

# BLOCK BOOK

BLOCKCHAIN FOR AIRCRAFT LOGBOOKS

THE FUTURE OF AVIATION RECORD KEEPING

REVOLUTIONIZING MAINTENANCE & SAFETY

ESTABLISHING DIGITAL TRUST & INTEGRITY



POWERED BY THE BLOCKCHAIN

**AIRSPACE**  
BLOCKCHAIN COMPANY



# WHO WE ARE

## **WE BELIEVE IN LEVERAGING THE BLOCKCHAIN**

This unlocks step increases in efficiency, cost optimization and productivity for operations in industries.

## **WE'RE INNOVATIVE ENGINEERS & INNOVATORS**

We're obsessed with finding a better way to do things in industries yearning for compatible change.

## **ONLY 4% OF INDUSTRIES ARE DIGITIZED & ONLY 1% OF THAT IS USED TO OPTIMIZE OPERATIONS**

This emerging horizon, we are passionate to be part of, with a vision to spearhead, accelerate and be the:

**VANGUARD FOR DIGITIZATION OF  
INDUSTRIES FOR 10X INCREASES.**

# OPPORTUNITIES

To optimize aircraft maintenance logbooks

Currently, the vast majority of logbooks for aircrafts and aircraft maintenance engineers are paper based, this process has been used because it's simple, relatively cheap to implement and can be used independent of digital infrastructure.

This however, has resulted in an avalanche of related issues. Sizeable amounts of prime floor space near airports is dedicated to just storing hand written logs.

Scores of people are tasked with scanning and maintaining physical copies in 'Tech Records'. **Engineers, 46% of whom report that they had issues related to miswritten reports**, write down logs daily, get them manually verified by their line managers and then re-enter them on the current maintenance software which is limited to delegating, managing and tracking tasks. Incredibly inefficient as well as operationally and environmentally unsustainable.



If a technician spends an average of 15 minutes per day to get the approvals of the line manager, in an average work year, he would have spent 50 hours doing this menial task.

This isn't a new problem and current e-log books technology exist, however, the current technology solution is vulnerable to cyber-attacks, manipulations and unwarranted modifications, hence most don't trust it, not to mention the cumbersome, slow and unfavorable user experience. Last, but definitely not least, Quality Assurance personnel, aircraft lessors, insurance companies, external auditors and civil aviation regulators audit these records. It is a time intensive and manual process taking months to complete by each party.

The opportunities for step increases in productivity, cost effectiveness and efficiencies are listed below:

- Manual, paper centric process - productivity loss
- Scanning logbooks as backups is laborious + Costs
- Double Entry of Data by engineers - time loss
- Environmentally unsustainable
- Data prone to errors
- Auditing by QA & regulators is time-intensive.
- Physical approvals by line managers are inconvenient.
- Current e-log book systems susceptible to edits.

# BLOCKBOOK'S BLOCKCHAIN POWERED SOLUTION



## BlockBook is Immutable

A single source of truth across all computers means data cannot be altered or manipulated without the knowledge of all stakeholders. Fortifying trust and security across all stakeholders

## Automation of Processes

Network self-validates all entries, business rule automation with near real-time processing. Managers & QA validate the logs from their computers, no more waiting around for signatures by AMEs

## Cost Effectiveness

Elimination of Intermediary costs and reductions in operational costs related to exceptions and reconciliations. Blockbook increases capabilities of all stakeholders without replacing existing technology investments.

## Transparent Auditability

Track, trace and authorize record entries and improve QA, operational & regulatory reporting. Removing layers of excess verification processes, sizeable reductions in time to audit and verify while improving Quality and delivery.



## Increased Security of Data

Public-Key encryption ensures record-level security of data. No-single point of failure network is resilient against attacks on individual nodes. Digital Personalities through blockchain ensures only the right people have access to the right data.

## Decentralized Storage

Assets controlled by their owners rather than individual custodians. Information validated by consensus mechanism rather than by third party. This increases visibility across full network of technical records with permissioned accessibility through smart contracts.

# HOW IT WORKS:

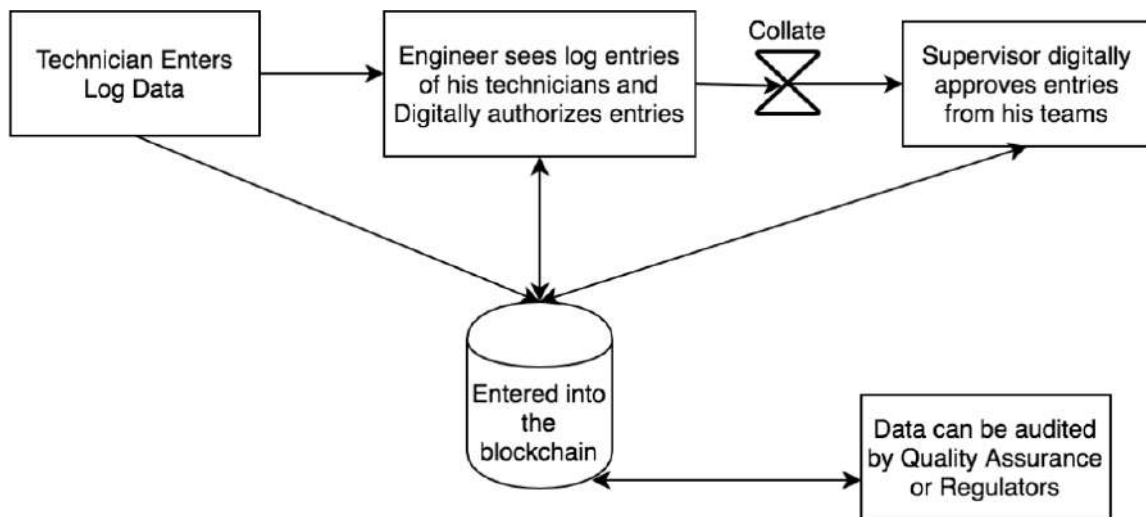
Logbook technology for the new age.

Blockbook is a web-based application that fully integrates with current MRO software, it also can be used independently.

Built on three core design philosophies of agility, simplicity and optimization, it enables a seamless permissioned interaction of all stakeholders with the logbooks

The process is modeled after current MRO procedures ensuring easy integration.

Simply put, there are three core groups of users involved with logbooks: Technicians, Line Managers and auditors (Quality Assurance, Regulators, third party). A simplified blockbook process is listed below:



## SIMPLICITY AND AGILITY FOR THE USERS ARE AT THE CORE OF THE DESIGN & BUILD OF BLOCKBOOK

The data will be cryptographically secured and accessibility will be permissioned. The actual data is distributed across the peer to peer network of the client while Airspace retains the hash of the blockchain.

Whenever a log is entered, it is recorded on the blockchain, each time an authorization layer is added by a line manager, supervisor, senior engineer or Quality Assurance, the authorization is added to the blockchain as well.

Quality Assurance Personnel can search for log entries to verify it needs be. Blockbook data is synced to current MRO Software, eliminating double entry.

Adding to the blockchain signifies that the data is now immutable, it cannot be manipulated with, deleted or edited unless another block is added to the chain that details this; thereby ensuring a legitimate single log that has been verified and is secure and can be trusted by all parties.

**WE CANNOT SOLVE A  
PROBLEM BY USING THE  
SAME KIND OF THINKING  
WE USED WHEN WE  
CREATED THEM**

**- Albert Einstein**

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