

Keeping the world's fleets flying

aviationbusinessnews.com

OCTOBER 2025 • VOLUME 27 • ISSUE 7

MRO

Management

INDEPENDENT & AMBITIOUS

DAE Engineering's chief Jeff Wilkinson on Joramco's transformation story and continued expansion plan

P.20

In association with
JORAMCO | Committed to Excellence
A DAE COMPANY

ENGINE MRO

New approaches to planning and supplier relationships

P.46

REGION OUTLOOK

Observations of MRO activity in Europe

P.70

DATA-DRIVEN SOFTWARE

Planning and scheduling is having its AI moment

P.102

ST Aerospace



Designed to Deliver a Simplified Supply Chain

Local People. Local Inventory. Local Decision Making.



Visit Us at Stand #2829

FDHAero.com



WELCOME...

TO THE BIGGEST EVER ISSUE OF *MRO MANAGEMENT*

This edition is not only the most extensive we have ever produced, but also a reflection of the extraordinary pace and resilience of the global MRO industry.

Hangar demand is strong and, despite the well-documented challenges of supply chain pressures, workforce shortages and evolving fleet technologies, the sector continues to adapt, innovate and thrive.

One of the most striking characteristics of this industry is collaboration. Whether between OEMs and independent providers, airlines and their partners, or MROs across regions, the spirit of working together to solve complex problems has never been more evident. It is this collective energy that is helping the industry manage bottlenecks, introduce new capabilities, and prepare for the next generation of aircraft and engines.

At *MRO Management*, we are proud to reflect this energy and growth. Our biggest-ever issue is possible thanks to the support of our advertisers and partners, and the engagement of you – our readers. Your insights, contributions and ongoing dialogue with us keep the magazine relevant and authoritative.

Beyond these pages, our brand continues to grow through the Predictive Aircraft Maintenance (PAM) conference series. Following successful editions in London, Dublin and most recently Singapore,

PAM has established itself as a truly global platform where the industry can share experiences, explore innovation, and debate the future. Event feedback has been outstanding, and we look forward to expanding PAM further in 2026 – with PAM Dubai already on the horizon.

Back to this record-breaking issue, the scale of which mirrors the scale of industry opportunity: from the rise in global fleet growth and new-generation aircraft entering service, to the digital tools and sustainability initiatives reshaping how maintenance is delivered. These themes, and many others, are explored throughout these pages.

To our long-standing contributors, partners and readers – thank you. And a special welcome to those picking up *MRO Management* for the first time at an event stand or in a conference hall. Whether you are a seasoned professional or new to the industry, we hope you find ideas, insights and inspiration here.

The sector is expanding, evolving and full of momentum – and we'll be right alongside it, continuing to chart its progress, challenges and successes in future issues and events. ●

Craig Waters

Editor

craig.waters@aviationbusinessnews.com

aviationbusinessnews.com

FOLLOW ON SOCIAL MEDIA FOR MORE:

 **@avbusinessnews**

 **Aviation Business News**



The people you trust. The experience you deserve.

Simpler and more streamlined paths to maintenance technician excellence. With a training portfolio spanning business aviation's leading OEM programs, CAE continually innovates to accelerate learning and deliver the most advanced training for world-class maintenance technicians. Through immersive virtual reality, modular, and just-in-time training, supported by smart and simple online booking, CAE gets expertly-trained technicians to your center faster—for safer, more mission-ready aircraft.



Elevate and accelerate your training at a CAE center worldwide, or yours.

Today and tomorrow,
we make sure you're ready
for the moments that matter.

CAE

Contents

VOLUME 27 | ISSUE 7 | OCTOBER 2025



52

8 Hangar Talk

The latest industry news

18 In The Spotlight

New partnerships and innovations

20 Company Profile

DAE Engineering chief executive Jeff Wilkinson reflects on Joramco's evolution

26 Legal Matters

Jason Dickstein looks at maintaining repair station records for FAA review

30 Cargo-Only Airline MRO

SolitAir's disciplined planning

33 Event Preview

What to expect at November's Predictive Aircraft Maintenance (PAM) Conference in Dublin

39 Q&A

AIXI's Cameron Byrd on predictive maintenance

42 Tob Table

AMETEK MRO's Ismaël Fadili on overcoming supply chain pressures

46 Engine MRO

Mario Pierobon reports on the recent challenges that are driving innovation

48 Company Profile

CTS Engines' focus on mature engines

50 News Analysis

Tackling the talent crunch

52 Event Review

Looking back at the success of the first-ever APAC edition



42

of the Predictive Aircraft Maintenance (PAM) Conference in Singapore

58 Cabin MRO

Joanna Bailey explores if AI can transform cabin MRO

63 Q&A

Aermetric's Sean Bushkov on predictive maintenance

66 Industry Voices

With PDQ Airspares' Paul Rice

70 Region Outlook

Bernie Baldwin reports on MRO activity in Europe

78 Event Preview

What to expect at this year's MRO Europe in London



70



137

81 Q&A

GA Telesis' Jason Reed on predictive maintenance

84 Training & Development

The industry's biggest vulnerability is not technology or capital but people

88 Skills & Workforce

Rob Mather from IFS explains how AI can help solve the skills shortage

94 Meet The Mechanics

An interview with Yi Liqun from ExecuJet Haite

99 Company Profile

GE Aerospace's Software as a Service solution

102 MRO Scheduling Software

Kevin Rozario reports on the effectiveness of data intelligence

108 Industry Voices

With Rotable Repairs' Bryan Croft

111 Q&A

EXSYN Aviation Solutions' Sander de Bree on predictive maintenance

114 Hangar Doors

The hangar door has become more than a functional necessity

118 Industry Voices

With Aviarena Trading's Bas van Lammeren

120 ABNcast

FDH Aero stepping up to the people challenge

123 Technology

Agility lessons from Red Bull Racing

126 Industry Voices

With EirTrade Aviation's Tony Ramage

128 Aircraft Teardown

AerFin's Simon Goodson on strategic teardowns to overcome supply chain pressures

133 Event Review

A round-up of announcements made at MRO Asia-Pacific

137 Green Sky

How AFRA is boosting trust in MRO through sustainable aircraft disassembly and recycling



On the cover: Image supplied by Joramco

MRO Management

Winner of Business
Publication of the Year

Independent Publisher
PAWARDS 2024
Winner

Editor

Craig Waters
craig.waters@aviationbusinessnews.com

Contributors

Bernie Baldwin / Kevin Rozario /
Mario Pierobon / Joanna Bailey

Art Director

Phil Couzens

Sub Editor

Heather Ford

Group Commercial Director

Toby Walton
toby.walton@aviationbusinessnews.com

Group Commercial Manager

David Hirsh
david.hirsh@aviationbusinessnews.com

Senior Business Development Manager

Robert Gouge
robert.gouge@aviationbusinessnews.com

Editorial Director

Lee Hayhurst
lee.hayhurst@aviationbusinessnews.com

Production Manager

Barnaby Moore
barnaby.moore@realresponsemedia.com

CEO

Chris Pitchford

For subscriptions & enquiries:

Barnaby Moore
barnaby.moore@realresponsemedia.com
All enquiries
+44 (0) 20 8444 2554

Printed in the United Kingdom by Micropress.
Reproduction is not permitted without the
express written consent of the editor. All efforts
are made to ensure that factual accuracy is
correct at time of publication.

All rights reserved. No part of this publication may
be reproduced, duplicated, stored in any retrieval
system or transmitted in any form by any means
without prior written permission of the publishers.

PUBLISHED BY

Real.
RESPONSE MEDIA

Unit 4, Cally Yard, 445 Caledonian
Road, London N7 9BG



Partnering OEMs.
Authorised repair centres.

Let's connect:

MRO Europe 2025
October 14-15
London #311

Hangar Talk.

News from across the industry



Markus Manna/Adobe Stock

LANDING GEAR MRO

Citilink and Turkish Technic agree new landing gear overhaul deal

Turkish Technic has expanded its partnership with Citilink through a new multi-year landing gear overhaul services agreement to cover the Indonesian low-cost airline's A320ceo and A320neo aircraft.

The agreement will allow Citilink to benefit from Turkish Technic's highly skilled workforce and decades of expertise in landing gear overhaul services, enhancing the efficiency and reliability of its operations.

Turkish Technic's Mikail Akbulut said: "This new agreement further enhances our long-standing partnership and expands our service network in the Asia-Pacific region. With our expert teams, we will continue to provide maintenance services for Citilink's aircraft at the highest safety and quality standards."

Citilink's Darsito Hendroseputro said: "We are delighted to develop a partnership with Turkish Technic in aircraft maintenance. This partnership underscores our shared commitment

to providing the highest standard of aircraft component support for our A320 fleet, ensuring safe and comfortable air travel for our passengers."

“This partnership underscores our shared commitment to providing the highest standard of aircraft component support



PBH CONTRACT

AFI KLM E&M and Vietjet Thailand sign landmark components support deal for 737-8s

> Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) and Vietjet Thailand have signed a long-term Power-by-the-Hour (PBH) components support agreement, to cover a fleet of 50 Boeing 737-8 aircraft.

The contract includes full components repair, access to AFI KLM E&M's worldwide pool, and Main Base Kit (MBK) support. The agreement marks

a first-of-its-kind in Thailand: the first Boeing 737-8 components deal for Vietjet Thailand and in the country, reinforcing AFI KLM E&M's footprint and leadership in the region.

The signing ceremony, which took place in September, was held at the Dutch Embassy Residence in Bangkok, in the presence of His Excellency Remco Johannes van Wijngaarden, Dutch Ambassador to Thailand.

COMPONENT SUPPORT

AFI KLM E&M and Parata Air sign A330 component support contract

> Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) has secured a component support agreement with Parata Air, Korea's newest carrier.

The six-year Power-by-the-Hour (PBH) contract covers the airline's launch fleet of six A330-300s and includes pooling, repair, base kits, health monitoring and logistics services. As Parata Air expands its fleet, the support will grow to cover more aircraft.

The deal is the first Airbus fleet component contract AFI KLM E&M has signed with a Korean airline. Parata Air cited the MRO provider's safety record, PBH expertise and regional network as key factors in its decision.

AEROTRENDS AVIATION

We are an established aviation supplier specialising in supplying and managing parts and repair services for Boeing and Airbus aircraft. We support a wide variety of aviation customers, including airlines, MROs, aircraft leasing firms, and other aerospace suppliers both domestically and internationally. Aerotrends is built around core principles of Honesty, Respect and Integrity - values that we live and grow by. Through its 24/7 round the clock support service in pursuit of out-of-the-box solutions we provide a unique approach to aftermarket aircraft parts supply that elevates the industry to a new level.

WORLDWIDE OPERATIONS



Our headquarters and main operations hub is based in **Shah Alam, Selangor, Malaysia** where we also offer part 145 for wheels and brakes. We also maintain a presence in the **United States**, with an office located in **Dallas, Texas**, to support our global operations.

CERTIFIED QUALITY



We deliver only **fully certified parts**: FAA 8130-3, EASA Form 1 or equivalent - backed by ASA-100 / FAA AC 00-56 quality systems, ensuring **complete traceability**.

COMPETITIVE PRICING



Founded by industry veterans with close to **50 years of combined experience**, Aerotrends balances deep know-how with aggressive sourcing to deliver **cost-efficient solutions**.

MULTI SECTOR SUPPORT



Our client base spans **domestic/international airlines, MROs, leasing companies and defence** - meaning we understand the varied demands and deliver tailored solutions wherever you are.



www.aerotrends-aviation.com



info@aerotrends-aviation.com

IN NUMBERS

50

AFI KLM E&M and Vietjet Thailand sign deal to cover 50 737-8s

74,920

IAC's widebody hangar at AMA in Texas will be 74,920 sq ft

22

HAECO has a 22-bay hangar at Hong Kong International Airport



BASE MAINTENANCE

HAECO wins three-year MRO deal with Brussels Airlines

Engineering and maintenance provider HAECO has signed a new base maintenance contract to support Brussels Airlines' Airbus A330 fleet.

HAECO will provide the support for the first time at its 22-bay hangar facilities in Hong Kong International Airport (HKIA) until 2028.

Under the agreement, HAECO Hong Kong will serve as the exclusive base maintenance service provider for Brussels Airlines' entire fleet of 11 Airbus A330-300 widebody aircraft during the winter season, covering C-checks including C1, C2 and 6-years checks.

HAECO's Gerald Steinhoff said: "We sincerely appreciate Brussels Airlines'

trust in our EASA-approved Airbus A330 base maintenance services. With 75 years of experience, HAECO is committed to ensuring the safety and reliability of Brussels Airlines' fleet while upholding the highest safety and quality standards."

Brussels Airlines' Filip Aerts said: "HAECO is a trusted MRO partner with proven expertise across a wide range of aircraft types, including the Airbus A330. We are confident that this collaboration will enhance the operational performance of our widebody fleet and support our commitment to delivering safe and reliable service to our passengers worldwide."



FACILITIES/HANGARS

Bird Aviation to add third hangar at Larnaca Airport

> MRO provider Bird Aviation is moving forward with its next phase of expansion at Larnaca Airport in Cyprus with the construction of a third hangar.

The project will introduce a fourth bay dedicated to narrow-body aircraft and will be located next to the company's existing premises.

Scheduled for completion by November 2025, the new facility will build on the company's ongoing growth strategy and rising demand from long-standing and new airline partners.

Once completed, Bird Aviation says the additional bay will further strengthen its operational capacity and flexibility, allowing it to accommodate more aircraft simultaneously.

Bird Aviation's Frederic Pralus said: "This project reflects both the confidence of our clients and the momentum we have built as a team. Adding a fourth bay will allow us to continue delivering timely, high-quality service while also planning ahead for the next stages of our development."



The IAI B777³⁰⁰ERSF

More of Everything

The Game Changer

IAI's 777-300ERSF "Big Twin" is reshaping the cargo world - delivering greater volume, allowing operators to enjoy exceptional fuel efficiency, and achieving lower operating costs compared to older freighters.

As the world's only STC approved conversion of its kind, this next-generation cargo aircraft delivers unmatched capacity, sustainability, and value.

The future of air cargo - ready for takeoff.

www.iai.co.il • Aviation_Group@iai.co.il



Discover More



ACMI

Thai SmartLynx receives maiden aircraft delivery

➤ Aircraft, Crew, Maintenance and Insurance (ACMI) specialist airline Thai SmartLynx has taken delivery of its first Airbus A320-200 at Don Mueang International Airport, marking a key step in securing its Air Operator Certificate (AOC) from the Civil Aviation Authority of Thailand.

The aircraft will anchor Thai SmartLynx's plans to offer flexible ACMI solutions, supporting local and regional carriers with seasonal capacity, route trials, or temporary fleet coverage.

Martynas Grigas of Thai SmartLynx said: "ACMI provides a turnkey solution by delivering not only the aircraft but also crew, maintenance and insurance. This allows client airlines to scale operations during peak demand or cover grounded aircraft without major investment or long-term commitments."

The milestone coincides with the opening of the airline's new operations office at Don Mueang, reinforcing its commitment to building a permanent base in Thailand. Additional A320s are planned to join the fleet over time.



MRO PARTNERSHIPS

HAECO achieves milestone aircraft input for ANA

➤ HAECO has announced the completion of its 500th aircraft input for All Nippon Airways (ANA) at its facility at Xiamen Gaoqi International Airport.

The achievement marks a significant milestone in the longstanding collaboration between HAECO and ANA which began in 1997.

HAECO offers extensive airframe maintenance capabilities for ANA's wide range of aircraft types, including the Boeing 767, 777 and 787 and the Airbus A380, and line services at various airports in the Chinese Mainland and Hong Kong.

HAECO's Ben Scheidel said: "This achievement is a testament to nearly 30 years of dedication and teamwork."



Credit: BASF

BRIEFS

- Lufthansa Technik has started the certification process of AeroSHARK for the A330ceo, the first Airbus model set to benefit from the drag-reducing riblet film developed with BASF Coatings.

- AerFin has taken delivery of a second B777-300ER previously operated by Japan Airlines. The widebody will be disassembled in the US to provide high-quality serviceable material for AerFin's global customer base.

- GA Telesis, through its Component Repair Group Southeast (CRGSE) division, has signed a multi-year supply agreement with a major aerospace manufacturer to secure a steady flow of factory-new proprietary components for its worldwide MRO services.

- Pennsylvania-based New World Aviation has expanded its MRO services to Fort Lauderdale-Hollywood International Airport (FLL), extending its footprint into the southeastern United States.

- TAT Technologies has secured a \$12 million, three-year contract with an undisclosed international carrier to provide MRO services for the GTCP331-500 auxiliary power unit (APU) used on the Boeing 777.

TAKING A LEAP FORWARD!

WE ARE BEST4LEAP



#LEAPforward

BEST4YOU

**AFI KLM E&M OFFERS MRO SERVICES
FOR ADAPTIVE SOLUTIONS**

 **LEAP**
Premier MRO

LEAP are trademarks of CFM International, a 50/50 joint company between GE Aerospace and Safran Aircraft Engines, and AFI KLM E&M is an authorized LEAP Service Provider.



**AIRFRANCE
INDUSTRIES**


KLM
Engineering &
Maintenance

A D A P T I V E N E S S[®]



FACILITIES/HANGARS

IAC breaks ground on new widebody hangar in Texas

Aircraft painting and aviation services provider International Aerospace Coatings (IAC) is partnering with design-build general contractor ARCO National Construction on the development of a 74,920 sq ft widebody aircraft hangar at Rick Husband Amarillo International Airport (AMA) in Texas, US.

A groundbreaking ceremony recently took place and the new hangar marks IAC's second widebody hangar and sixth overall at AMA, further strengthening

its 30-year presence in Amarillo. Once complete, it will be capable of accommodating all commercial aircraft types up to a Boeing 777-X, along with a 5,000 sq ft storage building.

To support IAC's painting operations, the facility will feature hazardous paint mixing and storage rooms, a wastewater treatment room, and a 75-horsepower, oil-free air compressor paired with a 2,000-gallon air receiver tank, with six strategically placed air drops throughout the hangar.

The hangar will also feature a ventilation system providing three-and-a-half air changes per hour, ensuring optimal air quality control, 3,000-AMP electrical service, and a durable standing seam metal roof.

“

Once complete, it will be capable of accommodating all commercial aircraft types up to a Boeing 777-X

FACILITIES/HANGARS

ST Engineering opens new Singapore facility



> ST Engineering has opened a new multimillion-dollar engine MRO facility at its aerospace compound in Paya Lebar, Singapore.

The expansion will enable the company to progressively double its annual capacity for CFM56 and LEAP engine maintenance to more than 300 shop visits by 2027. Combined with its Xiamen facility in China, total capacity across both sites will exceed 400 engines a year.

ST Engineering is also broadening its capabilities to include performance restoration and full overhaul shop visits for LEAP-1A and LEAP-1B engines, addressing rising global demand.

The development will also create over 300 high-value jobs in Singapore and integrate advanced technologies, such as AI-enabled hardware sorters and automated cleaning systems, to enhance operational efficiency.

A technician wearing a black and white Liebherr heat-protective suit and helmet is working on a large, complex aircraft engine component. The technician is using a tool to adjust a part of the engine. The background shows a workshop environment with various equipment and a blue panel with two black handles.

Swift and sustainable

Our network of qualified partners for Liebherr heat transfer services is growing. This collaborative approach is consistent with our drive to reduce MRO carbon foot print and aims at processing equipment locally to avoid lengthy interregional transportation. Our customers can therefore continue receiving OEM quality heat transfer services, at optimum turn around times as part of an eco-responsible MRO initiative.

www.liebherr.com

LIEBHERR

Aerospace

AVIATION WEEK
MRO
EUROPE

Oct. 15-16, 2025
London, UK

Visit us at booth no. 731

YOUR GLOBAL TRUSTED MRO PARTNER

Joramco provides world-class MRO & technical aviation solutions, delivering excellence with a commitment to precision and safety

- EASA Part 145
- 30+ Additional National Approvals
- 22+ Parallel Lines of Wide-Bodies & Narrow-Bodies Across 6 Hangars
- Facility Expansion with Hangar 7; Adding 5 Maintenance Lines



www.joramco.com.jo

Queen Alia International Airport - Jordan



Our Capabilities

AIRBUS

A300-600 A320neo
A310 A330-200
A320 Family A340-200/300

BOEING

B737 (Classic, NG and MAX)
B787-8/9
B777-200/300

EMBRAER

E170 E190
E175 E195
E190-E2



Facility Map



R4



In the Spotlight.

The latest partnerships, appointments
and innovations advancing the MRO sector



TRAINING & DEVELOPMENT

Airbourne Colours has pledged guaranteed jobs for 24 trainees at its Teesside Airport facility in the UK, with salaries starting at £35,000 and potential earnings of £45,000. The fast-growing aircraft painting firm plans annual training cohorts to meet rising demand. The scheme links training with long-term, well-paid careers.



INVENTORY MANAGEMENT

B&H Worldwide has expanded its Heathrow HQ with an extra 6,000 sq ft of office and warehouse space. The new unit, purpose-built for an aircraft engine leasing customer, features 24/7 operations, CAA-compliant security, climate control and dangerous goods storage. More than 7,000 line items have already been transferred, strengthening its global AOG support capabilities.

PEOPLE NEWS

AMETEK MRO has appointed Adam Payne (pictured below) as business development director for Europe.

In this new role, Payne will target the growth and expansion of AMETEK MRO's facilities and repair capabilities, including securing further Authorised Service Centre (ARC) agreements with OEMs.

Payne's 20-year career in the aerospace industry encompasses both commercial and military.



ACMI

Private jet charter KlasJet which is part of the world's largest ACMI (Aircraft, Crew, Maintenance and Insurance) provider, Avia Solutions Group, has announced its expansion into the Asian market.

In the final quarter of 2025, KlasJet will position one of its aircraft in Singapore to meet regional demand.

KlasJet is also planning to set up an office in Singapore with dedicated regional sales capabilities.

ENGINE MRO

Lufthansa Technik is expanding the availability of its Cyclean Engine Wash solution across Europe through a new partnership with ACC Columbia Jet Service. As of August 2025, ACC Columbia Jet Service started providing on-site engine core wash services for commercial aircraft as an authorised service partner.



Credit: Lufthansa Technik



Credit: Lufthansa Technik

ENGINE MRO

Lufthansa Technik has completed its 100th CFM LEAP engine induction at its Hamburg headquarters. The milestone was reached with a Quick Turn Shop Visit of a LEAP-1B engine from Brazilian carrier GOL Linhas Aéreas. The LEAP is steadily replacing the CFM56 as the core of Lufthansa Technik's engine services expertise in Hamburg.

ACMI

Aircraft leasing and trading services company AviaAM Leasing, a subsidiary of the world's largest ACMI (Aircraft, Crew, Maintenance and Insurance) provider Avia Solutions Group, has successfully delivered an Airbus A319-100 aircraft to Ukraine's Windrose Airlines. The aircraft was delivered under a dry lease agreement. The lease term runs until the end of 2025.



PEOPLE NEWS

Joramco has appointed Adam Voss (pictured above right) as its new chief executive officer, effective. Voss, previously Joramco's chief operating officer and most recently chief executive of Dubai-based TIM Aerospace, succeeds Fraser Currie (pictured above left), who becomes chief strategy and commercial officer at DAE Engineering.



TRENDING STATS

20

SolitAir plans to scale to 20 aircraft by 2027 (from Cargo-Only Airline MRO feature, p.30)

20%

European engine MRO accounts for around 20% of all shop visits annually worldwide (from Europe Region Outlook feature, p.70)

690K

The industry needs 690,000 new technicians over the next 20 years (from Skills & Workforce feature, p.88)

1,400

Each A320 teardown yields approximately 1,400 high-quality parts (from Aircraft Teardown feature, p.128)



TRANSFORMATION IN MOTION

DAE Engineering chief executive **Jeff Wilkinson** reflects on Joramco's evolution, highlighting the challenges and achievements of a transformation that continues to reshape the Amman-based MRO provider



“
We're very results driven. We set milestones, we hit milestones
”

JEFF WILKINSON

chief executive, DAE Engineering

1. His Majesty King Abdullah II is given a tour of Hangar 7
2. Joramco has built a track record as a leading independent commercial aircraft MRO facility

In 2017, Jeff Wilkinson arrived at Joramco to steer its transformation into a leading independent airframe MRO. “At the time, the company was a very different place,” he explains. “It was pretty much a regionally based MRO, looking after a few local carriers, and occasionally a European tour operator. It had about 1,000 staff, double-digit revenues, and so much untapped potential.”

That early assessment set the tone for what Wilkinson describes as “a transformation story designed to stabilise, modernise and reposition” the Amman-based maintenance specialist.

Phase one: “Fix what you've got”

Joramco is owned by Dubai Aerospace Enterprise (DAE) and the instructions from its shareholders from the outset were clear. “At the time, my boss Firoz Tarapore, chief executive and a member of the board of directors of DAE said: ‘Focus on fixing what's already there. Work within the resources you've got and carry it through’. And that's what we did,” Wilkinson recalls.

Wilkinson explained that the first step – or “phase one” – was assembling a new leadership team and focusing on Joramco's historic strength in narrowbody maintenance. The strategy soon evolved, however, to include widebodies, with new capabilities added for the Boeing 777, 787, 737 MAX and Airbus A330.

Geography was also a factor. “Jordan is three and a half hours into the Middle East, and three and a half hours away from Central Europe. That positioning allowed us to go after new customers



with different expectations and different price points,” Wilkinson explains. “We secured strategic contracts with the likes of Swiss and Lufthansa, and those deals reshaped the business.”

No department was left untouched. “We transformed people, finance, operations, customer support, commercial – every division had its own ‘transformation’ project,” Wilkinson recalls.

The results were dramatic. “In five to six years we took the business from double-digit revenues to very high triple-digit revenues. That was phase one.”

Phase two: Hangars, people and growth

With foundations strengthened, Wilkinson and his team began to plan for even more growth. “Three years ago, we drew up a rolling five-year plan. The revenue had tripled but still had the same footprint and the same



2

1,000 people. The plan was clear: new capabilities, new hangar, new academy. Build the infrastructure for growth.”

At the heart of phase two is Hangar 7, a vast A380-capable facility at Queen Alia International Airport.

“Building a hangar was new territory for me. I thought it would take 8-12 months to complete. It ended up being closer to 16 to 18 months, with all the integration between contractors, civil works, civil defence, airport access. Everything takes longer than you expect. But we got there, and the result is absolutely stunning.”

The facility, officially opened by His Majesty King Abdullah II in September 2025, is more than just extra capacity. “It’s the first cog in phase two,” Wilkinson says.

Building the Academy

The other cornerstone of phase two is people. Wilkinson is candid: “Facilities mean nothing without talent.”

Joramco’s existing training school produced only 15-20 students a year. “That wasn’t enough. If you’re going to build a beautiful hangar, you need to build a beautiful academy,” he says.

The company invested \$1 million in a new two-storey academy, complete with a retired 737 classic for hands-on practical training. It also launched Jordan’s

“
**We’re independent,
and that means we
can accommodate
everyone**
”

first bachelor’s programme in aircraft engineering, in partnership with the renowned University of Jordan.

“The response has been incredible,” says Wilkinson. “We opened in October 2024 with capacity for 200. Today we have 172 trainees already. That’s a pipeline of future engineers, building skills Jordan and the region desperately need.”

Demand and the capacity jigsaw

Phase two has already changed Joramco’s operating profile. Maintenance lines have expanded from 17 to 22, but demand has outstripped expectations.

“Demand for widebody work has exploded,” says Wilkinson. “We’re probably sold out for seven or eight widebody slots well into next year. That means telling some customers: no, you can’t have two slots, you can have one. It’s a constant jigsaw to fit everyone in.”

Being one of the few truly independent MROs in the Middle East adds to the

complexity. “Most regional providers are airline-owned, but we’re independent, and that means we can accommodate everyone,” says Wilkinson. “Our customers are demanding, and they have every right to be. Transparency is essential, and we know that we must be honest about what we can and can’t accommodate.”

Managing the growth curve

The scale of expansion has tested the organisation. Headcount has grown by 350 in the past year, and manhours are expected to climb from 1.4 million in 2024 to nearly 1.8 million in 2025.





1

"I'll be honest, I underestimated what 30% growth does to a management team," Wilkinson says. "When you add in building a hangar; building an academy, bringing in new customers – it's a huge strain. You can't expect one CEO to carry it all."

That recognition prompted leadership changes this year. Adam Voss, formerly Joramco's chief operating officer, is now chief executive, focused on day-to-day operations. Wilkinson has stepped into the broader role of chief executive of DAE Engineering, while Fraser Currie has become chief strategy and commercial officer for DAE Engineering.

"It's succession planning and strengthening the team," Wilkinson

explains. "You need one leader in Jordan, sleeves rolled up, delivering operations, and another focused on strategy, customers and growth. Fraser takes all the commercial responsibility, Adam runs the operations, and I oversee at group level."

Challenges and resilience

Not everything has been smooth. The closure of Jordanian airspace during regional conflict in July briefly unsettled customers.

"It spooked people initially," Wilkinson admits. "Jordan is neutral, but as soon as you close airspace anywhere, customers will get nervous. Airspace closures are

1. Joramco and Lufthansa have a significant, ongoing MRO relationship. 2. Hangar 7 was officially opened by His Majesty King Abdullah II in September 2025

part of today's world, whether it's drones in Europe or conflicts elsewhere. What matters is how you respond."

Joramco's response, he says, was built on customer support. "We helped get representatives out, managed communication, kept people informed, and that transparency reassured them. By September, we were back in full operation again."

Looking ahead

Phase two is only the beginning. The rolling five-year plan calls for an additional paint hangar, a "copy-and-paste" replica of Hangar 7, and ultimately a 28-bay facility.

"The independent verification shows the demand is there," Wilkinson says. "We've gone from 600,000 manhours when we started to 1.4 million last year, and nearly 1.8 million this year. The obvious question is: when do you hit two million? That's the next milestone."

For Wilkinson, it all comes back to focus and delivery. "We're very results driven. We set milestones, we hit milestones. That's the culture. Phase one was fixing what we had. Phase two is about building for the future – hangars, academy, manpower. And there's much more to come." ●



2



TURKISH TECHNIC

MRO THAN EVER



AIRCRAFT MAINTENANCE | COMPONENT SERVICES | COMPONENT POOL | TOTAL CABIN CARE | 24/7 SUPPORT

BASE MAINTENANCE | LINE MAINTENANCE | MATERIAL SALES | PART 21 J&G SERVICES
ENGINE & APU SERVICES | COMPONENT MAINTENANCE AND POOL SERVICES | CABIN INTERIOR MAINTENANCE
AOG SERVICES | LANDING GEAR SERVICES | TEAR DOWN SERVICES



TURKISHTECHNIC.COM



TURKISH-TECHNIC



TURKISHTECHNIC



TURKISHTECHNIC





Customers first.

With over 35 years' experience in the CFM56 and LEAP engine market, the SES team appreciate the diverse challenges operators encounter on a daily basis, which is why we don't have a one-size-fits-all approach.

Every customer's requirements are different and that is why we offer bespoke engine leasing solutions that will precisely meet your needs. So, how can we help?



Ivan Graydon
Chief Technical Officer

SES. The CFM Specialist Lessor
ses.aero

SES
Fly Certain

Records hold power

Jason Dickstein looks at some of the elements of
maintaining repair station records for FAA review, and
the FAA's oversight of recordkeeping activities

Why are my records important?

Often, a repair station's own records may be the only evidence that a repair station has operated correctly. They can be a very valuable asset if an accusation is leveled against the repair station, alleging that the repair station has acted incorrectly.

For example, if a customer sues a repair station, claiming that the repair station failed to perform an important element of the expected repair or installation, then the repair station may wish to produce its work order or traveler in order to show that the work was completed and that a stamp, initials or signature was applied to confirm this at the time it was completed.

Such records are normally kept in the ordinary course of business, and this makes them business records; business records reflect an exception to the hearsay rules and are more likely to be admissible in court than other records.

This business record can serve as *prima facie* evidence of the completion of the work described as completed. The burden may then shift to the accuser to produce contrary evidence.

From the FAA's point of view, the records required under the regulations help the FAA to confirm that a repair station is in compliance with the regulations. The National Transportation Safety Board has said that permitting the FAA to review records 'first-hand' is the



“
**Repair stations are
required to keep
records of the work
they perform for
at least two years**
”

JASON DICKSTEIN

president, Washington Aviation Group

fundamental purpose for the regulations permitting the FAA the right to inspect the facility.

There is another reason for adequate recordkeeping. Although the burden in a legal case rests on the FAA's shoulders to prove that the repair station has failed to comply with the regulations, most repair stations prefer to avoid seeing such cases filed. Sometimes the only way to avoid legal disputes with the FAA is to produce

records that *prove* the repair station's compliance with the regulations (even those for which there is no recordkeeping requirement). This can impose a *de facto* burden on the repair station to prove its innocence to the FAA inspector assessing the facility for compliance – one that many repair stations are happy to meet.

What records can the FAA review?

The FAA is permitted to enter a repair station's facility at any time to determine whether the repair station is in compliance with Part 145. Repair stations are required to keep records of the work they perform for at least two years. The FAA must be able to review these records – they may be entitled to suspend or revoke a repair station certificate from any facility that fails to provide access to inspect the facility's records.

In one case, a team of FAA inspectors arrived to inspect an air carrier's facility (air carriers are subject to the same sort of obligation to permit inspection as repair stations). The lead inspector was told that the facility's personnel would be videotaping the inspectors while they review records. The lead inspector insisted that the camera be turned off – the air carrier refused – and the inspection team left. This was a brand new issue for the FAA, so the FAA issued an emergency order on the grounds that the videotaping represented a refusal to permit inspection. The National

Transportation Safety Board reviewed the case and held that videotaping did not prevent the FAA from inspecting the records.

The records that the FAA can review include the records of the work performed by the repair station. These records will generally include all of the information required on the approval for return to service document, like a description of the work performed and the date on which the work was completed. The records should also include the name of the certificated person responsible for performing or supervising the work, as well as the name of the inspector of the work where that person is different (some air carriers 'required inspection item' work must be inspected by a different person, by law). The inspection results of the work should also be recorded. All the records required to be kept to confirm compliance with the regulations should be available to the FAA for review and inspection.

Compliance with the FAA's regulations (such as those in Part 145) represents the limits of the FAA's right to inspect. Inspecting anything else generally requires a warrant or subpoena, which few FAA inspectors bother to acquire.

What sort of records may fall outside of the FAA's right to review? Financial records generally are outside the scope

of Part 145. Where a repair station segregates the invoices from the work packages required to be retained by regulation, the FAA may have no right to inspect the invoices (although they of course have the right to inspect the documents required by regulation to be retained). If the facility's general manager keeps a personal diary that



2025 MARPA CONFERENCE NOV 11-13 DALLAS, TEXAS



WHY BE INTERESTED IN PMA PARTS?

Airlines worldwide use safe, reliable FAA-PMA parts to reduce lead times, and use cost savings in order to remain competitive. The global leasing community can look to PMA to protect the value of their assets.

WHY COME TO THE MARPA CONFERENCE?

Network with your customers, suppliers, regulators, and more. MARPA Member 1:1 Meetings mean a full calendar! Gain industry insights and education from regulators, specialists, and experts in sessions tailored to help you stay current with the latest changes and trends that can help your business thrive.

www.PMAparts.org/annualconference

HEICO



**JET PARTS
ENGINEERING**



First Aviation Services Inc.

adp



**R&D
Dynamics Corporation**

MITCHELL PMA
A JPE COMPANY

ATS



**NSL
AEROSPACE**

**AVIATION TECHNICAL
SERVICES**

WENCOR



VOGT AERO

American Airlines



**INTERNATIONAL
TRADE
ADMINISTRATION**

PARTNERS

2025 MARPA EVENT SPONSORS



“ The FAA is permitted to enter a repair station’s facility at any time to determine whether the repair station is in compliance with Part 145 ”

is separate from the official records of the repair station, then that personal diary is generally free from seizure in the absence of a warrant or subpoena. Some documents related to security interests (liens) may also be outside the scope of what the FAA can reasonably inspect.

If your principal avionics or maintenance inspector asks to see records that have nothing to do with Part 145 regulatory compliance, then should you grant access to those records? There is not a clear answer to this question. Whether to permit such additional inspection is a business decision that each facility must make for itself, balancing the repair station’s business relationship

with the FAA inspector against the repair station’s rights to be free of government interference except as authorised by law.

Am I entitled to know the FAA’s findings?

After the FAA inspects a repair station, the FAA is required to provide the repair station with written notice of the defects found during the inspection. If your facility does not get such a report in a timely fashion, and you believe that the FAA has made findings (perhaps because of oral statements made by the inspector) then write to your local office and request a copy of the written notice of regulatory defects.

It is common for an FAA inspector to provide an oral ‘out-briefing’ at the end of an inspection. This can be a useful meeting, but be careful about acting on the FAA’s oral advice. If you agree with the oral advice, then go ahead and implement it; but if you disagree with the advice, then you may want to wait for the written notice, particularly if the FAA’s finding does not directly impact current compliance. Where an FAA finding fails to impact regulatory compliance, it may represent an example of ‘business advice’ that the FAA has offered that will not find its way into the written defect report.

Looking for more good ideas about compliance? The MARPA Conference will be held with our partner, American Airlines, on November 13-14, 2025 in Dallas, TX. We will be discussing approved parts and strategies for maintaining aircraft in an environment of supply chain challenges. More details can be found at mpaparts.org. ●

MAXIMIZE SPACE. BOOST EFFICIENCY. GO ELECTRIC.

MEET US ...



inter airport europe
October 07-09 2025
Munich / Germany
Stand B6-500



MRO Europe
October 14-16 2025
London / UK
Booth 3604

Smart Tug Technology



FULLY
ELECTRIC
DRIVE



REMOTE
CONTROLLED



AUTOMATIC
NOSEGEAR
LOADING

No Barriers to Entry



NO DRIVER'S
LICENSE
REQUIRED



ONLY
2 HOURS
TRAINING

Tight quarters slowing you down? Discover Mototok – the electric tug that transforms your MRO workflow with compact power and unmatched control.

Unmatched Maneuverability.

Mototok's electric tugs offer superior maneuverability, making them ideal for even the most constrained hangars and maintenance bays. Tight turns? Narrow aisles? No problem. Experience effortless handling and say goodbye to traditional towing limitations.

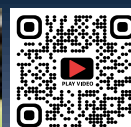
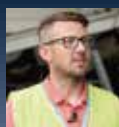
360° Nose Gear Access.

Mototok tugs can rotate beneath the aircraft's nose wheel without moving the aircraft itself – a key advantage when navigating tight spaces. This unique feature increases flexibility during repositioning and simplifies ground handling in workshops and repair areas.

Safe. Smart. Effortless.

With intuitive remote controls and a fully hydraulic, sensor-monitored nose wheel platform, Mototok ensures precise positioning and maximum safety – a must in modern MRO environments.

Reclaim your hangar. Increase efficiency. Trust Mototok – your electric tug solution for smarter MRO.



bit.ly/dennis-velic

"BASICALLY, WE CAN ACCOMMODATE MORE AIRCRAFT IN THE SAME HANGAR – JUST BY USING MOTOTOK"

Denis Velic,
Base Maintenance Manager, Adriatehnika



**Innovative remote controlled
electric-drive tugs**

Contact: +49-2151-65083-82 · www.mototok.com · info@mototok.com ·
We've got you covered! Sales and Service in **Europe, North America, Asia and Australia.**



STRENGTHENING AIR CARGO FROM WITHIN

Hamdi Osman, founder and chief executive of SolitAir, explains how smart MRO partnerships and disciplined planning underpin the Dubai-based carrier's rapid growth and technical reliability

In an industry which is defined by safety, speed and scale, I believe success lies in the details – especially in aircraft maintenance and reliability.

As we mark one year since SolitAir's launch at Dubai's Al Maktoum International Airport (DWC), I'm proud to reflect on both rapid growth and our commitment to safety and technical excellence.

Our fleet and MRO strategy is deliberately paced: we began with three wet-leased 737-800BCFs from ASL Ireland, plus a dry-leased unit under our own AOC, combining flexibility with control. As our fleet grows, every new addition enters service only after undergoing integrated maintenance planning, crew training and parts provisioning.

From day one, I envisioned SolitAir as a purpose-built middle-mile cargo airline serving the Global South, with a sharp focus on express, airport-to-airport airfreight. With a current fleet of five Boeing 737-800 narrowbodies (at the time of writing, two more aircraft are set to join by October 2025) and plans to scale to 20 aircraft by 2027, efficiency, predictability and world-class reliability underpin our entire model.

Every team member follows a simple mantra: "Keep the main thing the main thing". For us, that means operating the right aircraft – the 737-800 narrowbody – ideal for six-hour missions, payloads up to 22 tonnes and fast turnarounds, backed by the technical support so they can perform seamlessly. This ensures growth never compromises safety or reliability.

Investing in MRO capability

From the outset, SolitAir has prioritised a robust MRO ecosystem, both in-house and through key global partnerships:

Optimised Aircraft Maintenance Programme (AMP)

We developed an efficient AMP tailored to our operational requirements, including the innovative alignment of daily checks to a 48-hour interval. This was achieved by leveraging MSG-3 methodology and an MRBR review, delivering cost savings and maximising aircraft availability without compromising safety or compliance.

Strategic MSP engagements

We successfully engaged with two leading Maintenance Service Providers (MSPs) in the region to provide both

“As our fleet grows, every new addition enters service only after undergoing integrated maintenance planning, crew training and parts provisioning”

scheduled and ad-hoc support, ensuring operational flexibility, reduced downtime and consistent service quality.

Cost-efficient CAMO management

We manage CAMO activities through an outsourced set-up to minimise cash outflow for a small fleet, while leveraging the expertise of established providers to ensure safe, compliant operation of our Boeing 737s.

Implementation of OASES MRO software

We launched the OASES Maintenance & Engineering software platform to manage the fleet's airworthiness records, work packages and maintenance forecasting. This digital transformation enhanced data accuracy, improved regulatory traceability and streamlined fleet management processes.

TP Aerospace partnership

We've engaged TP Aerospace to supply wheels and brakes across our growing 737NG fleet – a critical component that reinforces our safety and dispatch reliability, supporting both current operations and future expansion.

Delivering reliability

Operational excellence translates directly to customer trust. Express cargo – whether pharmaceuticals, perishables or high-priority packages – demands exactness. A single equipment issue or timing deviation can cascade into disruption across tightly connected supply chains.

By maintaining high dispatch reliability and targeting daily services within a six-hour radius of Dubai – covering major hubs in the Middle East, Africa, the Indian Subcontinent, Central Asia and China – we provide ground handlers, forwarders, e-commerce partners and integrators with dependable scheduled and charter cargo options, including capacity for dangerous goods, perishables, pharmaceuticals, valuables and oversized freight.

Our strong technical readiness ensures inflight reliability translates not only into pride but also cost savings for customers, partners and for us as a young airline building a reputation for consistency.

Making SolitAir a trusted name

I founded SolitAir in 2024 to serve the middle-mile cargo segment – the vital link between origin airports and distribution hubs.

Today, from our 220,000 sq ft logistics facility at DWC, SolitAir runs express, scheduled services with a 98%+ on-time delivery rate. In just a few months of operations, the airline has earned eight industry awards, including ‘Game Changer in Air Cargo 2025’ and ‘The Air Cargo Operator Award’.

As of August 18, 2025, SolitAir operates 26 routes across the Middle East, Africa and Asia and, with each passing day, we are inching closer to our target of connecting Dubai with 50 destinations within a six hour radius.

Our vision is to be more than a cargo carrier – we aim to be the trusted bridge between the UAE and the Global South. We will continue to invest in expanding our network, fleet and partnerships while adding more direct access to markets across the Middle East, Asia, Africa and beyond.

Our mantra – “We make every SolitAir experience an outstanding one!” – is more than a slogan; it reflects our philosophy to build long-term partnerships through a foundation of



▲ Hamdi Osman, founder and chief executive, SolitAir

reliability and technical transparency. In aviation, trust is earned in maintenance records, dispatch consistency and the confidence that an aircraft will perform at every cycle.

As SolitAir charts daily routes across the Global South, we are guided by the conviction that operational excellence is as vital as commercial success. And our goal is to contribute to the economic empowerment of the Global South by enhancing trade and connectivity. We are committed to building long-lasting relationships with our clients, prioritising service over price and pursuing sustainability in every aspect of our operations.

The future of reliable cargo

In the coming months, we'll further integrate predictive analytics, expand our MRO footprint and deepen collaborations with global technical partners. Each aircraft added to our fleet strengthens that commitment.

As we pursue our mission, one detail remains constant: every bolt tightened, every inspection run, maps directly to cargo safely delivered, customers satisfied and our vision realised. ●

1. Al Maktoum International Airport, also known as Dubai World Central (DWC)

1

dubaiports.ae



AN AMAC AEROSPACE COMPANY



DESIGNED BY ENGINEERS FOR ENGINEERS

ROAM is an advanced aircraft technical records archiving solution and provides operators and asset owners alike, a cost-effective solution to store, audit and share records with various stakeholders.

Built-in search and filtering features facilitate record keeping and data management, providing manpower effectiveness, enhanced quality, and reduced risk. Stay on top of the management of day-to-day fleet maintenance, get in an instant the compliance status of your projects and save time of end of lease projects.

Contact us to explore how we can ease your operations.

+44 (0)1279 818 800
enquiries-gamit@amacaerospace.com
www.gamit.co.uk



PREDICTIVE INSIGHTS AT PAM DUBLIN

The Predictive Aircraft Maintenance (PAM) Conference will return to Dublin this November, bringing together airlines, OEMs, MROs, regulators and technology providers to explore how predictive technologies are transforming aircraft operations

As the aviation industry continues to embrace digital transformation, predictive maintenance is fast becoming one of the most influential tools in enhancing fleet reliability, minimising unplanned downtime and optimising operational costs.

The Predictive Aircraft Maintenance (PAM) Conference, delivered by *MRO Management* and *Aviation Business News*, will once again take place in Dublin on November 11-12 – building on the success of the previous Dublin event in 2024 and earlier editions in London.

This year's programme features a packed agenda with contributions from leading airlines, technology providers, OEMs and regulators, offering attendees both case studies and forward-looking discussions on the challenges and opportunities facing predictive adoption.

Airline insights at the forefront

Several major carriers will use the Dublin stage to showcase their predictive journeys.

Ryanair's Peter Hayden, director of maintenance planning, will discuss how the airline is implementing predictive maintenance to transform its operations, reflecting the low-cost giant's data-driven approach to efficiency and reliability.

British Airways (BA) is also set to take the spotlight, with Stephen Rayner, senior technical engineer, predictive maintenance group, presenting on the



▲ EirTrade Aviation is once again Platinum Sponsor for PAM 2025

flag carrier's adoption of predictive solutions and the impact on day-to-day engineering practices.

Aer Lingus, represented by Valentin Lewandowski, engineering data services manager, will provide a home-market perspective, sharing insight into its progress and plans for predictive maintenance adoption.

Meanwhile, Vueling's Marc Perez will outline real-world case studies of predictive systems in action, exploring both successes and the integration challenges faced within the dynamic demands of airline operations.

Moving beyond 'recreational maintenance'

One of the most eagerly anticipated panels – *'The Airline Approach: Moving Beyond Recreational Maintenance'* – will tackle outdated practices of performing unnecessary checks or part replacements. Instead, the discussion will highlight how predictive tools are embedding into daily operations to deliver measurable improvements.

Confirmed speakers include Craig Lynch of easyJet, Matias Bjerregaard of SAS, Shruta Shankar of United Airlines and Dustin Ames of Delta Air Lines, all of whom bring first-hand experience of deploying predictive systems at scale. Attendees can expect candid discussion on how airlines are balancing integration complexity, workforce adoption and the transition from reactive to predictive workflows.

“The breadth of this year's agenda demonstrates how predictive maintenance has moved from concept to practical application”



1



“PAM Dublin 2025 promises to cover every angle of the predictive transformation”

Learning from long-term journeys

Another highlight comes from Aidan Kearney, head of maintenance operations at easyJet, who will reflect on the carrier's predictive maintenance journey dating back to 2015. Kearney's session, *'From 2015 to Today: easyJet's Predictive Lessons'*, promises to offer valuable perspective on both the cultural and technical shifts required for long-term success – as well as his view on the attitude the wider industry must adopt to make the most of data-driven decision-making.

Engine reliability in the spotlight

Engines remain the most expensive and operationally critical asset in the fleet, making predictive tools particularly valuable in this domain. The *'Smart Engines, Smooth Operations'* panel will examine how big data, live diagnostics and artificial intelligence are shaping propulsion reliability.

Speakers include Amanda Bock of Delta Air Lines, Geert Van Damme of CTS Engines, Honor Powrie of GE Aerospace and Zack Silverman of United Airlines. Together, they will explore how predictive insights are extending

engine life, improving safety margins, and enabling airlines to better manage the pressures of tighter schedules and rising utilisation.

Safran Nacelles and Landing Systems will add to the engine discussions with a presentation about how Safran products and solutions can support maintenance-related decisions and enable Safran to provide dedicated solutions to airlines. François-Xavier Zakrzewski from Safran Nacelles and Edouard Lesellier from Safran Landing Systems will present with Matias Bjerregaard from SAS – Scandinavian Airlines.

OEMs, suppliers and airline partnerships

Collaboration between airlines and OEMs will also be explored in a joint session featuring Condor and Airbus, with Pascal Ramali and Petros Manaras presenting how predictive maintenance is boosting operational reliability.

Elsewhere, sponsor Vervon will host a session titled *'The Predictive Edge: How AI is Powering the Next Generation of Aircraft Reliability'*. Delivered by Dave Purfurst, this presentation will examine how AI is



1. Just some of the speakers taking part in PAM Dublin 2025 - from L-R: Amanda Bock, senior analytics engineer, propulsion engineering at Delta Air Lines; Craig Lynch, predictive maintenance specialist at easyJet; Peter Hayden, director of maintenance planning at Ryanair; Pascal Ramali, CAMO predictive maintenance engineer at Condor; and Stephen Rayner, senior technical engineer, predictive maintenance group at British Airways (BA)

DIEHL
Aviation

 **IMAGINE**

**IMAGINE WORLDWIDE
CUSTOMER SERVICES.**

Our customers can rely on Diehl Aviation as a long-term committed industry partner offering comprehensive Customer Services. We offer one-stop shops worldwide, ensuring that all our products and services are accessible – always with outstanding customer-oriented behavior.



**YOU INSPIRE
WE CREATE**



“PAM is set to reaffirm its position as the leading forum for stakeholders seeking to move beyond the break-fix mentality”

being applied to improve first-time fix rates, reduce chronic defects and simplify compliance across global fleets – particularly valuable as the industry grapples with a shrinking engineering workforce.

AFI KLM E&M will further add to the debate with Aude Fagour presenting *‘Innovating Predictive Maintenance with Prognos: An A350 Case Study’*. This session will showcase how the company’s PROGNOS® platform turns raw data into actionable intelligence, with a focus on creating tangible value for both airline and MRO stakeholders.

Startups and new voices

PAM Dublin 2025 will also provide a platform for disruptive new entrants. The *‘Startup Voices Changing the Game’* session, which is new for 2025, will spotlight companies including Baleen Labs, Aermetric and AIXI, each of which is developing innovative predictive solutions. This session will explore how startups are collaborating with established operators and MROs, and what their innovations mean for the future of real-time diagnostics and cost-saving opportunities.

Collaboration, regulation and compliance

Predictive maintenance may promise efficiency gains, but regulatory and legal considerations remain central to its adoption. The panel *‘Data-Driven Airworthiness: Aligning Predictive Technology with Regulatory and Legal Realities’* will gather representatives from airlines, CAMOs, OEMs, regulators and legal practice.

Speakers include Edgaras Knyzas of Heston Airlines, Darren Macer of Boeing, Deepak Parameswaran of United Airlines, Simon Phippard of Bird & Bird, and Andrew McGregor of GAMIT Limited. Discussion will focus on certification, compliance frameworks and liability issues around data ownership and traceability – offering attendees a comprehensive view of how regulators are approaching predictive technologies.

Another forward-looking session comes from Victoria Platt of SITA, who will present on *‘Federated Maintenance and the Power of Collaborative Intelligence’*. Platt will explore how federated data sharing could create new collaborative intelligence models across multiple airlines and maintenance communities.

Shaping the next chapter

The breadth of this year’s agenda demonstrates how predictive maintenance has moved from concept to practical application – with airlines, MROs and OEMs now sharing concrete lessons and measurable outcomes. From Ryanair and BA’s case studies to Delta Air Lines and GE Aerospace’s engine insights, and from startup disruptors to regulatory specialists, PAM Dublin 2025 promises to cover every angle of the predictive transformation.

By bringing together voices from across the value chain, the conference will offer attendees the opportunity not just to learn about the latest technologies, but also to engage with the strategic, cultural and regulatory frameworks shaping adoption.

As predictive tools continue to evolve, PAM Europe in Dublin is set to reaffirm its position as the leading forum for stakeholders seeking to move beyond the break-fix mentality and towards a future defined by foresight, collaboration, and intelligent maintenance. ●



To find out more about the programme, speakers and sponsors of this year’s Predictive Aircraft Maintenance (PAM) Conference in Dublin, and to secure your delegate ticket, please visit predictiveaircraftmaintenance.com/pam-dublin or scan the QR code.



amadeus



sponsored by
amadeus

CHRIS HANCOCK, CEO AVIOXX

“THE MARKET HAS
DECIDED SAF IS A
**GENUINE
SOLUTION**”

Sponsored by
amadeus

“YOU CAN BETTER
UNDERSTAND AND
RESPOND TO YOUR
CUSTOMERS WITH A
**DIVERSE
WORKFORCE**”



Sponsored by
amadeus

“WHAT'S BETTER FOR
THE CUSTOMER, IS
BETTER FOR THE
**ENTIRE
INDUSTRY**”

Sponsored by
amadeus

HAYLEY BONNICK GLOBAL HEAD OF MARKETING
REMARKABLE GROUP

“IF AIRLINES TREATED
THEIR AIRCRAFT LIKE THEY
DID THEIR WEBSITES
**PEOPLE
WOULDN'T FLY**”



Enjoy Weekly aviation insights from leading industry voices!

sponsored by

amadeus

www.aviationbusinessnews.com/abncast



ASCENT

AVIATION SERVICES



TUCSON INTL AIRPORT
Tucson, Arizona

PINAL AIR PARK
Marana, Arizona

MAINTAINING THE MAGIC OF FLIGHT

Ascent Aviation Services is a fully integrated MRO providing maintenance, storage, reclamation, modification, interior, and paint services to owners, operators and lessors of wide body, narrow body, and regional aircraft.

A Class IV 14 CFR Part 145 certified Repair Station maintaining approvals and certifications from regulatory authorities globally, including FAA, EASA, TCCA, BCCA, CAACI, NCAA, ANAC, 2-REG, and Aruba.



ascentmro.com

Experts in comprehensive full life aircraft care, providing solutions for a wide array of commercial aircraft.

SEE OUR WEBSITE FOR CAREER OPPORTUNITIES

<https://ascentmro.com/careers.html>

Smarter maintenance strategies

Ahead of this year's Predictive Aircraft Maintenance (PAM) Conference in Dublin in November, *MRO Management* asked **Cameron Byrd**, from event sponsor AIXI, his thoughts on the landscape of predictive maintenance



“The challenge today isn't just about predicting failure events – it's knowing how to stop the expected failures from happening”

CAMERON BYRD

chief executive and founder, AIXI

► **What's your perspective on how predictive maintenance is evolving in aviation, and where do you see the biggest opportunities or gaps still to be addressed?**

To baseline, let's define 'predictive maintenance' as an entire maintenance operation that reduces unplanned downtime and improves reliability by predicting and correcting failures before they occur. This includes operations such as collecting, cleaning, storing and parsing data, predicting events, taking corrective actions and creating learned associations.

The current focus in predictive maintenance remains heavily focused on using sensor data to predict failures. Hardware solutions exist to collect and store data, but adoption has mostly been limited to the leaders in this space. These same leaders have shown real ROI by reducing unplanned downtime, extending asset life and improving reliability. However, this is only part of the equation.

In addition to predicting failures, a fully realised predictive maintenance programme also needs a prescriptive maintenance tool that identifies risks and advises technicians on the most efficient, cost-effective actions to mitigate the chance of the predicted failures from actually happening. Unfortunately, many airlines are either ignoring or are unaware of the need for a prescriptive maintenance tool, leaving a hole in their predictive maintenance aspirations and a large opportunity for clever solutions.



▲ Southwest Airlines is using AIXI's AI-enabled tools to improve its fleet maintenance operations

► **How does AIXI's technology or approach differ from what's already available in the predictive maintenance market?**

AIXI is intensely focused on the prescriptive half of the predictive maintenance problem which, in and of itself, differs from the norm. We take things further by beginning with the fundamental part of any data-driven system – the data. An effective prescriptive maintenance solution requires information stored deep inside an airline's historic maintenance logs. Hidden within those logs is the combined knowledge of every technician who has ever maintained an aircraft in that fleet. It's an untapped, data-rich and authoritative source on how to best fix any failure.



◀ AIXI creates AI-enabled solutions that improve reliability and asset uptime for the aviation industry

“AIXI’s tools can accelerate the shift away from reactive maintenance by doing the hard work of making predictive maintenance effective and scalable”

AIXI’s foundational product has been in production since 2022. It extracts, cleans and normalises the airline’s historical maintenance logs so that they are consistent, structured and easy to dissect. Our specialised, industry specific language models (ILMs) understand the nuanced, often informal, jargon-filled language of aviation mechanics and pilots transforming maintenance logs faster, cheaper and with far greater accuracy than any human possibly could.

The cleaned maintenance data becomes the foundation on which our other tools are built. This ensures that the information provided by our tools is accurate and trustworthy, allowing users to confidently make informed decisions.

► What stage is AIXI currently at in terms of product development, partnerships or airline engagement?

AIXI has radically expanded its products in the last year. Our ATA AutoCoder™ continues to provide the foundation for all our robust AI-enabled MRO products. We recently introduced two new tools into production – Prescriptive Maintenance and Repeat Defect Identification. Those, along with our Ask OTTO chatbot, enable users to work more efficiently and make

data-driven decisions that improve their performance.

We’re excited about extending partnerships with an industry leading hardware company that’s changing how sensor data is collected and shared along with a disruptive start-up improving communication within maintenance teams. Being able to seamlessly integrate into these tools will help extend AIXI’s reach and help airlines use mountains of historical maintenance data to make real-time decisions.

On the sales side, we’re on track to exceed our goal for proof-of-concept pilots with new customers. We’re delivering results that help reduce the delta between planned and unplanned maintenance and identify repeat/chronic defects in ways that fix planes faster, improve maintenance dispatch reliability and reduce the number of AOGs.

► Looking ahead, how do you see start-ups like AIXI contributing to a wider shift away from reactive and scheduled maintenance towards more data-driven, proactive strategies? AIXI’s tools can accelerate the shift away from reactive maintenance by doing the hard work of making predictive maintenance effective and scalable. The challenge today isn’t just about

predicting failure events – it’s knowing how to stop the expected failures from happening. This requires turning massive amounts of maintenance records, logs and real-world events into models that can be trusted and reused.

That’s where AIXI comes in. By automating things like ATA coding, normalising data across fleets and applying AI at scale, AIXI can move airlines past one-off models and into a system where insights are repeatable and transferable. The impact is fewer unplanned events, faster troubleshooting and, ultimately, a transition from reactive scrambling to proactive strategies that improve reliability and safety, while reducing costs. ●



On November 11-12, *MRO Management’s Predictive Aircraft Maintenance (PAM) Conference* returns to Dublin where leading airlines, OEMs, MRO specialists, data experts and technology providers will come together to explore how innovation is reshaping and streamlining aircraft maintenance.

Thank you to our Start Up Sponsor, AIXI, for supporting PAM 2025.



For more information and how to register to attend, scan the QR code above or visit predictiveaircraftmaintenance.com



AELS
We **love** aircraft



We **love**
circular
aviation!

Ready to **sell** your **aircraft**?

We ensure a hassle-free sale with focus on sustainable disassembly. Our highly experienced staff will be able to provide you a clear and simple offer, on-site technical acceptance, quick and accurate records checks and an overall smooth process. We offer flexibility while minimizing environmental impact through recycling, repurposing and maximizing USM feedstock. **Contact us for a reliable and risk-free solution!**

Looking for **high-quality** aircraft **parts**?

Our strict supply chain controls guarantee 100% traceability. Every component meets the highest standards and undergoes a full paperwork check, including back-to-birth records. Documentation is available in digital or hard copy format. **Get in touch today for certified and reliable aircraft parts!**



Aircraft End-of-Life Solutions (AELS) BV
Vliegveldstraat 280, 7524 PK Enschede
The Netherlands | T + 31 (0) 88 235 7000
www.aels.com

Diamond Level
AFRA accredited



WHEELS IN MOTION

Ismaël Fadili highlights AMETEK MRO's strategies to overcome supply chain pressures while driving innovation in landing gear, wheels and brakes support

► Many discussions around landing gear, wheels and brakes focus on maintenance cycles and cost-per-landing, but what aspects of performance and reliability do you think are overlooked in industry conversations – and how is AMETEK MRO addressing them?

Although most discussions around landing gear, wheels and brakes do focus on supply chains, maintenance cycles and cost-per-landing, other aspects such as human factors are overlooked. A focus on the potential for human error is mandatory for all maintenance organisations, but in the aviation business it is critical to emphasise how mistakes and carelessness can lead to dramatic situations. Bad maintenance due to human error can include the presence of Foreign Object Debris (FOD), which can cause landing gear to collapse.



“
Close working relationships with OEMs will prove paramount in the coming decade
”

ISMAËL FADILI

vice president sales Europe,
AMETEK MRO

Additionally, we have seen wheel bolts ejected during take-off and landing due to bad torque, resulting in heavy damage to the engine. Another area that cannot be underestimated is the impact of the flying environment. Harsh conditions, such as extreme temperatures, can have significant implications on the performance and reliability of landing gear. Salty environments, in particular, affect components causing heavy corrosion. If this is not considered with respect to inventory, it could lead to disruption in the supply of major parts needed for repair programmes.



2

As the world's only Authorised Repair Station (ARC) to support the Canadair landing gears, AMETEK MRO often sees the effects of the environment on landing gear and are thus well-equipped to deal with them.

► **As aircraft fleets diversify with newer composite-heavy designs alongside ageing metal-heavy models, how have you adapted your testing, materials technology or overhaul processes to serve both ends of the fleet age spectrum effectively?**

As aircraft fleets diversify with newer composite-heavy designs alongside ageing metal-heavy models, AMETEK MRO will continue to support legacy aircraft. New materials which are mostly used for the main structure of aircraft will have little effect on component



1

1, 2 and 3. AMETEK MRO services more than 40,000 aircraft components

repair performance, allowing AMETEK MRO to maintain our wide-reaching capabilities on a range of aircraft across the fleet age spectrum.

However, AMETEK MRO is also prepared to support newer technologies. We keep a keen eye on emerging technologies, such as electrified braking systems and High Velocity Oxygen Fuel (HVOF) surface treatments for landing gear. There are processes in place to identify these new technologies and include them in AMETEK MRO's New Development Production process. This allows us to understand them more fully so that we can evaluate what kind of investment is needed to integrate them and, ultimately, begin repairing these new technology components in our facilities. From there, we can foster plans to continue our ability to support existing technologies whilst being prepared for future ones.

► **What recent advances or process improvements have you introduced in the maintenance and overhaul of landing gear, wheels and brakes that have had the biggest impact on turnaround times or reliability?**

Not only are we invested in cultivating a breadth of capabilities at AMETEK MRO, but we are also dedicated to increasing the efficiency and speed of our operations. We run regular Lean Academy events in every single shop to ensure our processes are aligned with our commitment to increase our existing capabilities. What is more, recent advancements have been introduced to our maintenance of landing gear, wheels and brakes, which have considerably improved reliability and turnaround times.

Process automation has had the largest impact, particularly for wheel operations. Stripping a wheel, for



3

instance, is mostly a manual process, but we have introduced an automatic bleed blasting machine. Thanks to this, we have been able to reduce the time needed to strip a wheel by an impressive 50%.

► **How is AMETEK MRO integrating sensor technology or predictive insights into its landing gear, wheels and brakes services to move customers away from purely scheduled maintenance?**

MAGELLAN
AVIATION GROUP

WITH 25 YEARS OF PROVEN EXPERTISE, MAGELLAN AVIATION GROUP IS YOUR TRUSTED PARTNER IN THE AVIATION AFTERMARKET.

- SPECIALIZING IN USM SALES, ENGINE LEASING & TRADING, AND ASSET MANAGEMENT SOLUTIONS
- SUPPORTING AIRLINES, LESSORS AND MROS WITH TAILORED PROGRAMS
- BACKED BY A GLOBAL NETWORK, SUPPORTED BY MARUBENI GROUP, ENSURING TIMELEY AND ECONOMICAL RESULTS

ATTENDING MRO EUROPE? STOP BY BOOTH 3931 AND MEET OUR TEAM!

25
Years
OF EXCELLENCE IN AVIATION





“AMETEK MRO businesses have added more resources and inventory to support scheduled and unscheduled events”

Although the data needed to support predictive programme technology such as sensors is often the property of OEMs or airlines, AMETEK MRO is capable of supporting predictive policies. By continuing to build trustworthy and lasting relationships with customers, we can start contributing solutions to OEMs and airlines. Such solutions can include, for instance, sending components when needed and not when scheduled, optimising cost and increasing reliability.

► Given recent supply chain pressures, what steps has AMETEK taken to ensure customers have continuity of service and parts availability for such critical components?

To support our customers and mitigate against supply chain shortages which are continuing to impact turnaround times (TATs), AMETEK MRO businesses have added more resources and inventory to support scheduled and unscheduled events. This of course requires investment and careful planning to

balance our inventory without holding unnecessary stock of expensive parts.

At AMETEK MRO, we have gone beyond this policy through the development of strategic partnerships with OEM component suppliers to hold inventory on site which we can use as and when needed and to adjust resources to specific cycles (e.g. summer season for wheels and brakes due to more removals), per our internal data, and customers' own forecasts.

► Looking ahead to the next decade, what disruptive trends – whether regulatory, technological or operational – do you think will most reshape the landing gear, wheels and brakes sector, and how is AMETEK preparing to respond?

Close working relationships with OEMs will prove paramount in the coming decade. We are observing crucial current trends including aircraft electrification and fully integrated landing gear systems, which combine wheels,

◀ AMETEK MRO has approximately 800 employees across its businesses

brakes, shock absorbers and retraction mechanisms to simplify maintenance and improve system efficiency. These will have an impact on the landing gear, wheels and brakes sector, as technicians will have to develop new skills to coincide with the introduction of these new technologies. At AMETEK MRO, we will form strategic partnerships to allow us to address these capabilities for our customers.

What is more, we will have to integrate digitalisation in our processes, as it will remove the variability associated with the interpretation of written information as well as fast-track the development of work instructions, training material and Standard Operating Procedures (SOPs). Digitalisation will also include video streaming of key processes and test set-ups, which will increase reliability and improve turnaround time.

Predictive maintenance policies, whether at an early stage or already in place, will become the industry standard with airlines and operators. Third party MROs, therefore, will have to adapt to this standard. Again, partnering with OEMs will be key if we are to support our customers through this transition. AMETEK MRO is already exploring various technology options, with targets to fully implement a predictive maintenance tool within the next couple of years. ●

ABOUT AMETEK MRO...

➤ AMETEK MRO is a leading global provider of MRO services for commercial, regional, military and general aviation aircraft. The company services more than 40,000 aircraft components, with capabilities including avionics, fuel, heat transfer, landing gear, hydraulics, pneumatics, power, safety and medical, wheels and brakes, and more. It has 12 locations around the world and approximately 800 employees across its businesses: AEM, Aeromedic, Ameron, Avtech, AMETEK Asia, Antavia, B&S Aircraft, Drake Air, Muirhead Avionics and Southern Aeroparts.

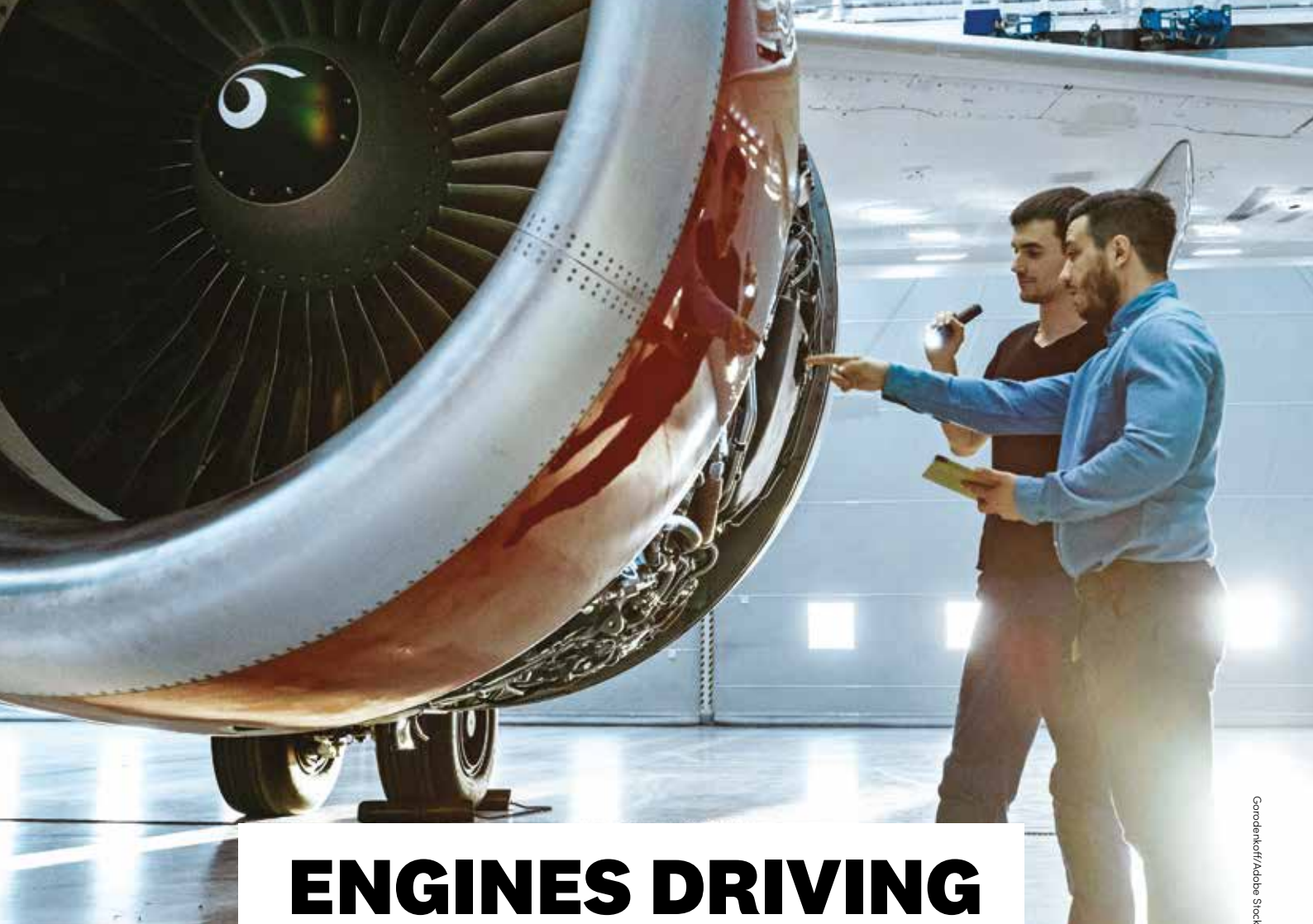
Hola Hi MRO Europe

It's time to meet your leading 'State-of-the-Art'
provider of MRO services at the #MROEurope London!

Find us at:
Booth #2131



iberiamaintenance.com



Gordenkoff/Adobe Stock

ENGINES DRIVING PROGRESS

Mario Pierobon learns from engine MRO experts about the new approaches to maintenance planning and supplier relationships

The aviation industry's post-pandemic recovery has created new challenges for engine MRO operations. With rising aircraft utilisation and years of deferred maintenance, the industry faces critical parts shortages, extended turnaround times and complex repair requirements driven by advanced materials in newer engines.

Critical parts shortages and supply chain

For the CFM56 engine, the biggest challenge today is the shortage of HPT blades, which is causing delays in maintenance and repair shifts at plants around the world, according to David Hobbs, vice president of sales at AerFin. "On the V2500 SelectOne, operators are increasingly dependent on new base material due to the lack of USM supplies, as relatively few engines are being dismantled," he explains. "At the same time,

the number of workshop visits continues to increase. Major maintenance and repair facilities are now prioritising their own workload, limiting third-party repair capacity. This puts further pressure on specialised repair suppliers and inevitably extends overall delivery times."

At recent investor and 2Q earning conferences, Larry Culp, chief executive of GE Aerospace, pointed out that there is not a single bottleneck. "Many people wonder what the one thing is you need to solve," he said. "I wish there was just one, but there are a thousand, and they keep changing. We are now in a much stronger position on the ground. We have more than 500 dedicated people working directly with suppliers, large and small, who are critical to our ability to scale. Suppliers who once posed a major problem now meet their commitments 95% of the time, more than double their performance compared to just a year ago."

Engine lead times

Hobbs affirms that lead times are highly dependent on the scope of work. “Engines requiring lighter duty scopes experience fewer downtimes, but where a complete overhaul or core performance restoration is required, supply chain constraints for newly manufactured components are having a significant impact.”

He continues: “Typical lead times today for the CFM56 are 90 to 120 days for a complete overhaul and 45 days for light duty. For the V2500, they are 60 to 70 days for a complete overhaul and 45 days for light duty. For the PW4000, they’re 120 days for a complete overhaul and 60 days for light duty, with older platforms challenged by new component availability and limited USM supply.

“For the CF6, lead times are over 120 days for a complete overhaul and 60 days for light duty due to similar pressures to the PW4000. Finally, for the GTF PW1100, they are 260 to 365 days. By comparison, lead times prior to 2020 were typically around 60 days for CFM56 and V2500 engines and closer to 90 days for older platforms.”

According to Culp, materials supply from priority suppliers has increased 10% sequentially: “Stability has also continued to improve, with suppliers delivering over 95% of their committed volume, nearly double the figure at the beginning of last year. Take our largest MRO site in Celma, Brazil, which represents 25% of our global volume. Here, the CFM56 fan module was the main obstacle to achieving our lead time target. A cross-functional team used value stream mapping and implemented flow lines to reduce lead times by over 30%. Celma’s lead times for CFM56 are now under 80 days. Improvements like this are

“OUR RECENTLY IMPLEMENTED AI-BASED BLADE INSPECTION TOOL IS IMPROVING INSPECTION ACCURACY AND CONSISTENCY WHILE REDUCING INSPECTION TIMES BY APPROXIMATELY 50%”

Larry Culp, chief executive, GE Aerospace

bringing lead times to approximately 90 days for the GEnx and CFM56 at our largest shops. That said, we still have much work to do on our other platforms.”

Engine systems and repairability

Turbine components, combustors and fan blades made of composite materials are among the most complex to repair, Hobbs observes. “Advanced alloys, composites and coatings in new engines improve efficiency but limit repair options, pushing the industry toward OEM solutions and greater reliance on specialised technologies,” he says.

Culp affirms that since the beginning of 2025, more than 200 new repairs have been developed for LEAP, plus 1,000 repairs within the commercial engines business. “Our goal is to more than double the number of LEAP-specific repairs by 2028,” he explains. “For comparison, we developed nearly 3,000 repairs during the lifecycle of the GE90 programme and are targeting a similar number for LEAP upon maturity.

“Our recently implemented AI-based blade inspection tool is improving inspection accuracy and consistency while reducing inspection times by approximately 50%. Composite fan blades, a technology only GE Aerospace and our partners have in service today, are helping us ensure industry-leading starting reliability.”

Summing up

Recent engine MRO challenges have been driving innovation. Supplier partnerships, AI-driven inspections and advanced repair techniques are building a more resilient future in which the severe bottlenecks of recent years will be significantly absorbed. ●

80

At GE Aerospace’s largest MRO site in Celma, Brazil, lead times for CFM56 are now under 80 days



Cultura Altes/Adobe Stock

KEEPING MATURE ENGINES IN FLIGHT

Senior executives from CTS Engines tell *MRO Management* that the company is sharpening its focus on mature engines as MRO demand grows

Strategic growth and OEM partnerships

CTS Engines has undergone a remarkable transformation over the years, evolving from a specialist in light CF6 repairs into a full-service MRO provider with growing global reach.

"CTS Engines has long been a trusted name in CF6 engine support, originally operating as Complete Turbine Services with a focus on off-wing repairs and light maintenance for CF6 variants," explains chief executive Bill Kircher. "As the needs of our customers have grown, so have we – evolving into a full-service MRO under the CTS Engines brand, with full overhaul capabilities and in-house test operations."

Today, the company's mission, as Kircher puts it, is to be "the most trusted MRO partner for mature engines by focusing on operational excellence, unmatched customer service and targeted investments in technologies that extend engine life and value". That mission is underpinned by

"CTS Engines is carving out its space by offering stability where others are stepping away"

deep expertise in engines such as the CF6-50, CF6-80A, CF6-80C2, CF6-80E1, PW2000 and GP7200.

Guiding the company's expansion has been a leadership team intent on balancing agility with investment. "Despite our strong growth, we've maintained the agility of a lean organisation and a deep attentiveness to our customers," explains chief commercial officer Vesa Paukkeri. "These qualities have been essential in guiding the right investments in talent, infrastructure and strategic partnerships that fuel our continued success."

Since 2022, CTS Engines has added overhaul capabilities for a new engine type each year: the PW2000 in 2022, the CF6-80E1 in 2023, the GP7200 in 2024, and the F117 in 2025. Partnerships with OEMs have also been strengthened.

Paukkeri adds: "As OEMs increasingly shift focus to newer-generation engines, our ability to support mature fleets fills a critical gap – benefiting both our partners and the operators who still depend on these proven engines."

Technology-driven efficiencies

A key milestone has been the opening of CTS Engines' 216,000 sq ft purpose-built Coral Springs facility in Florida which chief operating officer Randy Mengel says has been a "game-changer". He explains: "It's designed for modern MRO



operations, with optimised workflows that reduce turnaround times and increase throughput."

The site consolidates multiple processes under one roof, improving quality control and customer visibility. Mengel adds that investment in next-generation technologies is enhancing productivity: "Tools such as our Blue Light Scanner and advanced AI applications, as well as engine monitoring software such as Avidex, enable faster, more reliable insights. These technologies allow our talented engineers and supply chain experts to focus their time on analysing critical data – not just collecting it – driving smarter decisions and stronger results for our customers."

Doubling down on the mature fleet

While many MRO providers are shifting resources to support newer engines such as the LEAP and GTF, CTS Engines is maintaining its emphasis on older platforms. "Demand for engines like the





“Guiding the company’s expansion has been a leadership team intent on balancing agility with investment”

CF6 remains strong, particularly among freighter operators, military operators, and carriers in secondary markets that depend on proven reliability and cost-effective solutions,” explains Paukkeri.

“As OEM and airline support shifts away from these legacy platforms, CTS Engines is stepping in to fill the gap. We offer deep technical expertise, flexible workscopes, and robust parts support – things that are becoming harder to find elsewhere,” Paukkeri adds. “Our focus on this segment is intentional and long-term, ensuring customers have a trusted partner for as long as these engines remain in service.”

Workforce challenges and solutions

Like the rest of the MRO industry, CTS Engines is grappling with workforce pressures. “One of the biggest shifts we’ve observed over the past decade is how quickly employees are willing to leave a good job for a small increase in hourly pay,” comments vice president of human resources, Cynthia Parrilla.

That trend intensified post-Covid-19, when attrition rose despite CTS Engines having retained its workforce throughout the pandemic. “We had to fundamentally rethink how we attract and retain talent,” Parrilla explains. “The advantage of being a more agile organisation is that we were able to quickly assess the situation and implement meaningful changes.”

Those measures included adjustments to compensation, PTO policies, training and benefits. Recruitment efforts have also been bolstered by on-site hiring events. “As a result, we’ve grown our employee population by more than 30% year-to-date and continue to build a strong, capable workforce for the future. We’ve also added internal resources focused on on-boarding, technical and leadership training,” Parrilla says.

Headwinds and opportunities

Despite industry growth, supply chain and labour issues remain pressing challenges. “Some engines were

supposed to be retired years ago, but their reliability has made them irreplaceable as new engine variants struggle to gain footing,” Kircher observes. “But with every challenge comes opportunity. Through resourceful planning and operational flexibility, we respond quickly, build strategic inventory and offer creative material solutions.”

Chief financial officer Brandon Singer adds that even CTS Engines’ growth has presented hurdles. “One of the biggest operational challenges during our recent period of accelerated growth has been maintaining engine deliveries while navigating a major facility transition,” he explains. “Managing these logistical constraints while meeting customer expectations demanded precise planning, operational agility and a deep commitment from our team.”

A sharpened focus

As the global engine MRO market continues to rebalance around mature and next-generation fleets, CTS Engines is carving out its space by offering stability where others are stepping away.

Kircher sums up: “We’re seeing growing demand to keep mature engines flying well into the future – which is exactly where we excel.” ●

1. L-R: chief commercial officer, Vesa Paukkeri; chief financial officer, Brandon Singer; vice president of human resources, Cynthia Parrilla; chief operating officer, Randy Mengel; chief executive, Bill Kircher

TACKLING THE TALENT CRUNCH

A fresh outlook from Boeing underscores the scale of aircraft technician shortages

Boeing's 2025 Pilot and Technician Outlook (PTO) released in July has once again underlined one of the aviation industry's most pressing challenges: how to secure and sustain the technical workforce needed to maintain a safe, efficient and expanding global fleet. The forecast projects demand for 710,000 new commercial aviation maintenance technicians over the next two decades – nearly a third of the 2.4 million aviation professionals required worldwide through 2044.

The figures are stark, but not surprising. For several years, labour shortages have been flagged as a looming constraint on airline growth and MRO capacity. The PTO confirms that demand will be driven primarily by the rapid expansion of single-aisle fleets – particularly as airlines across Asia-Pacific and Eurasia ramp up capacity – and compounded by the retirement of experienced technicians. Boeing estimates that two-thirds of new hires will be needed to replace retirees, with only a third tied directly to fleet growth.

From a regional perspective, Eurasia leads the demand curve with 165,000 technicians required, followed closely by China (131,000) and North America (123,000). Southeast Asia, South Asia and the Middle East also feature prominently, reflecting the shift of



“Partnerships between OEMs, airlines, independent MROs and training institutions will be essential”

global fleet growth eastward. Africa and Oceania, while representing smaller markets, still face acute challenges in sustaining the necessary training pipelines and retaining skilled personnel.

What is perhaps most significant in this year's outlook is the emphasis on training transformation. Boeing points to immersive technologies – including virtual, mixed and augmented reality – as central to reshaping the way technicians are taught and upskilled. These tools can accelerate the learning curve by allowing complex procedures to be practised safely and repeatedly in simulated environments, reducing dependency on scarce training assets and costly live aircraft.

For MRO providers, the implications are twofold. First, the shortage will not be solved purely by recruitment; retaining existing talent will be just as critical, requiring investment in career

development, flexible working models and digital tools that make the job more efficient and less administratively burdensome. Second, partnerships between OEMs, airlines, independent MROs and training institutions will be essential. No single stakeholder can realistically scale the training infrastructure required, particularly in high-growth regions.

The PTO serves as both a warning and a call to action. Without decisive steps to modernise training and make technical careers more attractive, the industry risks a bottleneck that could undermine fleet availability and safety standards. Yet with targeted investment in people and technology, the challenge also presents an opportunity: to elevate the status of aviation maintenance as a career path that is digitally enabled, globally mobile and critical to the industry's long-term resilience. ●

2.4m

The Boeing PTO projects demand for 710,000 new commercial aviation maintenance technicians over the next two decades – nearly a third of the 2.4 million aviation professionals required worldwide through 2044

THE AEROVISION ADVANTAGE

CUSTOMIZABLE SOLUTIONS • CUSTOMER FOCUSED • COST EFFECTIVE

What We Do:

AeroVision is a leading inventory solutions provider for ERJ, EJET, CRJ, and Legacy operators. We offer airframe components, engines, engine parts, APUs, and landing gear for these platforms. AeroVision serves a global customer base with a wide range of services, including Outright Sales, Exchange Sales, Leasing, Cost per Hour (CPH) programs, On-Site Stock, Repair Management, Consignment, Remarketing, and Redistribution.

Why We Do It:

We partner with airlines, MROs, and lessors to deliver flexible, cost-effective solutions that minimize downtime, support fleet transitions, and address real-world operational challenges. Our customer-first approach means we listen, adapt, and customize every solution - keeping your fleet flying and your operations running smoothly.

Assets Available For Sale:

APUs and Landing Gear available for ERJ135/145 and ERJ170/190 platforms.

CONNECT WITH OUR TEAM AT MRO EUROPE!



+1-231-799-9000
INFO@AEROVI.COM
AEROVI.COM



PAM APAC MAKES DEBUT

The Asia-Pacific aviation community gathered in Singapore this September for the first-ever APAC edition of the Predictive Aircraft Maintenance (PAM) conference

Hosted by *MRO Management/Aviation Business News (ABN)* at the iconic Marina Bay Sands convention centre, the event brought together airlines, OEMs, MROs and technology innovators to explore how predictive tools are reshaping aircraft health management across one of the world's fastest-growing aviation regions.

The PAM Singapore 2025 agenda provided delegates with keynote presentations, panel debates, case studies and networking opportunities.

Across every session, one theme was clear: predictive maintenance is no longer a future promise – it is becoming a present reality, but its adoption still demands integration, collaboration and trust.

Market potential

Opening the conference, Richard Brown, managing director of NAVEO Consultancy and PAM Chairman, reminded delegates why Singapore was the right place to launch the APAC edition: "It makes sense to bring the conference to Singapore. The fleet in the region is huge. APAC has orders/options for over 5,400 aircraft, and China has an orderbook for 2,400. Combined, the two regions represent an impressive 37% of the current new aircraft orderbook. This provides tremendous opportunities to leverage digital tools to reduce unscheduled maintenance and turn unplanned and costly aircraft maintenance into something predictable, planned and manageable."



2



1. PAM Chairman, Richard Brown
2. Korean Air's Jonghoon Oh and Jaemin Kim
3. STRADE's Job Arnold
- 4 & 5. Day One evening networking

“Delegates heard from airlines leading the charge, suppliers refining their strategies and researchers introducing bold new ideas”

That sense of scale underpinned discussions throughout the event. With aircraft deliveries accelerating, the pressure is on to build maintenance capabilities that match demand and deliver efficiency gains.

From IT project to industry transformation

The first keynote came from Nicholas Tan, vice president of the Singapore Institute of Aerospace Engineers (SIAE), who distilled the essence of predictive maintenance into what he called “The Three Pillars of Predictive Maintenance Success.”

Tan urged delegates to look beyond technology and address the integration challenge: “Predictive maintenance is not an IT project. It is a fundamental transformation of aviation. Let’s foster this ecosystem and develop the talent required for aviation’s future. Let’s build this future, together.”

His message set the tone: the real obstacles are not sensors or software, but workflows, processes and people.

Case studies and use cases

Several sessions on day one dug deeper into practical applications. David Harper and Dermot O’Hara of GE Aerospace explained how AI is enabling 24/7 monitoring of engine conditions, how diagnostic engineers work directly with airlines, and how vision-enabled borescope inspection is reducing inspection burdens.

Mahmoud El Sawah, founder and chief executive of AirNxt, challenged the industry to simplify its approach: “Living digital twins can rebuild trust, cut through operational noise and prove that in aviation’s next flight plan, simplicity wins.”

3



4



5





1

Airlines share their journeys

A highlight of day one was a panel exploring how Asia-Pacific airlines are implementing predictive maintenance in real-world operations.

For Singapore Airlines, collaboration and standards are central. Joan Ng, data analytics and digitalisation executive emphasised: “As an airline we have our own predictive maintenance needs, so collaboration industry-wide in terms of understanding standards is crucial. Full flight data and using Skywise is our focus, making sure we can capture as much data as possible across as many aircraft components as possible. Working closely with our partners helps us keep on top of our goals in predictive maintenance. We use an in-house developed AI application to support overall maintenance activities across several areas, and we expect to expand this use.”

Dr Nithia Kumar, senior manager maintenance – airline engineering at Malaysia Airlines highlighted the data-rich nature of new aircraft types: “New generation aircraft are data-rich, so it is important for predictive maintenance to enter the industry to drive efficiency

1. Delegates in the conference room
2. ANA's Sadanari Shigetomi
3. AirNXT's Mahmoud El Sawah
4. Nicolas Detalle from ASRC
5. Tsubasa Yamada from Peach Aviation
6. Nicholas Tan from SIAE
7. Teledyne's Bobby Burkett
8. The 'Engine Health Unlocked' panel discussion
9. Day One evening networking

and keep aircraft flying. Our focus is leveraging the data from our sensors, so we need to understand how the industry can really help us harness that insight.”

Mark Mazarek, senior manager at Boeing pointed to the wider ecosystem: “The more airlines and aircraft are entering the region, the more scope and potential there is to push predictive maintenance forward. Supply chain and parts providers need to incorporate new technology too, to ensure they keep up with the efficiency the industry is seeing. Predictive maintenance is all about sharing developments and how the journey is for different airlines – the



2



3



4



5



6



7



more collaboration the better. I am very optimistic about the use of AI in the industry, especially with data cleansing. There are a lot of opportunities, and we are looking at more ways we can use AI to open up more efficiencies for airlines.”

From theory to practice

Korean Air provided one of the most detailed case studies. Jaemin Kim and Jonghoon Oh described how the airline has evolved from theory to a fully operational in-house predictive maintenance programme. Its “Smart MRO” strategy, they explained, is built on dedicated teams, data access and collaboration with OEMs and airlines.

Similarly, All Nippon Airways’ (ANA) Sadanari Shigetomi reflected on two decades of development at the airline: “The shift towards predictive maintenance has been supported by big improvements, both in the volume and speed of available flight data.”



8



9

PREDICTIVE AIRCRAFT MAINTENANCE CONFERENCE

APAC | SINGAPORE

SEPTEMBER 15 – 16 2025



10. A panel discussion on how better data sharing can improve forecasting, mitigate AOG risk and strengthen lifecycle planning from end to end

Data that once took three days to retrieve is now available within an hour, with up to 3,000 parameters. Shigetomi stressed: “The key advantage of predictive maintenance is operational speed. While improving hardware reliability is, of course, essential for airlines, we also believe it is equally important to fully leverage the advantage of speed offered by predictive maintenance.”

Looking ahead, ANA will expand its use of digital twins and focus on model explainability, actionable alerts and effective resource allocation.

Supply chains and smarter sourcing

The supply chain challenge came into sharp focus with Job Arnold, co-founder and chief executive of STRADE, who urged aviation to look beyond traditional approaches: “Take a page out of the Airbnb or Uber book... foresight alone is

“Across every session, one theme was clear: predictive maintenance is no longer a future promise – it is becoming a present reality”

EFW AFTERMARKET SOLUTIONS. FITTING YOUR NEEDS.

Contact: aftermarket.solutions@efw.aero www.efw.aero

EFW
A company of ST Engineering and Airbus

EVENT REVIEW

1. Lufthansa Technik and Peach Aviation presented about the airline's success with AVIATAR
2. Singapore Airlines and Malaysia Airlines discussed their predictive maintenance journeys during a panel



not enough to keep your aircraft flying. In the end it comes down to the execution.”

He warned against hoarding and stockpiling, calling for greater transparency: “I strongly believe that what this industry needs is that we circulate, that we connect, that we share data, not that we protect and... hold on to our own data. You need to give and then you can take.”

His mission, he said, was to deliver: “Real parts, real prices, in real time.”

Engines, records and inspections

Day one also featured a panel on engine health monitoring with representatives from GE Aerospace, elfc, and ANA, moderated by Richard Brown. With tighter schedules and rising operational demands, the panel reinforced why predictive maintenance is critical for engine reliability.

Other highlights of the first day included Jeff Smith of Parker Aerospace on digitising LEAP fuel nozzles; Anthony Wilkinson of Gamit on ROAM and using historic data to forecast future events; and Dave Purfurst of Vervon on AI-powered fleet management.

The message was clear: data is valuable only when transformed into actionable insight.

Day Two: A new philosophy

The second day opened with a powerful keynote from Nicolas Detalle, principal

research fellow and project lead at the Aviation Services Research Centre (ASRC), who said its work would “change the entire mindset of the industry.”

Founded by Boeing and Hong Kong Polytechnic University, the centre aims to “bridge the gap” between academic research and industrial knowledge to deliver world-leading aviation solutions. “We want to find the defects faster, understand the degradation better, and all this while controlling costs,” Detalle said.

Detalle outlined three projects at the heart of ASRC’s research, including inspection drones with hyperspectral imaging, spectroscopy for coating degradation, and AI-powered forecasting.

“We get hyperspectral drones which can fly around the aircraft and gather data on surface defects,” he explained. “And this gives us deeper eyes. Then we have a digital twin, which gives us a unified memory, and AI finally gives us a predictive brain.”

Together, these tools form “a new ecosystem... smarter, faster and more reliable.”

Teardowns and parts demand

With aircraft staying in service longer, demand for used serviceable material (USM) is growing. A panel featuring Tony Ramage, director – origination and trading (APAC) at EirTrade Aviation, Job Arnold from STRADE and Mahmoud El Sawah from AirNxt. The panel explored how market players are refining sourcing strategies to meet demand while managing lead times and capacity bottlenecks.

Collaboration in action

Other standout sessions included: Lufthansa Technik and Peach Aviation

detailing Aviatar’s Predictive Health Analytics deployment; Airbus and Jetstar demonstrating how Fleet Performance+ anticipates disruptions and prevents AOG events; Collins Aerospace showing how automation with human oversight builds trust; and Teledyne Aerospace Electronics illustrating how legacy data can be unlocked through IoT and edge computing.

The conference closed with a panel moderated by Uma Shangery Aruldass, continuing airworthiness manager at Asia Jet, with Micheál Armstrong, founder and chief executive of Armac Systems, Justin Spaulding, president of The 145, and Tom Vincent, managing director of Asia Pacific Aircraft Storage.

The panel discussed how predictive maintenance intersects with inventory, storage, and lifecycle management. From predictive inventory planning to integrated storage models, the panel argued that data sharing and repair analytics are key to mitigating AOG risk and ensuring resilience.

Looking ahead

The inaugural PAM Singapore achieved what it set out to do: spark dialogue, share knowledge, and demonstrate that predictive maintenance is no longer experimental but essential.

Delegates heard from airlines leading the charge, suppliers refining their strategies, and researchers introducing bold new ideas.

MRO Management and *ABN* would like to thank all the sponsors, exhibitors, speakers and delegates for making PAM Singapore 2025 such a huge success.

We look forward to welcoming back the industry to another edition of PAM APAC in 2026 – more information on the next event will be shared very soon. ●

AMOS. AGAIN.



“This collaboration reflects our commitment to adopting advanced technology solutions and solidifying Avia Solutions Group’s position as a leading company in the aviation industry. It marks a significant step towards enhanced fleet management and operational excellence.”

says Aviation Systems Architect & Project Manager at Avia Solutions Group.

Avion Express and SmartLynx of the Avia Solutions Group (ASG) take off with AMOS.

AMOS represents a transformational leap in operational effectiveness and fleet optimisation.

This strategic integration fosters data transparency, group-wide collaboration, and sets a new benchmark in digital transformation for ASG.

The integration not only streamlines processes but also unlocks significant cost savings and efficiency gains.



ARTIFICIALLY INTELLIGENT OR NATURALLY STUPID?

Generative AI could be transformative for cabin MRO, but is cabin MRO ready? **Joanna Bailey** reports

Artificial intelligence (AI) is undergoing a step change, both in terms of its capabilities and its importance to MRO. While AI has been used in aerospace for years, its newest iteration, generative AI, brings tantalising promise of revolutionary change. In MRO, the question is no longer whether to use AI, but rather how and where should it be put into service.

Airbus has been leading the charge into generative AI, first setting up a working group in 2023 to establish the benefits of the technology. Within a year, more than 600 use cases had been

identified, from recruitment tools to risk analysis, contract assessment to engineering assistants.

“While it is unlikely that GenAI will be able to design future Airbus products from scratch, its ability to assist humans by enabling them to better manage complex and technical documents is proving promising,” says Fabrice Valentin, head of AI and advanced analytics at Airbus.

Experiments are ongoing, and widespread adoption will take time. Nevertheless, the benefit of being able to check in an instant, using natural language, which tool to use for a specific operation, cannot be overlooked.

Enabling specialists

“Maintenance engineers and technicians will remain in high demand – AI is not going to replace people in this sector,” says Jainita Hogervorst, director of aviation consultancy Aerviva. “Instead, airlines and MRO companies see AI as an important tool in enabling their specialists to do more.”

The role played by specialists is a key concern. A 2024 Pipeline Report by the Aviation Technician Education Council projects a 20% shortfall in maintenance techs by 2028 – in part caused by an ageing workforce. Boeing projects a requirement for 716,000 new maintenance technicians in the next two decades.

“WHILE IT IS UNLIKELY THAT GEN AI WILL BE ABLE TO DESIGN FUTURE AIRBUS PRODUCTS FROM SCRATCH, ITS ABILITY TO ASSIST HUMANS IS PROVING PROMISING”



20%

A 2024 Pipeline Report by the Aviation Technician Education Council projects a 20% shortfall in maintenance techs by 2028 – in part caused by an ageing workforce

Capacity crunches brought about from a combination of Covid, shortages of skilled technicians and hiccups in the supply chain have been exacerbated by airlines holding onto older aircraft for longer. As new aircraft remain slow to deliver, retirement rates fell from 2.2% in 2022 to a historic low of 0.4% in 2024.

The challenge is not anticipated to normalise before 2027, so airlines are making the most of the aircraft they have. Several multi-million (or in some cases, multi-billion) dollar projects have been announced to haul these old aircraft's cabins into the modern era, adding to the demand for already-stretched cabin MRO providers.

Generative AI is widely being touted as a potential solution to the problem. Unlike traditional AI, which is excellent at analysing data and making predictions, generative AI focuses on creating new data and content based on learned patterns.

The limits of AI

The problem with AI is it needs to be trained, so a solution needs to exist or at least be logically solvable. When it comes to Emirates' \$5 billion refurbishment of more than 220 A380s and 777s – the biggest cabin MRO project the industry has ever seen – there just wasn't the information to give to AI.

“If you were to express the project in a mathematical form, it would probably look like the most frightening, the most intimidating formula ever you've ever seen,” says Ahmed Safa, head of engineering and MRO, Emirates Group.

Safa explains that, for a project as big as Emirates' A380 refurbishment, the only way to get to grips with the size of the task was trial and error. Using a grounded A380, the team trialled every activity that would take place during the retrofit, practising their segment over and over, perfecting the task ahead of the project launch.

“There was no playbook for this,” Safa says. “The A380 upgrade takes 33,000 man hours, squeezed into the small space of a fuselage, and it's done in 21 days. No AI was ever going to give you a solution for that.”

“There's an old adage that sometimes progress complicates a simple process,” he adds. “For this project, it was not AI that was going to be the source of our inspiration or help. It was HI. It was human intelligence.”

Is Cabin MRO ready?

While AI might not be right for Emirates' huge project, other companies are more positive about its potential. Several are figuring out how to integrate AI into their daily operations, while others are already developing tools to make cabin maintenance easier.

GE Aerospace revealed a partnership with Microsoft in late 2024 to launch a generative AI platform. Available to all 52,000 employees at the company, AI Wingmate gives access to a suite of generative AI capabilities, in a bid to boost efficiency.

“Generative AI is changing the way we all work, enabling us to be more productive with our daily work tasks than ever before, says David Burns, chief



▲ Airlines are hauling old aircraft cabins into the modern era with extensive refits

information officer at GE Aerospace. “Ultimately, this will strengthen our ability to help the aerospace industry meet our objectives of enhanced safety and sustainability while reducing supply chain delays.”

Elsewhere, a new AI-based tool is in development at Diehl Aviation that promises to simplify aircraft cabin inspections and reporting. Rather than laborious, error-prone handwritten records or complex electronic logbooks, a simple photo and checkbox interface will generate a written report, which the user can check before submitting.

As a use case, Lufthansa Technik is a perfect example of how large language models (LLM) can be used to take some of the busy work off technician's hands. By giving AI access to vast amounts of data, Lufthansa Technik hopes it will autonomously solve problems that would take engineers many hours of research.

Air New Zealand has used AI to analyse passenger food preferences from more than 30,000 photographs of collected meal trays. Collins is developing a connected galley with AI and big data that can communicate maintenance issues directly to engineers.

Over the in US, Textron Aviation has built and deployed an AI assistant

that helps frontline technicians quickly parse 60,000 pages of maintenance documentation for fast access to technical maintenance instructions. The company says the system, known as TAMI, has significantly reduced the time it takes to troubleshoot issues and improved workforce training.

Air-France KLM is sharing reams of data with Google Cloud's AI solution to analyse passenger preferences and travel patterns and to predict when maintenance is required.

Many more examples of pioneering AI projects can be discussed, but these trailblazers are not the majority. In fact, some airlines and MROs are far from being ready to embrace AI.

According to a recent whitepaper from McKinsey analysts, “Many airlines and MROs are still in the process of migrating from legacy systems and use paper or PDF-based maintenance records in their interactions with third party vendors. Addressing this technology deficit and ‘dirty-fingerprint’ recordkeeping is a significant hurdle to unlocking the potential of gen AI.”

Virtual reality

With over a million seats in service, Safran relies on cutting edge technology



60,000

Textron Aviation has built and deployed an AI assistant that helps frontline technicians quickly parse 60,000 pages of maintenance documentation for fast access to technical maintenance instructions

to plan cabin refurbishments, but it stops short of using AI specifically. “As well as 3D modelling, we are also using VR for our customers to step inside and visualise the possibilities for customisation,” explains Etienne Helfer Aubrac, vice president sales and marketing at Safran Seats.

For Safran, having a deep, granular understanding of the product lifecycle is essential. Predictive maintenance allows the company to proactively propose refurbishment solutions that suit an airline's maintenance philosophy.

“The cabin refurbishment market demands low turnaround times, a strong relationship with the airline and a thorough experience of the product,” Aubrac says. “We are relying more and more on digital tools to optimise each step of the process, from market needs anticipation to supply chain and repair management.”

Widespread adoption of generative AI is sure to take some time, and may be more difficult to implement in aerospace than other industries due to its tight regulation. Moreover, cabin MRO, with all its complex and variable components, has been relatively slow to embrace AI compared with how it is being used in engines, avionics and other aerospace systems.

Nevertheless, the opportunities for AI to mitigate the ongoing capacity strains are clear. It will take a few brave souls to pave the way for the rest of the industry, but the path is already being laid. ●

“BY GIVING AI ACCESS TO VAST AMOUNTS OF DATA, LUFTHANSA TECHNIK HOPES IT WILL AUTONOMOUSLY SOLVE PROBLEMS THAT WOULD TAKE ENGINEERS MANY HOURS OF RESEARCH”

This article was first published in Aircraft Cabin Management June/July 2025.



Keeping airlines flying, far and wide
Your trusted partner in aviation parts & support

GET IN TOUCH TODAY

+359 2434 9130

aeropb@aeropb.com

At Aero PB, we supply top-quality parts, chemicals, tools, and ground support equipment for commercial aircraft and helicopters — fast.
Whether you're facing AOG or a critical deadline, our global team is ready to respond with speed, precision, and care.

WHAT WE OFFER

- Parts certified to FAA, EASA, CAAC, SCAA & OEM standards.
- ISO 9001:2015 quality assured.
- Logistics centers in Europe, USA and UK.



CERTIFIED. TRUSTED. READY

For more information visit **www.aeropb.com**

THE ART OF PRECISION. THE SCIENCE OF THRUST.

WHERE CRAFTSMANSHIP, TECHNOLOGY, AND PASSION COME TOGETHER
TO REDEFINE PERFORMANCE.

LEVERAGING DECADES OF EXPERIENCE, ADVANCED TECHNOLOGY &
AN UNCOMPROMISING EYE FOR DETAIL.

FROM LEGACY FLEETS TO GOVERNMENT PROGRAMS, WE DELIVER
WORLD-CLASS MRO SOLUTIONS WITH TOP TURNAROUND TIMES,

COMMERCIAL ENGINES

CF6-50 / CF6-80A / CF6-80C2 / CF6-80E1 / GP7200 / PW2000 / PW4000

MILITARY ENGINES

F117



FIND OUT HOW CTS CAN HELP YOU REDUCE
DOWNTIME AND EXTEND ENGINE LIFE.

 CTSENGINES.COM
 SALES@CTSENGINES.COM



CTS ENGINES

Fix planes faster

Ahead of this year's Predictive Aircraft Maintenance (PAM) Conference in Dublin in November, *MRO Management* asked **Sean Bushkov** from event sponsor Aermetric for his thoughts on the landscape of predictive maintenance



“
Our platform is easily customisable, adapting seamlessly to legacy systems
”

SEAN BUSHKOV

chief technology officer,
Aermetric

► **From your perspective, what are the biggest challenges or inefficiencies in how predictive maintenance is currently implemented across the industry?**

Airlines today suffer from fragmented data ecosystems that are often inaccessible and inaccurate. This undermines usability and results in weak predictive insights. The challenge is compounded by a lack of tools to properly leverage processed information. Even when data is aggregated, operators frequently struggle to extract actionable insights because solutions are not designed with the maintainer or engineer in mind. Without integrated, accurate data and effective tools to act on it, predictive maintenance remains limited in impact.

► **How does Aermetric's technology or approach aim to address these gaps – and what makes it different from other innovations on the market?**

Aermetric brings fragmented data together by aggregating all sources into a single platform, ensuring accuracy and fidelity. On that foundation, we deliver the 'everything app' for aircraft maintenance that combines ATA coding, reliability tools, chronic tracking, health monitoring and predictive insights in one intuitive, end-user focused interface. Built by aircraft operators for aircraft operators, Aermetric understands the realities of maintenance and reliability, which allows us to deploy the analytics that teams actually need.

▼ Aermetric's platform is customisable to meet the unique requirements of different operators





“We see our role as enabling airlines to move confidently from fragmented, reactive maintenance to a unified, predictive ecosystem”

► **Data quality and integration are often cited as key barriers in predictive maintenance. How is Aermetric tackling these issues, particularly when working with legacy systems or disparate data sources?**

Aermetric brings deep experience in data cleansing, both commercially and for the United States Air Force, where we have consistently excelled at transforming raw, inconsistent inputs into reliable datasets. We combine multiple data sources to fill the gaps when information is incomplete, for

▼ Alaska Airlines uses Aermetric's platform



example pairing ACMS parameters with log page removal data to create a more accurate picture of aircraft health.

To simplify integration, Aermetric provides prebuilt data frames for all major maintenance information systems, aircraft parsing reports and technical operations tools. And because every operator has unique needs, our platform is easily customisable, adapting seamlessly to legacy systems as well as modern environments.

► **Looking ahead, how do you see predictive maintenance evolving over the next three to five years – and what role do you envision Aermetric playing in that future landscape?**

In the coming years, artificial intelligence (AI) will play a critical role in how engineers and maintainers respond to problems. While the underlying aircraft data may not change significantly, the ability to learn from historical records will accelerate troubleshooting, identify the right parts more quickly, and even suggest routing strategies to ensure reliability targets are met.

◀ American low-cost airline jetBlue is one of Aermetric's customers

Aermetric is uniquely positioned to lead this transition. Our experience across commercial airlines and the United States Air Force, paired with our proven expertise in NLP, ML and AI, allows us to provide operators with practical predictive tools today while building the next generation of reliable AI solutions.

We see our role as enabling airlines to move confidently from fragmented, reactive maintenance to a unified, predictive ecosystem that improves efficiency, reliability and fleet readiness. ●



On November 11-12, *MRO Management's* Predictive Aircraft Maintenance (PAM) Conference returns to Dublin where leading airlines, OEMs, MRO specialists, data experts and technology providers will come together to explore how innovation is reshaping and streamlining aircraft maintenance.

Thank you to our Start Up Sponsor, Aermetric, for supporting PAM 2025.



For more information and how to register to attend, scan the QR code above or visit predictiveaircraftmaintenance.com



AJW[®]

Complex MRO vendor network?

We are your one
stop shop for repair
excellence

Visit us at
MRO Europe
Stand 1511

AVIATION WEEK
MRO
EUROPE

AJW Group is the world-leading independent component parts, repair, lease, engine, flight hour programme, and supply chain solutions integrator, transforming efficiency in commercial, business and defence aviation.

With hubs and offices on every continent - including AJW Technique, a state-of-the-art component MRO facility in Montreal - nose to tail, we have you covered.

ajw-group.com

REGIONAL VS. GLOBAL SOURCING

Paul Rice from PDQ Airspares on finding the right balance in a fragmented market

Few MRO leaders would deny that supply chain stability has eroded compared to a decade ago. Trade friction, bottlenecks and extended lead times have become constant factors in their daily operations. Rising geopolitical tensions and shifts in trade policy are accelerating the move toward regionalisation, while higher transportation and energy costs are reshaping how material flows across borders. With disruption unavoidable, the real test is whether a sourcing strategy can absorb it.

Since coming out of the pandemic, supply chains have improved, but the experience exposed vulnerabilities that remain in play. The MROs that weather the challenges most effectively today are those supported by partners with the scale and flexibility to keep materials moving.



“Success requires access to both regional and global channels, working with partners that improve visibility across the pipeline”

PAUL RICE

group managing
director, PDQ Airspares

For example, regional sourcing helps shorten the chain between supplier and hangar, often making the difference between days and weeks of downtime. MROs with local options tend to recover faster when global channels slow down. Yet advanced avionics, composites and other high-reliability components remain concentrated in global hubs. Local networks cannot always replicate those capabilities and limiting access to global channels risks both innovation and scale.

Success requires access to both regional and global channels, working

with partners that improve visibility across the pipeline and know when to lean one way or the other.

Just as important, those partners need the global reach and local support to seamlessly transition between the two. But even with that balance, availability is never guaranteed.

That's when it becomes crucial to align with partners that can act on MRO forecasts by pre-buying materials, building buffer stock, or positioning consignment inventory directly in a customer's facility. We can typically build up a three- to four-month buffer of stock, so even if some supply chain issues are experienced, they've still got sufficient stock to maintain operations. Kitting then adds another layer of value, with parts prepared in advance for scheduled checks so they are delivered ready to use.

The days of predictable supply chains are behind us. Strategies built on stability alone will fall short. What matters now is flexibility – being able to pivot seamlessly between regional and global sources as disruptions unfold, supported by partners who can execute the planning and inventory strategies that make resilience possible.

In a market defined by constant change, MROs that adopt this balanced approach will not only safeguard reliability today but also position themselves for long-term advantage as the aftermarket continues to evolve. ●



For more information on PDQ Airspares, visit pdq-airspares.co.uk



The New Era of Secure Dataloading



Meet today's OEM requirements and regulatory guidance for secure dataloading

Fully compliant with ARINC 645-1 security standards, Teledyne's PMAT XS® and eADL XS™ new generation data loaders facilitate the distribution, onboard storage, and management of software parts and databases across an airline's operation. Built from the ground up with secure dataloading in mind, both loaders ensure the total integrity and authenticity of software parts during transfers, and protect against unauthorized access at every stage.





PREDICTIVE
AIRCRAFT
MAINTENANCE
2025

IN PARTNERSHIP WITH
MRO
Management

DUBLIN

11-12 NOVEMBER
THE GIBSON HOTEL



PAM Dublin is back for its 4th year after three sold-out shows. Bigger, better, and full of fresh insights. Join the conversation with top airlines, MROs, and OEMs this November at The Gibson Hotel.

SPONSORS & EXHIBITORS



www.predictiveaircraftmaintenance.com



PREDICTIVE AIRCRAFT MAINTENANCE 2025

PAM conference focuses on the latest advancements and strategies in the field of predictive maintenance for the aviation industry. It brings together experts, industry leaders, and innovators to discuss how predictive maintenance technologies — such as data analytics, machine learning, and artificial intelligence — can improve aircraft reliability, reduce operational costs, and enhance safety. The conference includes presentations, discussions, and networking events for professionals in aviation maintenance, technology, and engineering sectors.



Scan for info

“PAM is the leading event for staying at the forefront of predictive maintenance in aviation. It delivers real-world case studies, first-hand insights from seasoned practitioners, and valuable opportunities to connect with top experts in the field.”

Rob Stolk, Project Manager, AFI KLM E&M



“It was a pleasure to be able to speak at PAM. My team and I were super impressed with the production of the conference and the associated events and it proved to be very worth our time.”

Mike Roemer, Senior Manager, United Airlines

“PAM Dublin was an exceptional event, and I was honoured to present about aircraft health monitoring at SAS. Sharing insights on predictive maintenance alongside industry pioneers was inspiring. The focus on innovation and collaboration reinforced my belief in shaping the future of aviation safety and efficiency.”

Matias Bjerregaard, PAM Specialist, Scandinavian Airlines



PAM MIDDLE EAST 2026

DATES AND VENUE COMING SOON



EUROPE ACCENTUATES THE POSITIVE

Just what is the current state of the MRO sector in Europe, and how will it progress over the next couple of years? **Bernie Baldwin** discusses the scene with some key players

Holding steady

The airline industry in Europe has been relatively stable in 2025, with the only bankruptcy among passenger carriers being the short-lived Bees Airlines of Romania (March 30, 2024-February 01, 2025). Passenger traffic figures from IATA and ACI show low single-digit percentage increases.

One problem affecting airlines is the reduced rate of aircraft production resulting from supply chain issues. This has had a knock-on effect on the MRO industry, providing challenges for airline's own MRO departments and independent providers alike.

Eric Hoegen, director group sales at AMAC Aerospace, has been observing the market in Europe and assesses the current scenario. "Demand is still strong. Global fleet growth and high aircraft utilisation are keeping MROs full, but bottlenecks persist – especially on engines. Shop-visit capacity is tight and turnaround times (TATs) are far longer than pre-2020," he states, before outlining the positive and negative factors behind his remarks.

"The positive factors are: high utilisation plus aging narrowbodies are leading to more heavy checks delayed

new aircraft deliveries are keeping older aircraft in service longer, lifting aftermarket demand; and growing used serviceable material (USM) and teardown supply is helping to offset parts scarcity and cost."

Pressures and strains amidst strong demand

Hoegen continues: "The negative factors we see are: the engine reliability/recall hangover. PW1100G powder-metal issues and LEAP durability challenges have grounded aircraft and flooded shops, and TATs have stretched from around 45 days pre-Covid to between 210 and 270 days (sometimes longer) in many

cases; supply chain and labour shortages continue to constrain throughput and keep costs elevated; and inflationary pressure on labour and materials mean that many shops remain slot-constrained despite expansions."

When it comes to dealing with the challenges, Hoegen notes that MROs are proactively hunting for talents due to a shortage of qualified personnel. "Also, there is a focus of increasing the number of apprenticeships and new approaches to attracting and keep staff over the long term," he says.

Hoegen adds: "Elsewhere, slot management has become much stricter with a pure first-come, first-serve policy



◀ MTU Maintenance provides engine MRO services for various CFM56 engine variants ▶



1

and slot reservations being discussed with main clients over a year in advance.”

Arne Luxa, senior director sales, Europe, Africa & CIS for MTU Maintenance, has also been observing Europe’s aviation market. “Generally speaking, and according to the Boeing Market Outlook, the aviation market is seeing a strong growth rate globally of around 4.2% CAGR up to 2044. As the European market is mature, the growth rate here is expected to be a little lower, at around 3.1% CAGR,” he reports.

Luxa continues: “In such a growth environment, and especially with

postponed new deliveries and mature equipment being flown longer, there is strong demand for MRO services worldwide and shops remain full. The European MRO market, which is also mature and established, is no exception here. European engine MRO accounts for around 20% of all shop visits annually worldwide. So, it is a very competitive market, with a high number of shops from a wide variety of providers, from OEMs and airline shops to independents.

“To compete in this market, it is critical to offer outstanding technical expertise and to combat the high demand

and at times, long lead times, we believe it is also essential to be transparent in communication and proactive in fleet planning,” Luxa emphasises.

MTU Maintenance, of course, is a renowned MRO provider with more than 45 years and 25,000 shop visits of experience. “We pride ourselves on our customised approach and wide range of expertise,” Luxa notes.

“In particular, we are highly regarded for our fleet management expertise and technical insight, and offer excellent real-time analysis through our proprietary digital solutions suite, including myEFM for fleet management and myETM, our engine trend monitoring software.

“Our software combines fleet, technical and shop history data with market understanding and optimises planning scenarios through algorithms and artificial intelligence (AI). The result is highly detailed planning down to LLP (limited life parts) level. These scenarios are then assessed by our experts and

“WE EXPECT EUROPE TO REMAIN A HIGH DEMAND ENVIRONMENT BOTH IN THE NEAR AND LONG-TERM”

Arne Luxa, senior director sales, Europe, Africa and CIS, MTU Maintenance

discussed with customers to ensure informed decisions regarding planning and maintenance,” Luxa elaborates.

Another established MRO provider is SR Technics, whose vice president business development Europe, Vincent Metz, sees the European engine MRO market as strong and promising, but not without its challenges. “Demand for new-generation engines such as CFM’s LEAP is accelerating faster than expected, creating a unique opportunity for providers with the right capabilities to scale capacity and deepen their expertise,” he remarks. “At the same time, mature engine programmes remain robust, as many operators who had deferred shop visits are now returning to full MRO programmes, driven by a more stable outlook and the high cost of green-time solutions.

“On the supply side, the industry continues to face capacity constraints, shaped by post-Covid shortages in expertise, ongoing supply chain pressures, and limited availability of skilled personnel. In this environment, all major MRO providers are investing



2

1. A CFM56-7C engine
2. MTU Maintenance utilises its global network of facilities

Repair and Overhaul Specialists for Aircraft

Wheels & Brakes

- Industry Leading EASA / FAA Part 145 Wheel and Brake MRO Services
- Loans, exchanges, consignment & pooling
- Over 20 Years of Industry Service
- AS9110 Certified



**Rotable
Repairs**

**VSE
AVIATION**

SALES@ROTABLEREPAIRS.COM
WWW.ROTABLEREPAIRS.COM



▲ A GE90 jet engine

heavily in people, partnerships and infrastructure, and from SR Technics' perspective, the long-term outlook is clear: demand for engine MRO in Europe will continue to grow," Metz explains.

Supply chain challenges

Already highlighted, the supply chain has suffered a few years of disruption. How healthy it is now still causes concern for Metz. "At SR Technics, we believe the supply chain remains vulnerable. The underlying reasons for its instability are ongoing strong demand for new aircraft and engines, rising demand for MRO on new platforms, and continued demand for legacy engine support," he says. "On top of this come global factors such as tariffs that complicate the free flow of materials and increased military budgets competing for the same scarce resources."

Metz adds: "From our perspective, this vulnerable supply chain is not a temporary disruption, but a reality we will have to manage in the coming years. To adapt, we have redesigned our supply chain to maximise control and minimise the impact of disruptions on engine turnaround times. Key elements of this strategy include further expanding SR Technics' already extensive in-house repair capabilities and optimising our USM supply chain."

AMAC's Hoegen believes the supply chain situation has stabilised, but is not back to pre-Covid levels. "The disruption also led to industry consolidation with various OEM ownership changes that led to an overall change of market offering," he comments. "In the completion industry, the decrease in the number of suppliers of critical systems (such as

seats, CMS/OFE, window shades and so on) has increased lead times and prices."

Hoegen adds: "The supply chain has also been impacted heavily by geopolitical changes and sanctions where KYC (Know Your Customer) processes are cascaded throughout the entire supply chain, adding time and effort to MROs."

MTU's Luxa also believes the supply chain remains strained. "It is improving though, and USM demand – in particular on high volume and popular programmes such as the CFM56, V2500 and GE90 – is consistently high. USM is something we use extensively in our services as a way of reducing material costs for operators and we have been carrying out teardown services in-house for many years. It is also an area of the business that continues to grow," he reports.



“FROM SR TECHNICS’ PERSPECTIVE, THE LONG-TERM OUTLOOK IS CLEAR: DEMAND FOR ENGINE MRO IN EUROPE WILL CONTINUE TO GROW”

Vincent Metz, vice president business development Europe, SR Technics

“Further, we provide asset management services for owners who want to maximise asset value at the end of life and can tear down engines and remarket parts for them, purchase them for our own use, or provide a combination of both,” Luxa adds.

Outlook and trends

Having reviewed the current market, Luxa assesses the development of MRO market in Europe over the next two to three years. “We expect Europe to remain a high demand environment both in the near and long-term,” he predicts.

“At MTU, we are ramping up and adding capacity at nearly all sites worldwide,” he continues. “In Europe,

MTU Maintenance currently has three full MRO disassembly, assembly and overhaul sites, MTU Maintenance Berlin-Brandenburg, MTU Maintenance Hannover, EME Aero (a joint venture with Lufthansa Technik), as well as a dedicated component repair facility, MTU Maintenance Serbia. All of these are increasing capacity. MTU Maintenance Berlin-Brandenburg, for instance, is currently building an additional production hall as well as a training centre, and EME Aero just inaugurated its second test cell.”

SR Technics’ Metz has been looking at various forecasts for future demand in engine MRO. “The outlook clearly points to continued growth, driven

both by sustained demand for legacy platforms and by the expansion of the new engine business. Based on this, there is every reason to be optimistic,” he declares. “At the same time, history has shown that downturns in our industry rarely unfold gradually, but often arrive suddenly, triggered by major global ‘black swan’ events.”

Mets adds: “Considering today’s geopolitical climate, there are indeed reasons for caution. That is why SR Technics is focused on finding the right balance between supporting mature engines and investing in the new-generation engine business. At SR Technics, we maintain a five-year outlook for both engine groups – legacy

SIMPLICITY FOR THE WIN

WHEELS AND BRAKES IT’S THAT SIMPLE

MEET US AT
MRO EUROPE
BOOTH #1913

TPAEROSPACE.COM



and new – and involve airline and OEM partners early in the planning cycle to validate forecasts, align shop slots and secure material availability.”

According to Hoegen, AMAC foresees the market remaining strong over the coming years. Trends the company is seeing among MRO providers, particularly in terms of improved support programmes and capabilities, will be pivotal to achieving that forecast.

“Digital transformation is a trend that is adding new tools such as augmented reality, drone usage and predictive maintenance,” says Hoegen. “Also, of course, there is an overall move by politicians, regulators and authorities for sustainability and green practices in all parts of aviation, including MRO.”

As for increased capabilities, these are “constantly increased in accordance with customer’s requirements, through training, qualification and expansions,” he remarks. “Meanwhile, in view of the complexity of new aircraft, there is also a trend to tailoring the offering portfolio on particular types.”

MTU’s Luxa points to one trend that is going away. “As previously noted, the times of aggressive fleet growth are over. Nonetheless, we will see fleet modernisations, especially with the flag carriers. As such, all MROs are ramping up to cope with the rising demand for new engine MRO,” he comments. “At the same time, airlines have to find smart end of life strategies for the current generation types.”

“GLOBAL FLEET GROWTH AND HIGH AIRCRAFT UTILISATION ARE KEEPING MROS FULL, BUT BOTTLENECKS PERSIST – ESPECIALLY ON ENGINES”

Eric Hoegen, director group sales at AMAC Aerospace

◀ MROs are ramping up to cope with the rising demand for engine MRO

Luxa continues: “At MTU, we optimise solutions for our customers to avoid unnecessary spending. This includes all aspects of our services, from MRO, asset management and leasing solutions, on-site support, as well as our digital solutions such as myEFM and myETM. Through our engine fleet management, we can tailor our solutions to achieve optimised plans for our customers, generating the maximum value from all of their assets and ensuring minimised costs over the contractual period, and/or phase-out of the engines.”

Metz says that a common theme across engine MRO is the search for solutions to current challenges, including personnel shortages, supply chain vulnerabilities and the ramp-up of new engine capacity. “At the same time,” he adds, “uncertainty around future MRO needs and the limited availability of slots for new-generation engines are reshaping the traditional distribution of risk between OEMs, owners, operators and MRO providers, and with it their business models. New approaches that ensure predictable costs while safeguarding operational integrity for operators are still evolving, and we believe the industry will undergo significant changes as these models take shape.

“SR Technics combines the scale and in-house capabilities of a large MRO with the agility of a smaller player, which positions us uniquely to take over part of the load from larger shops,” Metz emphasises.

Summaries of many market reviews in recent times could be classed as ‘cautiously optimistic’. The current scenario, however, appears to be more positive than that, with solid growth expected and just the occasional dark cloud on the horizon. ●



We repair, you sell
– MRO to the world's leading
aviation suppliers.



The dependable wheel & brake MRO

worldaero.co.uk

MRO EUROPE LANDS IN LONDON

MRO Europe 2025 will open its doors to the industry in London on October 14-16

Taking place between October 14-16 at the Excel London, MRO Europe 2025 is the leading event in the region for the commercial aviation aftermarket, combining a senior level conference and international exhibition.

More than 590 solution providers will be exhibiting at the show, attracting over 11,500 attendees representing airlines, lessors, MROs, OEMs, suppliers and industry experts.

Event organiser Aviation Week says this is the largest of its kind in Europe and provides an excellent opportunity for attendees to learn about the latest trends and developments in the industry, as well as networking with other professionals.

Alongside the exhibition, there are two types of conferences available at MRO Europe 2025; a paid senior level conference and a free *Go Live! Theatre* on the show floor, giving plenty of opportunity to learn from industry experts, identify opportunities in the market and engage in lively debate.

With a mix of presentations and panel discussions, some of the topics to be covered during the main MRO Europe conference sessions include how key stakeholders are addressing bottlenecks through alternate part



2

“Alongside the exhibition, there are two types of conferences available at MRO Europe 2025”

strategies, exploring changing airline maintenance dynamics to enhance operational excellence, what measures key stakeholders are taking to ensure that aging aircraft remain operational, and examining potential strategies to extend engine life.

The *Go Live! Theatre* will focus more on showcasing the latest innovations, with case studies and product briefings taking place in the centre of all the action – right on the exhibition show floor. With sessions exploring topics ranging from smarter borescope inspections to the benefits of using software to automate/digitalise the labour intensive and manual processes of aircraft electrical load analysis, the *Go Live! Theatre* is set to be an exciting part of the event.

Just some of the stand out speakers set to take the conference and theatre stages during the event include:

Alice Belcher, director of predictive technology engineering at Delta TechOps; Inga Douglas, chief executive of GetJet Airlines; Niklas Kropp, head of business and fleet performance at TUI; Diego De Risio, head of maintenance at Vueling; Alex Ceballos, director of technical assets and supply chain at Aer Lingus; Arthur Dryancour, head of base and line maintenance procurement at Swiss International Air Lines; Clemens Geercken, head of commercials engine parts repair at Lufthansa Technik, and Fernando Comenge, director of strategy, transformation and supply chain at Iberia Maintenance. ●

1. Conference sessions are a main element of the MRO Europe event

2. Excel London will open its doors on October 14-16 for MRO Europe 2025



1

AVSTOCK

REMOVE | REPAIR | RESELL

DELIVERING SUSTAINABLE AVIATION SOLUTIONS

COMPONENT CONSIGNMENT
PROGRAMS

TEARDOWN PROJECT
MANAGEMENT

SUSTAINABLE 3PL
SERVICES

INVENTORY RECONCILIATION &
EVALUATION

END-OF-LIFE AIRCRAFT
ACQUISITIONS & TEARDOWNS

SURPLUS INVENTORY ACQUISITIONS &
REDISTRIBUTION

GLOBAL TRADING OF CERTIFIED USM
COMPONENTS

RECYCLING & UPCYCLING OF
AVIATION MATERIALS



محمد بن راشد للطيران
MOHAMMED BIN RASHID AEROSPACE HUB

Scan to
contact us





BRAND CHANGE

A NEW NAME

The Same Level of Excellence

GT ENGINE SERVICES IS NOW STS ENGINE SERVICES.
SAME TRUSTED TEAM. SAME HIGH STANDARDS. NOW
BACKED BY STS AVIATION GROUP'S GLOBAL NETWORK TO
DELIVER FASTER TURNAROUNDS AND EXPANDED ENGINE
SOLUTIONS, INCLUDING END-OF-LEASE INSPECTIONS,
BORESCOPE INSPECTIONS, MODULE CHANGES, REPAIRS,
PRESERVATION, AND STORAGE FOR CFM56, LEAP, V2500,
TRENT 700 AND MANY MORE.

WWW.STSAVIATIONGROUP.COM

A digital first mindset

Ahead of this year's Predictive Aircraft Maintenance (PAM) Conference in Dublin in November, *MRO Management* asked **Jason Reed** from event sponsor GA Telesis his thoughts on the landscape of predictive maintenance



“
The key approach to a truly enhanced future predictive maintenance culture is acquiring a steady flow of data coming directly from the aircraft
”

JASON REED

president - Digital Innovation Group (DIG), GA Telesis

▶ **How do you view the evolving role of predictive maintenance within the broader MRO ecosystem, and what impact is it having on aircraft reliability and cost control?**

Predictive maintenance is becoming a transformative force in the MRO ecosystem, especially in aviation. Its evolving role has begun defining two specific areas of support, one for reactive maintenance and the other for predictive maintenance.

We see first-hand how current and future data modelling algorithms transform the overall reliability and cost of operation. It does so not only on the aircraft component, but also in the MRO process management itself.

Using generative AI tools will allow an operator to understand repetitive failure modes more quickly and help pinpoint where to look during the incoming inspection phase to drive a quicker overall TAT.

Not only that, but also it can drive better, more reliable repair schemes, which support greater on-wing time. This is key overall in driving a lower CASM, a frequent goal of nearly every airline around the world.

▶ **What specific capabilities or services does GA Telesis offer that support airlines or lessors in adopting predictive maintenance strategies?**

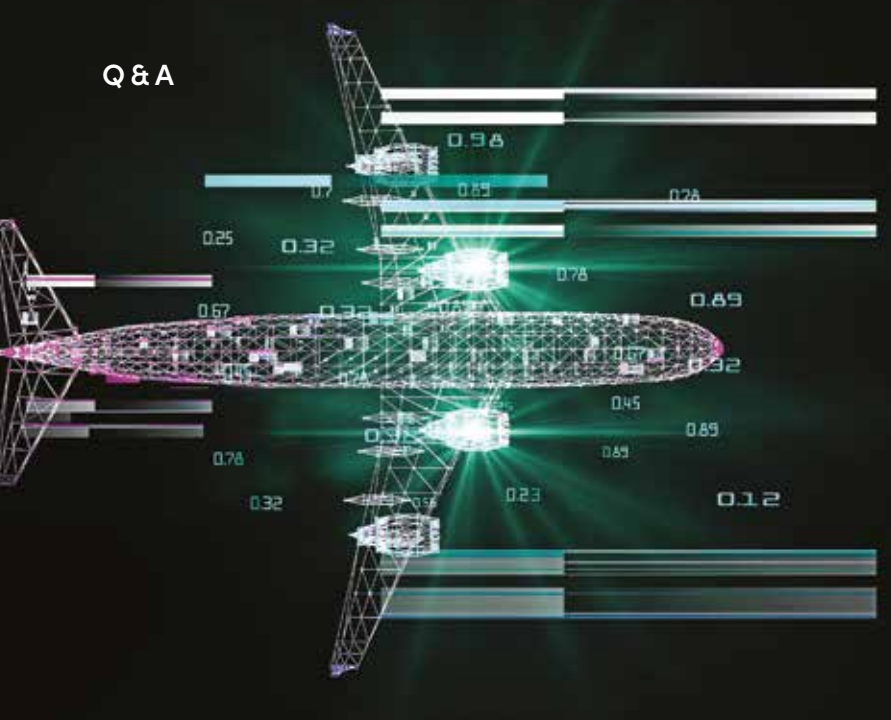
Within our Digital Innovation Group (DIG), we have a data science management team that takes a look at initial data to understand the ‘today’ of what’s happening in any type of aircraft



system or operational environment. That information is intended to create actions that transform the operational process and overall MRO management of the aircraft product in question.

From there, we drive analysis that looks at operating parameters, utilisation and on-wing performance. This begins the process of creating an algorithm that drives a predictive outcome for the product based on new maintenance practices. Once all of those aspects are covered, we start to recognise higher on-wing times of components as well as lower overall cost of operation.

We are now taking this approach to the next level with our newest digital twin product called WILBUR (Worldwide Integrated Lifecycle and Blockchain Unified Registry) to enable us to digitise and record all lifecycle, traceability and maintenance events into



“We have a data science management team that takes a look at initial data to understand the ‘today’ of what’s happening in any type of aircraft system”

a Web3 blockchain distributed ledger. This will allow the operator to look at individual component reliability via digital twin management, and pinpoint which of those components can benefit from further analysis.

With this GA Telesis approach, we expect reduced repair volumes coming back into the repair cycle and therefore leading to the lower cost that our airline customers are looking for.

► **Data access and integration remain major hurdles; how is GA Telesis helping to overcome these challenges, particularly in terms of collaboration with operators, OEMs or tech providers?**

Because of the diversified nature of our ecosystem, we have the good fortune of operating five different ERP systems within the global GA Telesis organisation. Our highly talented IT professionals and DIG teams have become masters at managing data access and integration in everything we do.

We have internal capabilities to create API connections not only from our ERPs to Power BI systems, but also into true Python data analytics programming groups who drive a lot of our data science functions.

In addition, our teams have also worked, past and present, with multiple airlines and OEMs to connect our businesses digitally to enable quicker decision making in all aspects. This mindset and approach to data management gives us a more consistent forward view of how to manage any type of maintenance or spare-related event.

We are firm believers that a holistic view of all data access is the key to not only better management within the company, but, overall, it's the number one driver of our growth and our mission of customer success.

► **Looking ahead, where do you see the most significant opportunities for growth or innovation in predictive maintenance, and how is GA Telesis positioning itself to lead or support that progress?**

The key approach to a truly enhanced future predictive maintenance culture is acquiring a steady flow of data coming directly from the aircraft. The technology coming from new-generation aircraft is so advanced that it can now notify ground crews of faults before they arrive.

We have heard of some cases where the aircraft is experiencing too many faults for issues that don't require correction after it lands. However, GA Telesis will

soon be able to use this type of data to significantly enhance the ability of line crews and MROs to focus on which components need to be troubleshoot or replaced, and when. For example, if a predictive failure mode is detected around 5,000 hours of use, overnight line crews could start proactively removing components around the 4,900-hour mark in anticipation of that event, thus completely overcoming a potential grounding of the aircraft.

To that effect, we are starting to partner with airlines to explore this type of data via the API process, which will ultimately be automated through WILBUR. This will then create a sort of 'black box' of predictive maintenance failures that would start to give airlines a better understanding of when these types of events may start to occur. ●



On November 11-12, *MRO Management's Predictive Aircraft Maintenance (PAM) Conference* returns to Dublin where leading airlines, OEMs, MRO specialists, data experts and technology providers will come together to explore how innovation is reshaping and streamlining aircraft maintenance.

Thank you to our Bronze Sponsor, GA Telesis, for supporting PAM 2025.



For more information and how to register to attend, scan the QR code above or visit predictiveaircraftmaintenance.com



AVIATION, WE'VE GOT YOU COVERED.

MORE PARTS. MORE PLATFORMS. MORE SOLUTIONS. ONE PARTNER.



Unical & ecube have your aftermarket needs covered.

The most comprehensive inventory of Airframe, Engine, and C&E material from MD-11 to A320neo, and world-class solutions for Aircraft Storage, Transition, Disassembly, and Repair Management.

UNICAL.COM

ECUBE.AERO

TRAINING FOR TAKE-OFF



Ene Krinpus talks to *MRO Management* about the future of training, recruitment and retention in aviation maintenance

Airlines are taking delivery of record numbers of new aircraft, yet the real bottleneck is not in production lines but in the hangar. For Ene Krinpus, managing director of Magnetic Talents (Engineering & Training Services), the industry's biggest vulnerability is not technology or capital, but people.

"Technical trades and physical labour are becoming less popular among the younger generations these days," she warns. "Math and physics are disappearing from high school curricula, leading to fewer people choosing engineering as a future career. The few who do choose engineering might not opt for aviation as a career, making aviation an underdog here."

Krinpus is frank about the perception issue facing aviation. "Although aviation is fascinating and awe-inspiring, it requires a lot of discipline, time and in-depth knowledge. Innovation development in the aviation sector also takes more time than in any other

industry, primarily because of safety and approvals. That makes it difficult to compete with industries that can innovate at a much quicker pace."

The result is that many young people lack the patience to commit to what she calls "a demanding career in a traditional industry like aviation". This, she warns, is making recruitment harder each year.

Under pressure

The growing demand and dwindling labour imbalance is reaching a critical point. "Considering the increasing number of aircraft and components that require maintenance, and the dwindling number of professionals available to do so, the next few years will be very challenging in terms of workforce availability," Krinpus explains.

The potential consequences are clear: "We might see delays in the delivery plans, and the existing workforce may leave the sector due to burnout. Flexibility and work-life balance are crucial in a modern labour environment, as employees often choose employers

based on the flexibility they offer. This is an important consideration when recruiting for the industry."

The global numbers remain stark. Industry forecasts continue to point to a need for more than 600,000 new mechanics over the next decade. "The lack of aviation professionals has been hindering the MRO sector for years," she says. "The outlook predicting the need for at least 600,000 new mechanics worldwide over the next decade remains."

Winning hearts and minds

For Krinpus, tackling the challenge requires a long-term cultural shift. "The only way for companies to tackle it is to put effort into popularising aviation as an industry and as a whole," she argues. "This means offering more internships and apprenticeships and joining industry-wide efforts to develop the needed workforce together, rather than fighting for each employee individually."

She believes greater visibility is vital. "On a smaller scale, various career and open-hangar days would bring the sector

closer to the people and provide a glance into what happens behind the scenes.”

Gender diversity is another priority. “We should work on attracting more female employees to the field,” Krinpus says. “Aviation is often seen as a very male-dominated sector; at Magnetic MRO, we have started to change that paradigm, with female recruits increasing every year.”

There is also a need to engage younger people earlier. “One additional approach, which we are piloting here in Estonia, is to bring technical aviation courses into secondary school study programmes, to start raising the interest towards engineering and aviation at an early stage,” says Krinpus.

The making of a technician

So, what qualities define the ideal recruit? For Krinpus, it comes down to passion. “The ideal candidate for the aircraft technician role at Magnetic Academy is someone who is passionate about aviation in general,” she says. “Somebody who can’t keep their eye off the sky when they see or hear a plane

1. More women are entering aviation, but greater efforts are still needed to close the gap
2. The Magnetic Academy classroom

approaching – a real aviation junkie.”

Importantly, Magnetic’s entry requirements are designed to be accessible. “Joining Magnetic Academy does not require any previous aviation experience or education, as our only prerequisites are that the person must have good English language skills, be ready for hands-on work and have a general interest in technical tasks. All the necessary skills and knowledge are taught.”

Recruitment is focused on three factors: “Attitude towards aviation, English skills, and proficiency with basic tools,” Krinpus explains. “Also, hired trainees will work in the maintenance environment, under a dedicated mentor, for at least 4-6 months before they are accepted to the study programme. This is needed to evaluate the technical level and to be able, if necessary, to customise the theoretical programme according to the group’s general skill level.”



2

A flexible training model

Magnetic Academy’s mission is clear: lowering barriers to entry and offering flexibility. “Our mission is to provide an opportunity for those who want to pursue a career in aviation but lack the necessary background or education,” explains Krinpus. “We believe that such a training programme will open the door to aviation for many talented people.”

The financial model is also crucial.





▲ Ene Krinpus, managing director, Magnetic Talents



Krinpus adds: “Combining work and study enables participants to maintain their income while studying, and all trainees receive a monthly salary from the company. This is especially good for people who have already become accustomed to having an income and who find the idea of going back to school without any income to be unreasonable.”

For Krinpus, “the main keyword at Magnetic Academy is flexibility – the option to build a foundation in becoming a licensed engineer without sacrificing their income during the study programme. In comparison to traditional school curricula, our trainees are on the shop floor from day one, allowing them to quickly determine if the job is a good fit for them.”

Once accepted, trainees embark on the Academy’s structured pathway. “After a successful recruitment process and spending approximately six months on the shop floor under dedicated mentor guidance, the trainees are given the opportunity to join Magnetic Academy and start working towards becoming licensed engineers,” Krinpus explains.

The journey begins with the ‘Zero2Hero’ course. This spans about 350 hours over six months, blending theory and practice. Krinpus says: “During the programme, they will learn high-level content of aircraft structures, systems and engines. They will get to know the fundamentals of electrotechnics and electronics, as well as maths and physics. Additionally,

they will cover softer topics, including technical English, human factor, and aviation law. The programme comprises 10 different lessons designed to strengthen the practical experience already gained.”

The alternating rhythm of the course is designed for maximum effectiveness. “Classroom sessions and practical experience are alternated – 1-2 weeks in the classroom, followed by 2-3 weeks in the maintenance environment. We run such courses at Magnetic every six months,” says Krinpus.

Building careers

The Academy does not stop once the initial training is complete. “Upon completing the 350-hour initial course, apprentices will continue to gain hands-on experience,” Krinpus explains. “After accumulating 4-5 years of practical experience, mechanics have the opportunity to join the second part of Magnetic Academy, specifically the Part-66 Basic module course. Once modules are completed, with five years of experience under their belt, one can apply for the empty licence in the local CAA and start exploring type courses.”

For Krinpus, breaking the career path into achievable stages is key. “The new generation of recruits tends to seek a quicker return. Breaking the process into smaller steps throughout their career path and seeing what they will gain during the five years is making the profession more motivational.”

A long-term vision

Ultimately, the Academy is designed to safeguard the industry’s talent pipeline. “The reason why Magnetic Group established such a strategic training programme was to be able to guarantee the inflow of new specialists despite decreasing interest in the engineering profession,” says Krinpus.

“My goal is to offer similar training programmes or help build in-house programmes in other MROs globally. This would serve the purpose of having the industry join forces to develop the needed workforce together, rather than fighting for each employee individually.

“We aim to expand Magnetic Academy beyond its current focus on technical staff development,” Krinpus explains. “This expansion will enable us to support the onboarding and growth of other specialists who have transitioned to aviation from other sectors. Currently, we are running both theory courses under our partner university’s 147-approval, but we are working to bring them under Magnetic’s own 147 certificate.”

Krinpus sees collaboration as the only way forward. “All in all, making aviation attractive requires the whole sector to work together. We cannot win the talent race if we compete for individuals in isolation. We need to inspire, educate and support a new generation of aviation professionals – starting from school age, continuing into early careers, and providing clear, rewarding career paths.”

Her message to the industry is unambiguous: if the MRO sector wants to keep pace with the future, it must take ownership of developing its people today. ●

“MAKING AVIATION ATTRACTIVE REQUIRES THE WHOLE SECTOR TO WORK TOGETHER”



CAERDAV

MORE THAN JUST HEAVY METAL

BASE MAINTENANCE • COMPOSITE REPAIR
COMPONENT PAINT • IN-HOUSE NDT • TOOL HIRE
AVIATION CONSULTANCY • AIRCRAFT STORAGE

TRULY INDEPENDENT MRO

Boeing 737 NG • Airbus A320 CEO



+44 (0)1446 753060

CAERDAV.COM

enquiries@caerdav.com



TECH TO THE RESCUE

Rob Mather from IFS explains how MRO organisations can utilise artificial intelligence (AI) and other technologies to help solve the skills shortage in aerospace and defence

Today's commercial and defence MRO organisations are facing mounting challenges – the double whammy of an ageing workforce and an insufficient pipeline of new skilled talent. At the same time, MRO teams must keep ageing aircraft mission-ready despite ongoing supply chain challenges – while also gearing up to support a new generation of advanced engine platforms. It's a perfect storm of operational complexity that calls for smarter, faster and more adaptive solutions. MRO organisations can utilise artificial intelligence (AI), digital technologies and innovative workforce strategies to combat these challenges.

The commercial MRO industry's workforce is ageing at a staggering rate. Workers approaching retirement age, between 55 and 60, make up 35% of the workforce (source: Oliver Wyman), while those between 18 and 30 represent only a single-digit percentage. Reports estimate the industry will need 690,000 new technicians over the next 20 years (source: Airbus).

The defence sector is facing a similar struggle, with 48% of defence employers stating they

have a shortage in engineering skills (source: guidantglobal.com) and a quarter reporting a shortage in manufacturing and mechanical expertise. These challenges have been exacerbated by the recruitment of new technicians failing to match the rising demand for MRO.

More than inadequate recruitment

A major catalyst for the current labour shortage was the Covid-19 pandemic, a time when many MROs faced financial difficulties and opted to furlough employees or offer older technicians early retirement. Throughout the pandemic, demand for commercial and defence MROs dropped, leading to many pausing their recruitment – which is a major contribution to the workforce age gap we see today.

The answer is not as simple as replacing experienced technicians with junior technicians. The former employees come with legacy knowledge, enabling them to efficiently identify, troubleshoot and solve problems. In comparison, junior technicians often lack this hands-on knowledge, leaving them reliant on manuals or

35%

In the commercial MRO industry, workers approaching retirement age (between 55 and 60) make up 35% of the workforce (source: Oliver Wyman)

▲ AR and VR are key to attracting the next generation into aviation MRO

the guidance of more experienced colleagues to complete tasks. This type of legacy knowledge cannot simply be passed on; it requires years of experience and is typically hard-won firsthand or shared in real-time by seasoned technicians.

To add to the MROs' mounting challenges, aircraft fleets are getting older, but they're not ageing out. In 2023, it was estimated that one-third of the 30,000 commercial aircraft in operation were over 20 years old (source: aircargoweek.com). During the pandemic, new aircraft orders and fleet renewal programmes were put on hold to cut costs – and many organisations are still playing catch-up. As a result, more airlines are still operating older aircraft or reintroducing retired aircraft which require more maintenance to keep them in operation as components age, decay and fail.

Out with the old, in with the new?

The commercial aviation industry is driven by efficiency and managing tight margins, but continuing to operate with older aircraft is having a serious impact. Consequently, many commercial airlines are seeking newer, more efficient aircraft. However, major aircraft manufacturers' failures to meet demand have slowed or prevented this fleet renewal.

“MROS NEED TO MAKE BEING A MAINTENANCE TECHNICIAN COOL TO THE YOUNGER GENERATION”

Boeing has faced a host of challenges from supply chain disruptions, testing phase failures, in-flight issues and workforce strikes. In January 2024, the FAA temporarily grounded all 737-9 MAX aircraft and forced Boeing to halt production of the 737 MAX, after a blowout of a 737-9 MAX door plug during a flight. As a result, many airlines pivoted to the Airbus A320, but these have had their own supply chain issues for aircraft components (source: Airbus). This left a significant gap in new aircraft supply and, with demand rising, airlines had to keep operating older aircraft.

Bringing aircraft out of retirement and storage increases demand for MRO technicians while awaiting the new, less maintenance-intensive aircraft deliveries. Older aircraft also heighten safety risks as technicians are under pressure to deal with the associated increased workloads as new protocols put strain on existing systems.



▲ Rob Mather, vice president – aerospace and defence, IFS



Volo Aero MRO

Volo Aero MRO, where we deliver brilliant precision machine solutions tailored for the aerospace industry. Since our inception in 2015, we have built a reputation for reliable support in the repair of aircraft engine and accessory parts, as well as specializing in Used Serviceable Material (USM) to help reduce engine shop visit costs.



50yrs
Experience



70+
T56 parts supported



95%
On time delivery

MRO EUROPE
VISIT US AT
BOOTH #3713

Our Markets

MILITARY



High-security, high-compliance repair services for military aero-engine components and hardware.

CIVIL



Certified precision repair solutions for major commercial engine models, with advanced coating and machining capabilities.

MATERIAL TRADING



Efficient USM-based supply solutions - rental, sale, or exchange - for rapid cost-effective access to parts.

Learn More www.volo-aero.com



“THE COMMERCIAL MRO INDUSTRY’S WORKFORCE IS AGEING AT A STAGGERING RATE”

▲ Bringing aircraft out of retirement and storage increases demand for MRO technicians

New engine platforms add to the MRO headache

The commercial aviation and defence sectors are both experiencing a shift in engine types, with the 737-MAX and the A320neo rising in popularity for commercial aircraft and the F-35 rising in deployment by military forces, including Poland (source: gov.pl) and Canada (source: f35.com). Even though new engine platforms are more efficient and, being new, shouldn’t be more maintenance-intensive from the jump, MRO organisations have encountered challenges with new engine types, such as the 737-MAX engine’s load-reduction mechanism fault (source: eplaneai.com), causing harmful smoke to enter the aircraft, or the issues with counterfeit titanium being used in both Boeing and Airbus aircraft. As a result, MROs have had to carry out maintenance on new engines right away to solve these issues.

New airframes and engines come with new training practices and certifications for technicians. MRO organisations need to proactively manage the training of their workforce for the new platforms and balance this with matching their demand to carry out work on legacy platforms. While building new capabilities isn’t anything new for these organisations, the sheer amount of change at once and the capacity required, piled on top of the other pressures, makes it a genuine challenge.

Solving the MRO brain drain

To combat the labour shortage and relieve pressure on their current workforce, MROs need to make being a maintenance technician cool to the younger generation, for many of whom the current state of MRO makes for an undesirable career path. The generation entering the workforce has grown up in the digital world we live in today; for them, augmented reality (AR) and virtual reality (VR) are not considered unusual, and they have access to personal AI assistants right on their phones. They are looking for more than just old-school monetary incentives.

Whether it be improving working conditions, utilising modern technological tools and systems, increasing job awareness at much earlier ages, or making the working environment more favourable for more diverse employees, the industry can do more to increase the recruitment or retention rates of the emergent generation.

New digital tools for a new generation

While MRO organisations need to be patient with recruiting the next generation of technicians, in the meantime, they must find ways to increase their maintenance capacity with fewer resources. The answer lies in implementing new technology to automate monotonous tasks, making technicians’ lives easier and reducing the chances of mistakes. This will also help make the job more appealing to a younger workforce with native digital skills and new or different priorities.

Ultimately, there are two different groups of digital technology solutions MROs can employ. AI-based solutions can help with monotonous tasks such as procedure research and data



LEADING THE FUTURE OF AVIATION

WHO WE ARE

KGB Aviation Solutions is a trusted leader in manufacturing and distributing advanced ground and flight systems for aircraft data acquisition, downloading, and analysis.

Our cutting-edge technology is designed to enhance flight safety, improve operational efficiency, and simplify maintenance for aviation professionals worldwide.

- State-of-the-art systems for real-time data handling
- Faster, safer, and more efficient flights
- 24/7 world-class customer support & service

SIMPLIFYING FLIGHT DATA DOWNLOADING

DART – Data Acquisition Ruggedized Tool

- Streams Recorder Data in Engineering Units
- Downloads from Most Recorder Types in Service
- Automatically Uploads Critical Data Directly to the KGB Web Portal
- Field-Upgradeable



DART

SKYLOG-SERIES



TOTAL FLIGHT DATA CONTROL FAST, RELIABLE, EFFORTLESS

ADVANCED FLIGHT SYSTEMS – SKYLOG-SERIES

- SKYLOG-25 FLIGHT RECORDER – 25 HOUR CVFDR
- SKYLOG-QAR – Customizable Wireless
- SKYLOG-DAU – One PN, Multi-A/C
- SKYLOG-MDAU – Up to 22 Parameters

PROVIDING BEST-IN-CLASS FLIGHT DATA SERVICES

DATA SERVICES

Our engineers are ready to take on the most complex flight data challenges:

- FDR READOUTS
- CVR INTELLEGIBIT
- DATA LINK DECODING



kgbaviation.com | 716-771-3178 | sales@kgbaviation.com



“THE LABOUR CHALLENGES FACING COMMERCIAL AND DEFENCE MROS ARE MOUNTING, BUT THE INDUSTRY CAN TURN THE TIDE BY EMPLOYING NEW DIGITAL TOOLS AND PROCESSES”

▲ Implementing new technology to automate monotonous tasks can make technicians' lives easier

entry with the support of an AI Copilot, but also provide optimised task scheduling, planning and assignment.

Meanwhile, non-AI technologies can improve other processes by increasing the use of mobile devices, improving engineer support with AR-supported video calling, enhancing precision and speed with embedded measurement tools, and making supply chains more efficient with e-paper labelling.

There are five main areas in which these digital solutions will help MROs reduce technician workloads and safety risks, while meeting increasing demand:

1. Increase technicians' hands-on metal time with aviation-specific mobile devices

Traditionally, in the MRO industry, job cards and manuals are on paper, but arming technicians

with mobile devices with aviation-specific language models can allow technicians to access these references digitally, request materials from the warehouse and get solution suggestions. The results are that the technicians never have to leave the aircraft – and the life of a maintenance technician starts to look a lot cooler.

2. Context-switching gives technicians the freedom to be more efficient

By having digital job cards on a mobile device, technicians can pause work and start new tasks proactively, while waiting for parts or materials, keeping them fully productive.

3. Embedded tech equals big efficiency wins

Whether it's an experienced technician needing to take a live measurement with lidar or an inexperienced technician initiating an augmented reality call with a supporting senior technician – mobile devices enable it all.

4. AI-optimised maintenance

AI tools can analyse data in two different areas of MRO operations. Task sequence optimisation can analyse data to ensure tasks within a given work package are scheduled optimally, while task assignment optimisation uses AI-driven optimisation engines to optimise the assignment of tasks across all available technicians based on skillset, experience, availability and even physical location.

5. Answering questions, locating procedures and troubleshooting: AI can do it all, and more

Early use cases of AI Copilot ensure technicians aren't wasting time painstakingly searching through manuals and documentation. In more advanced cases of AI Agents, the agent can use Natural Language Processing (NLP) to match previously recorded faults or troubleshooting manuals and make proactive suggestions to the technician.

The AI and digital tools turning the tide

The labour challenges facing commercial and defence MROs are mounting, but the industry can turn the tide by employing new digital tools and processes. These new tools, optimised and driven by AI, will tackle these challenges head-on. These tools in the hands of today's technicians will ease the pressure of their job, attract the recruitment of new workers, while ensuring the aircraft they work on spend less time in the hangar and more time in the air. ●



STORM AVIATION

Part of the FL Technics Group

YOUR FULL SERVICE MRO

- Rapid-response Global AOG Go Team
- Widebody A330 / B787 Base Maintenance (PIK)
- Brand New 145 & 147 Training Facilities
- Workshop Capabilities - Part 21G and Part 145 approvals
- Aviation Recruitment
- Line Maintenance



stormaviation.com





Yi Liqun

In the next instalment of our 'Meet the Mechanics' interview series – created to shine a light on the hands-on professionals who keep aircraft in top condition – we feature **Yi Liqun**, maintenance supervisor at ExecuJet Haite, who shares his journey from campus job fairs to business jet maintenance, reflects on the challenges of complex interior checks, and explains why safety, precision and a passion for aircraft keep him motivated every day

► **How did you get into aviation maintenance and what inspired your career path?**

In 2004, after finishing university, I discovered aircraft maintenance at a campus job fair. An aviation company's booth caught my eye and the field appealed to me for its technical nature and strict culture. I applied, passed the selection process and began my career in aviation.

By 2011, China's business aviation sector was booming. Until then, I had only maintained commercial airliners, but business aviation intrigued me with its advanced avionics, high-performance systems and customised cabins - true showcases of top-level engineering. Keen to master more complex maintenance, I moved into business jet work, which sharpened my skills and deepened my passion for the job.

► **Can you walk us through a typical day or shift in your role?**

My job involves a wide range of tasks, starting with daily scheduled checks – the core of my work. I also handle unexpected Aircraft on Ground (AOG) issues, often travelling to other cities for advanced troubleshooting. In addition, I'm trained in engine borescope inspections, which has become one of my key specialties.

Let me tell you about a normal day using scheduled checks as an example. I've become skilled at interior work

during scheduled checks. Each day starts with counting my tools – *three counts* is a strict rule in our field. I count before starting, during the job to avoid leaving tools on the aircraft, and again at the end to ensure everything is accounted for, preventing any safety risks.

For large scheduled checks, we need to remove all the inside parts of the plane and it's a big job. The galley, bathroom, wardrobe, seats, floor and ceiling, none of these can be forgotten. Let's take removing the galley as an example. First, I need to pack up all the loose items in the galley one by one. For items such as cups and plates, I wrap each one carefully with pearl cotton. Then I put them gently into a box and arrange them neatly, so they don't get broken when they are being moved or stored.

After emptying the galley, we move on to taking it apart. The galley is made up of many parts, such as drawers, trash cans, work surfaces, water tanks, taps and lights. Each part has a specific order in which it was installed. What's more,

most of the screws are hidden. It's not easy to find where they are exactly. A lot of the time, you need experience and to look carefully.

I wrap all the parts I have taken apart again with special cotton to protect them while stored and tag them with the aircraft information. I'm always worried about scratching or hitting the paint on the inside. After that, these parts are sent to a special storage room. They're stored together in areas marked by the plane's tail number. They're kept safe until the checks or tests are completed, and then they're put back into the plane.

Putting things back into place needs a lot of care. After installing each part, I need to test it right away to make sure it works. This is to stop me from forgetting to test a part. If I put other parts in first and cover it up, I won't be able to test it later.

A major scheduled check typically takes two months, from disassembly to restoring the aircraft interior. The work is demanding and full of challenges, but seeing the plane return to service makes the effort worthwhile.

“WHAT KEEPS ME GOING EVERY DAY IS THE SENSE OF ACCOMPLISHMENT I HAVE AFTER FINISHING TASKS”

► Yi Liqun performs maintenance checks on an Embraer Phenom 300

► **What's one particularly memorable challenge you've faced on the job – and how did you resolve it?**

The hardest challenge I've faced at work was the first time I had to dismantle and reassemble an aircraft interior on my own. When the company assigned me this task, I was nervous and doubted my ability. Previously, this work had been led by experienced British engineers hired as contractors. I had only assisted on two aircraft under their guidance, so I felt underprepared to manage thousands of parts independently.

To cope, I kept a detailed notebook, recording each day's progress and the parts I removed. If I couldn't fully detach a component, I documented possible methods to complete the task later. I also took extensive photos to guide reassembly, noting the orientation of parts, screw lengths and removal order. Such details are vital for restoring everything to its original position.

It's worth noting that this work has a lot of steps and parts and it takes a long time. So, it is easy to forget things along the way. By using these methods that I described, and after two months of hard work, I finally got the plane's inside back to how it was in original position within the timelines for the overall inspection. In that moment, I felt proud and quite confident to perform this work on other aircraft.

► **How do you and your team approach safety and reliability in your work?**

In my team, safety comes first. The company and team care a lot about quality and always perform work ensuring safety measures are incorporated.

During maintenance of aircraft, the team follows manuals and job cards to ensure utmost safety of technicians. Employees are also taught safety rules, best practices at work and the importance of strictly following and recording work steps. Everyone learns how to safely maintain the planes, use tools correctly and take

carefully disassemble/reinstall back to original condition.

ExecuJet Haite has safety policies and procedures in place. So, if workers find any unsafe circumstances, they can report anonymously or directly to management or quality department. We have various channels including a special SMS box, safety committee and more. The company also has a reward system in place to encourage employees to identify and report risks.

► **What changes or innovations do you see shaping the future of aircraft maintenance?**

I think there are several changes that will reshape the business aviation MRO industry. New lightweight and strong materials are becoming more common for their durability. Also, instead of set checks, AI, data and sensors will predict part failures. This cuts unexpected repairs and costs, reducing the downtime of an aircraft.

Lastly, I believe 3D printing may soon make some parts manufacture a quicker

process, especially important for older planes. These innovations will evolve aircraft maintenance better, making it faster, greener and safer.

► **What do you enjoy most about the job – and what keeps you motivated day to day?**

What I love most about this job is getting to work closely with aircraft. They're the best that humans have built, in my opinion. These days, aircraft technology is rapidly evolving and having to experience the technology in my daily work excites me.

What keeps me going every day is the sense of accomplishment I have after finishing tasks. This job certainly isn't easy and sometimes I face tough technical problems or have to work fast. But after many years and experiences, when I see all the maintenance jobs I've helped finish and all the planes I've released safely, I feel great satisfaction. That feeling pushes me forward, keeping me excited and focused on the next job. ●

“AIRCRAFT TECHNOLOGY IS RAPIDLY EVOLVING AND HAVING TO EXPERIENCE THE TECHNOLOGY IN MY DAILY WORK EXCITES ME”



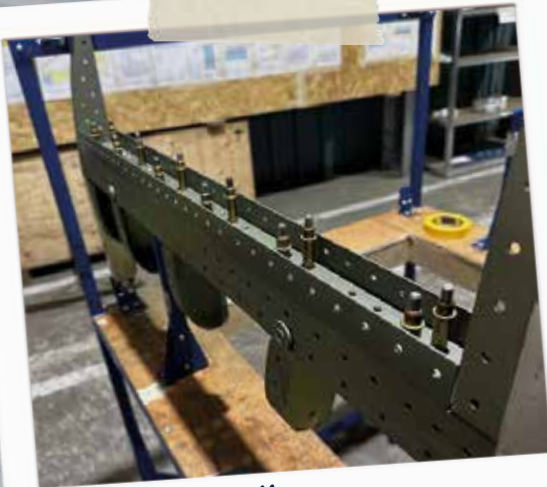
*The One-Off
Repair Club*



IMT Aviation Ltd are now performing **737-800** trailing edge flap repairs IAW Boeing **SB 113A3700-57-01**.



Pre-Bond



Drill off spar

- **One off repair**
- **No more repeat orders**
- **Reduced Spares Lead Times**
- **Faster TAT**
- **Lower Overall Costs**
- **Increased Flight Cycles**

Enjoy more flight time, less downtime with a one-off fix. Choose **IMT Aviation Ltd** for your trailing edge flap repairs and experience the difference.

Contact us

info@imtaviation.com

+44 1799542100

www.imtaviation.com

Aviation House Bearwalden Business Park, Royston
Road, Wendens Ambo, Saffron Walden, Essex, CB11 4JX



Lower skin installation



GTSMRO specialise in the repair and overhaul of wiring harnesses and electrical cables from engine and nacelles.

CAA, EASA and FAA approved.

Engine Line Supported

- LEAP-1A/1B
- CFM56-5A/5B/5C/7B
- CF34-10A/10E
- CF6-80C2/80E1
- GEnx-1B/2B
- GE90/GE9X

Contact us



www.gtsmro.com

REVOLUTIONISING AVIATION MAINTENANCE

GE Aerospace's Software as a Service solution for MRO professionals streamlines records, accelerates approvals and cuts costs through digital transformation



▲ GE Aerospace is committed to delivering solutions that set the standard for tomorrow

Navigating industry challenges

The aircraft MRO industry faces increased challenges that demand innovative solutions. From stringent safety and compliance requirements to cost management hurdles and the need for faster turnaround times, MRO professionals are navigating a complex landscape.

Traditional manual systems often exacerbate these challenges, creating bottlenecks that hinder operational efficiency and profitability.

GE Aerospace is addressing these pain points head-on with its Software as a Service (SaaS) Asset Records solution, designed to transform how maintenance documentation is managed across the aviation ecosystem.

A vision for seamless operations

GE Aerospace's SaaS Asset Records solution is built on a vision of standardisation and seamless operations. By digitising and centralising maintenance records, the platform creates a unified ecosystem where documentation can be accessed, analysed and shared effortlessly.

This enterprise-grade records management system enables incoming



▲ **Nate Hicks**, vice president, software product management, GE Aerospace, Software as a Service (SaaS)

and outgoing records packs to be reviewed easily between the airline and MRO parties, ensuring that maintenance professionals on both sides of an overhaul are receiving the necessary technical documentation as quickly as possible.

It also enables a single source of truth for technical records, enabling collaboration not only within organisations but also with external partners, customers, and regulators.

The result? Improved first-time yield of documentation, reduced rework and faster approvals during critical stages of the service visit process.

Andrew Coleman, president and general manager, explains: "As the aviation industry faces increased demand, GE Aerospace is committed to

"Our mission has been to craft a platform that truly resonates with the needs of MRO professionals, tackling their toughest challenges head-on"

Nate Hicks, vice president, software product management, GE Aerospace, Software as a Service (SaaS)



“As the aviation industry faces increased demand, GE Aerospace is committed to delivering solutions that not only meet today’s challenges but set the standard for tomorrow”

Andrew Coleman, president and general manager, GE Aerospace, Software as a Service (SaaS)

delivering solutions that not only meet today’s challenges but set the standard for tomorrow. Our SaaS platform empowers MRO professionals to achieve operational excellence while driving measurable business outcomes.”

Transforming MRO operations

The SaaS Asset Records solution leverages advanced technologies like Optical Character Recognition (OCR) and machine learning to digitise records, making them readily searchable and analysable. This capability enables rapid analysis during audits or investigations,

significantly reducing error rates and improving invoicing accuracy.

The platform also enhances collaboration by enabling seamless sharing and review of records with customers, partners and internal teams, fostering better communication and alignment.

Nate Hicks, vice president, software product management, shares: “Our mission has been to craft a platform that truly resonates with the needs of MRO professionals, tackling their toughest challenges head-on. By harnessing cutting-edge technologies like OCR and machine learning, we’ve built a solution

◀ GE Aerospace is transforming how maintenance documentation is managed across the aviation ecosystem



▲ **Andrew Coleman**, president and general manager, GE Aerospace, Software as a Service (SaaS)

that transforms workflows, accelerates turnaround times and reduces the weight of administrative tasks to deliver real, measurable impact where it matters most.”

Measureable impact across the industry

The results speak for themselves. Since 2023, GE Aerospace’s SaaS Asset Records solution has supported 3,016 MRO projects, logged 294 unique users, collaborated with 552 external third parties, and uploaded 1.5 million documents and files. Customers have reported 20-30% faster approval times, translating into millions of dollars in operational savings.

These measurable outcomes are setting new benchmarks for efficiency, compliance and customer satisfaction in the aviation industry. ●



GE Aerospace is driving digital transformation in the aviation industry, empowering MRO professionals to overcome challenges and achieve operational excellence. To learn more, visit: geaerospace.com/systems/saas/mro and explore how this SaaS solution can revolutionise your operations.

***ANY TYPE, ANY PLACE, ANYTIME,
WE DELIVER!***

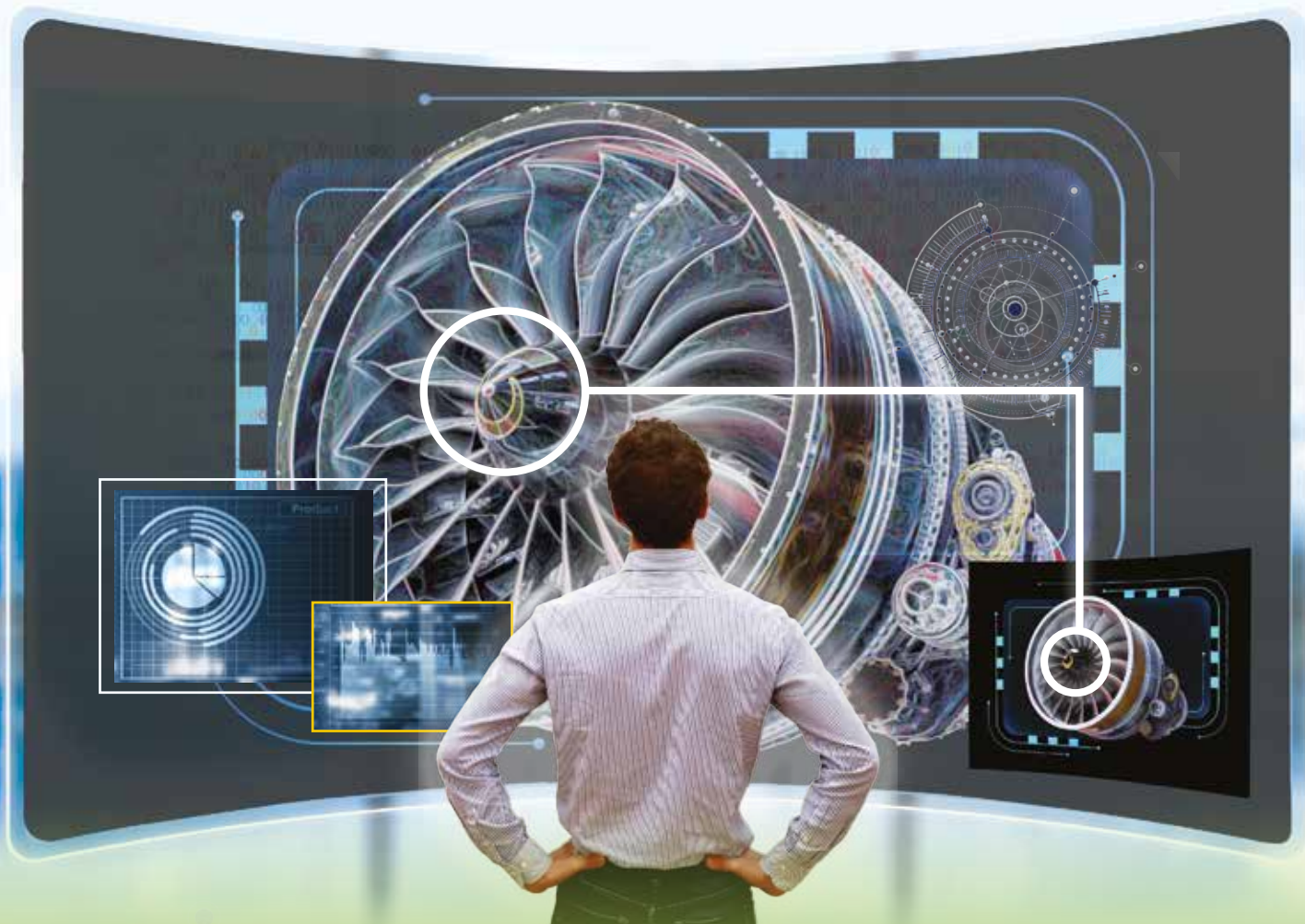


Find out how we can help you

www.sxi.aero

We, at SXI, enjoy a well-established reputation as a provider of worldwide ferry flight services across a broad range of aircraft types with our own crew members. Previous aircraft deliveries include routes in and between North- and South America, Europe, Africa, Asia and Oceania with aircraft types such as, but not limited to,

the Airbus A319/A320/A321, A330, A340, A350 and A380, the Boeing B737 (Classic, NG and MAX), B747, B757, B767, B777 and B787 as well as the Embraer E-Jet's, ERJ 145, E170/190 (E1 and E2), the Bombardier Q's (De Havilland Dash-8), Bombardier CRJ's, ATR42, ATR 72 and of course Fokker 50, 70 and 100 Aircraft



PLANNING & SCHEDULING IS HAVING ITS AI MOMENT

While MROs are deploying better software, the pace is variable, and necessarily so. **Kevin Rozario** reports

Digitalisation of aviation MRO continues apace. Machine learning (ML) and now artificial intelligence (AI) – sometimes even at a basic level – have increasingly become part of the suite of software services that help to monitor critical aircraft systems in real time. And there is a need for more of it.

At Ametek MRO – a broad-based component MRO holding authorised repair centre (ARC) agreements with major OEMs – its recent migration to Salesforce has marked a shift toward better visibility and opportunity tracking, according to Stanislav Djuric,

director of information technology at Ametek MRO Europe. The company's approach is pragmatic; it is layering modern tools on top of legacy systems to gradually improve visibility, collaboration and data quality without disrupting core operations.

“We’re beginning to explore AI tools like Squint and Copilot, which offer intuitive ways to gain insights from complex data and improve decision-making,” explains Djuric. “These tools don’t require deep technical integration, making them ideal for environments with legacy systems, like our Quantum ERP (enterprise resource planning).”

In the quest for better cost-effectiveness and efficiency, OEMs like Boeing, Airbus and Embraer want the MRO business to innovate more in order to anticipate and speed up decisions for improving aircraft availability and reduce costs to operators. It also seems obvious that better predictive maintenance software will prevent failures before they occur, thus avoiding expensive disruptions.

Just over a year ago, Embraer introduced substantial updates to its AHEAD (aircraft health analysis and diagnosis) platform for this precise purpose. In particular, it is leveraging data to foresee potential maintenance needs for the company's E-Jets fleets. Identifying patterns of aircraft systems degradation, tracking exceedance and adverse events – and suggesting preventive actions – are features of the platform that help to improve maintenance operations.

Carlos Naufel, chief executive of Embraer's Services and Support division – which supports commercial aviation, executive jets and defence customers – comments: “Integrated data ecosystems are key to success as they allow service centres to work with high volumes of data, generating intelligence with AI and ML tools. Cloud-based and modular platforms offer

scalability and real-time data access, while cross-team collaboration plays an important role as well.”

Most of the software and processes at Embraer Services and Support were developed in-house and the company is testing new MRO tools to advance its process and data integration strategy. “Data-driven intelligent automation and workflow enhancement are relevant to optimising the capacity of technicians in adapting to a changing environment,” says Naufel.

Slow to deploy?

However, not all MRO players are on the front foot with their planning. At IFS, a top provider of industrial AI and software, vice president of the company's aerospace and defence industries, Robert Mather, says: “Many



▲ Carlos Naufel, chief executive, Embraer Services and Support

“With the advance of technology and data intelligence supporting operations, planning and scheduling software is now closer to achieving better results and supporting MRO challenges”

Carlos Naufel, chief executive, Embraer Services and Support

THE BEATING HEART OF AEROSPACE

We care about the aerospace engine industry and don't believe in 'one size fits all solutions'.



www.farsound.com

FARSOUND



“Tools that offer predictive maintenance, automated scheduling and natural language interfaces are especially promising”

Stanislav Djuric, director of information technology, Ametek MRO Europe

organisations still haven't deployed some of the fundamental planning tools that have been available for years – things like constraint-based scheduling, single-planning views, or templated planning across different horizons, and even sequencing of line visits and task assignments. Those capabilities on their own can unlock tremendous efficiency, and yet a large portion of the industry hasn't taken advantage of them.”

Also urging better uptake and review is Saravanan Rajarajan, associate vice president and head of consulting for aviation, aerospace and defence at Ramco Systems, another aviation software provider. He comments: “It's

essential to revisit data platforms and data quality. The effectiveness of planning and scheduling software is dependent on the availability of the right data at the right time.”

He adds: “To achieve this, full integration must be established with the maintenance execution, inventory, tooling, manpower and flight operations systems. Cloud-based systems enable the capability for effective information sharing through APIs (application programming interface).”

Ramco has a proprietary platform for planning and scheduling with its own set of logics and algorithms to optimise the results. “This gives our customers flexibility to plan their works strategies and control individual maintenance visits,” says Rajarajan. According to him, the platform can create multiple ‘what if’ scenarios based on variable parameters like aircraft utilisation and capacity constraints.

▲ Embraer is leveraging data to foresee potential maintenance needs

He adds: “Comparative outputs showing the impact on the desired objectives like cost optimisation or TAT (turnaround time) protection help the user in firming up their final plan.” In its current form, the planning and scheduling module leverages AI to sequence tasks and assign staff – and by learning from historical data and operational constraints, AI systems continuously improve their scheduling capabilities.

IFS’s aviation maintenance solutions span all the key planning horizons from long-range fleet planning and network-level line and overnight planning to individual heavy maintenance visit planning and dynamic resource allocation in the line environment. The company provides these to MROs and airlines including Air France/KLM, Qantas and Southwest Airlines.

On the heavy maintenance side, IFS offers its cloud-based Production Planning & Control module (PP&C) – a Gantt-style planning tool; and IFS EmpowerMX’s burn-down style planning tools. Both enable major check planning and execution at scale. For long-range planning, its Fleet Planner is used by China Airlines and JAL to build and maintain their heavy maintenance schedules.

Mather explains: “The strength of IFS is that these solutions don’t sit in isolation. Because they are integrated with compliance and supply chain systems, customers gain visibility across the entire maintenance value chain. That integration is what allows organisations to unlock efficiency; not just planning more effectively, but also ensuring materials and manpower are in the right place at the right time.”

Momentum is variable

Key software players like Ramco and IFS will continue to push for bigger and better planning systems in aircraft maintenance where feasible. But MRO houses must look to their own specific needs and adapt accordingly. For instance, over the next year, Ametek MRO is expecting to move in the direction of more ‘plug-and-play’ AI solutions that can work alongside existing systems.

Djuric says: “Tools that offer predictive maintenance, automated scheduling and natural language interfaces are especially promising. We’re also planning to explore data warehousing and ETL (extract, transform and load) design, which will allow us to unify data



▲ Stanislav Djuric, director of information technology, Ametek MRO Europe

Over 15 years of experience with success in:

- Ready to go stock from Amsterdam on Rotables – Airbus, Boeing & Embraer
- Exchange pool on high demanded parts
- Consignment sales
- Warehousing
- Repair management



Are we in contact already?

If not, catch us via sales@aviarena.com

or call us at +31172728008

aviarena
www.aviarena.com



◀ Ametek MRO is using technology to unlock better forecasting, compliance tracking and strategic planning



▲ Saravanan Rajarajan, associate vice president and head of consulting for aviation, aerospace and defence, Ramco Systems

from Quantum, Salesforce, and other sources. This will unlock better forecasting, compliance tracking and strategic planning – all critical for scaling our MRO operations.”

Embraer’s Naufel adds: “With the advance of technology and data intelligence supporting operations, planning and scheduling software is now closer to achieving better results and supporting MRO challenges.” These challenges can start small. For example, Vervon’s Publications software allows MRO teams to have the most up-to-date OEM manuals at their fingertips every time they open the system. This cuts out guesswork, reduces compliance risk and ensures every maintenance action is backed by accurate technical content.

At IFS, Mather comments: “If I look ahead, what I’d most like to see is broader adoption of the tools already available – both the conventional advanced planning tools that have been industry-proven for years, and the new AI optimisation tools that can deliver immediate benefits today. The opportunity is here now; it doesn’t need to wait.”

“The effectiveness of planning and scheduling software is dependent on the availability of the right data at the right time”

Saravanan Rajarajan, associate vice president and head of consulting for aviation, aerospace and defence, Ramco Systems

IFS is expanding its proprietary AI optimisation engine – Planning & Scheduling Optimization (PSO) – across more use cases with every semi-annual release. “Each time we apply it to a new planning scenario, the efficiency gains are compounded. That ongoing development is where we’ll see significant customer benefits over the next 12 to 18 months,” says Mather.

Ramco’s Rajarajan is also confident that aircraft maintenance planning software will advance as more sophisticated AI/ML models are deployed along with high quality data. “Planning software shall extend beyond the boundaries of the MRO organisation connecting ecosystems like suppliers, customers and OEMs to leverage data. However, these require that AI models remain transparent, explainable and auditable to satisfy regulatory requirements.”

In the regulatory arena, which has the potential to be a minefield with the arrival of AI, IFS is quietly confident. Mather says: “Of course, we must always be careful in how AI is deployed. The regulatory framework today requires that decision-making in maintenance execution remains firmly with certified personnel. But the activity of planning itself is not a regulated function – and it’s exactly the type of domain where AI can be safely and effectively applied early. That makes planning and scheduling the perfect entry point for AI in aviation maintenance, fitting squarely within the safety and compliance boundaries while delivering real, measurable gains.” ●

AerFin



The way ahead for engine MRO

Engine MRO Lite: Bespoke solutions, faster turnarounds and lower costs

Our range of certified Engine MRO Lite services provides critical additional quick-turn capacity for airlines, lessors and MRO customers who are looking to optimise engine life or recycle value. With EASA/CAA & FAA145-approved facilities and the capability of operating up to 10 engines simultaneously, this is quick-turn to a standard you can really trust.

Discover more at [AerFin.com](https://www.aerfin.com)

The way ahead

SUPPORTING CUSTOMERS

Bryan Croft from Rotable Repairs highlights how investment in people, technology and OEM partnerships is driving capacity and customer support

Rotable Repairs, part of the VSE group, has supported the aviation industry since 2002, specialising in the repair and overhaul of aircraft wheels, brakes and associated components for a global portfolio of airlines, MROs and OEMs.

Since joining the VSE group, we have embedded best practice standards across operations, compliance and customer service, while making strategic investments in tooling, facilities and training to strengthen capability and ensure consistent, high-quality output.

Customer focus remains central to our business. Weekly one-to-one meetings with clients allow production progress to be reviewed, technical issues discussed, performance metrics shared, and problematic parts addressed proactively. This close engagement ensures that concerns are resolved quickly and service standards remain high.

Although industry-wide supply chain challenges have occasionally affected turnaround times for specific parts, we continue to work closely with partners and OEMs to minimise disruption and maintain reliability.



“
**Customer focus
remains central to
our business**
”

BRYAN CROFT

managing director, Rotable Repairs

Workshop evolution

Rotable Repairs has transformed its workshop in recent years to meet the changing needs of airlines and OEMs. Capacity has been increased through facility expansion, layout optimisation and new workstations, with seven-day shift patterns introduced to boost throughput and flexibility.

Four additional workstations in both the brake and wheel bays, alongside staff upskilling and retention initiatives, have created scope for 15% more workload.

We have also strengthened alignment with Safran Landing Systems, expanded our compliance and technical department, and placed strong emphasis on training and inclusion to ensure all staff can develop, progress and remain motivated long term.

Priority investment areas

To support the evolving MRO sector, we have made targeted investments across several key areas.

Automation has been introduced into core workshop processes to improve efficiency, consistency and TATs.

Advanced OEM-approved tooling and test rigs have been acquired, while workshop infrastructure has been modernised to handle larger and more complex work scopes.

Inventory management has also been strengthened through enhanced spares holding, reducing delays caused by supply chain constraints.

At the same time, structured training programmes, tiered career frameworks, mentoring and inclusion initiatives are helping to develop skills, support progression and ensure staff retention.

Q4 2025 and 2026 outlook

As 2025 draws to a close, we are focusing on several priorities for the year ahead. These include further reducing turnaround times through automation and process optimisation, while expanding capability to cover new aircraft types and emerging technologies such as electric brake systems.

Sustainability remains central, with initiatives in waste reduction, energy efficiency and recycling. We are also leveraging artificial intelligence (AI) – aligned with VSE policies – for demand quoting, forecasting and quality trend analysis.

In addition, deeper collaboration with OEM and airline partners, alongside continued investment in staff training, tiering, inclusion and retention, will ensure long-term capability and engagement. ●

◀ Rotable Repairs has achieved capacity gains through smarter facility layouts, more workstations and seven-day shifts



For more information on Rotable Repairs, visit rotablerepairs.com





BUILDING CUSTOMER TRUST

CFM56 - V2500 - F108 - F100 - CF34 - CF6 - LEAP - APU's

- ❖ **Fuel Nozzles**
- ❖ **FCU's**
- ❖ **Starters**
- ❖ **Wire Harnesses**
- ❖ **Thermocouples**
- ❖ **Component Repair**
- ❖ **No Clean Test Inspect charge if B.E.R.**
- ❖ **Highest Yields in the industry**
- ❖ **30 Day Turnaround Time**

www.3nnns.com



Federal Aviation
Administration



EASA
European Aviation Safety Agency



AS9100D
CERTIFIED
ISO 9001



ITAR
REGULATORY COMPLIANCE





WHEN EVERY MINUTE MATTERS, **RELIABILITY WINS.**

Advancing Fleet Reliability With AI-Driven Predictive Maintenance

An integrated, AI-powered approach to help MROs work smarter by streamlining maintenance tasks, reducing costs, and accelerating turnaround times. Veryon delivers real-time insights and decision support, powered by the industry's largest de-identified dataset and tailored to your operation, so you can anticipate issues, optimize resources, and keep maintenance moving with confidence.

Veryon AIRE delivers:



Smarter, Faster Fixes

Recommends the most likely fixes to boost first-time-fix rates; enables technicians to ask publication-specific questions and jump directly to troubleshooting steps.



Intelligent Fleet Management

Automates routine work, reduces maintenance expenses, and optimizes critical maintenance tasks and inventory management.



Enhanced Reliability

Surfaces chronic patterns, rogue components and short-life parts, and trend degradation early, before they escalate into unexpected AOGs.



SEE HOW VERYON AIRE HELPS YOU FLY
SMARTER, LONGER, AND MORE RELIABLY.

SCAN TO LEARN MORE



veryon.com 1-800-747-4560
learnmore@veryon.com

Smarter, not harder

Ahead of the Predictive Aircraft Maintenance (PAM) Conference returning to Dublin in November, *MRO Management* asked **Sander de Bree**, from event sponsor EXSYN Aviation Solutions, his thoughts on the landscape of predictive maintenance



“**AI and machine learning will play a growing role, but they must remain tools, not goals**”

SANDER DE BREE

founder and chief visionary,
EXSYN Aviation Solutions

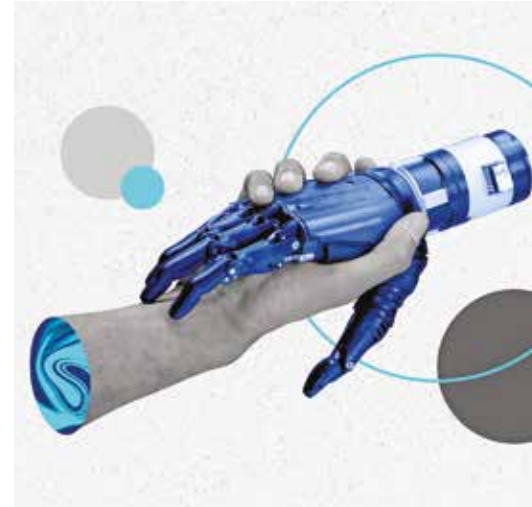
▶ How do you define predictive maintenance, and where is it delivering the most value for operators today?

Predictive maintenance in aviation is ultimately about anticipating technical events before they occur, using data and technology to shift from reactive or scheduled interventions to timely, condition-based actions. But I would stress that predictive is not a one-size-fits-all capability. It's an outcome of maturity, of having the right data, tools and organisation trust in place.

Where we see it adding most value today is in very specific use cases: identifying developing trends in systems with strong historical baselines or critical operational impact. Think of repeaters in the cabin or ATA chapters like 36 (pneumatics) and 27 (flight controls), where early signals can translate directly into fewer AOGs, smoother operations, or longer component lifespans. The key is to keep it simple. Predictive isn't about predicting everything; it's about making a few key areas more predictable and reliable.

▶ How is EXSYN Aviation Solutions helping airlines and MROs implement predictive maintenance?

We help operators take a step-by-step, data-first approach. Rather than selling 'AI magic', we focus on aviation-native tools that improve the trust, continuity and usability of aircraft data, because that's the real foundation for predictive. A big part of that is helping engineering teams build confidence in their own



▲ AI should enable, not define

data. Many CAMO teams still question whether their systems reflect what's happening on the aircraft. By surfacing discrepancies, standardising inputs and making data traceable, we help restore that trust.

Our platform is modular by design. Some operators start by automating reliability reporting or connecting OEM data streams. Others focus on standardising health checks or improving how findings from different data sources are correlated. In every case, we help teams work with the data they already have, make it cleaner and more connected, and then layer predictive logic where it makes operational sense.

Some examples include component failure prediction for specific identified critical parts based on maintenance



◀ EXSYN Aviation Solutions' platform is modular by design with some operators automating reliability reporting or connecting OEM data streams

“Predictive maintenance should feel less like a tech initiative and more like a natural evolution of how we manage aircraft health”

history and flight data, or prediction of material allocation to maintenance bases for line and heavy maintenance.

Airlines often ask how others use these dashboards. The key is ease and relevance. Our tools integrate into daily CAMO workflows, with predictive alerts linked to maintenance events or tasks to make them actionable. Dashboards are intuitive for engineers yet detailed enough for analysts.

Predictive maintenance is complex under the hood, but unless it's user-friendly and easy to explain, it won't be used, no matter how smart it is. That is a guiding principle in everything we build.

▶ What challenges exist in scaling predictive maintenance across fleets, and how is EXSYN Aviation Solutions helping to overcome them?

The main challenge isn't technology but consistency. Airlines operate diverse fleets with different system maturity and data quality, making it hard to scale one predictive logic across all aircraft types or tail numbers..

Another challenge is trust. Many CAMO and engineering teams still use spreadsheets or manual analysis because past systems lacked transparency and reliability. Predictive tools must prove themselves by being

consistent, easy to interpret and grounded in daily operations, with clear logic that teams can validate and act on.

EXSYN Aviation Solutions addresses this by focusing on data continuity. That means ensuring aircraft data remains accessible, usable and comparable across time, system changes, or fleet transitions. We also prioritise transparency in how predictive logic works, so engineering teams can understand the reasoning behind insights and integrate them confidently into their workflows.

▶ How do you see predictive maintenance evolving over the next few years?

I believe predictive maintenance will become more integrated into daily maintenance control and engineering decisions, but only for operators who have invested in their data foundations.

AI and machine learning will play a growing role, but they must remain tools, not goals. The key will be combining domain expertise with statistical or model-based signals in a way that complements human judgment. This hybrid approach is where predictive has the best chance of delivering real value.

I also expect regulatory perspectives to evolve. As predictive tools shape maintenance decisions, clearer

standards, validation and accountability will be needed. Transparency and data integrity will be as important as model sophistication. EASA has already moved with PART-IS on information security and launched an AI working group publishing its first views.

Ultimately, predictive maintenance should feel less like a tech initiative and more like a natural evolution of how we manage aircraft health – supported by better data, clearer tools and smarter collaboration between OEMs, airlines and MROs. ●



MRO Management's Predictive Aircraft Maintenance (PAM) Conference 2025 is returning to Dublin. Taking place in on November 11-12, leading airlines, OEMs, MRO specialists, data experts and technology providers will come together to explore how innovation is reshaping and streamlining aircraft maintenance.

Thank you to our Exhibitor Sponsor, EXSYN Aviation Solutions, for supporting PAM Dublin 2025.



For more information and how to register to attend, scan the QR code above or visit predictiveaircraftmaintenance.com



NitroPURE[®] ASM

DON'T BUY NEW

REPAIR

YOUR ASM!

B737

B747

B757

B767

B777

A320

Coming Soon:

A220, A330, A350

A COMPONENT OF

AeroParts
INGS

**INTEGRATED NITROGEN
GENERATING SOLUTIONS**



Learn more at
MRO Americas
2025!

Visit us at booth
#1223



SMART, SUSTAINABLE, AND FUTURE-READY

Hangar infrastructure is evolving fast, with digital tools, cloud systems and flexible designs reshaping how MRO facilities improve efficiency, sustainability and long-term resilience

Airlines, MROs and airports are investing heavily in next-generation infrastructure, with new hangars and maintenance bases designed to support larger aircraft, new propulsion technologies and stricter environmental standards. Yet in this fast-moving landscape, one area of infrastructure is often overlooked: the hangar door.

Champion Door, a Finnish manufacturer of large industrial doors, is working to change that perception. Under the leadership of chief executive Pekka Hosio, the company has developed a portfolio of intelligent, sustainable, and highly adaptable hangar door systems that are finding customers across the world.

“What sets Champion Door apart is our focus on smart innovation and project expertise,” Hosio says.

“We were the first in the industry to introduce a visual remote operation and management system – CD Cloud – that brings real intelligence to hangar doors.”

By marrying decades of engineering experience with cutting-edge digital tools, the company is positioning itself as a critical partner in aviation’s ongoing transformation.

The rise of intelligent hangar doors

Across the aviation sector, digitalisation is becoming the norm. From predictive maintenance platforms to AI-enabled flight operations, the industry is learning to unlock the value of data. Hangar doors are no exception.

Champion Door’s flagship innovation, the CD Cloud system, integrates automation, IoT and remote management to provide operators with

real-time visibility of their hangar doors. A 3D interface displays the condition of motors, panels and other components, making diagnostics accessible even to non-technical staff.

“One key benefit is reduced downtime,” Hosio explains. “Local maintenance teams can remotely access the system and, in many cases, bypass non-critical issues without a service visit. This not



◀ Pekka Hosio, chief executive, Champion Door

only cuts operational interruptions but also minimises travel-related costs and emissions.”

In an era when every delay has a cost, this capability is proving valuable. Airlines and MROs are under pressure to maintain fleet readiness despite ongoing supply-chain challenges and labour shortages. By reducing unnecessary service call-outs, CD Cloud not only saves money but also supports sustainability targets.

The company has also digitalised the sales and planning process. Its intuitive configurator tool allows customers to design doors to their exact specifications, from multiple leaf configurations and crane openings to colour schemes and features, while visualising the impact of changes in real time. Dealers benefit from a dedicated management panel, speeding up quotation accuracy and project delivery.

Sustainability built into every design

Sustainability is now a central theme in every aviation infrastructure investment.

“The hangar door has become more than a functional necessity – it is part of a broader push to integrate digitalisation, resilience and sustainability”

Whether driven by regulatory requirements, net-zero roadmaps or cost-saving imperatives, operators are demanding solutions that reduce energy use and environmental impact. Hosio notes that Champion Door has embedded sustainability in both product and process.

“Our thermally insulated fabric doors are designed to minimise energy loss, especially in extreme climates, directly supporting our clients’ energy efficiency targets,” he says.

The CD Cloud contributes to this effort by reducing travel for diagnostics and maintenance, while the company’s production facility in Finland recycles 100% of its waste. Even during the product lifecycle, sustainability is considered: doors can be repaired panel by panel rather than replaced in full, reducing material use and cost.

“In our industry, it’s not only about building strong products – it’s about making them last and making sure they are easy to maintain over decades,” Hosio adds. “That is also part of sustainable development.”

Global markets, local requirements

Champion Door’s customer base spans Europe, the Middle East, North America and, increasingly, Asia-Pacific, where airport and MRO infrastructure investment is accelerating. Each region brings distinct environmental and operational requirements.

“In regions like Asia-Pacific, where climate conditions vary widely, our doors are engineered to withstand extreme

◀ A large hangar door for Etihad Airways, manufactured by Champion Door



an EASA Part-145 approved organisation

Where our heritage in aviation maintenance and management blends seamlessly with our commitment to quality and excellence.



WORLDWIDE FLIGHT MECHANIC SERVICES



Our team of EASA-licensed flight engineers stands ready to join your crew, offering technical expertise that keeps your flight operations running smoothly and efficiently.

LINE MAINTENANCE



We perform EASA approved Line Maintenance with a current focus on China and Kazakhstan.

WORLDWIDE AOG RECOVERY



With rapid response times, we specialise in Aircraft on Ground (AOG) recovery, minimising downtime and allowing fast recovery of your aircraft.

FAST REACTION AD HOC LINE STATION SETUP



We are equipped to facilitate the creation and operation of an EASA Part 145 certified line station at any global location, ensuring seamless service tailored to your unique maintenance needs.

CONSULTANCY



Leverage our consultancy services for independent audits, line station efficiency evaluations, and strategic planning for line stations and flight engineer programs.

Learn More <https://www.hancock-aviation.de/>



◀ Champion Door created a large hangar door for Job Air Technic at Ostrava-Mošnov airport

temperature shifts, humidity and high wind loads,” Hosio says. “We use durable, chemical-resistant PVC materials for areas with heavy de-icing or coastal exposure, and we offer specialised fabrics for unique environments such as sandblasting facilities.”

Flexibility is a defining feature. Beyond climate resilience, doors can be customised with acoustic insulation, UV and mould protection, burglary-proof materials, fire resistance, or even translucent fabrics for natural light. Branding can also be incorporated, with printed designs turning hangar doors into architectural statements.

This adaptability has become a selling point as airports and operators look to maximise the value of infrastructure projects. A hangar door that performs reliably in harsh environments while offering operational efficiencies can make a measurable difference to long-term cost of ownership.

Preparing for tomorrow

Perhaps the biggest challenge for aviation infrastructure providers is uncertainty over the future fleet mix. With manufacturers exploring larger aircraft dimensions and alternative propulsion systems, hangars must be ready for designs that could look very different from today’s airliners.

Champion Door has responded by making flexibility its core design principle. “Our hangar doors are fully customisable with no size limitations – we scale the structure and frame strength according to the specific door dimensions, wind loads, and required features,” says Hosio.

The ability to install doors inside or outside the building, or directly onto the opening frame, provides additional

versatility. Meanwhile, the company is designing for resilience as well as scale. For military customers, hydraulic emergency opening systems ensure doors can be operated even during a power outage – an important feature in environments where operational readiness is critical.

“Our goal is to make sure our doors not only meet today’s aircraft demands but are ready for the aircraft of tomorrow,” Hosio stresses.

Competing in a crowded market

The hangar door sector is not without competition. Several established players serve global aviation customers, often with decades of experience in steel and fabric door design. But Champion Door is betting on a combination of smart technology and project management expertise to differentiate itself.

“What truly makes us champions is our team,” says Hosio. “With decades of experience, we’ve refined every part of our process – from sales and design to manufacturing and delivery. We don’t just supply doors; we manage large-scale, complex projects with precision. That’s our core strength and what our customers rely on globally.”

In practice, that means Champion Door is not just delivering products but helping customers manage the full life cycle of hangar infrastructure – from planning and procurement to installation and long-term support. This consultative approach is increasingly valued in a market where aviation stakeholders are wary of complexity and cost overruns.

The bigger picture

The company’s strategy aligns with broader trends in aviation infrastructure

investment. Across regions, airports and MROs, providers are racing to expand capacity and modernise facilities to accommodate rising passenger demand and next-generation aircraft.

In Europe, sustainability mandates are shaping procurement decisions, with carbon-neutral infrastructure targets accelerating adoption of energy-efficient building technologies. In Asia-Pacific, fleet growth and climate extremes demand custom-engineered solutions. In North America, investment is driven by ageing facilities in need of renewal. Against this backdrop, the hangar door has become more than a functional necessity – it is part of a broader push to integrate digitalisation, resilience and sustainability into aviation’s physical footprint.

Looking ahead

For Champion Door, the next phase of growth will likely involve deeper integration of smart technologies into its portfolio, building on CD Cloud to provide predictive maintenance and integration with wider airport and MRO management systems.

Hosio is confident that the company’s blend of innovation and expertise will keep it ahead of the curve: “We’ve always believed that doors should not be passive elements of infrastructure. They should be smart, sustainable, and adaptable – supporting our customers’ operations in every possible way.”

As aviation faces the twin imperatives of sustainability and technological transformation, Champion Door’s approach to intelligent, future-ready hangar doors offers a glimpse of how even the most established parts of aviation infrastructure are evolving to meet the needs of a new era. ●

Aircraft livery branding, placards, markings & MRO consumables



Design: Livery concepts, technical drawings, customisation & 3D renders.

Manufacture: Production of certified livery decals, large scale wraps & 3D paint masks, all with aircraft approved film.

Installation: Highly skilled & dedicated Larchfield teams to oversee projects with minimal downtime, anywhere in the world.



**GET IN TOUCH TO DISCUSS YOUR
NEXT LIVERY PROJECT**

+44 1732 369757
sales@larchfield-aerospace.com
www.larchfield-aerospace.com

IT'S A WRAP!

BRIDGING THE GAP

Aviarena Trading's **Bas van Lammeren** highlights how smarter procurement and stock strategies are reshaping the spare parts market

The aviation aftermarket faces a persistent challenge: the shortage of critical spare parts. With OEMs often quoting long lead times for essential components, MRO providers and operators are under growing pressure to keep aircraft operational while minimising repair turnaround times. In an industry where every grounded aircraft represents lost revenue, this issue has become one of the most urgent to solve.

Traditionally, MRO shops have relied heavily on OEMs for spare parts, but today's supply chain realities have exposed the limitations of this approach. OEMs are often constrained by high demand, limited production capacity and global logistics bottlenecks. The result: waiting periods that stretch repair timelines, delay shop visits and compromise overall fleet availability. This dependence has prompted the aftermarket to explore new strategies to secure parts faster and more efficiently.

One of the most effective responses has been diversified procurement. Instead of relying solely on OEM pipelines, providers are sourcing parts



“
MRO providers and operators are under growing pressure to keep aircraft operational while minimising repair turnaround times
”

BAS VAN LAMMEREN

sales manager, Aviarena Trading

through multiple channels to ensure availability. This includes working with independent distributors, surplus suppliers and aftermarket specialists who can deliver certified components with shorter lead times. By holding parts in stock or securing them in advance, MROs can immediately reduce turnaround times at their shops and return aircraft to service more quickly.

Another key practice is the use of part exchanges and pooling agreements. These arrangements allow operators and service providers to share resources, accessing spare parts from a broader network rather than waiting for OEM delivery. In addition, some MROs are expanding in-house repair capabilities

for specific components, enabling them to refurbish or overhaul parts internally rather than depending entirely on external supply.

The impact of these strategies is significant. Shorter lead times not only accelerate repairs but also strengthen relationships with customers who value reliability and speed. Airlines, under constant financial and operational pressure, benefit from reduced downtime and more predictable maintenance schedules. For MRO providers, offering ready-to-go spare parts becomes a competitive differentiator, setting them apart in a crowded aftermarket landscape.

Looking ahead, the industry is expected to further embrace digital solutions to enhance spare parts management. Predictive demand planning, powered by data analytics, will allow providers to anticipate which components are likely to be needed and secure them before shortages occur. Online marketplaces and digital inventory platforms will also make it easier to source and track parts across global networks.

In the end, the message is clear: the aviation aftermarket cannot afford to depend exclusively on OEM supply chains. By pursuing smarter procurement and maintaining a ready stock of spare parts, the sector is finding practical ways to keep aircraft flying, reduce turnaround time, and deliver greater value to customers. ●

◀ Aviarena Trading is based in The Netherlands



For more information about Aviarena Trading, visit: aviarena.com





ACCESS SOLUTIONS AND DOCKING SYSTEMS FOR AIRCRAFT MAINTENANCE OPERATIONS



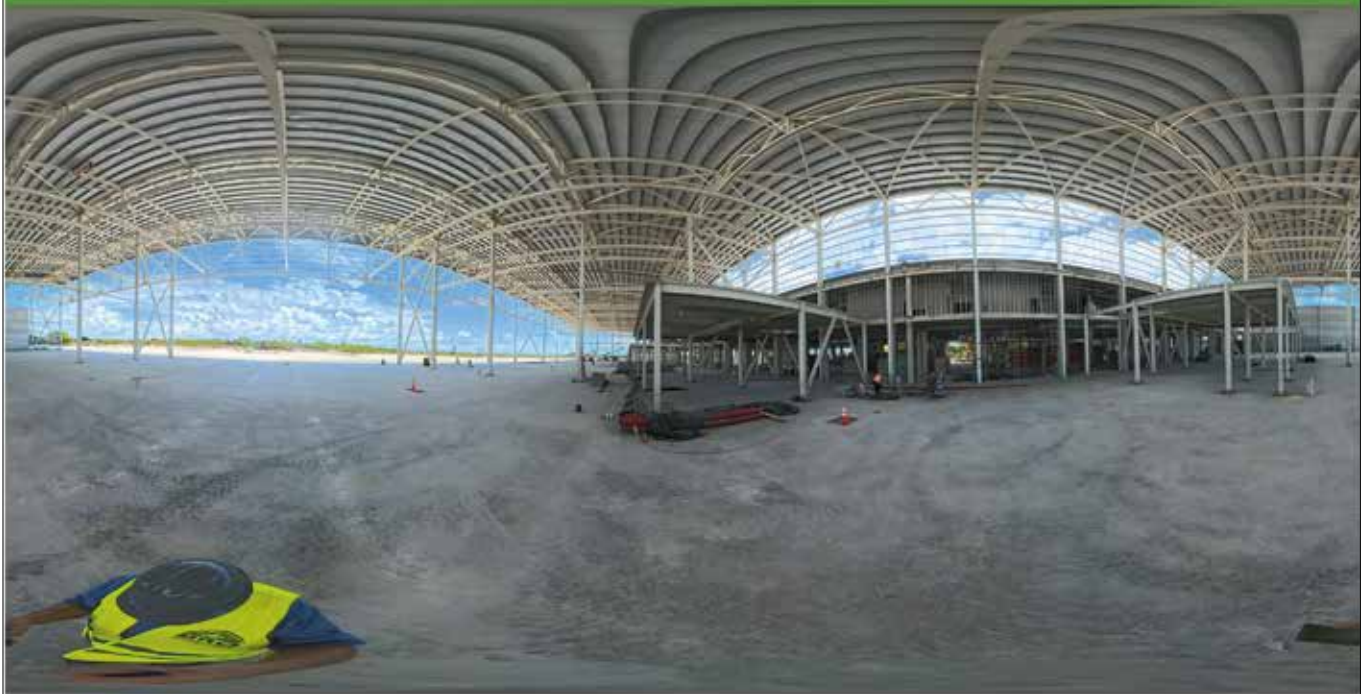
USA | CANADA | GERMANY | FRANCE | UNITED KINGDOM | ITALY | BELGIUM | SPAIN | BRAZIL | NETHERLANDS | SOUTH KOREA | PORTUGAL | SAUDI ARABIA | QATAR | LIBYA
BAHRAIN | JORDAN | MOROCCO | MALTA | PUERTO RICO | SOUTH AFRICA | SLOVENIA | ROMANIA | SINGAPORE | GREECE | BULGARIA | SWITZERLAND | TURKMENISTAN

+90 536 953 06 80

www.makroaero.com

t.taskiran@makroaero.com

360 DEGREE SUPPORT FOR **YOUR** MRO PROJECT



INTERESTED? VISIT
www.mro-facilities.com





ABNCAST

FDH Aero stepping up to the people challenge

At this year's Paris Air Show **ABNcast** caught up with Ian Walsh, the new chief executive of global aerospace parts supplier FDH Aero

Last year, FDH Aero was one of seven inaugural winners of *Aviation Business News'* Best Places To Work In Aviation, an accolade based on what employers tell us about their employer.

In an episode of ABNcast, ABN's Lee Hayhurst asked the company's new chief executive, Ian Walsh about the role he sees FDH playing in promoting the sector as an employer of choice and the changing skill sets it requires.

"I think it's a shared challenge for industry," he said. "The jobs required today are highly skilled, there's a lot of machine technology required, a lot of automation, and filling those jobs with the right people is a challenge.

"The next generation of folks don't necessarily migrate to those types of jobs and yet, as industry leaders and businesses, we have to make those jobs really attractive.

"We have to pay attractive salaries and provide the right benefits and incentives because they are wonderful jobs, they are stable jobs because we're in a really important industry. The aerospace and defence industry is in my blood, but

**“
We have to continue
to advertise and
promote our
industry
”**

we have to continue to advertise and promote our industry.

"The skill sets required for us are also changing. Being able to source, ship and pack parts is important, but now it's really understanding the data and the logic around what types of parts we should be buying, what types of parts customers need.

"How do we study and understand and optimise the level of inventory that's required to support our customers? We're really concentrating on how we become more intelligent buyers of the right types of inventory and how we manage that inventory effectively for our customers.

"We want to be more sophisticated, we want to be more intelligent, and that takes

training. It's the adoption of digitisation and how you can leverage AI, because there is a tremendous amount of data. And it's about making the supply chain as efficient as possible.

"Having been on the OEM side for many years, and now in distribution, you realise that there's a really important balance. The other thing from the customer side is variation – the pulling and pushing of supply and demand.

"You have to be able to shift rapidly if demand changes; we're trying to be the most optimised provider so we can eliminate a lot of that variation for our customers. That's what kills businesses, when they have to deal with variation." ●



This interview originally featured on a special Paris Air Show episode of ABNcast, the podcast from *Aviation Business News* (ABN), the parent media brand of *MRO Management*.

To subscribe go to ABN's YouTube channel [youtube.com/@aviationbusinessnews](https://www.youtube.com/@aviationbusinessnews) or scan the above QR code.



◀ Lee Hayhurst
with FDH Aero's
Ian Walsh



NCE North Composites Engineering Ltd



Composite Training

Unique provider of composite training solutions.

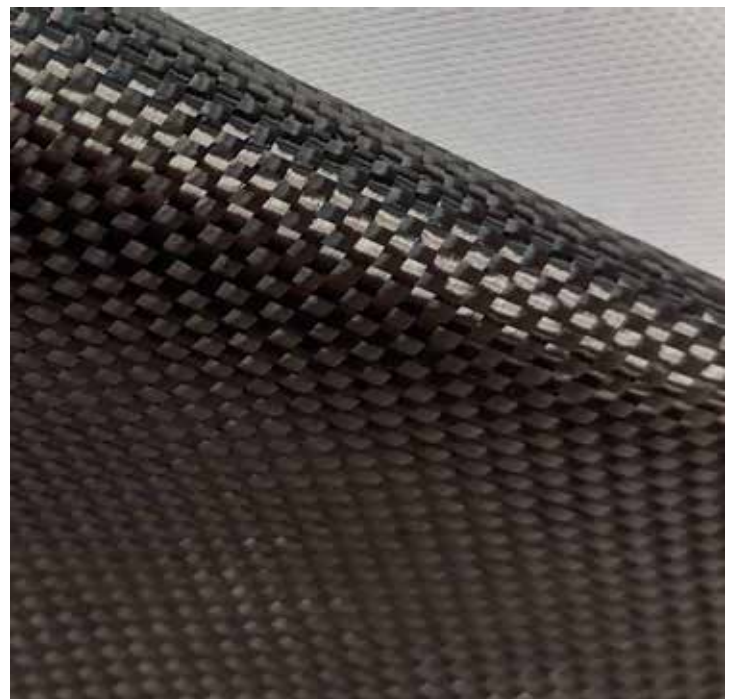
Specialist in Aerospace, Marine, Rail and Automotive sectors.

Courses in Composite Design, Manufacture, Repair and Analysis.

Equipment Supply

OEM for composite curing and repair equipment.

Specialised equipment for Manufacturing, Repair, Dust and Fume control.



Ready to expand your horizons
Visit our website
www.northcompositesengineering.co.uk



Advantage Daily News

OCTOBER 2025

ADVANTAGE

ADVANTAGEAVIO.SE

HIGHLY EXPERIENCED INDUSTRY PROFESSIONALS

The one-stop shop for Aviation Spare Parts, Engine Maintenance & Asset Management

"We can cater for all your needs"

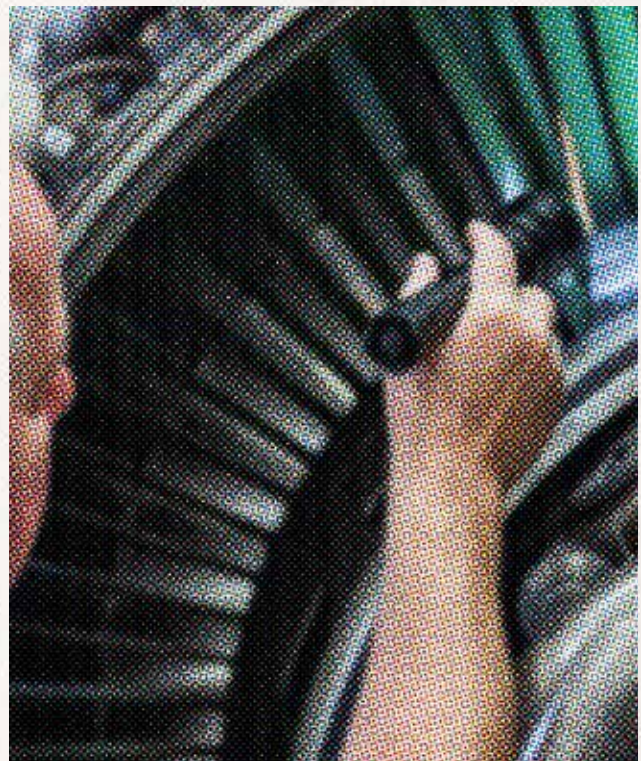
We offer flexible, affordable spare parts solutions to improve the end-user's operational efficiency. Our professional teams are dedicated to service and quality in every step of the process.

ADVANTAGE AVIATION was founded in Sweden in 2013. What started with an idea by 4 individuals has now grown into business with 20 employees on 2 continents. We have a wide network of reliable sup-

pliers and a stock of our own to supply parts for all needs.

ADVANTAGE TURBINE is an EASA & FAA Part 145 Approved Engine MRO specialized in field service. With our in-depth technical expertise, long industry experience and flexibility, we can help you manage your engine repair projects completely through the repair cycle. All maintenance services are carried out under our own approvals.

ADVANTAGE ASSET provides products and services regarding management, purchase and sale of new or used aviation assets. Technical experience, marketing skills and ethics, as well as our global network of industry experts enable us to deliver results under the best conditions. Advantage Asset has completed over 100 engine sales transactions, and more than 20 successful aircraft transactions.



With our assistance, your engine will get the attention it deserves. Our maintenance organization consists of a highly experienced team with long industry experience.

If your turboprop or turbofan engine requires maintenance, we can help you manage your engine repair projects completely through the repair cycle.

Get on board with Advantage!



We have a long experience of asset management, such as MRO & CAMO services, trust solutions, and finance & insurance. We can cater for all your needs.

Expertise in Aircraft Component Repair

We have a track record of success, with a proven history of successfully managing repairs and maintaining high customer satisfaction.

Cost Efficiency: Leverage our established relationships with repair shops to negotiate competitive pricing and reduce repair costs.

Accelerated Turnaround Times: Benefit from our proximity to repair facilities to expedite the repair process and minimize downtime.

End-to-End Management: Comprehensive service that includes logistics, repair coordination, quality assurance, and final inspection.

Customized Solutions: Flexible repair management tailored to meet the specific needs and requirements of your aerospace components.

Dedicated Support: Expert team available to handle inquiries, provide updates, and offer support throughout the repair process.

Regulatory Compliance: Ensure all repairs meet rigorous FAA and EASA standards for safety and performance.



Our facility in Lakeland, FL, is near numerous aviation repair shops & has a valuable local connection, based next to Lakeland Linder International Airport.



AGILITY LESSONS FROM F1

Red Bull Racing has pioneered the adoption of Hexagon high precision equipment.

Lee Hayhurst joined an aerospace innovation day at its Milton Keynes HQ and heard aviation can learn much from automotive design and the leading F1 team

A growing need for speed and agility in aerospace engineering, MRO and inspection is driving the sort of innovation in new processes and equipment seen in F1 racing.

Industry experts joined a panel during the Hexagon Oracle Red Bull Racing event to discuss how aviation is adapting to these increased demands while retaining the focus on quality.

Riana Rarimamonjy, Hexagon senior director, aerospace accounts, said MRO is becoming an increasingly important area as demand soars but supply chain pressures persist.

She said the push for greater agility “is everywhere” but there is a need to share more know-how to achieve it. “If you need experience to bring innovation to the market, it’s an issue.

“We are all working on how to bring innovation to the market in a shorter timescale to tackle issues like sustainability, and also because the aerospace demand is growing.

Rarimamonjy continued: “MRO is a big topic which is increasing at least as fast as the original equipment, so it’s all about having quick turnaround times, quick maintenance and solutions like automation.”

Andy Francis, technology director – automation at GKN Aerospace, said aerospace is looking to the automotive industry to learn how it can speed up its processes while maintaining quality.

He explained that this is being driven by the demands of emerging subsectors in aviation such as urban air mobility, which requires a much quicker rate of turnaround. “I think it’s fair to say that things are changing in civil airframe,” said Francis. “If you look back, say, 10 years ago, the word agility and civil airframe didn’t really go hand in hand.

“But recently, with the introduction of urban air mobility and advanced air mobility aircraft, that’s causing us within civil aviation to relook at our processes. Now we need to do something much faster. Along with that comes quality challenges.”

“Aerospace is looking to the automotive industry to learn how it can speed up its processes while maintaining quality”



▲ Industry experts discussed how aviation can get the measure of agility while maintaining quality

Francis continued: “We’re learning pretty quickly that the cost of qualification and certification of new processes and methods is extremely high, so we need to get it right first time.

“Getting that process control into the design phase is really key for us, so it’s early on, when we start thinking about these concepts, about what do these aircraft look like.

“We’re trying to educate our designers in terms of how they manage certain features so they are measurable, so when we get to production line, we’re not experiencing issues.”

Steve Beasley, chief executive of Metrology Engineering Services, said when on the coal face of AOGs in aerospace, quality and complying with stringent rules are a non-negotiable. “That level of quality has to come through in everything that we deliver,” he said.

“Similar to the F1 industry, we have stringent rules for getting that asset back into service, so it’s paramount the equipment we use does what we say it does. It’s a constant recirculation of that quality.”

He added: “It comes down to understanding the data: what are you looking for? What are your priorities? What data are you looking for and how can we present that in the right way?”

As the equipment used to measure becomes ever more precise, it is redefining measurement across sectors – not just manufacturers and MROs but also regulators and other stakeholders.

Beasley commented that MES has had an instance of an insurer using a manual inspection method to verify their digital measurements.

In F1 the sport’s regulator, the FIA, now uses Hexagon equipment to verify the fine measurements teams make to prove they are within the regulations. ●



▲ The Hexagon Oracle Red Bull Racing event

Hexagon equipment demonstrated at the Red Bull Racing aerospace innovation day:

PRESTO X – a new fully automated inspection cell developed to inspect large aerospace components

MAESTRO – a next-generation coordinate-measuring machine designed to deliver faster and more precise inspections

ATS800 – a laser tracker that enables real time and overnight inspections for large structures, eliminating the need for scaffolding and manual measurement

Digital Factory as-a-service – creates an accurate 3D digital twin of a manufacturing or engineering facility for optimal use of space



Hexagon’s 2025 Advanced Manufacturing Report – Key Findings

Hexagon commissioned a report with Forrester Consulting to gauge sentiment across five sectors: Aerospace & Defence; Automotive; Electronics; Healthcare; and Energy.

39%:

the top priority for C-suite executive was agility with rigid processes seen as hindering adaptability.

Manufacturers identified four key areas to address to ensure that the need for quality does not limit the ability to be agile:

1. 91%:

expect investment in artificial intelligence (AI) to deliver quality improvement

2. 78%:

cited the need for greater supply chain information sharing and collaboration

3. 75%:

wanted to see more prioritising of earlier designs to improve quality

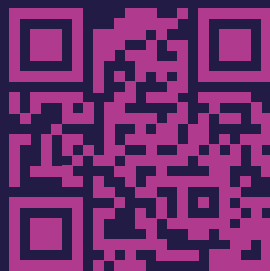
4. 72%:

said a key area of focus needs to be automation



BARNES™
AEROSPACE

The Future Starts Now



FLYING HIGH

EirTrade Aviation's **Tony Ramage** on how Asia-Pacific is cementing its role as a fast-growing hub in global commercial aviation

Mid-September in Singapore witnessed the annual MRO Asia-Pacific conference and exhibition in full swing, with several halls of the expo site fully occupied and much engagement between visitors and exhibitors.

The same month also saw MRO Management's inaugural Predictive Aircraft Maintenance (PAM) conference to be held in Asia, following previous success in both Dublin and London. EirTrade Aviation actively participated in both events which were well attended, and delegate feedback was positive. It was particularly encouraging to see a high level of engagement at the PAM conference, reflecting interest from both airlines and suppliers (OEM and third-party) in what is rapidly emerging as a key area of interest and focus for operators, as they look to optimise aircraft maintenance in terms of component availability, downtime and cost.

As the impact of Covid-19 continues to recede, it is evident that the Asia-Pacific region is at the forefront of global



“
The EirTrade Aviation team is expanding in the Asia-Pacific region to meet huge future potential and develop opportunities
”

Tony Ramage, director – origination and trading (APAC), EirTrade Aviation

growth, and this is naturally reflected in commercial aviation activity.

Airline schedules are now largely back to pre-pandemic levels, load factors are high, and the demand for air travel is sustained. This in turn is influencing increased demand for aircraft, with significant new orders and lease extensions commonplace.

With the ongoing OEM challenges in new aircraft delivery, from both a supply chain limitation and availability perspective, increased utilisation of current aircraft and engine assets is, in turn, driving maintenance and parts requirements. Demand for MRO capacity, both in the region and globally, is rising fast. This is acting as a catalyst for significant expansion of MRO

capability within Asia-Pacific which is already underway and will be most welcome once operational.

Given some of the intra-regional distances involved, exciting times are also ahead as new aircraft variants such as the Airbus A321XLR start to deliver. These aircraft will eventually be deployed to open up new 'long/thin' routes or provide additional off-peak frequency, thereby providing enhanced capabilities to operators and freeing up widebody capacity for use on high traffic routes. The region will also see continued deployment of widebody aircraft on short- and medium-haul routes to address passenger demand.

The EirTrade Aviation team is expanding in the Asia-Pacific region to meet huge future potential and develop opportunities, especially given the backdrop of large installed fleets of attractive assets such as the A320ceo family, 737NG, A330, 777-300ER and older 787 variants, across multiple airlines. We know that these will eventually be replaced with new-technology aircraft, and older examples will make excellent candidates for disassembly and enable us to harvest USM which can be provided back into the market to support remaining operational assets.

Given the size of the current fleet in the People's Republic of China, it is particularly gratifying to see international investment in facilities which will enable material to be removed with a CAAC tag to enable ongoing use in country. ●

◀ EirTrade Aviation's disassembly team is composed of skilled aircraft mechanics



For more information about EirTrade Aviation, visit: eirtradeaviation.com



ACTC

For the complete parts support solution..



M.D. Caner Önder



Since 2011 ACTC has delivered fast, flexible, customer focused aviation support.

With regional offices in Belgium, Romania, Turkey, Spain and the UK and a 24/7 “always operational” Global distribution hub, we move quickly. Our customer first mantra, delivers time critical procurement solutions, focused on the quality of products and service, not in adding AOG or DG packing surcharges.

Our vast multi-platform stock holding supported by our hand-picked network of Operators, OEMs, EASA/FAA/CAA Part 145 repair partners and approved distributors facilitates an incredibly fast response to all your routine and AOG sourcing requirements.

This infrastructure coupled with ACTC’s vast knowledge and experience allows the ACTC team to provide unparalleled AOG support to all our customers all year round.

From inventory to end-of-life asset strategies, we tailor solutions that cut costs, not corners.

Our Services:

- Consulting
- Repair & Purchasing management
- Warehousing and Logistics
- Inventory management
- Manned 24/7 AOG service desk
- Asset management

Our Products:

- 24/7 - 365 days operational
- Sales, Loans, Exchanges
- Power by the hour (PBH)
- Consignment sales & Marketing
- Tooling, consumables & Utilities
- Aircraft Dismantling

ASA-100, FAA AC00-56, ISO 9001:2015, EN 9120:2018 accredited



Join us at Europe's premier MRO aviation event
15th-16th Oct, London Excel centre, North halls, Stand 3739.





1 USING THE DIFFICULTY

AerFin chief executive **Simon Goodson** explains how aircraft owners are turning to strategic teardowns to overcome mounting supply chain pressures

In years past, the early retirement of commercial aircraft was often seen as a red flag by owners – a symptom of soft demand, ageing technology or depressed market values. But the industry is changing.

Today, mid-life and even younger aircraft are being retired and disassembled – not because they've underperformed, but because they're unlocking more value elsewhere. Aircraft teardowns aren't just a chapter in the end-of-life playbook. They've become a strategic lever for owners navigating tough market conditions. The increased pace of mid-life aircraft teardowns is not, in itself, a signal of market strength. It's a direct consequence of constrained supply chains and pressure on the OEMs to meet rising demand for new production, servicing and aftermarket support.

For owners, these circumstances can trigger real commercial challenges as they contemplate how to best transition or monetise aircraft assets being redelivered earlier than planned. But some are using

this difficulty to their advantage. Rather than sitting still, they're seeking confident, reliable partners to help them extract maximum value from these challenging situations. That's where AerFin comes in.

At AerFin, we're currently disassembling several A320neo aircraft – one of the most successful narrowbody aircraft platforms in aviation history, with over 10,000 orders and widespread adoption by operators worldwide. AerFin's acquisition of these 2017 vintage aircraft presents a key opportunity to support active fleets by making high-quality parts available in an aftermarket where demand exceeds supply. This is the new reality for aviation.

The reality behind early teardowns

Aircraft like the A320neo were never expected to hit the dismantling phase so early in their lifecycle. As one of the most advanced and efficient narrowbody platforms in operation, the A320neo family remains in high demand across global fleets. Yet, multiple units

“Mid-life and even younger aircraft are being retired and disassembled – not because they’ve underperformed, but because they’re unlocking more value elsewhere”

are now being torn down, not due to a lack of desirability, but because owners are responding to real-world constraints.

Each teardown yields approximately 1,400 high-quality parts, many of which are urgently needed by operators facing long lead times and rising costs from the OEMs. These parts don’t sit idle. They go straight back into the market, supporting active fleets and helping operators avoid grounded aircraft and inflated maintenance bills.

The economics of the aftermarket are increasingly pointing to earlier-than-planned teardowns as a smart, proactive strategy. Operators are under pressure to reduce maintenance costs, improve aircraft availability, and reduce their reliance on OEMs whose pricing structures and lead times are often difficult to absorb. This isn’t so much a story of premature retirement – it’s a story of agility. Owners are responding decisively to a supply chain bottleneck by unlocking residual value from assets that, although still viable for continued operation, offer richer potential and less risk when strategically dismantled. Parting out younger aircraft, especially those with high engine values and strong USM demand, is becoming an increasingly compelling option.

When challenges become choices

The phrase “use the difficulty” – famously popularised by actor Michael Caine – speaks to making the most of a bad situation. In the case of early teardowns, it perfectly captures the mindset of forward-thinking owners, lessors and asset managers.

Faced with operator defaults, lease returns and maintenance burdens that no longer make commercial sense, some owners are choosing to act quickly. Rather than absorbing the full weight of operational downtime or waiting indefinitely for OEM support, they are opting to part out high-value airframes and engines now – maximising recovery and minimising long-term impact.

It’s not necessarily Plan A. But it’s smart. And it requires a partner who understands how to move fast, manage risk and deliver real value in pressured situations.

The AerFin approach

At AerFin, we specialise in turning operational pressure into commercial activity. As a specialist in the teardown and remarketing of mid-life assets, we help asset owners maximise value from aircraft and engines.

Our current A320neo teardown programme is a strong example. The A320neo is not only popular, but also one of the most in-demand narrowbodies globally. Yet here it is, entering the teardown cycle. These are highly capable aircraft, equipped with sought-after components and engines in short supply. Through our agile teardown and parts recovery process, we’re able to harvest, certify and deploy material rapidly – supporting operators who need immediate, cost-effective solutions.

For operators, MROs and lessors, this is a strategic pivot. The ability to access high-quality USM sooner in the lifecycle of a fleet gives them the tools to extend the operational life of other aircraft more affordably and with less downtime.

This isn’t limited to the A320neo. Across platforms including the A320ceo, A330ceo, 737NG and E-Jet families, we’ve seen a rise in mid-life teardowns driven by similar pressures, either from supply chain constraints, shifting fleet strategies or operator insolvencies. In each case, the objective is the same: maximise value for owners and minimise operational disruption to operators through smart aftermarket execution.

A more circular, sustainable option

Beyond the commercial logic, there’s a growing environmental imperative for strategic teardown. Reusing serviceable components is a key enabler of the circular economy in aviation. Extending



▲ Simon Goodson, chief executive, AerFin

2

1. AerFin plays a crucial role in restoring balance to the supply chain
2. AerFin helps asset owners maximise value from aircraft and engines



1



2

“The economics of the aftermarket are increasingly pointing to earlier-than-planned teardowns as a smart, proactive strategy”

1,400

“With 1,400 parts harvested from each aircraft, and material already strategically placed in hubs across the globe, ready to support fleets worldwide, we’re helping operators navigate this shift with confidence”

the life of high-quality parts through reuse means fewer new components need to be manufactured, reducing emissions and resource consumption.

AerFin’s end-to-end process ensures that high-value parts and components recovered from teardown are refurbished, recertified and relocated to a customer who needs them. This helps the industry meet both economic and environmental goals, delivering cost savings for operators while supporting reduced emissions across the lifecycle.

The average age of lessor portfolios remains relatively immature by comparison with the expected operating life of their assets. As increasingly greater numbers of aircraft and engines delivered in the decade before Covid-19 mature into mid-life status, we should expect to see a significant development the market’s need and appetite for greater choice and cost reduction in the aftermarket.

In a market where airlines are under pressure to decarbonise and optimise costs, this model isn’t just beneficial – it’s becoming an essential part of the sustainability debate.

Reducing dependence on the OEM

The current wave of early teardowns has also exposed a growing imbalance in the aftermarket. It has long been the case that airlines have relied heavily on the OEMs to meet a broad scope of their maintenance and component needs. But as delays mount and price escalation continues, the need for alternatives is clear.

Independent USM providers like AerFin play a crucial role in restoring balance to the supply chain. We offer operators faster, flexible and more affordable access to the parts they need, without being tied to long lead times or rigid support packages.

For aircraft owners, this opens up new options. By disassembling high-value assets earlier, the aftermarket gains access to fresher, more durable components, while the rest of the fleet benefits from lower costs and shorter downtimes. Partnering with an experienced teardown specialist not only enables quicker asset recovery – it creates a pathway to support wider fleet needs, build new relationships and contribute to a more dynamic, diversified aftermarket.

Of course, this also means those who cling to legacy assumptions about when and how aircraft should be retired risk missing out. The opportunities are shifting earlier and only those agile enough to adapt will keep pace with the new rhythm of the market.

Looking ahead with confidence

The teardown of mid-life aircraft like the A320neo may not be the outcome owners originally planned for. But, with the right approach – and the right partner – it can become a lever to maximise value and minimise fleet disruption.

With 1,400 parts harvested from each aircraft, and material already strategically placed in hubs across the globe, ready to support fleets worldwide, we’re helping operators navigate this shift with confidence. Not just in AerFin, but in the strength of the aftermarket as a whole.

AerFin exists to support exactly these moments. We’re trusted by more than 600 customers worldwide to bring agility, precision and integrity to every part of the aircraft lifecycle. And in today’s market, where adaptability is everything, we give owners and operators the confidence to move forward – whatever the challenge.

Difficulty is inevitable. But how we respond to it defines what happens next. ●

1. AerFin is trusted by more than 600 customers worldwide

2. AerFin offers operators fast and flexible access to the parts they need



AERMACH

www.AerMach.com



New Hangar, 4 Maintenance

4 slots available starting with September 2025 for:

AIRCRAFT CAPABILITIES

- » BAe 146/AVRO 146-RJ
- » B737 CL
- » B737 NG
- » A320 Family (CFM 56&V2500)

WORKSHOPS

- » C5 - Batteries
- » C6 - Seats
- » C 14 - Landing gears, wheels & brakes

MRO ASIA-PACIFIC 2025 ROUND-UP

MRO Asia-Pacific took place in September in Singapore. Here's a round-up of just some of the news announcements to come from the event

SUPPLY CHAINS

HAECO and Satair sign parts supply expansion

HAECO has expanded its long-term partnership with Airbus Services company Satair to include the supply of Airbus standard parts across all HAECO Group operating companies.

The move builds on an existing strategic agreement and, by adding Airbus standard parts to the scope of supply, HAECO will benefit from a more streamlined and reliable supply chain, helping reduce administration and material management costs while lowering the risk of aircraft-on-ground (AOG) events.

HAECO's Christian Pinter said: "This agreement aligns with our strategic goals to optimise our material management across all areas of HAECO Group."

HEAVY MAINTENANCE

Joramco signs first-time agreement with Air India

Joramco signed a maintenance agreement with Air India for the first time, giving it the opportunity to perform heavy maintenance checks on Air India's fleet of Boeing B787s and B777s.

DAE Engineering's Fraser Currie said: "This partnership is a major step in our expansion to the Indian market, and we are excited to build a strong and lasting relationship with Air India in the years to come."



1. The Pratt & Whitney Canada APS5000 is the industry's first all-electric auxiliary power unit (APU). 2. HAECO and Satair sign strategic supply agreement expansion.



2

Air India's S.K. Dash said: "Our partnership with Joramco will help strengthen our repairs and maintenance competencies and enhance our fleet reliability for aircraft operations."

APU MRO

Pratt & Whitney and Singapore Airlines sign APU support deal

Pratt & Whitney Canada signed a 15-year maintenance agreement with Singapore Airlines for 34 APS5000 auxiliary power units (APUs) which support the airline's fleet of Boeing 787 Dreamliners.

Pratt & Whitney's Anthony Rossi said: "The agreement covers tailored maintenance solutions designed to provide peak performance, predictable costs and long-term reliability of the APS5000, exclusively designed for the widebody, twin-aisle Boeing 787 Dreamliner and the industry's first all-electric APU."

"The APS5000 greatly contributes to Singapore Airlines' impressive dispatch reliability on the Dreamliner. Its advanced design delivers improved fuel efficiency, reduced emissions and enhanced maintainability. This maintenance contract helps ensure the APUs continue to meet our OEM standards, supporting Singapore Airlines in keeping its operations running smoothly and focused on delivering a great flying experience."

COMPONENT SUPPORT

Singapore Airlines signs long-term A380 component deal with Safran

Safran Electrical & Power signed a seven-year component maintenance contract with Singapore Airlines, covering the carrier's Airbus A380 fleet. The agreement includes an option to extend for a further five years.

The renewed contract builds on a

"Our partnership with Joramco will help strengthen our repairs and maintenance competencies and enhance our fleet reliability"



1

“The partnership with HAECO demonstrates Garuda Indonesia’s dedication to remaining competitive in the global aviation industry”

2



1. Joramco signed an agreement with Air India.

2. Singapore Airlines signed a long-term A380 component deal with Safran.

longstanding relationship between the two companies and underscores the airline's confidence in Safran's technical expertise, global support infrastructure, and operational reliability.

Safran Electrical & Power's Amans Defosse said: “This agreement is a strong testimony to the depth of our relationship and reflects the trust we have built with Singapore Airlines over many years. Safran Electrical & Power is proud to continue supporting one of the world's most prestigious airlines with tailored solutions that enhance operational performance and optimise lifecycle costs.”

Singapore Airlines' Alvin Liew said: “We are pleased to continue working with Safran Electrical & Power under this renewed agreement that will provide component support services for Singapore Airlines' A380 fleet to help maintain safe and reliable operations.”

LANDING GEAR MRO

Turkish Technic seals landing gear overhaul deal with Garuda Indonesia

Turkish Technic signed two multi-year agreements with Garuda Indonesia covering the landing gear overhaul of several Airbus A330s and Boeing 777s.

The new contracts build on the long-standing relationship between the two companies, which last year extended to component pool service agreements. Under the latest arrangements, Garuda Indonesia will leverage Turkish Technic's expertise to enhance the efficiency and reliability of its widebody fleet operations.

Turkish Technic's Fikret Koç said: “We are pleased to strengthen our collaboration with Garuda Indonesia.

Our close cooperation in recent years has paved the way for new agreements, which not only expand the scope of our partnership but also create greater value for both companies moving forward. We look forward to continuing our successful partnership and remaining a trusted partner to Garuda Indonesia in the years ahead.”

Garuda Indonesia's Mukhtar Aris said: “Through the landing gear overhaul services offered for our widebody fleet, this collaboration aligns with the flag carrier's ongoing efforts to uphold the highest level of safety standards while also increasing operational efficiency to maintain the customers satisfaction.”

ENGINE MRO

HAECO signs first direct GE90 engine overhaul contract with Garuda Indonesia

HAECO signed its first direct GE90 engine contract with an airline operator in the Asia Pacific region – Garuda Indonesia. The three-year agreement covers overhaul and repair services for the airline's GE90 engine fleet, marking a significant milestone that solidifies HAECO's unique position within GE's MRO partnership network.

The contract builds on HAECO's exclusive 15-year Material Service Agreement (MSA) with GE Aerospace, signed in 2024. The MSA – the first of its kind between GE and an MRO partner – grants HAECO priority access to GE's material resources, enabling it to deliver unique benefits and value to airline customers like Garuda Indonesia.

Garuda Indonesia's Mukhtar Aris said: “As the national flag carrier, we are committed not only to ensuring the

highest standards of safety and reliability but also to delivering a seamless and comfortable travel experience that reflects Indonesian hospitality.

“This partnership with HAECO, renowned for its expertise in a wide range of aircraft engine maintenance including the GE90 engine, will further enhance the efficiency and resilience of our fleet operations. It also demonstrates Garuda Indonesia's dedication to remaining competitive in the global aviation industry while consistently giving passengers world-class service.”

MRO & ASSET MANAGEMENT

JAL renews Collins Aerospace support contract

Collins Aerospace signed a renewed 10-year FlightSense™ agreement with Japan Airlines (JAL) to provide comprehensive MRO and asset management services for the carrier's Boeing 787 Dreamliner fleet.

The long-term contract covers air management systems and electric power components across JAL's existing fleet of more than 50 787-8 and 787-9 aircraft, as well as future deliveries through to 2035.

Alongside this, the agreement extends JAL's Ascentia® analytics services for a further five years, enabling the airline to harness advanced data insights to drive operational efficiency and reduce lifecycle costs. ●



SCALE UP YOUR FLEET MAINTENANCE WITH ADE's

14-LINE HANGAR

Introducing Asia Digital Engineering's state-of-the-art 14-line hangar - purpose-built to optimize your aircraft turnaround time. With end-to-end MRO solutions for A320, A330, and B737, our expanded capabilities ensure efficiency, reliability, and scalability to meet your fleet's needs.

Trust ADE to keep you flying.

Discover Our Capabilities

www.ade.aero



COMMERCIAL MILITARY REGIONAL



SUMMIT
AEROSPACE
SETTING A NEW STANDARD FOR SUPPORT

Your partner for new heights and reliable results.

Core Capabilities

- MRO & Component Repair
- Avionics & Instruments
- Power Generation/ IDG Testing
- Landing Gear Repair & Overhaul
- Sales and Asset Trading/ Leasing
- Technical Support & Guidance

Aircraft Fleets Supported

Commercial Jets
Regional Aircraft
Military & Government



Contact Summit Aerospace

+1 (305) 267-6400

sales@summitmro.com

**Sky is the Limit
of Our Commitment to Excellence
in Civil Aviation**

MRO
Services

*Celebrating 20 years
of being the Regional Leader
in Civil Aviation MRO Services*

AEROSTAR S.A.
Performance through Professionalism!

YOUR TRUSTWORTHY MRO

www.aerostar.ro

Pioneering a global standard

AFRA is boosting trust in MRO through sustainable aircraft disassembly and recycling

The aviation industry is entering a decisive decade. Airlines and lessors face a wave of retirements, with thousands of aircraft due to exit service over the next 20 years. At the same time, regulators, financiers and passengers are demanding stronger accountability on sustainability. End-of-service management now sits at the centre of aviation's reputation, economics and environmental footprint – with direct implications for the MRO sector, which relies on trusted used serviceable material (USM).

In this context, the Aircraft Fleet Recycling Association (AFRA) has become a leading and unique reference on responsible aircraft disassembly and recycling. AFRA represents a global network of companies committed to retiring aircraft safely, sustainably and



“The disassembly process is complex and, if done incorrectly, can put both safety and reputation at risk”

LIONEL G. ROQUES

executive director, AFRA

with full traceability. Its voluntary Best Management Practices (BMPs) have become a de facto benchmark, filling a regulatory gap where oversight has often been fragmented or absent.

Unlike maintenance and repair, which are governed by established Part 145 regulations, disassembly has lacked a global rulebook. AFRA's BMPs therefore play a critical role. Facilities that follow these guidelines commit to rigorous procedures for part removal, material segregation, documentation and environmental protection. Independent accreditation audits verify compliance, giving lessors, airlines and MRO providers confidence that parts re-entering the supply chain meet consistent technical standards.

“The disassembly process is complex and, if done incorrectly, can put both safety and reputation at risk,” notes Lionel G. Roques, executive director of AFRA. “Our BMPs give the industry a shared reference point. They ensure not only that parts are recovered safely, but also that materials are recycled responsibly, reducing environmental impact.”

Over the past decade, AFRA accreditation has gained recognition from regulators and institutions. For accredited facilities, it has become a competitive advantage – evidence that operations meet demanding industry expectations while supporting sustainability targets.

A recent milestone is AFRA's collaboration with the Civil Aviation Administration of China (CAAC). As China's fleet grows and retirements rise, CAAC engaged with AFRA to help shape its disassembly oversight. The result is the AFRA-CAAC programme:



2

“MROs and operators need certainty about where a part came from, how it was removed, and whether it meets environmental and safety standards”

a landmark that embeds AFRA's BMPs in Chinese regulation. The scope covers both airframe and engine parts, reflecting CAAC's advisory circular. From now on, parts destined for China must come from AFRA-accredited facilities – the first time a national authority has formally integrated AFRA's BMPs into its system.

The programme also introduces blockchain-based traceability. Each component removed is recorded in a secure digital ledger, developed by Block Aero, creating an unbroken chain of custody from aircraft to buyer. For



1

MRO providers and operators in China, this delivers clear visibility into a part's origin, removal process and compliance status, supporting purchasing decisions and protecting asset value. The combination of trusted procedures and tamper-evident data helps reduce the risk of counterfeit or poorly documented parts entering the market.

Even with progress in China, challenges remain. Aircraft composition is changing: aluminium, once dominant and straightforward to recycle, is yielding to composites and advanced alloys that are harder to process at end-of-life. Recycling pathways for carbon-fibre reinforced polymers are improving but not yet mature at scale, and economics vary by region. At the same time, the projected volume of retirements raises capacity concerns. Without robust frameworks, aircraft may be disassembled in unregulated environments where standards are lower and transparency lacking, increasing safety and reputational risks for owners.

MROs are particularly exposed. Their business depends on reliable, compliant USM supported by records that withstand regulatory and customer scrutiny. If parts enter the market



3

without clear provenance, the value proposition of USM is undermined.

“Traceability is not optional,”

Roques stresses. “MROs and operators need certainty about where a part came from, how it was removed, and whether it meets environmental and safety standards. That certainty is the foundation of trust.”

Looking ahead, AFRA aims to extend lessons from the CAAC partnership globally. The association is engaging with regulators and international bodies to explore pathways for harmonised standards that support safe disassembly and market confidence in USM. Alignment will not be identical everywhere, but transparent benchmarks and verifiable data can create practical equivalence – enabling parts to move across borders with confidence while raising environmental performance.

AFRA is well positioned to help lead this transition, as membership grows and recognition from regulators and financial stakeholders increases. The CAAC partnership shows what is possible when industry expertise and regulatory authority work together, combining process discipline with digital traceability. For the MRO community, the message is clear: sustainable disassembly and robust traceability are not just environmental priorities – they are business imperatives. By setting clear standards, auditing against them, and building international partnerships that incorporate trusted data, the industry can move from intent to measurable, lasting action across the aircraft lifecycle. ●

1, 2 and 3. AFRA is dedicated to advancing environmentally responsible aircraft disassembly, recycling and materials management

Avioparts

Madrid

Miami

Dubai

Southam

We make your business fly

Aircraft Tyres | Aviation Lubricants | Chemicals

Introducing Avioparts – Global Reach, Local Expertise

Headquartered in Madrid since 1993 and strategically positioned with offices and warehouses in **Dubai, Miami**, and now **fully operational in the UK (Southam)**, Avioparts is proud to offer a new level of **dedicated, tailored support to Airlines, MROs, and Stockists** across the aviation industry.

Our UK facility delivers **cost-effective, responsive solutions** for **Aircraft Tyres** and **Aviation Lubricants**, backed by our global supply chain and technical expertise. We supply **all leading brands** and are proud to be **Authorised Distributors for Premium Manufacturers**, ensuring quality, performance, and peace of mind.



Wherever you are, Avioparts keeps you flying.



Everything You Need From a Single Provider

All around the globe, every day, we help operations run efficiently through every phase of their trip. For more than 25 years, our unwavering commitment to providing reliable and timely support has set us apart.

We are the trusted partner that delivers:

Flight Crew Services • Trip Support • Fuel • Sustainability



Visit our booth MRO Europe 2025 (Booth 3851) to discover how we can optimize your operations and help you achieve a more sustainable future.

spireflight.com