

SPACE INDUSTRY PITCH

STERIOD

AI-assisted automation *for telemetry data analysis.*

Steriod turns plain-language specifications into certifiable, executable Axiom programs — for verification, anomaly detection, root-cause analysis, control, and onboard intelligence.

Spec → Axiom

AI translates intent into a certifiable rule program

Multiple use cases

verification, anomaly, root-cause, control, reverse-eng

Run anywhere

desktop · server · embedded application on roadmap

Complex systems generate data faster than humans can **specify, verify, and act** on it.

Today's tools force a choice: ad-hoc, expert-locked, or non-certifiable. None gives you all three.

One-off scripts everywhere

Engineers re-write Python or MATLAB for every task — verification, anomaly detection, post-pass analysis. Not reusable, not reviewable.

Specifications drift from reality

Requirements live in Word and Excel. There is no automated path from a written requirement to a running test or controller.

Hours of manual investigation

When telemetry shows an anomaly, engineers grep logs and chase down root cause by hand. Expensive expertise, slow turnaround.

Auditors cannot read the code

Certification depends on artefacts an external auditor can read and sign. Custom scripts and proprietary models do not qualify.

Axiom — the certifiable bridge *between human intent and machines.*

A domain-specific language for temporal behavioural rules over data streams. Operators describe what the system shall do — Steriod generates a reviewable Axiom program that machines execute.

1 Human-readable

Engineers and auditors can read a rule with no tool support — it's plain text.

2 AI-generatable

Generated from natural-language specs, requirements, or learned from telemetry.

3 Certifiable

Plain-text artefact regulators can review, version, and sign off on.

   eps_power_health.axiom

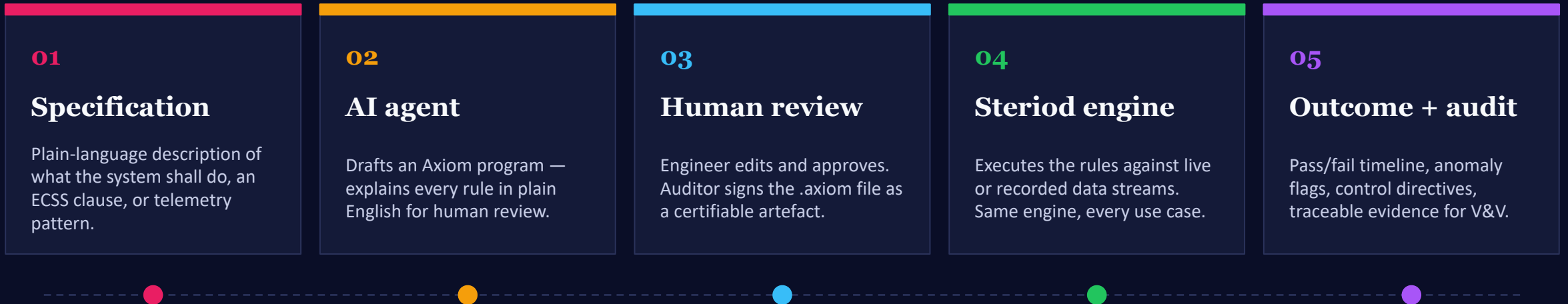
```
suite is $"EPS Power Health"
```

```
rule $"battery voltage in range" is
  expect battery_voltage >= 12.0 and
  battery_voltage <= 16.8
```

```
rule $"low soc triggers low power" is
  when battery_soc < 20 then eps_mode = 2 within 5
  seconds
```

One pipeline. Many use cases.

From a written specification to live, certifiable system behaviour — in minutes.



Built on the standards your ground segment already speaks

Hosts on

MQTT · Kafka · NATS · HTTP · Files · Custom

Engine

Steriod App · Steriod Service Manager · Axiom compiler + runtime (Go today, Rust/C planned)

Deploys

Desktop · on-prem server · cloud · onboard MCU

Two weeks of review ping-pong → minutes.

From an automotive root-cause analysis project we worked on. One concrete subsystem — the kind of compression that compounds across every V&V campaign.

BEFORE · HAND-CODED AUTOMATION

HV Coordinator V&V

Subject	High-Voltage Coordinator subsystem (automotive)
Effort	~2 weeks elapsed — including review ping-pong with domain experts
Output	A large body of automation code
Limits	Hard to maintain · not directly reviewable by experts · not reusable

WITH STERIOD · AXIOM RULES

The same V&V, in Axiom

Authoring	A few minutes to write the rules from the same spec
Review	Plain text — domain experts read it directly, no code walk-through
Execution	Runs on the data stream immediately — recorded or live
Artefact	Compact .axiom file — versionable, certifiable, reusable

WHAT THIS COMPOUNDS TO IN SPACE

Faster time-to-orbit

Shrinks the V&V critical path on every satellite build.

Lower CapEx per mission

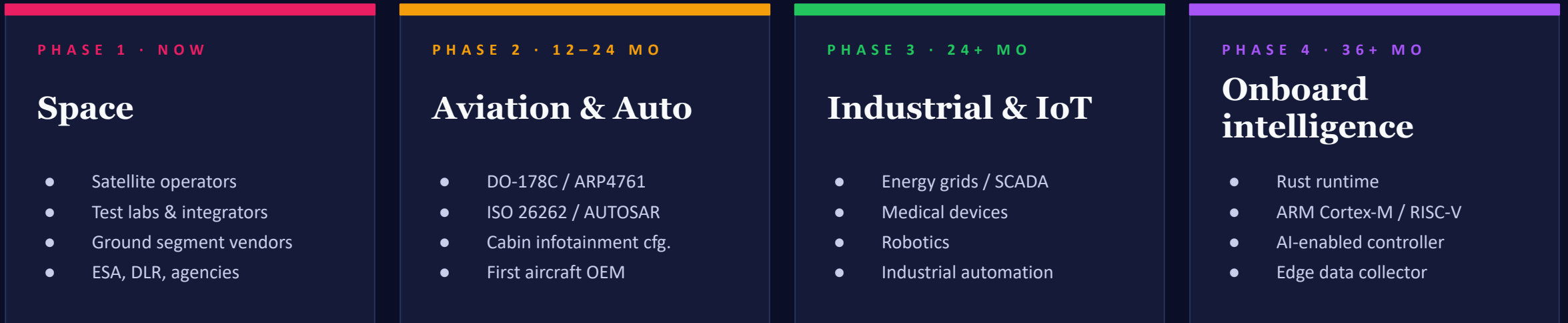
Fewer senior engineering hours per build, multiplied across the constellation.

Higher mission cadence

Reuse rule suites across builds — verification stops being a per-mission fresh start.

Beachhead in space. Then aviation, automotive, defence and more.

ECSS V&V demand, well-defined data formats, and tight word-of-mouth between mission teams make space the right first market.



Land with V&V. Expand on the same engine.

Today's V&V + anomaly-detection product is what we sell. Tomorrow's diagnostic platform expands on the same data, the same rules, and the same engine — growing ACV without sprawl.

TODAY · PHASE 1 · THE ENTRY POINT

Automated V&V & live anomaly detection

Continuous verification of system behaviour, with real-time flagging of deviations on telemetry streams. One unified rule layer replaces ad-hoc Python and disconnected alarm thresholds.

- Verify rules continuously against recorded or live data streams
- Surface anomalies in real time as rule violations
- AI suggests new rules from observed deviations
- Plain-text certifiable artefact every auditor can read

TOMORROW · PHASE 2

AI-driven diagnostics

Once Axiom is embedded in the customer's pipeline, the same engine and data unlock:

Root-cause analysis

AI walks the audit trail and proposes the most likely cause in plain English when a rule fails.

Requirement reverse-eng.

Learn rules from historical telemetry to bring legacy systems into spec.

Same engine. Higher ACV per customer.

Three macro shifts opened the window.

None of them existed at this maturity 24 months ago — and the first B2B signals are landing where it counts.

WHY NOW · MACRO TRIGGERS

The window opened in 24 months.

● AI tooling matured (2024–25)

Foundation models reached the reliability to translate plain-language specs into temporal rules. The Spec → Axiom layer was infeasible 24 months ago — it's a product feature today.

● NewSpace launch cadence

Record satellite launches and accelerating constellation deployments mean more missions need verification — but headcount-based V&V doesn't scale.

● ECSS-Q-ST-80 update

Updated software product assurance standards push satellite teams toward certifiable, traceable verification artefacts — Axiom's native output.

TRACTION

Early B2B signals from where it counts.

MISSION CONTROL VENDOR

Embedding Steriod features

Established European M&C software vendor with operational ESA mission heritage — PoC integration in progress to embed Steriod into their commercial platform.

ESA · SWPA WORKSHOP

Good reception at ESA

Presented at the ESA Software Product Assurance workshop — positive feedback from agency engineering leads (ESOC).

PHASE 1 · SHIPPED

Platform is in build

Connectors, Axiom engine, desktop app, and results dashboard are implemented and running today. PoC integration with the M&C partner above is active.

The combination doesn't exist today.

Cucumber/Gherkin gets you halfway — plain-text scenarios — but it's example-based, not stream-native, and not regulator-grade. Formal methods are rigorous but inaccessible. Steriod is the first AI-native combination of all five properties.

Capability	Custom Python	Cucumber / Gherkin	SCADE / TLA+	Datadog / Grafana	Steriod
Human-readable rules	—	Yes	—	Partial	Yes
AI-generatable rules	—	Partial	—	—	Yes
Temporal expressiveness	Partial	—	Yes	—	Yes
Streaming-data native	Yes	—	—	Yes	Yes
Certifiable artefact	—	Partial	Yes	—	Yes

The real moat: AI generation + audit trail + ECSS-aligned cert chain, integrated end-to-end. The DSL is forkable; the pipeline that turns a spec into a regulator-signable artefact is not.

Formal foundation: Axiom rules map 1:1 to metric temporal logic (LTL, MTL) — bringing decades of formal procedures for proving correctness, soundness, and completeness.

Three founders. A team of space enthusiasts.

Compilers, data, AI, and embedded — four deep specialisations behind one platform.



Marton Szabo

CO-FOUNDER • PRODUCT • BUSINESS

Co-founder of IP Camp and Neuron Development Kft. MSc Software Engineering. Built data-analysis tooling for automotive system verification and root-cause analysis. Currently building Steriod App, Steriod LLM Integration, and Steriod Service Manager.

[🔗 linkedin.com/in/martonszabo](https://www.linkedin.com/in/martonszabo)



Akos Nagy

CO-FOUNDER • TECHNOLOGY • COMPLIANCE

Former CTO of IP Camp. MSc Computer Science. Expert in language design and compilers — the brain behind the Axiom DSL and its runtime. Currently building Axiom Server, Axiom Compiler, the language specification, and the Axiom data processing application.

[🔗 linkedin.com/in/akosnagy350](https://www.linkedin.com/in/akosnagy350)



Peter Sallai

CO-FOUNDER • INTEGRATION • OPERATIONS

CTO of Dorsum. MSc Software Engineering, MBA. Expert in large-scale data processing and Rust — driving the embedded onboard runtime. Currently building sample business cases, proof-of-concept integrations with potential customer applications, and visualisation.

[🔗 linkedin.com/in/petersallai](https://www.linkedin.com/in/petersallai)

AI: all three founders with hands-on LLM integration and fine-tuning experience — applied to spec → rule generation, validated in the M&C PoC.

Built with the **European space industry.**

ESA-financed projects, DLR/SSC collaborations, and ESTEC presentations — credentials we bring to Steriod.

ESA · SISI

ONGOING

GNSS interference testbed

Part of the ESA NAVISP programme. Designed and built a testbed for vehicle testing under GNSS signal interference — synchronised vehicle-side data collection with a ground-truth reference system, plus automated report generation.

ROLE

Test platform & data tooling

ESA · OPTIMUS

ONGOING

Optical communication testbed

Part of the ESA ARTES ScyLight programme. With DLR GfR, DLR, and SSC, building a testbed for optical satellite-to-ground communication — contributing satellite and optical-ground-station emulation, plus M&C.

PARTNERS

DLR GfR · DLR · SSC

[↗ connectivity.esa.int/.../optimus](https://connectivity.esa.int/.../optimus)

ESA · ESTEC

Speaking on V&V at ESA

Presented at the ESA Software Product Assurance Workshop (SWPA) and the Simulation & EGSE Facilities for Space Programmes workshop (SESP) at ESTEC — engaging ESA's engineering and SPA community.

VENUES

SWPA · SESP · ESTEC

Capitalizing on the safety-critical **V&V bottleneck.**

Where the money is, what we're raising, and what we'll deliver in 18 months.

THE MARKET

Cross-boundary opportunity.

TAM

\$12B+

Systems Engineering & Automated V&V Software

SAM

\$4.5B

Safety-Critical Operations — Space, Aviation, Auto

SOM

\$350M

Space Sector V&V & Telemetry (Beachhead)

FUNDING ASK

Seed round to ship Phase 2.

RAISING

€500K Seed

RUNWAY

18 – 24 months

USE OF FUNDS

- Core team of 3
- Sales & marketing
- Phase 2 use cases
- OEM pilot partnerships

18-MONTH TARGETS

What we deliver.

ARR TARGET

€500K – €1M

TRACTION

Convert ESA/ESOC and M&C vendor PoCs into multi-year enterprise contracts.

ADOPTION

3+ satellite ops teams running Steriod in production.
1 customer citing Axiom in a formal regulatory V&V report.

Let's make Axiom the standard to define safety-critical systems **behaviour**.

PRODUCT

Phase 1, shipped

Connectors, Axiom engine, desktop app, and results dashboard implemented and running today.

TRACTION

Validated where it counts

European M&C vendor PoC active. ESA SWPA reception (ESOC). Track record on NAVISP and OPTIMUS.

THE ASK

€500K seed

Keep the engineering team running, ship features, and fund business development activities.

Marton Szabo

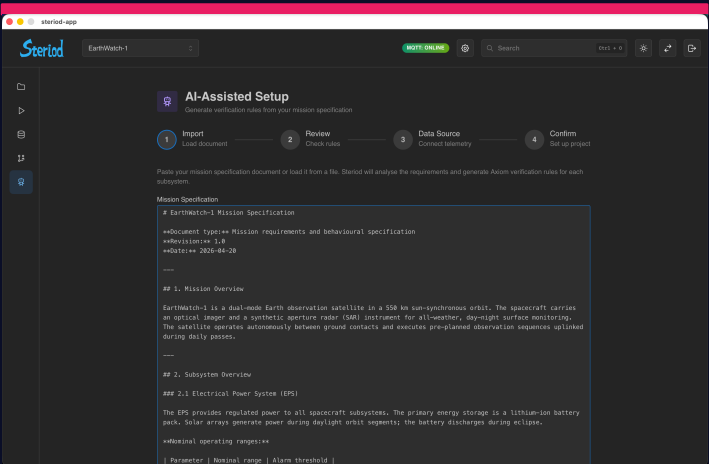
Co-Founder, Steriod

Email ping@steriod.ai

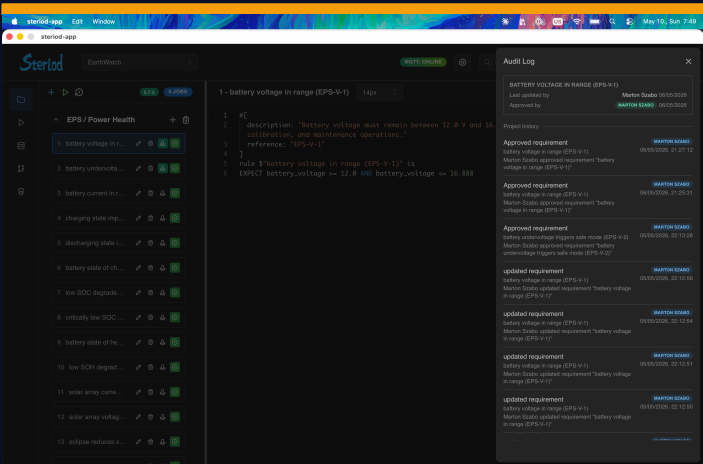
Web steriod.ai

Build the rules.

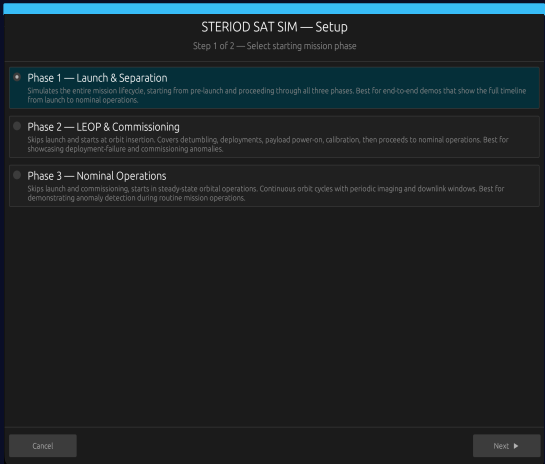
Plain-language specs become Axiom rules. Domain experts review them in plain text. Every change is captured in the audit log.



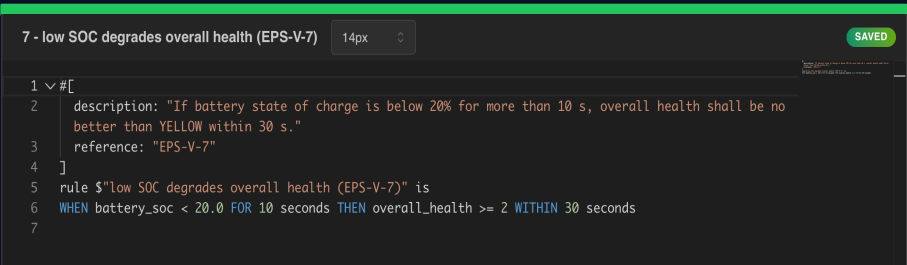
AI-ASSISTED SETUP



RULE EDITOR + AUDIT LOG



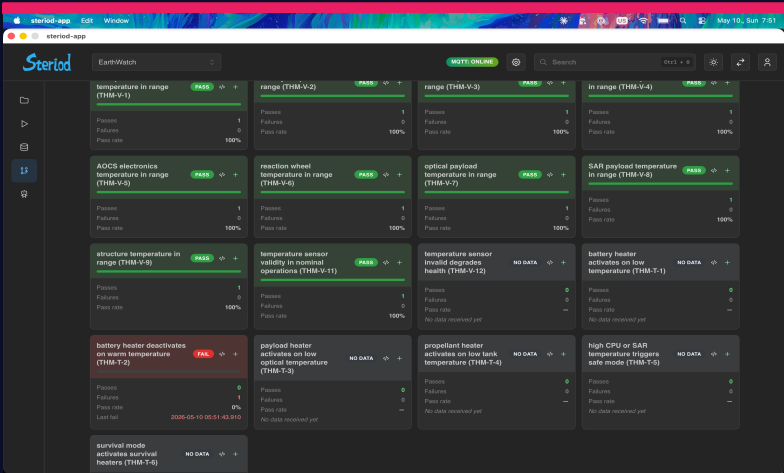
MISSION SETUP



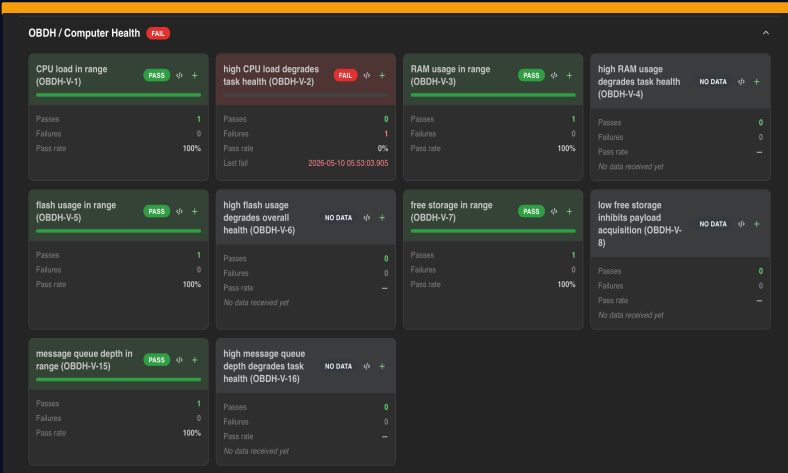
PLAIN-TEXT AXIOM RULE

Run on real telemetry.

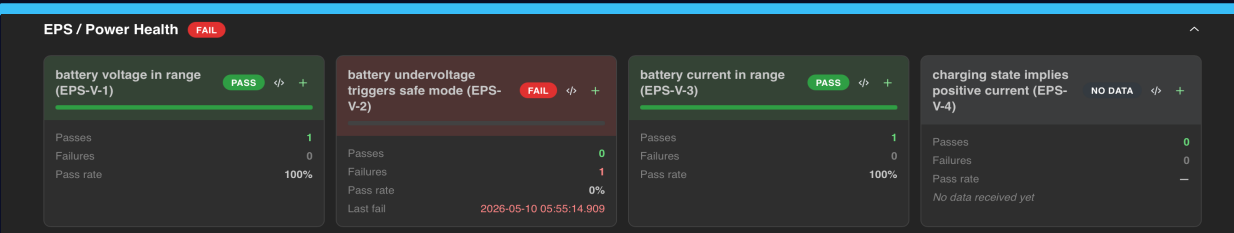
Live or recorded streams. Every rule passes, fails, or recovers — visible in the dashboard, traceable to its requirement.



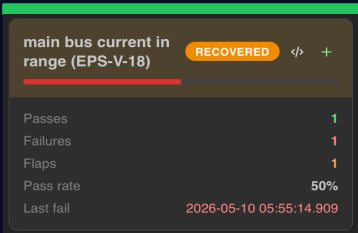
MISSION HEALTH DASHBOARD



SUBSYSTEM HEALTH DETAIL



PASS / FAIL TILES



RECOVERY TRACKING