

PitchBook Data, Inc.

Nizar Tarhuni Executive Vice President of Research and Market Intelligence

Paul Condra Global Head of Private Markets Research

Institutional Research Group

Analysis



Jim Corridore
Senior Research Analyst,
Industrials
iim.corridore@pitchbook.com

Data

Collin Anderson Senior Data Analyst

pbinstitutionalresearch@pitchbook.com

Publishing

Designed by Julia Midkiff

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INDUSTRY RESEARCH

Deep Dive Into Airline MRO Services

A look at deals and drivers in airline maintenance

PitchBook is a Morningstar company providing the most comprehensive, most accurate, and hard-to-find data for professionals doing business in the private markets.

Key takeaways

- The MRO industry is benefiting from strong fundamentals that make it
 increasingly attractive to private equity investors. The sector has seen significant
 deal activity and exit volume in recent years—a trend expected to continue
 through 2025 and beyond.
- One of the key drivers behind this momentum is the rising demand for commercial aerospace services. Ongoing travel demand, coupled with production delays at Boeing and Airbus, has resulted in an aging global aircraft fleet. As airlines extend the life of their existing fleets, the need for frequent and comprehensive maintenance has grown, further fueling demand for MRO services.
- The appeal for investors lies in the industry's highly predictable and recurring revenue streams, which are driven by regulatory maintenance requirements and safety protocols. Additionally, the global MRO market remains fragmented, creating ample opportunities for private equity firms to pursue consolidation strategies and achieve scale advantages.
- The post-pandemic recovery has also shaped the current landscape. Many smaller MRO providers experienced financial distress during the downturn, with some exiting the market and others emerging as attractive acquisition targets. Meanwhile, the return of parked aircraft to service has created maintenance backlogs that continue to drive demand. Boeing's ongoing production constraints have further contributed to the aging of active fleets, increasing the need for maintenance and repair.
- The current market environment reflects strong and sustained demand for MRO services, driven by both cyclical and structural factors. These favorable dynamics should support continued PE interest and investment in the sector over the medium to long term.

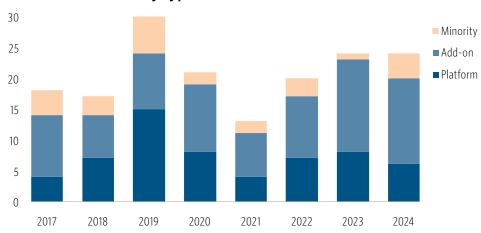


MRO activity

Deal activity

Deal activity in the space has been strong. In 2024, the maintenance, repair, and overhaul (MRO) category saw 24 deals, in line with the number of deals in 2023 and up from 20 in 2022 and 12 in 2021. The majority of the deals in 2024 were add-ons, totaling 14, followed by six platform deals and four minority deals.

MRO PE deal count by type

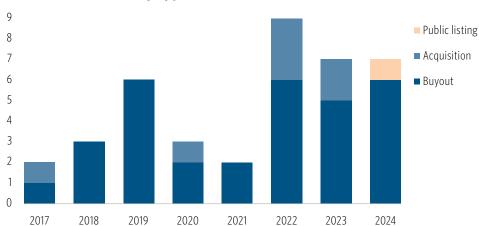


Source: PitchBook • Geography: Global • As of December 31, 2024

Exit activity

According to PitchBook data, there were seven MRO exits in 2024, which is in line with 2023 and compares with nine in 2022 and two in 2021. Of the exits in 2024, one was an IPO and the remaining were buyouts.

MRO PE exit count by type



Source: PitchBook • Geography: Global • As of December 31, 2024



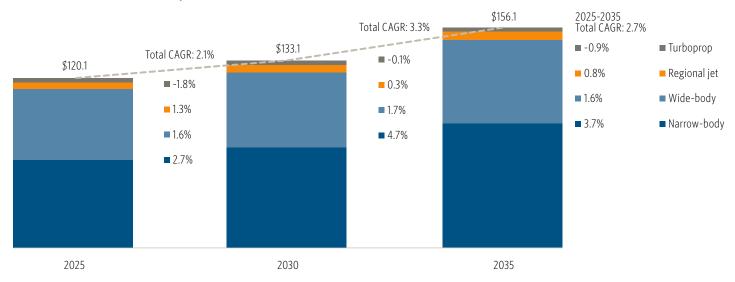
MRO fundamentals

MRO encompasses all activities required to ensure an aircraft remains safe, airworthy, and ready for operation. This includes everything from routine inspections and minor repairs to extensive overhauls that involve disassembling and rebuilding major components of the aircraft.

At PitchBook, MRO is categorized as a subsector of airlines & airline services, which is part of our broader aerospace & defense coverage. We initiated dedicated coverage of the aerospace & defense industry in Q3 2024 with the release of our <u>inaugural report</u>. This coverage has been regularly updated, most recently with our Q4 2024 report.

According to Oliver Wyman, the global aircraft MRO market is projected to reach \$120 billion in 2025, with an expected CAGR of 2.7% through 2035, when the market is forecast to grow to \$156 billion. On a regional level, IBISWorld reports 3,578 aircraft MRO companies operating in the US in 2024.¹ Globally, Oliver Wyman estimates there are approximately 5,000 firms in the sector, employing about 380,000 workers.²

MRO demand forecast by aircraft class (2025-2035)



Source: Oliver Wyman • Geography: Global • As of February 27, 2025 Note: This chart comes from Oliver Wyman's Global Fleet and MRO Market Forecast 2025-2035.

It credits the positive growth trajectory of the segment for the life cycle extension of aircraft, emphasis on safety, outsourcing of maintenance services, shift to predictive maintenance, and the rise of commercial aviation. Andrei Grskovic, partner at Oliver Wyman in the Aerospace, Defense & Government Services space, told us, "We have seen larger strategics and airlines increasing interest in expanding their MRO footprint over the past year, driven by getting closer to customers (proximity), filling in capability gaps, and aligning with an emerging trend of vendor rationalization.

^{1: &}quot;Aircraft Maintenance, Repair & Overhaul in the US - Number of Businesses (2005-2030)," IBISWorld, December 2024

^{2: &}quot;Global Fleet and MRO Market Forecast 2022-2032," ARSA, Oliver Wyman, 2022, n.d., accessed March 14, 2024.



Frothy valuations—in part driven by recent successful IPOs—have been the pacing item, with some subscale component MRO shops trading for 12x to 13x EBITDA."³

Fundamentals in the category remain strong. An increasing number of aging planes are in service and will need increased maintenance to stay in service. At the same time, Boeing and Airbus have been unable to meet demand for commercial aerospace, meaning the current global fleet will continue to age.

We also believe that PE activity in the space will remain robust over the next couple of years, based on several positive MRO characteristics that are attractive to PE investors, including good visibility into contracts and cash flows, the ability to scale with customers and gain economy of scale with suppliers, and the highly fragmented nature of the industry that creates a lot of deal opportunities at relatively low costs.

The airline MRO industry is experiencing significant growth and transformation, influenced by various factors:

Market growth

- Increasing demand: The global MRO market is projected to hit \$156 billion in 2035, a CAGR of 2.7% over the next 10 years, according to market researcher Oliver Wyman. We attribute this growth to strong fundamental air travel demand, which is fueling long-term orders for aircraft, while at the same time the two primary aircraft manufacturers, Boeing and Airbus, cannot meet demand. Boeing, in particular, has a well-below-optimal production rate, which is driving increased usage of older aircraft that need more maintenance.
- **Fleet expansion:** The commercial aircraft fleet is expected to grow from 26,750 in 2023 to 50,170 by 2043, according to a forecast by Boeing.⁵ At the same time, Airbus estimates that the global fleet will grow from an estimated 24,260 planes in 2023 to 42,430 by 2043.⁶

Supply chain challenges

• Component and labor shortages: The industry faces constraints due to shortages of critical components and skilled labor, leading to potential delays in original equipment manufacturer (OEM) deliveries and increased operational costs. Because of its troubles, Boeing's production rate fell to about 16 per month in 2024, according to aerospace consultancy Airlnsight Group. Boeing aims to get production up to 38 per month by mid-2025; it is currently capped at a maximum of 38 by the Federal Aviation Administration (FAA), which has increased scrutiny of the company following numerous safety issues. This is in contrast to Airbus currently producing about 60 planes per month, well above the rate of Boeing.

^{3:} Andrei Grskovic, partner at Oliver Wyman, email interview by Jim Corridore, March 14, 2025.

^{4: &}quot;Global Fleet and MRO Market Forecast 2025-2035," Oliver Wyman, Brian Prentice, Anthony DiNota, and Livia Hayes, n.d., accessed March 16, 2025. 5: "Global Outlook," Boeing, n.d., accessed March 14, 2025.

^{6: &}quot;2024 Global Market Forecast," Airbus, n.d., accessed March 14, 2025.



 Aircraft delivery delays: Airlines are experiencing disruptions from delays in aircraft deliveries by major manufacturers like Boeing and Airbus. Existing fleets are flying for longer, and older planes are in service beyond what is optimal, driving increased maintenance events to keep them flying safely.

Technological advancements

- **Digitalization:** The adoption of advanced data analytics and AI & machine learning (ML) enables predictive maintenance, reducing downtime and enhancing operational efficiency. While there are already strong drivers in place for increased MRO worldwide, companies within the MRO space with advanced technology are likely to capture more market share and be more attractive than their less-sophisticated peers.
- MRO software solutions: Integrated MRO software platforms streamline
 maintenance processes, improve resource management, and ensure regulatory
 compliance. This, in general, allows MRO companies to be more efficient, and
 efficiency almost always drives lower costs, whether in the supply chain, in labor
 utilization, or in the completion time of maintenance projects.

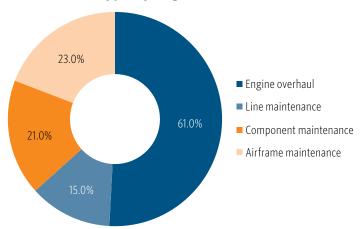


MRO: How it works

The MRO industry encompasses a broad spectrum of business models, ranging from small, specialized providers to large-scale operators with comprehensive capabilities. At one end of the spectrum are "mom and pop" shops focused on a single maintenance specialty—such as avionics, landing gear, or interiors. These niche providers typically offer one or two lines of maintenance and serve specific segments of the aviation market.

At the other end are large, diversified MRO companies capable of servicing entire aircraft types across multiple maintenance lines. These operators often handle both Boeing and Airbus fleets and offer end-to-end solutions that include airframe, engine, component, and line maintenance services.

Share of aircraft MRO type by segment



Source: Oliver Wyman • Geography: Global • As of December 31, 2024
Note: This chart comes from Oliver Wyman's Global Fleet and MRO Market Forecast 2025-2035.

For PE firms with deep sector experience, smaller MRO providers can present attractive consolidation opportunities. Acquiring and integrating these businesses can achieve scale in a targeted maintenance vertical, expand relationships with specific airlines, or increase wallet share on a high-volume platform like the Boeing 737. Building scale not only improves operational efficiency but also enhances purchasing power with parts suppliers and OEMs, a critical lever for margin expansion.

Fixed-base operators

Fixed-base operators (FBOs) typically operate at large general aviation airports and offer an extensive suite of services, including fueling, hangarage, ground handling, and maintenance. Many FBOs have significant hangar space and broad-based maintenance capabilities, which can include airframe and powerplant services.

While FBOs are inherently tied to specific locations—making consolidation more complex—they still represent attractive investment opportunities. PE firms can add value by introducing operational best practices, leveraging procurement synergies, and deploying advanced technologies such as digital workflow solutions and



customer relationship management platforms. These initiatives can drive margin improvement and customer loyalty, particularly in the high-net-worth and business aviation segments where FBOs often cater to premium clientele.

Airline hub-based MROs

Many large MRO providers are strategically located at major airline hubs, offering a wide range of services to anchor airline customers. These MROs may be owned by airlines but are increasingly being outsourced as airlines look to focus on their core competency: transporting passengers.

These operations tend to be large, complex, and capital-intensive, with high barriers to entry due to regulatory requirements, scale, and customer integration. Transactions in this space are less frequent but do occur. For example, Aviation Technical Services was acquired via a leveraged buyout in 2015. Additionally, market leader Lufthansa Technik was in discussions in 2023 to sell a 20% stake, although the transaction was ultimately canceled.

PE investors considering this segment should be prepared for significant diligence on long-term customer contracts, regulatory compliance, and unionized labor forces. However, these businesses can offer highly stable cash flows due to multiyear maintenance agreements and high switching costs for airline customers.

Other MRO segments

Beyond commercial aviation, MRO opportunities exist in regional airline maintenance facilities, military and defense-sector MRO shops, and corporate inhouse MRO for private and business jet fleets.

Defense-related MRO offers attractive stability due to long-term government contracts and recurring maintenance cycles tied to military readiness. However, these businesses require specialized certifications and often have complex compliance obligations, which may necessitate dedicated operational expertise.

Revenue models in MRO

MRO providers typically operate under several commercial models:

- Time & materials: Charging for labor hours and parts as they are consumed.
- Fixed-price maintenance events: Agreed-upon flat rates for specific services or overhaul events.
- **Power by the hour (PBH):** A fixed rate per flight hour, offering predictable revenue streams and lowering risk for airlines.

PBH contracts are increasingly popular due to their alignment with airlines' focus on cost predictability and cash flow management. For MROs, PBH models encourage efficiency and high-quality service, as profitability depends on minimizing costly rework and turnaround times.



Key value drivers for MRO companies

The most successful MRO businesses focus on:

- Cost leadership through efficient labor utilization and strategic sourcing of parts.
- Operational excellence, including maximizing mechanic productivity and minimizing aircraft turnaround times.
- Technological integration, such as Al-driven predictive maintenance, advanced inventory management, and supply chain optimization tools.

Scale remains a crucial driver of value. Larger MRO providers benefit from purchasing leverage with suppliers, better resource allocation, and a higher share of wallet with airline customers. Technology investments, including ML algorithms and Internet of Things sensors, can further improve predictive maintenance capabilities, reducing unplanned downtime and enhancing customer satisfaction.

Cost structure and margin profile

MRO businesses face a combination of fixed and variable costs. Variable costs include labor—mechanics and engineers, along with other staff—parts, and consumables. Fixed costs include, among other things, facilities, tooling, and equipment depreciation. Inventory management is critical, as aircraft parts are high-cost items that require precise forecasting and scheduling to maintain profitability. Optimizing inventory turnover without compromising service levels is key to maintaining healthy cash flow.

According to Oliver Wyman, MRO industry margins generally range from 10% to 25%, significantly higher than the 2% to 8% margins typical of airline operators.⁶ This margin resilience, combined with strong cash conversion, makes MRO businesses highly attractive to PE investors.

Regulatory and compliance considerations

The MRO sector is highly regulated, requiring companies to comply with complex international standards. Certification by agencies such as the FAA in the US and the European Union Aviation Safety Agency (EASA) is mandatory for most operations.

Beyond regulatory compliance, quality control and safety performance are non-negotiable, as MRO services directly impact flight safety and passenger's lives. Reputational risk and regulatory enforcement actions are material considerations for investors.

ESG factors are also becoming increasingly relevant, with regulatory agencies and airlines emphasizing sustainability in areas such as waste management, emissions reduction, and energy efficiency in hangar operations.

6: "Global Fleet and MRO Market Forecast 2025-2035," Oliver Wyman, Brian Prentice, Anthony DiNota, and Livia Hayes, n.d., accessed March 16, 2025.



Notable recent MRO deals

- September 2024: Precision Aviation Group raised \$204 million in debt financing. GenNx360 Capital Partners previously recapped the company at a \$400 million valuation with a continuation fund in November 2023, after buying the company from Five Points Capital and Riverarch Equity Partners back in July 2018 for an undisclosed sum.
- October 2024: Turbine Aero, a provider of MRO catering to both military and commercial customers was acquired in an LBO by Snow Peak Capital for an undisclosed amount. The Gores Group was the seller, and the deal was advised by Lincoln International and Stradling Yocca Carlson & Rauth.
- October 2024: STS Aviation Group saw a secondary private deal when Greenbriar Equity Group sold its stake in the company to H.I.G. Capital for an undisclosed amount. Advisors included Lazard, BMO Capital Markets, and Jeffries Financial Group.
- December 2024: Air Works India, a provider of MRO services to the airline industry, reached an agreement to be acquired by Adani Enterprises for \$45.8 million in a transaction that values Air Works India at \$52.8 million. MegaDelta Capital Advisors exited its stake. Adani Enterprises was advised by Cyril Amerchand Mangaldas and Kochar and Co.
- December 2024: Rotating Machinery Services was acquired by Arcline through an LBO for an undisclosed amount, supported by \$17.1 million in debt financing. Cortec Group exited its stake, and advisors included BMO Capital Markets, Houlihan Lokey, and Piper Sandler.
- January 2025: Glendale Aero Services MRO business was acquired by The Blackhawk Group via its financial sponsor New State Capital Partners for an undisclosed amount. Glendale Aero sold 100% of its stake in the deal.
- **February 2025:** Jet Support Services, a provider of MRO worldwide, was recapitalized at a total value of \$1 billion following the receipt of a follow-on investment from Blackstone.
- **February 2025:** Boeing sold 100% of its hangar facility and MRO business based in London to British Air for an undisclosed amount. This strategic acquisition was intended to bring additional technical expertise and advanced infrastructure into British Airways' operations.

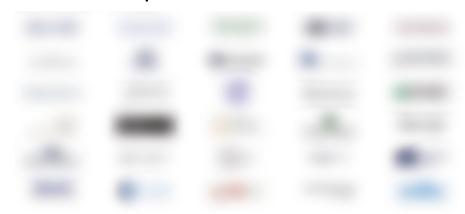


Largest privately held MRO firms

| Company | Revenue (\$B) | Owner | Acquisition date |
|-------------------------------|---------------|--|--|
| Lufthansa Technik | \$6.0 | Lufthansa Group | N/A |
| Air France Industries KLM E&M | \$4.5 | Air France-KLM Group | N/A |
| HAECO | \$2.8 | Swire Group | 2018 (full ownership following initial investment in 1980) |
| Ameco Beijing | \$1.9 | Air China | 2015 (merged with Air China MRO) |
| Delta TechOps | \$1.8 | Delta Air Lines | N/A |
| SR Technics | \$1.6 | HNA Group | 2006 |
| StandardAero | \$1.4 | Carlyle Group | 2023 |
| GAMECO | \$1.0 | China Southern Airlines | N/A |
| Iberia Maintenance | \$0.9 | IAG | 2011 (formed by IAG) |
| Fokker Services Group | \$0.8 | Panta Holdings | 2021 |
| Aeroman | \$0.7 | Avianca Group | 1993 (acquired by TACA, merged into Avianca) |
| Sabena Technics | \$0.7 | Sagard Private Equity | 2019 |
| Dublin Aerospace | \$0.6 | Dublin Aerospace founders and management | 2009 (founded by MBO) |
| TAP Maintenance & Engineering | \$0.6 | TAP Air Portugal | N/A |
| Turkish Technic | \$0.6 | Turkish Airlines | N/A |
| AirAsia MRO | \$0.5 | Capital A (formerly AirAsia Group) | 2020 (established) |

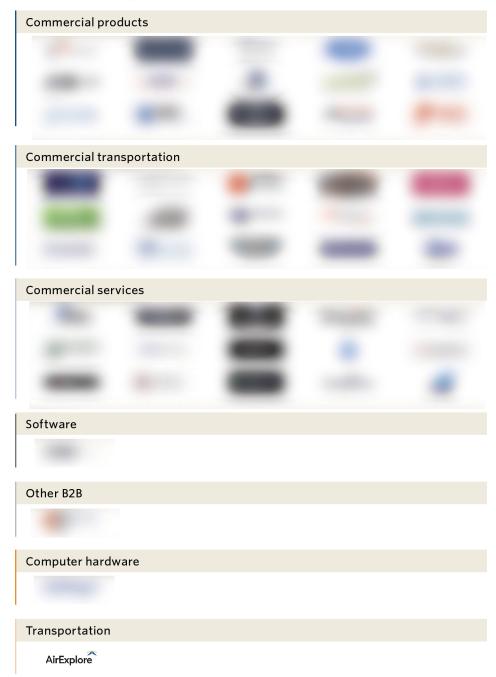
Sources: PitchBook, company reports, and press releases • Geography: Global • As of December 31, 2024

MRO investor map





MRO market map



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