
IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

WELCOME

#IATAWMES

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Silence your phone

#IATAWMES

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Download the app

Apple Store

Google Play

Event ID: **IATAWMES2026**

#IATAWMES

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

WMES App, Q&A &Survey.

Sessions

Speakers

Sponsors

Connections

QR code

Announcements

All Sessions | My Schedule | Appointments

Date | Time | More filters

Central Europe Time Adjust

Before Event

Tuesday 23 June

18:00 - 19:00 CET (1 hour)
Networking Cocktail Reception

Wednesday 24 June

08:00 - 09:00 CET (1 hour)
Welcome Coffee

09:00 - 09:10 CET (10 minutes)
Opening and Welcome
Milan-Venecia

From crisis to constraint: The new normal for the aviation supply chain

Wed 24/06, 09:10 - 09:30 CET
20 minutes

Milan-Venecia

Add to calendar

Add session

Speakers

Stuart Fox
Director Flight and Technical Operations, IATA

About this session

Plenary Session

Add session to calendar and scroll down to access Q&A and Survey.

About this session

Plenary Session

Live Q&A Hasn't started

Survey

#IATAWSS

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Event hashtag

#IATAWMES

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

With many thanks to all our sponsors

Bronze Sponsor

Lufthansa Technik

AVIATAR AMOS flydocs

Exhibitors

Conduce Mobile Aviation Solutions

FTG HEICO SAFRAN ULTRAMAIN

Media Partners

Airlines.

MRO BUSINESS TODAY

MRO Management

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Competition Law Guidelines

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Introduction

Karmel Shahin,

Manager Technical Operations and Supply Chain, IATA

#IATAWMES

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Mitigating supply chain disruptions for airlines

Alex Lan,

Head Aviation Supply Chain, IATA

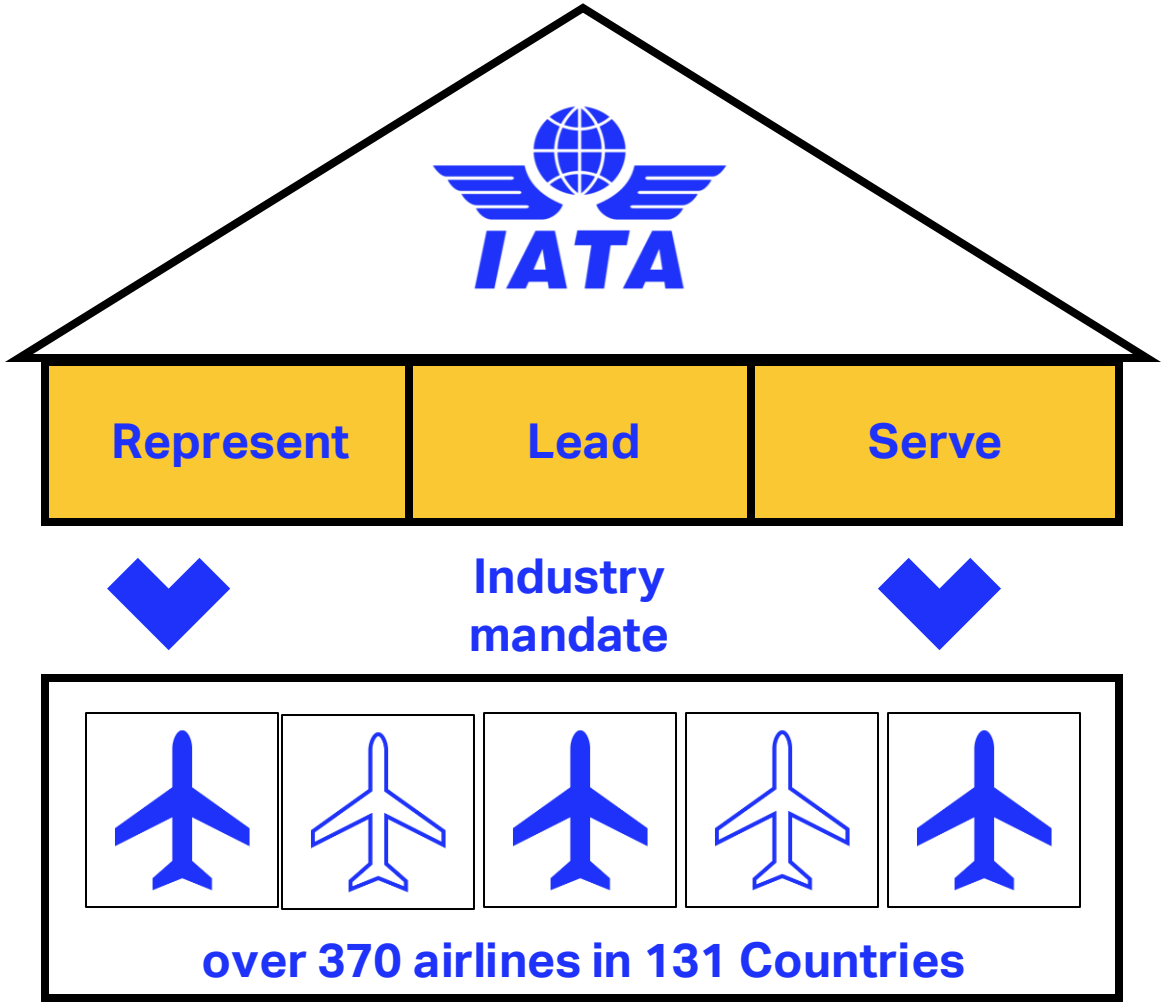
#IATAWMES

IATA MRO SmartHub Advocacy

Mitigating supply chain disruptions for airlines

Alex Lan, Head Aviation Supply Chain, IATA

IATA Advocacy mission in supply chain



Working together to shape the future growth of a safe, secure and sustainable **air transport industry** that connects and enriches our world

Supply Chain Advocacy is one of the core missions within IATA's Flight & Technical Operations department, Operations Safety and Security (OSS) division.

Global IATA report on supply chain issues

issued in October 2025, still a key reference for Airlines teams

available on www.IATA.org

- Executive Summary
- **Reminder about existing enablers** (*e.g: airlines rights through Product Support frameworks*)
- Call for actions

Airlines teams :

- Materials Management
- Procurement & Contracts
- Quality Assurance
- Executive Management

IATA actively pursuing the "call for actions" described in this report

MRO bottlenecks flagged in the report

Long repair Turnaround times continue to disrupt the supply chain

- Turnaround time (TAT) for components repairs has **increased by 25 – 40%** since 2019
- **Shop turns of some engine models** can now take up to 300 days, compared to typical averages of 120 days pre-pandemic

Many OEMs appear to have some reluctance to make more repair schemes available under their Product Support for airlines and their designated MROs.

- *This drives greater focus on Used Serviceable Materials (USMs), Part 21/DER repairs and PMAs as regulatory approved cost-effective options.*

a situation causing significant operational disruptions and costs increase

new IATA report on engine MRO supply chain

available on www.IATA.org

- At some point in 2025, about **650 single aisle aircraft** (latest models) **were grounded**, awaiting engines shop visits
- **Time On Wing** for some of the new engine models do not even reach 5,000 flight cycles
- Need to develop **more repair schemes** to reduce scraps of on-condition parts during shop visits
- Benefits of the **IATA-CFM agreement** - an example to follow, by airframe equipment OEMs as well

renewed IATA-CFM agreement for MRO practices

greater attention to its terms could contribute to better parts availability and MRO capacity

Examples of some key provisions, apply to all CFM engines (e.g: including LEAP) :

- Recognizes not only Airlines and Lessors, <u>but also MRO competitors</u> **as "beneficiaries"** of those measures.

- **Honours warranty** also on engines on which customers may have chosen to install regulatory approved **non-OEM parts** and/or applied **non-OEM repairs**.

- **Waives fees** (*both upfront fees and royalty*) to third parties overhaul shops for the **use of the engine shop manual (ESM),** and not requiring any other form of financial compensation.

- When customers choose during engine shop visits, CFM **accepts to re-install** customers' supplied non-OEM parts and/or non-OEM repaired parts if they are serviceable.

> full details and terms available on www.IATA.org: cfm-conduct-policies-and-implementation-measures.pdf

other OEMs (*including in Airframe equipment*) **encouraged to adopt same steps**

Supply Chain is therefore a top IATA priority

Vision: a Resilient, Efficient, and Transparent Aviation Supply Chain

Strategy supported by IATA Board of Directors

What are your key challenges?

Top 3 answers:

- Supplier control
- Single source
- Part availability

* Each participant was allowed up to 3 entries of choice

41 Source: Participant poll 19 April 2024

Airlines feedback from previous IATA supply chain workshops

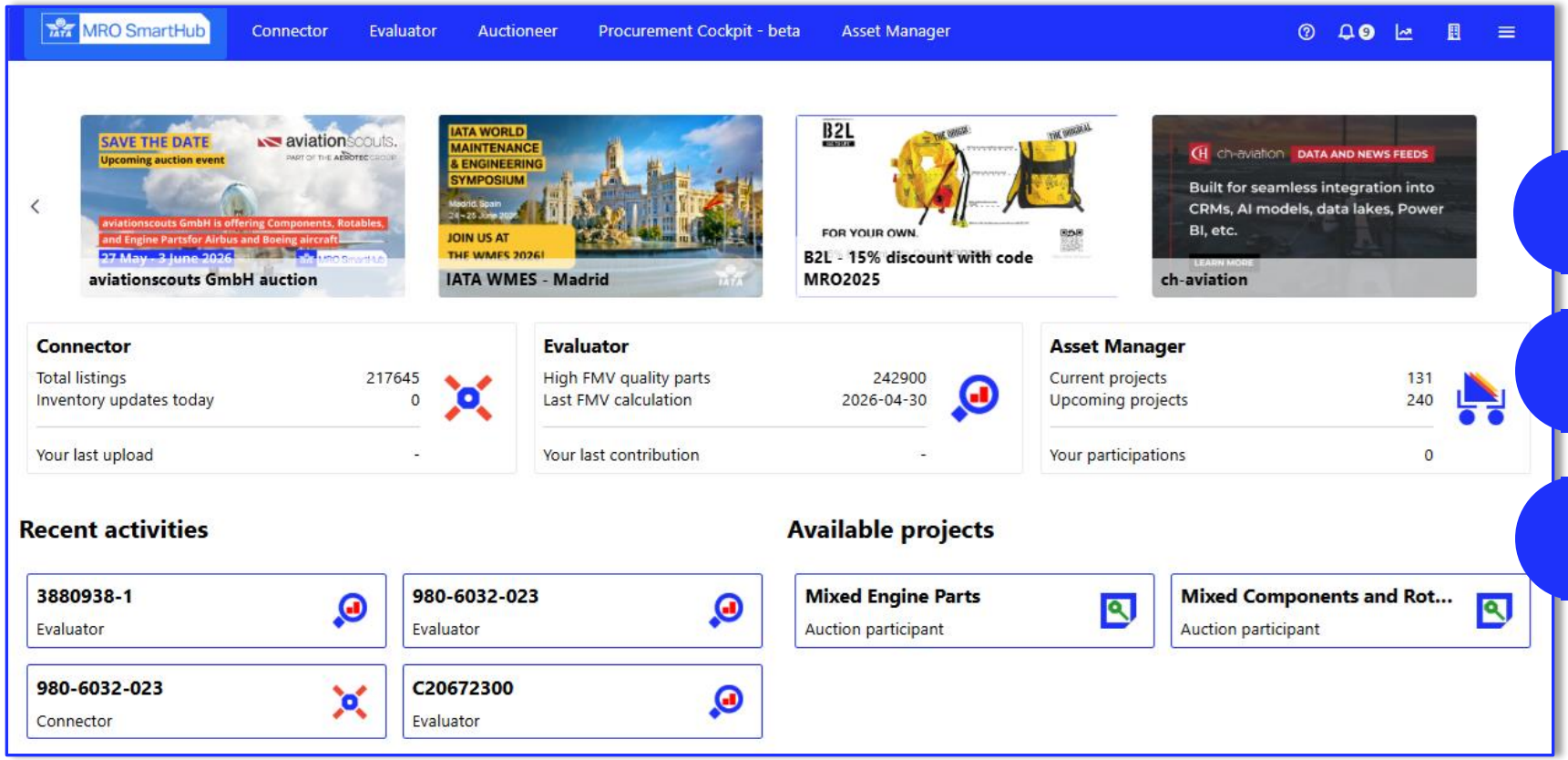
Advocacy Pillars :

- ❑ **Open up Aftermarket Services:** promote independent MROs, and alternatives to equipment OEMs networks.
- ❑ **Expand Materials Capacity:** promote **Part 21 & DER** repairs, **USM** materials & **PMA**s, reduce lead times & improve repair **TAT**.
- ❑ **Enhance Transparency & Forecasting :** develop collaborative platforms, provide better visibility on materials.
- ❑ **Accreditation & Standards:** promote suppliers accreditation, and support Blockchain for parts traceability.

how to deliver Advocacy into airlines operations ? **> need for an open Platform**

IATA already had a platform: MRO SmartHub

originally mainly focused on aircraft teardowns projects



Launched in 2019

Transformed in 2026

Now serving Advocacy

NEW **now includes a new open program dedicated to airlines**

vehicle to deliver the advocacy plan for airlines materials teams

NEW

MRO SmartHub

free access program for IATA, ALTA and IATP airline members

on core features within the following modules:

1. Evaluator

Information analysis on parts, KPIs, dashboards and guidance information

2. Connector

Visibility on materials listed by suppliers in the platform

3. Auctioneer *(sourcing)*

A tool to broadcast materials needs to support operations

4. Asset Manager

Materials from teardown projects. Enable joint bid purchasing on aircraft assets

(e.g: MROs, Lessors and Assets owners)

- KPIs on **top spend Part Numbers and shortages**
- highlights **PMAs alternatives** from the FAA database
- Individual **analysis** on materials spend optimization
- serviceable materials **from connected suppliers**
- **accredited suppliers through ASA-100**

ASA AVIATION SUPPLIERS ASSOCIATION

- **to reduce maintenance costs**
- **to also promote IATP's materials pooling :**

international airlines technical pool

more developments also in the roadmap (e.g: engines listings, IATA guidance documents..

IATA

making it easier for suppliers to support IATA MRO SmartHub

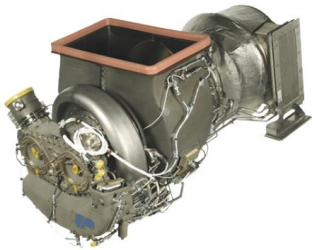
recent platform revamp now facilitates materials listings in the "Connector " module

NEW

GA Telesis started to list more than 170,000 parts, significant stocks of USMs

NEW

Revima trading just joined and will start listing **Landing Gears** and **APUs**



NEW

Ongoing development to adapt the platform for **engines** as well

Inviting all ASA-100 accredited suppliers to list inventories and increase visibility for airlines

How can airlines materials teams onboard this new advocacy program ?

- Airlines materials Management can mailto: SmartHub-Airlines@iata.org
  - free Order Form based on anonymized data participation
  - onboarding includes remote training sessions
  - Individual airline benchmark report issued after onboarding

- New platform developments to be steered by an airline advisory Working Group at IATA

Advocating for a Resilient, Efficient, and Transparent Aviation Supply Chain

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Mitigating supply chain disruptions for airlines

Alex Lan,

Head Aviation Supply Chain, IATA

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

IATA MRO SmartHub – Overview, Airline Features, USM Availability

Sebastian Vock,

Director of Solutions Engineering, Opremic

#IATAWMES

IATA MRO SmartHub – Overview, Airline Features, USM Availability

MRO SmartHub

Evaluator

Provides **Fair Market Value** and **detailed statistics for spare parts.**

Auctioneer

Sell excess inventory efficiently with tailored reserve prices, evaluation support, and targeted email marketing.

Connector

Eases trading with **preferred partners** through a distinctive trading channel. Now with optional pricing.

Asset Manager

Manage **aircraft procurement for dismantling** from start to finish. Simplify collection of joint bids on assets.

Maximize inventory value and reduce costs with MRO SmartHub's actionable insights and tools

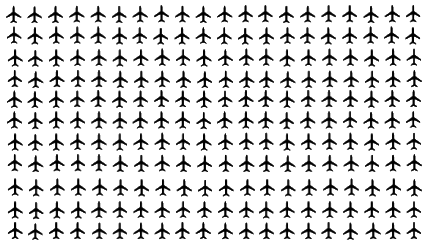
IATA MRO SmartHub is a **web-based business intelligence platform** enabling:

- Quick and accurate evaluation of material
- Transparent fair market value
- Company Benchmark feature
- Buy, Sell, Exchange, Consignment, Auction
- True availability of surplus material
- Joint-bid asset purchasing
- Effortless integration and enhancement into any ERP system and other MRO tools

Key facts and insights

750+
companies registered

1.7m+
parts included in material catalog



50+
Aircraft types supported

As of June 2026

IATA MRO SmartHub

- Launched in September 2019
- 1,600+ registered users
- 150+ material auctions hosted
- 35+ Evaluator data contributors

Connector

Unlock Next-Level Trading

Targeted Distribution
Offer material to selected partners through dedicated trading channels.

Flexible Pricing Control
Set and manage prices with flexible, rule-based controls, per partner and per listing.

Seamless ERP Integration
Connect directly to your existing systems - zero disruption.

Built-in Evaluator
Instant part valuations for smarter, faster trading decisions.

What's new on Connector

Pricing is no longer mandatory
List parts in minutes — price optional.

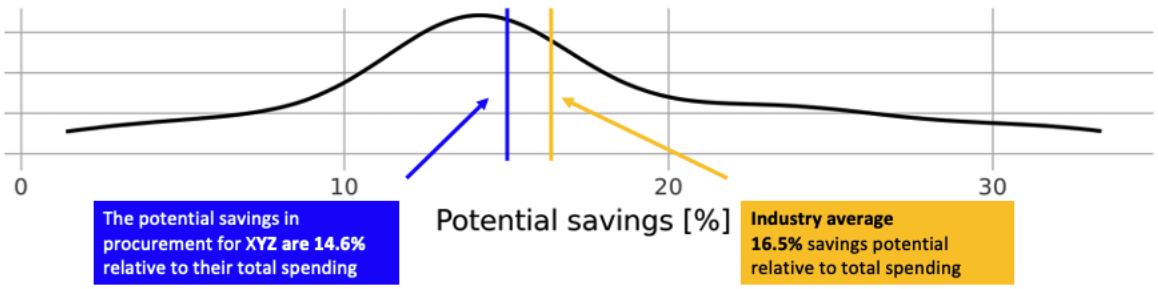
Enhanced marketplace view
Fast, responsive even with very large inventories.

Discover alternates and PMAs
Auto-surface compatible PMA and alternate parts by material.

Secure communication and quotation
Pricing, documents and messages in a secure, part-specific channel.

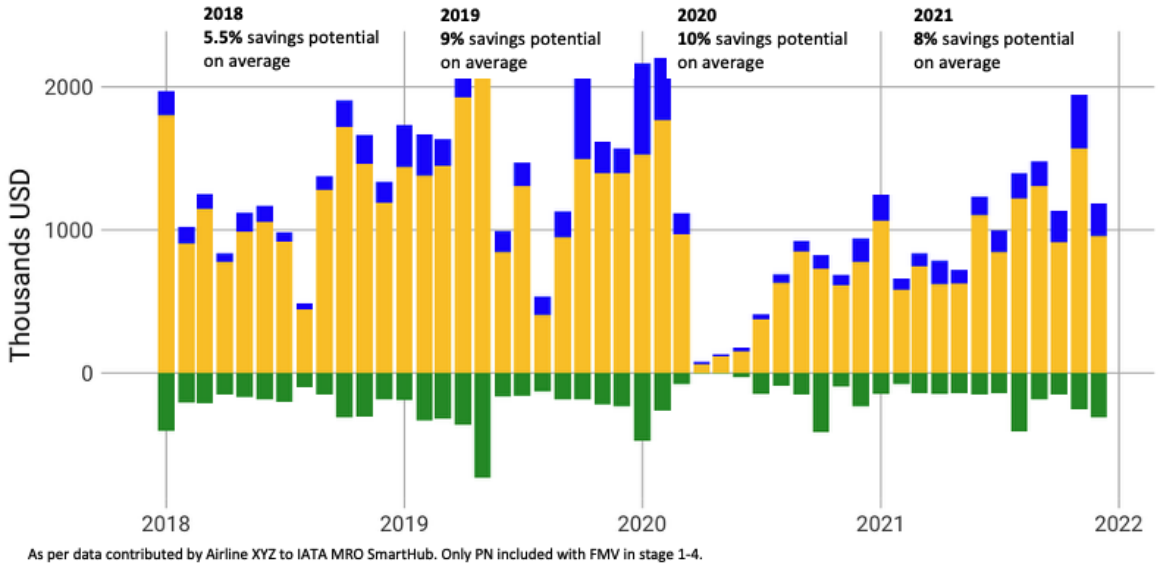
Evaluator – Support your Airline's Operations

A neutral, fully anonymized view of your savings against the wider community - built from real trading data, not estimates.



What we benchmark

- Procurement savings - potential and achieved
- Repair-management savings
- Use of alternates and modifications
- Excess-material sales and procurement-strategy shifts (on request)



➔ See what you have already captured, and how much is still on the table.

Evaluator – Material Supply Chain KPIs at a glance

Top Spend

#	Material	Description	MFR
1	COM-00-01261	Component part 01261	VCVXU
2	COM-00-02209	Component part 02209	7ACCL
3	COM-00-01511	Component part 01511	D99SB
4	COM-00-02041	Component part 02041	YR4VJ
5	COM-00-00631	Component part 00631	OR3XW
6	COM-00-01673	Component part 01673	IGRRW
7	COM-00-02325	Component part 02325	ODU8F
8	COM-00-00751	Component part 00751	KSOLF
9	COM-00-01172	Component part 01172	0123P
10	COM-00-00607	Component part 00607	TDIG1
11	COM-00-00435	Component part 00435	CV8KI
12	COM-00-01826	Component part 01826	93UAV
13	COM-00-02093	Component part 02093	LBMO9
14	COM-00-00732	Component part 00732	FAZ5G
15	COM-00-00295	Component part 00295	7S4QR
16	COM-00-00380	Component part 00380	N5YMU
17	COM-00-01339	Component part 01339	NMC3K
18	COM-00-02503	Component part 02503	PRRGN
19	COM-00-00713	Component part 00713	XP3WJ
20	COM-00-00897	Component part 00897	E5AAD

Surplus Change

#	Material	Description	MFR	Surplus change
1	COM-00-00447	Component part 00447	RP149	59%
2	COM-00-02224	Component part 02224	P7YA0	50%
3	COM-00-00934	Component part 00934	CN56S	47%
4	COM-00-00277	Component part 00277	I6SRH	47%
5	COM-00-00825	Component part 00825	FS2FF	45%
6	COM-00-00441	Component part 00441	KV82V	42%
7	COM-00-02232	Component part 02232	SSSGT	42%
8	COM-00-01598	Component part 01598	FQLUV	38%
9	COM-00-00258	Component part 00258	MISGV	36%
10	COM-00-02015	Component part 02015	CGIK4	33%
11	COM-00-00962	Component part 00962	MNWNT	32%
12	COM-00-01312	Component part 01312	EMKII	30%
13	COM-00-01951	Component part 01951	MLKRY	29%
14	COM-00-00019	Component part 00019	WV71R	29%
15	COM-00-01826	Component part 01826	93UAV	29%
16	COM-00-02360	Component part 02360	FSQIV	29%
17	COM-00-02512	Component part 02512	K3G1B	29%
18	COM-00-01369	Component part 01369	PW8IT	28%
19	COM-00-02485	Component part 02485	MJSD5	28%
20	COM-00-01136	Component part 01136	11ONL	27%

Built on Real Data Points

Calculated from more than 100,000 actual data points across the community.

Top Spend Part Numbers

The parts driving the most spend on each aircraft type, ranked by real monthly trading value.

Supply Shortages in NEW

How sourcing is shifting from new to surplus, year over year.

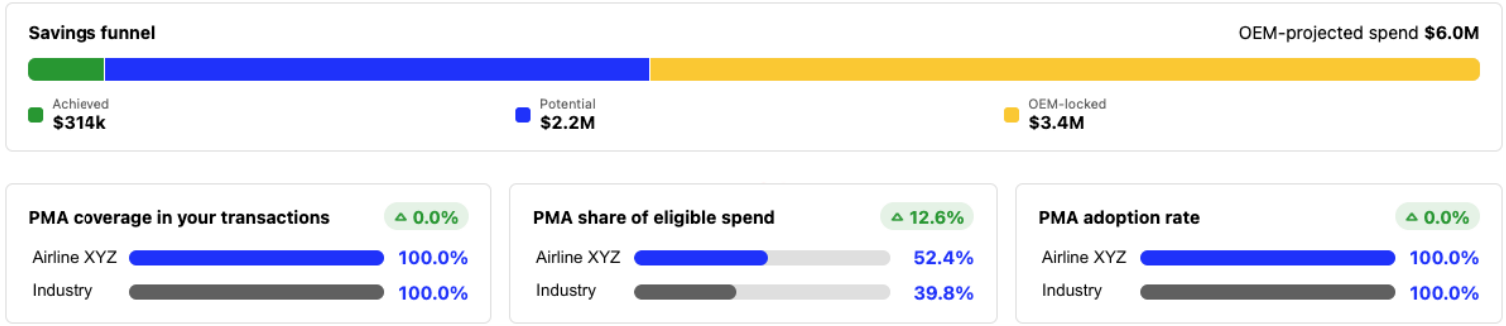
Supporting Airline Fleet Managers

Filter by aircraft type, material domain and month – the same data feeding IATA's supply chain advocacy and Working Groups.

Evaluator – Quantifying your PMA Savings

PMA Savings at a Glance

Your airline's PMA coverage, share of eligible spend and adoption rate, benchmarked against the industry.



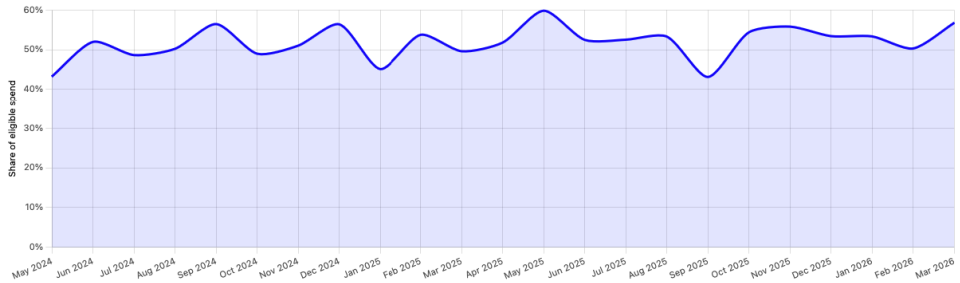
Rank	OEM PN	Description	PMA PN	Avg. OEM Price	# events	PMA FMV	Potential savings	%
1	**ENG0001660**	Engine part 01660	COM0000908	$2.217	2	$481	**$1.736**	78%
2	**ENG0000260**	Engine part 00260	COM0001475	$2.172	2	$582	**$1.590**	73%
3	**COM0002905**	Component part 02905	COM0000299	$2.159	2	$571	**$1.588**	74%
4	**COM0002008**	Component part 02008	ENG0000768	$2.211	2	$650	**$1.561**	71%
5	**COM0000231**	Component part 00231	COM0002453	$2.245	2	$687	**$1.558**	69%
6	**ENG0000274**	Engine part 00274	COM0000511	$2.143	2	$586	**$1.557**	73%
7	**COM0002305**	Component part 02305	COM0000360	$2.271	2	$718	**$1.553**	68%
8	**ENG0001739**	Engine part 01739	COM0001722	$2.131	2	$578	**$1.553**	73%
9	**ENG0001538**	Engine part 01538	COM0002788	$2.291	2	$746	**$1.545**	67%
10	**ARC0000144**	Airframe part 00144	COM0002659	$2.161	2	$616	**$1.545**	71%

Quantify Potential Savings on Part Level

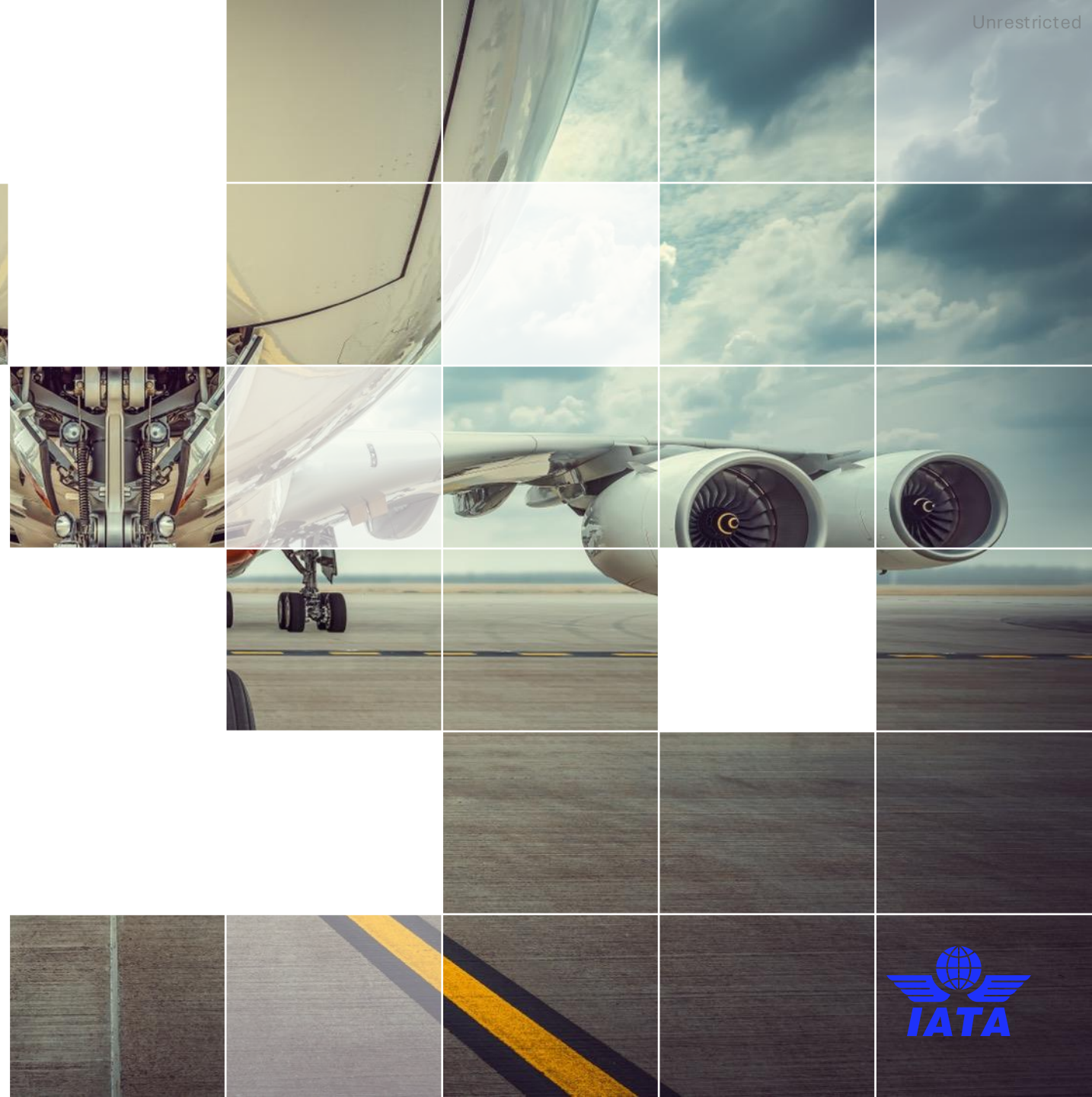
Receive strategic insights on material level to improve your airline's procurement behavior and strategy.

Discover your Airline's PMA Adoption

Quantify your airline's recent change in PMA adoption based on market data.

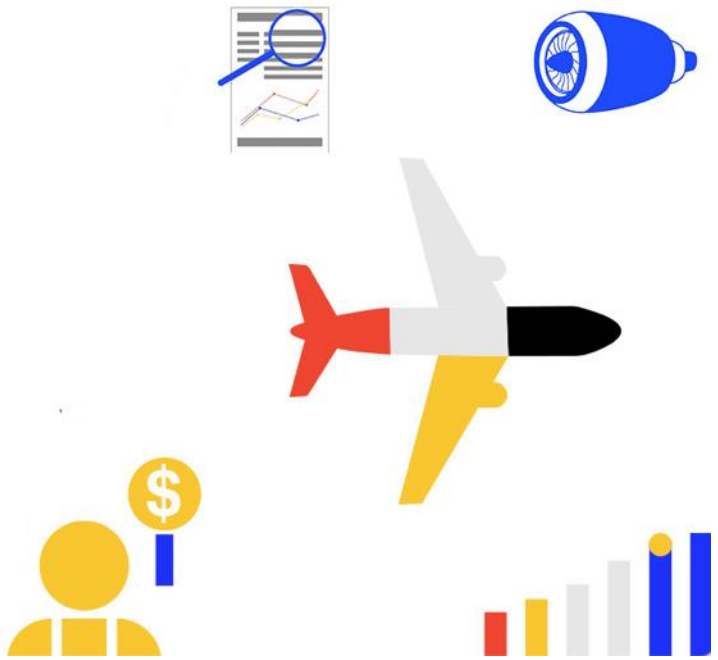


Asset Manager



is a **neutral community marketplace** for whole-asset teardowns.

Project Owners – leasing companies and independent MROs – list assets and collect joint bids; **airlines participate to secure the USM** that fits their fleet.



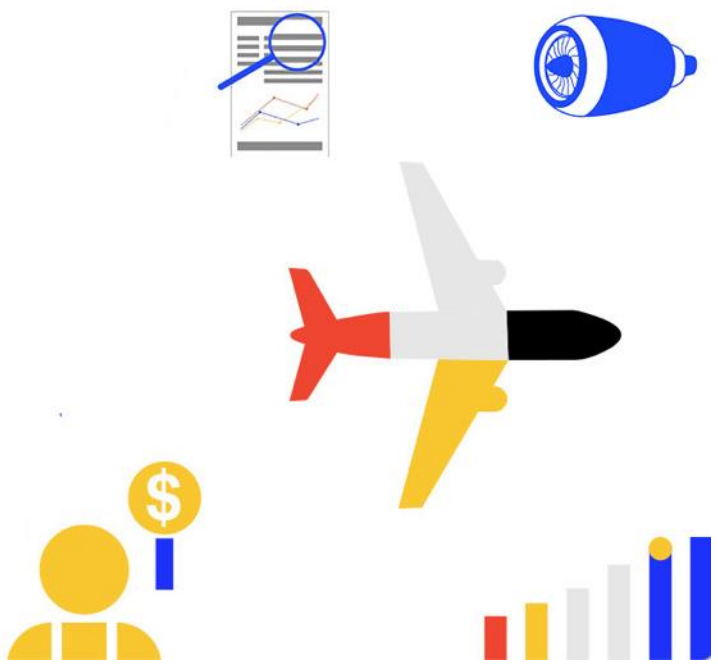
How can you profit from using Asset Manager?

PARTICIPANTS

Airlines

Secure the cost-efficient USM that best fits your fleet – material you might otherwise never see.

- \+ More visibility of available USM
- \+ Direct access and greater procurement power
- \+ Simple, intuitive bidding process
- \+ Automated updates and full documentation at every step



How can you profit from using Asset Manager?

PROJECT OWNERS Leasing Companies & Independent MROs

List whole assets and collect joint bids on teardown packages – for the best possible outcome on the entire asset.

- \+ Manage multiple teardown projects in one place
- \+ Market-based valuation of every package
- \+ Transparent, compliant bidding process
- \+ Reach a wider pool of qualified airline bidders

Connector – Supplier Initiative

Reach a global aviation community on the neutral, IATA-backed marketplace.

Why join?

Free module access as a seller – for a limited time
List inventory and reach the global aviation community

Simple inventory management
Upload availability via CSV in minutes

1,600+ industry buyers
Your supplier profile and listings become visible across the entire platform community

Targeted distribution
Trade through Connector with preferred partners

Only a few steps away

Set up your supplier profile
Add your logo, description & terms of sale

Upload your inventory
Bulk-import sales listings via CSV — pricing optional

Activate notifications
Assign contacts to receive real-time order alerts

Typical Onboarding Journey for a New Airline

Live in around two weeks

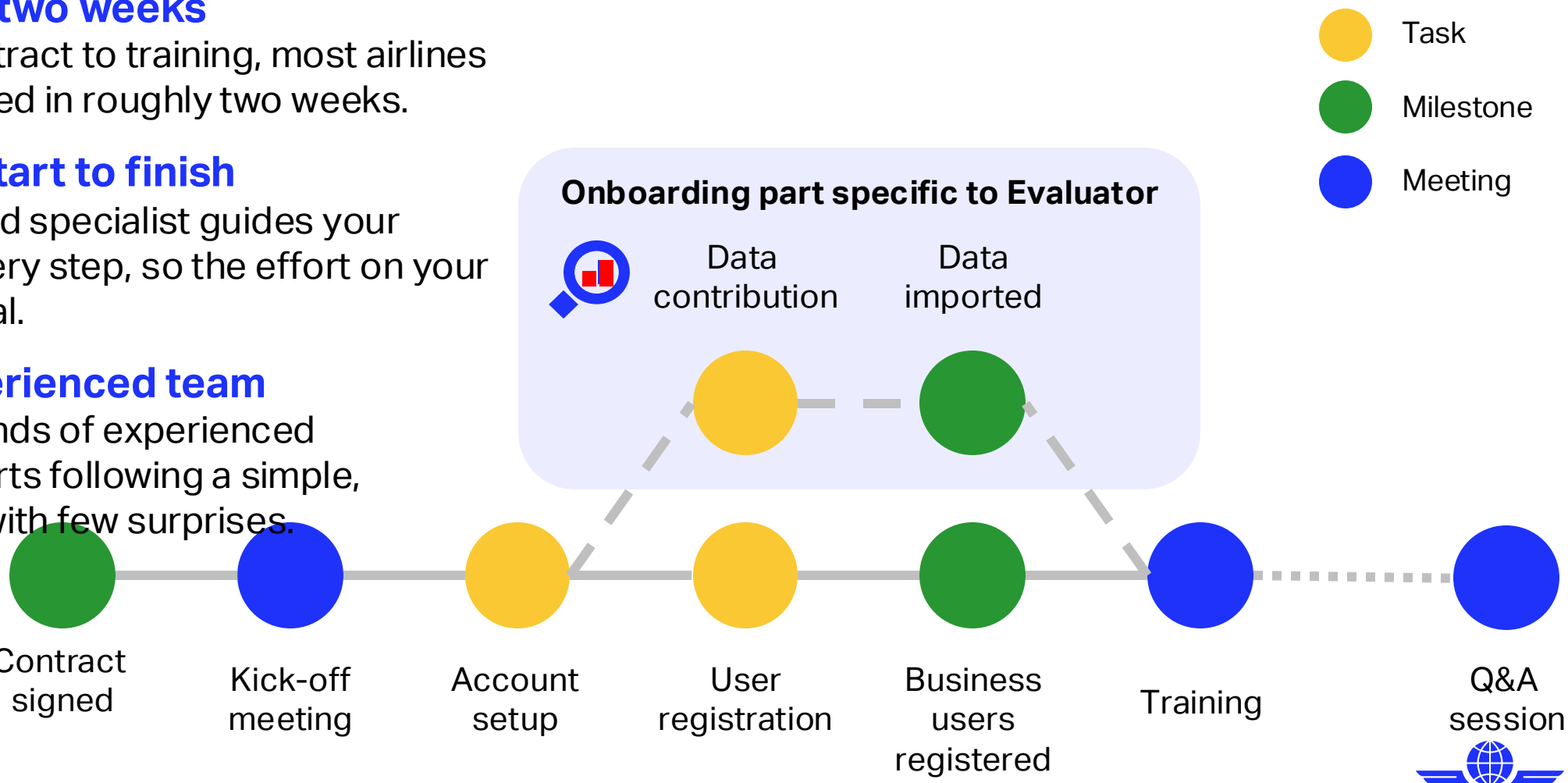
From signed contract to training, most airlines are fully onboarded in roughly two weeks.

One contact, start to finish

A single dedicated specialist guides your team through every step, so the effort on your side stays minimal.

A proven, experienced team

You are in the hands of experienced onboarding experts following a simple, structured path with few surprises.



Training Concept

Admin Training

Dedicated session for company administrator

Module Training

Dedicated training sessions for each module

Online Tutorials

Tutorials available on documentation hub

Q&A Session

Interactive Q&A after 3-4 weeks of usage

Outlook: 2026 and Beyond

Continuing the supplier initiative rollout with new platform capabilities and strategic partnerships.

Development Outlook

- **Engine, APU & LDG**
  Capability to lease, sell and exchange high value rotables
- **Procurement Cockpit**
  A central sourcing and order-tracking dashboard, currently in beta testing.
- **Deeper Analytics**
  Continued investment in richer usage analytics and reporting across the platform

New Suppliers Onboarded

- **GA Telesis**
  Global leader in integrated aviation services
- **Revima**
  Specialist in APU and landing gear MRO
- **Growing network**
  Active outreach to expand the supplier base

Industry Cooperations

- **ASA partnership**
  Supplier audits feed an approved quality icon next to qualified companies
- **IATP exploration**
  Evaluating further industry cooperation opportunities

MRO SmartHub

Garath Harries
IATA Product Manager
harriesg@iata.org
+1-514-466-3701

Dr. Sebastian Vock
Opremic Product Expert
sebastian.vock@opremic.com
+49-151-167-86349

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

IATA MRO SmartHub – Overview, Airline Features, USM Availability

Sebastian Vock,

Director of Solutions Engineering, Opremic

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

IATA MRO SmartHub Advocacy

Moderated by **Karmel Shahin,**
Manager Technical Operations and Supply Chain, IATA

#IATAWMES

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Moderated by
Karmel Shahin,
Manager Technical Operations and Supply Chain, IATA

Panelists

Justin Lambourne,
Senior Sales Director,
GA Telesis,LLC

Santiago Valencia,
Head of Maintenance and Supply Chain,
ALTA

Xavier Mornand,
Head of Business Development,
Revima Group

Sebastian Vock,
Director of Solutions Engineering,
Opremic

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Networking Coffee Break

Next session starts at 16:00

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Introduction

Alex Lan

Head Aviation Supply Chain, IATA

#IATAWMES

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Helping Airlines to reduce operational costs

Greg Zuikovs,
Interim General Manager , Airinmar

#IATAWMES

AIRINMAR®

An AAR Company

HELPING AIRLINES REDUCE OPERATIONAL COSTS

Specialist in Tailored Component Repair Management and Aircraft Warranty Support Services

Value of Product Support Frameworks
IATA, Madrid, July 2026

About me and Airinmar

14 years supporting aircraft maintenance

- ✓ 4 years within an aftermarket environment – components (Reheat Aero) and engine maintenance (MTU Maintenance)
- ✓ 10 years with Airinmar and AAR, with extensive knowledge of component maintenance best practices, FH agreements, the use of systems as well as the Product Support Agreements PSAA and SSC
- ✓ Airinmar is dedicated to providing tailored component repair and aircraft warranty support services, to assist airlines in reducing their operational maintenance costs

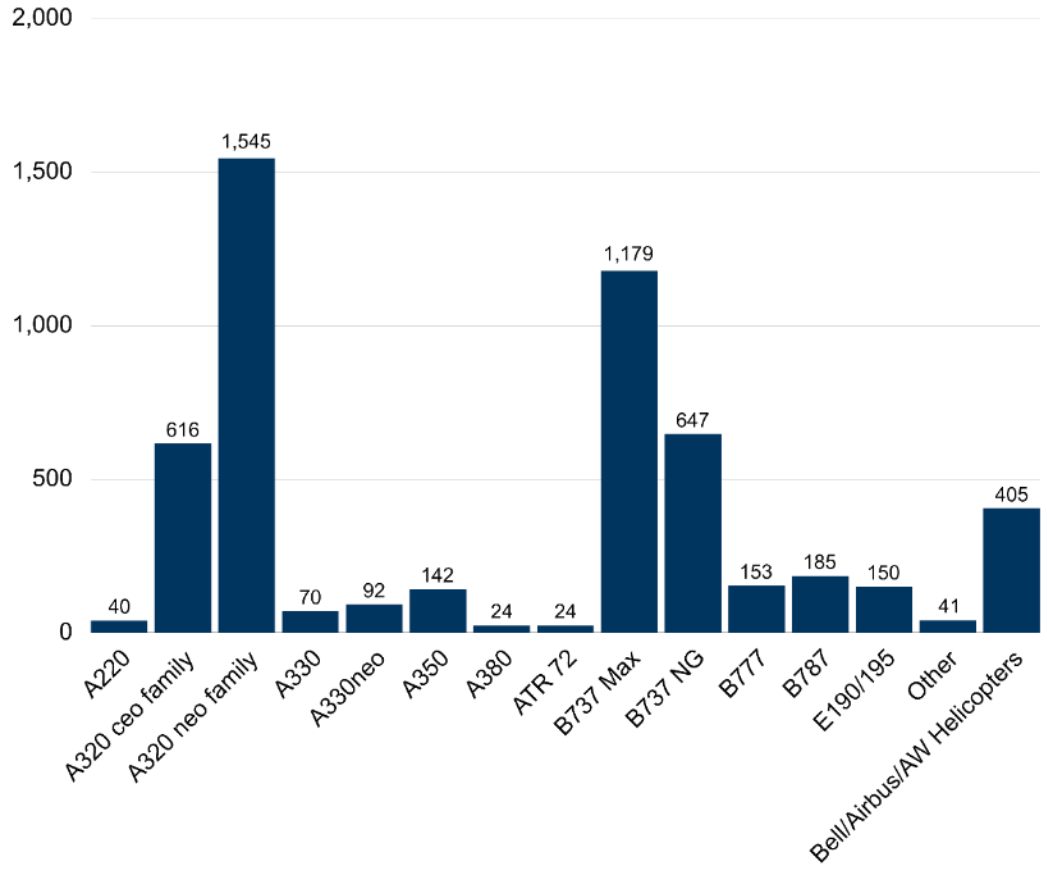
Our Customers

Our services are applicable across all aircraft types

25 Airlines supported globally

All types of commercial Aircraft

including helicopters



The basics

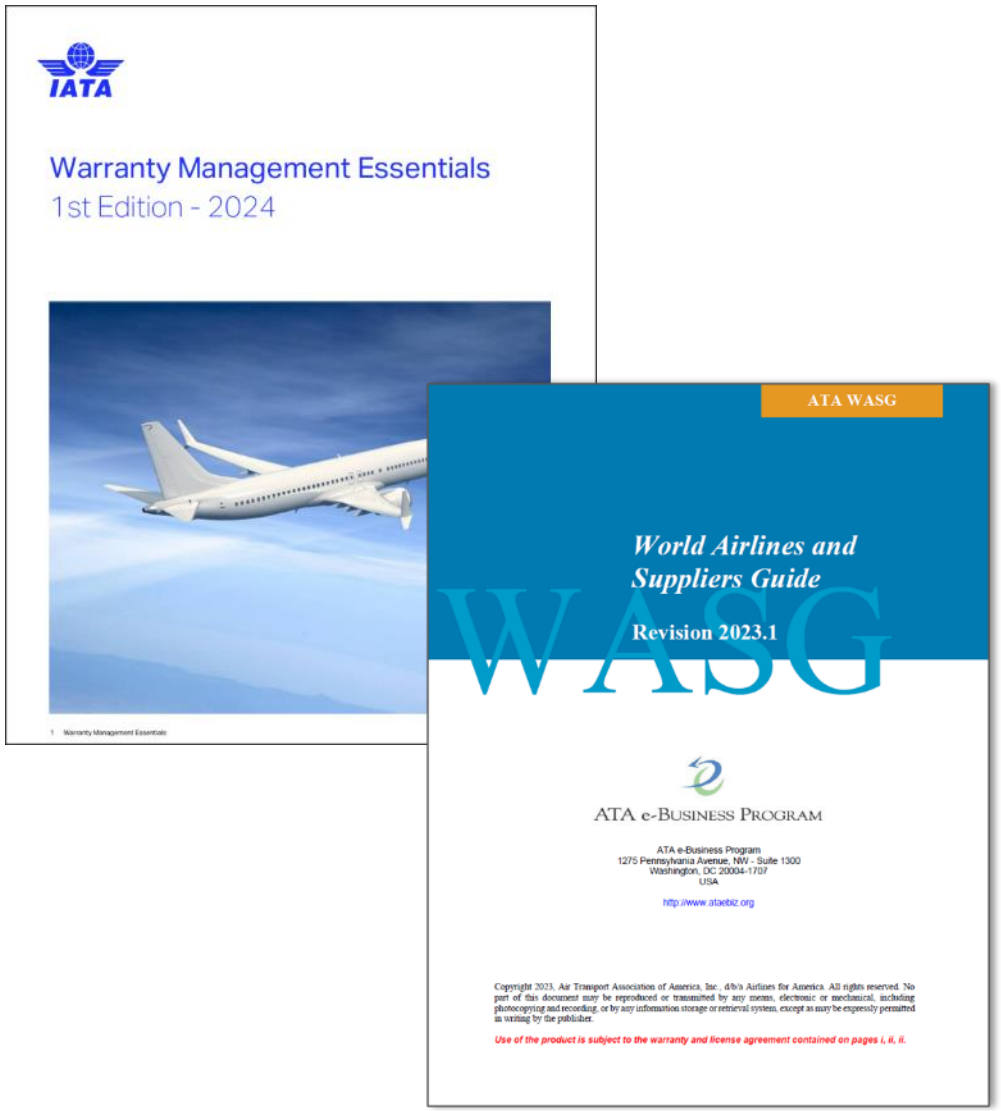
Product Support Agreements and documents to refer to

Different types of Product Support Agreements:

- PSAA, SSC, GCP2000
- Engine Purchase Agreements
- Airframe Purchase Agreements

Useful sources of additional information and how-to guides

- World Airlines and Suppliers Guide (WASG)
- IATA's Warranty Management Essentials

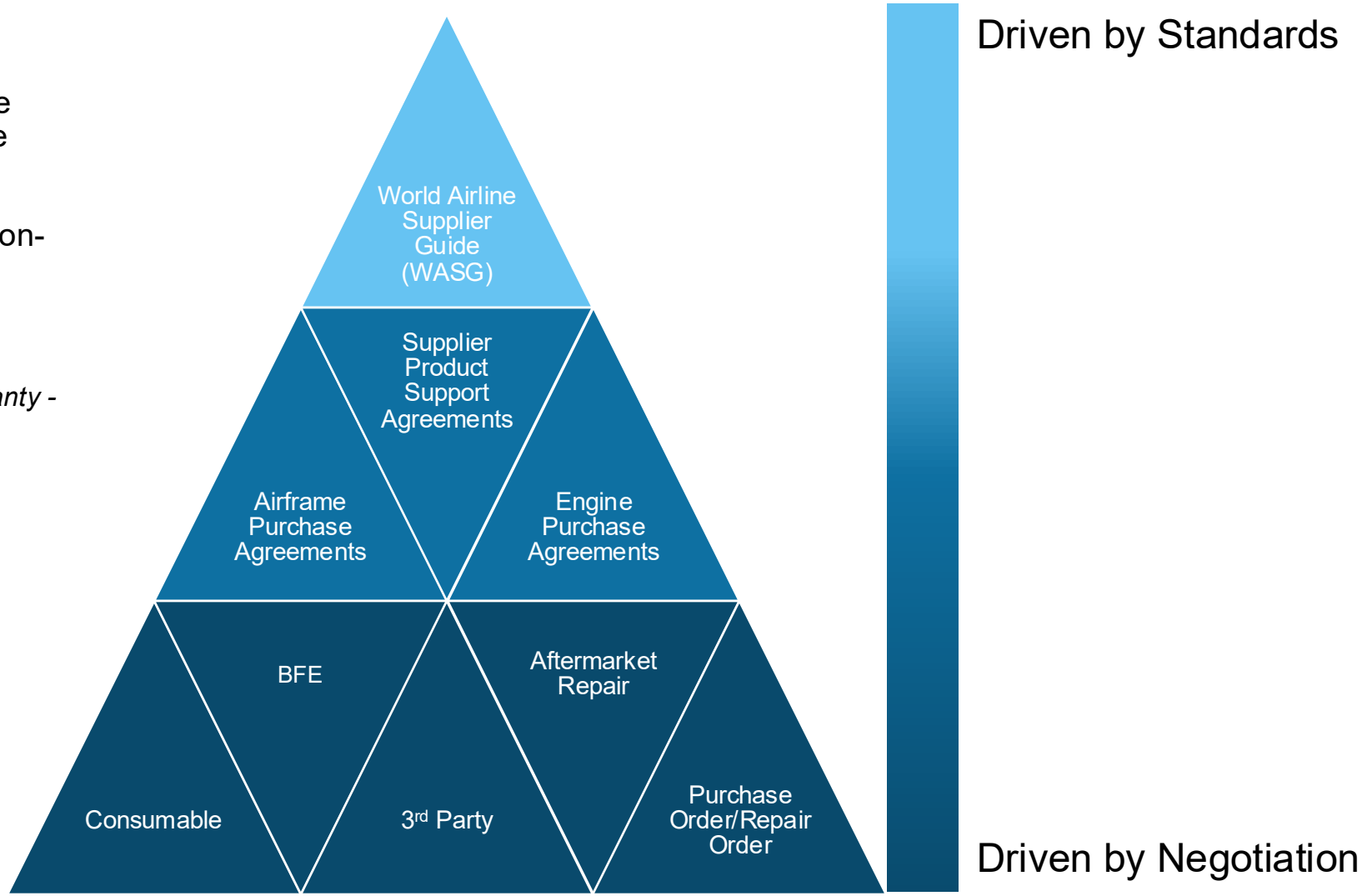


WASG, Product Support Agreements

Before Entry Into Service - More Emphasis on Contract Negotiation

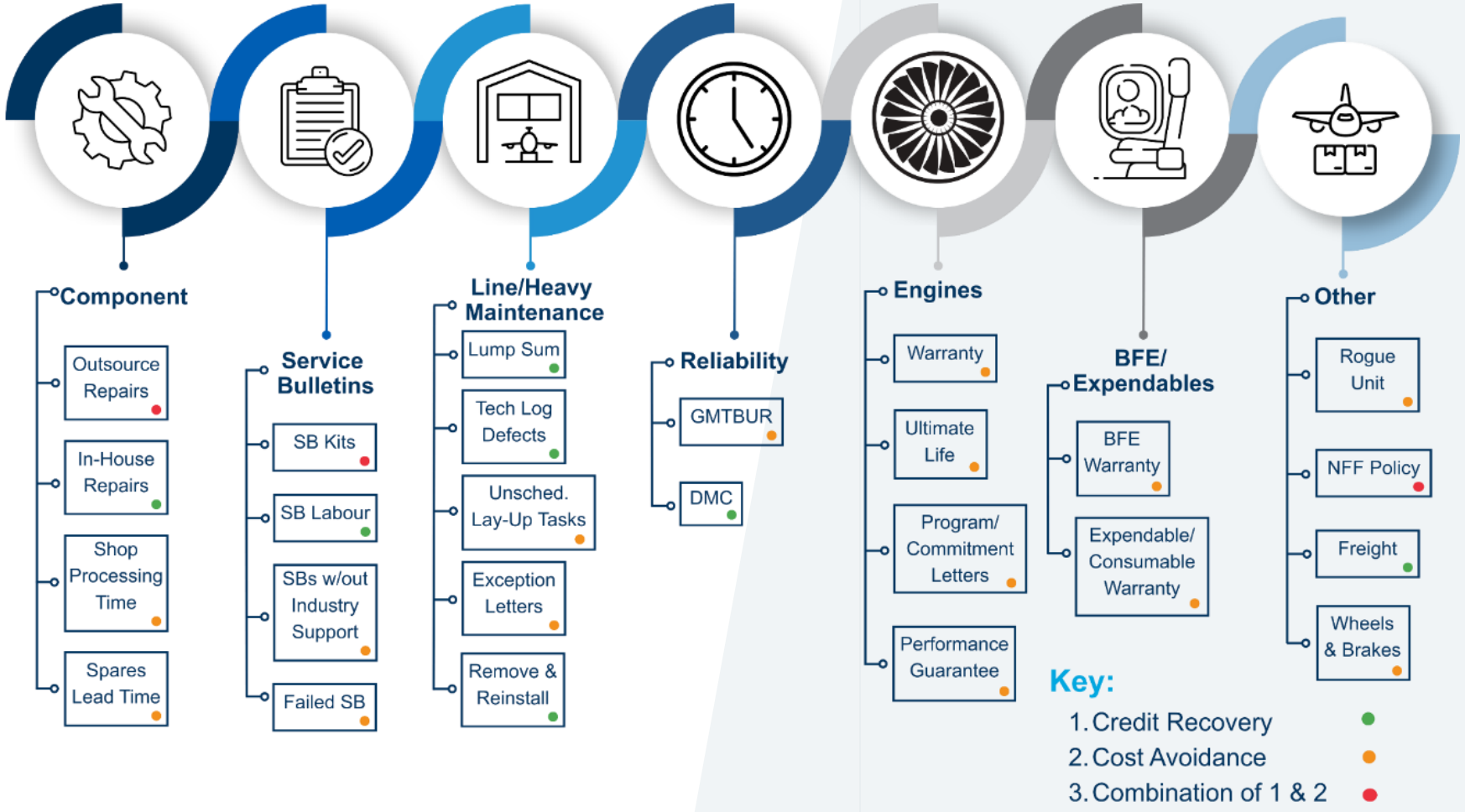
- The World Airlines Supplier Guide acts as the standard for the most commonly found airline agreements
- Use the standards to drive negotiation with non-OEMs

IATA Warranty mgmt. Essentials Page 6/7 - 2.1.2 Warranty - Aircraft Lifecycle



Main warranty and product support categories

As covered by PSAA, SSC, Engine Purchase Agreements, Airframe Purchase Agreements, BFE agreements



Things to look out for

Not all warranty entitlements are found in agreements

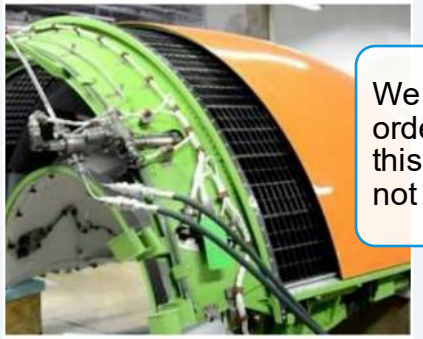
- ✓ Service Bulletins
- ✓ Service Letters
- ✓ Retrofit Information Letters
- ✓ Commitment Letters
- ✓ Program Letters
- ✓ Other all-airline/operator memos, letters, transmissions

Manufacturers have not designed it to be easy to understand, identify and claim entitlements

IATA Warranty mgmt. essentials. Page 10 - 2.1.2.1 Post-Warranty Mitigations

Example Warranty Cases (as we see it):

Failure to conform with order

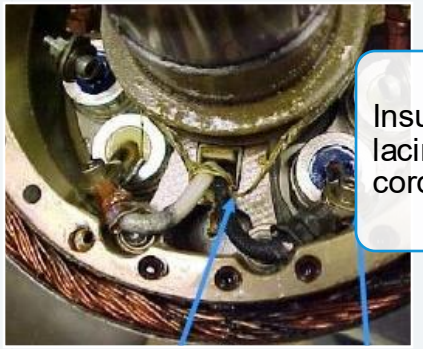


We ordered this in red, not orange

Defect in materials

Failure within the warranty period

Defect in design



Insufficient lacing cords

Be fit for the intended purpose

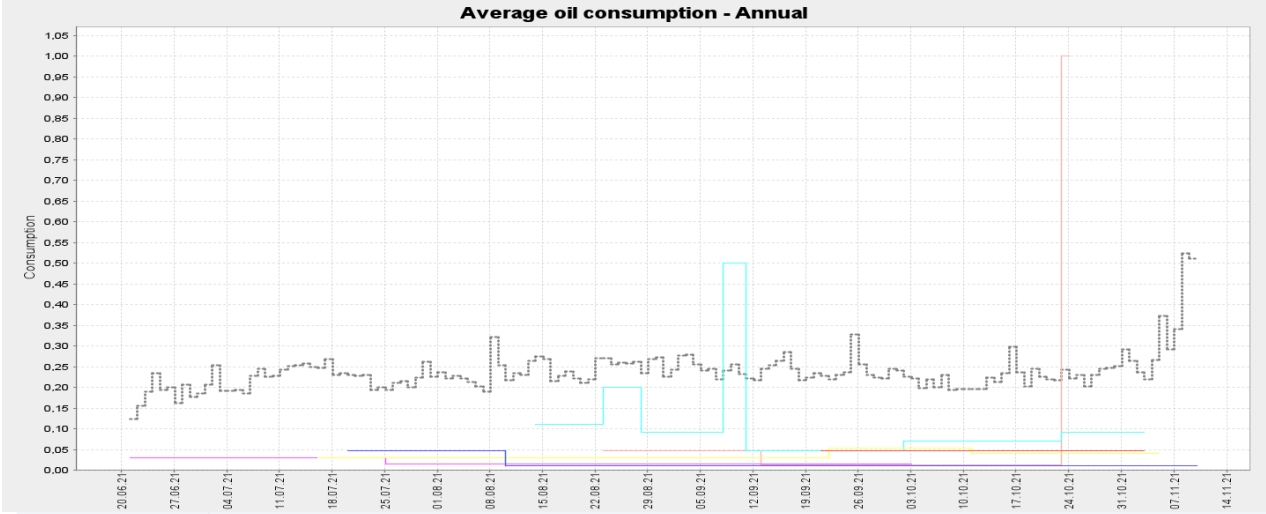
Missing spring washer

Engine Performance Guarantee

A320 / PW1100 / Oil Consumption Guarantee

- ✓ Engine Oil Consumption Ten-Year Guarantee
- ✓ Last 12 month average of 0.24 U.S quarts per flight hour versus 0.2 target
- ✓ Last 12 month oil consumption overspend/underspend = **~$116k** overspend
- ✓ Penalty rolled into a five and ten year reconciliation

Example rule	Example Parameter
Oil Consumption	0.2 quarts per flight hr
Computation	Engine fleet average
Supplier remedy mitigation	None
Remedy options	Financial penalty
Financial Penalty	Excess oil consumed
Financial Penalty Cap	$2,000,000
Reporting/Claim time limit	Annual plus 5/10 year



Component Flight Hour Warranty case

Warranty reduction on FH O&A costs - NAW

- ✓ Cost of **$64K** quoted for replacement unit due to 'Customer Induced Damage' - not normal wear & tear
- ✓ Unit was removed from aircraft within new aircraft warranty period and sent by FH Provider to OEM
- ✓ Removal Reason: "Window Heat, Left Side" failure
- ✓ Warranty denied due to heavy scratches on inner main ply
- ✓ Challenge made directly to OEM **(bypassing the FH provider)**:
  - ✓ OEM focused only on the scratches when deeming unit CID/BER, it did not recognise the root cause > failure of the heating mechanism
  - ✓ Argued scratches on inner main ply should be considered a secondary failure - attempts to clear window for visibility
- ✓ OEM agreed to replace the windshield FOC under warranty

Saving $64K / 100%

Summary

Let this not be a forgotten instrument to improve your supply chain and recover maintenance costs

Challenges:

- The Airframe Manufacturers and OEMs have the ability to divide and conquer warranty matters
- Warranty in aviation is unlike most other industries
- Dilution of warranty terms and barriers to success
- Delegation / assignment – OEMs will put up a fight when trying to outsource / seek external support.

"…it is very important to have top management and key account support".

We can't emphasise this enough. Sometimes issues need to be escalated to hold the manufacturers and OEMs to account.

**IATA Warranty mgmt. essentials. Page 25 – 6.2 Post-Warranty Mitigations*

<u>The strength of the product support agreements should be the best-selling point Boeing, Airbus and the OEMs have.</u>

AIRINMAR®

An AAR Company

Your partner for business success:

Greg Zuikovs

Interim GM

Senior Director Sales & Business Development

gz@airinmar.com

www.airinmar.com

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Helping Airlines to reduce operational costs

Greg Zuikovs,
Interim General Manager , Airinmar

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Using Product Support Frameworks to Protect Airlines

Katherine Rivera,

AVP Aircraft Engineering, Philippine Airlines

#IATAWMES

Philippine Airlines
The Heart of the Filipino

Contract to Continuity:

Using Product Support Frameworks to Protect Airlines

Katherine Rivera

World Maintenance &
Engineering Symposium (WMES)
Madrid, Spain
Jun 2026

IATA

Rights → Remedies → Resilience

Product support frameworks act as dynamic operational tools creating options during disruptions in airline operations.

Supplier Support Conditions

Product Support Assurance Agreement

RIGHTS + OBLIGATIONS + DATA + REMEDIES + ESCALATION

What you're entitled to	What suppliers must deliver	What enables speed	What you can activate	What prevents stall

Airbus SSC
and
Boeing PSAA
are long-term agreements
ensuring support through
an aircraft's
commercial life.

Assert the right, Trigger the remedy, Enable Resilience

How Do Product Support Frameworks Work?

To protect lead time, repair time, reliability, pricing discipline.

Four Operational Levers During Disruption

Lead Time Remedies

This lever focuses on emergency services and financial remedies to protect against delays in delivery and lead times.

Shop Time Protections

Utilizes GSPT to distinguish repair time guarantees from operational turnaround times, enabling loan or exchange remedies.

Reliability Guarantees

Includes policies like GMTBUR and NFF that reduce costs and repeat removals by meeting data obligations.

Delegation Mechanism

Ensures nominated MROs have formal authority to execute remedies promptly without delays.

Philippine Airlines
The Heart of the Filipino

Lead Time Remedies

Supplier misses delivery TAT,
what's our first move?

1. Verify entitlement
2. Secure credits for delay in delivery
3. Escalate as necessary

Shop Time Protections

Supplier says, 'waiting for quote approval',
Is this counted in TAT?

YES. Airline actions drive the GSPT clock.

GSPT : Guaranteed Shop Processing Time
GSPT is not TAT.

Reliability Guarantees

Component removed below MTBUR,
Defect or guarantee claim?

Depends. Remedies vary for repair/supplier accountability.

Warranty vs Guarantee : Free of defect **vs** Level of Performance.

Delegation Mechanism

Our MRO is doing the works;
do they have our SSC/PSAA rights?

Only if we've formally delegated them.

3-way : OEM, Airline Customer and Nominee (MRO)

Airline Obligations

Ownership
Single accountable owner + cross-functional cadence

Speed
Fast quote decisions + timely remedy requests (*in writing)*

Evidence
Clean timestamps + substantiated removals / claims

Enable
Delegation/designee + tool access & templates

Delegation Mechanism Challenges

Recognition & Authority

- Slow recognition or endorsement of delegation letters.
- Some do not understand Product Support Frameworks

Template & Form Complexity

- Absence of delegation templates
- Requirements can become overly granular.

Scope & Framework

- 100% SFE by OEM ≠ 100% Coverage
- Side agreements can create overlap/ override Product Support Frameworks.

Recognized. Standardized. Operationalized.

Call to *Action*

Improve Supply Chain Insight | Leverage Existing Contractual Enablers*

Embed Governance

Turn frameworks into muscle memory.

Create executive level KPIs.

Clear Ownership Roles

Name the owner.
Define the handoffs.

Prove value in outcomes.

Build Multi-Source Resilience

Pair SSC/PSAA with aftermarket alternatives.

Expand sourcing options.

If it’s not owned, measured, and governed—it’s not real.

*IATA-Oliver Wyman : Reviving the Commercial Aircraft Supply Chain, Oct 2025

Disruption is inevitable, but recovery can be contracted for.

By exercising airline rights on existing Product Support Frameworks with discipline and intent, airlines can transform contracts into strategic assets that protect fleet availability, cash flow, and brand reliability.

Contract to continuity happens when we make the framework executable.

World Maintenance & Engineering Symposium (WMES)
Madrid, Spain
Jun 2026

Thank you!

www.philippineairlines.com

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Using Product Support Frameworks to Protect Airlines

Katherine Rivera,

AVP Aircraft Engineering, Philippine Airlines

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Product Support Frameworks and Supply Chain Resilience

Miguel Velez Gallardo,

Senior Manager Supply Chain, Etihad Airways

#IATAWMES

IATA Maintenance & Engineering Conference 2026

Product Support Frameworks and Supply Chain Resilience

[Miguel Velez Gallardo]
[Title] | Etihad Airways

Supply Chain Resilience in Aviation

Structural Shift in the Market

- Fleet growth outpacing supply chain capability
- Aging fleets remaining longer in service
- OEM production ramp-up increasing aftermarket pressure
- Geopolitical and logistics instability

Current Industry Pain Points

- Repair TAT inflation across the network
- Chronic material shortages
- Labor and capability constraints
- Supplier concentration risk
- Reduced buffer inventory across the ecosystem

Impact for Airlines

- Increased AOG exposure management
- Schedule reliability improvement programs
- Strategic inventory and pooling optimization
- Reduced dependency on external providers

Mitigation Strategies & Industry Response

Partnership Evolution

- Closer airline–OEM–MRO collaboration
- Joint recovery planning
- Supplier performance governance

Strategic Inventory Build-up

- Shift from ultra-lean inventory models
- Critical-part buffering
- Regional stock positioning

Workshop & Capability Focus

- Technical capability retention
- Repair capability localization
- Engineering and planning competencies

Supplier Diversification

- Reduced single-source dependency
- Expanded repair networks
- Independent MRO collaboration

Digital Supply Chain Visibility

- Predictive analytics and forecasting
- Real-time shortage tracking
- AI-driven planning and prioritization

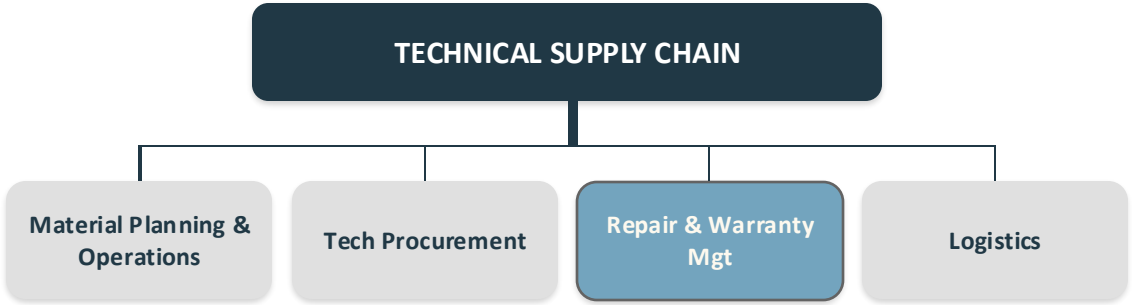
PSAA/SSC Support - OEM

- After support framework to ensure material
- Escalation caps on provisioning of additional material

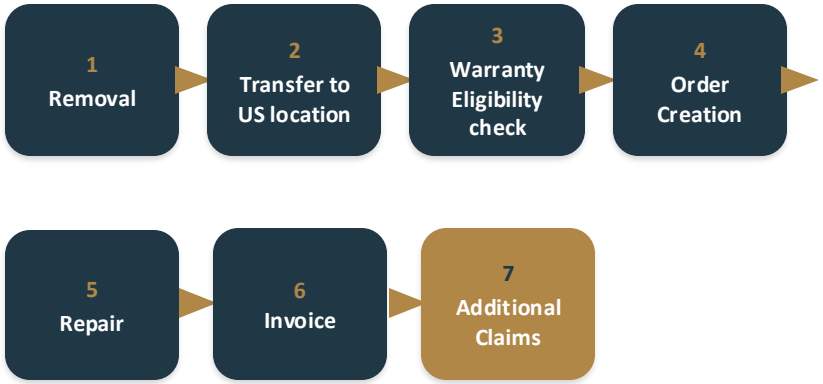
The airlines performing best today are not necessarily the leanest — they are the most adaptable

EY Warranty Claims Management: Organizational Set-up & Process

ORGANIZATIONAL SET-UP



WARRANTY REVIEW IN MATERIAL FLOW



KEY INTERFACES

- **Fleet Engineering – to capture reliability and operational impact**
- **Production / Technical Operations - Clarify the reason for removal**
- **Finance – To follow up on invoicing, credit notes and statement of account**
- **Legal – Review of aircraft purchase agreements and interpretation of clauses**

KEY METRICS

- **Warranty Recovery Rate** — eligible cost recovered
- **Claim Cycle Time (TAT)** — submission to settlement
- **Claim Capture Rate** — eligible events actually claimed
- **Claim Acceptance Rate** — approved vs. submitted
- **Open-Claim Aging & Backlog** — value & age of unresolved claims

Examples of delegation of PSAA/SSC rights

Delegation to 3rd party MROs

A321 Main Wheel Hub

- Vendor hit a repair capacity shortage
- Manufacturing constraints blocked any float increase
- Third-party MRO approved by OEM to run warranty repairs at an agreed cost base

Delegation to Authorised repair stations

LWSA IR Faucet

- OEM acknowledged regional repair capacity constraints
- PSAA/SSC rights enforced to enable alternate repair routing
- Warranty repairs redirected to an authorised regional station
- Faster turnaround while preserving warranty entitlement

Delegation to Pool Providers

CIDS Director · P/N Z014H000333B

- PSAA/SSC rights delegated to access pooled CIDS Director inventory
- Pool rates materially lower than direct OEM pricing
- Immediate availability secured for operational continuity
- Units serviceable, though not the latest production standard

Example of PSAA / SSC on aftermarket support

The OEM Proposal

Condenser & heat exchanger

- **Extended TAT —** exclusive agreement runs longer than the SSC stipulates
- **Weaker penalties —** non-performance terms set below SSC levels
- **Precedence clause —** OEM states its agreement customers come first
- **Universal flat rate (UFR) —** covers only the raised defect, undermining SSC principles

How Protections Are Undermined

1. Contract Supersession Clauses

- New support agreements supersede all prior remedies
- Existing PSAA / SSC rights implicitly waived without acknowledgement

2. Reduced Service Scope

- Offered services provide lower coverage than PSAA / SSC
- TAT, reliability and remedy provisions fall below agreed standards

Why It Matters

- **Enforceability erodes —** PSAA / SSC weakens as a supply-chain resilience tool
- **Risk shifts back —** operational and financial exposure returns to the airline
- **Inconsistency spreads —** fleets, suppliers and support models diverge

Requirements for next generation of PSAA/SSC

Contractual Strength & Governance

- **Scope of applicability**
  Define which components, systems and major rotables fall under coverage, closing today's exclusion gaps
- **Enforceability**
  Measurable TAT, workmanship and reliability commitments backed by performance penalties and escalation governance
- **Arbitration**
  Independent dispute resolution for warranty and repair-cost disagreements
- **Loss-to-coverage parity**
  Size support provisions to actual operational losses, closing the gap where exposure outruns agreed remedies

Capacity & Service Delivery

- **Capacity build-up**
  Tie OEM production ramp-up to mandatory repair-capacity scaling that keeps pace with fleet growth
- **Aftermarket services integration**
  Unify repair, pooling and material support in one coordinated framework
- **Delegation & traceability**
  Authorize qualified third-party MROs and pool providers with full traceability of parts and approvals
- **Digitalization of clauses**
  Machine-readable, part-level clauses enabling real-time eligibility checks and predictive planning

Commercial Alignment & Adoption

- **Cap price escalation**
  Transparent controls limiting annual new-unit price increases against agreed industry indices
- **Aftermarket escalation controls**
  Standardized price-escalation governance across aftermarket services and components, indexed to agreed benchmarks
- **Customer-support incentives**
  Reward structures that prioritize airline operational continuity, not just contractual minimums
- **Latest-standard alignment**
  Hold all suppliers and OEM partners to consistent conformance with the current PSAA/SSC version as a condition of participation

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Product Support Frameworks and Supply Chain Resilience

Miguel Velez Gallardo,

Senior Manager Supply Chain, Etihad Airways

#IATAWMES


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Value of Product Support frameworks for United Airlines

Alec Larson,

Senior Manager - Warranty & Product Support, United Airlines

#IATAWMES

UNITED

Value of Product Support frameworks

Alec Larson

Senior Manager – Warranty & Product Support

- About our team
- United fleet overview
- Product Support framework toolbox
- Why these tools matter
- Supply chain disruptions
- Remedy programs
- Ambiguous contract language
- Obsolescence management
- Additional opportunities
- Key takeaways

Warranty, Supplier Accountability, & Product Support team

Team Mission

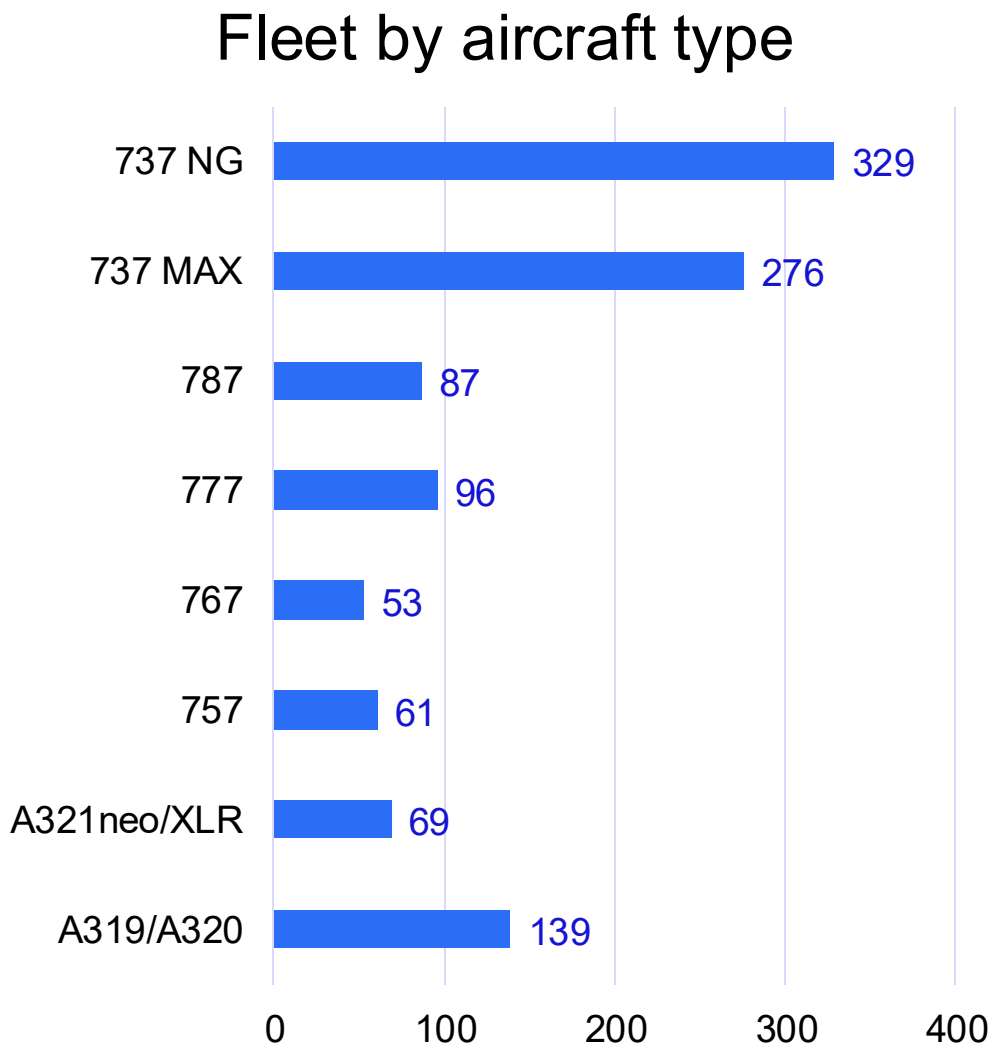
Protect United's operation and financial interests by ensuring suppliers deliver to the commitments, performance, and support negotiated in our agreements

Team Responsibilities

- Warranty recovery
- Product support remedies
- Incentives, rebates, & commercial recoveries
- Contract compliance & governance
- Supplier performance analytics
- Third-party aircraft damage claim recovery

United Fleet Overview

- 1,110+ mainline aircraft
- Eight aircraft families
- Boeing-heavy fleet mix supported by Airbus narrowbody capacity
- Designed for both dense domestic networks and long-haul international service
- World's largest airline by RPMs



Product Support frameworks: The Airline Toolbox

PSAA and SSC agreements provide airlines with a framework of tools designed to protect operational performance, manage supplier accountability, and reduce supply chain risk

Tools available include:

- Warranty
- Spare parts support
- Repair & turnaround performance
- Reliability & product lifecycle
- Technical & engineering support
- Remedies
- Supplier performance management

Product Support frameworks matter more than ever

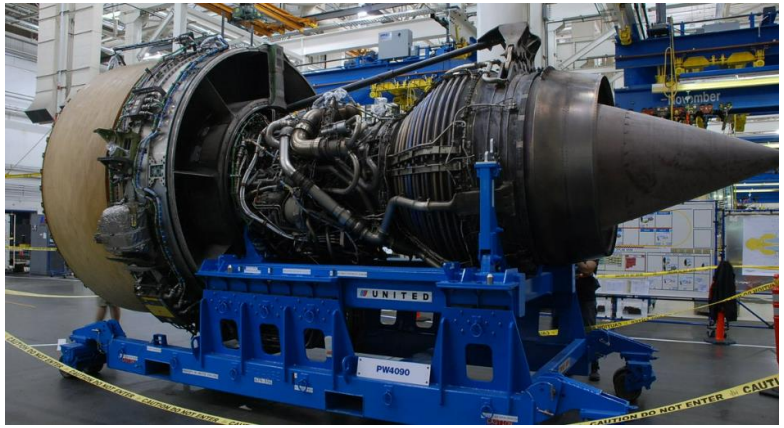
Global supply chains remain fragile and unpredictable

Repair turnaround times increasing

Aircraft & component complexity continues to increase

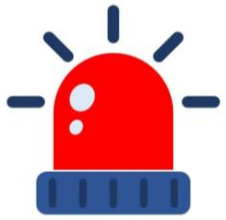
Supplier consolidation has reduced competition

Obsolescence challenges are accelerating



When supply chain disruptions occur, product support agreements define the path forward

Force Majeure Event



Earthquake, war, tariff impact, supplier shutdown, raw material shortage, etc.

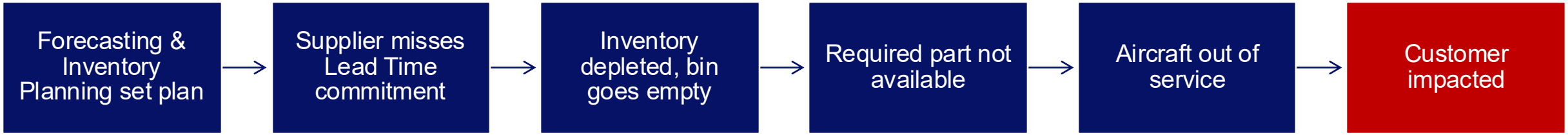
Supplier Obligation

- *Notify airline of the event*
- *Identify impacted parts/services*
- *Explain expected operational impact*
- *Implement mitigations*
- *Provide ongoing status updates*

Airline & Supplier Benefits

- *Improved Visibility*
- *Better Inventory Planning*
- *Faster issue resolution*
- *Clear accountability*
- *Faster recovery*

Strong remedy programs help manage the impact of delays



- Spare Part Lead Time and Repair Turn Time Remedies create accountability for missed commitments
- Encourage supplier focus on recovery & performance
- Remedies help offset the real operational and financial impact of delays

Ambiguous contract language can have big consequences – recent supplier example

Supplier Challenge

- Supplier communicated pushed delivery dates on late orders
- Internal team acknowledged the updates without considering impact

Resolution

- Implemented standardized process and responses
- Clarified that lead time updates are acknowledged for planning purposes
- Preserved applicable contractual rights and remedies

Lesson Learned

- Clear language and consistent administration are equally important

Obsolescence management is becoming more important as our fleet ages

Seller shall use diligent efforts to minimize cost and operational impact of obsolescence, including the effects of interchangeability, to Customer and Boeing. –PSAA Rev D Pro forma

777 Cabin Control Panel Support

- OEM discontinued a subcomponent within 777 CCP assembly
- Repair support of the component became poor
- Long term-impact to fleet support and material availability
- PSAA Obsolescence language being used to help in issue which is currently under review

Additional opportunities to strengthen Product Support

Clearer supplier ownership & part applicability

More consistent support from aircraft manufacturers

Earlier industry engagement in future revisions of Product Support Agreements

Continued collaboration among airlines, OEMs, suppliers

Key Takeaways

Product Support Frameworks Create Structure

- Define expectations and remedies before problems occur
- Establish responsibilities and accountability
- Provide remedies when commitments are missed

Details Matter

- Clear language matters
- Small changes can have significant impacts
- Baselines should be protected

Partnership Matters

- Contracts do not replace relationships
- Trust and communication remain essential

Thank you

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

Value of Product Support frameworks for United Airlines

Alec Larson,

Senior Manager - Warranty & Product Support, United Airlines

#IATAWMES

IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM

Networking Cocktail Reception

Starts at 18:00

#IATAWMES

IATA WORLD MAINTENANCE & ENGINEERING SYMPOSIUM

With many thanks to all our sponsors

Bronze Sponsor

Lufthansa Technik

AVIATAR AMOS flydocs

Exhibitors

Conduce Mobile Aviation Solutions

FTG HEICO SAFRAN ULTRAMAIN

Media Partners

Airlines.

MRO BUSINESS TODAY

MRO Management


IATA WORLD
MAINTENANCE
& ENGINEERING
SYMPOSIUM
Madrid, Spain
24 – 25 June 2026
IATA