

Inflight

A full-page background image showing a rocket launch. The rocket is a slender, dark object ascending vertically, leaving a bright, intense column of fire and white smoke plume behind it. The launch is taking place at dusk or dawn, with a dark blue sky and some clouds. In the foreground, the launch complex is visible, including a large, billowing cloud of white smoke and fire at the base of the rocket. To the right, there's a tall, white, lattice-structured tower. The overall scene is dramatic and captures the power of a rocket launch.

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Project runway

Growing demands in cabin interior MRO continue into 2023 as more airlines and business jets undergo grand cabin refurbishment projects. But with ongoing concerns surrounding labour shortages, supply chain disruptions and macroeconomic challenges, a complete post-pandemic recovery is still beyond the horizon. Elena Lodge reports.



Living in a modern world flooded with social media, selfies and Instagram influencers, the age-old maxim that “It’s what’s on the inside that counts” holds more significance than ever.

This saying, so it seems, rings especially true for aircraft. As aviation slowly begins to reap the rewards of the post-pandemic recovery, it appears that cabin retrofitting is the new flavour of the month.

In January, Emirates debuted the first of its retrofitted A380 aircraft on the airline’s flagship Dubai to London route, with plans to upgrade the entire A380 fleet by 2025.

The US\$2 billion Emirates project, which implements new features including a distinct new colour palette, the airline’s signature ghaf tree motif and new cream leather

upholstery, is the largest refurbishment programme in aviation history.

The Dubai flag carrier’s fleet “makeover” is just one of many more to come, as an increasing number of airlines, including Air France and Air India as well as several business jets, are also pursuing grand refurbishment plans in the coming year.

So what has caused this recent surge of “cabin fever”?

“Over the past few years, airlines have focused on essential fleet maintenance and have neglected interior refurbishments as a non-essential expense,” says Sohaib Ahmed, Programme Manager – Interiors, AJW Group, who attributes the sudden influx of cabin refurbishments to the increased demand for travel, post-COVID.

“Amidst the recent and welcome upturn in travel bookings, [airlines] are now looking to aircraft cabin MRO maintenance services for a fresh interior look,” he adds.

Despite the slower recovery of MRO markets in the Asia-Pacific region, China’s decision to reopen its borders to international travel in early January is expected to make a positive impact on the Asia-Pacific cabin interior markets because of the responsive surge in customer demand.

OUT OF STORAGE

According to aviation analytics firm Cirium, 408,800 flights were scheduled to depart China in January alone, equating to over 69.4 million seats. In short, MRO facilities catering to this demand have their work cut out for them.



Many parts: as 3D printing technology continues to advance, firms such as STS Aviation Group are increasingly looking to it as a sustainable means of producing aircraft interior parts.

“Aircraft downtime means loss of income for an airline, so finding a company’s availability and how quickly they can complete your project and return the aircraft to service is vital for your bottom line and ROI,” he says.

REDUCE, REUSE, RECYCLE

The last few years has seen sustainability take centre stage across the globe, so much so that you’d be hard pressed to go a day without reading the word “sustainable” at least once – especially in the aviation rhetoric.

Having long been on the receiving end of environmentally-fuelled criticism, investment into sustainable aviation has become a top priority across the board. To meet the industry-wide pledge to be net zero by 2050, the development of sustainable technologies has begun to make ground with sustainable aviation fuel (SAF), hybrid-electric and hydrogen-powered aircraft, as well as eVTOLs, to name a few.

For the MRO industry, this is no different. In fact, some manufacturers of new cabin interior products are even borrowing from the three Rs – reduce, reuse and recycle – to produce eco-friendly alternatives to traditional cabin fittings made from recycled materials, such as composites made from natural fibres as well as bio-based plastics.

E-leather, for example, is a strong contender for sustainable aircraft seating solutions. AJW’s seating material SkyLeather replaces petrochemicals, which are resourced from refining petroleum from fossil fuels, with water-based polyurethane.

For Michael Leung, the Managing Director of AAR Engineering Services Asia, customers have already expressed interest in cabin interior upgrades as airlines begin to “capitalise [on the market recovery] and ride the wave”.

He says: “Airlines are starting to retrieve the aircraft from storage and, as you can imagine, those aircraft have been in storage for two to three years, so most of the cabin interiors are in very bad shape. So, at a minimum, there will be requirements to change the soft furnishings like carpets and curtains, where it’s susceptible to damage in long-term storage.”

With more and more airlines seeking these cabin interior upgrades, what exactly should they be looking for from an MRO?

According to Lena Watters, Senior Vice President and General Manager, STS Aviation Services Canada, those seeking cabin interior maintenance need to prioritise reliability and reputation in their search and select an MRO maintaining “an excellent reputation for cabin interior services, with trusted customers”.

A similar view is taken across the pond. Mark Robertson, Senior Vice President of Business Development, STS Aviation Services Ireland, also emphasises the importance of selecting a maintenance company with “a reliable contract network”.

AJW’s Ahmed agrees, adding a caveat that an MRO should adhere to all relevant safety and environmental regulations and maintain frequent communication and transparency from beginning to end.

STS Aviation Services' Robertson believes e-leather to be the way forward. "In the not-too distant future, I posit that e-leather will become the standard insofar as aircraft seating or seat manufacturing and refurbishment is concerned."

Also offering a sustainable alternative to traditional cabin interiors is additive manufacturing (AM), more popularly known as 3D printing. Using a three-dimensional digital model to create a physical object layer by layer, 3D printing can create aircraft interior components that are more lightweight, with reduced operational costs and improved efficiency.

Recent developments in AM technology have caused a huge increase in demand for lightweight 3D-printed components, so much so that the aerospace market is expected to reach \$6.75 billion by 2026.

As 3D printing technology continues to develop, more and more companies will look to the technology as a sustainable solution to produce aircraft interior parts, including STS Aviation Services, says Watters.

WARNING LIGHTS

Reflecting on the last few years, the industry has certainly come a long way from the pitfalls of COVID-induced turbulence.

In fact, according to an analysis by ICAO, air transport seat capacity and passenger totals globally reached 80% of pre-pandemic levels in September last year.

However, macroeconomic uncertainty coupled with the lingering impacts of coronavirus and the Russia-Ukraine conflict will continue to disrupt recovery as we continue into the year.

The global economic outlook for 2023 looks bleak, with the World Bank and almost two thirds of the world's chief economists warning of a recession. For airlines seeking developments like cabin interior MRO services, this poses a problem as airlines will be under pressure to keep costs low.

"Commercial airlines want to keep a focus on the cabin interior to remain competitive, but due to the current economy, airlines may postpone interior expenditures to preserve cash," says Watters.

This impact on cabin interior redevelopments will be especially challenging for airlines in the Middle East, says AJW's Ahmed, as the increase in low-fare carriers

throughout the Gulf regions has led to a crowded airspace and subsequent "fierce competition" among these airlines.

The most critical issue, however, impacts on cabin interior MRO markets on a more global scale.

"Supply chain is still the most critical problem," says Leung, "whether it's US, Middle East or Asia, because a lot of the suppliers have been affected by the pandemic."

These ongoing shortages can cause huge delays to aircraft interior MRO projects, as well as regular MRO endeavours for that matter, with schedule delays ranging from six months to a year due to the lack of aircraft components on the market.

Relating quite closely to supply chain

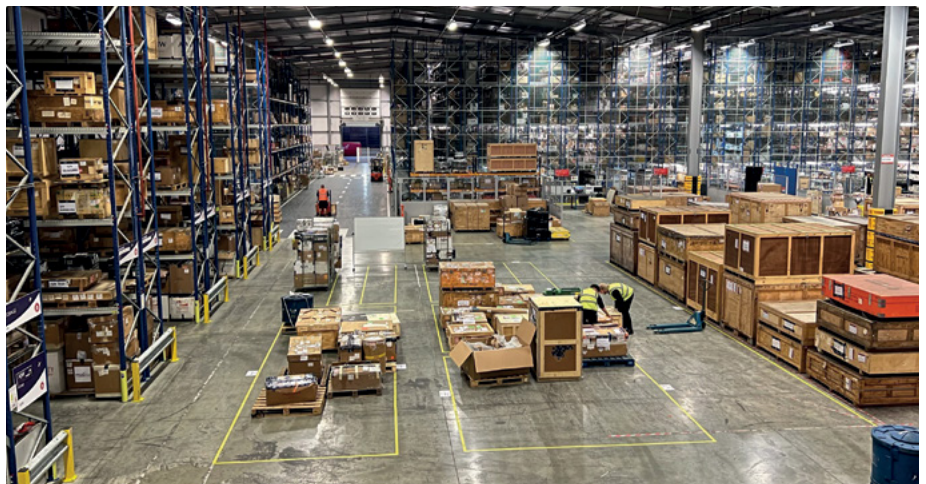
shortages will be the continual challenge of keeping up with increasing MRO demands with a lack of skilled labour. The pandemic saw many of the industry's skilled workers leave the industry – leaving behind a detrimental gap in the essential workforce needed to keep up with the now increasing demands for MRO capabilities.

Without the necessary number of skilled engineers to carry out aircraft MRO, MRO slots are scarce as maintenance facilities cope with high demand using a smaller workforce.

What's more, the effects of the workforce shortage don't end with an MRO slot and often materialise in the time taken to complete projects.

Ahmed says: "There is pressure to keep fleets in service and to minimise downtime,

Demand for cabin refurbishments is rising. Below, AJW Group. Bottom, AAR Engineering Services Asia.



and finding quick and efficient maintenance and repair services amidst a crippled workforce across the sector is affecting turnaround time.”

“Are these insurmountable challenges?” asks Robertson, “I don’t think so.”

The solution, he says, will come from “an industry-wide effort” to recruit the youth of today into careers in aircraft MRO.

CAUSE FOR CELEBRATION

There is no doubting that the last few years have been chock-full of complications for MROs.

Unfortunately, in light of the many challenges yet to be faced, there are no “quick fix” solutions.

IATA published a report in January

identifying a whopping 13 risks to air transportation and the economy that are expected to act as this year’s surly band of antagonists.

To readers who are superstitious, a total of 13 alone is a cause for concern, but the risks themselves – including climate change, travel restrictions and war, to name a few – symbolise the need for caution and patience. We are not out of the woods yet.

Regardless of the struggles that lie ahead, it is important to take time to appreciate the victories and successes along the way.

For AJW, victory manifested in the form of a milestone, as the MRO celebrated its 90th anniversary last year. When asked about its 90 years in business, Ahmed highlighted the “pivotal moments of growth”, citing the 2021

launch of the Montreal AJW Technique MRO facility and the first power-by-the-hour contract signed by AJW in the 1990s.

“But behind all these big moments,” says Ahmed, “are our people.”

A pure sentiment, and one that AJW Group classifies as a vital reason for its success.

“Through the resilience, determination and commitment of our people, we are who we are. The most valuable lesson learned – your most important resource is your human resource.”

If there is ever a time to appreciate the value of your team, it’s during a workforce shortage, and quite topically, this is exactly what industry experts will be discussing at this year’s MRO Middle East and MRO Americas. ■



STS Aviation Group says it regards e-leather as a strong contender for sustainable aircraft seating solutions.

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