As airlines recover from the latest economic downturn, the maintenance, repair, and overhaul (MRO) industry is slowly starting to show signs of a pending uptick. Many airline customers are forecasting growth later in the year, which is good news for MRO service providers. However, a new competitive arena is developing, and providers will need to rethink their service offerings if they are to compete with market-leading “Mega-MROs”. These providers have already started to differentiate themselves with more sophisticated and complex product offerings. MROs will also need to develop stronger commercial organizations to support the next-level evolution of complex offerings. Next-generation technologies, large-scale financing, and purchasing leverage create competitive advantage and support MROs’ battle against OEMs’ continued protection of intellectual property and aftermarket services.
Slow Global Economic Recovery Indicates MRO Growth Not Expected Until 2011

2009 marked a significant global reduction in GDP for the first time in many decades (Exhibit 1), and the airline industry felt the effects. While some positive signs have emerged, such as a slight easing of the credit markets, moderate increases in the U.S. housing market, the beginning of increased consumer confidence in Western economies, and general recovery in some stock market indices, there are still many hazards that may prevent a return to strong growth. With respect to aviation recovery, one such hazard is the uncertainty in the behavioral changes in both consumer and business travel spending. Additionally, credit markets will likely remain relatively tight, resulting in capital that is both relatively scarce and highly selective. These factors indicate that the level and growth rate of the airline industry recovery in 2010 is likely to be slow but steady.

Historically, changes in MRO industry spend typically lag the revenue shifts of the airlines (Exhibit 2). The same pattern is expected coming out of this recovery, so although the airline industry itself may be showing gradual improvement from the latest down cycle, MRO demand growth will likely lag by several quarters. In fact, the global MRO market is forecasted to shrink slightly through 2010, with limited growth beginning in late 2010 or early 2011. (Exhibit 3)

The economic recovery for the MRO industry is expected to be prolonged for several reasons. First, despite any forecast revenue growth, airlines will continue to focus on keeping their maintenance costs low by reducing the volume of maintenance activity. Tactics such as burning through spares inventory, deferring non-essential checks, extending maintenance programs, and reducing discretionary maintenance spend (e.g., paint, interiors, modifications) should be expected to continue throughout the year. MROs will not invest to...
increase capacity until airlines clearly demonstrate a sustained increase in demand.

In addition, when airlines are purchasing MRO services, they are even more intensely focused on cost as the dominant decision criterion. Airlines continually evolve their purchasing organizations and deploy a wide array of tactics to drive down short- and long-term maintenance costs. These tactics include aggressive auction processes, increased use of DER/PMA as a credible threat and/or real alternative, use of inventory pooling, and mandating guaranteed cost reduction (and performance improvement) in their long-term agreements.

**MROs: Only the Strong Will Survive**

Over the past few years, strong MROs have survived the economic downturn, and a few even managed to grow their share within a shrinking market. For some providers, this involved financial and organizational restructuring. For others, it meant taking a new strategic approach to understanding emerging
customer demand and key market drivers. From these actions a new level of competition is emerging beyond core MRO activities and their initial differentiators (Exhibit 4). The emerging new differentiators break the typical bounds of MRO, entering adjacencies such as large-scale financing and progressive technology innovation. This new tier of providers is emerging with such size and financial leverage that they are able to offer a new set of services to their customers, further distancing themselves from the rest of the industry.

**Level 1: Core MRO Activities**

Regardless of the operational moves made to survive the recession, strong MROs rely on their mastery of the fundamentals of maintenance service provision. Competitive cost, quality, and turn times continue to be essential for survival and growth in the MRO industry and make up the basic level of service for any customer. Without them, MROs will be unable to retain long-term customers. Although this may seem basic, mastering this core set of MRO activities is difficult, and in fact many MROs are still struggling in these three core areas. There continues to be a wide dispersion of supplier performance in the fundamentals based on airline ratings (Exhibit 5).

Compounding the challenge of mastering the basics is the continuing trend of moving operations to lower-cost geographies. Eastern Europe, Turkey, Asia, and Central and South America all continue to grow with transplanted maintenance facilities that focus not only on airframe activities, but also on components and engines work. The fact that these geographical movements have expanded beyond airframe work signals a greater acceptance of globalization and demand from airlines to cut costs, and a related need for MROs to reduce costs and pricing in order to maintain their customer base. Nevertheless, a key challenge in transplanting or creating these new maintenance facilities is to ensure that the maintenance fundamentals remain strong.

---

**Exhibit 4  Expected evolution of MRO service hierarchy**

**Level 1: Core MRO Activities**

- Cost, e.g.,
  - Labor cost control and efficiency
- Quality, e.g.,
  - Quality management systems
  - Continuous improvement programs
- Customer service, e.g.,
  - Structured communications and reporting processes
  - Expedient invoicing
  - Turn times, e.g.,
  - Maintenance and materials planning

**Level 2: Initial Differentiators**

- Full-service providers
  - Deep and broad airframe, engine, and components capabilities
- Value-added services, e.g.,
  - Engineering support including DER development
  - Inventory planning
  - Maintenance programs
- Materials solutions, e.g.,
  - Alternative materials
  - OEM discounts
- Advanced technologies, e.g.,
  - Coatings
  - Plasma welding
  - High pressure turbine
- Commercial flexibility, e.g.,
  - PBH and flexible payment terms

**Level 3: Emerging Differentiators**

- Next-generation technology investments, e.g.,
  - Data management
  - Advanced repair development
  - Supply chain innovation
  - Total care management/optimization
- Liquidity improvements, e.g.,
  - Large-scale pooling agreements
  - AC/engine financing
- Supplier leverage
  - Long-term alignment with several large-fleet (current or future) airline customers

**Expected type of work obtained at each level:**

- Spot checks and drop-in work
- Shorter-term, smaller projects
- Long-term, full fleet deals

Source: Oliver Wyman Research.
reduced cost structure alone will not attract long-term customers; the MRO must continue to improve its levels of quality, service, and turn times.

It is expected that many MROs will continue to operate at Level 1 (Exhibit 4), and as the rest of the marketplace evolves the customer set for Level 1 operators may eventually be limited.

**Level 2: Initial Differentiators**

As MROs master the basics, they include value-added services and other differentiators. Full fleet management, engineering design, materials management, and maintenance programming services are found in the product offerings of most Level 2 MROs. Bundling these services together with traditional maintenance activities creates a comprehensive, value-added package for customers. PMA parts and extensive repair service offerings can create substantial value for airline customers, and those MROs that are able to integrate these parts into their supply chain have an advantage over competitors that cannot. Flexible commercial terms regarding payments and warranties can set some MROs further ahead of others in competitive bidding processes.

Level 2 MROs realize that winning the war on price alone is not a successful long-term strategy as industry margins continue to erode. The ability to provide flexible services that customers value allows these MROs to retain a viable position in a shrinking market. Many larger MROs are either already in this space, or plan to be in this space within three years (Exhibit 6). Competition remains fierce at this stage; however, it is expected that as the strongest MROs continue to evolve, Level 2 providers may not be able to capture the truly long-term, full fleet deals.

**Level 3: Emerging Differentiators**

As mentioned, the majority of the MRO industry is Level 1 or 2 (Exhibit 4). However, through consolidation and close ties with large airlines, several MROs and OEMs have been able to leverage their size and strong financial position to move into a new stage of service offerings. Despite the recent 2–3% decrease in airline spend on MRO activities, these leading-edge “Mega-MROs” have been able to gain as much as 10-15% market share on their competitors, winning long-term, billion-dollar-plus maintenance deals along the way. Level 3 providers
use their size along with additional strategic levers to provide a competitive edge. Some providers are choosing large-scale financing and the ability to increase their customers’ liquidity, other providers are investing in major technology improvements to improve customers’ reliability and reduce maintenance costs over time, and still others are leveraging their size and airline relationships to pressure OEMs on pricing. All of them recognize that an MRO’s/OEM’s ability to provide large-scale financing, increase customer liquidity, and lower customers’ maintenance costs over time will be key to capturing additional market share. These offerings typically require sizeable amounts of cash, a significant investment in technology, and a high degree of sophistication in the MRO organization.

These providers have a strong understanding of market dynamics and key economic drivers, and use this knowledge to not only design profitable deals for themselves and their customers, but also to leverage internal resources across the organization for successful execution. This requires constant coordination between the commercial, finance, and operations departments of the MRO, ensuring that every customer touchpoint is in line with the broader goals of the provider and the airline.

**MRO Commercial Organizations: Experimentation and Evolution**

As MRO providers evolve through these levels to capture larger, more complex deals with increased operational integration requirements, the MRO commercial organization requires evolution as well. The commercial organization requires increased sophistication in the areas of market research, financing, risk management/modeling, technology understanding, customer service, and accounting. It appears that there is a high degree of experimentation in MRO commercial organization structure and leadership, and so far there does not appear to be a dominant winning model (Exhibit 7). The primary organizational structure is nearly evenly distributed among customer-, geography-, and product-centric models. In addition, over 40 percent of MRO commercial organizations that responded to the survey experienced a shift in the organizational structure in the past two years, and over

---

**Exhibit 6: MRO revenue model evolution**

<table>
<thead>
<tr>
<th>Current Revenue Model</th>
<th>Level 1: Core MRO Activities</th>
<th>Level 2: Initial Differentiators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>26% of MROs</td>
<td>7% of MROs</td>
</tr>
<tr>
<td></td>
<td>- No plans to expand offering to differentiating services</td>
<td>- Plan to reduce and/or eliminate additional services from offering</td>
</tr>
<tr>
<td></td>
<td>22% of MROs</td>
<td>46% of MROs</td>
</tr>
<tr>
<td></td>
<td>- Plan to broaden offering to include differentiating services</td>
<td>- Plan to remain in this space</td>
</tr>
</tbody>
</table>

Source: Oliver Wyman 2010 MRO Survey.
60 percent of respondents noted a change in the senior management of the commercial organization. MROs appear to be searching not only for the right balance of power and responsibility within the commercial department, but also for a senior management team with the right characteristics to lead the broader organization to higher ground in the industry.

**Conclusion**

The airline industry is showing signs of growth in the next 12–18 months, and there will be intense competition in the MRO industry to capture this additional maintenance revenue. Most providers consider pricing, quality, and service as key purchase considerations, but realize that focusing on these elements alone does not equate to a successful long-term strategy. Rather, successful providers are moving beyond mastery of the MRO fundamentals to differentiate themselves by identifying and providing a much more sophisticated suite of service offerings—many of which are increasingly complex yet of high value to the airline maintenance community.

However, a few MROs are pushing differentiation even further by making significant investments in next-generation technologies, augmenting customer liquidity profiles through innovating financing alternatives, and/or leveraging collective purchasing strength to garner improved supplier discounts. As these levers emerge, organizations must also develop their own functional capabilities like enhanced financial analysis and market research, increase information sharing across stakeholders, and align organizational coordination between the MRO’s commercial and delivery departments. This is critical in order to successfully, and profitably, deliver such an innovative and comprehensive set of cost-reducing services to customers.

The competitive landscape in the MRO industry will continue to evolve. Each maintenance provider’s survival depends on its response to this emerging set of attributes.
About Oliver Wyman

With more than 2,900 professionals in over 40 cities around the globe, Oliver Wyman is an international management consulting firm that combines deep industry knowledge with specialized expertise in strategy, operations, risk management, organizational transformation, and leadership development. The firm helps clients optimize their businesses, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities. Oliver Wyman is part of Marsh & McLennan Companies [NYSE: MMC].

The Aviation, Aerospace & Defense Practice

Oliver Wyman has deep, international experience in all segments of aviation, including airports, airlines, service providers, MROs, OEMs, and investors. The Aviation, Aerospace & Defense Practice has consulted to nearly three-quarters of the Fortune 500 firms in these sectors, as well as to major airports around the world.

This white paper was prepared by Tim Hoyland, Chris Spafford, and Roger Lehman, all of whom are Dallas-based partners of Oliver Wyman. They can be reached at tim.hoyland@oliverwyman.com, christopher.spafford@oliverwyman.com, and roger.lehman@oliverwyman.com.