

SPEEDING UP AEROSPACE INNOVATION



THE AEROSPACE INDUSTRY is moving from a ten-year development cycle to a need for immediate, on-demand services. This means that as original equipment manufacturers (OEMs) move into the testing and delivery phases for a new round of aircraft models, their attention will need to turn from long-term projects to a range of short-term issues associated with launch, support, life extension, and operational flexibility. These issues are not new, but a record volume of deliveries and the emergence of new customers will make quick resolution of any challenges paramount.

At the same time, OEMs must determine how they will facilitate and accelerate longer term growth, particularly in the aftermarket. Crucially, OEMs find themselves facing off against aftermarket maintenance, repair, and operations companies (MROs) to serve emerging markets and clients.

GOING BEYOND THE BACKLOG

Major OEMs currently have up to ten years of production in backlog, and the required delivery rate for new products keeps on accelerating. Most critically, as aircraft and engine orders are delivered, they will not be replenished at the same speed. Manufacturers therefore will need to complement their revenue and earnings with aftermarket growth. Integrated and differentiated services that reduce downtime while improving the performance of the existing fleet will be particularly vital. We see two opportunities here for OEMs to set themselves apart: product strategy and delivery.

In terms of product strategy, OEMs will need to propose products and services that differentiate them from competitors and leverage their design-related

intellectual property. Without any new, large programs, that means quickly developing incremental innovations. Rather than making one big bet on a new aircraft model or engine, companies will need to make thousands of small, quick-turnaround bets on new ideas and technology. Additive manufacturing (3D printing) and predictive maintenance are examples in the aftermarket.

On the delivery side, OEMs will have to reduce lead times both on the factory floor and across the aftermarket while lowering the risks associated with upstream materials and suppliers. Similarly, manufacturers will need to improve shop-floor work instructions while rapidly integrating systems for final assembly. Under pressure from the changes coming about due to the development of “digital industry,” engineers will need to shift from managing multiple development cycles over long periods of time to solving problems in real time.

It's important as well that OEMs empower local leaders to make the split-second decisions that are required to maintain efficient operations. Typically, a shop manager within a factory may oversee several hundred workers and is responsible for the end-to-end performance of what boils down to a profit unit. The shop manager thus needs the skills and decision-making power to collaborate seamlessly with all relevant functions (supply chain, quality control, technical, work preparation, etc.). The same pattern should be followed for local management in engineering, procurement, and sales, such that cascading empowerment permanently boosts performance.

THE AFTERMARKET RACE

As their backlogs wane, manufacturers will need to grow after-sales margins in the face of fierce competition from

MROs, which are innovating at a rapid pace. MROs are moving to adopt new technologies and solutions such as big data analytics, aircraft health monitoring systems, predictive maintenance, new repair technologies, and additive manufacturing. At the same time, large MROs keep on expanding the range of services they offer to operators and lessors, thereby reducing the need for operators to maintain high parts inventories and helping them avoid long grounding periods for aircraft. The MRO market is expected to grow from \$67 billion last year to \$100 billion in 2025, and at least 10 percent of this value is projected to be in the area of completely new services.

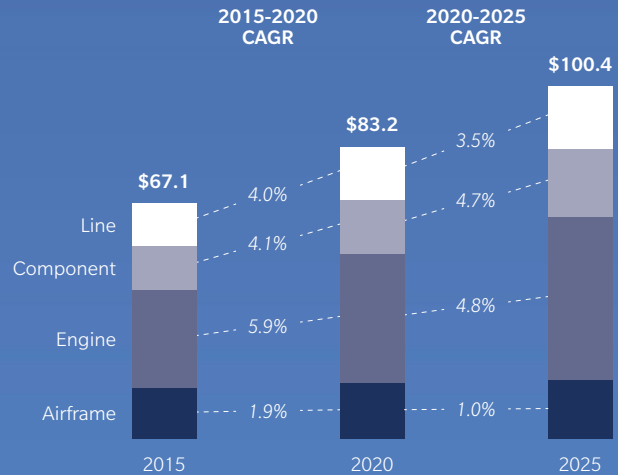
In addition, the focus of competition between OEMs and MROs is likely to shift increasingly to emerging markets that are seeing high levels of fleet growth, such as Asia. In these newer markets, after-sales services are as yet fragmented and uncoordinated, with low levels of workforce and logistics maturity. In these cases, OEMs looking to capture a larger share of the aftermarket from MROs could leverage their strong supplier relationships and sophisticated supply chain networks to offer new integrated service bundles, parts management, and logistics solutions.

The engine for new growth in the aerospace industry will be faster definition and roll out of strategies to accelerate production and meet the demands of a growing aftermarket. OEMs will need to continuously innovate to counter their competition and take advantage of the large opportunities that will be offered by the aftermarket over the next decade.

SÉBASTIEN MAIRE
Partner
sebastien.maire@oliverwyman.com

GEOFF MURRAY
Partner
geoff.murray@oliverwyman.com

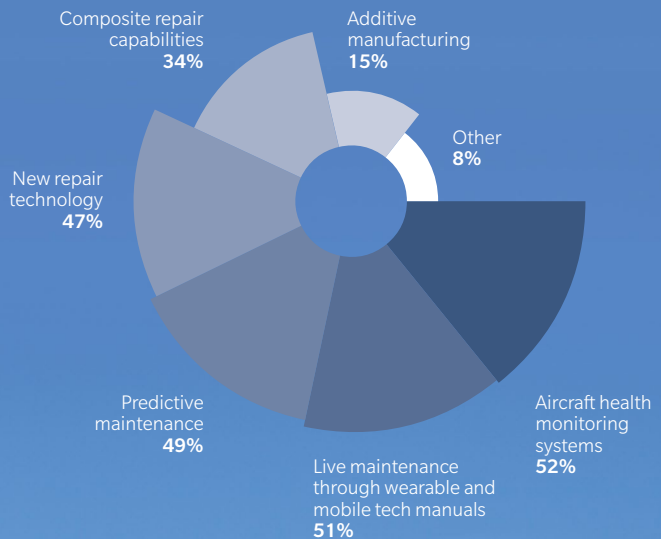
GLOBAL MAINTENANCE, REPAIR, AND OVERHAUL MARKET FORECAST BY SEGMENT (\$ BILLIONS)



Source CAVOK Global Fleet and MRO Market Forecast

AEROSPACE COMPANY SURVEY

HAS YOUR ORGANIZATION APPROVED INVESTMENT FOR DEVELOPING ANY OF THESE TECHNOLOGIES NOW OR IN THE NEXT FIVE YEARS?
Percent of survey responses (multiple selections possible per category)



Source Oliver Wyman 2015 MRO Survey

