



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."



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.”

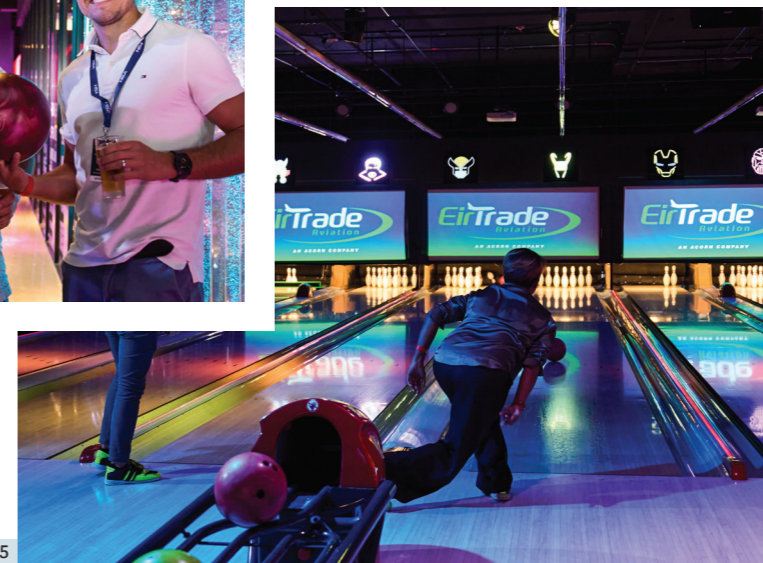
Tan urged delegates to look beyond technology and address the integration challenge: “Predictive maintenance is not an IT project. It is a fundamental transformation of aviation. Let’s foster this ecosystem and develop the talent required for aviation’s future. Let’s build this future, together.”

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.”





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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.

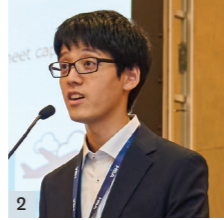
For Singapore Airlines, collaboration and standards are central. Joan Ng, data analytics and digitalisation executive emphasised: “As an airline we have our own predictive maintenance needs, so collaboration industry-wide in terms of understanding standards is crucial. Full flight data and using Skywise 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



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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.”



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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

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



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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 Veryon 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 Mahmud 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. ●