REINVENTING INVENTORY MANAGEMENT

Better management of parts inventory will be in sharper focus in 2026 as MROs and suppliers target improved service – and profitability. **Kevin Rozario** reports

1

"AS SUPPLY CHAINS STABILISE AND DIGITAL TOOLS MATURE, PIM IS POISED TO BECOME A SOURCE OF COMPETITIVE ADVANTAGE"

Supply-chain disruptions may finally be easing, but the aftershocks of the Covid era continue to reshape how the aviation industry manages its inventories. Few areas have felt the strain more acutely than the discipline of parts inventory management (PIM), where the long-standing tension between availability and cost has been pushed to its limits.

From engine component shortages to labour constraints and ageing fleets, the sector has been forced to confront weaknesses in its parts ecosystem. But from the pressures, has come adaptation. Across the MRO landscape, organisations are rethinking how they plan, source and position inventory, accelerating a shift from reactive stocking to intelligent, risk-based strategies.

The industry's playbook is changing. Digitalisation, integrated systems, predictive analytics, teardown-driven USM markets and new partnership models are redefining how MROs and operators approach the fundamentals of inventory. Supply-chain delays have made certain components – for example for CFM56, V2500 and PW1100G engines – difficult to source.

Coupled with labour shortages and ageing fleets, weaknesses in how aviation has managed its parts inventories were exposed by the pandemic. But with supply chains now recovering, aviation PIM is turning from firefighting to a long-term efficiency drive.

Turning strains into gains

McKinsey's November 2025 report, *Fly High, Stock Higher*, underscored the scale of the challenge. While aircraft deliveries have returned to 2019 levels, parts have continued to climb and inventory turns have fallen (see chart). Capital is therefore being tied up for longer periods, even as operators face pressure to improve availability.

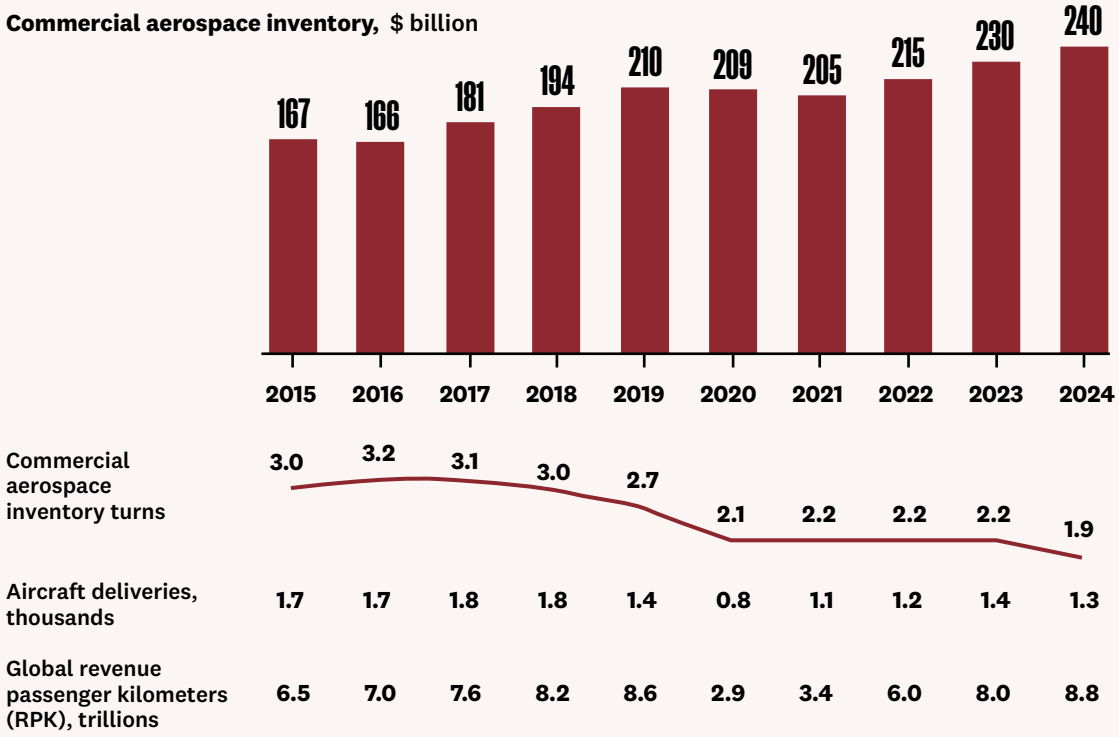
Overstocking remains expensive, but understocking can be catastrophic, with aircraft-on-ground (AOG) events costing airlines dearly. All parties have historically erred on the side of caution, holding buffers of rotables, LRUs and engine components across multiple bases. But this approach carries its own risks, including obsolescence as fleets transition to new-generation aircraft.

Against this backdrop, MROs and parts specialists have been forced to rethink their strategies. *MRO Management* has spoken with several industry leaders about how they are responding.

Craig Skilton
vice president components, APOC Aviation

1. AJW Group HQ warehouse logistics

AIRCRAFT DELIVERIES AND COMMERCIAL TRAFFIC HAVE RECOVERED TO PRE-PANDEMIC LEVELS, BUT INVENTORY TURNS HAVE DECLINED



Source: S&P Global Market Intelligence; McKinsey Value Intelligence Platform (n=70 companies); McKinsey analysis

▲ **Scott Symington**
chief commercial officer, AJW Group

For many organisations, the past 36 months have triggered a fundamental reassessment of how inventory is planned and deployed. Scott Symington, chief commercial officer at AJW Group, says the company has "invested heavily and streamlined our inventory strategy and operations processes to ensure we can meet customer demands and provide reliable component availability".

A key part of that shift is AJW's in-house optimisation tool, Apollo, which uses probabilistic modelling to guide ROI-driven stocking decisions. "By implementing automated inventory tracking systems, we can streamline tracking and management processes, thus reducing errors and delays," explains Symington. The company's global pooling strategy – covering 450,000 line items – is designed to position stock closer to customers by strategically placing inventory across its various hubs, including Milan Malpensa and Amsterdam.

APOC Aviation has also turned to data to improve PIM efficiency. According to Craig Skilton, vice president components, the company has moved away from purely historical stocking models. "Supply chain volatility has driven a much more disciplined, data-driven approach," he says. "We now use dynamic strategies that factor in our growing customer base and real-time demand signals." The result: improved availability and lower AOG risk.

For EirTrade Aviation, the response has been to expand both inventory and service coverage. Repairs manager Erik van Son notes a "steady rise in exchange and AOG requests", has prompted the company to significantly increase stock levels and introduce a 24/7 AOG service. This allows customers to reduce their own holdings while maintaining rapid access to critical components.

FL Technics Indonesia has focused on resilience. Chief executive Martynas Grigas says the company has adopted "a strategic buffering strategy" for fast-moving consumables and rotables, keeping them in-region to minimise logistics bottlenecks. For high-value items, the company relies on a part-exchange network and long-term fixed-price contracts. The payoff has been that turnaround times (TATs) have significantly improved and there are fewer last-minute AOG cases.

Inventory realities of ageing fleets

The industry had expected a decline in maintenance demand for older aircraft by now, but this has not gone somewhat awry. Van Son says: "Ongoing issues with the B737 MAX and GTF engines have forced airlines to continue operating legacy aircraft. The decline in MRO demand for older assets has therefore been significantly slower than originally anticipated."

He adds: "MRO facilities and airlines that had already reduced inventory levels for these older platforms are now required to replenish stock to meet current demand at a time when OEMs are

▲ EirTrade Aviation warehouse

simultaneously scaling back their supply chain capacity for these assets. This mismatch has placed considerable pressure on supply chain specialists to source parts, driving a significant increase in the prices of available components."

Symington notes that ageing fleets have increased reliance on MRO providers, making strong inventory strategies essential. AJW Group has invested in digitalisation to optimise storage and logistics, while its power-by-the-hour (PBH) solutions have allowed airlines to transfer risk and access large pools of stock for both legacy and next-generation fleets.

Grigas points to the growing importance of USM in supporting ageing fleets. "Part availability is a challenge for everyone," he says. "FL Technics uses age-specific data to determine possible part replacements due to fatigue. As some parts might be old and obsolete, we shift to USM sourcing. For this, we rely on non-OEMs and secondary markets such as teardown companies."

The way ahead: digitalisation, partnerships and AI

Looking ahead, industry leaders expect digital tools, smarter forecasting and deeper collaboration to play a decisive role in reshaping PIM.

At APOC Aviation, Skilton expects digital platforms to improve visibility across inventories, repair pipelines and supplier networks. "Enhanced transparency allows PIM decisions to be made earlier," he says, "reducing the need for last-minute, AOG-driven sourcing at premium-cost."

Van Son sees predictive maintenance and advanced forecasting as valuable, but not sufficient on their own at EirTrade Aviation. "MROs and airlines will still need to actively manage their supply chains to ensure a rapid

▲ **Erik van Son**
repairs manager,
EirTrade Aviation

▲ APOC Aviation parts store

▲ **Martynas Grigas**
chief executive,
FL Technics Indonesia

return to service," he says. He also expects more strategic partnerships between MROs, airlines and USM providers, with USM specialists maintaining sufficient inventory to support quick-turn programmes.

Grigas anticipates rapid progress in AI-enabled tools. "AI can analyse millions of flight hours and historical maintenance data," he says, improving predictions and accelerating parts searches which can, in turn, streamline PIM. He also expects these capabilities to significantly reduce AOG exposure and cost over the next two years.

Symington says that AJW Group's digital transformation has been "the most significant development brought about by supply chain disruptions", enabling better forecasting, monitoring of TATs, and dynamic adjustment of inventory levels.

PIM: New thinking in a new era

Helped by technology, aviation is likely to move away from the stock-heavy, reactive model that defined the pre-pandemic era. In its place, a more intelligent, predictive and collaborative approach is emerging.

Predictive analytics, USM markets, digital twins and lifecycle-based planning are all factors reshaping how airlines, MROs and OEMs look at PIM. The players that can blend technology, data and cross-sector collaboration to build resilience and efficiency into their parts inventory management will build advantage in the coming years.

While the industry's challenges remain significant, the momentum for innovation in parts management continues. McKinsey notes that addressing inventory challenges is "not just a tactical necessity but a strategic imperative to support sustainable growth". The consultancy says that companies adopting data-driven approaches to streamline operations "can break free from inventory gridlock" and capitalise on the sector's potential.

As supply chains stabilise and digital tools mature, PIM is poised to become a source of competitive advantage. The next decade will reward aviation organisations that treat inventory not as a static cost centre, but as a strategic capability. ●

"ORGANISATIONS ARE RETHINKING HOW THEY PLAN, SOURCE AND POSITION INVENTORY, ACCELERATING A SHIFT FROM REACTIVE STOCKING TO INTELLIGENT, RISK-BASED STRATEGIES"