BREAKING THE PAPER HABIT

Rob Saunders, director of business development at Ultramain Systems, explains why ELB adoption has been slower than expected

The aviation industry is no stranger to innovation. Digital transformation is reshaping how we fly and maintain aircraft. Yet, one area has lagged behind: the adoption of electronic technical logbooks (ELBs). Despite their clear benefits – cost savings, operational efficiency and improved data integrity – ELBs have faced a slower-than-expected rollout across the industry. Why?

According to Rob Saunders, the industry's hesitation isn't due to a lack of capability; it's a missed opportunity. The adoption of ELB is long overdue, he says. With over 20 years of experience, Ultramain has perfected an ELB solution that delivers cost savings and operational efficiencies to line maintenance. The benefits far outweigh any perceived risks. Forward-thinking airlines have embraced this shift early, and the results speak for themselves. Some pilots have never even touched a paper logbook; in fact, those would seem primitive to them, Saunders notes. Since pioneering the ELB space in 2005, Ultramain launched its first eTL product in 2007 for the B777 and supported Boeing's 787 Class 3 EFBs until 2024, when the final operator transitioned to ULTRAMAIN ELB on iPads. Today, Ultramain supports 21 customers, 1,800 aircraft across 15 fleet types, and is approaching 4 million ELB sectors, proof that digital transformation in aviation is not just possible, but powerful.

Paper legacy

For decades, paper logbooks have been the backbone of aircraft maintenance documentation. They're familiar, tangible and deeply embedded in operational workflows. But they're also error-prone, inefficient and increasingly out of step with modern aviation.

The shift to ELBs isn't just a technical upgrade; it's a regulatory and cultural one. While early barriers included the high cost of hardware and limited regulatory clarity, much has changed. Today, mobile devices like iPads are affordable, reliable and widely accepted by regulators as aircraft-stowed or personally issued equipment.

Guidance

Recent publications from EASA and the FAA, including EASA's Guidelines on the Use of Electronic Documents, Records and Signatures, have helped clarify expectations. These documents, referencing the eIDAS regulation (EU 910/14), provide a framework for what's required and, just as importantly, what isn't.

> **"Paper logbooks are error-prone, inefficient and increasingly out of step with modern aviation"**

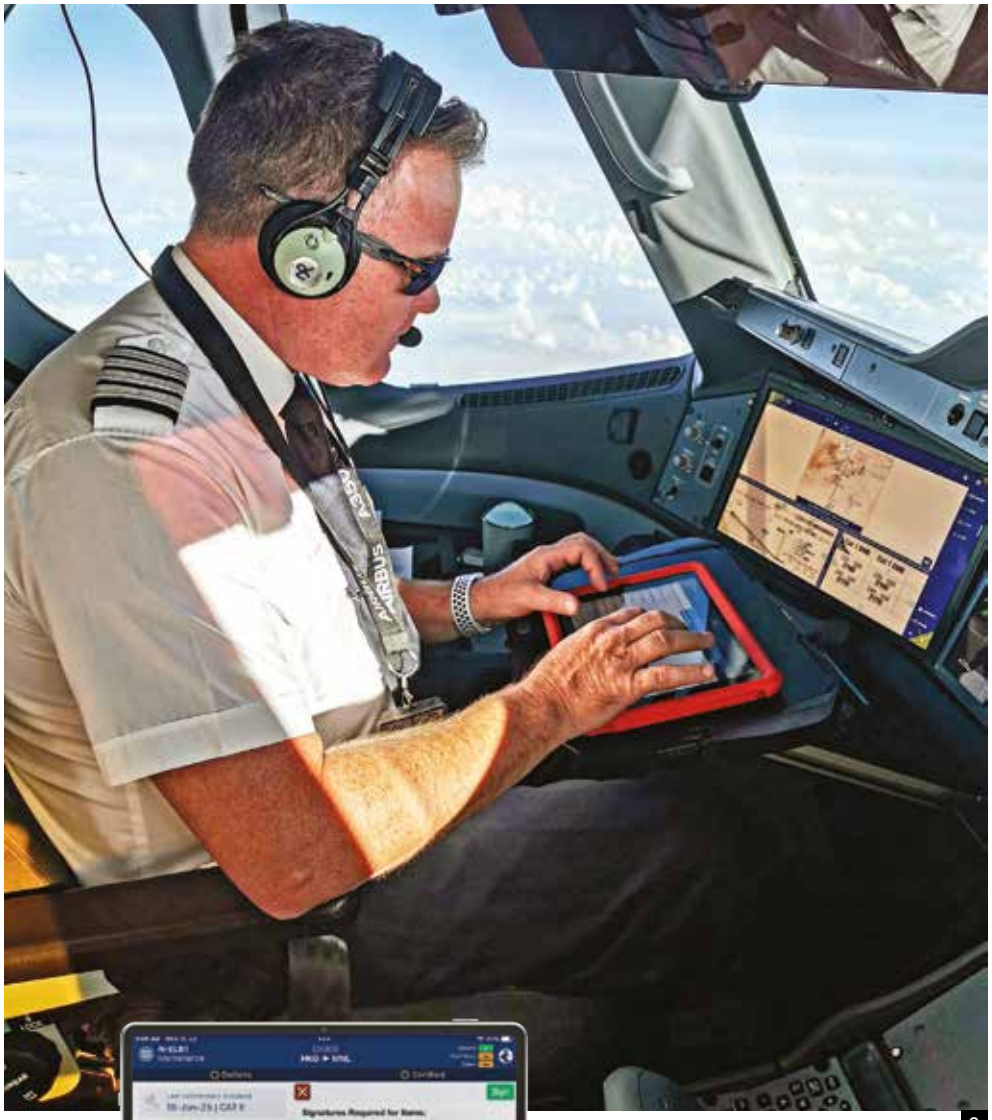
▲ **Rob Saunders**, director of business development at Ultramain Systems

Still, interpretations vary. Some regulators impose minimal requirements, while others demand extensive controls. This inconsistency creates uncertainty for operators and slows adoption.

Change management

While regulatory clarity is improving, the biggest hurdle is human. ELBs impact pilots, mechanics, cabin crew and ground handlers. Success depends on user adoption and that means the system must be intuitive, reliable and seamlessly integrated into daily operations.

Saunders says that Ultramain has seen firsthand how tailored implementation aligned with each airline's regulatory and operational context can make all the difference. In some cases, a single airline may require different configurations under multiple AOCs.



2

3

UNDERSTANDING eSIGNATURES IN AVIATION

A key component of ELB implementation is the use of electronic signatures (eSignatures). These fall into three categories:

- Simple Electronic Signature (SES): Often "sign-on-glass," these are easy to use but offer limited legal strength. More regulators are considering sign-on-glass-only as unacceptable.
- Advanced Electronic Signature (AdES): Secure, traceable and widely accepted for aviation use, often involving encrypted PINs and timestamps. Generally accepted by regulators as appropriate to meet eSignature requirements for CRS.
- Qualified Electronic Signature (QES): A higher standard in legal terms, but often impractical due to complexity and cost. Achieving a QES in a Line Maintenance environment where devices are shared and multiple foreign MRO organisations will be exercising CRS authority. It is generally considered unnecessary by regulators.

Choose the right partner

Digital transformation in aviation isn't just about compliance; it's about culture. Choosing an ELB partner with the experience and flexibility to adapt to your needs can dramatically reduce training and change management burdens.

When the system works for your people, adoption follows. And when adoption happens, the benefits of ELBs – efficiency, accuracy and insight – take flight.

For more information visit:
ultramain.com

1. Ultramain ELB eSignature page on iPad
2. A British Airways pilot using Ultramain ELB on the flight deck **3.** Norse Mx crew using Ultramain ELB in the hangar