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MRO

August 2014 - www.avitrader.com

MRO TRENDS
A global perspective

Company Profile - MAEL

Is Africa the next maintenance destination?

MRO News
from around the world

People on the Move
latest appointments

Its a small world

The aviation business and the operating environment in which it finds itself is a global affair. As such the strategies and competitive trends employed by MRO service providers will impact how airlines and aircraft operators do business.

Europe is showing some positive signs of a come back following a sluggish economic environment in that region. Many European airlines are reporting improved financial performance but there are still financial pressures that may bring capacity and demand issues affecting MRO in that region.

Off shoring MRO activities by North American and Western European airlines to emerging markets, Asia in particular, continues to seem less economically viable that it has been for several years now. The main culprits seem to be the growing presence of OEMs in the global market and the growing local demand.

Interestingly, Rus Sutaria of Avia Intelligence in London considers the fundamental question as to whether Africa could be the next maintenance destination? His report looks at the potential opportunities and the challenge of navigating political barriers there.

Analysts predict that the value of the commercial aircraft MRO market will reach $53.4m in 2014 but market conditions will remain challenging.

Happy reading

Keith Mwanalushi
Editor

Engine leasing is an attractive option for operators. *Photo: AFI KLM*

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AviTrader MRO

Published monthly by

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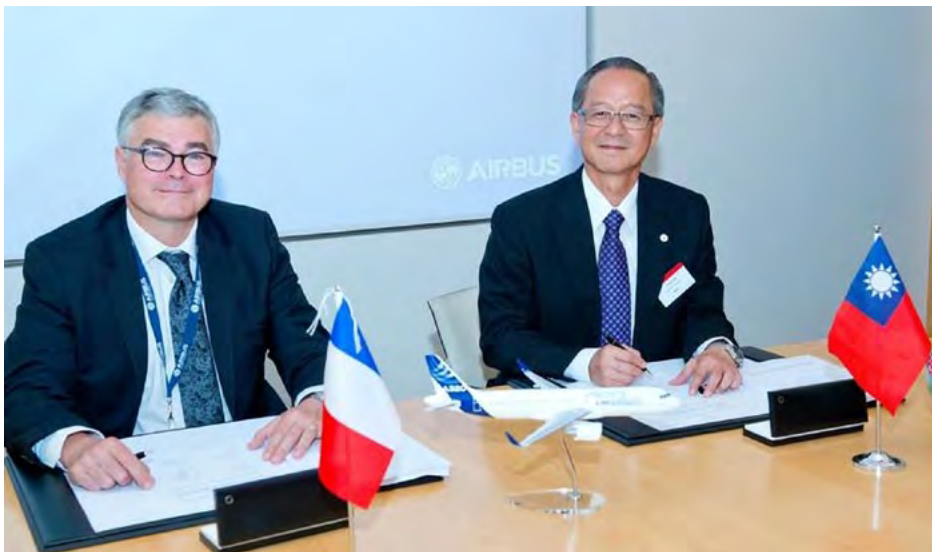
Registration

AviTrader MRO is a subscription-free monthly publication. To receive a copy in your inbox every month, please send an email with the subject “subscribe” to oemmro@avitrader com

Opinion

Please send your comments and queries to editor@avitrader.com



Taiwanese corporation to supply composite panels for aft belly fairing *Photo: Airbus*

Airbus choses AIDC as new supplier for A320 Family

Aerospace Industrial Development Corporation (AIDC) in Taiwan has become a new tier-one supplier for Airbus. Under the agreement, which followed a thorough evaluation process, AIDC will produce composite panels for A320 Family aircraft aft belly fairings. The contract was signed by François Mery, Airbus Senior Vice President Aerostructure, Procurement and Tony Liou, AIDC Senior Vice President.

Embraer Executive Jets opens new facilities at its Contact Center

Embraer Executive Jets opened new facilities at its Contact Center, this month, to provide operational, technical and maintenance support for the global fleet of business jets. The facility expansion takes place five years after the center began its operations in 2009. During this time, the fleet of Embraer executive jets has quintupled in size. There are currently more than 780 Embraer Executive Jets aircraft in operation in over 50 countries, and they are supported by the Contact Center 24 hours a day, 365 days a year. "Investing in support and services for full customer satisfaction has been one of our competitive advantages, which is proven by product support surveys conducted by the trade press," said Edson Carlos Mallaco, Vice President Customer Support and Services, Embraer Executive Jets. "Our Contact Center is staffed by experienced professionals who are qualified to provide services for different levels of events."

Héroux-Devtek signs new contract with Boeing to fabricate torque tubes for 787 Dreamliner

Héroux-Devtek has been awarded a multi-year contract to manufacture torque tubes for the Boeing 787 Dreamliner. Under the terms of the agreement, which represents new business for Héroux-Devtek, shipments are scheduled to begin in early calendar year 2015. The manufacturing of these components will be carried out at the Corporation's Laval, Quebec facility. Production of the 787 will increase from the current rate of 10 airplanes per month to 12 in 2016 and to 14 by the end of the decade. As of July 31, 2014, the backlog for the 787 stood at 869 aircraft.

Scoot selects UTC Aerospace Systems C.A.R.E. program for Boeing 787 maintenance

Scoot, a wholly-owned subsidiary of Singapore Airlines, has selected UTC Aerospace Systems to provide asset management and repair services for components on its Boeing 787 aircraft through a Comprehensive Accessory Repair and Exchange (C.A.R.E.) program agreement. As part of the C.A.R.E. program agreement, UTC Aerospace Systems will provide inventory support and maintenance, repair and overhaul (MRO) services for 10 Boeing 787-9 and 10 787-8 aircraft to be operated by Scoot. Products supported under the agreement include air management systems, electric power generator and start systems, emergency power systems, fire suppression, sensors and lighting systems. The first of the 787-9 aircraft will be delivered to Scoot in November 2014.

Summit Air of Canada signs JetSpares contract with BAE Systems

Summit Air of Yellowknife, Northwest Territories, Canada has signed a two-year JetSpares rate-per-flying-hour (RPFH) spares contract with BAE Systems Regional Aircraft to support its newly acquired fleet of two 90-seat Avro RJ85 regional jetliners. To support the growing market interest for the Avro RJ in Canada, BAE Systems Regional Aircraft has worked closely with Transport Canada Civil Aviation (TCCA) to obtain Canadian Type Certification for both the Avro RJ85 and the bigger RJ100. Summit Air is the latest Canadian operator to acquire the Avro RJ, and following delivery of the first aircraft in September will commence FIFO (Fly-in; Fly-out) operations in partnership with First Air and Det'on Cho Logistics on behalf of Diavik Diamond Mine to airlift employees to and from Edmonton to the remote mine which is situated 300 kilometres north of Yellowknife and with air only year-round access.

SkyWest Airlines selects AAR to service E-175 landing gear

AAR has signed an agreement with SkyWest Airlines to overhaul landing gear on its fleet of 40 Embraer 175 commercial passenger jets. The contract builds upon AAR's existing relationship and its experience servicing landing gear on the Embraer 120 family of aircraft for SkyWest Airlines. The work will be performed at AAR's landing gear repair station in Miami. The contract positions AAR as a go-to MRO for E-Jet landing gear. Last fall, AAR entered an agreement with Liebherr-Aerospace to provide landing gear maintenance, repair and overhaul (MRO) services for the Embraer 170/175/190/195 family of aircraft, enhancing AAR's capabilities.

BAE Systems signs five-year support agreement with Emirates

BAE Systems has signed a five-year agreement with Emirates, the world's largest Boeing 777 operator, to provide maintenance and technical support for its entire Boeing fleet. Under the terms of the agreement, BAE Systems will deliver on guaranteed turn around times, position product in region, and provide benchmark technical support. The company will provide maintenance support for products supplied at line fit to Boeing, such as flight controls, flight deck systems, and control and monitoring systems, at its service centers in the United States, United Kingdom, and Singapore.

Liebherr-Aerospace delivers first flight test bed components for Bombardier Global 7000 and Global 8000 business jet

Liebherr-Aerospace Toulouse SAS has delivered the first set of bleed air system components for the engine flight test bed of the Global 7000 and Global 8000 aircraft program, Bombardier's latest ultra long-range business jets. The testing activities will be performed on GE Aviation Passport engine. Bombardier has selected Liebherr's center of excellence for air management systems to develop and supply the bleed air, the cabin pressure control, the air-conditioning, the wing anti-ice and the fuel tank inerting air preparation systems. The qualification tests are currently performed at Liebherr-Aerospace's test center in Toulouse.

Western Aircraft opens doors to two new buildings

Western Aircraft, a Greenwich AeroGroup company, added two new buildings totaling 26,000 ft² to its 18-acre leasehold. The new construction includes an expanded parts facility as well as a two-story infill building that houses support shops for Western Aircraft's services operation. Western Aircraft President Jeff Mihalic said that Western's business expansion was driven in large part by the sales tax exemption on installed parts passed by the Idaho legislature in 2012 and the growth of Western's capabilities and sales force. The overall expansion includes more than $2.3m in new facilities and more than $2.4m in facility improvements and specialized tooling. Additionally, due to the added business, Western Aircraft has increased staffing from 150 to 200 employees.

Scoot selects Pratt & Whitney AeroPower for 787 Auxiliary Power Unit maintenance support

Pratt & Whitney AeroPower has signed a long-term comprehensive APS5000 Auxiliary Power Unit (APU) maintenance support agreement with Scoot, a wholly owned subsidiary of Singapore Airlines, for its new fleet of 20 Boeing 787 series aircraft. The support agreement includes repair services and spares asset management. The agreement, which focuses on system health monitoring, and aircraft operational and dispatch reliability, marks Pratt & Whitney AeroPower's most comprehensive maintenance support program for its APS5000 APU. The agreement covers 10 B787-8 and 10 B787-9 of Scoot's new 787 aircraft fleet. The first delivery of the 787-9 aircraft is scheduled for November 2014.

China Airlines selects UTC Aerospace Systems for long-term spare parts agreement

China Airlines has selected UTC Aerospace Systems for a long-term detailed spare parts agreement that includes air management, electric, and engineering systems on select Boeing and Airbus aircraft operated by the airline. As part of the five-year exclusive agreement, UTC Aerospace Systems will provide China Airlines with OEM parts for the Airbus A330 and A340 and Boeing B737- 800NG and B747- 400 aircraft.

Ameco provides releasing for SIA's A380 *Photo: Ameco*

Ameco provides aircraft releasing for Singapore Airlines' A380

On August 1st, Ameco Beijing starts providing line maintenance and aircraft releasing services for Singapore Airlines' A380 aircraft which is used by the carrier on Beijing-Singapore route, seven flights per week. Ameco has been providing line maintenance and aircraft releasing services for Singapore Airlines' Boeing 777 and Airbus A330 in Beijing since 2011 and extended the services to A380 from this August. In addition to Singapore Airlines, Ameco also provides line maintenance to Lufthansa Airlines' A380 in Beijing.

Rolls-Royce signs engine services contract with Thomson Airways

Rolls-Royce has signed a service support agreement with Thomson Airways for RB211-535 engines that power the airline's Boeing 757 aircraft. The service support agreement has been designed specifically for Thomson and will support the airline's Boeing 757 aircraft for the duration of their time in the fleet. Thomson Airways, part of the TUI Group, is the airline for Thomson and First Choice, and is the UK's third largest airline. It has a fleet of 59 aircraft operating from 20 UK airports.

Southwest Airlines expands OnPoint Solution agreement with GE

Southwest Airlines expanded its OnPoint solution agreement with GE Aviation to cover a total of 196 CFM56-7B engines which power its Boeing 737-800 aircraft, and up to 100 CFM56-7B engines, that power recently acquired Boeing 737-700 aircraft.

Werner Aero Services sets up V2500-A5 nacelle pools in US and Europe

Werner Aero Services has placed complete sets of V2500-A5 nacelle components in New Jersey, USA and in Brussels, Belgium. The components are strategically positioned in these two locations to support its US and European customers with quicker turn around times. Werner Aero Services plans to continually add more V2500-A5 pool locations to faster reach its worldwide customers. All components are in serviceable condition and available on a pool access basis or as needed with opportunities still existing for airlines to join the existing nacelle component pools. Werner Aero Services is full service nacelle provider including repairs, modifications, loans, lease, exchanges, and just in time service.

Meggitt wins Boeing 737 MAX engine and APU fire protection

Meggitt Safety Systems has been awarded a contract by The Boeing Company to design, develop, manufacture and support the fire protection system for the 737 MAX engine and APU. The contract comprises the control computer, engine and APU fire detectors and the engine and APU fire suppression bottles. This contract demonstrates the opportunity to provide full Chapter ATA 26 system offerings enabled by the combined capabilities of the merged Meggitt Safety Systems and Pacific Scientific.

Fokker and SASMOS sign agreements for production of wiring harnesses in India

Fokker Elmo, a business unit of Fokker Technologies and SASMOS HET Technologies Ltd. have signed Agreements for producing electrical wiring interconnection systems in Bangalore, India. Recognizing the Indian aviation market is one of the fastest growing and most dynamic aviation markets in the world; aircraft manufacturers have the need for Indian Industrial Participation, presenting an excellent business development opportunity for Fokker Elmo and SASMOS. Over time, this Indian business model is expected to grow to attractive values for both companies.

Marshall Aerospace and Defence Group`s new Abbotsford, BC offices *Photo: Marshall Aerospace and Defence Group*

Marshall Aerospace and Defence Group chooses Abbotsford as North American office hub

Marshall Aerospace Canada, part of Marshall Aerospace and Defence Group, has increased its in-country presence and strengthened its commitment to focused new business development in North America, with the purchase of a 4,343 ft² building at Abbotsford Airport in British Columbia. The building will become Marshall's Canadian head office, out of which the company's comprehensive Air, Land and Sea engineering and maintenance capabilities will operate to serve current and future military and civil contracts and customers. The Abbotsford base will also act as Marshall's base for strategic growth in Canada and North America. The new office in Abbotsford can accommodate up to 35 personnel, the majority of which will be engineers and technical staff. This office will further consolidate Marshall Aerospace Canada as an integral part of Marshall's United Kingdom global operations, where Marshall is a Design Authority for a number of platforms, and has fully approved procedures and practices in place that allow the company to undertake and certify OEM-type work on a variety of components, systems and structures. Currently, Marshall supports more than 10 air forces around the world.

Héroux-Devtek renews important contract with Bell Helicopter

Héroux-Devtek, a leading Canadian manufacturer of aerospace products, has renewed an important multi-year contract with Bell Helicopter for the manufacturing of components and assemblies for several helicopter programs. Under the terms of the agreement, Héroux-Devtek will manufacture the main rotor hub and the tail rotor hub for the new Bell 505 Jet Ranger X, as well as for the Bell 206B and Bell 206L helicopter models. Héroux-Devtek will also manufacture tail rotor hubs, as well as other drive system components, for the Bell 212, Bell 407 and Bell 412 aircraft. The contract renewal spans a five-year period ranging from calendar year 2015 through calendar year 2019 and calls for the production of components for new aircraft and the aftermarket. Based on current program expectations, the total value of this multi-year agreement could exceed $46m.

Liebherr-Aerospace signs contract with LOT Polish Airlines for E-Jet E1 landing gear overhauls

LOT Polish Airlines has selected Liebherr-Aerospace Lindenberg GmbH, to overhaul the main and nose landing gear systems of their Embraer E-Jet E1 fleet, which comprises E170 and E175 aircraft. The contract was signed at the Farnborough International Airshow. In addition to MRO services, it includes an integrated support solution, which covers spare parts and engineering services and enables partial risk-sharing between Liebherr-Aerospace and LOT. LOT, the launch customer of the Embraer E-170 aircraft, has the first scheduled E-Jet landing gear overhauls in Europe. Following the successful overhaul campaign Liebherr perfomed for LOT's ERJ 145 aircraft, and based on Liebherr's experience, support package and the companies' existing business relationship, LOT has again chosen Liebherr.

New collaboration between flydubai and JorAMCo

flydubai has selected JorAMCo to provide the EIS (Entry Into Service) check for seven of their new Next-Generation Boeing 737-800 aircraft. The aircraft will depart from the Boeing Company's Renton factory in Washington for Amman where they will be fitted with seats and inflight entertainment before being flown to Dubai to enter flydubai's fleet.

JorAMCo to provide EIS-checks for flydubai *Photo: JorAMCo*

GE Aviation breaks ground on $100m jet engine assembly factory in Indiana

GE Aviation hosted a ceremonial ground breaking on July 22nd, for a new $100m jet engine assembly facility in Lafayette, Indiana. The new 225,000-ft² facility in Lafayette will assemble the new LEAP engine of CFM International, a 50/50 joint company of GE and Snecma (Safran) of France. CFM has logged total orders and commitments with airlines for more than 7,500 LEAP jet engines – and it does not enter service until 2016. It will power new Airbus A320neo, Boeing 737 MAX, and COMAC (China) C919 aircraft for airlines worldwide. Launched in 2008, the LEAP is now undergoing development testing. As the engine transitions to the production phase, GE could begin hiring at the new Lafayette facility as early as 2015. Within five years, the plant's workforce is expected to exceed 200 people with the capacity to do final assembly for the engine as well as the engine's hot section (compressor, combustor, high-pressure turbine). Final assembly of the LEAP engine at the Lafayette facility will involve using components and sub-assemblies from GE and Snecma operations and from their suppliers around the world. The LEAP engine will also be assembled at GE's existing engine assembly plant in Durham, North Carolina. The Lafayette facility will operate a highly advanced assembly line incorporating several new technologies, including automated vision inspection systems and radio frequency parts management to easily spot parts on the shop floor.

Avia Solutions Group to establish new aviation park in Lithuania

Avia Solutions Group, a WSE listed global provider of one-stop-shop aviation business solutions, and Kaunas Free Economic Zone Management UAB have signed a memorandum of cooperation with regard to the development of a new Aviation Park in the territory of the Kaunas Free Economic Zone, Lithuania. Upon the successful implementation of all project stages the local economy will be infused with almost US$40m and the new Aviation Park will become the largest and most innovative centre of aviation services in Lithuania. The new Aviation Park in Kaunas is a major project aimed at attracting various local and foreign companies engaged in providing a wide spectrum of aviation related services, such as maintenance and repair of aircraft engine, landing gear and other components, aircraft tear down and sales as well as aviation-related scientific researches. The new centre is planned to occupy the territory of up to 100 ha, located next to Kaunas International Airport.

Shifting Trends

Analysis by ***Keith Mwanalushi***

Few issues are as important in aviation as the maintenance that keeps aircraft flying in the air. And as such, any shifts in MRO strategies can be crucial for aircraft operators. *AviTrader MRO* discusses the global trends with experts from AFI KLM E&M, Iberia, Ascent Aviation Services and MTU

The commercial aircraft MRO market grew out of a trend in which airlines performed third party contract repairs following respite periods between in-house jobs. Given the numbers of aircraft in service today and how critical safety is, MRO has now evolved to become a major market within aviation. This will continue to be the case but the market will face many new challenges, not least from OEMs who are increasing their market share. Researchers at Visiongain have determined that the value of the commercial aircraft MRO market in 2014 will reach $53.4 billion.

Few issues are as important as maintaining aircraft to ensure safety of flight. *Photo: Iberia*

Independent MROs are faced with the protective dominance of the OEMs. So clearly, there is need for creative strategies from the MROs to provide added value services to the operators. José Luis Quirós, Iberia's Technical director says it will be difficult to add value enough to compensate the leverage that OEMs have regarding cost control, access to design documentation and prize parts." The trend will probably be to get a deeper level of engagement between MRO and OEM or this type of components," says Quirós.

Chris Heredia from Ascent Aviation services has a similar view and points out that added value come in many ways. "Certainly everyone looks to favourable pricing and availability," says Heredia. He continues: "The OEMs will always dominate in the industry because they control the proprietary information related to many airframe and or component repairs."

Heredia adds that the MROs will continue to explore and develop approved repairs for the industry as they compete with the OEMs and each other. "An independent MRO must look at ways to enhance the customers overall experience, mainly through cost, turnaround time and overall satisfaction with the work performed."

Jose Luis Quiros - Iberia Technical director.

While OEMs have the genuine ambition to control the after sales services, it is not very likely they will develop additional capacity organically, Quirós believes. "At the same time, airline related MRO will still be interested in maintaining activity, not that much for the activity itself, but to retain product knowledge in house. This combination should facilitate the aforementioned engagement towards the 'OEMRO' more stretch business cooperation between the two," states Quirós.

Clearly, for MROs linked to a sister airline being part of that airline should allow the MRO to constantly evaluate all the areas affecting the total cost of ownership. Mr Ludovic Loisel, VP Strategy & AFKL MRO Coordination observes the changing industry from the inside and adapting to it. "Based on our operational knowledge and the engineering experience, we have a constant flow of lean projects running on various levels. Via these projects we save on costs and keep our current customers satisfied and attract new customers due to reduced turnaround times, stocks, hourly rates, and also to the improvement of product quality.

North American and Western European airlines used to take advantage of lower labour cost in emerging markets. Recently, the labour cost in such emerging markets has risen. Last year, FL Technics reported that MRO outsourcing has been relatively long recognized by airlines as one of the major ways to cut down on OPEX. However, off shoring aircraft maintenance and repair services to the emerging markets, particularly to Asia, might soon prove to be less economically viable than it has been for several years now. The main culprits behind the change are the growing local demand and the increasing presence of OEMs in the global market. The rising demand and the service prices, as well as the new players in the market are not only stimulating competition, but are also prompting MRO providers in the developed markets to consider the best ways of maintaining proper qualification of the regional MRO specialists.

"To counteract the advantage of low labour costs of emerging countries, some MRO businesses in Western Europe such as Iberia have been working hard in productivity increases in the past five to

JVs such as Spairliners for the A380 are good tools to stimulate competition on the market. *Photo: AFI KLM*

ten years, and we still do," notes Quirós. Therefore, he explains that MROs in Western Europe should be in a better position to recover a part of the volume transferred to other regions in the same period.

"Nevertheless, this evolution will be very dependent on the currency exchange rate of the EUR. The scenario in North America might be slightly different, as the close vicinity of emerging regions helped very much by the decalization of the airframe MRO, and it would be difficult to take a step back in this process," explains Quiros.

It is estimated that by 2025, the labour rates in most of the present emerging regions will reach the level of Western Europe, and probably slightly earlier in North America due to the dollar effect.

"As an MRO, we work at not being opportunistic," adds Heredia from Ascent. "The industry is very tight knit and most players keep a common goal of offering their clients the best price and service. MROs work on return business, thus any unusual strategies leave a customer with many concerns," he continues.

> "The industry is very tight knit and most players keep a common goal of offering their clients the best price and service. MROs work on return business, thus any unusual strategies leave a customer with many concerns."
>
> Chris Heredia, Ascent Aviation services

However Heredia sates that the industry has not seen a move in this direction just yet, "but we do anticipate this happening as certain contracts run out. Sourcing strategies remain fluid and one can see trends arise during certain cycles of the airline and MRO markets."

The market for newer engines is growing rapidly *Photo: AFI KLM*

Upcoming MRO provider Aerostar of Romania is also firming its grip on markets in Africa and the Middle East. After securing contracts with Ghana-based Starbow, the Bacau-based MRO signed a deal with pan African LCC fastjet [Tanzania] to provide heavy maintenance of two of the airline's fleet of three Airbus A319 airliners. This major new contract underscores the growing market reputation that Aerostar is building across Africa for the quality, cost-effectiveness and on time delivery of its MRO services, the company reported.

In the past two years the number of 'C' and 'D' checks carried out by Aerostar for its Middle East, Turkey and North African customers has averaged 26/27 aircraft per year. Last year the market in the region represented some 53 per cent of Aerostar's commercial MRO business which saw 51 aircraft overhauled at Bacau.

Remus Vlad, Aerostar's Civil MRO Business Manager said: "We have built up a solid foundation of MRO business from customers in the Middle East, North Africa and Turkey and we have a number of long-standing airline clients such as Royal Air Maroc who have entrusted their aircraft to us since 2010 and Pegasus Airlines of Turkey with whom we have done business for the past seven years. As well as winning new business which is our primary goal, we are also now working with our customers to turn the yearly maintenance contracts we currently receive into longer-term agreements."

A capital intensive business like running an airline requires cash preserving strategies like inventory reduction. So how are the MROs addressing which serviceable material programs will help the operators to reduce inventories levels at higher "off-the-shelf" availability?

Mr Ludovic Loisel responds and says the power-by-the hour contracts provide scale effects from Air France, KLM and customers fleets in order to reduce the costs and the inventories. "A Joint Venture like Spairliners for the A380 and the Ejet support is a good tool to introduce enough competition on the market - in order to control the costs. Proximity is also a good tool to reduce the costs in providing a short supply chain [AMG, Barfield in the Americas, AFI KLM E&M Components China, MAX MRO in India]. A subsidiary (JV) like AAF Spares gives us the possibility to manage our stock," Loisel explains.

Heredia adds that as an MRO, Ascent keeps the high usage and high cost parts in stock to help reduce inventory and shipping costs to the operator. He also finds buying in bulk a useful strategy as it also reduces turn time and cost.

The serviceable material programs are suitable to be developed for mature products, but very unlikely for new models, but José Luis Quirós from Iberia's sees some exceptions to this: "products with a significantly higher reliability than expected or willingness to increase sales." He also sees more and more frequent cooperation between MROs - independent and airline related alike - and inventory houses to maximize the utilization of invested capital.

Talking engines

As stated by Visiongain, the commercial aircraft engine MRO market is the largest submarket of the global commercial aircraft MRO market. Strong growth rates for this submarket are forecast based on the complexity and expense of the new engines, less reliance on labour rates than other submarkets, and the soaring growth in air travel which is providing opportunities for each submarket of the global commercial aircraft MRO industry.

Leo Koppers, Senior Vice President Marketing and Sales at MTU Aero Engines responds to a few global issues:

Engine MRO is the largest submarket *Photo: Iberia*

Independent MROs are faced with the protective dominance of the OEMs. What are the creative trends of the MROs to provide added value services to the operators?

Whether as part of an OEM network, or as an independent MRO provider, positive customer relationships are the key success driver in the aftermarket. With this in mind we strive to offer alternatives and flexibility in serving our customers. In this regard, MTU Maintenance can rely on both, its parent company MTU Aero Engines' in the development and production of aircraft engines as part of different OEM networks as well as its experience in providing alternative MRO services for engines in which it does not hold a production share.

While the market for newer engines is growing rapidly, older equipment is increasingly being phased out. This shift is particularly poignant for both small scale independents and the airline maintenance divisions which may not have the means to access newer upcoming engine technology. For an MRO provider this can represent both challenge and opportunity, the most significant effects of such retirements for a provider are threefold: lower shop visit demand, a substitution through exchange engines or modules, a growing availability of used material that, if serviceable can built into the engines during shop visits instead of installing new parts.

A capital intensive business like running an airline requires cash preserving strategies like inventory reduction. Which serviceable material programs will help operators to reduce inventory levels at higher "off-the-shelf" availability?

An increasingly popular strategy for airlines seeking to preserve cash levels is through the minimization of owned assets, either by leasing or subcontracting just-in-time inventory management and provisioning of such assets to third parties. When it comes to engine assets, the role can typically be taken over by the engine MRO service provider. In this case, engine related inventory can include everything from: piece parts, accessories, engine LRUs right up to complete engines.

In regards to straight material supply, there are a number of options depending on both the desire of the customer and the state of the damaged material. If the condition of the part is such that repair is no longer an option, MTU provides new serviceable material. If the damaged part can be repaired and brought back in serviceable condition then MTU can simply provide an exchange component from MTU's stock while we purchase the damaged one for repair before adding it to stock or utilizing it for another customer's needs. This service can also be extended to customer held surplus components, in which we act as a vendor in finding a new buyer.

As engines are the most expensive asset on an aircraft, high levels of availability can be maintained by reducing the number of owned engines, either as primary equipment or spares - through an array of assorted leasing options. As such MTU Maintenance has expanded its lease engine services to match increasing customer demand, through the creation of two new joint ventures with the Japanese based Sumitomo Corporation.

MTU Maintenance Lease Services B.V. will provide airlines, MROs and lessors with short-and-medium term lease solutions for its customers. Based in Amsterdam's World Trade Center, both companies will provide comprehensive engine services that span entire lifecycle of an aircraft engine including material management solutions.

AerCap Holdings N.V. reports second quarter net income of $212.4m

AerCap Holdings N.V. announced that its adjusted net income was $212.4m for the second quarter of 2014. Adjusted earnings per share were $1.29 for the second quarter of 2014, an increase of 118% over the second quarter of 2013. On May 14, 2014, AerCap completed the acquisition of International Lease Finance Corporation ("ILFC") from American International Group ("AIG"). The results of ILFC have been consolidated in AerCap Holdings N.V.'s income statement and cash flow statement for the second quarter as of May 14th, 2014, the completion date. As of June 30th, 2014, AerCap had committed to purchase 350 aircraft with scheduled delivery dates up to 2022. Over 90% of its committed aircraft purchases delivering 2014 through December 2016 and approximately 50% of its committed aircraft purchases delivering 2014 through 2022 are placed, either under lease contract or a letter of intent. AerCap executed 122 aircraft transactions during the second quarter of 2014. Targeted aircraft sales of ~$1bn per year on average are ahead of plan: ~$2bn completed since the ILFC transaction announcement in December 2013. 90% of the ILFC aircraft have been transferred to AerCap's existing operations in Ireland. Available liquidity of $6.5bn as of June 30th, 2014. Since the announcement of the transaction $7bn of funding has been raised: unsecured revolver, term loan and ILFC acquisition related take-out financing.

Boeing's second-quarter revenue increased 5%

Boeing reported second-quarter core earnings per share (non-GAAP) of $2.42, reflecting strong performance and favorable tax items. Commercial Airplanes second-quarter revenue increased 5% to $14.3bn on higher deliveries. Second-quarter operating margin was 10.8%, reflecting the delivery volume and strong performance offset by the $238m pre-tax charge on the KC-46A Tanker program. During the quarter, Commercial Airplanes delivered the first 787-9 Dreamliner and the 787 program received 330-minute ETOPS certification. In July, Emirates Airline and Qatar Airways finalized orders totaling 200 777X airplanes and Monarch Airlines announced a commitment to purchase 30 737 MAX airplanes. Commercial Airplanes booked 264 net orders during the quarter. Backlog remains strong with over 5,200 airplanes valued at a record $377bn.

Airbus Group reports solid results for first half 2014

Airbus Group reported solid results for the first half of 2014, reflecting operational improvement and the continued focus on programme execution. Demand for the Group's products remains strong as shown at July's Farnborough Air Show, where Airbus announced 496 aircraft orders and commitments confirming the health of the commercial aircraft market. The A330neo was endorsed by the market with 121 commitments announced at the show. Group order intake in the first half was €27.7bn (H1 2013: €95.6bn), with the order books worth €677.4bn on 30 June, 2014 (year-end 2013: €680.6bn). Airbus received 290 net commercial aircraft orders (H1 2013: 722 net orders). Net order intake at Airbus Helicopters was 148 units (H1 2013: 167 units) while in July agreements were signed to supply 123 rotorcraft to China. Group revenues increased 6% to €27.2bn (H1 2013: €25.7bn), driven by Airbus Commercial Aircraft and Airbus Helicopters. Airbus' revenues 7%, reflecting the increase in deliveries to 303 aircraft (H1 2013: 295 deliveries) and a more favourable mix, including five additional A380s compared to a year earlier. Airbus Helicopters' revenues rose 8% as deliveries increased to 200 units (H1 2013: 190 units) including the NH90 ramp up. EBIT before one-off for Airbus rose to €1,287m (H1 2013: €1,231m), reflecting operational improvement but was weighed down by A350 XWB support costs and a more front-loaded research and development (R&D) expense profile compared to 2013. EBIT before one-off at Airbus Helicopters rose to €150m (H1 2013: €128m), reflecting the Super Puma recovery and services activities. Reported EBIT increased 24% to €1,839m (H1 2013: €1,478m) and included a €70m positive contribution from the dollar pre-delivery payment mismatch and balance sheet revaluation. The finance result was €-252m (H1 2013: €-417m while net income increased to €1,135m (H1 2013: €758m).

Hong Kong Aircraft Engineering Company (HAECO) reports 2014 interim results

The HAECO Group reported an attributable profit of HK$283m for the first six months of 2014. This compares with a profit of HK$359m for the equivalent period in 2013. Earnings per share decreased by 21.2% to HK$1.70. Turnover increased by 65.6% to HK$5,337m, with the acquisition of TIMCO accounting for 61.8% of the increase. The Group continued to invest in order to expand its facilities and technical capabilities and to improve and widen the range of services it can offer to customers. Total capital expenditure during the first half of 2014 was HK$3,259 m (including expenditure on the acquisition of TIMCO of HK$2,942m). Capital expenditure committed at the end of June was HK$997m.

Embraer releases second quarter results

In the second quarter of 2014 (2Q14), Embraer delivered 29 commercial and 29 executive (22 light and 7 large) jets. The Company's firm order backlog ended 2Q14 at US$18.1bn. As a result of aircraft deliveries, coupled with revenues from the Company's Defense & Security business, 2Q14 revenues were US$1,761.3m, for year-over-year growth of 13.1%. Year-to-date (YTD) revenues in the first six months of 2014 were US$3,003.6m, representing year-over-year growth of 13.6%. EBIT and EBITDA margins were 10.6% and 14.8% respectively, in 2Q14, and for the first six months of 2014 were 9.3% and 13.7%, respectively. 2Q14 net income attributable to Embraer Shareholders and Earnings per basic ADS totaled US$143.4m and US$ 0.7829, respectively. For the first half of 2014, net income attributable to Embraer Shareholders was US$254.0m and earnings per basic ADS was US$1.3867.

Bombardier releases financial results for second quarter 2014

Bombardier Aerospace's revenues amounted to $2.5bn for the three-month period ended June 30th, 2014, compared to $2.3bn for the same period last fiscal year. EBIT totalled $141m, or 5.6% of revenues, compared to EBIT before special items of $107m, or 4.7%, and EBIT of $138m, or 6.1%, for the same period last fiscal year. Free cash flow usage amounted to $363m (including net additions to PP&E and intangible

assets of $509m) for the second quarter, compared to a usage of $459m (including net additions to PP&E and intangible assets of $534m) for the same period last fiscal year. Bombardier Aerospace delivered a total of 62 aircraft during the second quarter, compared to 57 for the same period last fiscal year, and received 48 net orders, compared to 82 for the same period last fiscal year.

Messier-Bugatti-Dowty signs agreement with Sabena technics to acquire 100% of Hydrep

Messier-Bugatti-Dowty and Sabena technics signed an agreement on July 18th for Messier-Bugatti-Dowty to acquire Sabena technics' 50% stake in their 50/50 joint company, Hydrep. The transaction is scheduled to take effect in September 2014. Based in Dinard, France, Hydrep employs 100 people and is a leading provider of repair services for landing gear on regional and business airplanes and helicopters. After a successful 23-year partnership between these two leading aerospace companies, Hydrep, as a wholly-owned subsidiary of Messier-Bugatti-Dowty, will be able to bolster its position in the market for landing gear maintenance and associated services.

Rockwell Collins reports third quarter fiscal 2014 earnings

Rockwell Collins reported total sales for the third quarter of fiscal year 2014 were $1.26bn, an increase of 12% from the same period in 2013, primarily due to the acquisition of ARINC. Total segment operating earnings for the third quarter of fiscal year 2014 were $263m, an increase of $6m from the same period a year ago. Third quarter fiscal year 2014 earnings per share from continuing operations were $1.19 and income from continuing operations was $163m compared to earnings per share from continuing operations of $1.18 and income from continuing operations of $161m in the third quarter of last year. Sales to aircraft original equipment manufacturers increased due to higher hardware delivery rates for the Boeing 787 aircraft and higher customer funded development program sales, partially offset by lower deliveries at the light end of the business jet market. Aftermarket sales increased primarily due to higher service and support activities and higher Boeing 747-8 and 787 spares sales, partially offset by lower retrofit sales. Operating earnings for the third quarter of 2014 were about flat with the third quarter of 2013 and operating margin decreased 150 basis points. While operating earnings benefited from lower company funded research and development expense, operating margins were impacted by higher employee benefit related costs and less favorable incremental margins associated with higher sales of newer products and customer funded development programs.

Precision Aviation Group acquires Aviation Controls

Precision Aviation Group, a leading provider of products and value-added services to the worldwide aerospace and defense industry announced the acquisition of Aviation Controls, Inc. (ACI). ACI is a leading global provider of Maintenance, Repair, and Overhaul Services (MRO) for engine accessories, specializing in components and accessories for the GE J-85, Honeywell LTS-101, and Rolls Royce 250 engines. David B. Mast, President & CEO of PAG stated, "The acquisition of ACI further diversifies PAG's MRO capabilities by expanding our services into engine accessories. Our investment in ACI allows us to provide our customers additional capabilities which will improve service levels and facilitate more streamlined purchasing operations. We are excited about the opportunity to provide ACI's MRO services to our customers."

Willis Lease Finance earns $2.2m in 2Q14

Willis Lease Finance, the premier independent jet engine lessor in the commercial finance sector, reported second quarter 2014 net income was $2.2m, compared to $9.7m in the second quarter of 2013, and $4.3m in the first quarter of 2014. Earnings for the second quarter of 2013 were positively impacted by a one-time $8.6m tax benefit related to a reduction in the company's deferred tax liability and higher than normal earnings from joint ventures due to the recording of $3.4m of maintenance reserve revenue related to the termination of aircraft leases within the WOLF joint venture.

MTU Aero Engines presents half-year results with net income of €111.0m

In the first six months of 2014, MTU Aero Engines AG achieved a revenue growth of 2% to €1,815.8m (1-6/2013: €1,774.9m). Operating profit remained stable at €170.7m (1-6/2013: €169.7m), with an EBIT margin of 9.4% compared with 9.6% in the first half of 2013. Net income increased by 4% to €111.0m (1-6/2013: €106.7m). The increase in group revenues in the first half of 2014 is attributable to growth in the commercial engine business, where revenues have risen by 8% from €953.6mn to €1,032.9m. The main source of these revenues in the OEM business, which comprises series and spare parts sales, were the V2500 engine for the A320, the GP7000 used to power the A380, and the GEnx for the Boeing 787 and 747-8, a program in which production rates have been ramped up significantly. Revenues in the commercial maintenance business have fallen by 7% to €572.9m (1-6/2013: €613.4m). The V2500 engine accounted for the largest part of these revenues. Revenues in the military engine business have barely changed, at €225.5m (1-6/2013: €223.2m). The EJ200 Eurofighter engine was the main source of these revenues. MTU's order backlog increased by 8% to €10,153.9m between January and June 2014, compared with the level reported at the end of 2013 (Dec 31, 2013: €9,374.6m).

B/E Aerospace record second quarter 2014 financial results exceed expectations

B/E Aerospace reported its second quarter 2014 financial results. Second quarter 2014 revenues of $1.09bn increased 28.1% as compared with the prior year period. Second quarter 2014 operating earnings were $198.1m, an increase of 24.8%, and operating margin was 18.2%. On a GAAP basis, operating earnings were $185.3m. Second quarter 2014 earnings before income taxes were $166.4m, an increase of 29.8%. On a GAAP basis, earnings before income taxes were $153.6m. Second quarter 2014 net earnings were $117.6m, representing an increase of 27.3%, as compared with the prior year period. On a GAAP basis net earnings were $108.6m.

Driving efficiency - MAEL

MAEL's state-of-the-art maintenance facility at Birmingham Airport, UK. *Photo: Monarch*

Monarch Aircraft Engineering (MAEL) based in the UK is part of The Monarch Group and provides Maintenance Repair Overhaul (MRO) services for its sister company Monarch Airlines and other global airlines.

MEAL traces its history back to 1967. Today, the UK-based MRO Company provides maintenance services from its principal bases at Birmingham, London Luton, and Manchester airports in the UK.

MAEL operates globally, supporting clients located in east and west Europe, Middle East, Australia and North America. The company has developed expertise in maintaining legacy fleets and is also a MRO for new technology aircraft, including the Boeing 787. In fact, MAEL is one of just three Boeing approved GoldCare MROs in the world and according to MAEL this appointment underpins a continued expansion of the business.

MAEL was named MRO of the year in 2013 by the industry at the Aviation 100 Awards. It's UK-based training centre, Monarch Aircraft Engineering Training Academy (MAETA) has extensive capability to deliver full EASA Part-147 B1 & B2 approved type training for a variety of aircraft including the Boeing 787; it is one of only eight independent organisations worldwide accredited to provide training for this aircraft type.

In December 2013, MAEL was also awarded first place in the category 'Through Life Engineering' at The Manufacturer of the Year Awards 2013.

Financial figures released by MAEL indicate that in the 12 months to 31 October 2013, MAEL delivered a solid financial performance with total revenues increasing year-on-year by £18.1 million, or 22.0 per cent, to £100.1 million (2012: £82.1 million), marking an important milestone in the growth of the business.

Revenue from third-party customers rose year-on-year and now account for approximately 30 per cent of MAEL's revenue, a proportion that the division intends to grow. MAEL's blue-chip customer base includes easyJet, Flybe, Thomson Airways, Wizz, Titan Airways, TAG Aviation, Jet2, DHL, and LOT Polish Airlines.

Heavy Maintenance

With facilities strategically located at London Luton Airport, Birmingham Airport and Manchester Airport in the UK, MAEL are capable of accommodating up to twelve lines of heavy maintenance across Boeing, Airbus, Embraer and Bombardier types including the Boeing 737NG, 757, 767 and 787 as well as the Airbus A320 family, A300, A310 and A330, Embraer 170, 175, 190, 195 and Bombardier Q400.

Line Maintenance

MAEL has a strong reputation as being one of the leading line maintenance providers in the UK and overseas. With permanent year round stations at London Gatwick, London Luton, Birmingham, Manchester, East Midlands, Leeds Bradford, Glasgow, Malaga, Alicante, Tenerife, Warsaw, Kiev and Goa where technical handling is carried out on Boeing 737, 757, 767, 777, 787, Airbus A300-600, A300B4, A310, A320 family, A330, Embraer 170, 175, 190, 195 and Bombardier Q400 aircraft.

AOG Support and Assistance

MAEL is acutely aware of the significant damage to airline operations and revenue when AOG events are not responded to immediately. In order to ensure necessary action is taken in an AOG situation, they are able to provide SMART (Specialised Monarch AOG Response Team) on a detachment basis to assist with the rescue of grounded aircraft or supply materials and components on a sale, loan or exchange basis.). Available 24 hours a day, seven days a week, this service is managed through Monarch's Integrated Operations Centre (IOC).

Component Services

MAEL is able to provide full spares support programmes on a flight-hour basis, as well as offering components on a loan and exchange basis. The spares inventory owned by Monarch is dual-released with both EASA and FAA certification. MAEL also has an established state-of-the-art component maintenance centre. The facilities has an excellent range of tools and test equipment, and several workshops, including avionics and battery services, calibration, composites, safety equipment, and aircraft engine and mechanical services.

Engineering and Technical Support

MAEL has an industry leading Continuing Airworthiness Management Organisation (CAMO) team which is well set up to provide all aspects of continuing airworthiness management, planning, tech-

nical records, Service Bulletin reviews and recommendations. With the added advantage of EASA and GCAA Part-21 Subpart J Design Organisation approval to produce modifications on numerous aircraft and specialised experience in producing cost effective In-Flight Entertainment solutions, MAEL can offer a comprehensive suite of services.

Monarch Aircraft Engineering Training Academy (MAETA)

EASA Part-147 Approved aircraft type training is delivered by MAETA. The academy has gained a worldwide reputation for its continuing high standards and provides technical training for numerous aircraft types and engine combinations. MAETA can also provide tailored technical and safety management systems (SMS) consulting services to airlines, MROs and supply chain organisations. These services can be offered on a short-, medium- or long-term basis, and can be tailored to specific client requirements.

Back chat with Ian Bartholomew, Interim Managing Director Monarch Aircraft Engineering (MAEL)


Ian Bartholomew

What are some of the current trends that you are observing in the aftermarket aircraft support business?

"Airlines continue to focus on the total value proposition and with demands on yield due to the current overcapacity it is essential that the MROs offer the best value service provision. With the continuing high cost of fuel, pressure to reduce carbon omissions and the need to ensure high levels of aircraft availability there is a definite trend to have aircraft maintained closer to the airlines operating network. As the emerging markets see their cost increase, coupled with high repositioning costs local markets such as Europe can now offer far more attractive MRO solutions and this trend will continue with the introduction of new technology aircraft."

Which components and/or aircraft types are you seeing to have the most market interest following teardown activity?

"Both the Boeing and Airbus narrow body fleets appear to offer the best teardown opportunities, especially those where there remains significant life on the engines and LLPs."

Information Technology

Volartec announced **Island Transvoyager (ITI Air)** to be the launch customer in South East Asia. With the latest ATR 42-500 addition to the fleet, ITI sought a suitable Maintenance Management System to manage its expanding fleet. The first ATR 42 will be added to **Alkym Management and Control System** for Aircraft Maintenance as part of the implementation project which is currently under way. With the project team onsite at ITI this month they will have the first aircraft loaded and Alkym in a Live operating environment by the end of August.

Skymark Airlines, Japan's third largest airline, has chosen **Panasonic Avionics Corporation's** global connectivity service, eXConnect, to provide its passengers with free-of-charge in-flight Wi-Fi service. Passengers will be able to stay on top of current events as they surf the web, keep in touch with friends and family through their social networks, and even check email and send the latest edits to their upcoming sales presentation to their colleagues – all at 35,000 feet. For domestic routes, Skymark Airlines will introduce this free service on its fleet of new Airbus A330s. They will also expect to offer this same free-of-charge Wi-Fi experience on their international A380 fleet that will be initially flying to North America.

ADSoftware reported the successful launch of its Airpack Fleet Management System and logistics solution to **Nova Airways**, Sudan's largest carrier. In an industry that demands constant compliance with regulations, Sudanese carrier Nova Airways was looking for a system that could help them to stay ahead of changing requirements by anticipating any modifications required by regulatory texts. The AirPack solution proved to have the answer, with two specific modules inside the maintenance software which are dedicated to airworthiness management, regulatory compliance and fleet reliability. AirTime would enable the engineering department to coordinate the compliance of the aircraft with the required maintenance programs, applicable airworthiness directives, service bulletins, log books, planning, mechanics and shop activity. Nova Airways is currently the largest Sudanese airline operating a fleet of 3 CRJ200, 1 CRJ200LR and 1 B737-500.

Ensuring appropriate aircraft spares supply in a highly competitive environment

Under competitive pressure more and more airlines are abandoning the strategy of holding huge and expensive parts stocks to support their operations. However, it does not mean that they are willing to give up on the extremely reliable dispatch such stocks support. As a result, finding the right balance between spares availability for fleet utilization and the high cost of maintaining stock levels still remains one of the biggest challenges for an airline today.

All carriers share the need to ensure that spares are in the right place and at the right time. Efficient supply chain management requires sophisticated forecasting, well-placed stocks and smart logistics. While there are airlines that can perform some of these tasks, most still lack the scale to forecast part requirements precisely, ending up having to pay impressive amounts of money for excess inventory.

All carriers share the need to ensure that spares are in the right place and at the right time. *Photo: Locatory.com*

Nowadays, more and more OEMs offer spare parts support for their products on a flight hour basis and push the service to their clients rather aggressively. For instance, with around 11 000 of its engines in operation, Pratt & Whitney has up to 40% of PW4000s and 60% of V2500s under flight-hour support. It is estimated that 80% of GTFs are similarly covered. The company stocks 20 000 new part numbers and 25 000 numbers of surplus parts, and commits to fulfilling orders promptly 95% of the time.

Nevertheless, engine support is only part of the picture. For instance, up until recently most operators used to hold largest parts stocks at their main bases, with only a set of the most commonly required spares stored at outstations for line maintenance and A-checks. However, considering the latest trends in the industry it is of no surprise that the focus has strongly shifted towards the support for out-of-base services.

After all, especially as concerns long-haul operations, aircraft downtime can be greater at an airport than at the main base. That is why the stocks kept in these locations needs to be carefully tailored to every particular operator's requirements, rather than consist of speculatively placed spares in anticipation of demand. Moreover, while there is the predictability of planned and forecasted maintenance, the unpredictability of defects and non-routine maintenance is a whole other challenge.

According to Zilvinas Sadauskas, the CEO of Locatory.com, the airline industry still has a lot to learn about massive improvements that are made possible for inventory management with some relatively simple software changes: "Making it all work starts with forecasting and IT. If you don't have a good information system, you will be dead in a few months, since you will simply lose track of stuff."

Zilvinas Sadauskas CEO of Locatory

Appropriate application of such tools enables carriers to avoid delays caused by the lack of materials whilst cropping gross part stocks by 10%, the executive states. As a result, one gains the ability to provide a better service level for parts and more reliability for maintenance operations. Moreover, network suppliers can enjoy significant improvement in their business performance, not to mention the fact that direct costs for fleets of 10-15 aircraft can be cut by 20-25%. However, all these great perks are subject to at least a few years' worth of operational data.

At the same time some airlines are reluctant to give access to their data needed in order to outsource contractors, or, alternatively, supply it in formats that are unusable.

"If industry players are seeking to significantly cut the currently excessive supply chain-related costs, closer collaboration between OEMs and suppliers must be accompanied by the overall increased openness and trust. There is also the need to challenge the existing status quo surrounding manufacturing processes and productivity, including program management and engineering productivity. The question is whether the industry is finally ready to apply the kind of focus and strategic thinking needed to achieve what it means to be truly competitive: profitable growth," concludes Sadauskas.

Source: Avia Solutions Group

Is Africa the next maintenance destination

Analysis by Rus Sutaria – Avia Intelligence Limited, London

A recent conversation with an aviation consulting professional, has raised the sensitive issue of the readiness of Africa to deliver a much promised and cost-effective maintenance solution that, if well managed on so many levels could actually facilitate a sudden and almost explosive presence of Africa on the aviation MRO map.

Let's face it, all that mineral and oil wealth, has made large swathes of Africa key strategic targets for sales of new and state of the art aircraft. Together with a rapidly growing fleet, the need to improve and modernise maintenance capability within the continent is becoming increasingly prevalent. A fact that has been already recognised by the likes of South African Airways, Kenya Airways, Arik and more recently Ethiopian, with the introduction of more home grown capability, and a reducing reliance on third party MRO businesses from outside of Africa.

This month Rus Sutaria of Avia Intelligence, considers the fundamental question, is Africa ready to realise its' potential, and present herself as the next leading maintenance destination for other carriers outside of Africa, as well as positioning themselves as the leading supplier of aircraft maintenance services within Africa.

Optimism, together with a healthy dose of scepticism would lead to the conclusion, yes.....maybe. A lot has to happen within the African MRO culture in order to create the basis of a conducive working environment within which African MROs can prosper and propagate. This article will not attempt to address the political and tribal issues surrounding African aviation, but it is the single most influent challenge faced by African MRO. Should Africa wish to be taken seriously as a major aviation player, then solving national and tribal politics will go a long way to further enhancement of the MRO image in Africa.

Other challenges that are faced by African aviation maintenance includes more practical issues including recruitment & training, upgrade of maintenance facilities and technical capabilities. The remainder of this paper will attempt to address each of these issues in turn.

Recruitment & Training

African nations are very keen for their people to be introduced into key MRO roles. Furthermore, they wish to empower their own people with a view to managing and advancing their own destiny. However, these organisations although rightly advancing the cause of 'Black Economic Empowerment', must also be careful not to dismiss the knowledge, skills and experience simply on the basis of black empowerment. Ironically, it was the great Nelson Mandela, and his vision of an inclusive 'Rainbow Nation' that could be engineered to introduce and eventually progress black pilots, engineers, cabin crew, etc into the senior and strategic positions, with the help of other influential ethnic minorities, and without the losing face or control.

On a positive note, Africa is already in possession of a talented and experienced pool of aviation professionals. Unfortunately, the pool is not of sufficient size and complexity in terms of skills upon which a coherent recruitment and training strategy may be realised without external help. The truth is that a 'Rainbow' style recruitment and training strategy will be key to the long term manpower requirements for aviation maintenance in Africa.

Introduction or Upgrade of Maintenance Facilities and Technical Capabilities

It is a foregone conclusion, that Africa needs serious capital investment in the specification and ultimately production of a completely new aircraft maintenance infrastructure. Aviation MROs at both aircraft and component level, please take note. There appears to be an opportunity to jointly develop and deliver world-class facilities in African states, servicing not only African carriers, but also carriers from outside of Africa. However, be warned of the political and tribal challenges that will be presented to you. If you are willing to take a number of commercial risks, and have the savvy to overcome Africa's politics, then the potential opportunities could be huge!!!.

Any potential venture must also accept that there will be an element of expectation with regard to developing an effective local management team. Africa has always been keen to progress its own people, and accomplishing this might well be a means to an end during undoubtedly challenging negotiations. Therefore, development of local personnel is an important point.

Africa's Advantage

A positive observation to those of us commentators from outside of Africa, is that the continent offers huge financial advantages in terms of value for money where manpower, land and the creation of facilities are concerned. OK, I admit it, the basis of such ambitious investment strategies much also be tempered with significant out of pocket investments in the improvement of existing transport infrastructure as whole, not just that of aviation.

Rus Sutaria, Director – Content and Knowledge Services
Photo: Avia Intelligence Ltd

Geographically, Africa also presents a huge advantage in terms of stationing key strategic repair stations through Africa. As a case in point Arik in Central West Africa, Kenya Airways Technical & Ethiopian in East Africa, South African Airways Technical to the South and EgyptAir Maintenance to the North East of Africa. The potential to provide a comprehensive and integrated maintenance capability already appears to be prevalent. Perhaps the next logical step could be an African Aircraft Maintenance Alliance.

Regardless, any return on initial investment is likely to be realised relatively quickly, so long as line and base maintenance capacity is fully realised, and there continues to be room for further growth both operationally and off-course financially.

The Future's Bright the Future's Africa

Africa has already begun to demonstrate that from the operational perspective, that it is ready to step-up to the plate and face the challenge. Isn't it time to back-up ambitious operational plans, and deliver the African continent with a world-class MRO infrastructure that not only supports the ambitions of African air transport, but also provides access to other operators from outside of the African continent?

Financial, economic, political considerations set-aside, the continent of Africa and her carriers have the opportunity to create a leading capability where Maintenance Repair and Overhaul are concerned. They have the money, they have the know-how and the ambition. If a formerly impoverished nation like Ethiopia can turn itself around and subsequently set the bar, and be able to provide for an outstanding aviation system that includes a successful operator like Ethiopian Airlines, then there can no longer be any excuses for the rest of Africa.

Ian Bartholomew *Photo: MAEL*

The Monarch Group has appointed Ian Bartholomew as Interim Managing Director of Monarch Aircraft Engineering Limited (MAEL), its aircraft maintenance division. He succeeds Mick Adams, who is leaving the business to take up a post at Etihad Airways as Vice President of MRO based in Abu Dhabi.

Diego Estrada has joined the Commercial team of AWAS in the position of Sales Director and will be located at its Americas region offices in Miami. He will report to AWAS' Managing Director for the Americas, Walter Valarezo. Prior to joining AWAS Mr. Estrada was at lessor AerCap where he most recently held the role of Manager Aircraft Marketing, covering Eastern Europe and African airline accounts.

Nordic Aviation Capital, the world's largest regional aircraft leasing company, is bolstering its presence in the Asia Pacific region with the appointment of Bill Rossi as VP Sales and Acquisitions based out of its Singapore office. Rossi joins NAC from Embraer Aircraft where for the past five and a half years he worked as sales director Asia Pacific.

Effective on August 1st 2014, Karl Ulrich Garnadt, the member of the Executive Board of Deutsche Lufthansa Aktiengesellschaft and CEO of Lufthansa German Airlines succeeded Stefan Lauer, to be the Vice-Chairman of the Board of Directors of Ameco Beijing. Karl Ulrich Garnadt began his career at Lufthansa in 1979. In 2011 he became CEO and Chairman of Lufthansa Cargo AG. Since May 1st, 2014, he has been a Member of the Executive Board of Deutsche Lufthansa AG and CEO of Lufthansa German Airlines..

Karl Ulrich Garnadt new Vice-Chairman of the Board of Directors of Ameco Beijing *Photo: Ameco Beijing*