



EARHART

THE FUTURE OF AVIATION
HAS ARRIVED

LITE PAPER V2.0

September 2022

ABSTRACT

Earhart is a blockchain powered solution that transforms how the trustworthiness and traceability of aeronautical records is stored and used. The Earhart Blockchain Solution provides features that helps the aviation ecosystem in the accomplishment and implementation of all the regulatory and compliance framework. This solution allows multiple immutable digital twins and an innovative concept of on-chain transactions that allows instant data sharing, monetization and acquisition.

THE PROBLEM

Record keeping is nowadays done in centralized ledgers which cannot communicate with each other. Aviation regulators require that record keeping is performed in order to keep the rastreability and accountability of every action taken in the industry. Since the ledgers don't communicate with each other, and depending what type of ledger is used, this type of work is made essentially by manpower which gives origins of many errors, falsifications, forgeries, loss or deterioration. Besides the time to process the information is much higher, extending the aircraft ground time, these errors can put at stake the aircraft safety. The technology used for the centralized ledgers, mainly paper and non-standard software, can give origin to data lost, wrong data, corrupted, deterioration, or even to illegal changes or adulterations. This costs the aviation industry many millions of USD.

USE CASES

- Permanent Recording.
- Data connectivity between stakeholders.
- Cheap, Safe and Hi-Speed Data Transfer.
- Data trustworthiness.
- Digital Twin.
- Traceability and Back-to-Birth of all data.
- Individual and Organization auditable digital certifications.
- Auditable digital initial and recurrent training records.
- Real time airworthiness status.
- Enhanced aircraft Phase-In/Out with two-clicks data operations.
- Improved auditing and compliance processes.
- Improved certification, leasing, warranty and insurance claims response time.



- Improved overhaul industry safety.
- Blockchain issuance of certifications.

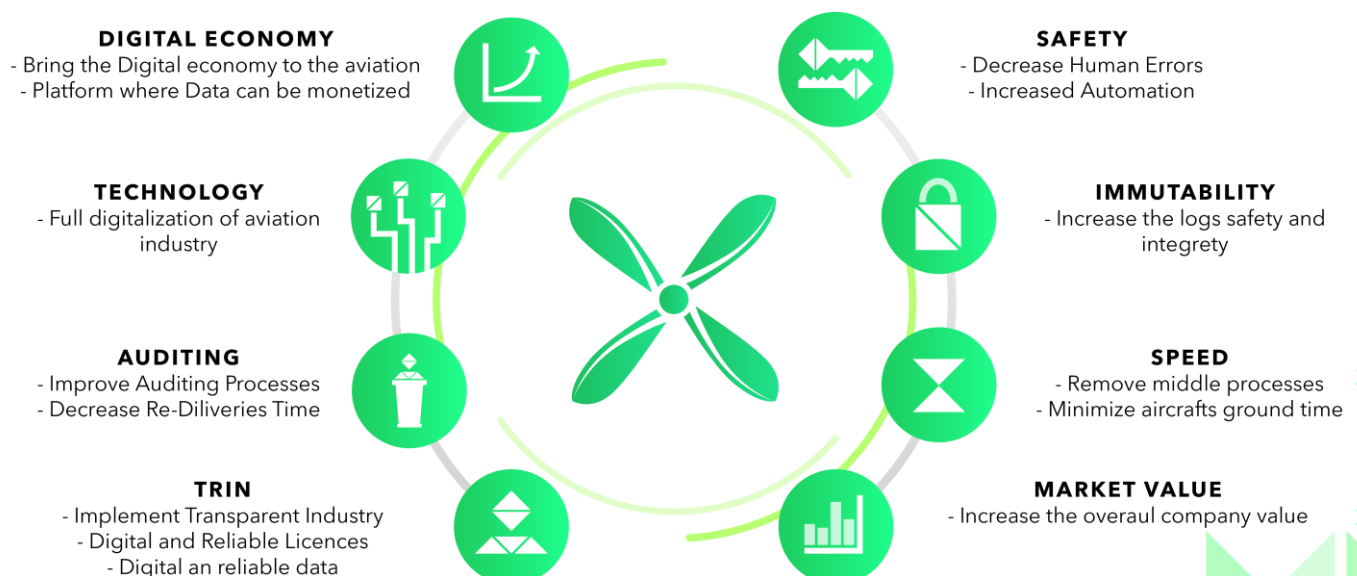
THE SOLUTION

The Earhart Solution complies with both main aviation regulators requirements. Both EASA and FAA requirements are omitting the use of blockchain technology for aviation. EASA from several papers and working groups has confirmed that Blockchain complies with aviation regulations, and also confirmed that the proposed Earhart approach is reliable and consistent to the current aviation framework. Also ICAO supports the development of blockchain aviation solution with applicability for the aviation ecosystem.

With Earhart blockchain powered solutions, all the records will be recorded forever, never lost, adulterated, or even corrupted. This solution will decrease by many factors the price of used aircraft, since the cost of record keeping and processing are residual. Also, the need for reworks due to loss or unreliable data is zero, saving large USD millions in maintenance per year.

With the Earhart solution implemented, there is the possibility in real time to acquire all the desired airworthiness data. The daily management of aircraft fleets will be highly facilitated since countless of both economical and human resources can be saved. The man-power to perform the aircraft airworthiness control will be highly reduced and the authorities can issue their airworthiness data and immediately perceive their impact. Audits, aircraft modification status and professionals working time can be conducted in real time.

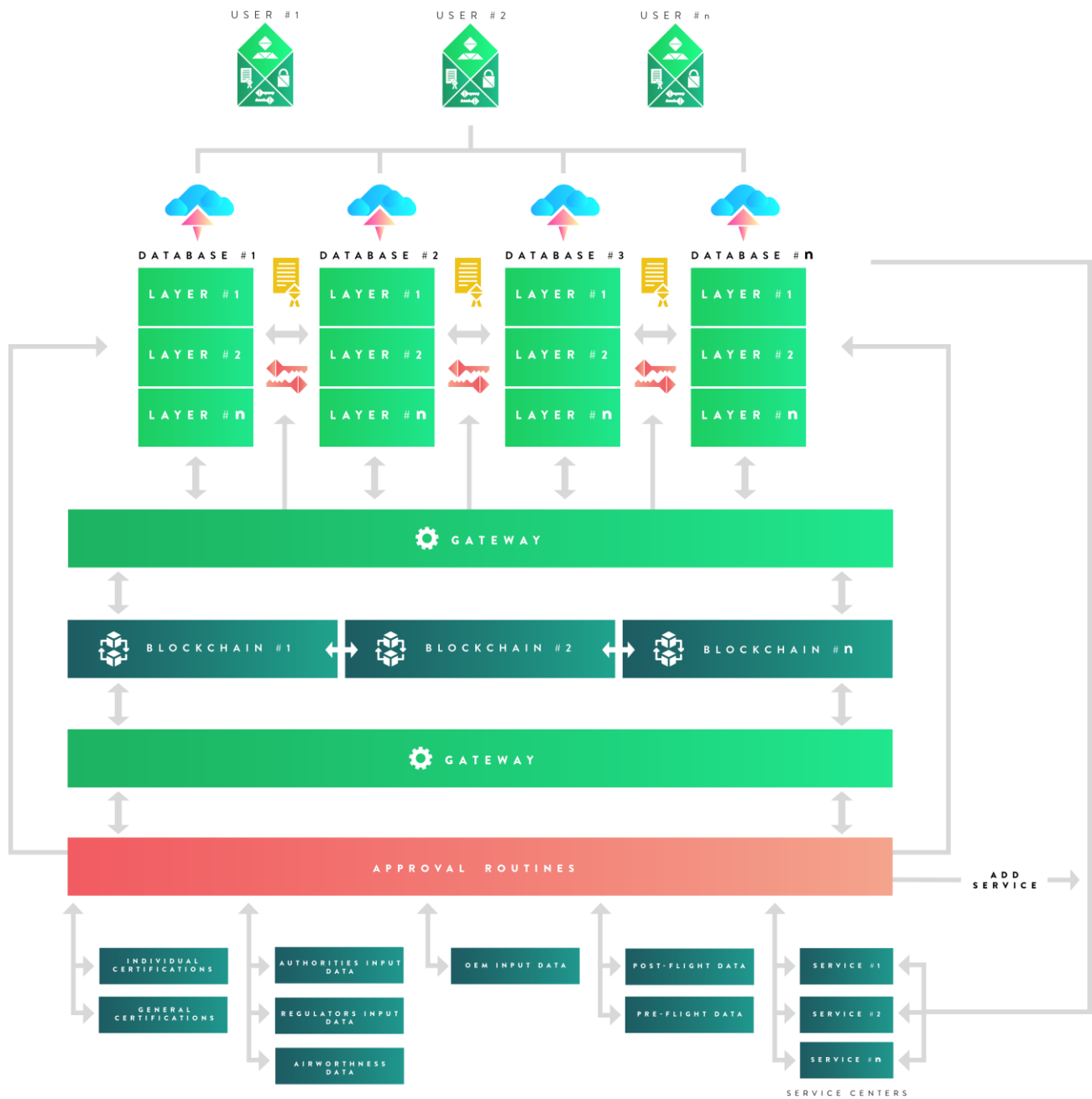
GOALS



ROADMAP



TECHNICAL OVERVIEW



The base of the development is the construction of several functional blocks. These blocks are the proposed process which involves the main aeronautical players. Each player has his functions and responsibilities, but all are interconnected and dependent from each other.



The proposed working modules are:

- Individual Certifications
- General Certifications
- Authorities
- Regulators
- Airworthiness
- Lessors
- Maintenance
- Compliance
- OEM
- Post-Flight
- Pre-Flight
- Passengers
- Blacklisted Passengers
- Services (Maintenance)
- Airports

TOKENOMICS

