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MRO

Aerospace Magazine

Sustainable solutions for disassembly

Asset Transitions

Re-registrations mark return in capacity

AJW Aviation

CEO Clyde Buntrock on the aftermarket and economy

Events Report

IATA Global Media Day Geneva, Switzerland

WestJet expects to expand with dedicated Boeing 737-800 freighters. © *WestJet*

Cargo softening, but conversions remain buoyant, for now

Cargo was the bright spot for aviation during the pandemic but as we enter a new year the good times for air freight are cooling off, based on industry data just released. CLIVE Data Services indicated last week that December 2022 saw -8% fall in global air cargo volumes, the tenth consecutive month of lower demand, down -13% compared to 2019.

IATA have suggested global cargo revenue for 2023 will fall 20% of total airline revenue down from 40% in 2021 and an estimated 28% in 2022. There is a lot of uncertainty in the coming months and year considering global economic factors and how the Covid situation that is still lingering in China plays out.

Demand for air cargo is soft now, rates are falling, and supply chains continue to struggle but the good news is that cargo charters are looking promising even as a cooling off period looms. Despite ongoing uncertainty and volatile market conditions, demand for charters was still present in markets and industries that are less affected by global cycles, such as just-in-time (JIT) and time-critical supply chains which rely on ad hoc charter provision. These are sectors that are less susceptible to peaks and troughs of demand.

The exit of 'preighters' has coincided with the virtual stoppage of Covid related products, so we are seeing a more balanced market in terms of capacity. Russian capacity has only really affected the outsized market.

There is certainly still demand in the cargo conversions sector, we know that conversion houses are busy with slots booked in some cases up until 2027. There are a couple of notable developments in this space, last month Aeronautical Engineers, Inc. (AEI) said Transcend in Singapore had placed an order for two B737-800SF freighter conversions; WestJet Cargo in Canada also plans to introduce four B737-800 freighters from March 2023 to bolster its cargo operations. Kigali-based Rwandair also took delivery of its first freighter of the same type to start operations within Africa and the Middle East, no doubt this will be the initial stage of future dedicated cargo operations for the airline.

We will keep a close eye on the latest trends in the conversions market through the new year.

Keith Mwanalushi
EDITOR

CONTENTS

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Ascent Aviation, Jet Parts Engineering, Lufthansa Technik

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17 **Developing pathways for sustainable disassembly**

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Iberia Maintenance signs long-term agreement with HK Express to maintain 32 V2500 engines

Iberia Maintenance continues to extend its V2500 customer base with the addition of HK Express
© Iberia Maintenance

Iberia Maintenance and HK Express, a fully owned subsidiary of Cathay Pacific, have signed a long-term contract to maintain 32 V2500 engines powering the low-cost carrier's Airbus A320ceo and A321ceo fleet. Efficiency improvements, such as the extension of engine repair in-house capability, work scope adjustments to ensure shop visit optimisation and used serviceable material (USM) sourcing from the market, were the key differentiators in the offer. At the end of 2012, Iberia Maintenance, with the support of International Airlines Group (IAG), started working on the International Aero Engines (IAE) capability to service the V2500 engine. In 2015, it obtained Pratt & Whitney's licence for V2500 engine MRO and joined the network of IAE, which distributes its customers' engines for repair and overhaul to network partners. At that time, Iberia Maintenance became the first non-IAE member workshop to overhaul V2500's. Iberia Maintenance Engine Shop specialises in CFM56, V2500 and RB211 engines and provides services to a worldwide customer base of airlines, OEMs and the wider industry, while servicing V2500 engines being more than half of the current workload. In October, the company obtained the license to service Pratt & Whitney GTF™ engines. The first engine will be inducted in 2023.

Av8 Group adds new CMMS to increase internal landing gear overhaul efficiency

Coordinate Measuring Machine System *© The Av8 Group*

The Av8 Group has reported that it added a second CMMS (Coordinate Measuring Machine System) to its manufacturing process of PMA parts, providing a more efficient measure of larger parts which will increase the efficiency and value of the company's landing gear overhaul process. The new CMMS measures with an accuracy of up to one ten-thousandth of an inch (less than the width of a human hair). Both CMMSs are computer driven, which efficiently measures multiple parts at a time, while also being run unattended. This is the company's second similar in-house machine and doubles the capacity of work that can be completed. This new machine is also faster, thus tripling the through-put of inspecting parts overall. Av8 produces thousands of parts every year and they all must pass through the CMMS, as the FAA requires 100% of the parts to be inspected under Av8's current PMA authority.

AAR extends distribution relationship with Leach International

AAR CORP. has announced an extension of its distribution relationship with Leach International (Leach). AAR will continue to stock, promote and sell electromechanical and solid-state switch gears, such as relays, switches, relay panels, and power distribution units, to OEMs for new production, commercial airlines, and MRO providers, as well as to the military aftermarket, on behalf of Leach. "AAR will continue to help Leach provide the highest level of service for our customers. Leach products are used in a wide range of applications, from commercial aviation to cutting-edge defence applications, and AAR's world-class support ensures Leach parts continue to set the standard for power distribution," said Elijah Dobrusin, Leach Vice-President of Sales & Marketing. "Our extended agreement makes certain that customers can continue to operate and obtain their critical parts, even in this unprecedented supply chain environment."

AEI signs agreement with Transcend Aero Services for B737-800SF freighter conversion

Aeronautical Engineers (AEI) has reported that Singapore-based Transcend Aero Services (Transcend) has placed an order for two AEI B737-800SF freighter conversions. This agreement represents the first freighter conversion order Transcend has placed with AEI. The first 737-800 aircraft (MSN 35217) is commencing modification this month. The authorised AEI Conversion Centre, Commercial Jet based in Dothan, Alabama will accomplish conversion-related touch labour on the aircraft. The second 737-800 will commence modification in March 2023 and will be modified at Commercial Jet's Miami, Florida facility.

HAECO Xiamen to build new aircraft maintenance facility at Xiamen Xiang'an International Airport

Rendering of HAECO Xiamen's new aircraft maintenance facility © *HAECO*

HAECO Xiamen, a member of the HAECO Group, has participated in a ground-breaking ceremony to commence the construction of its new aircraft maintenance facility at Xiamen Xiang'an International Airport. Established in 1993, HAECO Xiamen has grown by leaps and bounds over the past 30 years to become a leading provider of aircraft maintenance and modification services in the Asia Pacific region. Its comprehensive suite of aircraft engineering services includes airframe services, line services, parts manufacturing, design engineering, certification and technical training. HAECO Xiamen is also renowned for its high safety standards and quality services with competitive turnaround times and on-time delivery. Currently based at Xiamen Gaoqi International Airport, HAECO Xiamen will re-locate to the new airport to build a new industry-leading hangar. Covering a total area of 537,300 m^2, including a construction area of 292,300 m^2 and an apron area of 284,000 m^2, 18 new buildings will be constructed to cater to apron engineering, engine test bays, a utility tunnel, aviation fuel supply and other outdoor works. The new maintenance facility will combine innovation, green design and advanced technology to achieve optimum energy utilisation and operational efficiency. There will be 12 wide-body and six narrow-body maintenance bays as well as two separate painting bays to provide flexible parking for multiple aircraft types and different maintenance needs. According to the company, once the construction is completed, HAECO Xiamen will be the largest single-span aircraft maintenance hangar in the world. The construction project has been designed from the outset to optimise operational efficiency and maximise space utilisation, helping to reduce aircraft maintenance turnaround times and improve punctuality to meet its customers' maintenance schedules. The innovative 'centre-axle' design connects the hangars and ancillary buildings, facilitating logistics management and resource sharing. The new maintenance facility will also feature innovative design and state-of-the-art green measures including solar power, intelligent building management systems, intelligent lighting controls, water storage and air conditioning systems, as well as advanced wastewater and air treatment, with the goal of achieving gold certification under the LEED-NC (Leadership in Energy and Environmental Design for New Construction) rating system.

GAMECO completes first Airbus A350 IL-Check for Lufthansa

© GAMECO staff presenting the Lufthansa A350 aircraft after IL-check

Guangzhou Aircraft Maintenance Engineering Co. (GAMECO) has completed the first Airbus A350 IL-check for Lufthansa at GAMECO's main base in Guangzhou, China. This first Airbus A350 IL-check is part of a multi-year contract which covers various aircraft types and extends the cooperation between Lufthansa and GAMECO. Previously, GAMECO has provided multiple levels of base maintenance services up to IL-check for Lufthansa's Airbus A380 fleet. "We as Lufthansa Airline are very happy to be back at GAMECO, having successfully completed the very first A350 IL-check in our fleet. We fully appreciate GAMECO's efforts to maintain the most technologically advanced aircraft of our fleet for the upcoming years" said Thomas Spriesterbach, Vice President, Technical Fleet Management, Lufthansa Airline.

AviaAM Leasing acquires two more Boeing 737-800s for passenger-to-freighter conversion

AviaAM Leasing, a global aviation holding company engaged in tailored aircraft leasing and trading services, has announced the purchase of two more Boeing 737-800 aircraft for Passenger-to-Freighter (P2F) conversion. The aircraft, bearing serial numbers 29769 and 28225, are the fifth and sixth Boeing 737-800s, respectively, inducted to cargo conversion, with the previous three already delivered to the lessee and the fourth to be delivered in late January 2023. Subject aircraft are successfully operated by Bluebird Nordic, a rapidly growing Iceland-based cargo airline, offering ACMI and full-service cargo operations. "We continue to execute our plan related to the Boeing 737-800BCF conversion programme and thus support our group's cargo airlines with more efficient cargo aircraft," said Tadas Goberis, CEO and Chairman of AviaAM Leasing. "Each of the conversion projects we undertake requires detailed planning and complex solutions, thus we're proud to continue this project, this way strengthening our presence in the air cargo market as a reliable leasing and trading service provider." The two aircraft have already been inducted for P2F conversions at the Taikoo (Shandong) Aircraft Engineering Company (STAECO) facility in Jinan (TNA), China. It is expected to have the P2F conversions completed by Q2 2023.

F3 Logistics has implemented **Pentagon 2000SQL™** to expand operations with support for procurement and logistics services to the U.S. Air Force and other industry customers.
F3 Logistics was recently awarded a Third-Party Equipment Purchasing (3PEP) small-business contract to improve war fighter support, maintain or lower costs for the government, ensure continued utilisation/increase of small business manufacturers and maintain clear government programme visibility. Parrish Swearingen, President of F3 Logistics commented that "our business operations continue to grow and the Pentagon 2000SQL™ system has allowed us to automate our procedures while we scale up our internal operations and customer service".
F3 Logistics is a limited liability company located in Warner Robins, GA, established December 13, 2013. The company provides a high level of professional logistics and warehousing services predominantly for government clients.

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Safran investing €50 million in new compressor blades and vanes plant in Belgium

© Safran

François Lepot, CEO of Safran Aero Boosters, has announced that a new compressor blades and vanes production plant for aircraft engines is to be established in the Walloon region of Belgium, in the province of Liège. A €50 million investment is to be made in a refurbished site where titanium compressor blades will be manufactured, including those required for the LEAP engine. This production line will bolster Safran Aero Boosters' industrial expertise in its flagship product, the low-pressure compressor. Bearing the name Safran Blades, the production unit is being set up in partnership with the Belgian and Walloon federal authorities, the Société Régionale d'Investissement de Wallonie (S.R.I.W) and the Société Fédérale de Participations et d'Investissement (S.F.P.I.M). Safran Aero Boosters has a majority stake of 56% and the two partners each hold 22%. The 10,000-square-metre centre of excellence is located in Marchin, on a former ArcelorMittal site that will be completely refurbished, incorporating Safran's best industrial technologies to meet the highest global standards. Featuring automation, highly qualified personnel and the most advanced digital technologies, Plant 4.0 will produce more than 2,000 blades and vanes per day, with innovative, autonomous real-time quality control at every critical stage of production. The unit is planned to become operational in 2025 and will provide jobs for around 100 people. Additionally, the site is designed to meet the highest standards in terms of sustainable development, with a significant reduction in energy and water consumption and the use of renewable energy (solar panels, hydraulic turbines, etc.).

HEICO Corporation reports fourth-quarter and full fiscal year results

HEICO Corporation has released that net sales increased 20% to a record US$609.6 million in the fourth quarter of fiscal year 2022, up from US$509.4 million in the fourth quarter of fiscal year 2021. Operating income increased 27% to US$146.5 million in the fourth quarter, up from US$115.0 million in the fourth quarter of 2021. The company's consolidated operating margin improved to 24.0% in the fourth quarter, up from 22.6% in the fourth quarter of 2021. Net sales increased 18% to US$2,208.3 million in the fiscal year ended October 31, 2022, up from US$1,865.7 million in the fiscal year ended October 31, 2021. Operating income increased 26% to US$496.8 million in the fiscal year 2022, up from US$392.9 million in the fiscal year 2021. The company's consolidated operating margin was 22.5% in the fiscal year 2022, as compared to 21.1% in the fiscal year ended 2021. Improvement in the commercial aerospace market has resulted in nine consecutive quarters of sequential growth in net sales and operating income at the Flight Support Group. Net income increased 13% to US$97.2 million in the fourth quarter of 2022, up from US$86.1 million in the fourth quarter of 2021. Net income increased 16% to US$351.7 million in the fiscal year ended October 31, 2022, up from US$304.2 million in the fiscal year 2021. Net income in both fiscal 2022 periods was adversely impacted by a higher effective income tax rate. EBITDA increased 23% to US$172.2 million in the fourth quarter 2022, up from US$139.5 million in the fourth quarter of 2021. EBITDA increased 22% to US$593.7 million in the fiscal year 2022, up from US$487.4 million in the fiscal year 2021.
(£1.00 = US$1.20 at time of publication)

© Texel Air hangar

Texel Air, a Bahraini cargo operator and MRO, has selected **Rusada's** ENVISION software solution to manage its airworthiness and maintenance operations. Texel Air operates a fleet of Boeing 737 freighters to provide cargo charter and ACMI services across the globe. It also offers base and line maintenance services from its 3,200 m² hangar, located at Bahrain International Airport. Texel Air utilised a third-party specialist to help manage its fleet, but after recent growth and with planned expansion on the horizon, it is seeking greater control over its operational data and processes. "With its depth in functionality and easily accessible interfaces, we see ENVISION as the backbone of our future digital journey" said Andres Kjerulf, Director of Airworthiness at Texel Air. "We are very pleased to be partnering with Rusada and are looking forward to working closely alongside them towards a successful implementation project." Texel Air will be adopting eight of ENVISION's modules including Fleet Management, Base and Line MRO and Inventory Management, plus three of its mobile apps for cross-device access and paperless operations. The web-based solution will be deployed by Rusada's in-house team of implementation specialists.

Aftermarket sales rise amid challenging economic forecasts

Clyde Buntrock, Chief Executive at AJW Aviation.

Clyde Buntrock Chief Executive Officer at AJW Aviation speaks to the AviTrader editor about the current status of the MRO and aftermarket and how the economic climate might influence the industry going forward.

OEMs are set to increase production rates of new aircraft especially narrowbodies in response to meeting demands for years' long backlogs. Clyde Buntrock, CEO at AJW says this has led to uncertainty about whether vendors will be able to maintain the component supply chain to the OEMs. "While the shortage of raw materials is a factor, another concern is the lack of skilled personnel on the production lines, and this is placing businesses under immense pressure to produce enough products to service an increasing number of aircraft," he highlights.

In a narrowbody aircraft webinar in November, experts at aviation consultancy firm IBA outlined that global capacity recovery towards 2019 has slowed in the second half of 2022 but is continuing into 2023 and the Airbus A320neo family and Boeing 737 MAX will be the most predominant narrowbody aircraft by 2032.

With airlines retiring some older widebodies in favour of newer narrowbodies, Buntrock feels this will ultimately impact the MRO and aftermarket sectors. "The newer generation narrowbody aircraft are predominantly electronic systems and have fewer parts, but while this means they have lower margins and are more reliable, which is of benefit to the airline, it could affect the MRO and aftermarket services somewhat."

This said, Buntrock sees an increase in aftermarket sales in the aviation industry and stresses that there are still maintenance schedules to be maintained for existing fleets, so it is business as usual for companies like AJW who offer MRO services.

It is worth noting that several airlines are still not at pre-Covid flying capacity and still have aircraft on the ground, however there is optimism in the industry as tourism makes a steady recovery. "As passenger numbers continue to increase over the coming months, airlines will have to mobilise their grounded aircraft and see to maintenance to meet the needs of their global and local travellers. Stakeholders in the MRO and aftermarket sector, such as

> ***"The newer generation narrowbody aircraft are predominantly electronic systems and have fewer parts, but while this means they have lower margins and are more reliable, which is of benefit to the airline, it could affect the MRO and aftermarket services somewhat."***
>
> Clyde Buntrock, AJW Aviation

AJW are prepared for an upturn in the industry.
© AJW

AJW Group, are ready for this upturn in business and remain positive about business growth going forward," he states.

Industry experts are suggesting the strength of the U.S dollar will create additional cost challenges for global aviation, for instance, engine and component cost per flight hour agreements sold in $USD will equate to higher maintenance costs.

Buntrock acknowledges that the strength of US dollar is putting pressure on airlines by driving up the cost of everything from fuel to components, and aircraft themselves. He explains: "The knock-on effect of the strengthening dollar is that it has sent previously strong currencies such as the British pound and the Chinese yen plummeting recently. The pound has also been affected by the looming energy and economic crisis as well as ongoing geopolitical unrest in the region."

International airlines recovering from the pandemic continue to face financial challenges as they raise revenue in local currencies but mostly pay for jet fuel, and maintenance and overhaul costs in dollars. Buntrock suggests these costs amount to approximately 40% of airlines' outgoing costs – "they only have one solution, and that is to pass these costs onto their passengers by increasing already high, ticket prices."

It is business as usual for companies like AJW for MRO services. *© Keith Mwanalushi*

According to observations from AJW, ticket prices are currently 42% higher than they were pre-pandemic, which shows a staggering increase in cost for passengers. Buntrock says with airlines recovering from an approximately $190bn net loss in revenue over the past three years, they must do something to get back on track.

The good news is that airline ticket prices are expected to lower in 2023 compared to 2022 suggest experts IBA mainly as a consequence of an increase in industry capacity. IBA believes demand might be surprisingly resilient because of continued of pent-up demand, lower ticket prices and the fact that lower fuel prices will lower the break-even point for marginal routes.

All considered, Buntrock believes the travel industry has seen a definite upturn in bookings globally, which is positive as it is increasing airline revenues. "While there is an increase in revenue and businesses are doing well, capital costs have also soared, which is placing pressure on all in the industry. The strong dollar has pushed up the price of new aircraft and raw materials and rising inflation rates and exchange rates are not helping the already struggling industry," he says.

Aircraft purchase deals made before the pandemic, may have been pushed back due to lack of revenue, but the deals were signed, escalation clauses will have kicked in and the aircraft are currently more expensive than initially expected, Buntrock notes. He says airlines now need to deal with balancing flying schedules and pricing amidst reduced passenger confidence in the industry as it is. Cost per flight contracts signed a few years ago, will also have been escalated, again affecting countries who are balancing their revenue and expenditure currencies.

As Buntrock observes, things look good for global companies who are making sales in dollars as their capital expenditure is paid in dollars as well, and this bodes well for their investors. "Companies that receive payment in local currency but have capital expenditure expenses in dollars are the ones who will struggle in the current economic climate."

As aircraft **transitions** ramp up, MRO capacity remains a challenge

STS Aviation' work included significant cabin reconfigurations to suit new operators.
© STS Aviation Services

Asset transitions are expected to increase in 2023 following continued strong demand as airlines bring back capacity and more aircraft find new homes, but MRO slot availability looks increasingly difficult.

By Keith Mwanalushi

Airlines will be looking to return as much capacity to the market as they can in 2023 and aviation analysts at IBA indicate that demand might be surprisingly resilient because of continued pent-up demand, despite lingering industry challenges.

STS Aviation Services have been heavily involved in the transition market during the past 12 to 18 months. "Looking back, it's quite evident that during the height of Covid new and existing operators were able to strike the best deal possible from lessors on PBH and short-term leases," Colby Payne Head of Business Development at STS Aviation Services UK tells *AviTrader MRO*.

Payne says with this increased demand, both existing STS Aviation bases at Birmingham (BHX) and Newquay (NQY) in the UK saw an influx of parking and re-registration inputs. "This mostly included significant cabin reconfigurations to suit the new operator, and one of our customers opted to have us carry out multiple A330 fleet introduction projects, which incorporated Zero LOPA modifications [removal of all seats] on each aircraft to allow for light cargo operations."

With the addition of a newly certified facility at Manchester (MAN), STS Aviation is now offering a tailored-capacity solution that is suited to the transition market, Payne noted.

The Covid period may have also accelerated and paved the way for several new start-ups to spring up either to replace lost capacity or add completely new players on the scene. STS Aviation has been working closely with UK start up Hans Airways which recently announced the successful completion of a new round of financing which will enable it to progress plans to commence scheduled air services between Birmingham (UK) and Amritsar in India.

In August 2022, Hans Airways announced the partnership with STS Aviation for re-registration tasks and entry into service modifications ahead of a route-proving flight for the UK Civil Aviation Authority on an A330-200 newly re-registered as G-KJAS – according to airlinefleets.net, it is a 2008-build aircraft previously operated by Air Europa as EC-KTG.

STS Aviation accepted the first aircraft for a maintenance visit at its widebody aircraft MRO facility in Birmingham and since the August announcement, the MRO company has continued to support Hans Airways with further projects. "We have been offering MRO support and advice to Hans Airways for quite some time, and we are pleased that they have worked through some recent challenges," Payne updates.

Colby Payne, Head of Business Development
STS Aviation Services, UK

Giuseppe Renga, Group Chief Executive Officer and President the AMROS Group says the company has been involved in

STS Aviation bases like Birmingham in the UK saw an influx of partking and re-registration work.
© STS Aviation Services

several aircraft repossessions, unscheduled redeliveries and transitions. Even pre-Covid, AMROS invested in increasing knowledge and procedures in order to enable a swift and cost-efficient aircraft registration for operators.

"We assist our customers in registering aircraft by being well connected with aviation authorities and we know what the dynamic are, the key success factors and loose ends in such a process," says Renga. "As a CAMO, we know the aircraft well, enabling us to register aircraft swiftly, taking over a lot of work from costly law firms," he adds.

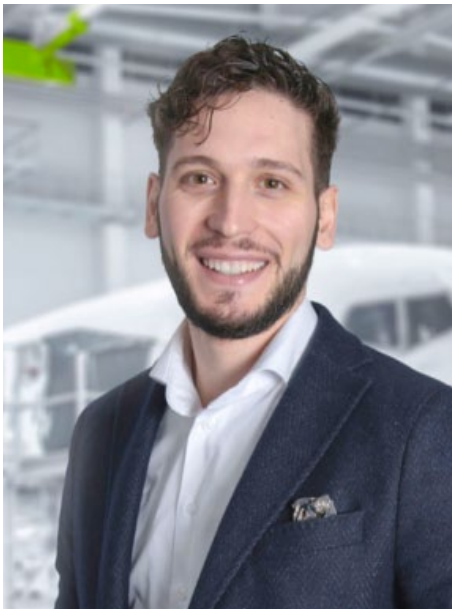
As for modifications, and as a fleet technical management service provider including CAMO, Renga believes the company is well versed in getting an aircraft airworthy for aircraft owners, MROs, and operators. "We are also able to provide minor and major modification solutions ahead of time and in house, saving time and money due to short communication channels and streamlined processes – without the pressure," he mentions.

Renga anticipates a rise in demand for aircraft registration support and modifications in 2023 as more aircraft continue to return to service but he also observes that MRO slots are scarce, with most being full well until Q2 2023 – "we see many airframes available, yet unable to be delivered due to lack of slot availability, so this might result in a strong demand for ACMI to secure routes," he states.

Assets showing strong demand

With aircraft rapidly returning to service, the AMROS Group are seeing significant demand for hard-time components, such as oxygen generators and fire extinguishers that will likely have to be replaced. Renga adds: "We are seeing extreme price discrimination with those components, heavily price inelastic and in addition, an increase in Life Limited Parts [LLPs] for all kinds of landing gear, APU and engines that will require servicing for return to service." These are in addition to emergency equipment, wheels and brakes and structural items.

Armando Filho, Material Management Director at Vallair observes that the A320 and B737 continue to be attractive markets,



Giuseppe Renga, CEO at AMROS Global

> **"We see many airframes available, yet unable to be delivered due to lack of slot availability, so this might result in a strong demand for ACMI to secure routes."**
>
> *Giuseppe Renga, AMROS Group*

Armando Filho, Material Management Director at Vallair

> **"The market has been demanding - lots of engine, aerostructure and airframe parts have moved quickly after teardown, but they are also looking for top value components like APUs and landing gears with green time that will minimise costs for their operations."**
>
> *Armando Filho, Vallair*

especially for the ageing fleet where airlines and MROs have been keen to seek out the best value for money instead of purchasing directly from the OEMs. "The market has been demanding - lots of engine, aerostructure and airframe parts have moved quickly after teardown, but they are also looking for top value components like APUs and landing gears with green time that will minimise costs for their operations."

Filho reveals that Vallair are currently actively verifying several A330/A350/B777 aircraft for teardown potential, and for cargo conversion.

Looking specifically at core transitions (meaning pure asset operator swaps), Payne at STS Aviation says the highest turnover in the past 18 months has been related to Airbus and, more specifically A320ceo and A330ceo aircraft.

"We have completed numerous transitions for a variety of lessors; from 'as is where is' to strict, more traditional return conditions. In addition, Covid played a huge part in accelerating one of our valued customers' retirement plans, and we assisted with the return of nearly all of their B757's, which was an extremely rewarding project despite it being the end of an era for a loyal customer," Payne states.

Will the economic outlook affect transitions?

As the IBA indicated in their 2023 aviation outlook analysis last month, inflation is likely to stay strong until 2024 coinciding with stabilisation of energy pricing and interest rates will continue to creep up too.

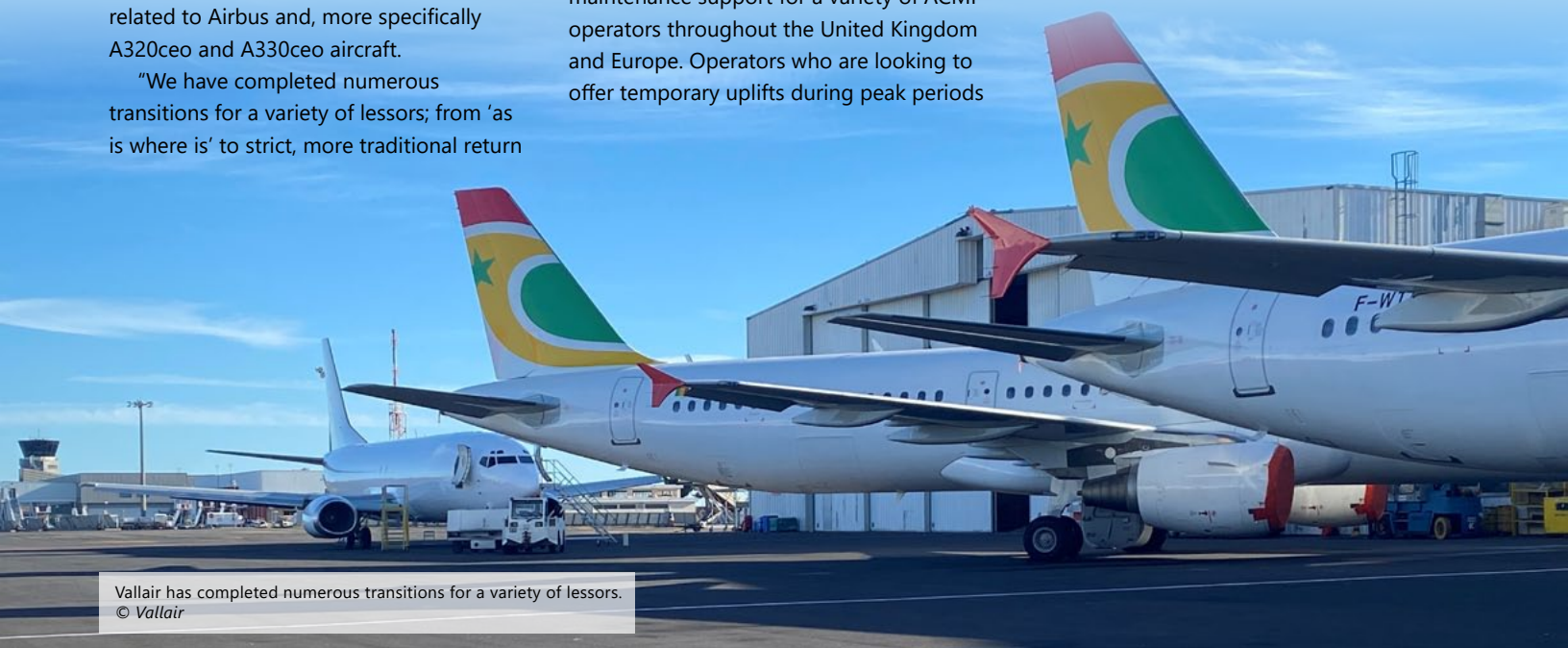
Other analysts have cautioned about a potential bleak global economic outlook due to high costs, geopolitical issues and a recession in some global markets. Payne, however, does not see the economic outlook having any significant slowdown in asset transitions or repairs in the coming year, in fact, quite the opposite – "The forecasted loads for 2023 are considerably higher than 2022, which are on par with pre-Covid levels. In addition to the loads, we are seeing an increased demand for line maintenance support for a variety of ACMI operators throughout the United Kingdom and Europe. Operators who are looking to offer temporary uplifts during peak periods for major UK airlines," he says.

Renga echoes similar thoughts and sees no slowing down in asset transitions in 2023 considering the market is still recovering from post-Covid and in need of airworthy assets. He also sees multiple opportunities for start-ups able to procure assets.

"In addition, we see multiple fleet renewal projects in which we are engaged in, hence generating transitions again," Renga notes.

Despite the pandemic and the ongoing geopolitical issues affecting connectivity and supply chains, Filho from Vallair stresses the importance that aviation plays in global economies. "Yes, we cannot ignore additional risk factors such as inflation, increased taxes, and the energy crisis but these will force aviation businesses and the supporting industries to search for a sustainable growth model to adopt."

However, Filho and the other speakers in this article remain upbeat about the prospects and opportunities in the sector. "I believe that recovery and growth will continue in 2023, that is if we don't get any more major shock events to add to those we already enduring," Filho concludes.



Vallair has completed numerous transitions for a variety of lessors. © *Vallair*

TPAerospace

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ecube are developing measurement processes to assess their sustainability performance more accurately.
© ecube

Developing pathways for **sustainable** disassembly

The aircraft disassembly market faces unique challenges in the race for more sustainable operations but there are advances taking place in line with global greener practices and experts say closer collaboration with suppliers, OEMs and airlines could see even more economical solutions.

By Keith Mwanalushi

The aviation business is one of the most dared industries to achieve stringent sustainability targets. Airlines, airports and aircraft OEMs have led the charge in applying initiatives aimed at achieving net zero operations and transitioning to greener practices. The aircraft aftermarket and end-of-life segments are also getting more assertive in pushing efforts to achieve similar goals.

At end-of-life specialists AerFin, they are taking sustainability very seriously. "When it comes to an airline's decision to retire an aircraft, AerFin's objective as a business is to help them maximise the residual value of those assets and to do so in a sustainable manner," declares James Bennett SVP Sales. Bennett says by recycling aircraft and engines on a global scale AerFin can offer used serviceable

James Bennett, SVP Sales at AerFin

> **"By integrating recycled components into their fleet maintenance strategy, airlines mitigate lengthy lead times, avoid price fluctuations, and reduce their global footprint associated with the movement of the goods."**
>
> *James Bennett, AerFin*

material (USM) to airlines and lessors that then reduces the requirement for the manufacture of new parts, which in turn helps to eradicate waste.

Bennett stresses the importance of giving airlines the flexibility to recall components from the airframe thus helping operators avoid additional investments in purchasing new components, and to encourage them towards circularity by reusing their own material. "Also, by integrating recycled components into their fleet maintenance strategy, airlines mitigate lengthy lead times, avoid price fluctuations, and reduce their global footprint associated with the movement of the goods," Bennett adds.

Moreover, AerFin are building a pool of serviceable inventory to support existing and new customers who are looking for cost-efficient and sustainable solutions for their fleet. The company has an established link with AFRA (Aircraft Fleet Recycling Association) with a vision for making aviation more sustainable.

When ecube first came to market over a decade ago, they saw an opportunity to give aircraft owners and managers a more efficient and professional option than may have been available then. "Our value proposition was rooted into our removal processes, the efficiencies we innovated, and the resulting time savings achieved, our customer service levels and our ability to pack, store and ship material, all done within the confines of a heavily commodified marketplace," says Paul Murray ecube's new VP Sustainability and Business Development. "Frankly, as long as all of this was achieved within the existing environmental legislation, we and our customers were content with the environmental aspect to our work."

EirTrade uses AFRA best management practices eliminating any threat to the environment from the end-of life process.
© EirTrade

The landscape has changed utterly in the last decade as the climate crisis began to dawn on wider society. About five years ago, the folks at ecube began to understand that in order to survive in business in the long term, they needed to robustly improve their sustainability platform and to go beyond the acceptable standards of the day. "We sought to get out in front of the issues associated with aircraft dismantling, anticipate what our customers would need from us in the future and to take a leadership position in the market. Effectively, we began to transition from an aircraft end of life operation to an aircraft recycling business and that coda now informs our entire operation," Murray explains.

At ecube, they are developing measurement processes to assess their sustainability performance more accurately. Murray adds: "It is important that we are able to measure carbon footprint, both that of our own and that of our suppliers. We have established Plane Reclaimers.aero to develop new pathways for the future reuse and repurposing of aircraft parts."

The range of parts that ecube are currently requested to remove from aircraft varies hugely, ranging anywhere between 300 to 1500 parts and the company wants to develop opportunities for operators to maximise the component harvest by developing new pathways for those parts. "We deepened our linkages to our carefully selected suppliers to ensure they are aligned with our sustainability objectives. We have invested in a new senior management function of VP Sustainability, not just to consolidate our progress but also to develop new channels both within aviation and in other industries."

Paul Murray, VP Sustainability and Business Development at ecube

Murray indicates that ecube are also on the board of the AFRA and pushing to drive up the standards across the industry.

According to Goutham Ramdas, Director- Aircraft Trading at Universal Asset Management (UAM) they consider all aspects in sustainability specifically through their recycling processes for any aircraft undergoing disassembly. This begins at the very first stage when evaluating how to recycle the fluids from the aircraft, all the way to the copper wiring when the aircraft hull is finally recycled. "Our goal is to maximise recycling as much as possible, and to minimise the carbon footprint on the environment as part of our disassembly processes," comments Ramdas.

He says most of the opportunities in the end-of-life process comes down to how players in this space can process aircraft aluminium, and the 5% of material on the aircraft that are more difficult to recycle. "While we fully comprehend the notion that not everything can be fully recycled, the onus remains on aftermarket companies to figure out how to prolong the usage of materials that cannot be recycled at the moment until that technology has been brought to the market," Ramdas points out.

At EirTrade's facility in Ireland, using AFRA best management practices eliminates any threat to the environment from the end-of life process. The products of aircraft recycling are re-used to greatest extent possible, for instance, the fluids are removed for recycling at approved facilities and components are carefully removed, repaired, or overhauled, and returned to service with airline operators. Some unusable components and materials are distributed for educational purposes.

Goutham Ramdas, Director- Aircraft Trading, Universal Asset Management

Also, the fuselage of the aircraft is cut into sections to create pods for use as offices, sheds and living spaces, while remaining structures are shredded, metals segregated and recycled at an approved facility.

Jim Maguinness, Technical Manager -QAM at EirTrade Aviation explains that fuel and oil are removed from the aircraft using the procedures in the aircraft maintenance manual. "Drip trays are used to contain any possible spills during removal of components and all hazardous materials are segregated into assigned

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areas, racking, bins, bunded pallets, for example to comply with our waste facility permit."

As Maguinness highlights, fire extinguishers containing halon and other gases are components which are overhauled and re-used and the export and import of Ozone Depleting Substances (ODS) is licensed.

Handling hazardous materials sustainably

In terms of the process, AerFin have an internally developed software programme that provides data to optimise the yield of serviceable components. Bennett explains that those components are typically the high value engine and airframe components and major assets such as APUs, landing gears and nacelles, and avionics and interiors. These are identified, removed and segregated and what is left is an empty fuselage which is typically divided into four categories: 1) metal, steel, stainless steel and titanium; 2) recyclables, such as flight deck glass and tyres; 3) hazardous components such as fire extinguishers and batteries; 4) lastly, composite materials such as the interiors and seats.

"We are then left with a small amount of waste, which in turn is disposed of in a sustainable manner," Bennett notes.

As for aircraft hazardous components, besides batteries and fire extinguishers, Bennett says these also include various fluids and chemicals (such as lubricants) and repellents, which keep an aircraft operational. "One of the initial phases of tearing a plane down is depleting its hazardous fluids and materials. It involves a specialised process that is done very cautiously to meet environmental safety requirements."

Components that are destined for recycling are then re-certified either by AerFin, or by third-party component repair partners. They are then sold to the network of operators to support their immediate and future operational needs, thus completing the circle.

At UAM, they have a robust group of vendors who specialise in the ability to handle hazardous materials from

The industry is keeping a close eye on new development for the recycling of advanced composites.
© *EirTrade*

Jim Maguinness, Technical Manager -QAM at EirTrade Aviation

disassembles. "For us to reduce the impact on the environment, we ensure that any of our processes and vendors are fully in compliance with the local and EPA standards along with our AFRA requirements" says Ramdas. He adds that UAM's industry-first Diamond KPI accreditation through AFRA was driven by the impact on the environment as part of these processes.

Are recycling technologies developing fast enough?

Some materials, for instance those found in cabin interiors may contain embedded flame retardants so safety regulations would preclude them from recycling. Ramdas suggests that while there are certainly advancements in recycling technologies, there is still more work to be done to attain 100% recyclability.

There is need for more cabin materials to be easily recyclable at end of life.
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"This is even more important when considering its not far off when aircraft with carbon-fibre composites will need to be recycled," but Ramdas heeds that the technology is not quite ready to achieve that.

Maguinness says the development of recycling technologies is dependent on commercial viability and end-of-life and recycling should be taken into consideration during the design of any product. EirTrade is keeping a close eye on new development for the recycling of advanced composites and carbon fibre, which are increasingly replacing metals in aircraft manufacturing.

Murray from ecube observes that in recent decades the technologies for the design of new aircraft and the development of new materials was some way ahead of the technologies available to effectively recycle what was made. "We are actively engaging with partners in a number of different channels to explore better ways to reuse carbon fibre," he says.

When aircraft airframes containing large amounts of carbon fibre start to mature the quest to repurpose these materials effectively and economically becomes a major challenge, as Murray suggests. "This element of the process is in its infancy, its complicated and complex and it will take multi party collaboration to find a solution. We think the aircraft OEM's need to take a lead role here. The automotive industry established design conventions to determine the amounts of material used in new vehicles which comes from already recycled material and also determines how much material available at the end of a vehicle's life that is easily recyclable."

For instance, Murray argues that aircraft undergo substantial cabin interior refreshes at some point in their life cycle and surely, it is reasonable to insist that the OEM's, the interior's suppliers, the airlines, the aircraft owners and the regulatory authorities collaborate to ensure that all such upgrades use a minimum percentage of material from recycled sources and also that the material installed is easily recyclable at end of life.

Murray says: "It is credible to believe that this is something that future airline passengers would expect. Consumers are becoming far more eco conscious in their buying habits so service providers and manufacturers would do well to build in a level of compliance to satisfy a growing demographic."

With industry data indicating that aircraft retirements will double in the next few years, the need for airlines to collaborate with sustainable end of life managers is and will continue to be greater than ever.

Outlook for Aviation, presented by IATA's Willie Walsh and Marie Owens Thomsen. © *IATA*

Plenty of **optimism** but keep a watch on spare parts availability

By Keith Mwanalushi in Geneva

The International Air Transport Association (IATA) gathered international journalists in Geneva, Switzerland last month to give an update on the status of the air transport industry globally.

IATA revealed that in 2022, airline net losses are expected to be $6.9 billion which is significantly better than the performance of 2020 and 2021. IATA expects a return to profitability for the global airline industry from 2023.

Of course, the effects of Covid were discussed in detail with all major regions now rising from the ashes of the pandemic with the exception of China. As several in the industry have suggested, it is probably still too early to talk about a post-pandemic world until the situation in China levels out.

"For the rest of the world, we are seeing a strong recovery but still below where we were in 2019. The domestic markets are pretty much back to where they were in 2019 and international is seeing steady recovery. So, given what we have come through in 2020, 2021, we have to be positive about 2022 but the headwinds we face are significant," stated IATA Director General Willie Walsh.

Looking at the lesson learnt from Covid, Walsh said the pandemic was clearly endemic now, with the exception of China. "I think looking back on many of these restrictions, it is very clear to us now with the data that is available that the restrictions had very little, if any, positive impact on constraining or reducing the transmission of the virus," Walsh stated.

The state of the global economy is of concern to the aviation industry and there are plenty of discussions circling around a recessionary environment. Walsh was cautious about referring to a blanket recission but perhaps a really sharp economic slowdown. "So, because of this slowdown, I think people perceive it as recessionary but today, we are

International journalist attending the IATA GMD in Geneva.
© Keith Mwanalushi

actually not at all in the space of the global recession. However, let me be clear that individual countries are clearly experiencing recessions, and the other countries will also experience recessions this year and next. The global recession ought to be possible to avoid," he stated.

Looking ahead, Walsh said we are clearly still not at 2019 levels –"We believe our industry will reach that level in 2024 led by the US." IATA data shows that North American carriers are expected realise profits of $9.9 billion in 2022 and $11.4 billion in 2023. In 2023, passenger demand growth of 6.4% is expected to outpace capacity growth of 5.5%. Over the year, the region is expected to serve 97.2% of pre-crisis demand levels with 98.9% of pre-crisis capacity.

Analysts have estimated around 85 airlines that are no longer in business from 2020 to the early part of 2022. In Europe, the airlines that collapsed were fairly small, inefficient and marginally profitable and those margins will continue to be a challenge for existing operators.

Walsh felt there were still financial pressures on the other airlines – "The difference is airlines are generating cash now instead of liquidity, which is the critical issue and the difference between surviving and going out of business."

He also saw no significant change in the industry – "I look around the European industry, and it's very fragmented, but it's always been very fragmented. So, I think there is a strong case for consolidation in Europe but consolidation through normal M&A activity, given the state approaches at the moment," he said.

IATA indicates that European carriers are expected to see a loss of $3.1 billion in 2022, and a profit of $621 million in 2023. In 2023, passenger demand growth of 8.9% is expected to outpace capacity growth of 6.1%. Over the year, the region is expected to serve 88.7% of pre-crisis demand levels with 89.1% of pre-crisis capacity.

Not to mention, the impact of the war in Ukraine and the volatility created in the oil price that has clearly added significantly to the airlines' cost base.

In terms of recovery and airline profitability, IATA observes regional

> **"We were aware of disruptions in the supply chain during the year. The degree to which the CEOs around the table expressed concern about the availability of products was not surprising, but the scale of it was worse than I had realised."**
>
> *Willie Walsh, IATA*

patterns with the North American airlines that were already profitable in 2022, followed by Europe and the Middle East in 2023 and 2024 or beyond.

In 2023 the airline industry is expected to tip into profitability. Airlines are anticipated to earn a global net profit of $4.7 billion on revenues of $779 billion (0.6% net margin). This expected improvement comes despite growing economic uncertainties as global GDP growth slows to 1.3% (from 2.9% in 2022).

"Despite the economic uncertainties, there are plenty of reasons to be optimistic about 2023. Lower oil price inflation and continuing pent-up demand should help to keep costs in check as the strong growth trend continues. At the same time, with such thin margins, even an insignificant shift in any one of these variables has the potential to shift the balance into negative territory. Vigilance and flexibility will be key," said Walsh.

Notably, Walsh mentioned that IATA was aware of the challenges in obtaining aircraft spare parts in the market: "We were aware of disruptions in the supply chain during the year. The degree to which the CEOs around the table expressed concern about the availability of products was not surprising, but the scale of it was worse than I had realised."

Despite the economic uncertainties, there are plenty of reasons to be optimistic about 2023, says Walsh.
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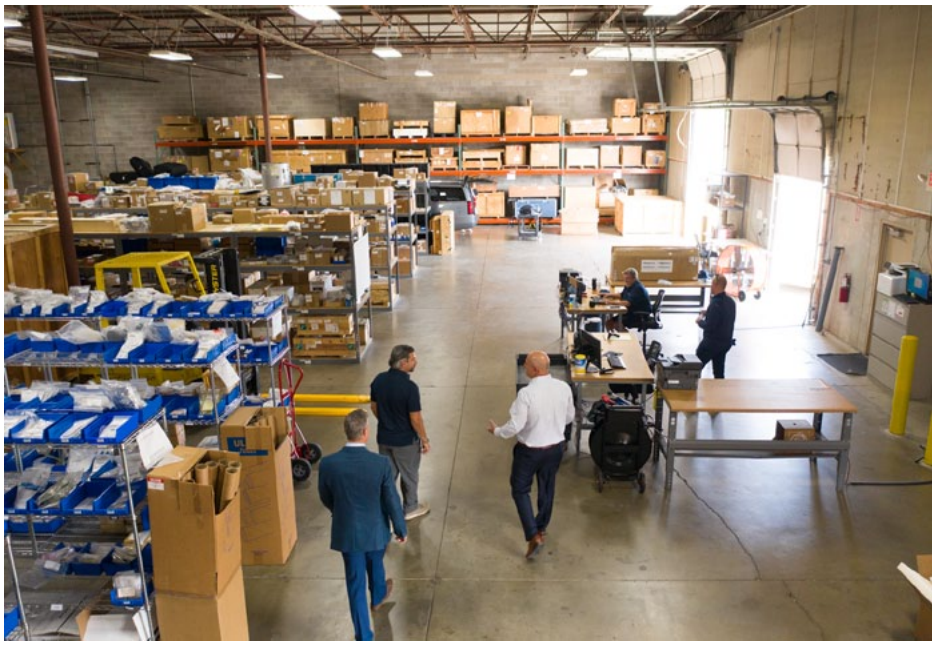

Airlines are concerned about the global avialibility of spare parts.
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Sustainability was also a major talking point in Geneva and Walsh gave an outline of where the industry stands today and the goals for 2023 in the race to achieve net zero in aviation by 2050. "I think we are making good progress," Walsh said. "Clearly, this is a very important target for the industry and we are on pace to see that." He further stressed the importance for all the stakeholders including governments and regulators to turn that aspirational goal into something more concrete.

Of significant concern, however, are the increased costs associated with the transition to net zero. "It is something that the industry recognises but we are going into this transition with our eyes open. It is going to be hard work and we know it is going to be expensive," Walsh stated.

Q&A

In the hot seat...

Paul Hasson, Setna iO Sales Director and Engine Analyst

Paul Hasson Sales Director and Engine Analyst, Setna iO

What attracted you to this industry?
I sort of fell into the industry. I am of the belief that most folks do not really know what it is that we do outside of the industry – it is quite a niche business. In any case, I am happy I fell into it!

What does a typical day involve in your role?
There is a myriad of new responsibilities in a role focused around engine acquisitions. A typical day involves evaluation of engines and airframes alike, managing thousands of lines of repairs with the help of our repairs team and of course, selling the material to our new engine MRO partners.

What role does Setnix play in the business?
Remember those thousands of repair lines I mentioned? With all the disruption that we have seen in the industry over the past couple of years – from piece part shortages, labour issues, discontinuation of repair capabilities, and an ever-growing bottleneck of components stuck at various shops – Setnix has allowed us to continue operating as usual by keeping lead-times reasonable, allowing us to actually sell the material we have been purchasing. Setnix has been paramount to our day-to-day sales and operations.

Why has Setnix specialised in Auxiliary Power Units.
APUs have always been a strong focal point of Setna iO, mainly due to Setna iO co-Founder and Setnix President, Robert James. He is one of the few folks in the industry that truly understands the APU as a full asset as well as on a deep piece part scale. Since I have been with the company, we have dismantled over 300 APUs across various platforms – with all that metal comes a lot of knowledge and experience. Setnix has positioned itself to be a leading MRO in the industry.

What are your thoughts on the teardowns market at the moment?
The market is strong for various reasons – we have seen a lot of aircraft that were supposed to retire by now get a second chance in life. Commercial jets are being converted to cargo, 737 classics are remaining in the air because the costs allow them to, and new jet deliverer bottlenecking are all creating a unique opportunity for anyone who can source material at the moment. Demand is strong for the foreseeable future, and supply is being removed from the market in a sustainable way. It has also been incredibly challenging and capital intensive, while requiring serious patience and deep knowledge on piece parts to realise a fair return on investment. To really earn a return on a teardown, an asset needs to be located and negotiated, records reviewed over the 12–25-year history of the asset. The teardown itself can take six months from start to finish and then parts need to be shipped around the world and received into a warehouse with extensive pictures and details noted. 1000+ repair orders need to be cut and managed (often incorporating piece parts to keep each line item profitable) and then parts then need to be received back into stock, and then sold which can often take 50x separate quotes to customers around the world. Finally, money needs to be collected which often take 60+ days. It is no mean feat!

Which airframes or engines are you currently disassembling and what further asset acquisitions are you evaluating?
As far as airframes go currently – A320s, 737NG's, A330's, 777's, an E190, as well as a few A380s which have been exciting! We have just started getting our feet wet on the engine side of the business, however since the beginning of 2022 we have been able to purchase and disassemble 6x V2500-A5s, 2x CFM56-5Bs, 2x CF34-10s, and 1x PW4168. We have created a solid supply chain for our airline and MRO customers, as such, we have no intentions of slowing down.

What are you most looking forward to in 2023?
I heard 2023 will be a good year for movies, besides that it is business as usual: having fun and working hard!

on the move


Stewart Odurny

Stewart Odurny has been appointed Executive Vice-President Customers and Strategy of Safran Landing Systems as of January 2, 2023. He will be in charge of programmes, sales and the development of new markets in conjunction with the aircraft manufacturers. Odurny started his career in 2002 with Messier-Dowty as Purchasing Manager and then became Purchasing Director in 2004. He was appointed Landing Gear Products Director in the Supply Chain directorate in 2007. He joined the Programme Management team in 2009 and was appointed B787-9 Programme Manager in charge of cost optimisation. He then became Safran Landing Systems' Director of North America Sales and Marketing in 2012. Since 2016, Odurny held the position of Vice President Sales and Marketing for North America.

ST Engineering iDirect, a global leader in satellite communications, has named **Don Claussen** as its new CEO, effective January 2, 2023. Claussen will lead the company in expanding its global leadership and technology vision against a backdrop of rapid satcom industry transformation. Based in the U.S., Claussen brings with him over 15 years of industry experience and has transformed solutions development and delivery for global satcom companies. Claussen joins ST Engineering iDirect from Intelsat General Corporation where he served as Vice President responsible for strategy, business development, product management and service delivery. During his time at Intelsat General Corporation, Claussen aligned the product development and service delivery teams to launch a multi-orbit capability, providing end users seamless access to GEO and LEO satcom services from a single user interface.

StandardAero has appointed **Dan Satterfield** to serve as Chief Financial Officer (CFO). Satterfield is responsible for StandardAero's global financial strategies, day-to-day financial, accounting and tax operations, as well as performance, reporting and long-range business planning, including investor relations, treasury, controller and audit operations. He replaces **Mike Scott**, who is retiring after more than 33 years of dedicated service to StandardAero. Satterfield will be located at the company's Scottsdale headquarters office. Satterfield joined StandardAero from Honeywell Aerospace, after serving the past four years as Chief Financial Officer for Honeywell's US$12 billion aerospace portfolio of products and services. Prior to his service at Honeywell, he worked in senior executive financial leadership roles at Gates Corporation, Eaton, Cooper Industries and Siemens.

Abelo has announced the addition of **Bill Rossi** to its global marketing team. Rossi takes on the role of SVP Marketing for Asia with immediate effect. Rossi has amassed over 25 years of experience in the aviation sector; his expertise has centred on the Asian Pacific market where he has held senior sales and marketing roles for aircraft manufacturers and leasing companies. His regional aircraft and marketing expertise, his experience and passion to working closely with airlines and other business partners, underpins Abelo's planned growth and development as a leading turboprop lessor. Abelo is a full-fledged leasing platform created in June 2022, focusing on the commercial Turbo-Prop aircraft segment. It results in the merge between former Elix Aviation's platform and Turbo-Prop portfolio of 65 assets, and the management expertise of ADARE Aviation Capital, led by CEO **Stephen Gorman**.

AviTrader MRO

The leading industry publication linking aircraft maintenance, the aftermarket, and aircraft operators

AviTrader MRO is a monthly digital magazine providing news and senior level analysis on the global commercial aviation MRO industry. Over the past decade the publication has grown to be a leading source of insight and analysis on the key issues facing the aircraft maintenance and aftermarket sectors.

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