



Smart Asset Solutions for the Aerospace Industry

Executive Summary



"... when assets themselves become elements of an information system, with the ability to capture, compute, communicate, and collaborate around information... these 'smart' assets can make processes more efficient, give products new capabilities, and spark novel business models. "

— McKinsey's Clouds, Big Data and Smart Assets

Aerospace Industry Challenges

**3-5
million**

Serialized parts on an airplane

- The management of any single part along with its lifecycle records necessitates enormous documentation, which takes a long time and can be prone to errors.



Antiquated part identification and tracking systems with static data

- Today's OEMs supply airplane parts with just a riveted metal nameplate with limited information.
- Many times nameplates are impossible to read making it difficult for maintenance workers to interact with the part and know what activity is required when maintaining safety standards.
- Paper and pencil information logging processes track the use and maintenance activities along the chain, resulting in a data management and maintenance tracking nightmare.
- The part records are static and unchangeable from the time of manufacturing until the part's removal from the field.



Frequent inspections required; multiple compliance challenges

- Many items on an airplane like life vests, in-cabin oxygen canisters, etc. require frequent inspection (for presence and expiration date). Today's existing standard of visual inspection is labor intensive, lengthy and error prone.

**100
thousand**

Serviceable parts

- Air framers are interested in tagging all serialized, repairable, replaceable and maintainable airplane parts — about 10,000 parts on a typical airplane.

Smart Assets Solutions

Digital information embedded on the part

- Including a birth record and all necessary documentations allows the part to be identified with a degree of accuracy.

Digital Part History Records

- Adding Digital Part History Records during significant events in the part's lifetime allows data to travel with the parts, wherever it goes.
- Safety checks and future MRO activities can be performed much quicker with all actionable data at your fingertips.
- Embedded information and digital documents on the asset enables the best repair for improved safety.
- Digital information on the smart asset can be updated throughout its life.

Digitally enabled fast inspections; compliance with ATA Spec 2000, AS5678

- Digital information on the item allows an entire cabin to be scanned as quickly as someone can walk down an aisle.

The right data at the right fingertips

- Embedded data on those parts delivers intelligence at the fingertips of the right person so the right action can occur for process and labor accuracy, efficiencies and significant cost savings.

" Aircraft components need to be easily traceable with full transparency throughout a product's supply chain and lifecycle with the ability to verify their pedigree at all times. After evaluating and testing Tego's solution... we are convinced we can meet the stringent requirements of our customers."

— Program Manager, Honeywell Aerospace

Immediate Benefits

A smart asset platform, such as Tego's Asset Intelligence Platform (AIP), electronically captures critical asset information and provides the following benefits:

Across the value chain:

- Delivers accurate configuration control and repair history
- Ensures regulatory agency compliance monitoring
- Reduces inventory control and provisioning costs
- Allows for accurate and efficient spare parts pooling
- Exposes rogue parts
- Reduces warranty claim processing costs
- Enables part installation and removal time tracking
- Guarantees accurate flight hours tracking by part

For air framers, specifically:

- Reduces parts receiving costs
- Eliminates data entry errors
- Provides accurate "as delivered" configuration

Industry Leaders Driving the Industry Standard

Both Boeing and Airbus are now specifying that all serialized, repairable, replaceable, and maintainable airplane parts must be compliant with Spec 2000 and AS5678



Today the **Airbus' A350 line** is tagging around 3,000 parts with 700 unique part numbers.

On **all other Airbus aircrafts**, tagging of seats and life vests has delivered significant operational and financial benefits.



Boeing's OEMs are also coming online.

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Give us a call to see how we can help you implement your aerospace solution.