CAMO SOFTWARE BRINGS MAJOR BENEFITS TODAY – AND EVEN MORE TO LOOK FORWARD TO IN THE FUTURE

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Cloud-native software used by Continuing Airworthiness Management Organisations, generally known simply as CAMO software, is gaining ground across the aviation sector. Its advantages over traditional on-premise systems – including scalability and reduced IT overhead – have already been noted by multiple industry experts. One of them is Viktor Kondratjev, Head of Continuing Airworthiness Management Unit at FL Technics.

The substantial benefits of CAMO software

One of the major benefits of CAMO software is that it enables aircraft engineering teams to implement predictive maintenance and benefit from advanced reliability analytics.

Viktor Kondratjev commented**:** “The process is fairly straightforward – the software gathers data transmitted by aircraft in real time and runs it through a special algorithm. Meanwhile, engineers

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on the ground receive the reliability patterns the software has identified and adjust their maintenance schedules accordingly.Up until recently, engineers had no other resource than to use printed task cards or walk back and forth between aircraft and computer terminals just to get their daily work done. Fortunately, this is rapidly becoming obsolete. With the advent of mobile apps, they can get all the information they need on a tablet or smartphone, and sign off on tasks without leaving the place they're currently working at."

No longer confined to merely putting out fires, airlines can start implementing more forward-looking, risk-based approaches that deliver noticeably superior results. This leads to fewer frequent operational disruptions and more reliable fleets. Convenience is another factor improved, as now engineers can access all the important stats via dashboards straight on their phones.

In addition to making technical personnel's lives easier, the mobile solution also leads to faster maintenance turnaround, lower incidence of human error, and more streamlined compliance processes. Whenever an engineer completes a task and scans his digital task card, the relevant data is sent directly to the CAMO system, which automatically makes all the necessary updates in the system.

Turning the tide of traditional record-keeping

Being a highly regulated industry, aviation has historically been relatively slow when it comes to change. For instance, despite the digital transformation unfolding across nearly all sectors, aviation companies have long insisted on the printed format of their documentation. With pressure to digitise mounting, however, the industry has finally begun to embrace digital record standards like the ATA Spec 2500.

"This is big, for CAMOs and lessors alike. Having a standardised framework of record-keeping in place cuts down massively on how long it takes for CAMOs, lessors, and operators to exchange airworthiness data and review the relevant documentation at the time of redelivery. As you can imagine, this results in lower costs, time spendings and a much simpler aircraft transition process," Mr. Kondratjev said.

Current issues and pending solutions

The benefits of CAMO software are clear. But what about the challenges? With airworthiness data no longer stored on the premises, concerns about data security and ownership naturally arise. "Besides, airlines may want to shift to digital solutions but face pushback from regulators who, perhaps understandably, aren't quite as gung-ho about the change. And transitioning to a cloud-based solution is no walk in the park either. Apart from potential difficulties with ensuring reliable connectivity, the process requires additional staff training and managing legacy system integration with a light touch to avoid operational disruption".

Modern CAMO software has to comply with new cybersecurity and airworthiness regulations like EASA Part-IS, which mandates risk management associated with the use of data and technology in aviation. Developers are adapting to these new requirements by focusing on compliance, encryption and access control.

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Is AI the future of aviation?

The integration of AI-driven assistants and digital twin solutions could be a game changer for CAMO operations. These smart systems are beginning to show their value by taking on tedious administrative tasks like verifying regulatory compliance, retrieving technical documents, and identifying patterns in maintenance reliability data.

While the potential of these AI solutions is impressive, a number of hurdles remain to be scaled before widespread adoption becomes a live option. Successful deployment requires strong data management frameworks to ensure the integrity of information, thorough regulatory approval processes to comply with aviation's strict safety standards, and, perhaps most importantly, organisational readiness to adopt new working methods.

As Mr. Kondratjev’s insights suggest, the MRO sector is experiencing a fundamental shift in the way that technology supports airworthiness management, with AI co-pilots representing the cutting edge of this transformation. For forward-thinking CAMOs willing to invest in necessary infrastructure and change management, these tools offer a compelling opportunity to enhance operational efficiency while maintaining high safety standards.

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