CASE STUDY

EMSIGNER · GOVERNMENT & PUBLIC SECTOR · MIDDLE EAST

A National Air Navigation Services Authority in the Middle East Achieves 80% Improvement in Aircraft Readiness and 100+ Digitised Processes with eMudhra emSigner

SECTOR	REGION	SOLUTION
Government & public sector	Middle East	emSigner

CLIENT OVERVIEW

The organisation is the national authority responsible for air navigation services across a major international aviation hub in the Middle East, overseeing operations at four airports under its jurisdiction — including one of the world's busiest international airports. Managing the safe and efficient movement of aircraft across a highly complex airspace, the organisation serves more than 140 airlines and tens of millions of passengers annually. Digital transformation and safety innovation are central pillars of its operational strategy.

THE CHALLENGE

The organisation was seeking a digital workflow platform to help digitise over 100 internal processes and accelerate its efforts to meet a national mandate requiring all government and public-sector entities to achieve full paperless operations. The authority had set an internal target of achieving 50% digital transformation within a compressed timeframe, and the approaching deadline was creating pressure across technical and operational teams.

Beyond the cultural and change-management challenges, the organisation required a solution that was highly resilient and hosted within its own infrastructure for security. It needed to support quick and easy digitisation across a wide variety of document types in a user-friendly manner, while delivering an 80% reduction in turnaround time for paper-based document processing. The solution also needed to integrate with third-party and ad-hoc users from partner organisations — including audit partners — with defined access levels through an active directory structure.

> *"We faced three major challenges to digital adoption. The first was training people on the platforms, given that aviation had followed traditional procedures until now. The second was imparting a culture of being paperless — our teams were so used to paper that they felt less empowered signing a 400-page document in a single click. The third challenge arose from the technical and maintenance side: daily tasks consumed about 8 hours in total for collecting, signing, scanning, and submitting documents to higher officials."*
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> **Senior Software Engineer, Air Navigation Services**

THE SOLUTION

eMudhra enabled the organisation to use serial and parallel signing features within emSigner's built-in workflow engine. An active directory integration was established with defined access levels for third-party and ad-hoc users from partner organisations, enabling them to securely participate in signing workflows. A multi-factor authentication model was deployed to enforce strong Identity and Access Management protocols, making the system resilient against data breach attempts.

emSigner is now operational at all four airports under the organisation's air navigation purview, including the international hub which manages one of the world's largest fleets of wide-body aircraft. The platform handles hundreds of operational documents daily — from maintenance records and safety certificates to regulatory approvals — with complete tamper-proof audit trails and real-time visibility into document status.

The solution directly supports the organisation's compliance with the national Electronic Transactions Act and the government's overarching paperless strategy. By digitising more than 100 processes within two months of deployment, the organisation met its 50% digital transformation target ahead of schedule and is continuing to expand the platform's scope across additional workflow categories.

RESULTS

emSigner delivered transformative results across safety-critical operations, demonstrating that even highly regulated, traditionally paper-dependent environments can achieve rapid and sustainable digital transformation.

METRIC	BEFORE	AFTER
Daily document processing time (maintenance crew)	8 man-hours per day	Reduced by 8 man-hours — fully automated
Aircraft readiness / flight turnaround time	Delayed — manual approval bottlenecks	80% improvement in readiness speed
Processes digitised	0 — fully paper-based	100+ processes digitised within 2 months
National paperless target achievement	Behind schedule	50% target met ahead of deadline
Multi-party signing capability	Not available	Serial and parallel signing with active directory integration
Audit trail and document traceability	Manual — paper filing in locked storage	Real-time digital audit logs with tamper-proof records

About eMudhra. eMudhra is a globally trusted provider of digital trust services, offering eSignatures, PKI, Certificate Lifecycle Management, Multi-Factor Authentication and Identity & Access Management solutions. Licensed by the Controller of Certifying Authorities (CCA), India, eMudhra serves 1,000+ enterprises across 40+ countries, helping organisations build secure, compliant and paperless digital ecosystems.

Customer name withheld for confidentiality.