EON AI Ventures

The Gap Between the Classroom Door and the Job

Why industrial work has two categories of supplier, neither of which is present at the moment that matters most

Summary

Organisations in high-risk industries buy from roughly ten categories of supplier, and those categories sort cleanly into two halves.

One half teaches people about the work. Classroom providers, e-learning, immersive scenario content, bespoke simulation, competency records. This half knows the training buyer, holds the accreditation, and its involvement ends when the session ends.

The other half sits inside operations. Process simulators, connected worker applications, control-of-work and EHS platforms, engineering digital twins, remote assistance. This half is present during the work, and it begins from the assumption that the person doing the work is already competent.

Between those two halves is a gap. The training half stops at the classroom door. The operations half starts after competence is assumed. Nothing occupies the space in between — the moment a specific person meets a specific machine and does something for the first time.

This paper describes that gap, argues that neither half can close it from where it stands, sets out what closing it actually requires, and offers four questions any buyer can use to work out which half a supplier belongs to. It names no companies and makes no claims about anyone else's product.

1. Two halves that have never met

The division is not a matter of quality. Both halves contain excellent products doing exactly what they were designed to do. The division is structural, and it comes from how the market was built.

Training was historically a room. It had a budget, a department, an instructor, a calendar and an attendance sheet. Everything that grew out of it — the LMS, the e-learning catalogue, the VR headset programme — inherited the shape of the room. The output is a person who has been taught, and a record that they were.

Operations was historically a system of record. It had permits, work orders, maintenance histories, incident registers. Everything that grew out of it — the control-of-work platform, the connected worker application, the engineering twin — inherited the shape of the record. The output is an account of what was done.

The two halves were bought by different people, from different suppliers, on different budgets, to satisfy different auditors. There was never a reason for either to cross into the other, and no supplier had a commercial motive to try.

Where each half stops

Half	What it produces	Where it stops
Teach about the work	A person who has been taught, and a record of it	The classroom door. It has no visibility of what happens afterwards
Simulate the work, in a room	High-fidelity behaviour for a small population, usually control-room operators	The control room. It does not travel to the equipment
Record the work	An account of what was done, entered by the person who did it	What the worker reported. It cannot observe
Run the work	Guidance at the moment of the task, and evidence of what actually happened	This is the gap

2. What falls into the gap

Four situations sit squarely in the space between the two halves. None of them is exotic. All of them are routine.

The first time on the real thing

A person has completed the course, passed the assessment and been signed off. They now approach a specific machine, in a specific configuration, in specific weather, for the first time. Everything that prepared them was general. Everything in front of them is particular. No system is present for that transition.

The plant that changed

Training content is authored against a plant as it was. Plants are modified continuously — a valve relocated, a pump replaced with a different model, a line re-routed during a turnaround. The content ages from the day it is finished, and re-authoring it is a project, so in practice it is not re-authored. The worker reconciles the difference in their head, alone, at the equipment.

The contractor

In many operations, contractors account for the majority of exposed hours. They arrive for a defined period, they work across several operators whose standards differ, and they leave. They are the hardest population to train and the least likely to be reached by anything installed inside one operator's systems.

The moment of judgment

Something is not as expected. The isolation looks wrong, the reading is odd, the permit does not match the job in front of them. The decision is made in seconds, by one person, usually without anyone to ask. Training rehearses this. Nothing observes it.

3. Why neither half can close the gap from where it stands

This is the part that matters, because it explains why the gap has persisted rather than being quietly closed by a product update.

- **Authored content cannot anticipate. In most training content, every consequence a learner encounters was written in advance by a person. That is a strength for rehearsing a known judgment call and a hard ceiling elsewhere: the learner cannot ask a question the author did not think of, and the customer's own equipment can only appear if someone builds it, at a cost that repeats for every asset.**
- **Records cannot observe. A digital work instruction records that a step was marked complete. That is genuinely better than paper. It is not the same as knowing what happened — and no amount of dashboard sophistication turns a self-reported entry into an observation.**
- **Fidelity does not travel. The deepest models in this market are extraordinary and they live in the control room, coupled to the control system, serving tens of people. They were never designed to walk out to the equipment with a technician, and re-engineering them to do so would make them something else.**
- **Accreditation does not scale to the particular. Accredited providers hold something no software vendor can manufacture: authority to certify. But a certificate attests to a general standard, and the gap is made of particulars — this machine, this configuration, this crew, this shift.**

Each half is structurally excellent at its own job and structurally unable to do the other one. That is why the gap is a gap rather than a feature request.

4. What closing it actually requires

Whoever closes this gap — and it does not have to be us — has to solve six problems at once. We set them out generically because they are properties of the problem, not of any product.

#	The requirement	Why it is hard
1	A model of the equipment that carries function, not just shape	Geometry alone cannot support a procedure. The model has to know that a component is a seal, that seals fail, and what failing means
2	A way to build that model without a modelling project	If each asset costs a project, the tenth site never happens. The build has to come from what the customer already has: photographs, drawings, scans
3	Consequence that is computed, not written	So the system can answer a question nobody anticipated, and so it does not go stale when the plant changes
4	Presence at the point of work, including without a signal	Much of the work happens where there is no connectivity and where certified hardware is mandatory
5	Capture of the difference between the guidance and the action	This is the only measurement that is not a proxy. It is also the only one that improves the model over time
6	Evidence that survives an audit	A score inside a training tool is not evidence. The output has to be an artefact a regulator, an insurer or an internal auditor will accept

Any supplier claiming to work in this space should be able to say clearly which of the six they do, which they do not, and which they intend to. So should we.

5. Four questions worth asking any supplier

These separate the categories faster than a feature comparison, and we are content to be judged by our own answers.

- **Does your measurement come from a simulation, or from the job? A readiness figure derived from a training exercise is a proxy. Ask what it is a proxy for, and how well it has been shown to predict behaviour on the plant.**
- **What do you hand a regulator or an auditor as evidence? Ask to see the artefact, not the dashboard.**
- **Who helps the worker at six in the morning, at the equipment, with no signal? Many products in this market are excellent and end when the session ends.**
- **When the plant changes, who rebuilds the content, how long does it take and what does it cost? Ask for the answer for the second and the tenth procedure, not the first.**

6. What we do not claim

A paper that only describes other people's limits is marketing. These are ours.

- We do not match the process fidelity of a dedicated operator training simulator, and we do not try to.
- We do not issue permits, authorise work or certify anyone. Our systems are advisory by design and the authority stays inside the customer's management system.
- We do not accredit and we do not award certificates. That authority belongs to accredited providers and standards bodies, several of which we work with rather than against.

- Our model of a facility is generated rather than surveyed. It is not a substitute for engineering-grade as-built geometry.
- Our physics layer does not yet cover every medium we intend it to cover, and we would rather say so than be found out in a technical evaluation.
- Our capabilities are at different levels of maturity. Ask us which, and ask for a live demonstration of the specific one that matters to you.

7. An invitation

Do not take this paper as evidence, ours or anyone else's. Two tests are worth more than a month of evaluation documents.

> *Send one procedure and photographs of the equipment it applies to. Ask any supplier — including us — to put your machine into their product, and to tell you how long it takes and what it costs the second and the tenth time.*

Then ask each of them to show you exactly what an auditor would receive at the end. One of those answers will be a claim. One of them will be evidence. The difference is the gap this paper is about.

About this paper

Written and published by EON AI Ventures Pte Ltd, August 2026. It describes categories of product and service as we understand them from publicly available information at the date of writing. It names no company and makes no assertion of fact about any identified product. Capabilities in this market change quickly, and we will review this paper every six months.

Nothing here is legal or regulatory advice. Where regulation is referred to, read the rule itself rather than our description of it.

If you represent a supplier in one of the categories described and believe we have characterised it unfairly, please write to us. We will review and correct it.