



Can Innovative Maintenance and Support Drive African Airlines' Recovery?

By Ian Malin



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Airlines are encouraged to fly the youngest aircraft due to obvious cost savings from fuel efficiency as well as fewer requirements for expensive maintenance events provided by higher reliability.

The average age of the global in-service fleet is 13.5 years. In contrast, in Africa the fleet age average is 19.3 years. While that may not be surprising, in North America, the average age of the fleet is 17.7 years. Hence, even prior to COVID-19, there has been a fleet renewal phase in North America, retiring aging passenger aircraft such as MD80s and older 737NG, with 757s and 767s either being converted into cargo or retired. What's now being deployed into North America are 787s and A350, A220, A320 Neos and 737 Max's, as evidenced by United Airline's recent 737MAX order.

The current fleet backlog is dominated by narrow-bodies (~74% of the backlog). This is relevant because perfectly good narrow-body aircraft, such as B737NG and A320CEO aircraft, those that are approaching mid-life age status of 10 years and older will still need to be deployed and Africa will become an increasingly

compelling outlet, especially for leasing companies who have invested in these aircraft and are looking to realize their investment returns. As airline operator options in primary markets are fulfilled by new platform variants, aircraft investors will increasingly look for alternate destinations to place aircraft. Solutions such as the State Aircraft Leasing Company that was recently announced by the government of Nigeria, which AJW is leading, will enhance the viability of placing these aircraft into Africa. This influx of aircraft into the region will complement the establishing of an African MRO, also recently announced by the Nigerian government.

While current aircraft relative demand from Africa is small when compared to the rest of the world, growth is expected to continue, irrespective of the current COVID-19 setbacks affecting the industry. In terms of MRO operations, there are currently only three major centers - in Ethiopia, Kenya and South Africa - all geographically distant from some of the major population centers in Africa. Other than line maintenance, there is not an accessible maintenance provider in Central and West Africa. As mid-life aircraft age, the frequency of

maintenance requirements, both in terms of heavy maintenance and resultant component repair, will increase. It is well known that harsher operating environments will contribute to maintenance demand.

Proximity to maintenance will not only stimulate aviation activities, but it will also drive further benefit to the region. Airlines will become more viable, not having to ferry long distances for scheduled and unscheduled repairs. With the aviation trading predominantly in United States Dollars, maintenance spend will attract foreign exchange to markets struggling to procure currency. Technology applications are growing in the aircraft maintenance fields. Developments in digital solutions, such as heads up displays for maintenance manuals, 3D printing, RFID tracking solutions, PMA parts supply chain and e-commerce that are being developed globally will find application in Africa.

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opportunities supporting it. E-Commerce applications, historically developed as an after thought to labor intensive manual processes of quoting, dispatching and repairing aircraft components, can be deployed at a green field level in Nigeria. Parts inventory, a cash intensive deterrent to working capital, can rely more on just-in-time logistics solutions. While there will always be a human element to ensure safety standards are upheld, efficiencies gained by designing a digital forward maintenance facility and supply chain today will drive technology sector solutions, thus further enhancing the operations of airlines in Africa.

Telecommunications advances suggest that the new Nigerian MRO can become self sufficient faster and rely less on high-costing expatriate support experts and more on remote support solutions that guide the local staff towards becoming subject matter experts. This also means less brain drain and even brain "gain" as trained employees return to their countries of origin now that employment

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opportunities in the aviation sector are on the near horizon.

A world class maintenance center in West Africa means local airline investors can more confidently budget during their business planning. Cost certainty equates to lower risk which leads to more confidence in launching airline startups.

Struggling legacy operators, battered by the COVID-19 pandemic, can see relief in the expensive maintenance of their fleets. Predictive maintenance and fully integrated supply chain solutions, deployed through a local MRO solution, means less down time, higher safety standards and greater consumer confidence.

Ultimately, the timing of maintenance growth endeavors in Africa is opportune. While plans have been delayed due to COVID-19, digital innovation has not suffered. With many companies forced to identify and develop efficiencies internally during this crisis, these solutions are ripe to be deployed in a third-party commercial context. The combination of a supply of younger-than-the-average age aircraft, government foresight, population growth, scarcity of alternatives and economic rebound pair GDP growth with higher MRO requirements that Africa is poised to develop clean sheet solutions for. ▣

AJW Technique's 220,000 square foot MRO facility in Montreal

