



THE COST OF UNCERTAINTY: WHY PRESCRIPTIVE MAINTENANCE IS BECOMING THE NEW STANDARD

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MEET THE TEAM



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THE VERYON PLATFORM

Veryon supports maintenance decision-making across the full operational lifecycle

VERYON TRACKING

- Fleet Management
- Flight Operations
- Work Order Tracking
- Maintenance Tracking
- Inventory Tracking

VERYON WORK CENTER

- MRO Management
- Parts, Inventory, and Tooling Management
- Quoting and Finance Management
- Work Order Management
- Employee & Labor Management



VERYON DEFECT ANALYSIS

- Clustering Algorithms
- Chronic & Repeat Identification
- Core Defect Search, Visibility, and Investigation
- Data Integration
- Proactive Maintenance Identification

VERYON PUBLICATIONS

- Regulatory Libraries
- Part Requests
- Mobile Field Access
- Unified Technical Publication Access
- Digital Document Viewer

VERYON GUIDED TROUBLESHOOTING

- Regulatory Libraries
- Part Requests
- Mobile Field Access
- Unified Technical Publication Access
- Digital Document Viewer

VERYON'S GLOBAL FOOTPRINT



Built upon the industry's largest dataset, combining experience, tails, and insights to improve aviation

Decades of Experience Supporting Aviation



50+

Years of industry experience

300+

Employees with decades of aviation experience

75K

Maintenance professionals using our products

180+

Countries being served

With Broad Reach and Access Across the Market



200K

Aircraft relying on our products

5,000+

Unique Customers

1.2K+

Distinct Makes/Models

100+

Distinct OEMs

Generating Insights for Comprehensive Maintenance & Reliability



98M+

Maintenance Events

1.3M

Total Parts

2M+

Chronic Events

1.5K

Worldwide Repair Stations

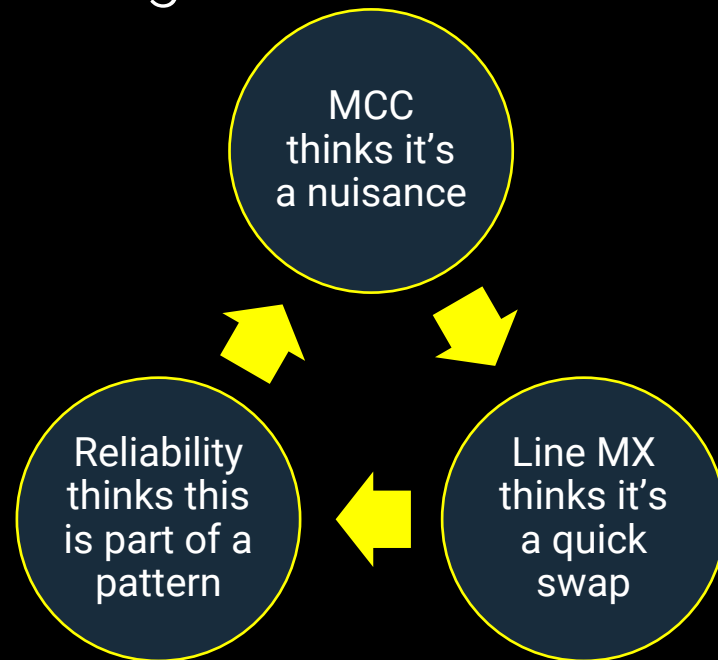




SAME DEFECT, THREE OPINIONS

What happens when decisions outpace insight

- A defect comes in, same ATA, similar symptoms, different wording



- All 3 are rational conclusions with partial context; no time for detective work
- A decision is made. Was it the right one?
- Defect comes back, and then back again
- Uncertainty doesn't disappear; it multiplies costs



THE COST OF FAILED FIXES

Why recurring issues quietly drain uptime, budgets, and trust

Schedule Disruptions

Delays & Cancellations

\$33B

annually across
global airlines

Source: Airlines for America, FAA NextGen Office data, "U.S. Passenger Carrier Delay Costs," 2023

Reactive Repair Spend

Unscheduled Maintenance

88%

of direct
maintenance cost is
unscheduled

Source: Kählerlert, Reliability Engineering & System Safety, 2021

Parts & Warranty Spend

No-Fault-Found & Repeat
Removals

20%+

of components
returned healthy

Source: Cranfield University, "What Are the Safety Implications of No Fault Found?", 2023

WHAT'S MISSING BETWEEN DETECTION AND DECISION



REMOVING UNCERTAINTY

Bridging the gap from reaction to prescription



REACTIVE



DEFECT OCCURS



MANUAL INVESTIGATION



CONFLICTING NOTES



BEST GUESS FIX

- Wait for defects,
- Chase symptoms
- Repeat the cycle

PREDICTIVE



FORECAST FAILURES



PERFECT FORESIGHT



AUTONOMOUS ACTION



FLAGS RISK, NOT ACTION

- Technology shows promise
- Data coverage varies by fleet
- Adoption is uneven today

PRESCRIPTIVE



SURFACE PATTERNS EARLY



RECOMMEND NEXT ACTION



REDUCE UNCERTAINTY NOW



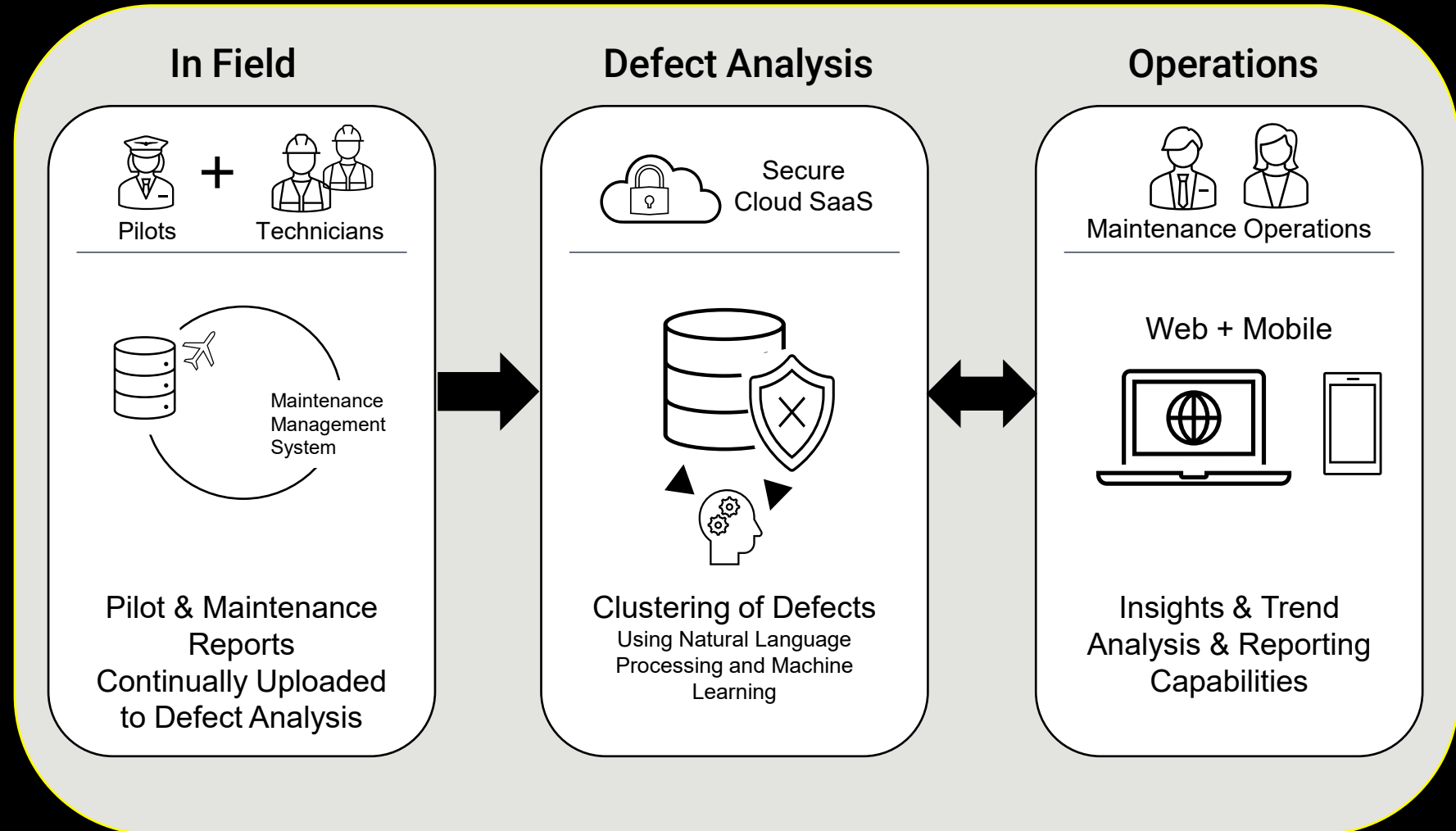
HUMAN STAYS IN THE LOOP

- Repeat issues are prioritized
- Less firefighting
- Stable day-of ops

DEFECT ANALYSIS: HOW DOES IT WORK? ↗

Turning raw maintenance data into actionable insight

- Helps operators see which defects keep coming back
- Shows which problems matter most right now
- Enables action before issues escalate



VERYON DEFECT ANALYSIS



From Logbooks to actionable reliability insights

- Turn raw defects into early reliability signals
- See what's repeating, where, and why—without manual analysis
- Focus engineering and maintenance effort where it matters most

The screenshot displays the Veryon Diagnostics software interface. At the top, there is a navigation menu with options: Chronics, Defects, Alerts, Dashboards, Sessions, Symptoms, and Admin. A search bar is located on the right. Below the navigation, there are filters and a 'Last import' section showing '19-Sep-2025 21:22 (UTC)' and '16 Chronics' for the period '01-Jun-2025 to 07-Jul-2025'. The main area features a grid with columns for Tail, ATA, Category, Chronic ID, and a calendar view for June 2025. The grid lists various chronics with their respective ATA numbers, categories (e.g., WATCH), and chronic IDs. Below the grid, a detailed view for Chronic V001VD-0036 is shown, including criteria (Autotag (Untagged)), duration (67), defects (6), delays (0), cancellations (0), and removals (2). The detailed view includes a table with columns for Description, Corrective Action, Initial Symptom, and Fix Category.

Tail	ATA	Category	Chronic ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
V001VD	7200	WATCH	V001VD-0036																											
N2001	2740	WATCH	N2001-0065 2in10																											
N2014	2750	WATCH	N2014-0015 6in30																											
N2025	3240	WATCH	N2025-0031 6in30																											
N2003	2750	WATCH	N2003-0052 6in30																											
N2037	2760	WATCH	N2037-0060 2in10																											
N3073	3080	WATCH	N3073-0026																											
N3054	2150	WATCH	N3054-0025 6in30																											
N3059	4950	WATCH	N3059-0106 6in30																											
N2010	2150	WATCH	N2010-0038 6in30																											
N3014	2521	WATCH	N3014-0029 6in30																											
N3075	2760	WATCH	N3075-0008 6in30																											

Chronic V001VD-0036 (Criteria: Autotag (Untagged) Duration: 67 Defects: 6 Delays: 0 Cancellations: 0 Removals: 2)

Chronic	Status	Category	Risk	Action
V001VD-0036	Verified	Good Demo Example (WATCH)	High	0 items

DESCRIPTION	CORRECTIVE ACTION	INITIAL SYMPTOM	FIX CATEGORY
RIGHT ENGINE OIL DRIPPING AFTER ENGINE SHUTDOWN	FOUND B-NUTS AT THE OIL PRESSURE TRANSMITTER TO BE LOOSE FOUND THE LEAK. TIGHTENED TO PROPER TORQUE, AND CONTINUED ENGINE RUN, PERFORMED LEAK CHECK NO LEAKS FOUND. NO FURTHER ACTION REQUIRED. REF CIT 560XL AMM 73-30-02.	ENG OIL External leakage	FINAL FIX
OIL LEAK FROM RIGHT ENGINE	PERFORMED OIL LEAK CHECK ON RH ENG. NO DEFECTS NOTED IAW PWC 545A MM 70-00-00	ENG OIL External leakage	DIDNT WORK
RT RENGINE EVIDENCE OF OIL LEAK	OPENED THE RH ENGINE COWLING. ENGINE OIL POOLING IN THE BOTTOM OF THE COWLING PERFORMED CLEANING OF THE ENGINE COWLING AND THE ENGINE OF THE OIL ENGINE OIL LEVEL IS AT MAX FULL RAN THE RH ENGINE AND VERIFIED NO OIL LEAKAGE FROM THE ENGINE DRAINS, ACCESSORIES OR LINES ENGINE OIL MIGHT HAVE BEEN SPILLED INTO THE COWLING WHEN SERVICING THE ENGINE OIL REF CESSNA 560XL 12-11-02	ENG OIL External leakage	DIDNT WORK

PRESCRIPTIVE DIAGNOSTICS IN ACTION



Turn maintenance history into clear next step, backed by outcomes

- Automatically identify the most critical chronic based on repeat rate, spread, and impact
- Analyze patterns and corrective actions across fleet, not a single event
- Distinguishes fixes that resolved the issue from actions that repeatedly failed
- Prescribes the next best action, with direct access to proven fix cases

The screenshot displays the Vervon AIRE diagnostic interface. The top navigation bar includes 'Chronics', 'Defects', 'Alerts', 'Dashboard', 'Sessions', 'Symptoms', and 'Admin'. The main content area shows a fleet-wide chronic analysis for '832 Chronics' with a timeline from August 13 to August 24, 2024. Below this, a table lists various aircraft and their associated chronic details. A detailed view of a specific chronic (N3012ND) is shown on the right, including a welcome message, a list of top 4 problems, and a list of quick actions.

Good morning, Kris 🌞
Welcome back to the MCC. For the A320 fleet here are your top 4 problems you should focus on

- **N3012ND:** Chronic-7492 (ATA 36), Pack shutdown, 7 in 30d
- **N3047ND:** Chronic-7509 (ATA 27), Repeat flap warnings
- **N3091ND:** Chronic-7513 (ATA 21), Temp control repeaters
- **N3120ND:** Chronic-7502 (ATA 32), NWS faults rising

Select a chronic to see what actions helped resolve these in the past, and which ones didn't.

Selected: N3012ND

Here's the ATA 36 history for N3012ND (Chronic-7492):

- Replace pack controller: 66% Effective Fix
- Flow Valve Replacement: 12% Effective Fix
- Bleed Air Valve Repair: never worked

Want to see the cases that fixed this chronic defect, or are you ready to update the status by applying a note on how the tech should proceed with a fix?

Quick Actions

- 📄 Create / Show Alerts
- 🚨 Critical Defects
- 🔧 Start Troubleshooting
- 🔄 Updated Chronics

Add a note summarizing what actions worked, what didn't, and why this chronic is prioritized

VERYON GUIDED TROUBLESHOOTING



Scale expertise while improving first-time fixes and reducing repeat removals

- Apply proven fixes, not just procedures
- Capture and scale tribal knowledge across teams and shifts
- Reduce repeat removals and “no-fault-found” cycles

VERYON DIAGNOSTICS Chronics Defects Alerts Dashboards Sessions Symptoms Admin

Search Chronics, defects, alerts, symptoms & more ...

Symptoms > 79 - ENGINE OIL : Engine oil leaking

Possible Solutions (4) Unlikely Solutions (5)

POSSIBLE SOLUTIONS

- Engine Oil Leaking due to Damaged Aft Sump Oil Scavenge Tube [Details](#)
- Engine Oil Leaking due to Damaged Aft Sump Oil Supply Tube [Details](#)
- Engine Oil Leaking due to Loose Aft Sump Oil Supply Tube Connection [Details](#)
- Engine Oil Leaking due to Loose Aft Sump Oil Scavenge Tube Connection [Details](#)
- No Possible Solution

ANSWER QUESTIONS TO NARROW DOWN SOLUTIONS

Engine position(s) where fault occurred

- No Answer Selected
- Engine No. 1
- Engine No. 2
- Both engines

Do a check of the engine fan cowls externally and oil leakage

- No Answer Selected
- Leak found
- No leak found

Engine 1 EEC - Maintenance Messages present [Select Here](#)

Do a check for coking or evidence of oil leakage on supply and scavenge lines

- No Answer Selected
- Coking or leaks found
- No coking or leaks found

Possible solutions (5) Unlikely solutions (0)

FIM - AUTO FAIL Light: Light On And ALTN Light On, AUTO FAIL Light Goes Off When Pressurization Mode Selector Switch Is At ALTN. - 21-31 TASK 801

78% Fix effectiveness - 121 fixes 75% Fix effectiveness - 321 fixes (global)

AUTO FAIL Light On and ALTN Light On due to Air Cycle Machine (ACM)

34% Fix effectiveness - 46 fixes 34% Fix effectiveness - 46 fixes (global)

Here are all the unresolved sessions created in the last 10 days

Session ID: 44376345 **Unresolved**

ATA 28 Fault Codes

Aircraft Model	G650
Aircraft serial number	N1001
Engine serial number	EG0294300
Originator	Adam Gilchrist
Last Worked on by	Steven Wills
Last saved	13 Aug 2024 15:13:14

Session ID: 44376345 **Unresolved**

ATA 28 Fault Codes

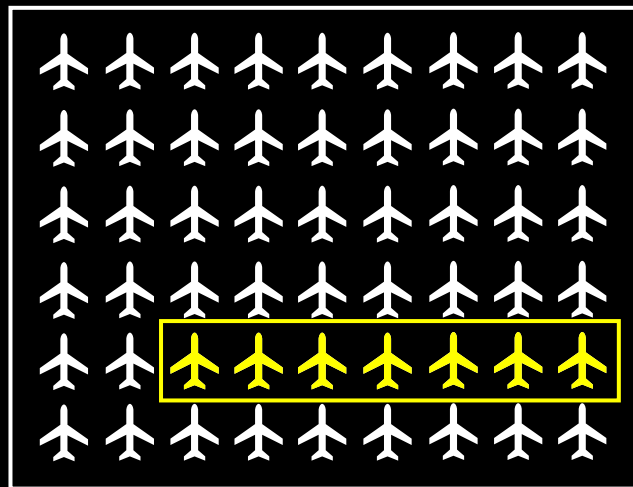
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Last Worked on by	Steven Wills
Last saved	13 Aug 2024 15:13:14

DATA FUELING INSIGHTS



Decades of experience, scalable platform, and massive data – we see what others may miss

Veryon “Fleet” vs Your Fleet



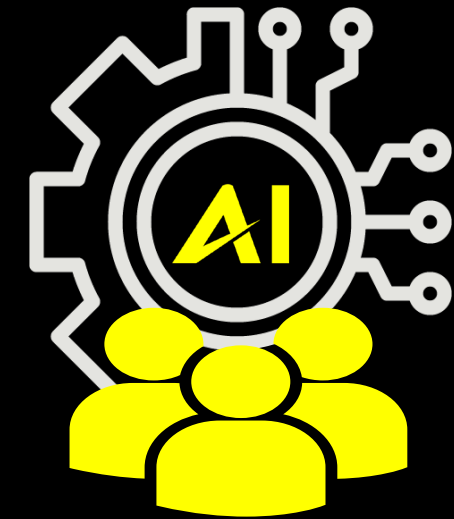
Data fueling the insights from one of the largest **anonymized** maintenance aircraft datasets



VERYON
AIRE



Built upon **Veryon AIRE**, a platform of machine learning algorithms, generative, and agentic AI

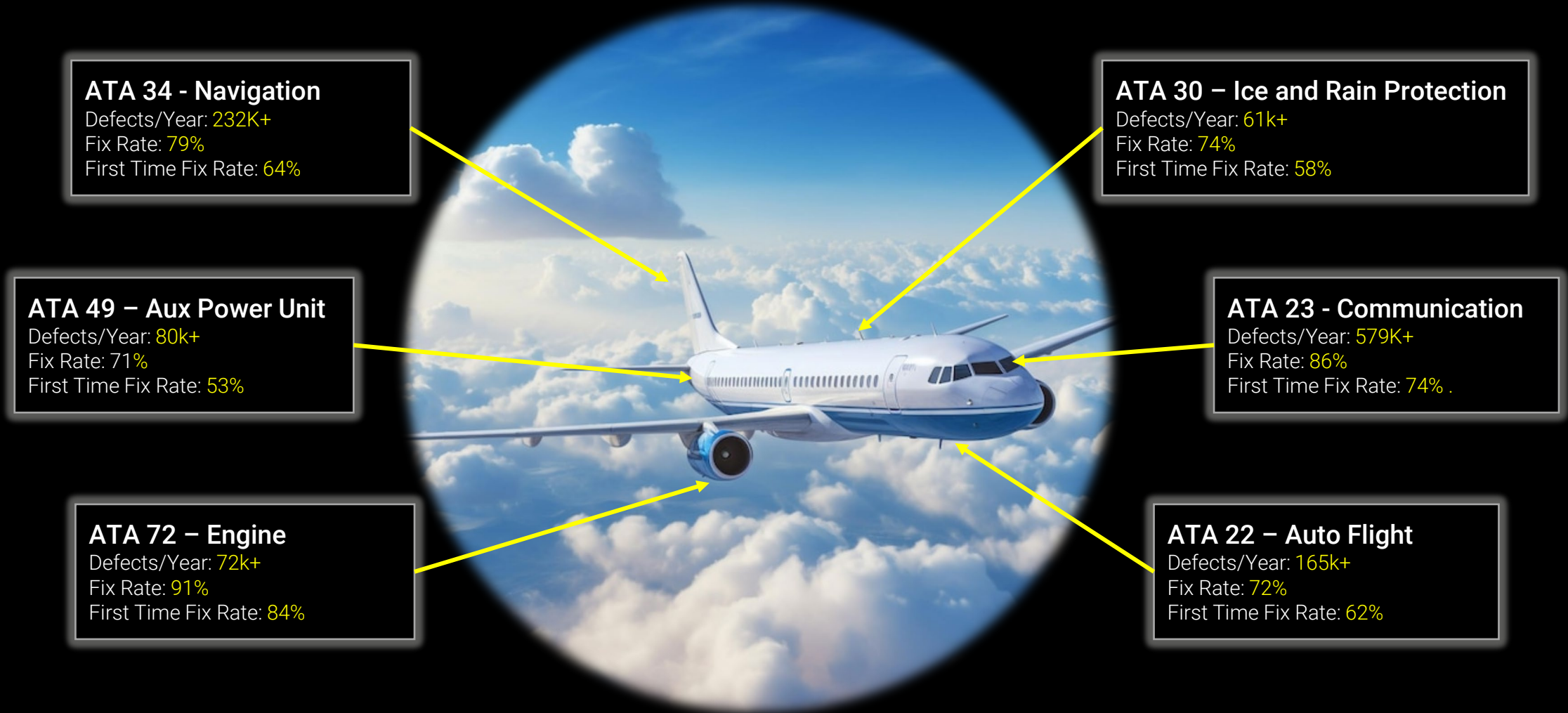


Validated and reviewed by over **two decades** of deep aviation and data science experience

FROM DIAGNOSIS TO OUTCOMES



Leveraging logbook data to supercharge your sensor data and uncover unseen patterns



REAL OUTCOMES – CASE STUDY



How a large operator drove chronic reduction and improving operational efficiency – at scale

Background



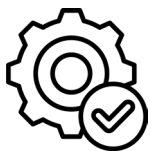
- Maintenance Control manages a nationwide fleet, tackling chronic and hard-to-fix issues
- Legacy ATA-based system was slow, manual, and blind to cross-chapter issues
- Chronic defects were visible, but teams lacked fast, reliable context to act early

Solution



- Prioritized critical issues each day, by using Defect Analysis to rank repeat risk
- Caught emerging repeats earlier by grouping defects by behavior and recurrence, not just ATA
- Reduced investigation time by surfacing similar history and across the fleet
- Made more consistence mx decisions by grounding actions in proven fleet outcomes

Results & Impact



- Faster resolution with fewer repeat events and less day-of firefighting
- MCC effort shifts from pattern hunting to corrective actions
- Reduced recurrence expands the airline's chronic monitoring window, surfacing issues earlier
- Intervened more often before schedule impact

DELIVERING REAL RESULTS



Improving fleet availability, mechanic efficiency, financial outcomes, and safety

~12%

Increase in aircraft availability

~31%

Reduction in repeat defects with improved first-time fix rates

~5%

Reduction in unnecessary component replacement and parts expense

~75%

Reduction in troubleshooting time for new technicians

7%+

Improvement in fix effectiveness...even with limited sensor data

~23%

Reduction in downtime related costs

Experience the transformative power of AI-powered prescriptive maintenance firsthand

Ready to move from predictive insight to prescriptive action?

Please visit the team to learn more

