gainingaltitude

Issue 8

Rethinking aftermarket revenues: New growth strategies for aircraft manufacturers

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With a shrinking percentage of proprietary parts on new platforms, aircraft manufacturers are looking for alternative sources of aftermarket revenue.

To achieve this, manufacturers should leverage their unique competitive advantage in four areas: point of sale opportunities to bundle services with sale, relationship with suppliers, global footprint in commercial and defense, and engineering knowledge. For some high-margin services with a strong network effect, like information-enabled services, critical mass may need to be acquired. Other services (like component services) will require achieving supply chain excellence and fundamental changes to the operating model to be cost and service competitive.

Aircraft maintenance is as old as flight itself. Even though the maintenance, repair, and overhaul (MRO) operating model has not changed much in the more than 100 years since flight began, the last decade has seen significant changes:

- According to a DOT report,[1] maintenance outsourcing for the large US carriers has increased from 30% in 2003 to over 70% today.
- New risk sharing partnerships in aircraft development have shrunk the percentage of the aircraft manufacturers' proprietary parts on new platforms to single digits, requiring them to look for other sources of aftermarket revenue, with the major component and subsystems suppliers having greatly increased their market power.
- MRO growth is following fleet growth into the Middle East and Asia Pacific, requiring a more global MRO footprint.
- Airlines are rapidly renewing their fleet. We expect to see half the fleet replaced in 10 years with next-generation technologies, resulting in lower MRO demand and higher required MRO investments.

In response to these trends, aircraft manufacturers have developed comprehensive aftermarket offerings, ranging from aircraft health monitoring and component repair services to complete nose-to-tail MRO coverage. This aftermarket business is very important for system and major component OEM sales and the major component OEMs are willing to sacrifice margins on new product sales for a chance to capture lifecycle revenue and profits (the well-known 'razor blade model').

1 Federal Aviation Administration, "Air Carriers' outsourcing of aircraft maintenance," Sept. 30, 2008

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Even though service offerings abound and manufacturers spend heavily on advertising them, adoption has been slow

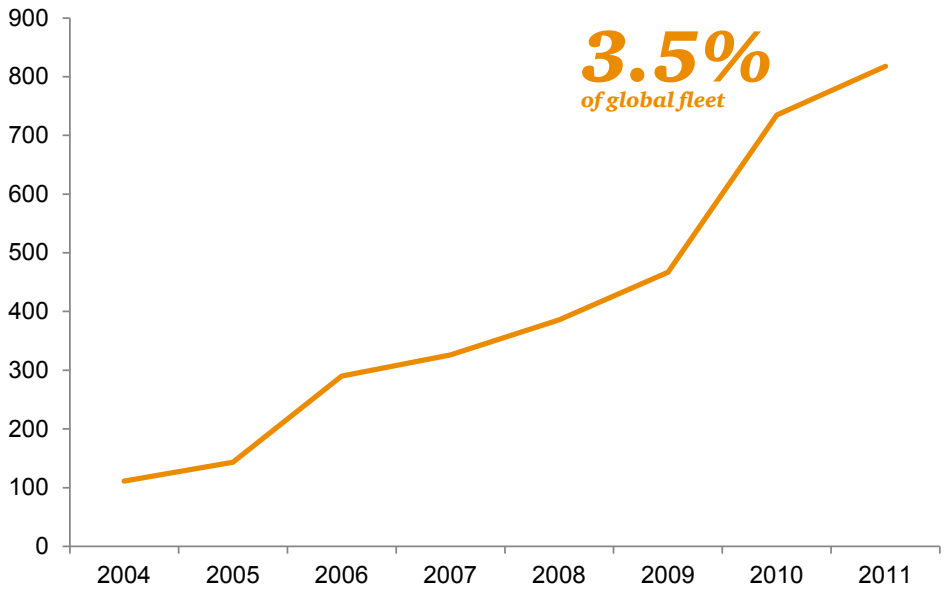
Challenges in growing aftermarket revenues

Growing aftermarket revenues, however, is not going to be without challenges for the aircraft manufacturers. These challenges include slow market adoption, increased supplier power, and lack of fully developed business models.

Even though service offerings abound and manufacturers spend heavily on advertising them, adoption has been slow. Seven years after the introduction of manufacturers' power by the hour (PBTH) agreements, only 3%–4% of the total worldwide fleet has signed up (Figure 1). Early adopters are mostly small, Asian low cost carriers (LCC) and European charters (Figure 2). Close to 90% of early adopters are small airlines with fewer than 50 aircraft in their fleet, and 70% of these airlines are in Europe and Asia. PwC surveys with airlines pointed to three reasons for slow adoption:

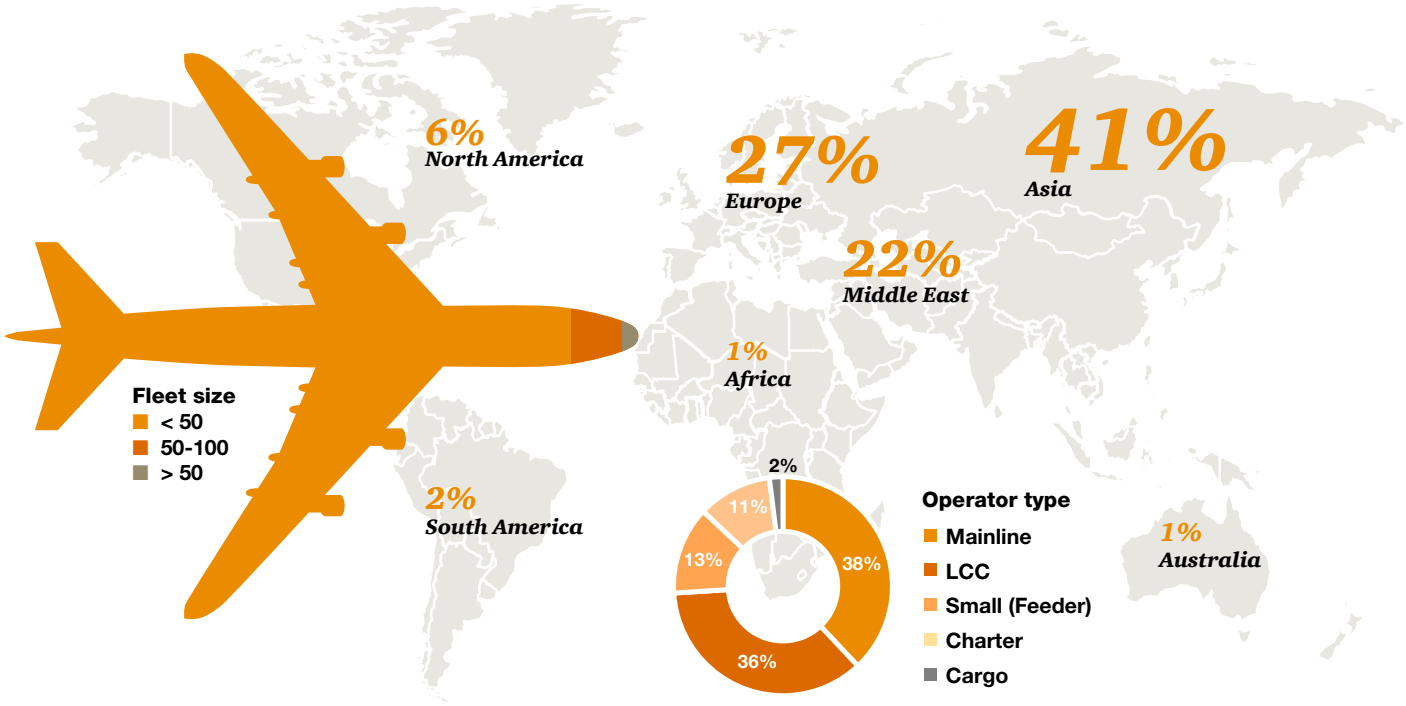
1. Airlines do not believe the manufacturer knows maintenance as well as airlines or independent MROs.
2. Airlines do not want to be locked into long-term material contracts and lose the ability to lower costs over time.
3. Airlines fear that duplication of MRO infrastructures for different fleets will increase their maintenance overhead.

Figure 1: Power by the hour market adoption



Source: Aviation Week—MRO Prospector and PwC Analysis

Figure 2: Early adopters of total care PBTH agreements



Source: Aviation Week—MRO Prospector and PwC Analysis

Another challenge for the manufacturers' aftermarket organization is the fact that power in the supply chain has significantly shifted to the risk-sharing partner (RSP) suppliers. This means that these suppliers have increased market power, as they have been given lifetime rights under the RSP model to monetize their large upfront investments. In turn, they will attempt to protect their IP aggressively and be involved in the downstream service to a larger degree, having identified the aftermarket as a clear source of revenue.

Finally, for some of the aircraft manufacturer aftermarket services, the business model lags behind the technology. Information-enabled services are a good example. With their engineering legacy, manufacturers know how to handle large amounts of data and provide value to the operators, but important questions around business models and incentives, as well as diverging data standards and immaturity of airline data systems, remain unanswered.

A new aftermarket growth strategy for aircraft manufacturers

All things considered, we believe the future is bright for aircraft manufacturers to grow their aftermarket revenues. To do so at acceptable margins, the manufacturers should not try to compete directly with independent MRO providers in providing low-margin repair labor. Rather, there is opportunity for them to leverage their unique competitive advantage in four areas: point of sale opportunities to bundle services with sale, relationship with suppliers, global footprint in commercial and defense, and engineering knowledge.

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The shift toward a global MRO model has begun, and it is anticipated that Asia will become the largest MRO market by 2022

Aircraft manufacturers are in a unique position to bundle services with products at the point of sale. Engine manufacturers have long engaged in this practice and are reaping the rewards with large aftermarket market share. This strategy requires a different view of product lifecycle revenue and margins, including change in incentives for product and aftermarket sales. At Aviation Week MRO Americas 2012, airlines expressed an interest in alternative risk-sharing business models with the manufacturers, similar to the successful performance-based logistics models adopted by the military.

Another advantage a manufacturer has over an independent MRO provider is the relationship with its suppliers. This relationship has evolved over time from the traditional arms-length transaction to risk-sharing partnerships. The motivation behind this change was spreading the development cost and risk of new platforms. But the time may have come to consider another evolution in supplier relationships, again taking a longer (lifecycle) view of supplier relationships, where the manufacturer trades off development risk with total lifecycle revenues and margins. Options to consider include merchandising, allowances, and royalties.

The shift toward a global MRO model has begun, and it is anticipated that Asia will become the largest MRO market by 2022. However, MRO demand and supply growth are not aligned. A recent PwC globalization study showed only 14 of 92 aerospace suppliers have the financial muscle to build and support 'in region,' even with demand already determined by demonstrated platform success.[2] Geographic expansion has also magnified weaknesses in the MRO supply chains with shipping times as long as six weeks, so performance in this area will become the differentiator when serving customers in new growth regions.

The larger aircraft manufacturers are in a good position to take advantage of this trend through an existing global footprint to support their global commercial and military customers.

Finally, manufacturers can leverage their engineering knowledge to provide value-added services to their airline customers. The amount of data coming off new-generation aircraft has grown exponentially, and turning this data into meaningful information (Big Data) for the airlines to lower operating costs and provide more fleet flexibility provides opportunities for whoever can harness the power of this information. As the designer of the aircraft and the integrator of the various subsystems onboard the aircraft, the manufacturer holds a natural advantage in knowledge and branding for these information-enabled services.

Critical enablers to success

The opportunities for aircraft manufacturers to profitably grow their aftermarket revenues in the next decade are intuitively clear. However, taking advantage of these opportunities will require some business model, operational, and organizational changes.

Some high-margin aftermarket services, like information-enabled services and component services, have a strong network effect, where the benefit to the consumer and provider of these services increases with the number of participants. Critical mass needs to be acquired by the manufacturer and will represent an upfront investment.

2 PwC, *Gaining altitude*, "Globalization: Aerospace suppliers need a flight plan to sustain growth," August 2012.

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Other services, such as maintenance and component repair services, require the manufacturers to lower their operating costs to be competitive. PwC MRO benchmarks indicate a 40% supply chain cost advantage for what we call "ruthless competitors." In a recent engagement with one of the aircraft manufacturers, we demonstrated that these cost levels can be achieved, but that they will require structural changes to the company's operating model free of historical biases and cost allocation schemes.

In PwC's *Spares Forecasting* survey, a study representing OEMs, airline operators, and third-party MRO providers, PwC looked to uncover the reasons why inventories across the value chain were increasing without dramatic improvements in aircraft availability or aircraft repair turnaround times. According to the study, significant gaps were identified in business processes, business and demand drivers, demand planning systems, and attitudes about roles and responsibilities for improvement of the demand planning process across the industry. The outcomes of the survey provide recommendations for:

- Better leading indicators for future demand signals for repairs and spares
- Improved information for reducing lead times on aircraft parts turnaround time
- Opportunities to reduce spares inventories across the value chain
- Better organizational alignments, enhancing communication between channel members

An opportunity exists for innovation in managing the leading indicators around aircraft performance and fleet availability.

Finally, underlying all of this should be a change in culture, from a 'manufacturer of aircraft' to a 'provider of aviation solutions.' This is easier said than done, but it is required in order to help change behaviors, incentives, market positioning, and success in gaining market acceptance—and, ultimately, to help bring about higher service revenues and margins.

How PwC can help

To have a deeper discussion on the manufacturer aftermarket and growing aftermarket revenues, please contact a member of PwC's A&D team:

Dirk de Waart
Principal
(310) 291 3926
dirk.de.waart@us.pwc.com

Scott Thompson
Partner, US Aerospace & Defense leader
(703) 918 1976
scott.thompson@us.pwc.com

Chuck Marx
Principal, US Aerospace & Defense Advisory Leader
(602) 364 8161
charles.a.marx@us.pwc.com

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