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Reflection on market downturns and developments over the past year leaves an uncertain outlook for the year ahead in the rotorcraft MRO industry.

By Peter Donaldson

**D**espite the helicopter's inherent flexibility and the diversity of operations that it is uniquely capable of carrying out, low oil and gas prices are rarely good news, because they always hit exploration activity – an area that has historically been the largest source of demand for flying hours.

Coupled with weak economic growth on a global level throughout 2016, and what the International Monetary Fund calls 'a wide dispersion of possible outcomes' in its projections for the next couple of years, the result is a continuation of tough times for helicopter operators and maintenance, repair and overhaul (MRO) providers, both OEMs and the independents that depend on them.

This particular downturn has claimed some high-profile victims, evidenced by long-established operators CHC and Erickson filing for Chapter 11 bankruptcy protection in the US. In addition, Airbus Helicopters' CEO Guillaume Faury described 2016 as probably the most difficult year of the last decade for the rotorcraft industry as a whole.

In conditions such as these, strong product support is arguably even more

important than it is in times of plenty, because it enables operators to respond quickly to any opportunities that do arise and to make the most of them.

**Showing resilience**

'The helicopter MRO market is resilient,' Dana Fiatarone, VP for commercial systems and services at Sikorsky, told RH. 'The oil and gas downturn has slowed the demand for new aircraft in some segments as well as the related requirement for MRO support; however, our customers continue to utilise our aircraft to meet their many mission requirements.'

'That is why we continue to focus on, and invest in, providing world-class customer support, including continued aftermarket MRO support,' she said. 'In addition, we are seeing a number of our customers and others in industry modify, upgrade and reconfigure existing helicopters to fill demands in missions like

# Life support

When economic times are tough, strong product support is arguably even more important. (Photo: Life Link III)



search and rescue operations, and that does provide opportunities to the helicopter MRO market.'

It has been a little over a year since the company launched two new customer support initiatives in the form of a commercial customer care centre in Trumbull, Connecticut, and a forward stocking location (FSL) in Stavanger, Norway, which supports one of the largest regional S-92 fleets.

Fiatrone is upbeat about the response to both. 'We're hearing positive feedback and seeing substantive results,' she said, commenting on the Trumbull facility. 'Sikorsky has significantly reduced the volume of AOG [aircraft on ground] events by 72% and reduced AOG turnaround time by 66%. At the same time, response time for routine and urgent orders has also improved.'

Fiatrone declared that Sikorsky was 'thrilled' with the performance of the Stavanger FSL, which is operated by Aviation Logistics: 'Since beginning operations to serve Scandinavia in September 2016, it has serviced more than 300 part requests with an average response time of less than one hour.'

She also told *RH* that Sikorsky is committed to positioning more of its aftermarket inventory within 12 hours of operational aircraft, using a number of forecasting methods and tools to find the best sites. 'We are constantly communicating with our customers to understand their needs and would most likely look to fleet-concentrated areas like the Gulf of Mexico or parts of Asia for future locations.'

The company also added to its MRO network in Asia, appointing UI Helicopter as an authorised customer support centre in South Korea in mid-February 2016.

Operators in Korea fly 14 S-76s on executive transport and utility missions, while the Republic of Korea Air Force flies three S-92s as executive transports. The Korea Coast Guard also operates one as an SAR machine and has a second on order that is due for delivery this year.

UI joins more than 20 Sikorsky customer support centres around the world and is one of the few approved to provide MRO services for both of the manufacturer's commercial types.

Long-term support agreements are another aspect of Sikorsky's strategy for coping with tough times. The company signed ten-year contracts in July with Bristow Helicopters and Babcock Mission Critical Services (formerly Bond Offshore Helicopters), covering the S-92 under the OEM's Total Assurance Program.

Both deals provide the operators with extended support for aftermarket material needs, enabling them to run their S-92 fleets within a known budget, reducing the risks associated with unexpected costs.

Furthermore, this type of contract provides a degree of predictability for both operators and MRO providers. Vector Aerospace, for example, owned since 2011 by Airbus Helicopters but still operating as an independent, signed a five-year deal with Canada-based Eagle Copters in February to repair, overhaul, test and modify power sections and combine gearboxes of Pratt & Whitney PT6T turboshafts for the Bell 212/412 aircraft that Eagle supports.

### Seeking approval

Other manufacturers have also been expanding their support networks through agreements with independent providers. Leonardo, for example, appointed Textron subsidiary Able Engineering as an approved supplier for MRO and testing of dynamic components in June last year.

Based at Phoenix-Mesa Gateway Airport in Mesa, Arizona, the company provides FAA-approved component repair and overhaul services plus approved replacement parts to commercial and military aviation fleets in more than 60 countries.

Gabriel Massey, director of strategy at Able Engineering, outlined the company's approach to business in tough times. 'The success of the MRO market is directly linked to fleet activity. If operators don't fly, they don't need repairs,' he told *RH*.

'Our company is in a somewhat different position. Because we are focused on saving operators money – in a market where people are flying less – we provide value by delivering opportunities to safely cut costs.'

Being an approved MRO solutions provider has been Able's model since its inception in 1982, Massey said, describing the company's mission to safely reduce



HCare Smart offers 'by the hour' contracts with lower minimum hour stipulations. (Photo: Airbus Helicopters)

aircraft operating costs by providing resourceful component repair and overhaul services and approved replacement parts.

'Because of this, we have numerous approvals from multiple OEMs,' he said. 'In the case of Leonardo, we have enjoyed a very positive working relationship for years, but any time we sign formal approval agreements, as we did with Leonardo last year, it is a welcome and positive event.'

'Many customers only work with approved OEM providers, so this official designation gives us the credibility that a lot of companies are looking for. It opens up access to a new segment of the customer market and can quickly accelerate our new client relationships,' Massey elaborated.

While Able is authorised to support all Leonardo types, it is actively supporting the AW109, 119 and 139 models.

Safety-critical life-limited components in rotor and transmission systems tend to be the most demanding to work on, thanks to their complex design and common use of exotic materials, such as superalloys, that require advanced processes and controls. This means the company has to carry out more engineering analysis to support repairs with greater FAA oversight.

The company's established specialisation in the aftermarket sector has enabled it ►

to build up the resources it needs to take these tasks on, including a staff of more than 400, with hundreds of mechanics, more than 40 engineers and designated engineering representative specialists and an extensive range of test equipment and services, a combination which allows Able to complete 99% of jobs in-house, according to Massey.

In-house capabilities include electroplating, chemical processing, machining, grinding, non-destructive testing, hydraulics, bearings services and painting. The company works to airworthiness standards from a wide range of authorities around the world, including the FAA, EASA, CAAC, JCAB, DCAT, ANAC and the Brazilian Navy.

'For Leonardo, we've invested heavily in expendable replacement parts, particularly for the parts we repair for the AW139, and continue to invest in – and expand on – our pool of rotatable components,' Massey said.

'Across all of our supported products, we are constantly investing in authorised tooling, a large catalogue of expanded repairs and the continued education and training of our mechanics. We are also continually developing new supplier relationships to streamline and improve our parts manufacturing process.'

### Core business focus

Massey noted that a growing number of operators are focusing on what they do best and as such are beginning to view in-house maintenance as a secondary business, a trend he expects to see continue.

'This is a great window of opportunity for a company like Able to prove that shifting maintenance and repair to a trusted outsource partner can save them money while maintaining – and often exceeding – their safety and performance expectations. We see this as one of the most significant market changes in the foreseeable future.'

Further additions to Leonardo's MRO network supporting the AW139 came later in the year, with RUAG Aviation named an authorised service centre for the type on 28 November, and CHC subsidiary Heli-One Poland receiving EASA approval for base maintenance on 6 December.

RUAG's sites at Sion and Lugano in Switzerland are both approved to work on the type, providing airframe and



Able Engineering in Mesa, Arizona, is authorised to support all Leonardo types. (Photo: Dana Warr)

component MRO, cockpit and cabin upgrades, refurbishments and painting, as well as warranty-plus support and consulting services.

The company also supports other Leonardo types as well as machines built by Airbus, Bell, MD and Sikorsky, and several fixed-wing aircraft manufacturers. In addition to MRO services, RUAG lists upgrades and the development, manufacturing and integration of subsystems among its core competencies.

Since its opening in 2014, Heli-One Poland's 6,040sq m Rzeszow facility – in the heart of Poland's 'aviation valley' – has evolved to provide base maintenance support for Airbus's AS332, H225 and H135 types, with the AW139 as the newest addition.

Offerings include all levels of inspections, checks, testing and re-certification, full structural support, corrosion removal and repair, minor and major structural repairs and modifications, non-destructive testing, painting, upgrades, service bulletin compliance, fault diagnosis, vibration evaluation and modification and repairs to avionics. Services specific to the AW139 include exhaust duct repairs and tail assembly modifications.

Independents too are adding extra types to their portfolios to attract more business from the healthier sectors of the market. Lithuania's Helisota, for example, which is well known as an MRO provider for Russian Helicopters' Mil Mi-8 and Mi-17 types and the Robinson range, added Airbus's H120, H135 and H145 to its EASA Part 145 certificate at the end of March. This

enabled the company to begin providing both base and line maintenance support for private and government operators of these types, which are widely used in the private and parapublic sectors.

### International coverage

Bell Helicopter, which continues to win awards for its product support, has built on its capabilities in Europe, with the completion of three EMS-configured Model 429s for Slovakian operator Air Transport Europe, announced on 25 January 2017. The aircraft are the first to emerge from Bell's facility in Prague, which the company refers to as the official regional customisation, delivery and aftermarket service centre for Europe.

Working with the rest of Bell's regional network, it also provides full MRO capabilities in a sector of the helicopter market that remains healthy and growing, thanks in part to the development of new types, according to the company's regional director for Europe and Russia, Jakub Hoda.

'Establishing the Bell Helicopter facility in Prague lends to our anticipation of further market growth, in addition to the introduction of the new Bell 505 and Bell 525. With this growth, we intend to have the people, products and facilities necessary to continue to win in the region and support our growing footprint,' he said.

Much of the growth has come in the parapublic and EMS sector. The company reports increased demand for the 429, 407GXP and 412EPI throughout the region.

Earlier in January, Bell announced progress on its Customer Advantage Plan

(CAP), which was launched in March 2016, a year which also saw the addition of four service centres around the world.

Guaranteeing fixed maintenance costs per flight hour, CAPs come in Standard and Premier varieties, respectively covering the helicopter's basic configuration and optional coverage of non-standard kits. Other benefits include preferential rates for aircraft serviced by any of the more than 100 Bell customer service facilities, streamlined budgeting and better financing terms, protecting an aircraft's residual value. Buy-ins have been eliminated for select premier fleet customers, and the plans are transferable to the new owner when the aircraft is sold.

So far, CAP has attracted customers in Asia-Pacific, Europe, Latin America and North America, with fleets of varying sizes in mission areas such as EMS, corporate/VIP and oil and gas.

The new service facilities are located in Australia, China, Egypt and Turkey: Eagle Copters Australasia in Coffs Harbour, New South Wales; Zhenjiang Aerochine Aviation in Zhenjiang City; Petroleum Air Services in Nasr City, near Cairo; and Genel Havacilik in Istanbul, respectively.

In May 2016, Bell reported MRO business growth in the Asia-Pacific region following completion of 5,000-hour inspections on a pair of 412EPs at Seletar Aerospace Park, Singapore, for a customer in Australia. Speaking at the time, general manager Mike Greene said that the service centre continues to drive

growth in heavy MRO for customers throughout the region.

In addition to MRO, the facility provides refurbishment and customisation services, new aircraft deliveries, spares distribution and maintenance training within the region, with certifications from Australia's CASA, Indonesia's DGCA, the Philippines' CAAP, Singapore's CAAS, Thailand's DGCA and more in the pipeline.

### Product support

Airbus enhanced its HCare material support packages last March with what the company describes as a simplified and reshaped offering that is tuned in to the expectations of operators of light single-engine aircraft and light twins.

The Easy Repair scheme, for example, guarantees turnaround times on 800-plus components, while HCare Smart offers 'by the hour' contracts with lower minimum hour stipulations and bigger discounts during the warranty period. Other attractions include removal of the buy-in requirement for single-engine aircraft, flexible buy-in options for light twins and availability support for fleets of more than ten aircraft. The enhanced HCare contracts include binding performance commitments on Airbus.

Around the same time, MD Helicopters launched new customer support portal MyMD.Aero, which the company describes as a user-driven, web-based network designed to modernise and improve maintenance planning, parts availability and communication for all its operators.

The membership-based service is free to join for all MD helicopter owners, operators and authorised service centres and distributors. Accessible from mobile and desktop devices around the world, it is designed to provide real-time access to essential fleet performance data.

This is part of a raft of efforts the company has been making to improve its product support, work which was rewarded in June by improved customer satisfaction due to availability and cost of parts, response to AOG and general quality of service, as measured in an independent survey.

'Compared to 2015, we have seen a 34% increase in 24-hour response time for reported AOGs,' said Nick Nenadovic, VP of aftermarket and customer support at MD Helicopters.

Among the company's longer-term efforts is its deal with Sapura Aero in Kuala Lumpur. Initially, Sapura is to act as an authorised independent sales representative of MD's commercial range along with optional equipment and accessories, serving Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. Sapura Aero is also to provide aircraft handling, hangarage, aircraft management and aircraft charter services.

MD Helicopters' CEO Lynn Tilton expects the deal to accelerate development of what she described as a robust and self-sustaining commercial rotorcraft market in the region. A key element of this will be a regional MRO and training hub, according to managing director of Sapura Aero, Shahrman Shamsuddin.

As Danish politician Karl Kristian Steinke and various other luminaries have said, it is difficult to make predictions, especially about the future. Like any other business, MRO providers must be prepared.

'We do not expect there to be significant change looking forward in 2017, and it is difficult to speculate how the helicopter MRO market will react and reposition itself during this market downturn,' Fiatarone concluded. 'In the interim, we will continue to focus on providing our customers with the support they need. Our goal is to ensure that when our customer has a mission to fly, their Sikorsky aircraft is able to fly that mission.' ■

Poland's 'aviation valley' has evolved to provide base maintenance support for Airbus's AS332, H225 and H135 types, amongst other models. (Photo: Airbus Helicopters)

