EON AI VENTURES · WORK INTELLIGENCE · AEROSPACE

EON Universal Aerospace

Facility-Agnostic Training & Field Intelligence

Turning any worker into a multi-year expert.

A composable equipment ontology for aircraft maintenance, repair & overhaul.

Built for line & base maintenance — airframe, powerplant and systems.

EON AI Ventures

White Paper Companion Deck · July 2026

THE OPPORTUNITY

Any technician. Any tail.

The licensed engineers who hold decades of judgment are retiring, and the AMT/B1-B2 shortage is widening. The technicians replacing them are green — in a domain where being wrong is an airworthiness and escalation problem, not an inconvenience.

Recognise

Names every component on sight.

Guide

Composes the correct procedure, step by step.

Escalate

Stops and hands off to a human when unsure.

The worker is green. **The guidance is not.**

THE CORE INSIGHT

Composition, not enumeration

An aircraft isn't a monolith to be memorised. Across every type, maintenance is performed on a finite library of known components — the same pumps, actuators, valves, generators and LRUs, organised by ATA chapter.

Think of a language. You could memorise every full sentence you'll ever need — endless and hopeless. Or you learn the **words** and build any sentence. EON Universal learns the **components** — then composes any system, on any tail.

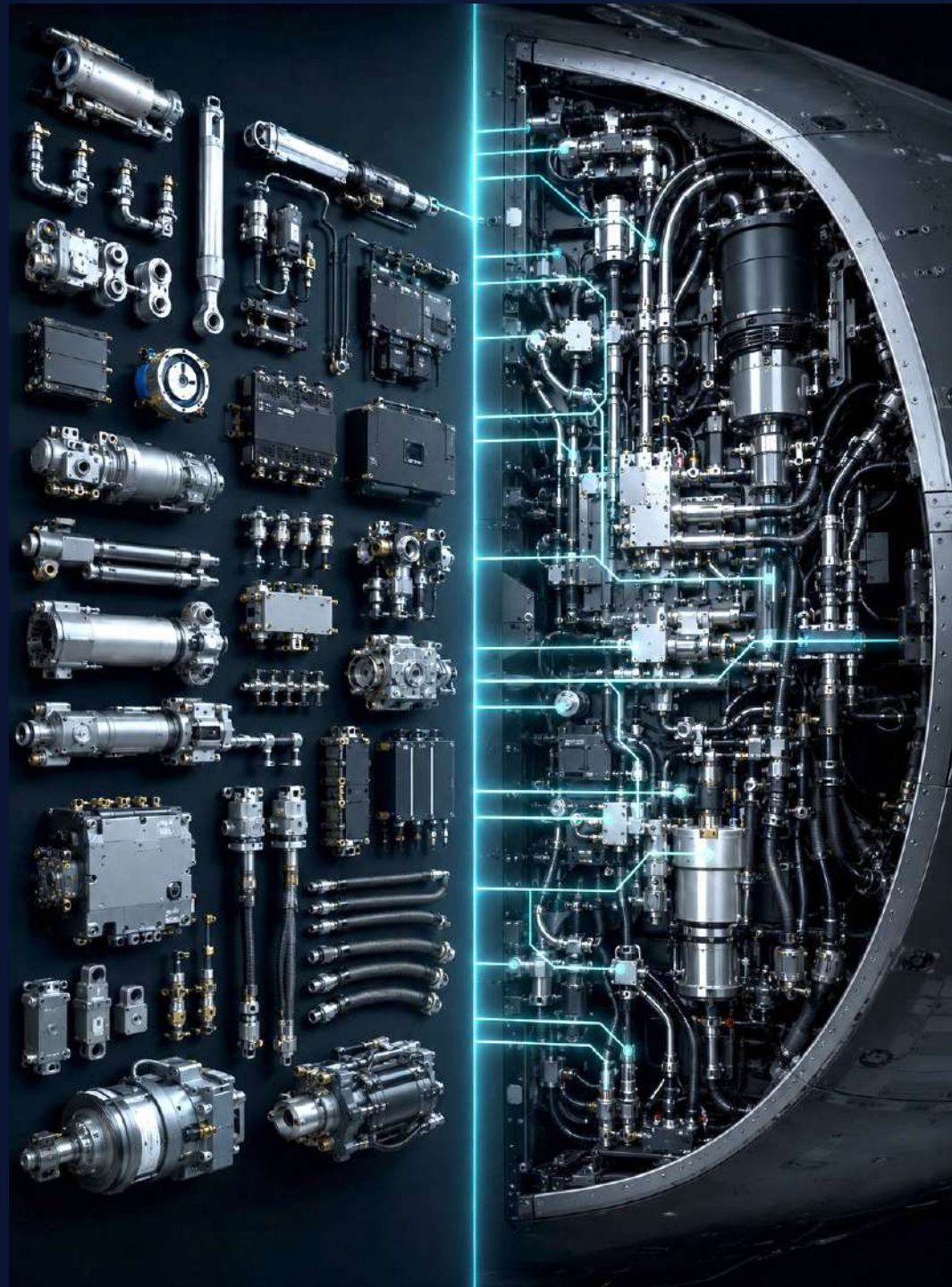
Enumeration — model every site

- Scales with the number of sites — unbounded
- Every new site is a new modelling effort
- Permutations are effectively infinite — hopeless

Composition — model the vocabulary

- Scales with component classes — bounded, ~50 to start
- Recognise nodes, infer topology, compose
- Every job makes the system smarter — it compounds

You don't model every aircraft type. **You model the components every type is built from.**



THE BOUNDED LIBRARY

Fifty classes, not five hundred tail numbers

~50	15	80%+
equipment classes to start	top classes carry most daily value	of real field interactions covered

Built on ATA iSpec 2200 (ATA chapters) — aviation's own system-numbering standard, the de-facto taxonomy for every maintenance manual. When the system recognises a component, its output maps straight into the AMM task, the part number and the operator's MRO / M&E records. It speaks their data language on day one.

TIER 1

~50 classes

Core LRUs a technician touches — 80%+ of line tasks

TIER 2

~300 types

Variants by type & effectivity — rarely surprised

TIER 3

1,000–2,000

Maintainable items: seals, bearings, bushings, fasteners

Each class carries a six-layer competence record — see next.

WHAT 'KNOWING A COMPONENT' MEANS

The six-layer competence record

1 Identity
ATA chapter, part no., aliases

2 Geometry
3D model + multi-angle imagery

3 Anatomy
Subcomponents & boundary

4 Function
What it does; operating envelope

5 Behavior
How it responds to upsets

6 Procedure
Operate · inspect · isolate · fix

Recognition keys on layers 1–2. Guidance composes from layers 3–6.

ONE METHOD, EVERY HEAVY INDUSTRY

The same engine, beyond aviation

Because the system understands components rather than memorising aircraft, the method transfers to any industry built from a finite parts vocabulary. Learn the parts once; help every asset built from them.

Aerospace & MRO

Fleet LRUs · ATA iSpec 2200

THIS DECK'S FOCUS

Oil, gas & petrochemical

~50 classes · ISO 14224

First library in build

Mining & heavy equipment

Fleet + fixed plant*

Same composition logic

Power & energy

Turbines, switchgear, BOP*

Adjacent vertical

**Illustrative — class families are representative; aviation anchors to ATA chapters, oil & gas is the first library in active build.*

THE DIFFERENCE

Genesis shows the steps. EON Universal understands the work.

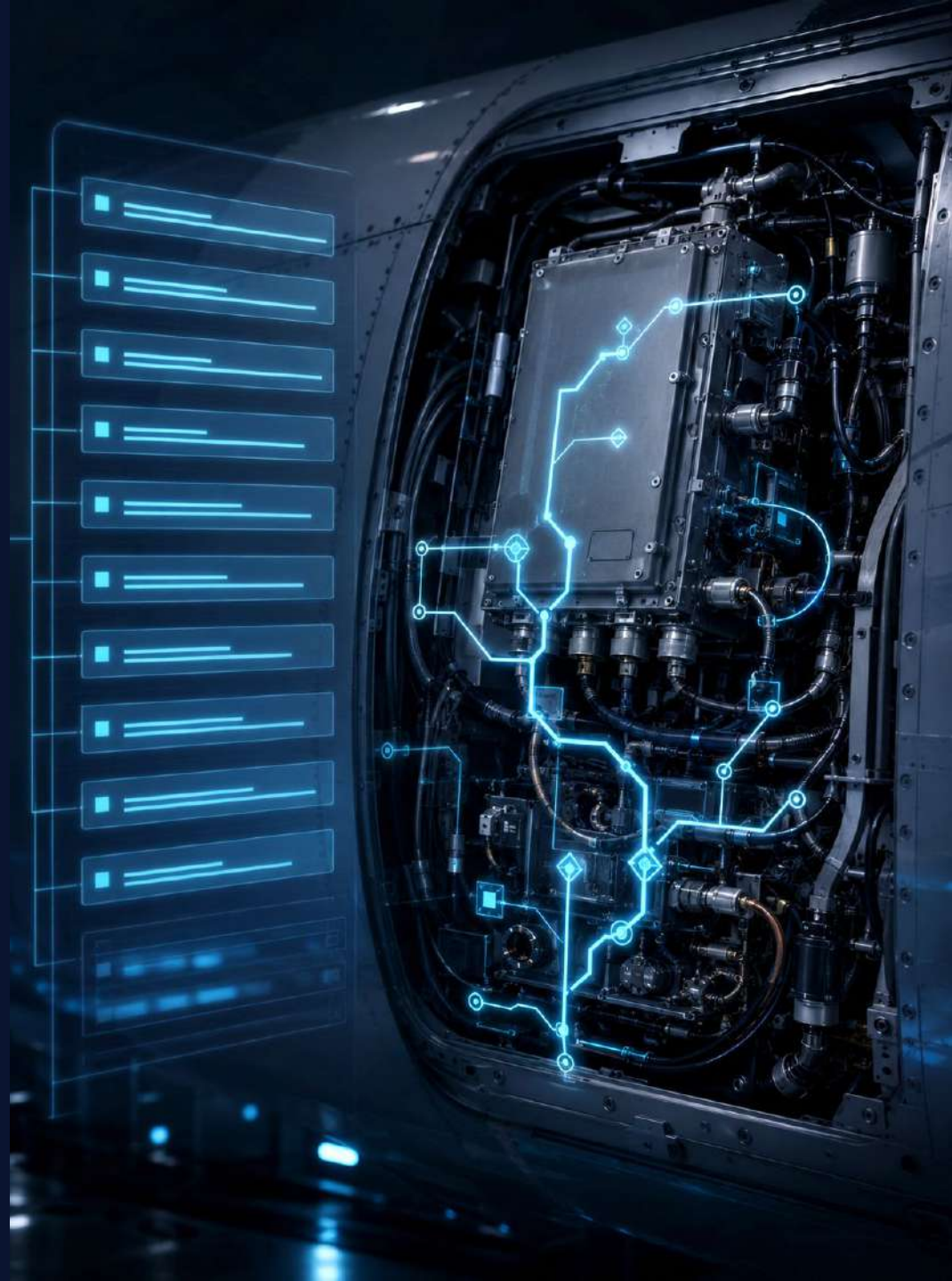
GENESIS — the core engine

- Needs 3D models supplied to it
- Handles sequential SOPs only — not conditional
- Knows what to do/show, but not why
- Cannot configure different capabilities
- Does not recognise things in real life

EON UNIVERSAL — intelligence + library

- The component library + the configurator
- Conditional SOPs that branch on live conditions
- Explains why each step matters
- Generalises to LRUs and types it has never seen
- Recognises equipment on sight — feeds FieldIQ + Holodeck

This is the step nobody has taken — not even a simulator. **That understanding is the entire product.**



IN THE TRAINING CENTER

What EON Universal makes possible

Each part explains what it is, how it works — and lets you try it.

Talking components

Branching task cards with safety gates: depressurise hydraulics before removal.

Conditional procedures

Inject a fault; the trainee must recognise and respond, not follow a script.

Fault diagnosis

Unlimited, configuration-valid system layouts from one component library.

Generative configurations

Defensible, scored evidence a worker is ready — against the standard.

Certification

Every session improves the shared library for the next worker.

Compounds

THE PROOF — USE CASE 3

Conditional SOPs: procedures that branch

A fixed SOP is a straight line. A conditional SOP is a decision tree with safety gates — the next action depends on a live condition. Only authorable because Universal understands the equipment.

Isolate & tag
safety the system

›

Stored pressure still present?
accumulators · gear

›

Bleed down
re-check ↺ loop

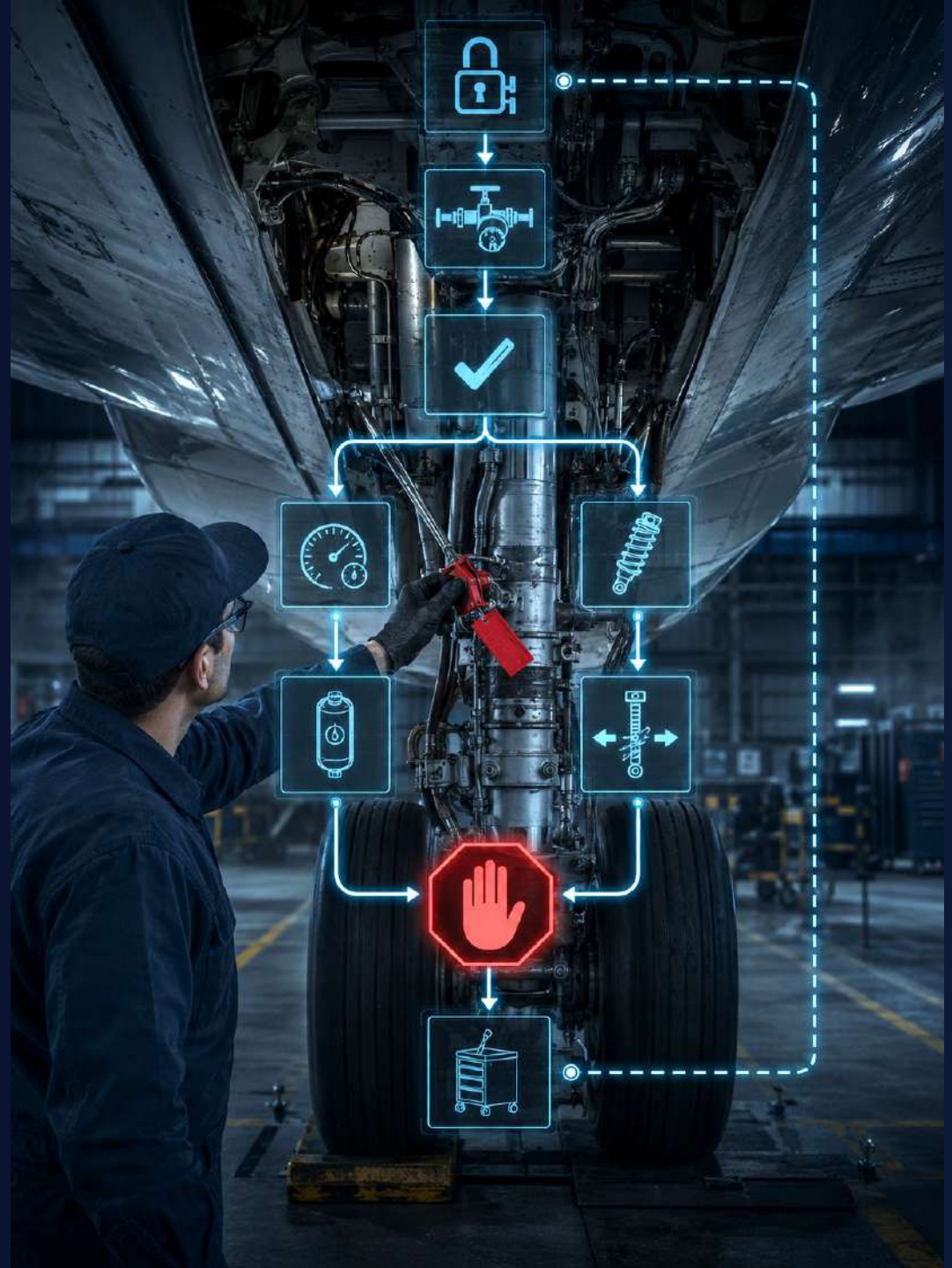
›

Proceed to remove
E=0 · P=0 · safe

Abnormal → STOP & escalate (Verdict)

Why this is the proof. The 'stored pressure still present?' branch only exists because Universal knows a hydraulic accumulator holds pressure after shutdown — and a charged landing-gear strut stores energy. **Genesis has no concept of stored pressure — so it cannot branch on it.**

Seven training use cases: talking components · guided & scored SOP · conditional SOPs · fault injection · generative configs · AR-only practice · certification



ONE SYSTEM, THREE SURFACES

Author once — deliver everywhere

ANYWHERE

Phone / AR glasses

AR-only at 1:1 scale. Practice off-base with no aircraft on the dock.

IN THE HANGAR

Tablet / AR on the airframe

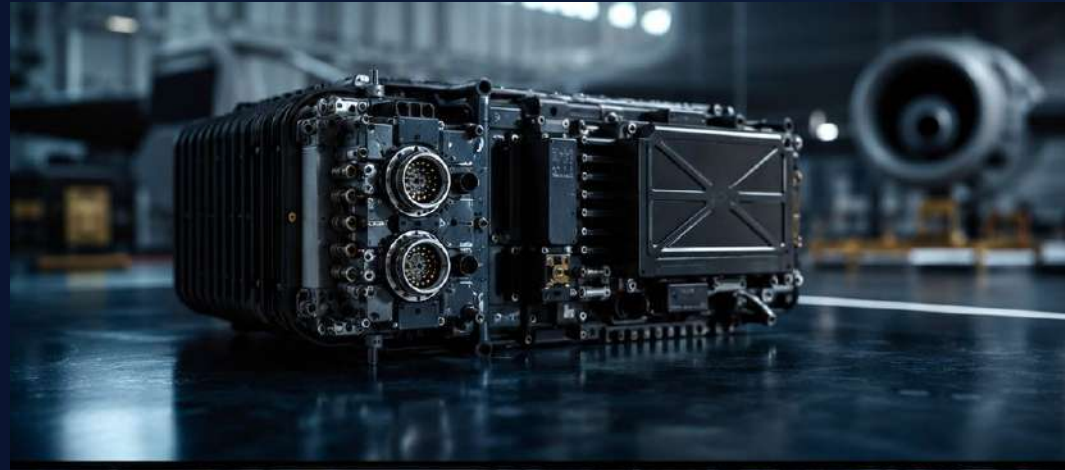
LiDAR overlays the digital twin onto the real aircraft — each LRU tappable.

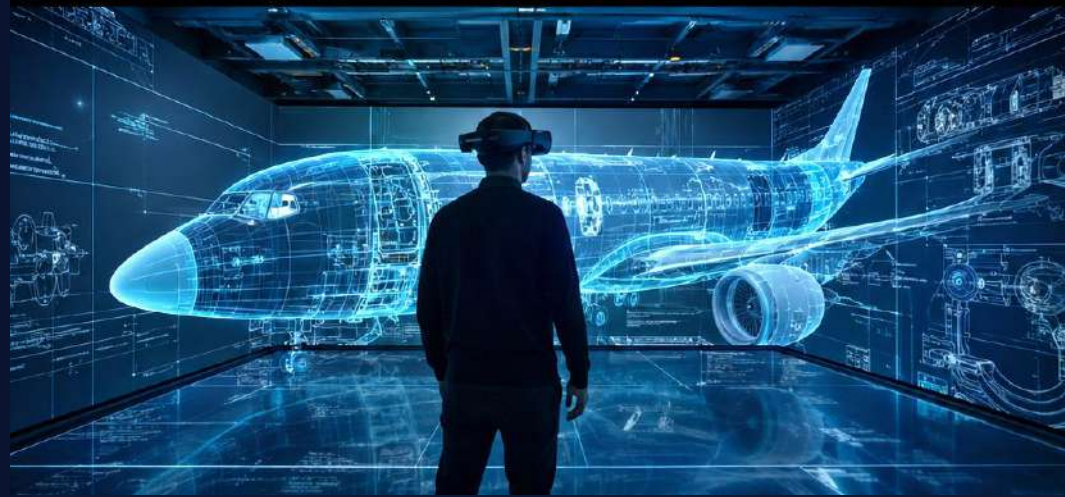
IMMERSIVE

The CAVE (Holodeck)

LED walls and floor surround the trainee in a generated bay at full scale.

Phone off-base → tablet/AR on the airframe → CAVE for immersive, infinite training. The same understanding drives all three. The CAVE — a modern LED reborn iCube — is the premium upsell tier.





HOW WE BUILD IT

The Pyramid — layer by layer

6 Field	Use everything in the real field — the eventual goal
5 SOPs	Standard procedures applied on the foundation
4 Foundational skills	Must-know basics, especially safety
3 Function	What each labelled component does
2 Label	Every component identified and tagged
1 3D model	An accurate model — the base of everything

You cannot skip a level. Layers 1–4 understand components, not facilities — which is exactly the bridge to the universal solution.

THE ARCHITECTURE & THE VALUE

Own the work, not the weights

Genesis

The core engine. Models, labels, runs step-by-step SOPs.

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EON Universal

Adds intelligence, the library, the configurator, recognition.

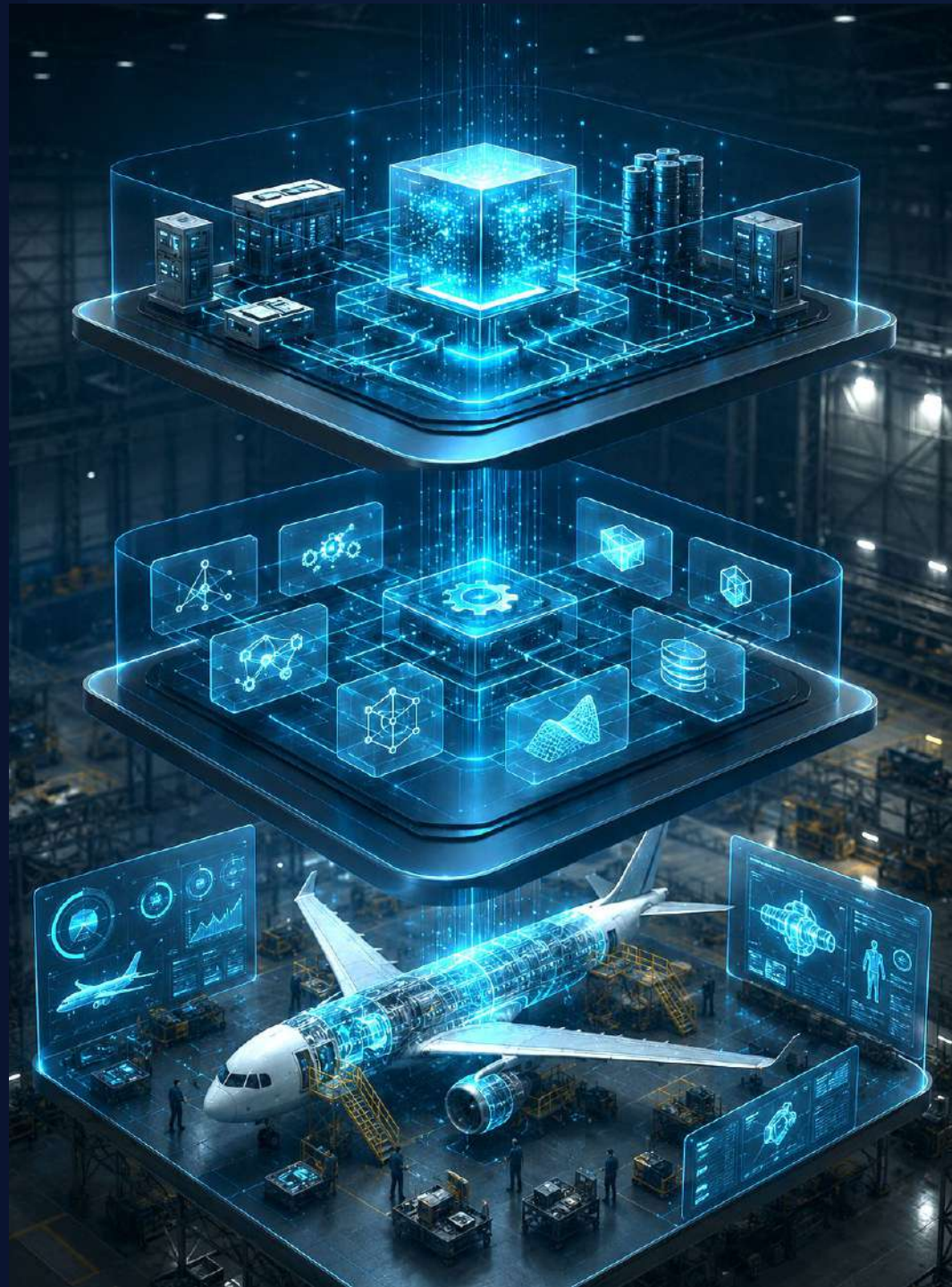
›

Field IQ + Holodeck

Delivery: field recognition, on-the-spot guidance, scenarios.

- Every job makes the system smarter — a product that compounds.
- Works on facilities it has never seen — recognise, infer, compose.
- A bounded library you own — not a per-site modelling cost forever.

Genesis shows the steps. **EON Universal understands the work.**



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