helvetic airways

REDiFly

Helvetic Goes Paperless with the REDiFly eTechlog

Case Study

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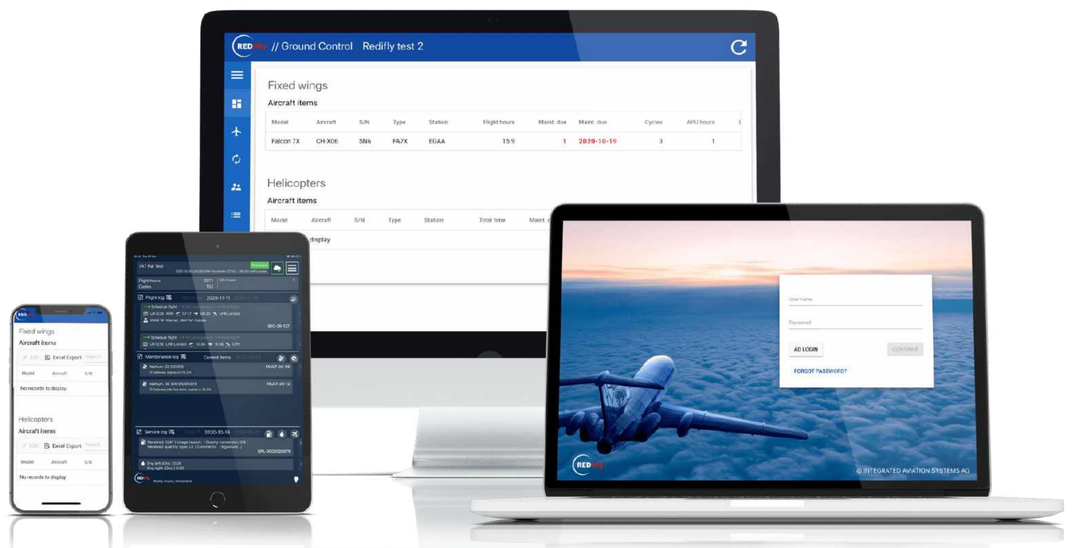


1. Executive Summary

About Helvetic:

Helvetic Airways partnered with Integrated Aviation Systems (IAS) to implement the REDiFly eTechLog, a fully digital, cloud-based aircraft technical logbook. The project eliminated paper-based inefficiencies, enhanced cross-departmental workflows, and enabled real-time technical visibility, all while complying with FOCA guidelines.

Key Project Outcomes:

- Full rollout to 18 aircraft spanning over 18 months from initial project scope
- Over 15,000 sectors digitally logged (as of May 2025)
- 30–60 monthly paper errors reduced to near zero
- Full integration with AMOS, AMOSmobile, and WinOps
- Pilot's taking responsibility for their own devices has resulted 0 iPad hardware defects since adoption of personal devices as opposed to previously

2. About Helvetic Airways

Helvetic Airways is a Swiss-based regional airline operating a fleet of Embraer E190-E2 aircraft across Europe.

Known for its agile operations and strong digital vision, Helvetic chose to modernise its technical logbook process as part of a broader paperless maintenance initiative.

The transition to REDiFly's eTechlog system was driven by the need to:

- Eliminate recurring paper log errors (previously up to 60 per month)
- Remove redundant manual data entry and streamline handovers
- Improve visibility for MCC and reduce turnaround-related delays
- Support long-term IT scalability with a SaaS-first, API-connected platform

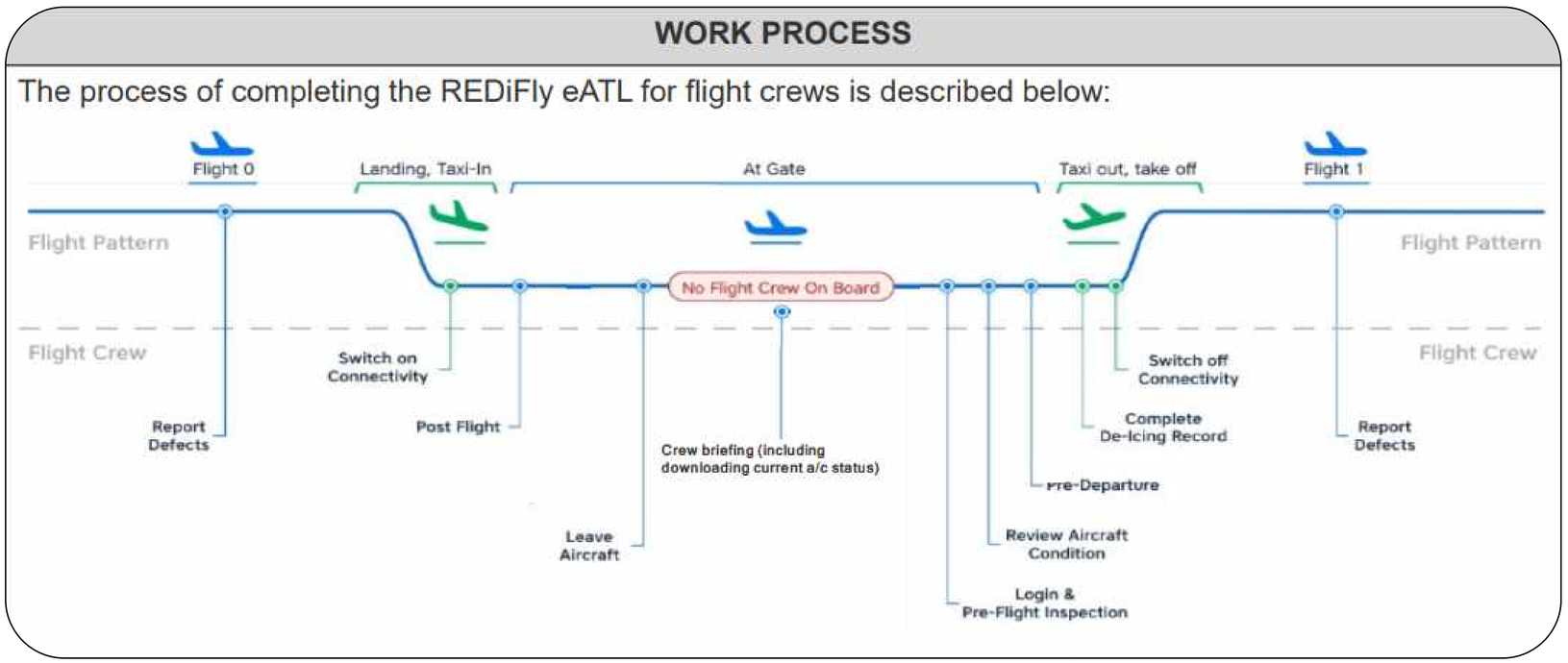
3. REDiFly eTechlog

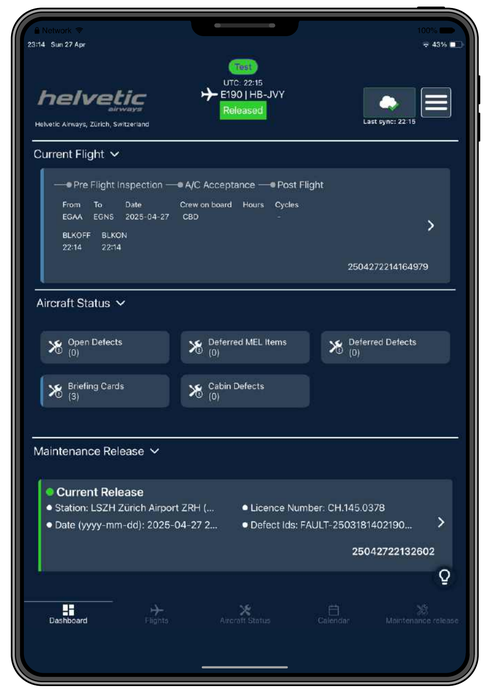
The REDiFly eTechlog system captures, stores, and synchronises key operational and technical data throughout each flight cycle. It consists of a managed iPad application used by flight and maintenance crews, supported by a secure, ground-based database.

Key Data Captured in REDiFly:

- Aircraft Status: Open work orders, deferred MEL items, defects, briefing card notes, and previous cabin reports
- Flight Information: Flight times, cycles, fuel burn, preflight inspections, and aircraft acceptance
- Service Log: Fuel uplift/defuel and de-icing data

All data is synchronised with the REDiFly Command Centre, a centralised, Azure-hosted database, when network connectivity is available. The application is deployed through a controlled process via managed iPads, ensuring standardisation and data integrity across the fleet.





4. The Paper Log – Operational Risk

Before the eTechlog rollout, Helvetic's paper-based system generated around 60 errors per month. From transcription mistakes to incomplete defect sign-offs.

Each one required manual correction, follow-up, and cross-checking, consuming valuable time across teams. Beyond the admin burden, these errors introduced compliance risk, delayed defect closure, and diverted engineering resources from higher-priority tasks.

Common issues observed:

- Transcription errors – incorrect or illegible entries
- Incomplete records – missing signatures or unresolved defects
- Delayed data availability – not visible to MCC until handover
- Duplicate entry – manual AMOS input added workload
- Audit complexity – time-consuming record validation

These issues directly impacted technical operations and introduced a measurable operational cost.

5. Implementation Timeline

The Helvetic eTechlog rollout followed an 18-month phased approach, beginning with scoping and IT definition in early 2023 and concluding with full go-live in Q3 2024.

Q1–Q2 2023: Project scoping and IT solution design initiated alongside process reviews.

Q2–Q4 2023: Detailed documentation developed as affected processes were redefined.

Q1–Q2 2024: Training and gap analysis carried out to prepare users and teams.

Q2–Q3 2024: Pilot runs conducted, followed by a controlled fleet-wide go-live.

Task	...	Q1'23	Q2'23	Q3'23	Q4'23	Q1'24	Q2'24	Q3'24
Scoping and Planning								
IT Solution Definition								
Review / Redefine affected Processes								
Documen-tation								
Gap Analysis & Training								
Pilot Run / Testing								
Go-Live								

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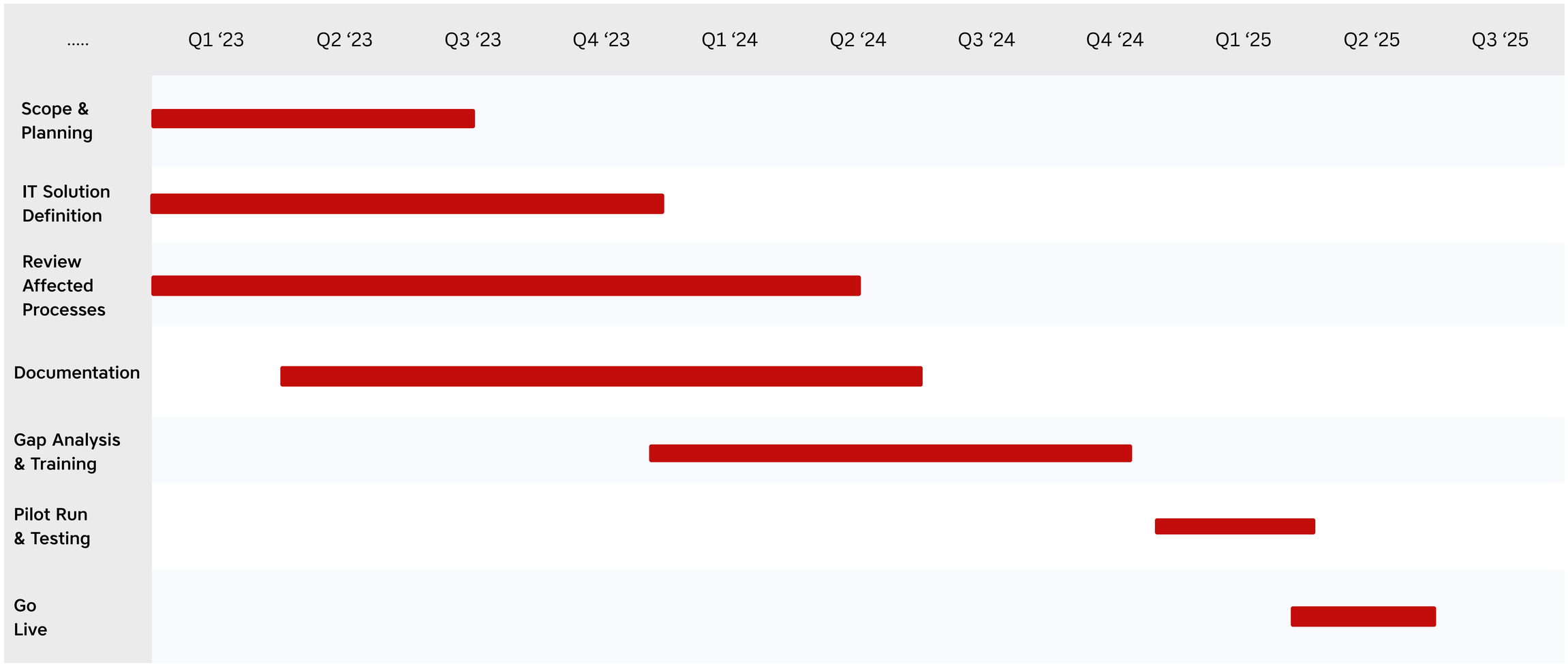
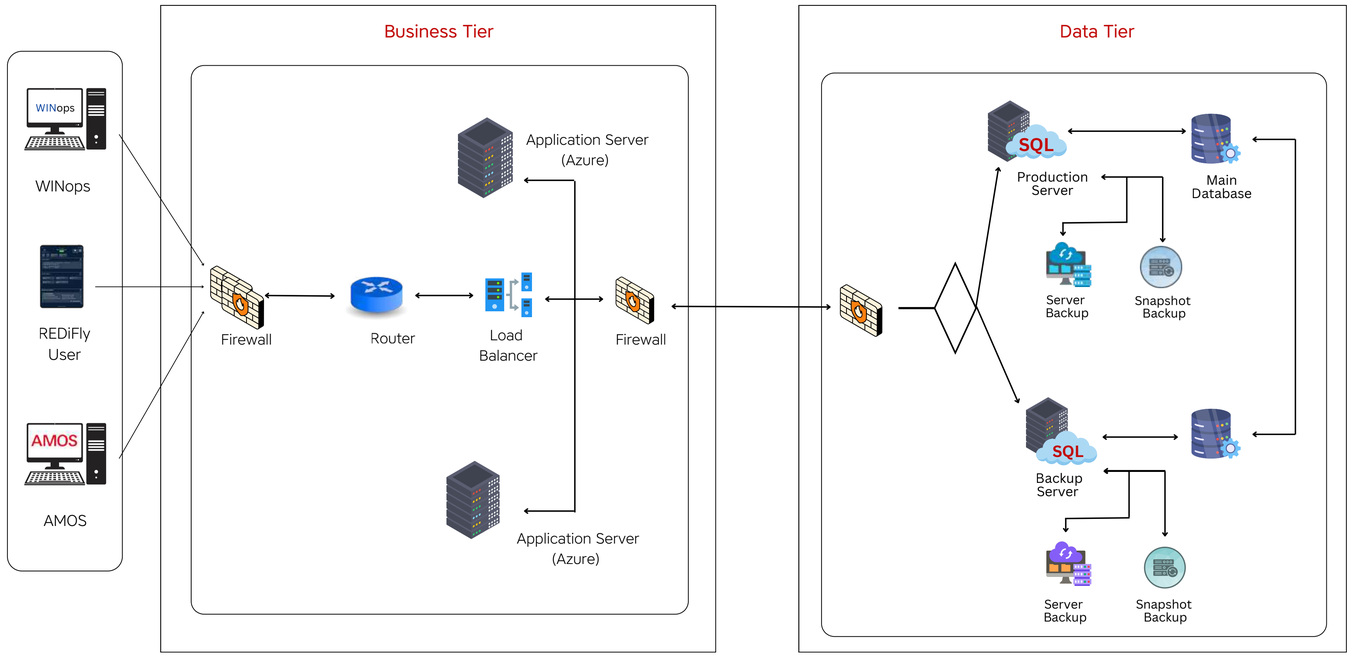


6. Data Flow & Database

Helvetic's REDiFly eTechlog (eATL) operates alongside AMOS and WinOps as part of an integrated maintenance and flight operations ecosystem.

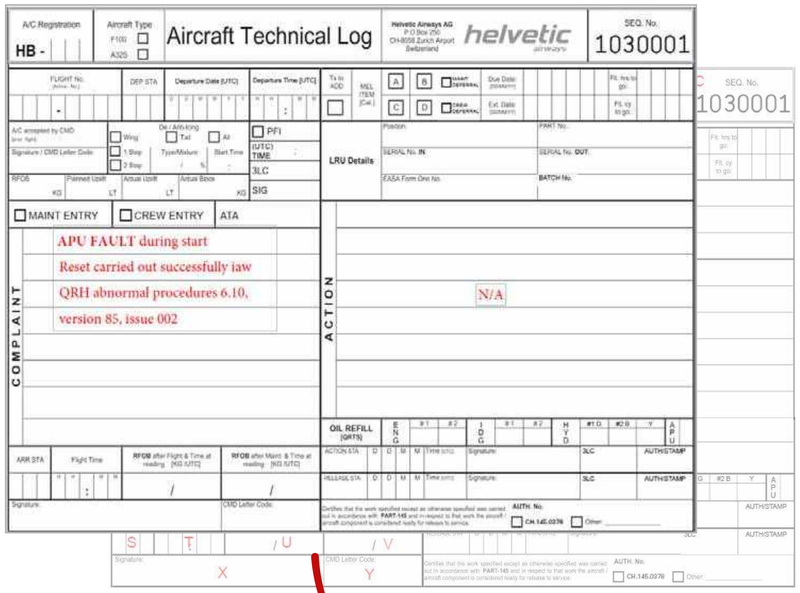
Data entered on the iPad-based eATL is stored locally and automatically synchronised with the REDiFly Command Centre Database (REDiFly DB) once network connectivity is available. This database is hosted on a secure Microsoft Azure instance, managed by Helvetic's IT team and actively monitored by REDiFly.



Real-time two-way integration keeps journey logs, technical data, and flight information in sync across AMOS, WinOps, and REDiFly, eliminating duplicate entry and ensuring a live, accurate aircraft record.

Background and manual sync options support continuous use, even offline. IAS monitors system availability and sync integrity, with automated alerts to both REDiFly support and Helvetic's IT team in case of issues.

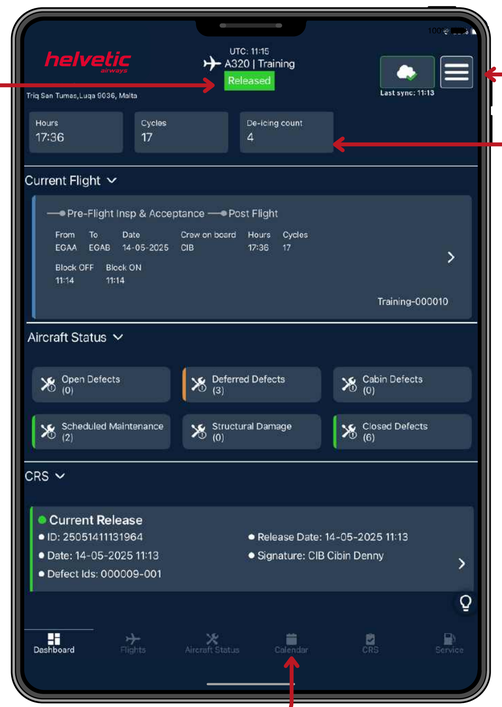
6.1 Configuration & Customisation



REDiFly tailored its user interface to Helvetic's operations mapping the data from the paper ATL. The application offers multilingual support and flight-status-driven workflows. Flight crews were provided with intuitive, pre-populated forms and autofill features. Data fields are prefilled from connected systems such as the flight schedule, validations prevent incomplete entries, and key calculations are automated. The result is a faster, more intuitive process with fewer manual steps and fewer errors.

Colour coded release button lets you know if CRS is attached

Actions Menu



Current Flight tile will be prepopulated with details of next flight.

Hours, Cycles and Daily Checks with countdown timers.

You can click on tiles to expand and get more details.

Aircraft Status Tab gives info on defects, briefing card, scheduled maintenance. can be expanded for more detail.

Maintenance Release tab has update info on the latest CRS.

Toggle between light & dark mode.

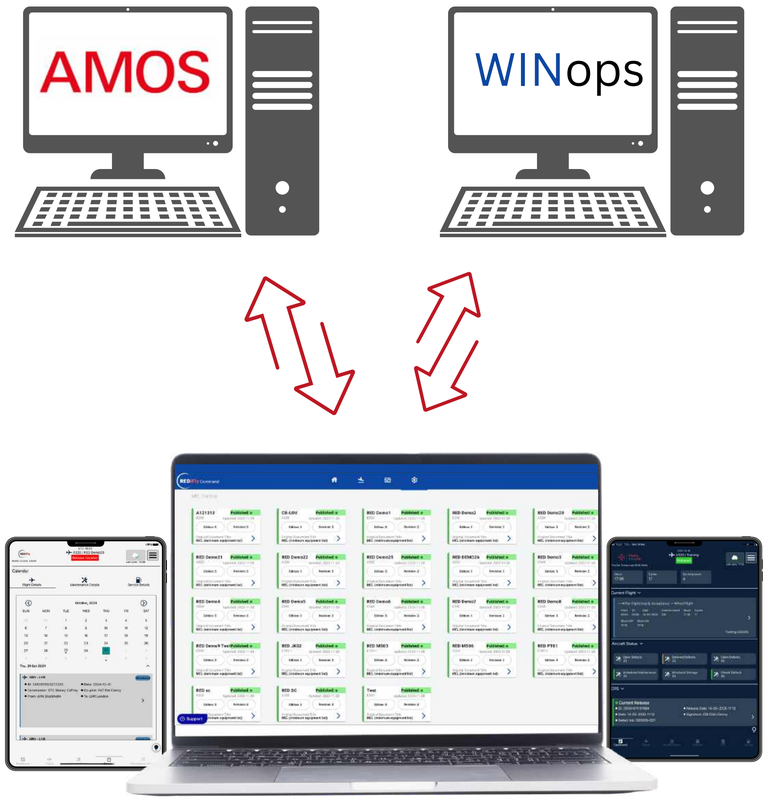
Calendar feature allows you to few historical data on defects & sectors.

6.2 Integration with AMOS & WinOps

Helvetic's eTechlog is fully integrated with AMOS and WinOps using secure two-way OpenAPI/REST interfaces. This setup enables real-time data sharing across engineering, flight crew, and operations - eliminating delays, double entry, and ambiguity.

Live sync with AMOS & AMOSmobile

Defects, rectifications, and CRS updates sync instantly. Engineers always see the latest aircraft status, eliminating lag and manual relaying.



Preloaded flight data from WinOps

Routing and crew info auto-import into the pilot app, reducing turnaround workload and speeding up dispatch readiness.

Closed-loop defect validation

Digital entries flow seamlessly across systems, ensuring traceability, improving decision speed, and cutting down on back-and-forth between MCC and line maintenance.

Together, these integrations reduce admin overhead, improve defect handling, and create a unified, up-to-date view of aircraft health — laying the foundation for real operational savings.

6.3 Integration ROI – Delay Reduction Impact

With a fleet of 18 aircraft operating 5 sectors daily, Helvetic runs over 36,000 flights per year. EUROCONTROL data shows an average 17min delay per flight across Europe, with 10–15% of delays linked to technical causes (EUROSTAT/IATA). Even a modest improvement in defect handling can make a measurable impact.

Savings Breakdown:

Total delay minutes/year:
36,000 flights × 17 mins = 612,000 mins

Delay minutes from technical causes (10–15%):
61,200 – 91,800 mins/year
(Source: EUROSTAT / IATA)

Savings from a 5% improvement (on technical delays):
3,060 – 4,590 mins saved

Cost impact at €100/min (IATA/FAA est.):
€306,000 – €459,000 per year in conservative delay savings
Savings Breakdown:

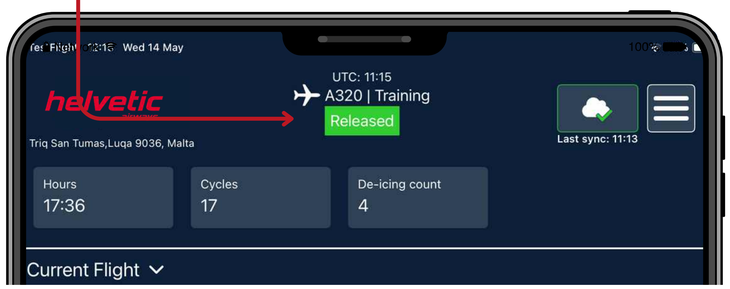
These savings reflect just one area of improvement. The same integrations also reduce rework, improve audit readiness, and streamline maintenance planning, with long-term value continuing to grow as operational data builds. While it is still early in the implementation to measure these impacts precisely, the estimates presented are based on reputable industry benchmarks

6.4 Workflow Optimisation

Helvetic’s eTechlog implementation streamlined several high-friction workflows by removing manual steps, improving data accuracy, and enhancing visibility for both cockpit and maintenance teams. Key feature sets were designed to reduce workload

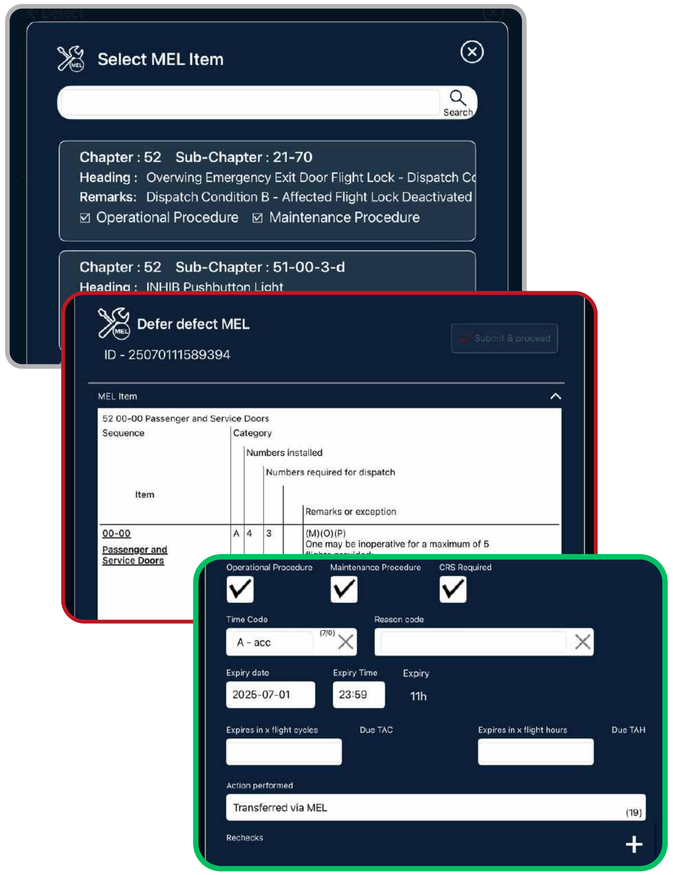
Live CRS & Status Indicators

Real-time (CRS) updates and visual aircraft status (green/red) give flight crew and MCC instant clarity,



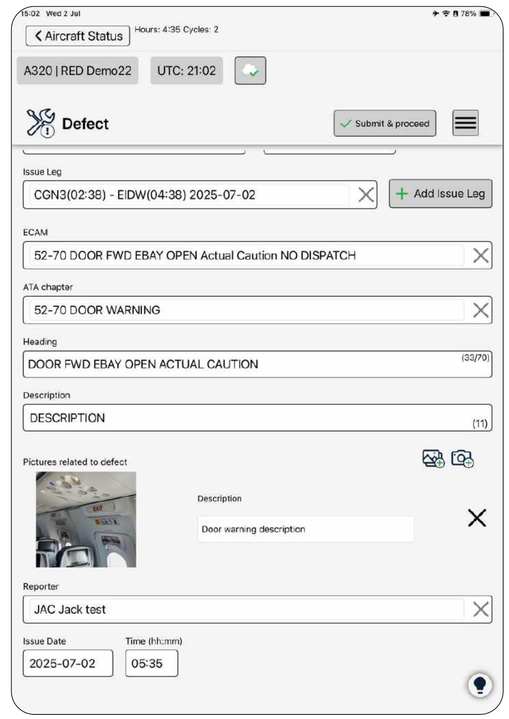
Smart MEL Management

MEL items are selected in-app with logic that guides deferral limits and follow-up, ensuring consistency and reducing manual input.



Defect Image Capture & Overlays

Defects can be logged with annotated photos and overlays, giving MCC clearer context and reducing no-fault-found maintenance.



6.5 Pilot Allocated Devices

As part of its paperless maintenance rollout, Helvetic opted to assign iPads directly to pilots and engineers, rather than keeping devices onboard aircraft.

This decision delivered several key benefits:

Operational Flexibility – that pilots can have access to live Aircraft Status before being on the Aircraft.

Support Simplification – IT can manage devices centrally via MDM with fewer access issues or forgotten hardware.

Personal Familiarity – Crews develop consistency and speed using their own device, improving data entry accuracy.

Reduced Aircraft Downtime – No need to troubleshoot or replace in-aircraft devices between flights.

Device Configuration: Pilot-Assigned by Request

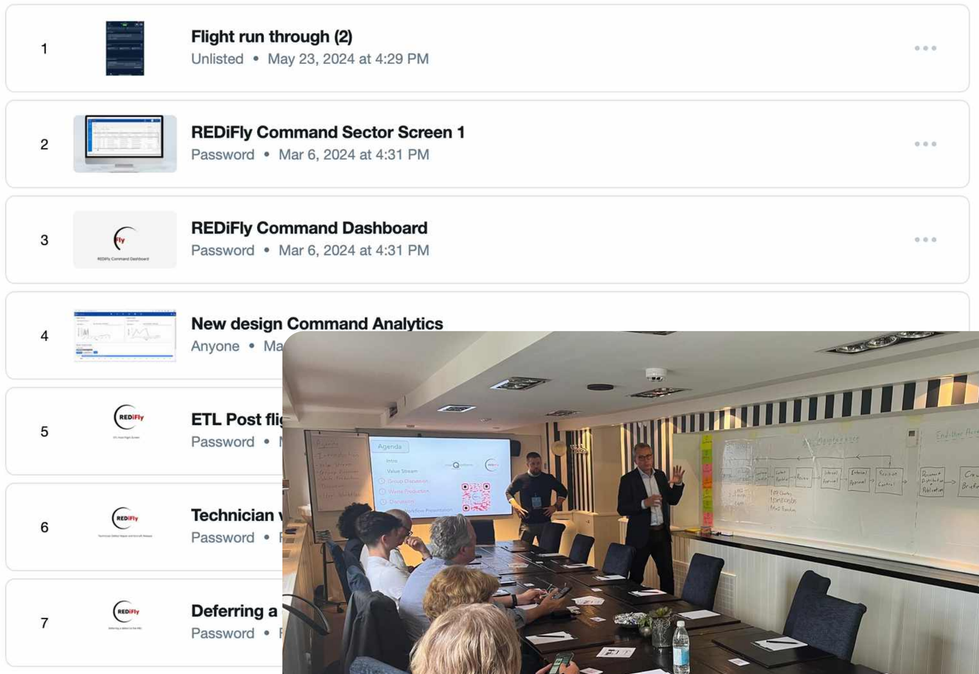
While REDiFly typically uses aircraft-assigned devices, Helvetic requested a pilot-assigned setup to better match their workflow.The platform supports both configurations, giving operators the flexibility to choose what fits best. This approach improved continuity, simplified support, and boosted familiarity — with 580+ iPads managed and zero reported faults. including Cabin Crew Members. 180 Pilots, 320 Cabin Crews, 80 Mechanics

6.6 Training & Rollout

Rolling out a new system across flight operations and maintenance required careful planning to ensure consistency, confidence, and minimal disruption. Helvetic focused on accessibility and clarity, combining structured training with flexible, on-demand resources to support every user group.

580+ iPads deployed

Including Cabin Crew Members. 180 Pilots, 320 Cabin Crews, 80 Mechanicsensuring the system could be used seamlessly across all operational environments from day one.



Blended training formats

Pilots and MCC teams received training through a combination of, online modules, and live walkthroughs, tailored to each role's workflow.

Digital quick guides and video support

A full library of step-by-step video tutorials and reference guides was made available through the IT support centre, giving users access to help at any time.

The rollout process was staged to build familiarity, with parallel operations allowing teams to gradually integrate the eTechlog into real-world workflows. This approach ensured strong adoption from the start and minimal disruption to daily operations.

6.7 Support & Troubleshooting

To ensure a smooth transition and minimise operational disruption, Helvetic implemented a multi-layered support and troubleshooting framework during the initial rollout of the eTechlog system.

This included redundancy across tools, fallback modes for frontline teams, and 24/7 technical assistance throughout the parallel run phase.

Dual-input offline mode during rollout

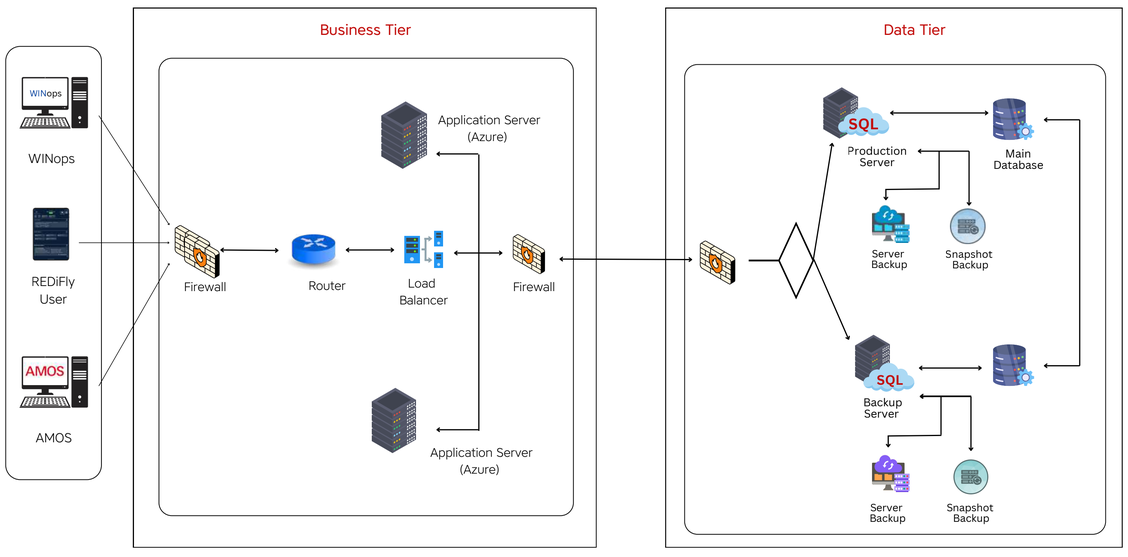
During the three-month dual-run, crews could use both the paper ATL and the eTechlog simultaneously. This ensured operational continuity and built confidence in the new system without disrupting workflows.

Backup access via desktop & mobile clients

In the event of hardware failure or device loss, crews and MCC staff had access to the eTechlog through web and desktop clients. Spare iPads were also held in Zurich and by key personnel to allow for rapid device replacement when needed.

24/7 support during rollout phase

A dedicated support channel was maintained with REDiFly, ensuring round-the-clock assistance for technical issues, login/access problems, and sync troubleshooting. Usage logs and support tickets were tracked in the IT Support Centre to ensure visibility and resolution.



7. Risk Mitigation and Approvals

Helvetic achieved FOCA approval through a structured rollout, including a three-month dual-run across 1,000+ flights with full parallel use of the paper ATL and eTechlog.

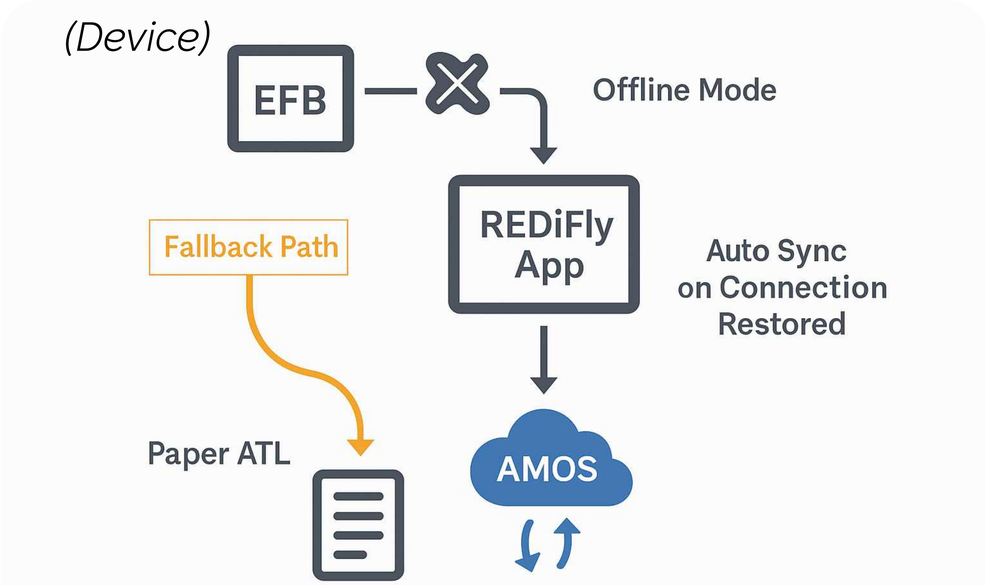
A formal risk assessment was submitted addressing technical, operational, and compliance risks. Approval was backed by a Human-Machine Interface review, along with updates to OM-A 8.1.11 and CAME 1.1A, submitted as part of the FOCA governance package.

Cross-functional teams from CAMO, Flight Ops, and IT worked closely with REDiFly and IAS, with regular check-ins held with FOCA throughout the approval process.

8. Contingency Management & Security

Helvetic implemented a layered contingency plan covering REDiFly, AMOS, and device failure scenarios. The eTechlog supports offline operation, with auto-sync once connectivity returns. Backup procedures include a paper ATL fallback, redundant iPads, and structured MCC workflows.

For third-party MROs, a hybrid process enables dual recording, with signed paper slips uploaded and mirrored into AMOS. Manual reversion paths and real-time sync indicators ensure data integrity is maintained throughout.



The platform is hosted in an ISO 27001–certified environment, with Microsoft SSO, role-based access, and MDM controls allowing remote lock and wipe of crew devices. These safeguards align with FOCA and EASA cybersecurity guidance.

TÜV NORD

CERTIFICATE

Management system as per

ISO/IEC 27001 : 2013

(Including Cor 1:2014 and Cor 2:2015)

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

INTEGRATED AVIATION SYSTEMS IRELAND LTD.
Unit 32 Regional Development Centre,
Dundalk Institute of Technology,
Dundalk Co. Louth A91 RF2W,
Ireland

operates a management system in accordance with the requirements of ISO/IEC 27001 : 2013 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope -

Information Security Management Covering Design, Development, Support of Software Products for Aviation Industry and Support Functions HR & Training, IT Infrastructure, Facility Management.
As per the Statement of Applicability of 02.01.2021 version 1.0

Certificate Registration No. **44 121 22393501**
Audit Report No. **2.5-10649/2021**

Valid from **03.03.2022**
Valid until **02.03.2025**
Initial certification **2022**

Certification Body
at TÜV NORD CERT GmbH

Mumbai, **03.03.2022**

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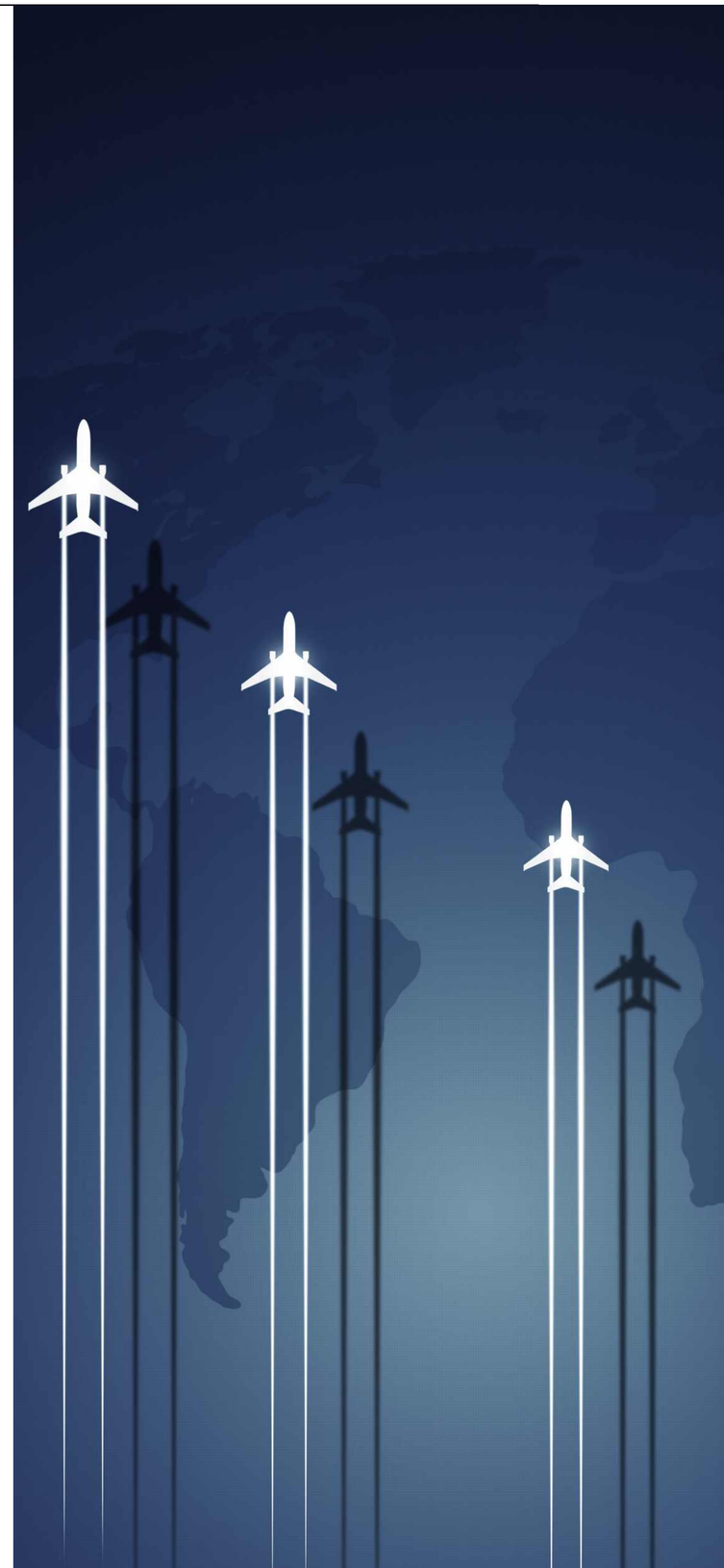
IAF DAkkS Deutsche Akkreditierungsstelle D-ZM-12007-01-00

8.1 Contingency Procedures

Helvetic’s eTechlog implementation includes clear, predefined procedures to ensure uninterrupted operations during system disruptions. Whether due to device failure, connectivity loss, or third-party system issues, the process allows crews to continue logging, syncing, and maintaining compliance with minimal disruption.



Key Scenarios & Mitigations:

No Connectivity / Server Unavailable:

Flight data is entered into the eATL and paper ATL. Status remains visible via the Flight planning application or printed backup.

Device Failure:

If one device/EFB is broken, the second crew member’s device is used.
If both are unavailable, paper ATL is used for data and defect entry.

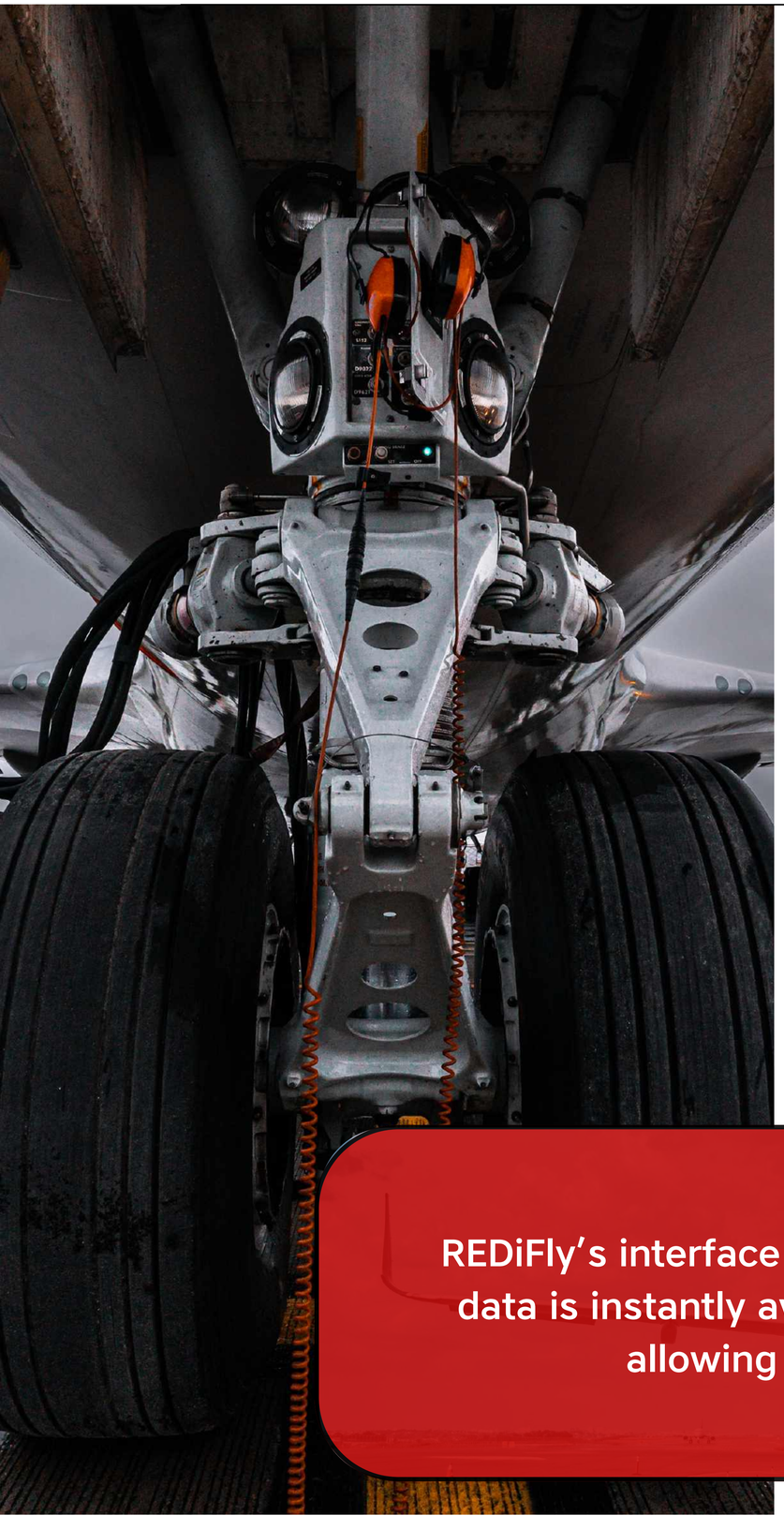
AMOS (MRO system) Unavailable:

REDiFly continues to function; crew enters defects in eATL and paper ATL if required, with MCC monitoring the REDiFly Command as a backup. AMOS sync resumes once restored.

3rd Party Maintenance Actions:

Paper ATL used in parallel with eATL. Crew attaches a photo of the signed paper log; MCC finalizes work order in AMOS and releases aircraft.

9. Benefits Observed in First 6 Months



In the first 6 months since implementation, Helvetic has recorded measurable improvements across operations, system stability, and crew experience.

Error Reduction - Paper-based log errors (30–60/month) have been fully eliminated, improving data accuracy and reducing engineering follow-up workload.

Device Stability - Across 580+ deployed iPads, Helvetic has reported zero device-related faults per month, supporting reliable, always-on access.

Operational Efficiency - Increase in defects with informational character (i.e. self resetting defects), increases the awareness for repetitive defects and could initiate preventive maintenance

System Integration - Two-way, real-time integration with AMOS and WinOps has removed manual rekeying, improved defect traceability, and reduced turnaround delays by enabling a closed-loop digital workflow.

Turnaround Readiness - MCC has live visibility of inbound defects, allowing pre-emptive task planning and faster line maintenance decisions.

Pilot Feedback:

REDiFly's interface is intuitive and easy to use. Real-time syncing means logbook data is instantly available in AMOS, WinOps, and our other connected systems, allowing us to stay focused on the flight, not the paperwork.

10. What's Next ?

With the eTechlog now fully embedded in daily operations, Helvetic is focused on extending its digital maintenance ecosystem and sharing lessons learned with the wider industry. Several forward-looking initiatives are already underway:

Integrated Cabin Logbook rollout

Expanding REDiFly's platform to include cabin defect reporting, closing the loop between cabin crew, flight deck, and maintenance.

Unified EFB vision

Progressing toward a seamless crew experience with flight plans, eTechlog, and documentation integrated into a single, EFB app interface.

Predictive defect analytics

Leveraging structured eLog data to flag recurring technical issues, enabling more proactive maintenance and reducing repeat defects.

Industry collaboration & knowledge sharing

Contributing insights to Aircraft IT forums and CAMO conferences to support industry-wide progress toward smarter, paperless operations.

12. Testimonial

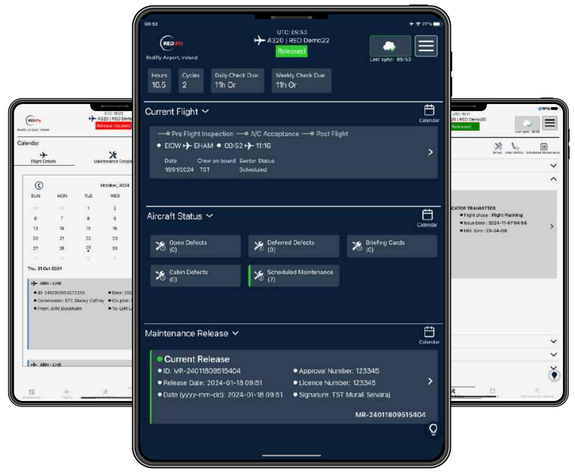
Christian Suhner, CTO of Helvetic comments:

“Going live with the REDiFly eTechlog has been a major milestone for Helvetic Airways. The system adapts to our processes, rather than the other way around, making it easier to collect and manage technical data. It has strengthened our operations’ data quality, security, and reliability across the network. We’re excited about what the future holds with REDiFly.”

13. About the Partners

About REDiFly

REDiFly develops flexible, user-focused aviation software. Their eTechlog replaces paper-based aircraft technical logbooks, giving operators real-time control over maintenance data, improving airworthiness tracking, and reducing operational delays. Built through direct collaboration with flight and maintenance teams, REDiFly helps streamline maintenance workflows and simplify regulatory compliance.



About Helvetic Airways:

Helvetic Airways is a Swiss airline headquartered at Zurich Airport, operating scheduled and charter flights across Europe with a fleet of 2 Embraer aircraft. Helvetic is known for its high operational standards, modern fleet, and commitment to continuous innovation in aviation services.

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