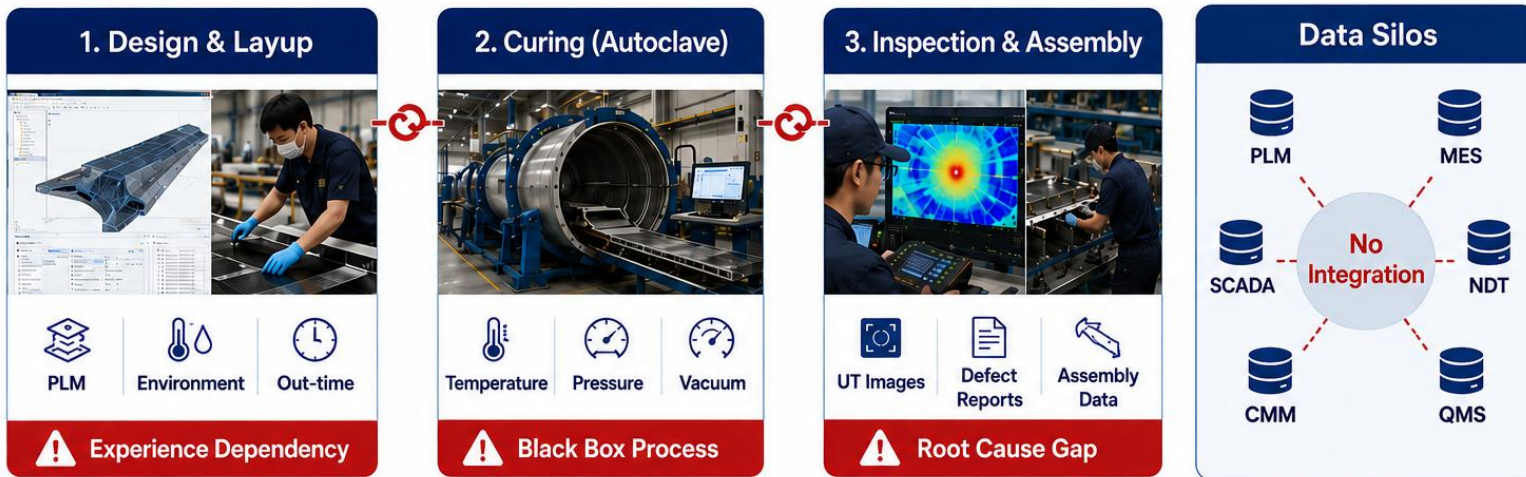


PREMIUM MOBILITY
Safety & comfort

Composite manufacturing is evolving—
it is becoming more complex, data-intensive, and quality-critical than ever before.

Rich Data, Poor Decisions

Data Exists, But Insights Are Isolated



*"To unlock 'Aerospace Quality' at 'High Velocity', the industry doesn't need more isolated IT systems -- we need a **unified intelligence core**."*

From Trapped Data to **Probabilistic Forecasting** and **Actionable Decisions**



1. DATA Data Convergence



PLM
Design Data



Shop Floor
Environment
Out-time



SCADA
Equipment Data



NDT
Inspection Data



MES / CMM
Assembly Data

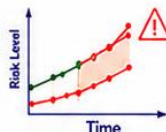


2. PREDICTION AI Risk Prediction



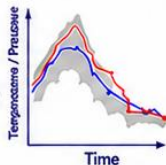
Degradation Modeling

Predict material
out-time risk



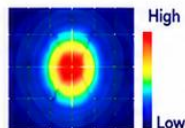
**Curing Quality
Pattern
Recognition**

Detect deviation
in autoclave cycle



**Cross-Domain
Correlation**

Pinpoint most
probable
root cause



3. DECISION Decision Support



BETTER (Quality Risk Prevention)



Find defects early
Reduce scrap & capacity loss



Predict risks at
key process points



Strengthen quality
control & build
resilience.

FASTER (Data-Driven Decision Making)



Cross-department
data & root cause
in minutes



Connect all data
in one view



Identify root causes
faster & improve
efficiency

Best AI & Smart Manufacturing Integration Platform

Unified Integration • Intelligent Management • Smarter Manufacturing



MODULAR IMPLEMENTATION



TRUSTED BY LEADING MANUFACTURERS



60+

CONTROLLER INTEGRATION



2000+

MACHINE CONNECTIVITY



