By Robert W. Moorman/Overhaul & Maintenance

The oil and cash rich Middle East remains fertile ground for the MRO industry, despite the drop in earnings of some of the region's airlines and the worldwide credit crunch. Various regional governments and airlines as well as their partners have worked tirelessly promoting the region as a major center for the servicing of aircraft and engines. And, they've demonstrated their enthusiasm by investing billions of dollars in creating and upgrading the MRO businesses there. The efforts seem to be paying off.

One need look no further than Dubai to witness gold rush-like expansion efforts. Consider the multi-billion dollar Dubai World Central Aviation City, which is part of the far bigger Dubai World Central (DWC) Aviation City complex, a 140-sq.-km. industrial and residential community being built 40 km. away from the current airport. The aviation portion of the DWC is slated to open before the Dubai Air Show in 2009.

Goodrich Corp.'s year-old, 115,000-sq.-ft. MRO facility is there. It will share real estate with a large Indian aviation services company, Livewel Aviation Services, which has invested $80 million in a 23,960-sq.-meter (258,000-sq.-ft.) MRO facility within DWC's Aviation City.

The region's liberal open skies policies and its location on the map help promote the Middle East as a gateway to North America, Europe, Africa and Asia-Pacific. Much of the MRO work will come from Eastern and Western Europe and Africa, provided labor rates and other operating costs remain reasonable, analysts predict.

"The Middle East provides one-stop connectivity" to the rest of the world, said John Byers, CEO of Abu Dhabi Aircraft Technologies (ADAT), who spent much of his career with Air New Zealand Engineering before coming to the Middle East a few years ago.

Continued investment in infrastructure here is a key driver of MRO investment. "There is an interesting formula for the growth of the MRO industry in the region" that involves the commitment of several parties, said Chris Doan, president and CEO of consultancy TeamSAI. That formula refers to a combination of regional advantages: increasing oil-related wealth, massive investment and expansion, low labor rates and favorable geography between Europe and Asia.

Government entities, private investors and leading aviation companies have made massive investments in the MRO business in the region, but there are challenges, and not all of them are tied to the falling price of oil.

Middle East MRO spending in 2008 was around $2.2 billion, and was expected to grow to $3.4 billion in 10 years, a 4.4% compound annual growth rate.

TeamSAI said the Middle East represents a 5% share of the global market. Other observers believe that portion to be around 2%.

North America retains a 37% share, while Europe has 30% , followed by Asia/Pacific at 25%, and South America at 6%, according to consultancy Frost & Sullivan. Both firms predict modest growth in Middle East over the next few years. And, the growth will come in part from still viable commercial aircraft needing major maintenance as well as new, not yet delivered airliners.

Middle Eastern airlines operate around 700 aircraft, said TeamSAI. That number will grow at an annual rate of 5.2%, culminating in a fleet of 1,150 commercial and cargo aircraft in the next several years.

An examination of the relatively young fleet of Middle East airlines and recent orders for new Boeing and Airbus equipment seems to ensure the need for MRO services in the region for years to come.

Emirates Airlines ordered 58 Airbus A380s, of which two have been delivered. Middle East operators overall have ordered 816 Airbus airliners, with 343 in operation as of November 2008. They also have 375 Boeing aircraft in service, with another 412 on order, according to Ascend. Recent orders include 50 737-800s by FlyDubai and 30 by the Republic of Iraq; 17 787-8s by Gulf Air; 10 777-300ER and 35 787-9s by Etihad Airways, and four 777-200ERs by El Al.

But, the Middle East MRO market is not immune from turbulence. A major concern is attracting, training and retaining qualified personnel to work on aircraft and powerplants. Finding qualified technicians to work and remain in an unfamiliar--

and to some a cost-prohibitive environment--remains a challenge, said several MRO leaders.

Consider the case of Dubai Aerospace Enterprise, a now three-year-old aerospace, manufacturing and services company that has invested millions of dollars in building up its MRO business, including the $1.9 billion acquisition in 2007 of aviation service providers Standard Aero and Landmark Aviation from The Carlyle Group.

To meet the challenge of attracting qualified personnel, DAE established DAE University. But the school, which was headed by George Ebbs, a former president of Embry-Riddle Aeronautical University, didn't attract enough students and closed. This could demonstrate that even well-funded players like DAE are not immune to the uncertain market conditions in the region.

DAE declined to be interviewed for this article, but acting CEO George Mushahwar previously has said: "DAE University was established to become a global leader in aviation and aerospace higher education. While that ambition remains firmly held, the demand for an aerospace workforce has shifted amid a deteriorating global economyýýýour plans for the aviation institute are being put on hold until further notice." DAE's website indicates that the company will continue to operate a flight training academy.

Apart from attracting qualified personnel, there is a fear of overcapacity and there are the perceived cultural and business challenges to consider, MRO leaders say. Dubai is very pro-business, but other areas of the Middle East can be trying for outside MROs. Taxes and fees, and stability in some countries, such as Iraq, add to the challenges of expanding MRO business in the region.

"It does affect the ability to sell outside the region and bring work in," Doan said.

The numbers help tell the story. The moribund economy worldwide has slowed growth somewhat in the Middle East. Passenger traffic growth worldwide in 2007 was around 17%, according to TeamSAI. In 2008, growth slowed appreciably to between 4% and 4.5%.

Some observers believe the leading MROs are looking down the road. "Most of the present fleet won't see a C or D check for the next 24-36 months," said Nathan Smith, an aerospace analyst with Frost & Sullivan. "The MRO industry in the region is preparing for the future."

Even if the region prepares for an eventual MRO bonanza, skeptics worry about the present lack of business with so many players.

"I think there is some over capacity in the Middle East in terms of the proliferation of facilities that claim to be viable MROs," said Ahmed Metwalli, president and COO of Memphis-based Aerospace Products International, a global OEM parts distributor and inventory management company. "There will be some contraction and rationalization in that part of the world."

He shared other concerns: "Some of these MROs don't have the critical mass to sustain their business," Metwalli said. "There is more supply than demand." This could be why some Middle East MROs are picking up piecemeal work on aircraft from Kenya, Libya and South Africa, he added.

Strong infrastructure, coupled with sufficient capital, will help ensure survival of some of the region's MROs, as will partnerships, several experts agree.

"All things being equal, the customer will give positive perspective to your commitment to being in close proximity to their operations," said Paul Snyder, president of Goodrich Customer Services.

Quotable Notables

Despite the challenges, there are a number of MROs in the region, including Abu Dhabi Aircraft Technologies, Jordan Aircraft Maintenance Ltd. (JorAMCo), EgyptAir Maintenance and Engineering, Bedek, a division of Israel Aerospace Industries, and El Al Tech, the MRO division of El Al Israel Airlines, among others.

JorAMCo continues to expand its service offerings. It recently signed a memorandum of understanding with Palm Aviation, under which Palm will offer global flight support, ground handling and refueling services for the MRO's customers. The company, based at the Queen Alia International Airport in Amman, also has five-year contract to provide aircraft maintenance for Fly Niki, the Austrian low cost carrier. The company has pursued an aggressive growth plan in the last few years, doubling the size of its facilities and staff, and it also opened a training academy for aircraft technicians.

JorAMCo began operations in 1963 as Royal Jordanian's Maintenance and Engineering Department, and in October 2000, the government privatized the company.

Egyptair Maintenance and Engineering (M&E) is another company that bears watching. In March 2008, parent company Egyptair Holdings opened a new, $100 million MRO complex. The 86,000-sq.-ft. engine facility is part of a joint venture with Rolls-Royce. The facility primarily will overhaul Rolls-Royce engines.

The company conducted a detailed market survey and analysis, and plans to grow organically and seek help from established OEMs and MROs. Egyptair M&E's growth strategy depends on "synchronization between these two approaches," said CEO and Chairman Abd El Aziz Fadel. "The first one is to sustain the internal potential growth from EgyptAir fleet and new domestic operators. The second is strategic partnerships with well known MROs and OEMs concerning some selective activities," Fadel said.

Fadel said the new low cost carriers in the region, including North Africa, will provide a significant source of revenue. At present, Egyptair M&E's customer base is varied and includes Iberia Airlines, Olympic Airways, Aerosovit, Qatar Airways, Etihad Airways and Kuwait Airways. Spanish carrier Futura International Airways was a customer before going out of business in September.

Furthermore, Egyptair M&E is seeking FAA certification in order to offer its services to U.S., Fadel said.

For Bedek, the regional MRO market is fairly limited, but the Tel Aviv-based company continues to attract considerable business throughout the world, and is looking toward MRO opportunities in Africa. Bedek's overall goal is to be one of the "leading conversion houses worldwide," as well as one of the "five largest companies offering third-party maintenance," said Dany Kleiman, VP and general manager for the Bedek Aviation Group.

Kleiman said Bedek is concentrating on four primary product lines: passenger to freighter conversions; full service MRO for commercial customers; modifying aircraft for air-to-air refueling capability; and being full service providers to governments.

In 2005-2006, Bedek sales were just under $100 million. In 2007, revenue jumped to $700 million. "Our goal is to reach $1 billion in sales by 2010,"Kleiman said.

The company recently announced conversion products for the 737-400 and 767-300ER, and introduced more engine product lines, such as CFM56-3 and -7, and the GE CF34 powerplant. It also hopes to work on the IAE V2500 or a comparably sized engine later this year.

Bedek has improved its infrastructure and opened new hangar facilities last summer. As a result, Bedek can convert up to cargo four 747-400s simultaneously, although that market has been "soft" of late, Kleiman noted.

Bedek's neighbor El Al Israel Airlines Maintenance and Engineering offers line maintenance and logistics support to the El Al fleet of 36 Boeing airliners and other operators' aircraft at its Tel Aviv hub and at three other locations in Asia, Europe and North America. Bedek provides engine service for El Al's airliners.

With a 1,300-person staff, the MRO division offers heavy maintenance, C and D checks, modifications and interior remodeling at its three-hangar facility in Tel Aviv. It also provides support for landing gears, engine components, avionics and emergency and safety equipment. El Al Tech provides round-the-clock recovery support and other logistics services. Shmuel Kuzi, VP of maintenance and engineering said the MRO division works on more than 40 aircraft per day.

Helpful Linkages

The eye-popping expansion in Dubai, Abu Dhabi and Doha, corresponding growth by Emirates Airlines, Etihad Airways and Qatar Airways, and the introduction of low-cost carriers in the region help ensure a continued market for MROs. But, it is partnerships with recognized OEMs can provide immediate stability and a constant revenue stream.

Consider what GE is doing there. The company doesn't operate its own MRO facility in the Middle East, but it is helping customers expand their MRO operations or launch new facilities to meet the needs of the growing engine fleets, said Muhammad Al-Lamadani, general manager, Eastern Europe, Middle East & Commonwealth of Independent States for GE Aviation.

GE and the Mubadala Development Co., the strategic investment arm of the Abu Dhabi government, which owns ADAT, signed a partnership in July 2008 to help the MRO expand its engine overhaul and repair business. In Doha, Qatar, GE established the GE Technology and Learning Center, where it offers engine line maintenance training for customers in the region. And at the Dubai air show last year, GE and Saudi Arabian Airlines signed a cooperative agreement to support the airlines' MRO efforts. GE was also instrumental in the construction of Emirates Airlines' Engine Test Cell facility in Dubai.

The availability of highly skilled technicians in the region is challenging, and many airlines are turning to recruiting technicians from India, Thailand and the Philippines to meet their needs, Lamadani said. Another concern: Middle East airlines are training on many engine models, but GE learned from its own facilities that if MROs in the region specialize in certain engine models, they can improve productivity, Lamadani said.

To support its military business, GE has depots in Abu Dhabi, Turkey and Cairo. The F110 powerplant for the F-16 has been very successful in the UAE, Oman, Egypt and Turkey. The engine also powers the F-15S used by Royal Saudi Air Force (RSAF). In a recent deal, GE won the contract to re-engine the RSAF's F-15 fleet. And, last July, Rolls-Royce and Mubadala launched a joint venture that will offer On-Wing Care through ADAT, including support services from boroscoping to engine changes for the Rolls-Royce Trent family.

Boeing and partner Alsalam Aircraft Co., a Saudi Arabian company partially owned by Boeing Industrial Technological Group, signed a three-year, $29 million contract to provide programmed depot maintenance for the Royal Saudi Air Force C-130 fleet.

Airbus said it has yet to sign a cooperative agreement with any MRO in the region.

Well-established MROs based elsewhere are partnering with their counterparts in the Middle East.

SR Technics, for example, is owned by a consortium from the UAE comprising Mubadala Development, Dubai Aerospace Enterprise and Isithmar World.

"It is SR Technics' strategic intention to pay particular attention to the Middle East as it is one of the company's key growth markets," said company spokeswoman Vivienne Burch.

SR Technics took a substantial step in the region in late 2006 through a $750 million contract with Gulf Air that gives SRT technical management responsibility for Gulf Air's fleet of 34 airliners. Other customers include: Air Arabia, Maximus Air Cargo and Oman Air, for which the MRO will provide landing gear services for two years on the airline's 737NG fleet.

Lufthansa Technik, which has a sales office in Dubai, has a two-fold strategy for the Middle East, which remains the biggest market for completions of widebody VIP aircraft. [See "Billionaires Still Buying," p.39.] LHT has completion contracts with unidenfied corporate customers for two 747-8 in the region and just signed completions contract for a VIP A330 aircraft, said Walter Heerdt, SVP for marketing and sales.

LHT also has numerous service contracts with Etihad, Qatar, Gulf Air and Saudi Arabian Airlines. Heerdt estimates LHT could generate between $700 million and $1 billion in MRO-related business over the next decade from Middle East operators.

While LHT provides service in the region, it's also attempting to wrest some business for its just-opened MRO facility in Sofia, Bulgaria, which performs D checks for 737s and Airbus narrowbody aircraft. And, on the island of Malta, LHT is servicing narrowbody aircraft and widebodies. Middle East operators already have signed up for MRO services at the Malta facility.

"We have the capabilities being built up in Sofia and Malta that customers from the Middle East could use," Heerdt said, adding that the company will announce a new MRO contract with a Middle East operator at the MRO Middle East Conference & Exhibition.

Even with partnerships and the financial backing of the government, Middle East MROs must consider the huge capital costs versus the throughput and volume of work.

"This kind of specialized equipment for engine overhaul or component testing is hellishly expensive," said ADAT's Byers. "You need significant volume to justify that kind of expenditure." He said some regional MROs would not be able to develop that kind of throughput without partnerships.

The second life of older equipment, brought on by the recent decline in fuel prices, is another revenue stream worth the consideration of independent Middle East MRO providers. But counting on older equipment for revenue is band-aid therapy. "The vast majority of older aircraft that are parked will stay parked," Byers said.

A good way to gauge the potential of the Middle East MRO industry is to reflect on its history. Many years ago, the region had a few standalone MROs. Much of the line maintenance was performed by the maintenance divisions of flag carriers, while heavy maintenance was outsourced. But, things are changing in part because of investments made by Gulf governments and outside investors, which believe in the long-term potential of this region as a center for MRO activity.

"Right now, the region has some mature MROs and another promising new MRO," EgyptAir M&E's Fadel concluded.

And that is a good sign.

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