

**ATA e-Business Forum 2025**  
Montreal, Canada – Oct 6-8, 2025



# Driving Operational Efficiency via SPEC2500

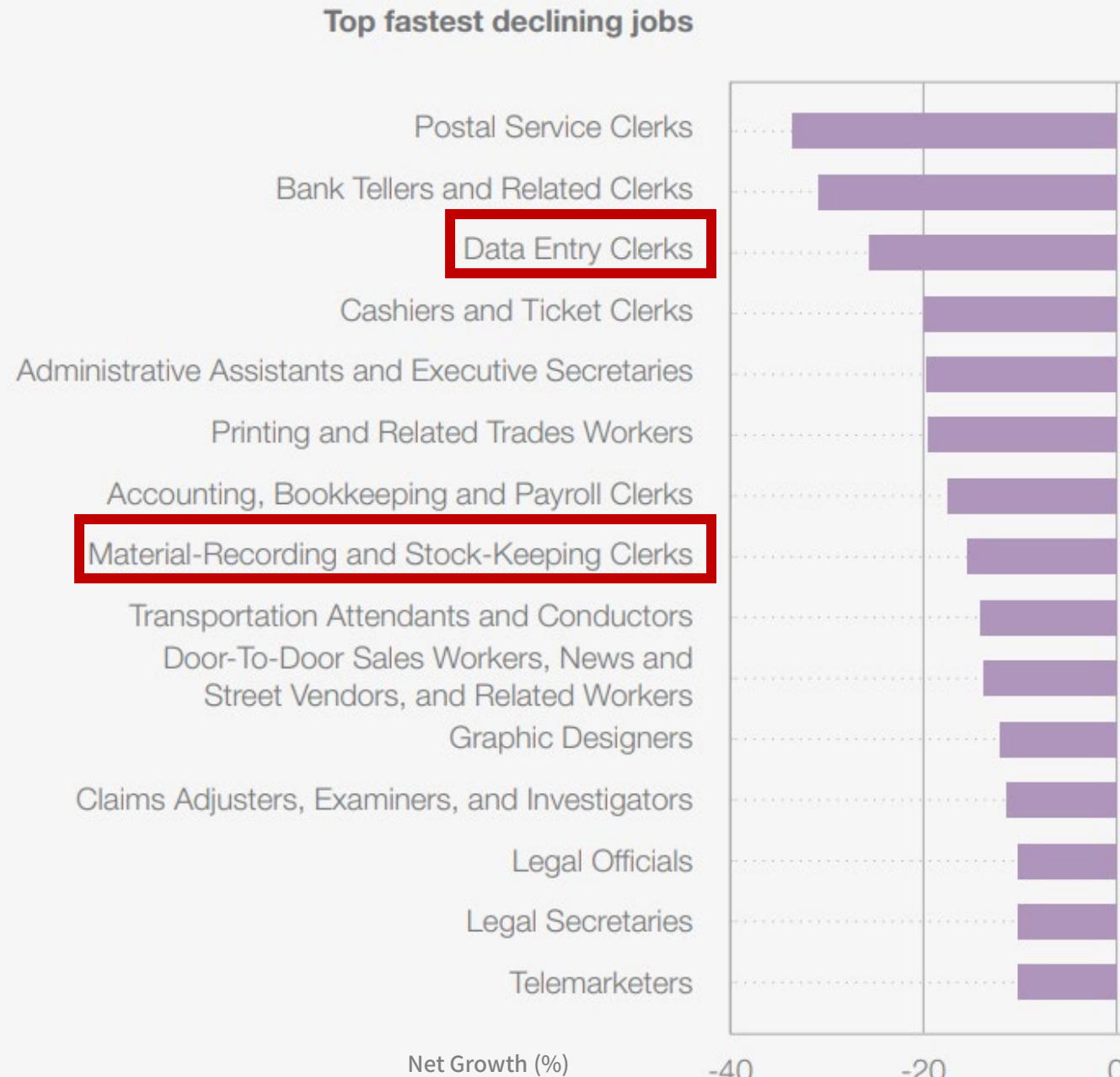
Real-world Use Cases and Strategic Outlook



**Guillaume Sola – S. Product Owner**

# Introduction

## Aera of digitalization



Source World Economic Forum,  
Future of Jobs Survey 2024

Still...



Typical Aircraft Transition engineer

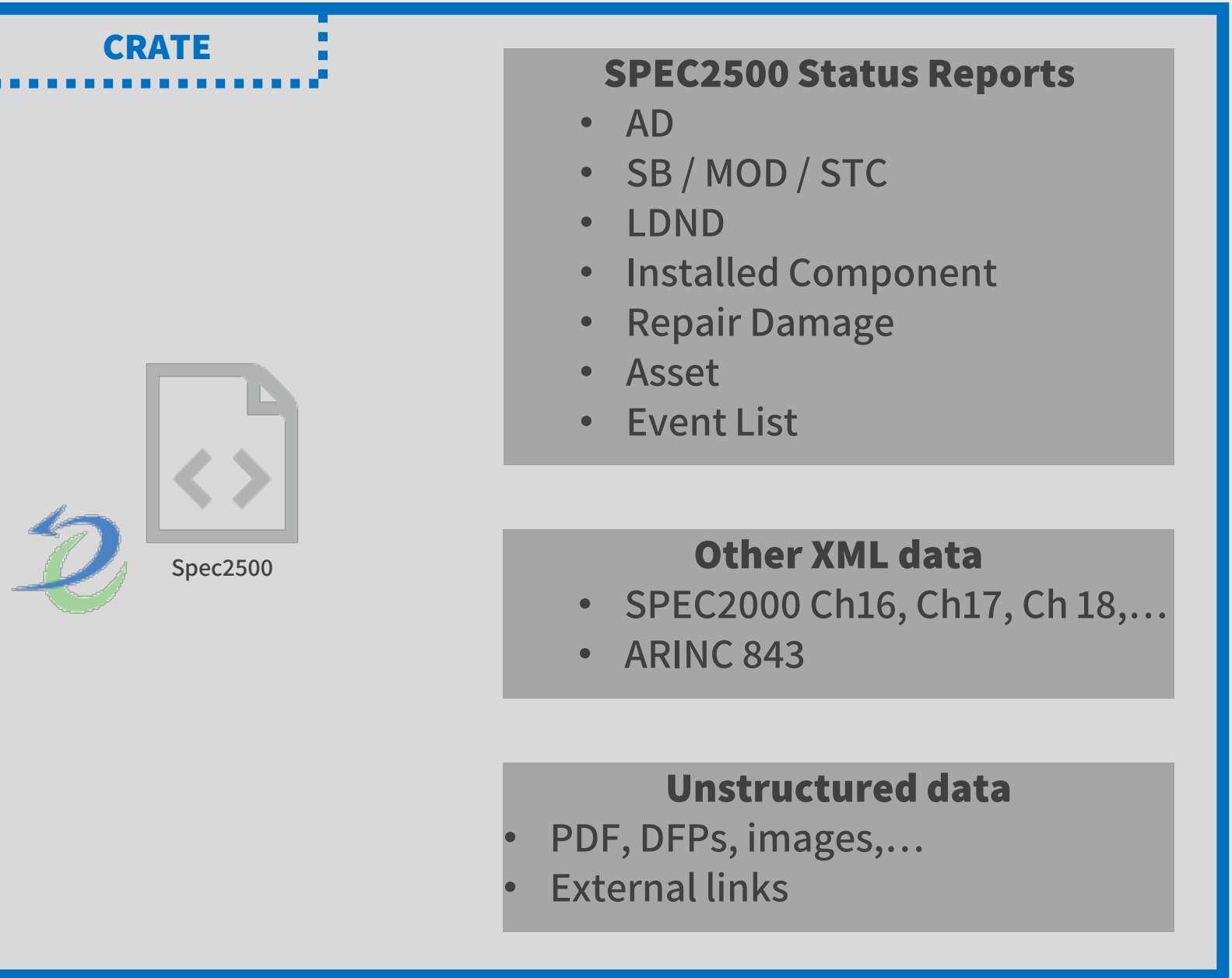
# Agenda

- SPEC2500 concepts
- What's new in rev 2023.1
- Walk through use cases
- Concrete application
- ATRWG update
- Q&A

## **Driving Operational Efficiency via SPEC2500**

Real-world Use Cases and  
Strategic Outlook

# What is SPEC2500?



# SPEC2500 Concepts

## Export Strategy

Structured data:

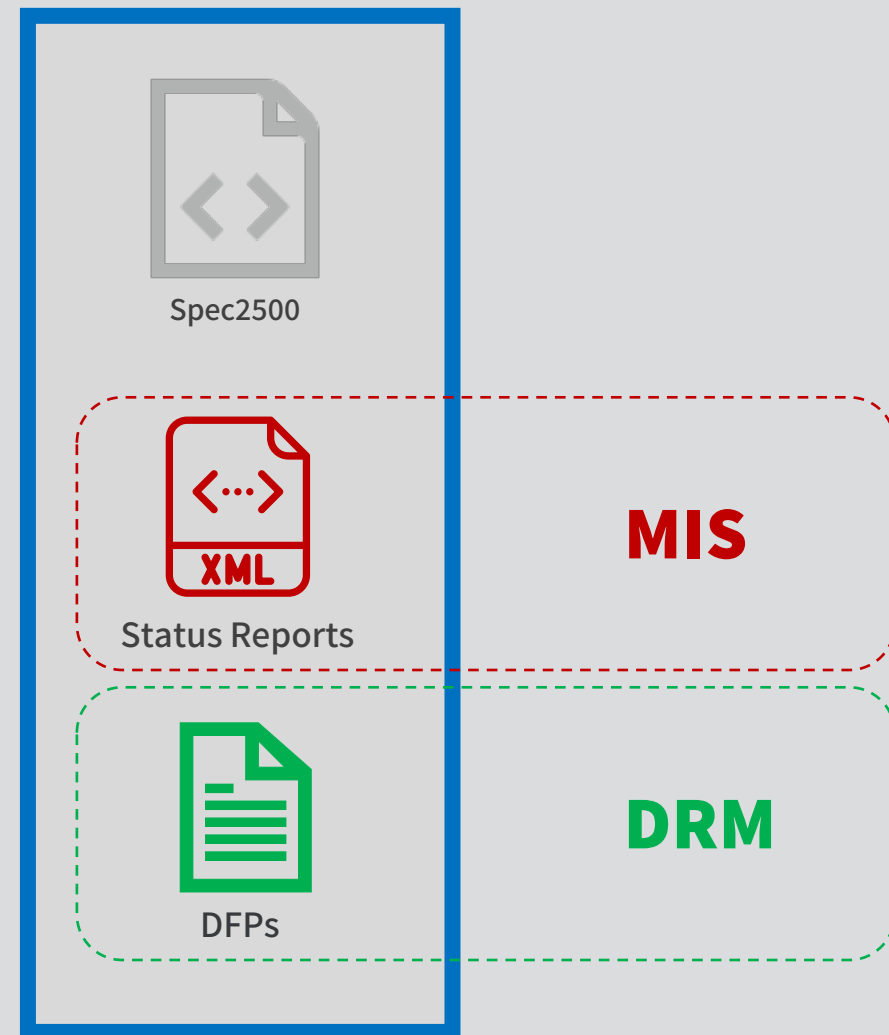
# MIS

(Maintenance Information System)

Unstructured data:

# DRM

(Digital Records Management )



# SPEC2500 Concepts

## Export Strategy

Structured data:

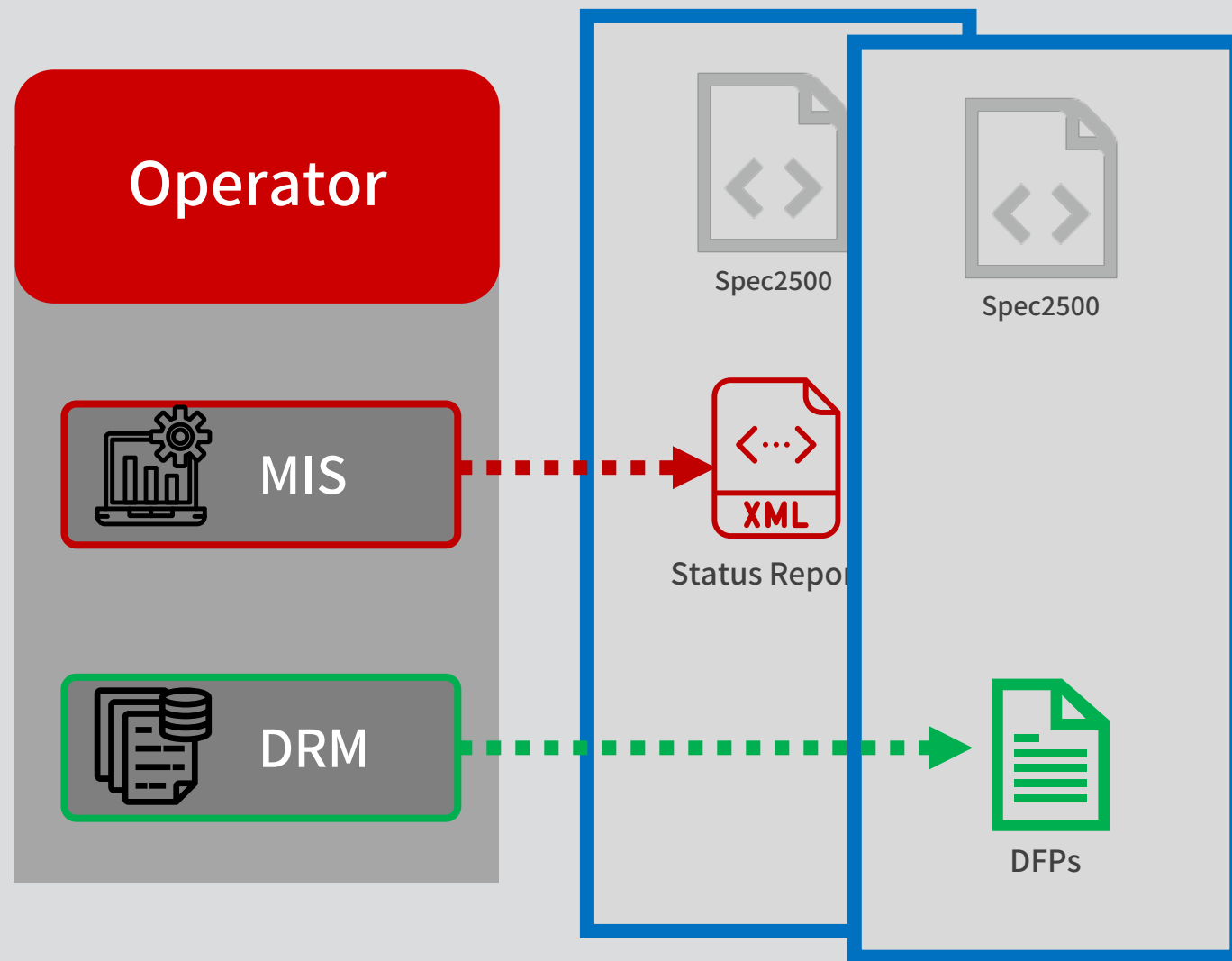
**MIS**

(Maintenance Information System)

Unstructured data:

**DRM**

(Digital Records Management )



# SPEC2500 Concepts

## Export Strategy

Structured data:

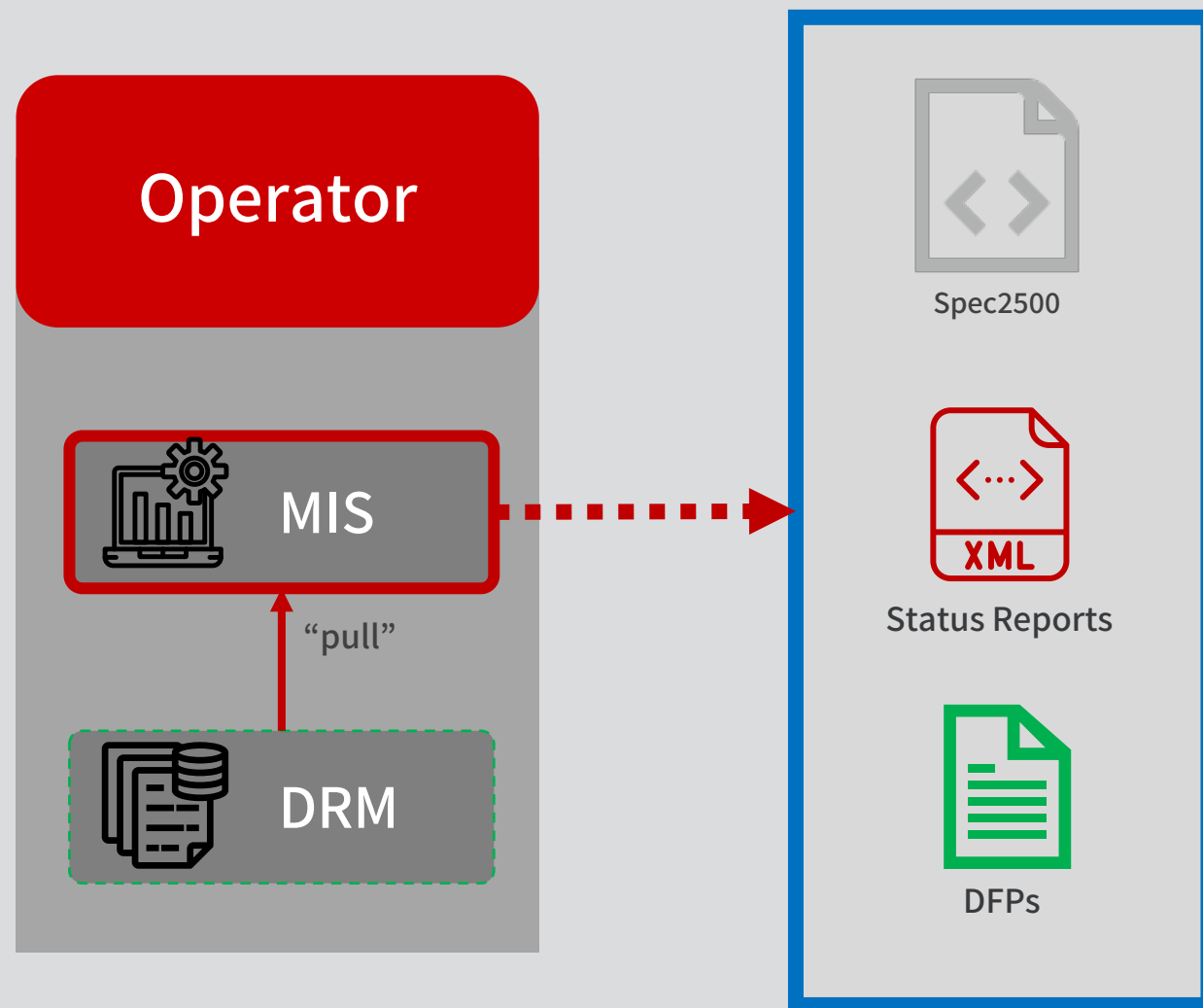
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# SPEC2500 Concepts

## Export Strategy

Structured data:

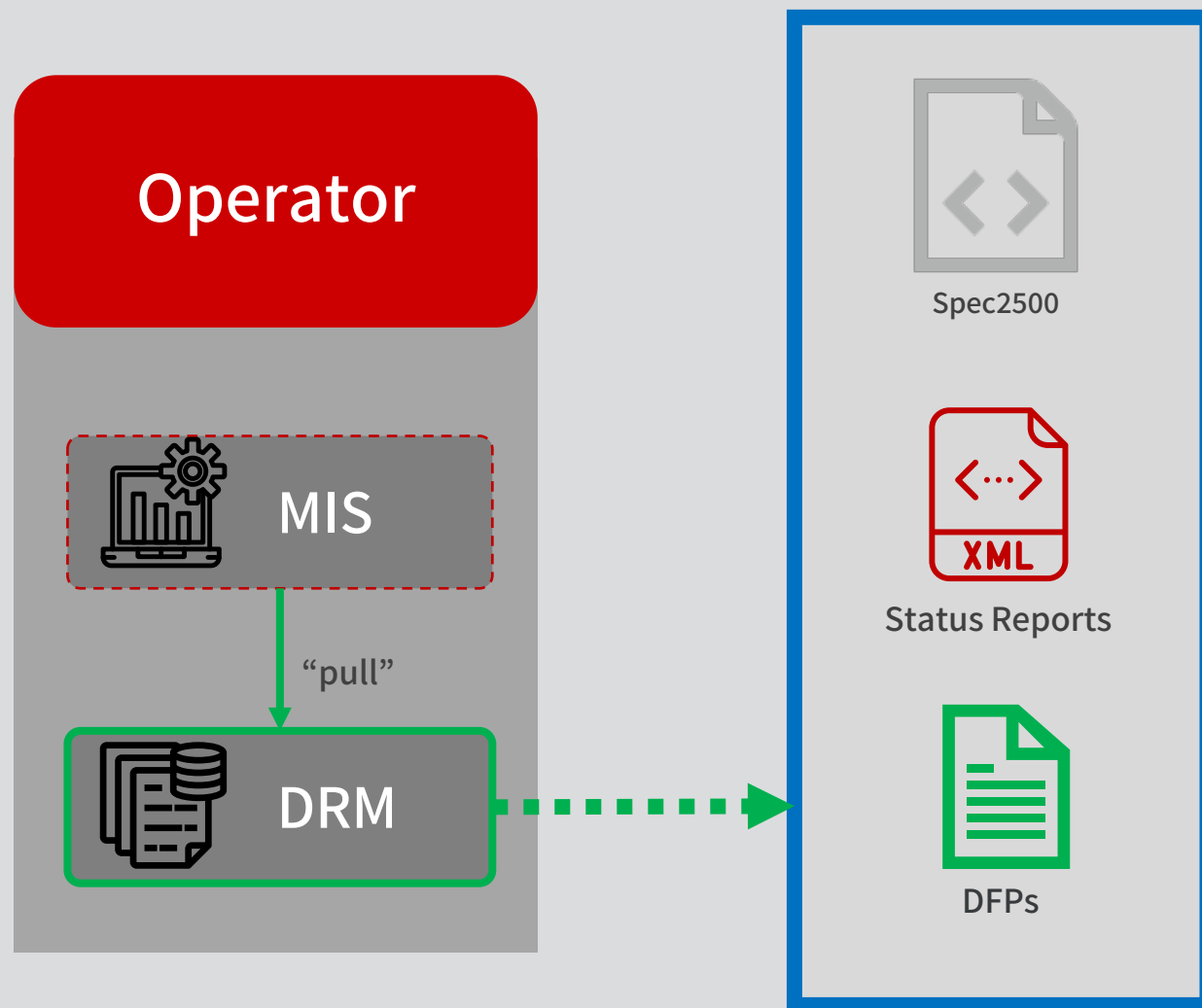
**MIS**

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Unstructured data:

**DRM**

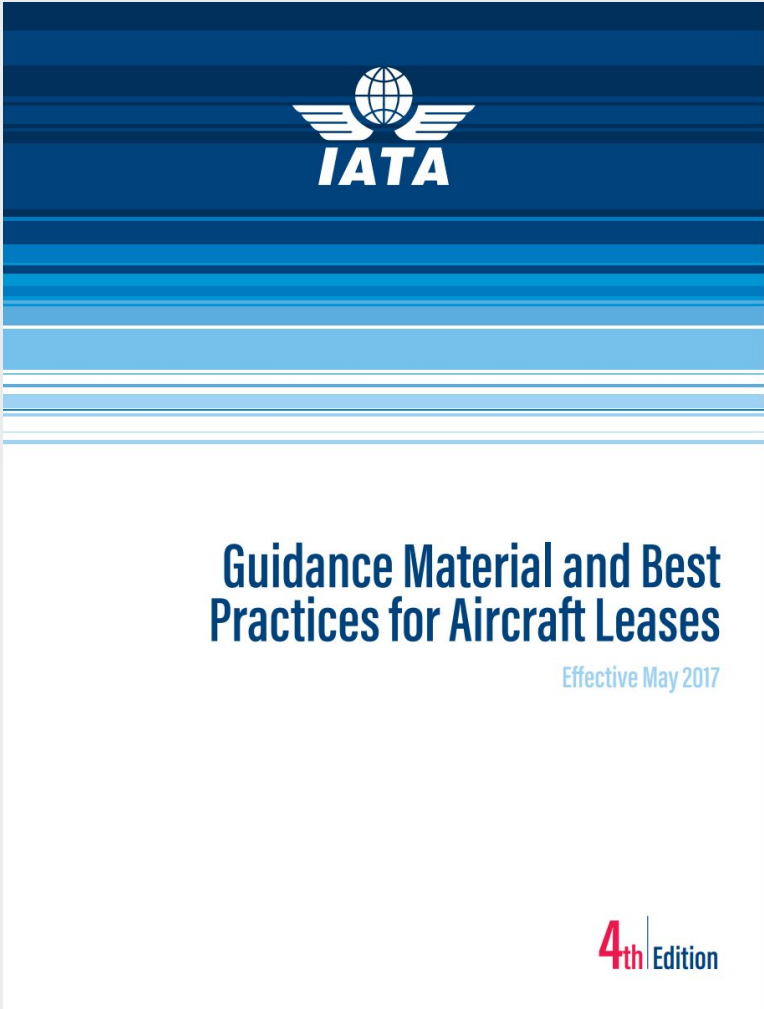
(Digital Records Management )



# SPEC2500 Concepts

## Specific naming conventions

- Ability to categorise records against:
- IATA guidelines (annex II)
  - Lessor in-house classification



IATA Guidance Material and Best Practices for Aircraft Leases		
Annex II: Typical Redelivery Records		
For delivery and redelivery, a certain number of documents and related substantiation records are required. This annex provides a best practice of the various documents and their description of what is required. Every lease agreement and associated delivery and redelivery will be different, and consequently the list of documentation will be different, as items can be added and/or removed from this list. All the documents listed below should be recognized and accepted, in support of the leasing transaction, in their electronic format whenever the local CAAs of the Lessor and Lessee do not mandate the paper format of the respective documents.		
A	Item	Current Certificates
A	001	Certificate of Airworthiness (from Redelivering Airline), and if applicable the Airworthiness Review Certificate (ARC).
A	002	Certificate of Registration (from Redelivering Airline).
A	003	Certificate of Airworthiness for Export (if applicable).
A	004	Noise Certificate (or equivalent) e.g. AFM page.
A	005	Copy of Radio Station License (from Redelivering Airline), including installed list of all radio transmitting equipment.
A	006	Aircraft De-Registration confirmation (if applicable).
A	007	Burn Certification - Compliance with FAR 25.853 (or EASA equivalent) for seats, carpets, curtains, interior surfaces including in-combination burn certification (as applicable) (note - burn certificate may be contained in the AIR/ARL or type design / IPC).
B	Item	Aircraft Maintenance Status Summaries (certified by designated airline representative)
B	001	Certified listing of Airframe Check / Inspection History / Maintenance Checks performed.
B	002	Certified status of Total Time in Service (Hours and Cycles).
B	003	Aircraft Flight Time Report / Aircraft Log Book / or Airline Maintenance Information System (MIS) utilization report (as applicable).
B	004	Certified status of Airframe & Appliance (Component) Airworthiness Directives (including AD revision, applicability status and statement as to method of compliance e.g. modified/repaired/inspected).
B	005	Certified status of Manufacturer Service Bulletins incorporated (may be included in combined Aircraft Modification Listing).
B	006	Certified status of all Airframe Non-Manufacturer Modifications incorporated, including STC's (may be included in combined Aircraft Modification Listing).

# What is new in 2023.1?



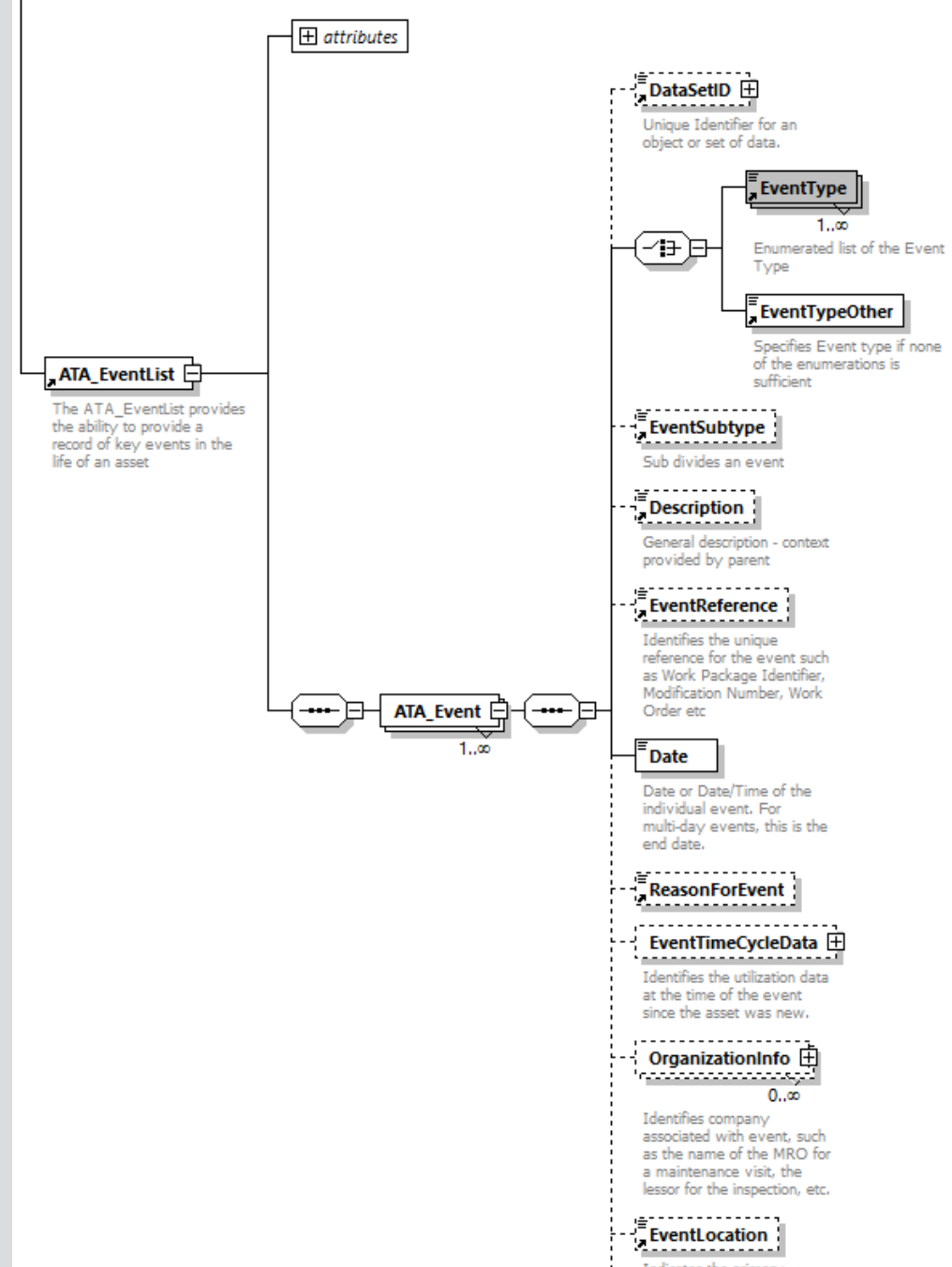
# What is new in 2023.1

## MISC changes (not retro-compatible!)

### ATA Event list

Lists major events in  
an asset's life

- OEM delivery
  - Shop Visit
  - Redelivery
- Major modification
- WP / Maintenance
  - ...



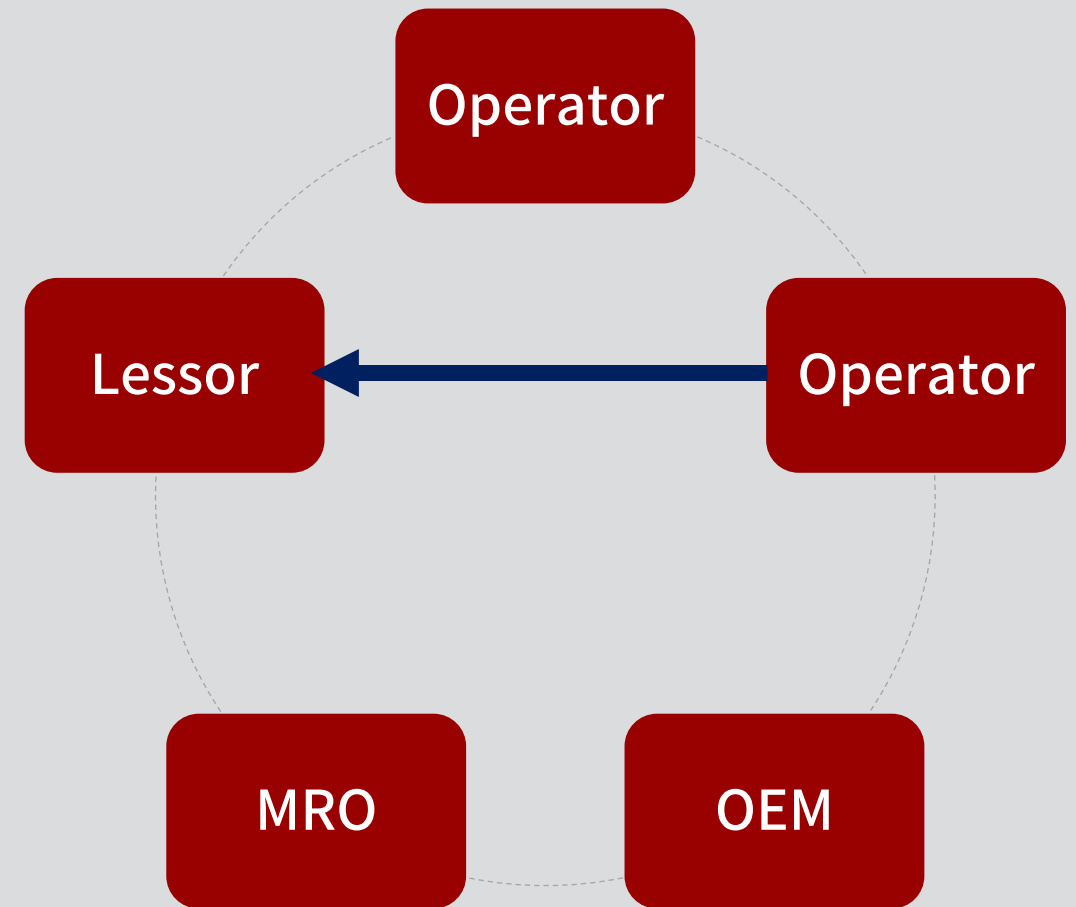


# Walk through use cases



## Walk through use cases

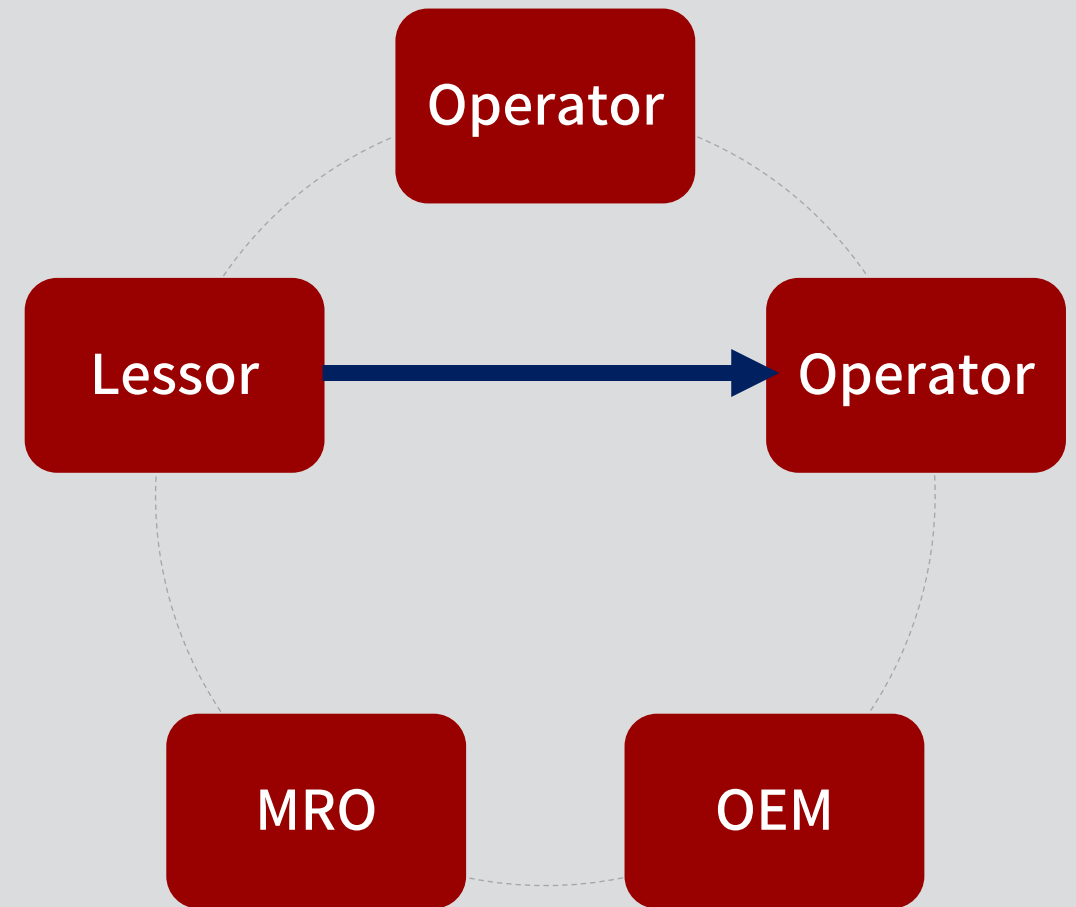
- **Streamlined & standardized** records collection.
- Provides **transparency** and **traceability**.
- Reduces **manual typing, errors, and labor**.
- Enables **records evaluation** before asset delivery.
- Unlocks **quicker induction** times and **operational availability**.



# Lease Return

## Walk through use cases

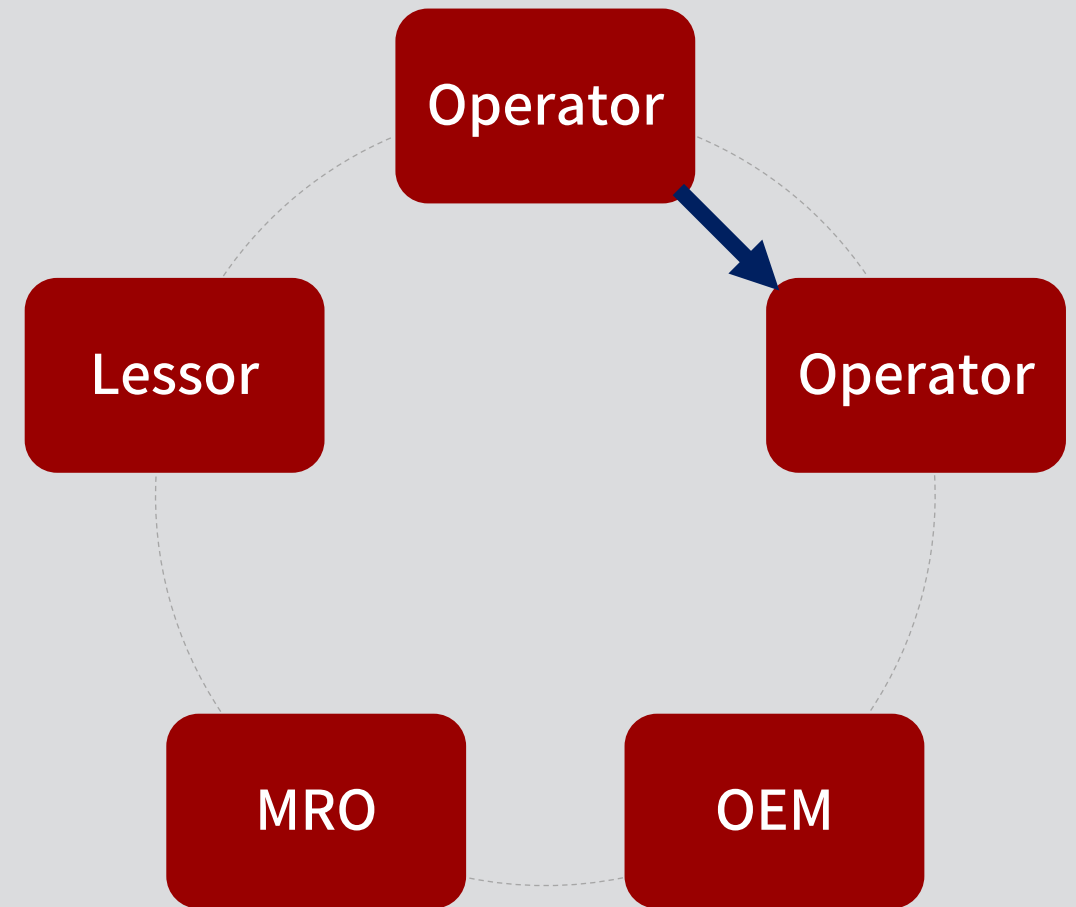
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**Lease Delivery  
(used Asset)**

## Walk through use cases

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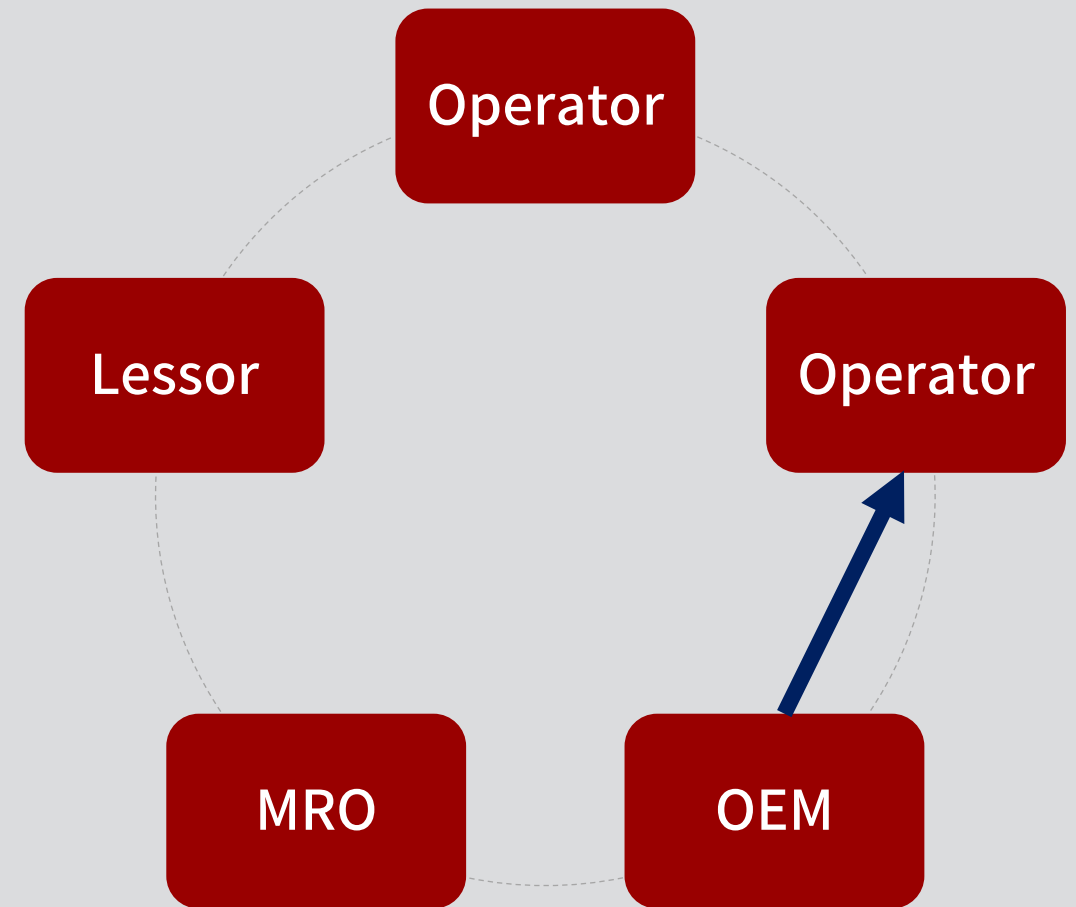


## Asset Transition



## Walk through use cases

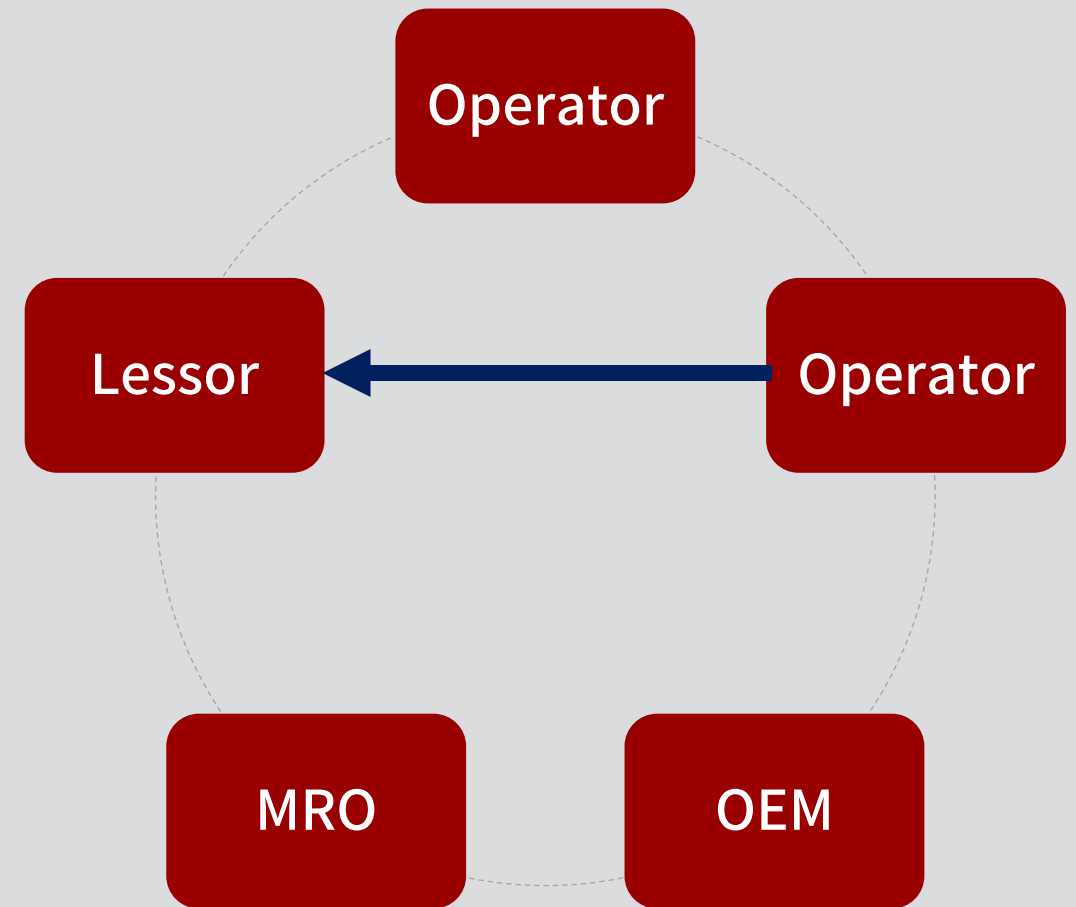
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# Initial Delivery

## Walk through use cases

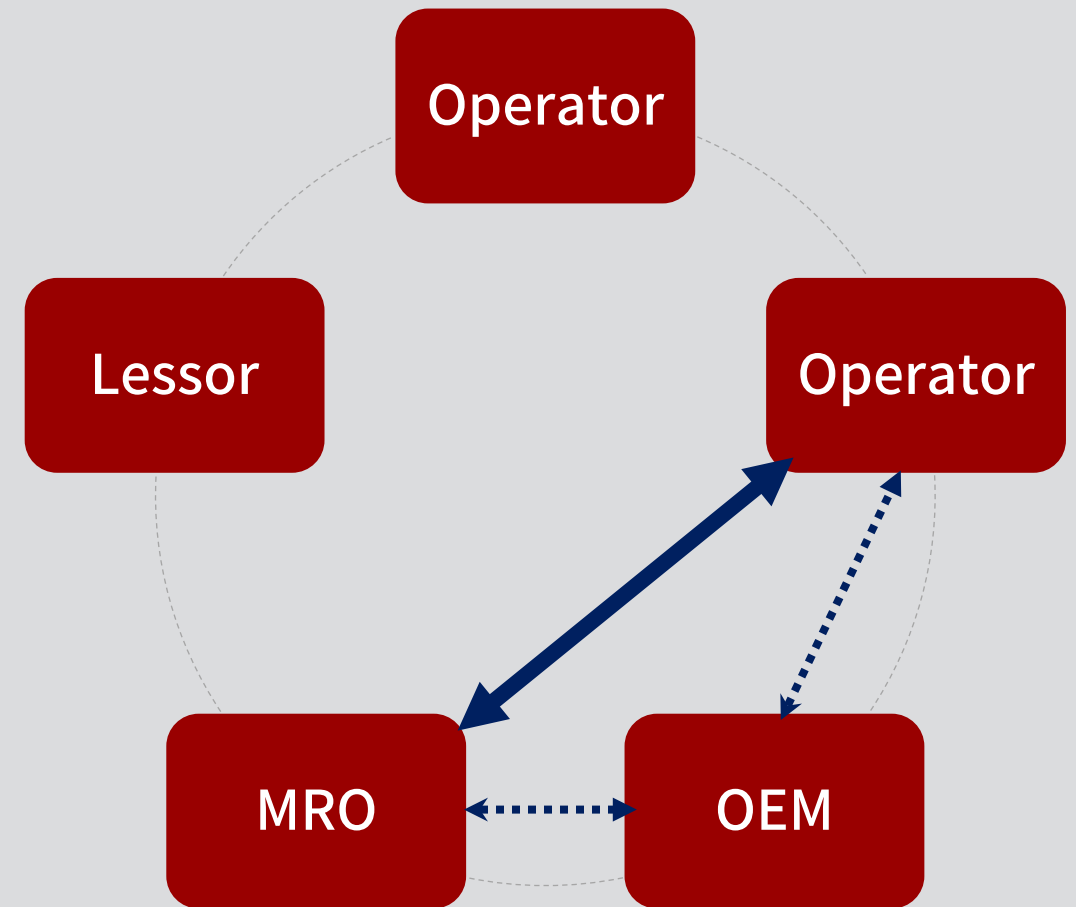
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# Lessor monthly reporting

## Walk through use cases

- **Streamlined & standardized** records collection.
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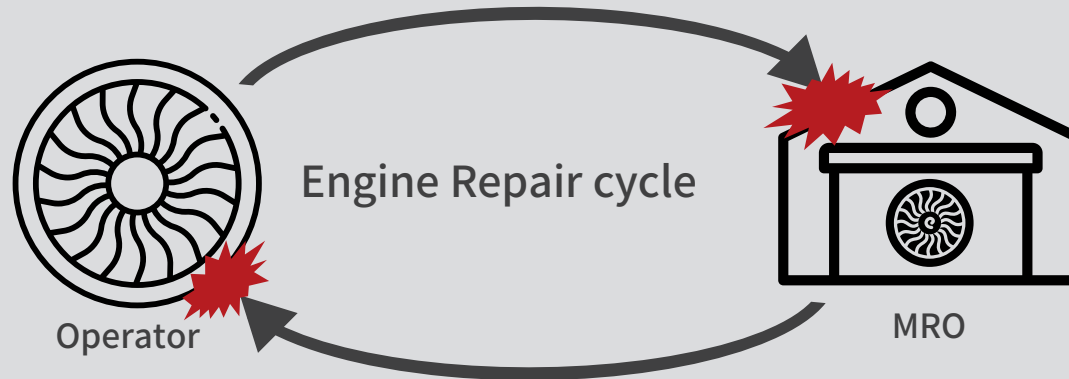
# Induction post maintenance.

# Concrete application



## Concrete application

### Engine Repair cycle



**Typical Engine  
induction time:**

**1 – 2 MD**

### Project Goals & Requirements:

#### For the Operator

- Faster induction
- Better data quality
- Fewer data corrections and end-user support.

#### For the OEM maintenance center

- Faster induction
- Better view of utilization and work performed.



# Concrete application

## Scope

### Scope

Part / Serial Number



Time Since (N, OH, R)



Position



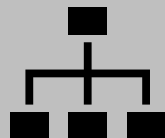
Condition



Manufacture Date



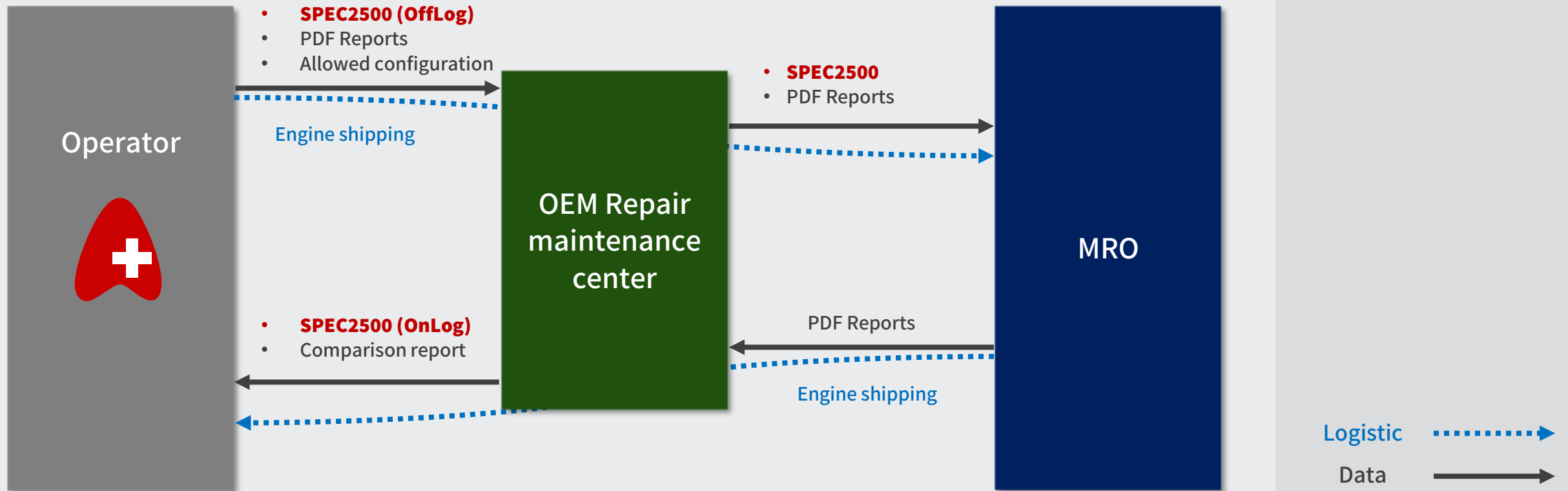
NHA / NLA relationship



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    <FunctionalPositionInformation>
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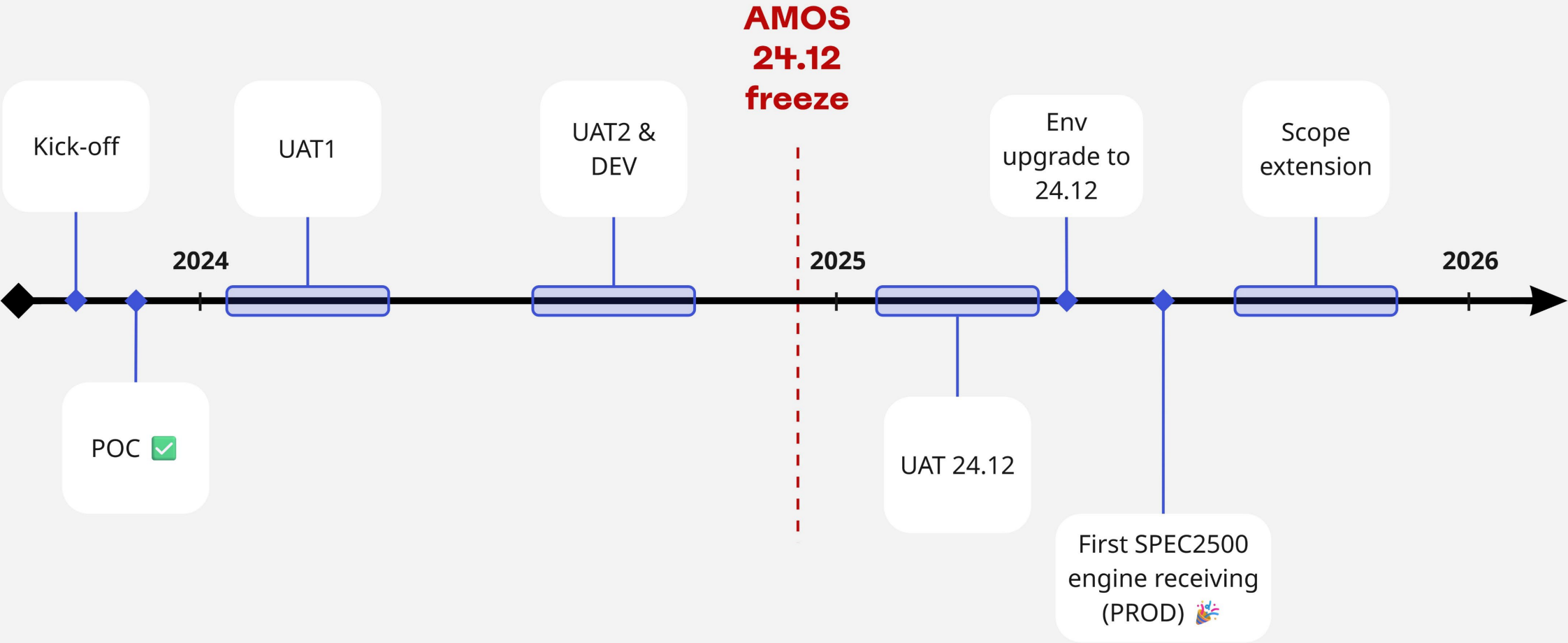
# Concrete application

## High-level architecture



# Concrete application

## Project timeline





# Concrete application

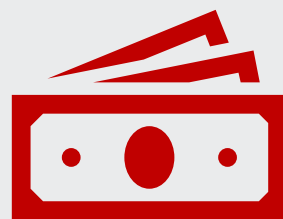
## Measured takeaway

1-2 MD



Engine  
induction time

0,5 MD



30 000 \$

Yearly cost  
saving

Component Inspection & Records (APN:2293)

ne 14:24 ☒ Print Label ☐ Print Receipt

Uninspected

Imported data from: SPEC2500-ENGINE-WRONG-NHA.xml at Mon Sep 22 14:23:27 UTC

Rotable PN: CFM56-5B4P / SN: SPEC2500-1 / PSN: 35896 Requirements Tree Receiving

Apply To Reload Show Configurations Tree Icons Legend Show XML

Part No.	Description	Serial No.	Conf. ID
CFM56-5B4P	ENGINE	SPEC2500-1	CFM56-5
01FAN	01 MODULE FAN	01FANSPEC2500-1	01FAN
02LPC	02 MODULE LPC	02LPCSPEC2500-1	
03HPC	03 HPC P733579	03HPCSPEC2500-1	03HPC
1386M56P03	HPC ROTOR FWD SHAFT	GWN0576-01-1	
1558M31G04	HPC ROTOR 1-2 SPOOL	GWN1576-01-1	
1588M89G03	HPCR SPOOL ASSY STG. 4-9	GWN2576-01-1	
1590M59P01	HPC ROTOR DISK STG. 3	GWN3576-01-1	
05HPT	05 MODULE HPT	05HPTSPEC2500-1	05HPT
1498M43P04	HPT ROTOR DISK	GWN4576-01-1	
1498M45P07	HPT REAR SHAFT		
1795M36P02	HPT FRONT ROTATING AIR S...	GWN5576-01-1	
1873M73P01	HPT ROTOR FRONT SHAFT	GWN6576-01-1	
06LPT	06 MODULE LPT	06LPTSPEC2500-1	06LPT
336-001-804-0	LPT ROTOR DISK STG. 1	BB730001-01-1	
336-002-006-0	LPT ROTOR DISK STG. 3	BB730002-01-1	
336-002-105-0	LPT ROTOR DISK STG. 4	BB730003-01-1	
338-010-005-0	LP TURBINE SHAFT	BB730004-01-1	
338-117-404-0	LP TURBINE CASE	BB730005-01-1	
338-171-703-0	LP TURBINE FRAME		
07EXH	PLUG-ASSY OF EXHAUST	07EXHSPEC2500-1	07EXH
238-0451-513	EXHAUST CENTRE BODY	ROHSPEC2500-1	
PWENGCOMP	PW ENGINE COMPONENT TR...	COMPSPEC2500-1	CFMENG

Part No.	Serial No.	In Tree?
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9238M66...	UNJD576...	<input checked="" type="checkbox"/>
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338-002-1...	BB83001...	<input type="checkbox"/>
336-002-0...	BB73000...	<input checked="" type="checkbox"/>
1853M48...	GDB5761...	<input checked="" type="checkbox"/>
338-010-6...	DC12345...	<input checked="" type="checkbox"/>
PWENG...	COMPSPE...	<input checked="" type="checkbox"/>
338-002-1...	BB83000...	<input type="checkbox"/>
1873M73...	GWN6576...	<input checked="" type="checkbox"/>
TY2013-10	8755-01-1	<input checked="" type="checkbox"/>
1498M43...	GWN4576...	<input checked="" type="checkbox"/>
338-002-1...	BB83000...	<input type="checkbox"/>
05HPT	05HPTSP...	<input checked="" type="checkbox"/>
330400M...	AGSPEC2...	<input checked="" type="checkbox"/>
338-002-1...	BB83000...	<input type="checkbox"/>
8061-535	WYGA057...	<input checked="" type="checkbox"/>
1211313-...	APMMV5...	<input type="checkbox"/>
338-002-1...	BB83000...	<input type="checkbox"/>

# START SMALL SCALE UP



# Concrete application

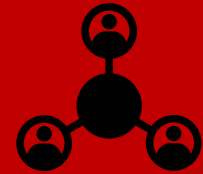
## Lessons learned

**Unknown data**

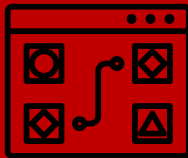


### **Lack of homogeneity**

- Agreement on Tracked parts
- NHA/NLA
- Tracked positions



**(Auto)matching logic.**



**Nomenclature mapping**





# ATRWG Update



## ATRWG update

# Component History initiative

- Digital “Back to Birth” industry.
- 13 specific standard events

## New SPEC2500 rev

- Minor adjustments

# DIGITAL PASSPORT

<xml>

<componentPassport>



</events>

<componentPassport>



## ATRWG update

- ✓ Validation of Schema proposal
- ✓ Identification of new history entries
- ✓ Implement POC

# JOIN US

TO SHAPE  
AVIATION  
DIGITALISATION



**Thank you for your attention**



**Time for  
questions**

