
IATA
17th MAINTENANCE
COST CONFERENCE
WEBINAR SERIES
Episode 3: Digital
Aircraft Operations
Wed. September 29, 2021
7:30-9:30am EDT
IATA

Opening Remarks

Our host today:

Chris MARKOU

Head, Operational Cost Management – IATA

markouc@iata.org

- This session is **recorded**.
- Your mic is automatically **muted**.
- Use the **Q&A feature** on the right side of your screen to submit your questions to our speakers
- Competition Law Guidelines

Competition Law Guidelines

Do not discuss:

- Any element of prices, including fares or service charges
- Commissions
- Allocations of customers or markets
- Marketing plans, commercial terms or any other strategic decision
- Group boycotts
- Your relations with industry stakeholders
- Any other issue aimed at influencing the independent business decisions of competitors

Next Episode

Episode 4 – October 6

(7:30am EDT or 1:30pm in GVA or 7:30pm SIN)

- Operating in the post pandemic

Visit www.iata.org/mcc to register

Agenda

- Our speakers
- Leveraging data to optimize aircraft operations
- Harnessing industry data to optimize material cost within airline maintenance

Our Speakers

Pierre-Yves BENAIN

Business Innovation Sr. Manager – SITA

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Joan ROCA

Product Manager – SITA

joan.roca@sita.aero

Dr Sebastian VOCK

Senior Solution Architect – Opremic Trade GmbH

sebastian.vock@opremic.com

How SITA is leveraging data to optimize aircraft operations

Pierre-Yves BENAIN

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IATA MCC 2021 Webinar Series - Episode 3

How SITA is leveraging data to optimize aircraft operations

September 29th, 2021

Pierre-Yves Bénain
Joan Roca

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SITA at a glance

SITA 100% owned by the industry and driven by its needs. 2,800+ Airlines, airports, governments, OEMs, MROs, … work with us. SITA has 3 domains of expertise

4,500 employees worldwide

SITA AT AIRPORTS

SITA AT BORDERS

SITA FOR AIRCRAFT

SITA FOR AIRCRAFT

Enabling

400+
customers

400+ of the **world's airlines** and **ATI leaders** use our **connected aircraft solutions**

Ensuring

18,000+
aircraft can communicate

Around **250 carriers** and **18,000+ aircraft** rely on our **datalink services**

Supporting

90+
air navigation service providers

We support **90+ air navigation service providers** with **global air traffic management**

Exchanging

5+ million
kilobytes of ACARS data

We **deliver 5+ million kilobytes** of **ACARS data exchange every day**

We deliver the promise of the connected aircraft, across fleets, between solutions and among people

DIGITAL DAY OF OPERATIONS

Powering airline digital transformation for optimized, new generation flight operations

CABIN CONNECTIVITY SERVICES

Global, best-in-class high-speed inflight Wi-Fi and cellular 4G. On every network, every platform, across avionics

UNIFIED AIRCRAFT COMMUNICATIONS

The world's state-of-the-art aircraft and ATC communications ecosystem

BIZLAB

Exploration of value added-novelty in aircraft related economic and technology spheres

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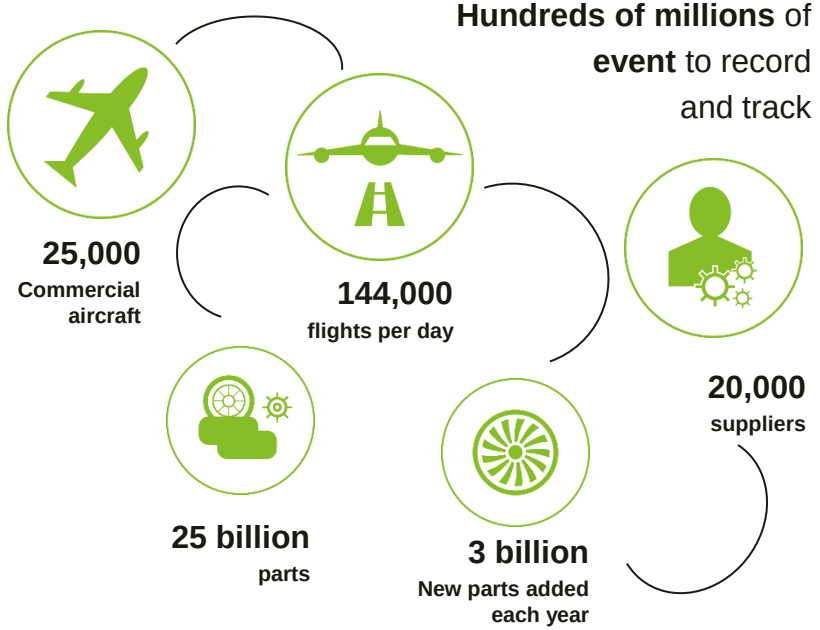
The industry problem

Inefficiencies result from a mix of poor operational process and inventory management as well as inadapted systems

The current aircraft assets ecosystem



The business problem
High cost for the industry

Spent magnitude for the Industry
- **$50B** airlines value of parts inventory (Up to **$5M /Y** / AC)
- **60%** **of MRO cost** related to engines & components

Manpower/errors costs
- Maintenance data rely on paperwork (Rarely digital):

Assets value at risk
- Lack of history evidences

The process and IT problems
Silo communications - inefficiencies

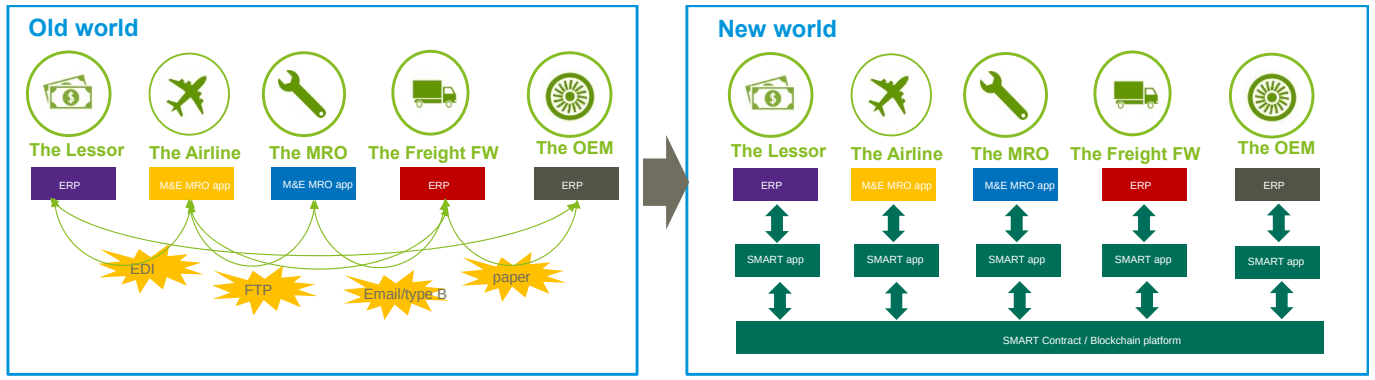
Poor process integration
- No coherent **workflow across stakeholders / ERPs**
- Limited to **no end-to-end process automation, traceability & transparency**
- Complexity in **monitoring SLA & obtain service levels**

Poor IT responses
- **ERP evolution almost impossible, incomplete & costly**

Our starting point - a POC with our founding members in 2020 key outcomes/results

All expectations were met, setting foundations for industrialising the solutions in 2021/2022

How to better orchestrate parts transaction workflow & information exchanges



Together with:

- Cathay Pacific Airlines
- Haeco
- Bolloré
- Willis Lease
- Safran
- flydocs

POC success criteria

- End to end process automation with complete visibility
- Data confidentiality, alongside compliance with standards
- SLA monitoring, complete trackability and records of parts movement
- Independent auto-reconciliation and part value protection

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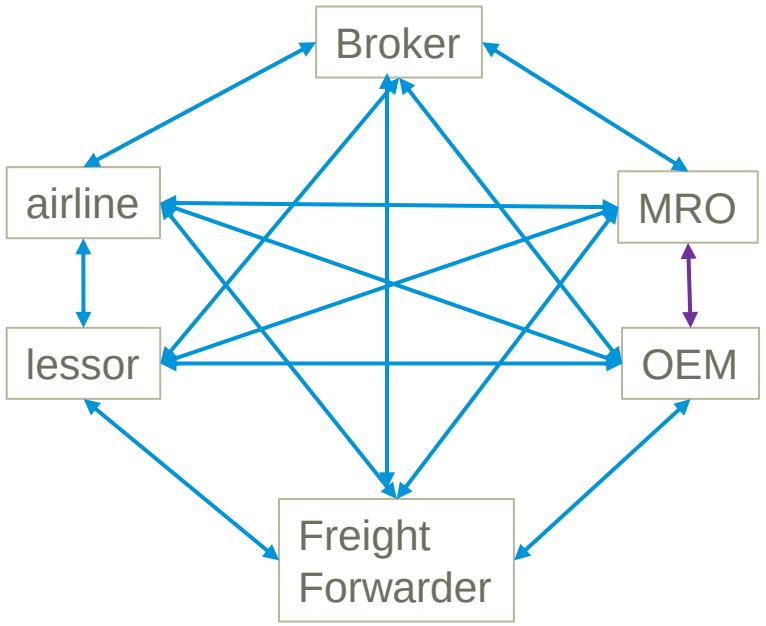
Why Blockchain is appropriate

Blockchain an enabler to secured lifetime data/passport enabling trusted peer-to-peer business orchestration

Peer-to-peer transactions



The 5 reasons for using Blockchain

- Trusted information exchanges
- Improved process efficiency
- Full transparency
- One source of truth
- Minimal costs of ERP transformation

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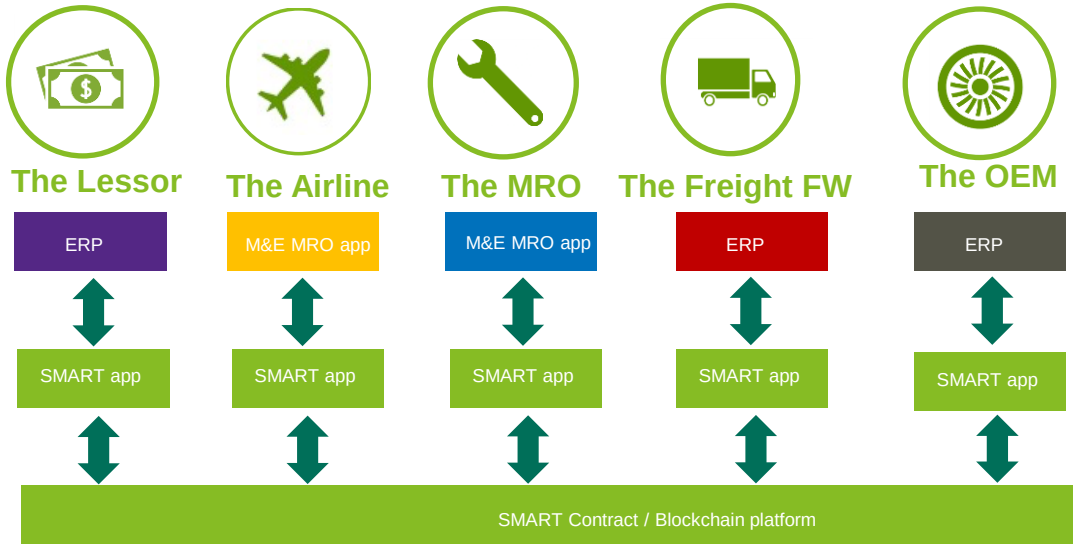
The services

SITA will launch in 2022 two solutions called **“Track and Trace”** and **”Change of Ownership”** which can be used separately

While our immediate focus is part’s ownership, **the digital passport will enable additional data & related use cases** (e.g. lease return, counterfeit parts, maintenance log, …)

MRO ecosystem



Services

Track & Trace (T&T):

- Establishes a “tracking & tracing” of part movements
- Using T&T each partner has its specific rights to read and share information with others as defined by T&T.

- The standard to exchange information between partners is ATA SPEC 2000

Change of Ownership (CoO):

- Captures and creates a record of information related to parts and sales order data exchanged between different partners.
- The record stored is called a “Digital Passport”. The Digital passport is accessible by all partners based on their consensus.

- The standard of communication to interact with the Digital Passport is ATA SPEC 2500.

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Immediate benefits for the Industry

key reasons making SITA the sole organization creating the end-to-end business, Industry and technology consensus

SITA MRO services
MRO ecosystem benefits

Across the aircraft asset ecosystem

- Raise end-to-end process efficiency through automation, visibility and traceability
- Raise confidentiality and trust in sharing parts data
- Raise visibility on inventories and parts value protection
- Reduce risks for SLA disputes and penalties
- Create added value through an open and competitive partner ecosystem

Benefits from blockchain
Technology consensus

- Raise trust on information exchanges and storage
- Raise process efficiency
- Create full transparency
- Create One source of truth
- Eliminate (minimal) costs of ERP transformation
- Create connection to value-add partner ecosystem thanks to open platform

Working with SITA
ATI dedicated, trusted and neutral

- Service provider fully owned by/dedicated to the Air Transport Industry, with over 70 years of maturity and knowledge of the Aircraft ecosystem
- Always been the trusted enabler of business transactions, communication and data exchanges in the ATI.
- Neutral player, and not part of any commercial interest,

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Please download our series of white papers - *Chapter 1 airlines*

https://www.sita.aero/mroblockchain

. …..and meet us at Aviation Week MRO Europe conference in AMS in October for a demo

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DDO - Data and Platform

Our goals and ambition

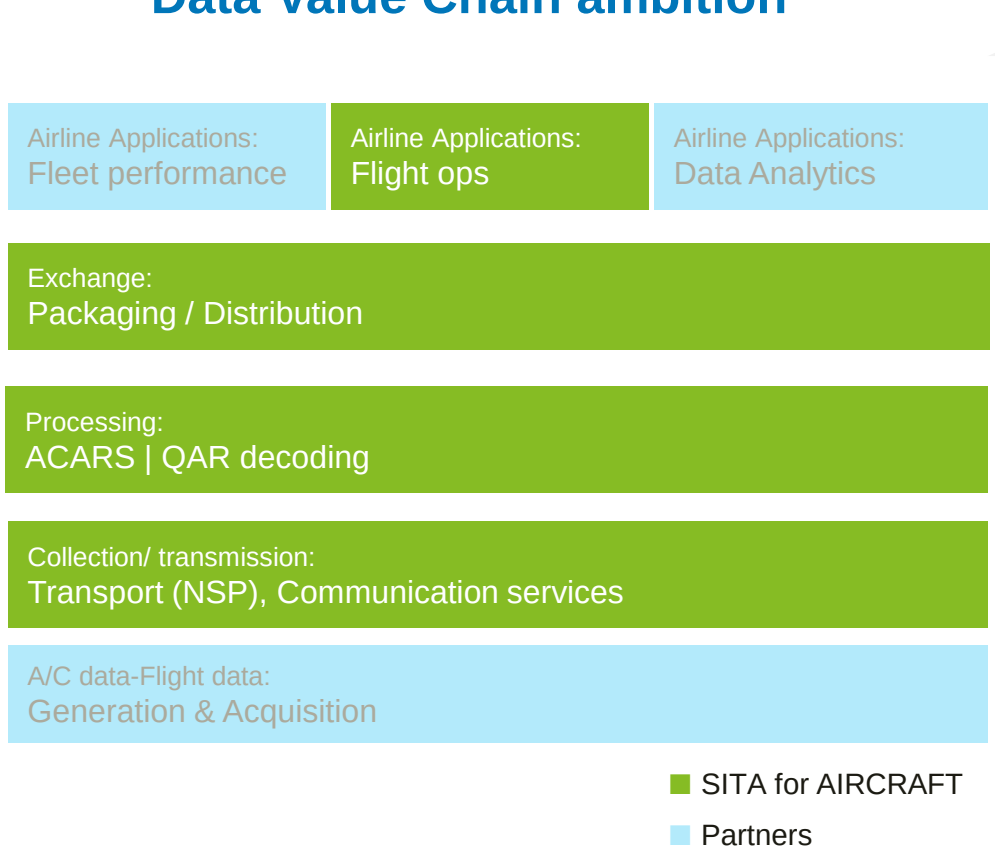
Our vision is to transform aircraft data/ flight data management for airlines, OEMs and other users.

Our mission is to make aircraft data accessible to airline and their partners

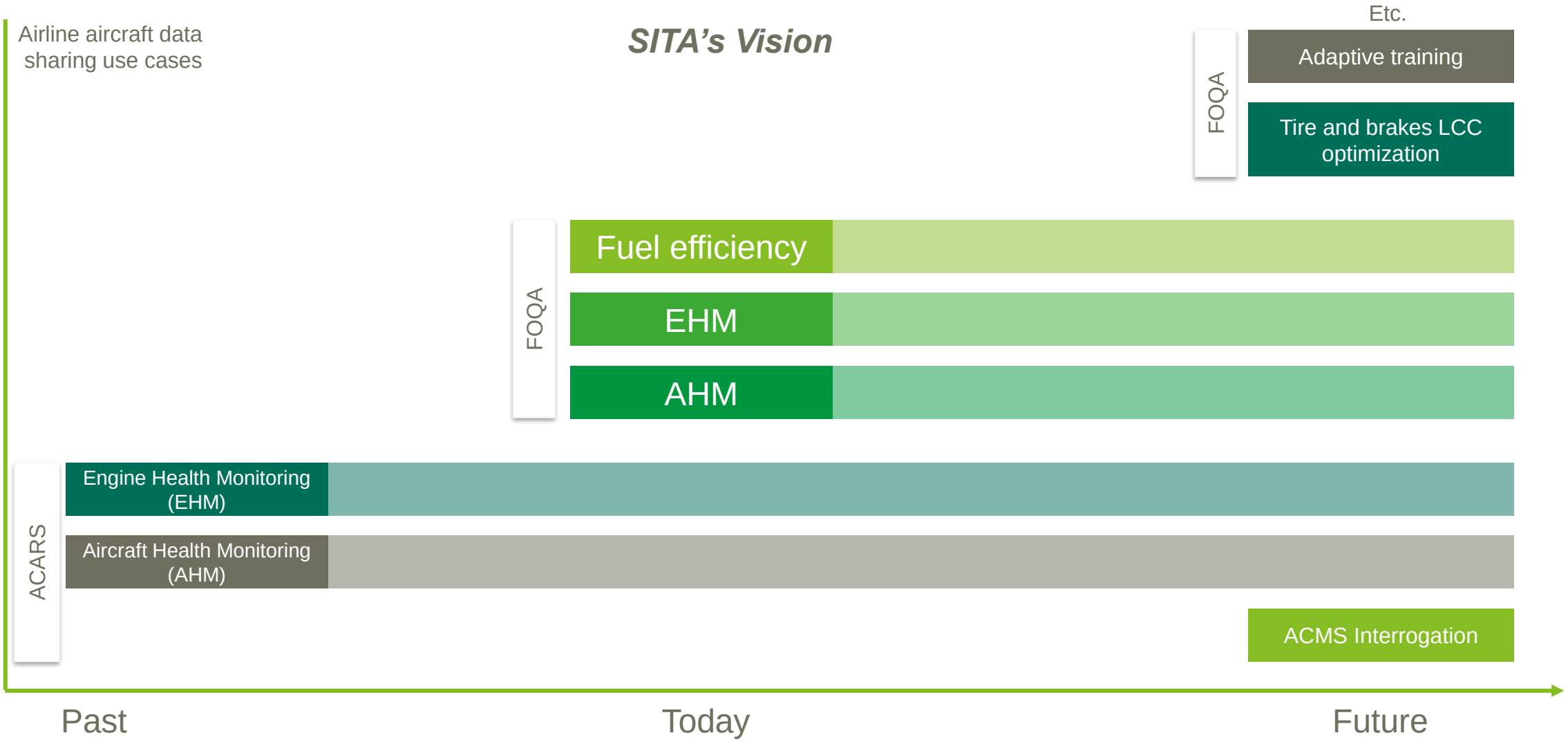
We are the link between aircraft data and parties interested in aircraft data and any other complementing data.
We are building the aircraft data database of the future to:

- Provide easy access to complete set of their data
- Feed data to airline's tools, apps and services, increasing their capabilities and accuracy
- Enable predictive maintenance of aircraft components
- Use big data algorithms to learn, act and make air travel safer, more comfortable and sustainable.

Data Value Chain ambition



Importance of aircraft continuous (FOQA) data on operations



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Platform offerings

Aircraft data platforms for receiving, cleaning, transforming and distribution of ACARS, QAR, DAR etc.

AIRCOM® Flight Messenger

Fully configurable ACARS processing and distribution tool

Highlights:

- Connects aircraft, users and systems
- Interfaces local users through the Mailbox and external users through connectors
- Handles downlink, uplink and ground messages, formatting and distribution
- Tracks aircraft and flight data
- Orchestrates tasks using the Sequencer

Airline and OEM use ASP and FM to: bridges the gap between aircraft, users & systems

Airline perspective:
Improve and automate communication between aircraft/flight ops and ground

OEMs perspective:
Offer real time asset health monitoring

AIRCOM® Legato

Coming in 2022

Fully managed SaaS ACARS processing and distribution tool

Highlights:

- Manage ACARS messages from desktop or mobile devices through a web interface
- View, sort and filter ACARS messages
- Automatically identify aircraft messages with a built-in catalogue
- Pre-defined output formats
- Easily share messages to external users and systems

Airlines and OEMs use AIRCOM Legato to: allow SITA to manage their ACARS processing on their behalf in a secure and efficient way

E-Aircraft® DataHub

The neutral data exchange platform for FOQA data

Highlights:

- Vendor independent and hardware-free solution
- Easy to connect to the customers' data workflows and processes
- Fully managed cloud-based solution
- Peripheral DataHub available on request
- Main features : Decoding, Distribution, QA, Filtering, Data augmentation

Airlines and OEMs use DataHub to: process and distribute their FOQA data

Airline perspective:
Input data to multiple FOQA based services from one platform

OEMs perspective:
Offer predictive maintenance capabilities

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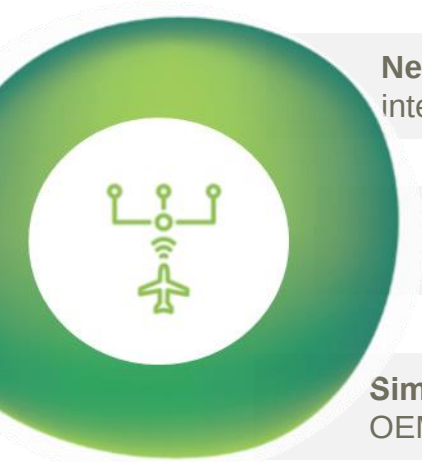
e-Aircraft® DataHub: Overview

Safer & more efficient collaboration in the OEM/ MRO/ Lessors digital space

Industry relevance



Neutral hub facilitating digital service partners integration with operators

Open platform mutualizing costs/ efforts for operators and OEMs/ MROs

Simplified operators' IT journey across multiple OEMs/ MROs /Lessors digital initiatives

Opportunities

Benefits for Airframers, OEMs and MROs

- ✓ Overcome complexity with multi-fleet data collection and transformation
  Making it timely and complete
- ✓ Global airlines acceptance to interconnect their IT
  Gaining Airlines' trust and control
- ✓ Operational efficiency improvements

Benefits for Airlines

- ✓ Data sharing with any partner of choice globally
- ✓ Full control and ownership of data distribution
- ✓ Multi-fleet data collection for all aircraft and data types

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e-Aircraft® DataHub: Overview

A neutral data exchange platform for the industry, enabling trusted collaboration between airlines and their digital service partners – meeting regional, national and airline-data specific needs

Operators

Multi-fleet data sets

Raw data

External Data

DataHub Services

Airlines Secured Access

OEMs Secured Access

COLLECTION

DISTRIBUTION

CONTROL

CLASSIFICATION

DECODING

FILTERING

POST-PROCESSING

Secured Vault

Secured Vault

Hybrid Cloud(1) | GDPR(2) compliant ISO27K certification.

Airline Operating Partners

Structured data

Analytics

ALGORITHMS

PREDICTIVE MAINTENANCE

PERFORMANCE OPTIMIZATION

(1) Hybrid cloud: private cloud combined with public cloud
(2) GDPR: (EU) Global Data Protection Regulation

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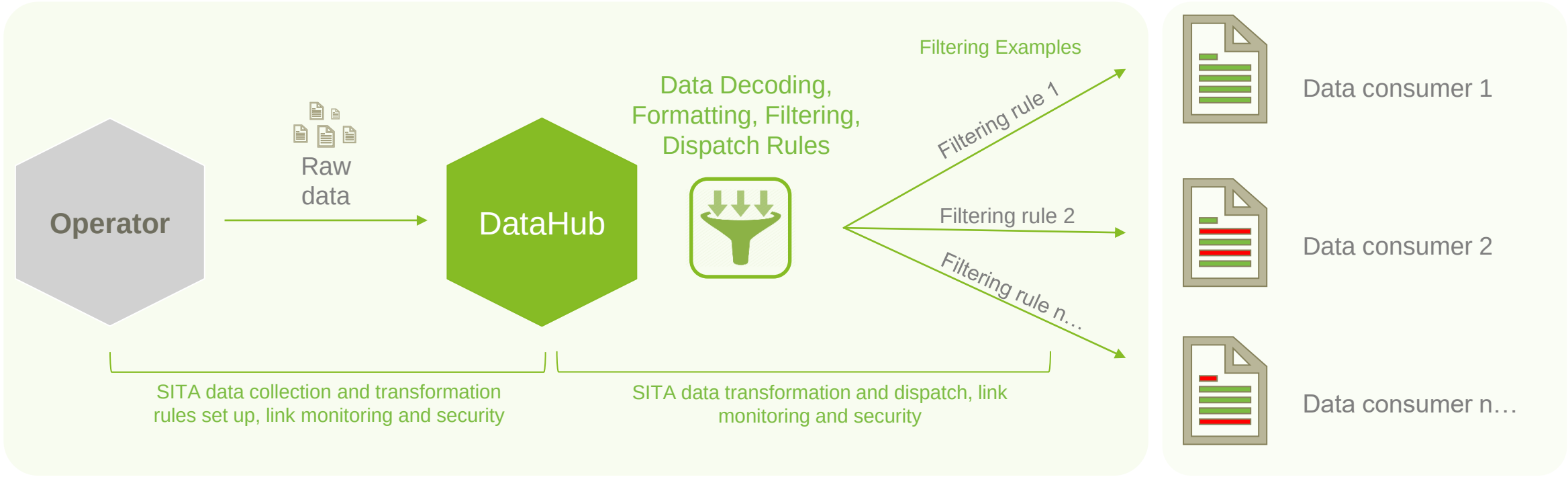
A Turn-Key Managed Service



SITA monitors all links, performs data transformation and custom data filtering rules per data consumer as per operator guidance, and on behalf of the operator

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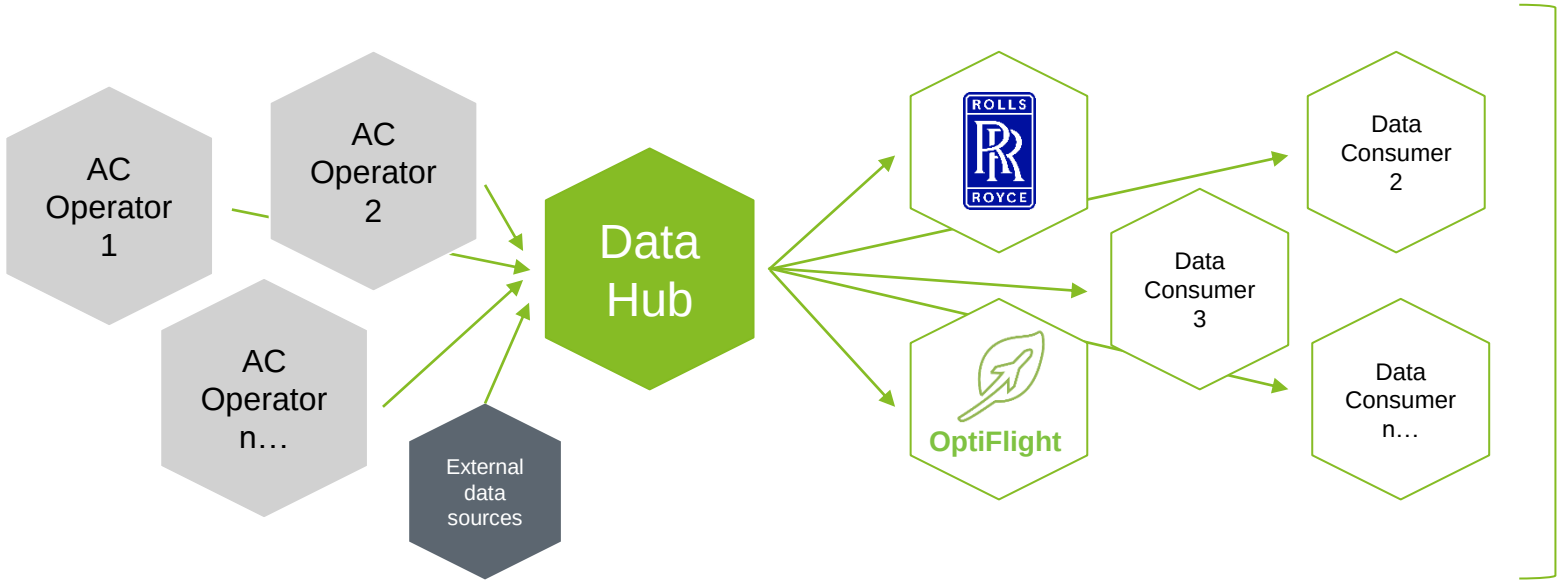
One SITA Connector, Multiple Benefits

Facilitating the « many to many » relationships of data sharing



SITA is in advanced discussions with multiple OEMs/MROs and service providers.

SITA has onboarded a total of **« double digit » airlines** in its e-Aircraft® DataHub, from leading Tier 1 airlines to regional players, across Americas, Europe and APAC

<u>One open platform</u>, <u>one light IT project</u> to implement at operator* side and OEM side, to unlock Big Data benefits

* Initial airline effort to connect to DataHub is estimated at **16 hours**

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Thank You

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Questions?

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Harnessing industry data to optimize material cost within airline maintenance

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Senior Solution Architect – Opremic Trade GmbH

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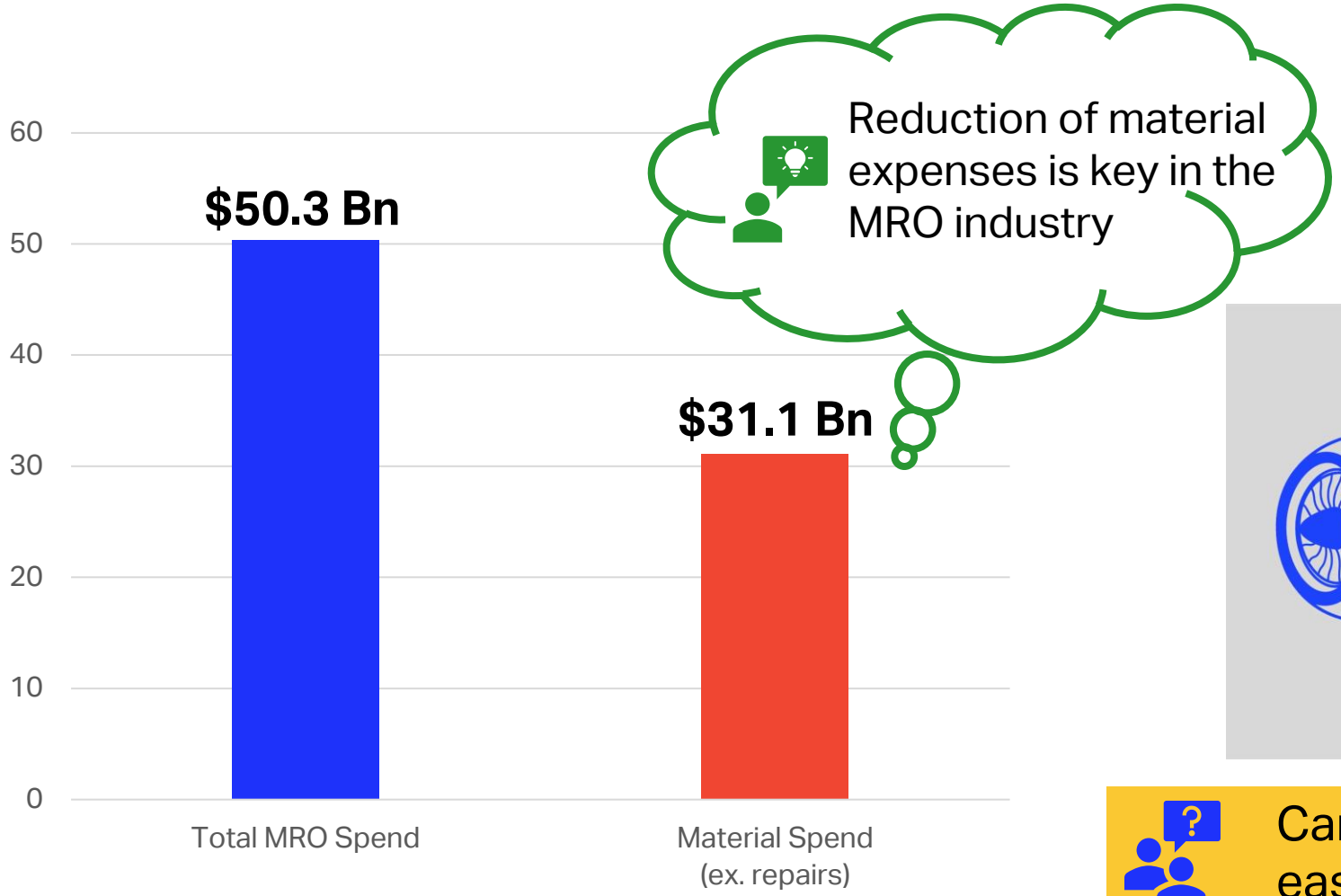
MRO SmartHub

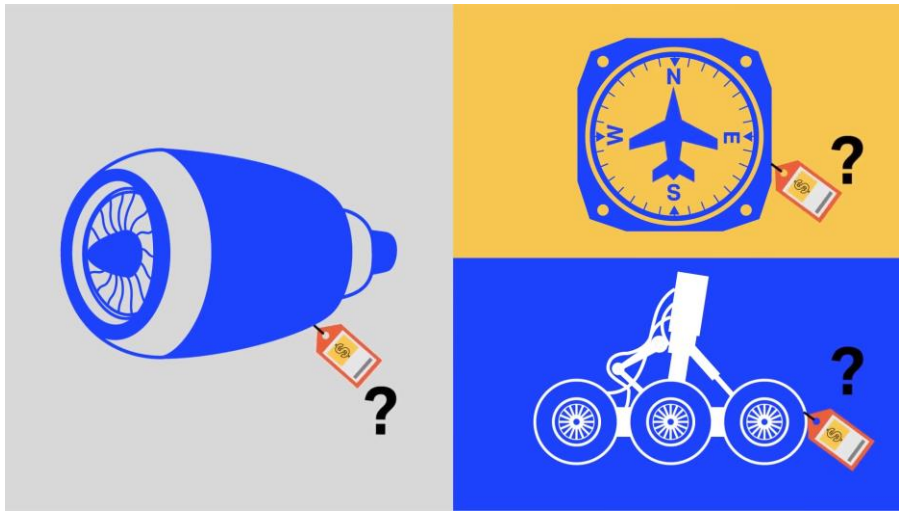
Harnessing industry data to optimize material cost within airline maintenance

Dr. Sebastian Vock
Opremic trade GmbH

Material spend represents ~ 60% of MRO costs



Reduction of material expenses is key in the MRO industry

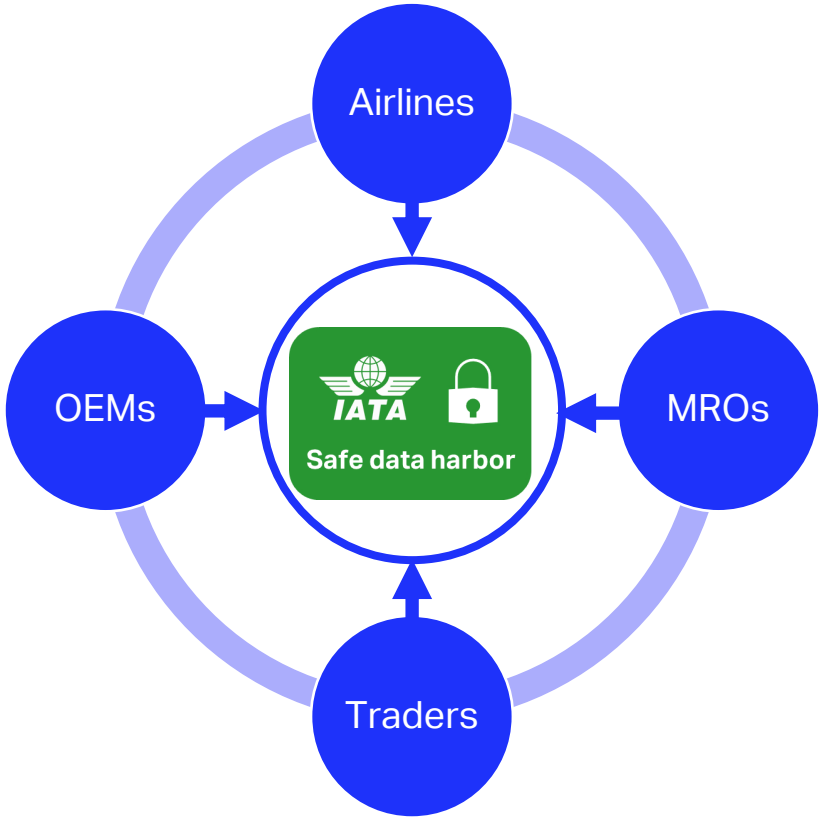


Can airlines and MROs reliably and easily quantify their savings potential?

Source: Oliver Wyman, volume of global MRO market for 2020

Knowledge about industry data can save money

Anonymized customer data



MRO SmartHub
Fair Market Value (FMV)

Company transaction history

Actuator 1211313-010 paid $30,000

Real-time online analysis

FMV on IATA MRO SmartHub $20,000

Accumulate & Visualize

Potential savings $10,000

IATA MRO SmartHub quantifies their customers' savings potentials

From top ...

Benchmark on company level - Calculation date: 30.8.2021 ⓘ

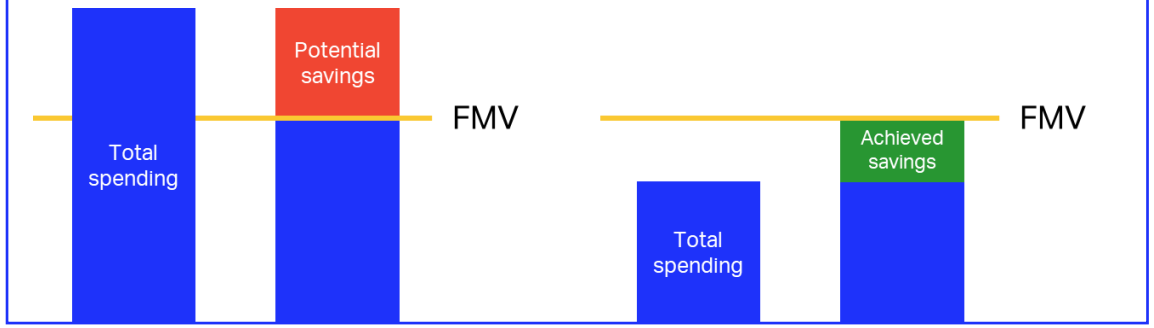
Total

Total potential savings [USD]	Total achieved savings [USD]	Total spending [USD]
$3,790,004	$821,188	$12,161,737

Divisions

Division	Potential savings [USD]	Achieved savings [USD]	Total spending [USD]
Sale	$842,150	$25,314	$3,241,049
Purchase	$2,123,491	$715,718	$7,136,124
Replacement	$824,363	$80,057	$1,784,564

Example: KPI calculation for parts purchase

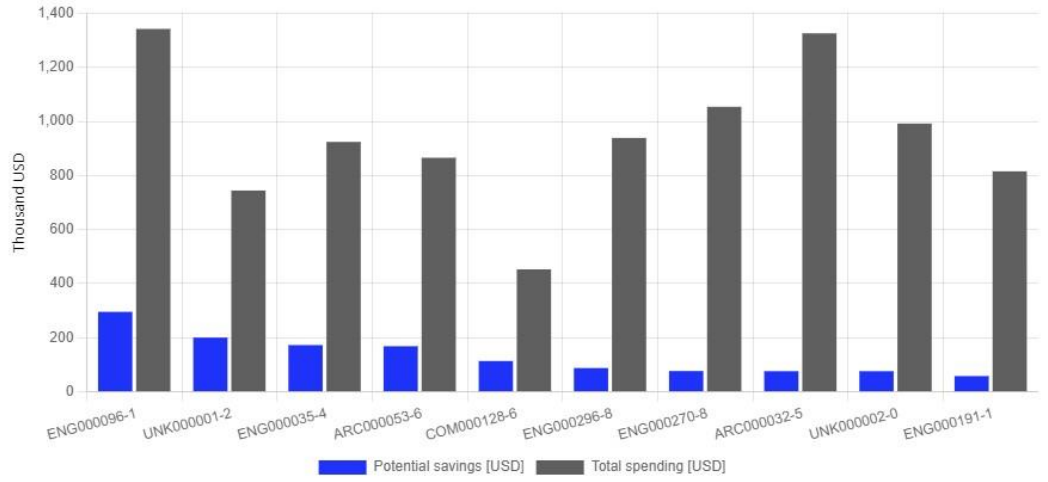


... to bottom

Purchase

Material domain	Potential savings [USD]	Achieved savings [USD]	Total spending [USD]
ARC	$339,329	$83,613	$1,236,159
COM	$256,863	$14,724	$1,069,792
ENG	$1,217,958	$540,519	$3,510,053
LDG	$29,656	$60,434	$192,005
w/o	$279,687	$16,428	$1,128,115

Top 10 parts



29 September 2021

Note: Data artificially created due to confidentiality

How can companies identify their savings potentials?

- Contribute data to a neutral industry database
- Use the market information

Provision of
individual transaction data
into

IATA MRO SmartHub

enables

- ✓ Real-time industry benchmark
- ✓ Efficient continuous monitoring
- ✓ Management information system

MRO SmartHub

- ✓ Real-time **industry benchmark**
- ✓ **Efficient** continuous monitoring
- ✓ Management **information system**

Coming soon…

- Interactive monitoring of individual management targets
- Integrate contractual restrictions
- Advanced anticipation of market trends

Dr. Sebastian Vock
Opremic trade GmbH
Leading Product Specialist
IATA MRO SmartHub

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Current customers and engagements

IBERIA
Batam aero technic
Lufthansa Technik Middle East
HAWKER PACIFIC AEROSPACE
KLM engineering & maintenance
Eurowings
TOTAL AVIATION
TDA.
LATAM
AAR
S7 Airlines
EPCOR
Blue Air
AIRFRANCE KLM INDUSTRIES
APOC AVIATION
海南航空 HAINAN AIRLINES
LOT
AIR BOTSWANA Going Your Way
Lufthansa Technik Component Services
Lufthansa Technik
Austrian

Visit the product page
www.iata.org/mro-smarthub

Download the COVID Whitepaper
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Register for a demonstration
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Questions?

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Useful links

- Maintenance Cost Technical Group
  www.iata.org/mctg
- Technical Operations Working Group
  www.iata.org/tog
- Safely Restarting the Aviation Industry

Thank you!

For more information on MCC 2021, please visit www.iata.org/mcc

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