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Management



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EASING

THE

PRESSURE

In the wake of the Covid-19 pandemic, the aviation supply chain has grappled with numerous disruptions and delays. *Mario Pierobon* finds out from industry experts what the consequences are on the supply chain, the accompanying challenges and the emerging solutions



◀ An integrated drive generator (IDG)

According to Thomas Böttger, vice president of corporate purchasing at Lufthansa Technik Group, the aviation industry is currently experiencing a period of significant expansion: “All primary demand clusters of the global aerospace and aviation sector are simultaneously witnessing growth, on a global scale, with the production of flight hours for civil transport having returned to pre-Covid-19 levels.

“This strong recovery is accompanied by substantial pressure to increase production rates, driven by robust orders, across all relevant civil aircraft original equipment manufacturers (OEM),” he continues. “While the supply chain is consistently striving to increase output each quarter, it is important to acknowledge that some system OEMs are facing difficulties in keeping up with the rapid growth in demand, causing some delay in matching this upward trend.”

Clyde Buntrock, chief executive at AJW Aviation & Technique, agrees that the aviation sector is still grappling with persistent component shortages and supply chain disruptions following the fallout from the Covid-19 pandemic: “One of the main challenges it faces is extended lead times for components caused by the bullwhip effect on the supply and availability of skilled labour.

These, combined with a surge in demand for travel and record-breaking summer sales for airlines, have resulted in inefficiencies in forecasting inventory demand, which in turn impacts suppliers’ ability to meet their customers’ needs effectively.

“Furthermore, Brexit-related additional tariffs and increased border checks continue to adversely affect the supply chain, creating ongoing challenges, particularly for the UK cross border.”

The Covid-19 pandemic has significantly affected the employment landscape in the aviation sector, explains Buntrock. “According to government data, more than a third of aviation’s current MRO workforce is approaching retirement age, accounting for 35 per cent of employees aged 55 to 64. Some individuals have chosen early retirement in search of a better work-life balance, while others are making changes to preferred industries, workplaces and commutes in pursuit of a more balanced life. Others have even moved away from aviation into what they perceive as more stable sectors.

“Declines in aerospace personnel training and ongoing labour shortages are putting pressure on the aviation supply chain, leading to extended lead times for maintenance and repairs. The industry is actively addressing these issues and raising awareness of career opportunities to attract emerging talent into the sector, but progress remains slow.”

Impact on the supply chain

The current market circumstances are driving greater regionality in MRO sourcing, according to Buntrock. “OEM centres are sharing services across the globe to mitigate capacity constraints and working with customers and logistic partners to understand the supply chain vulnerabilities that exist and how to overcome them.

“OEMs and suppliers face challenges in their performance environment, particularly in terms of shop processing time (SPT), along with increasing costs of raw materials and labour. Manufacturers are producing new aircraft as quickly as they can, but this is being impacted, to a large degree, by slow component supply and workforce shortage.”

Component demand remains high, despite the cost-of-living crisis, but supply chain challenges are driving inflation in market prices for the most severely affected components. Buntrock says: “As these challenges unwind, the market prices should return to a more normal equilibrium level with lower volatility. This will facilitate a smoother path for airlines and other aviation industry organisations to meet customer demands as the industry continues to recover.”

To improve asset availability for customers, Lufthansa Technik has established multiple strategic directions. Böttger says: “We have adjusted our stock of materials to buffer extended supply times for piece parts, we utilise our smart work scoping and repair



1. Single component maintenance
2. Every component matters
3. Clyde Buntrock, chief executive, AJW Aviation & Technique

“Perhaps the pre-Covid level of supply chain performance may not materialise until well into 2025, possibly even extending into 2026”

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methods, and seek opportunities from used serviceable material (USM).
“Currently, the primary catalyst lies in our substantial in-house equipment repair capabilities, a facet we intend to strategically expand, since maintaining operations in-house affords us significantly heightened control over performance outcomes.”

OEMs are seeking collaboration with Lufthansa Technik to undertake smaller joint projects, says Böttger. “This creates mutual benefits both for the OEMs themselves, for the group organisation and for expanding the customer base. This collaborative approach subsequently ensures improved access to intellectual property (IP), allowing repairs to be undertaken in-house and alleviating the burden on their service centres.”



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Challenges and solutions

AJW Group has expanded its contracted services in both North and South America and there is also growing demand for additional EU-based locations and a potential increase in routes to the Americas. Buntrock says: “We are actively evaluating the competitiveness of our logistics providers and remain committed to working with strong global allies to consistently provide logistics support.”

According to Buntrock, industry stakeholders and partners must move together to find the best solutions to minimise disruptions, and AJW is exploring third-party supply options. He says: “We implement a pooling strategy by strategically positioning inventory across the world, which enables easy access and distribution to our regional customers.”

“Our inventory management and logistics solutions are tailored to meet the operational demands of our customers. To mitigate potential airfreight uncertainties, we are opting for more predictable and consistent airfreight routes to ensure reliable deliveries.”

Due to the overall growth in various sectors, all of which depend on the same

manufacturing capabilities, perhaps the pre-Covid level of supply chain performance may not materialise until well into 2025, possibly even extending into 2026, according to Böttger. He says: “The most important challenges currently faced concern the lead times associated with engine equipment and parts, as well as OEM reliability in terms of supplying new parts. Our cooperative initiatives offer potential avenues for addressing these challenges.”

“We have already started to build collaborative relationships with OEMs, and the central pillar of our collaborations is the initial dismantling of all trade barriers. This involves the removal of barriers such as access to intellectual property and the prohibition of approval policies of spare parts manufacturers (PMA). The main objective at this juncture is to perfectly blend the entire spectrum of technical capabilities and capabilities possessed by both partners, thus amplifying our overall productivity.”

From a technical point of view, experts regularly generate a multitude of innovative ideas in various sectors, according to Böttger. He says: “One noteworthy facet of our collaborative efforts pertains to forecast how many specific components, by part number (P/N), are required by the industry. It is imperative that we enhance the supply chain’s efficiency and assist OEMs in optimising their operations by fostering improved and more precise predictions of our requirements.”

“This encompasses forecasting material demand, as well as projecting the volume of devices destined for supplier-based repairs. In essence, the general goal is to create a more precise and reliable demand forecasting system.”





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