MRO operations and Covid-19: leveraging the enforced ground time and planning for the future

While most aircraft sit idle on the ground with uncertainty as to when regular flight patterns will resume, what can an airline MRO organization do? The unique situation of having entire fleets grounded requires a whole new approach to airline MRO under various considerations between survival mode, cash management and opportunities for strategic reorganization.

We take a look at the various options airline MRO organizations have to manage the Covid-19 impact, remaining productive and planning for the future to emerge from the crisis stronger, smarter and more efficient.

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Since the initial appearance of Covid-19 in Wuhan, China, in late 2019, the disease has subsequently spread across the globe affecting every continent. As a result, governments worldwide have issued restrictions, travel bans and border closures, forcing airlines to ramp their schedules down and ground their fleets. As of March 2020, the number of commercial passenger flights was down 62.9% compared to pre-crisis levels in March 2019[1]. With the majority of the passenger fleet grounded, airlines face various challenges across all functions. And this applies just as much to the Maintenance, Repair and Overhaul (MRO) organization within an airline.

The global MRO market was worth USD 69 billion in 2018[2], representing between 10% and 20% of the direct operating cost of an airline. This volume is slated to significantly reduce in 2020 following the capacity cuts as a response to the crisis; nevertheless, it will keep its place as one of the most significant direct operating cost components, even for grounded aircraft.

The grounded fleet, creates a whole new perspective on the fleet's MRO requirements. Under normal operations, the MRO organization of an airline usually struggles to keep up with the various schedules, tasks and defects while the aircraft are constantly in the air. In total contrast, the aircraft now sit idle on the ground waiting for the day they will return to service, opening up the opportunity to refine MRO tactics and the overall MRO strategy.

In this context, **MRO organizations can address the crisis on three fronts**: (a) immediate actions for survival, (b) using available resources and ground time productively, and (c) forward looking activities to plan for the future.

[1] Source: Flightradar24

[2] IATA Maintenance Cost Technical Group, 2019

Immediate response: shift to survival mode

Airlines move to survival mode by firstly halting the drain of cash. “Maintaining liquidity is the major priority, which requires a switch from the classical EBIT-focused steering to a cashflow-focused steering as soon as possible”, recommends Lufthansa Consulting’s Associate Partner Christine Weigner. This would typically take the form of delaying non-mandatory tasks and checks, reducing discretionary spend, closing infrastructure and managing payments to suppliers (and from clients) to protect cashflows.

Using available resources and ground time productively

In an ideal world, the MRO organization would wish to have all aircraft C-checks completed in order to have a fully available fleet as the crisis starts to gradually lift, allowing the airline to flexibly allocate the aircraft to the restarted and expanding schedules. However, in order to maintain liquidity and control costs – and given that some aircraft may still have time left to the next C-check – a more comprehensive analysis is needed across the supply chain. From a tactical perspective and provided that technical staff is available, an MRO organization could still conduct several tasks to maintain productivity and efficiency.

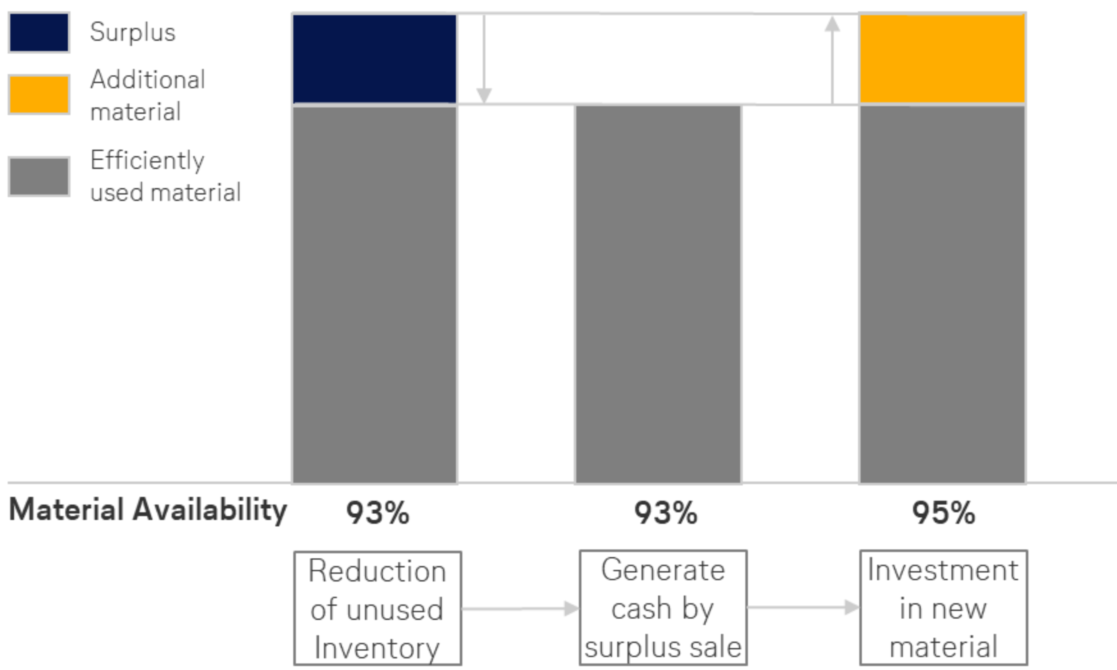
Every airline must, at the very least, manage the **minimum inspections** for their fleet, which can typically be conducted by line maintenance. These include:

- **Storage periodic ground checks** based on weekly intervals for visual checks to yearly intervals for generator (IDG) corrosion check
- **Engine preservation** to protect the engines against corrosion, liquids and debris

Beyond that, an MRO organization could leverage existing staff to carry out a range of further activities. Some of these are activities that are often neglected or difficult to devote sufficient time to during regular busy operations, while others offer the opportunity to introduce greater efficiency or lower cost into existing processes.

- Rectify **deferred defects** on the fleet, which under normal operations is challenging
- Revisit **service bulletin (SB) campaigns**, as some may feature a different business case when the fleet is grounded and staggering and/or seed units are no longer required, allowing for improved component reliability going forward
- Establish **task/job cards** for new non-routine tasks, such as storage and/or preservation activities or customize task cards for existing routine maintenance. Customized task-cards enable a more efficient ramp-up back to normal operations and allow for updates according to the Aircraft Maintenance Manual (AMM)
- Revisit the **C-check schedule**. In the case of an internal organization, there are likely to be opportunities to reduce shifts and staffing levels, with hangar times adjusted accordingly. In case of external contracts, the company can use the circumstances to renegotiate supplier contracts and realize discounts
- Execute **IT projects** which require server downtime and involve data migration

- Revisit **inventory management**:
    - Conduct **periodic inventory listings**, with the advantage of significantly fewer material rotations
    - Identify **surplus material**, for example that which is not used at least annually, and move it to a surplus locator/position. Depending on the extent of urgency to release cash, a careful consideration of the timing for sale needs to evaluate a possible book loss against the potential for recovery of market values. This may not be the case for certain fleets due to mass retirements, such as the B767 and B757. Previous Lufthansa Consulting analyses have identified that in average 15-25% of the owned material can be considered as surplus and can be disposed from the balance sheet
    - Opportunistically adjust **material availability** and associated **service levels.** Provided cash can be spent, revisit the inventory levels and adjust stock holdings to make use of a plunge in fair market value due to lower material demand and/or returned surplus. Similar to the sale of surplus material, the purchase of additional stock requires consideration of the future price development of components. As an alternative, however not ideal practice, the cannibalization of an airline's own fleet can satisfy short-term material demands to avoid cash-out.



Looking ahead: planning for the future

The fleet grounding also allows pause to take a more strategic view of an airline's MRO organization. It could be an opportunity to implement fundamental change and transformation, which in daily business was never a priority. With due consideration to the associated expenses, an MRO organization could consider:

- Supplier contracts:
    - Approach suppliers to **renegotiate existing contracts** which probably include minimum flight hours or a minimum number of engine shop visits
    - In case an airline was looking at outsourcing and looking for new/additional supplier contracts, it could consider **issuing an RFP** and make use of lower market prices
    - A **make vs. buy analysis** under consideration of restructured and potentially smaller fleets in the future could come to different results than in the past
- Opportunity for reorganization:
    - Review and revise **internal processes** which have caused headaches in the past
    - **Restructure the organization** to come out more efficiently of the crisis. This includes adapting already now to a gradual ramp-up of operations and possibly to a smaller fleet, lower workforce post-crisis while at the same time keeping the workforce and talents in-house
- New business opportunities (for an airline MRO unit)
    - Evaluate the potential for additional revenue from entering the **third-party business** to fill in capacity gaps left by the core airline business

Certainly, the duration of the COVID-19 crisis cannot yet be estimated (although scenarios can be developed) and some of the suggested activities may require cash-out to some degree. However, these are some - but not all - of the productive ways to make use of the unprecedented window of having the majority of the fleet grounded with staff motivated to keep working on aircraft and in the MRO organization.

It should be noted that the relevance, applicability and ability to execute these actions would vary widely by airline or entity. Each MRO organization would need to develop a tailored action and financial plan as it seeks to navigate the crisis and emerge stronger, leaner and smarter.

To learn more and discuss how your organization could benefit from Lufthansa Consulting's expertise on Crisis Recovery, please get in touch at ALcrisis-solutions@LHConsulting.com. ***Together, we can make it through to better days.***

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