

Show it once. Train everyone.

How an expert's demonstration on a digital twin becomes a complete, governed training package



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Executive summary

Every industrial organisation knows the bottleneck in training. The people who know a procedure best are the experienced operators, mechanics and technicians who are busiest, hardest to schedule and, increasingly, close to retirement. Turning what they know into training means interviews, storyboards, document drafting, 3D production and review cycles, and the work is repeated for every deliverable the learning and development (L&D) team has to hand over.

EON already removes much of this cost in two places. **EON Universal** builds a 3D twin of equipment from ordinary photographs. **Genesis 3** turns a written procedure into a scored simulation that runs in a browser, on a tablet or in a headset. **EON Tacit** captures expert interviews. What none of them does is capture the expert's

know-how while the expert is working on the equipment, settle the disagreements that every real review produces, and deliver the full set of materials an L&D department must publish.

EON Handover fills that gap. It works in five stages:

1. **Twin.** EON Universal builds a virtual skid from photos, with separate, named parts.
2. **Draft.** AI drafts the procedure from the twin and from any existing standard operating procedure (SOP).
3. **Show & Tell.** The expert plays through the draft on the twin, talking, zooming, clicking and highlighting. Handover records all of it and turns it into structured steps.
4. **Handover Room.** The team puts the procedure on a big screen, debates it, and agrees. Handover logs every view and applies agreed changes live.
5. **Publish.** One structured record produces the SOP, a quick reference card, a narrated video, the Genesis simulation, a quiz and an on-the-job sign-off sheet.

A manual Step Editor is available at every stage for precise edits and enhancements. Every statement in the record carries its source and time stamp, nothing is published without named approval, and critical steps require sign-off by health, safety and environment (HSE) reviewers.

THE IDEA IN ONE LINE

The expert shows the job once on a digital twin. The organisation gets every training deliverable it needs, kept in step with one approved record.

1. The problem: training waits for the expert

Industrial training content is expensive because it is slow, and it is slow because it depends on a small number of people. By the industry estimates EON published with Genesis 3.0, building one XR training module the traditional way takes six to twelve months and costs between \$50,000 and \$150,000, with 3D artists, software developers and instructional designers working in sequence. In some industries, half of experienced experts are expected to retire within five to seven years.

The cost of the simulation is only part of the story. For each procedure an L&D department typically has to produce:

- the written SOP, in the organisation's own template and language;
- a short field reference or checklist;
- a demonstration video or e-learning segment;

- a knowledge check;
- a practical assessment for on-the-job sign-off;
- and, where the budget allows, a simulation.

Each of these is usually produced separately, by different people, from notes taken in different interviews. When the equipment or the standard changes, every one of them must be found and updated by hand. They drift apart, and trainees learn from whichever version they happen to open.

Why interviews alone are not enough

Recording an expert's voice captures valuable judgement, but without the equipment in front of them the expert's words lack context. "Close that one first" means nothing in a transcript. Experts also skip what has become automatic to them. The reasons, cues and small checks that make a procedure safe are often exactly the parts that never get said.

2. What already exists, and what is missing

Handover is deliberately built on products EON already ships. It does not rebuild them.

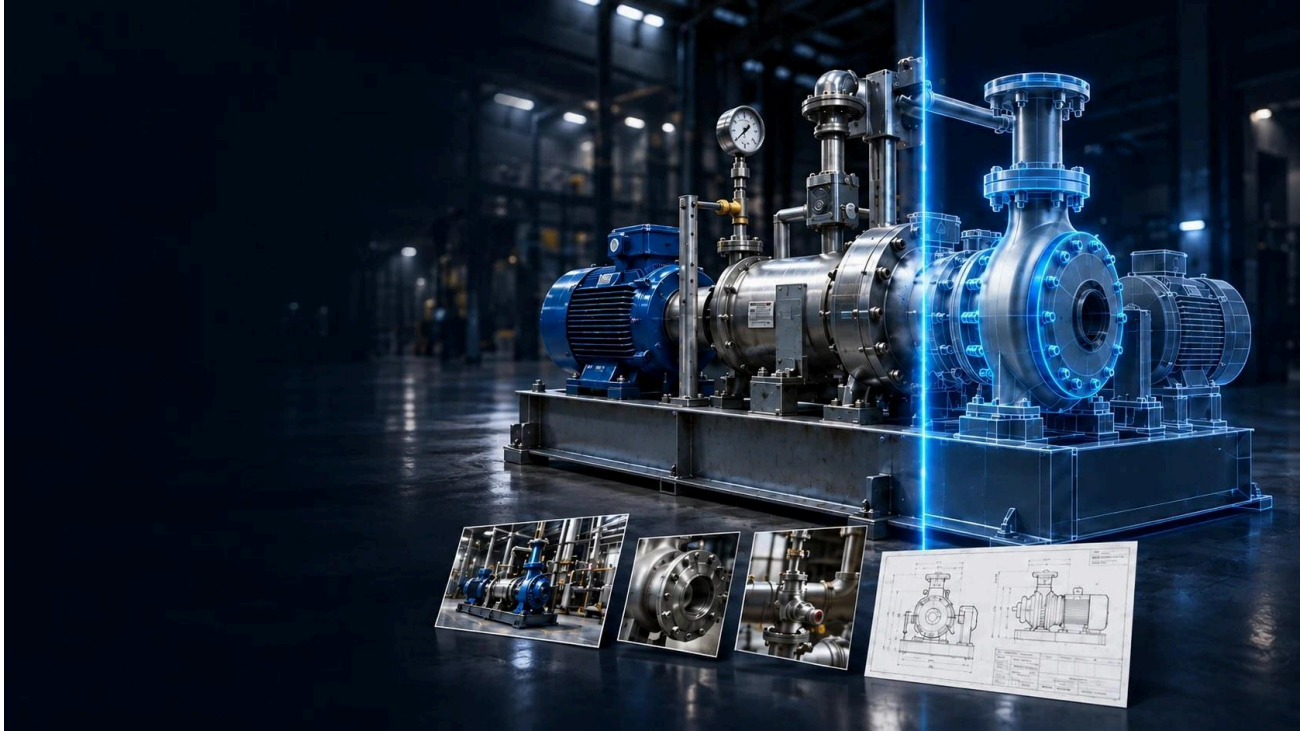
Product	What it already does	What it does not do
EON Universal	Turns ordinary photos into a 3D twin with separate, named parts.	Capture how the equipment is operated or maintained.
EON Tacit	Captures structured expert interviews and links knowledge by topic.	Capture know-how in the context of the equipment. Interviews are voice only.
Genesis 3	Turns a procedure into a scored simulation with Show Me, Train, Let Me Try and Evaluate Me modes on any device.	Capture the procedure from a person, or publish the wider L&D deliverables.

Three things are missing, and they are what Handover provides:

- 1. Know-how captured in 3D context.** The expert's words are tied to the exact part, view and action on the twin.
- 2. The full L&D package.** Documents, video, quiz and sign-off sheet as well as the simulation, all from one record.

- 3. The team's debate, settled and recorded.** Real procedures are agreed in a room, by people who disagree. Handover makes that session productive and keeps its decisions.

3. How EON Handover works



Handover starts from a virtual skid built by EON Universal from ordinary photographs.

3.1 Twin: start on a virtual skid

Capture never happens in front of the real equipment. EON Universal builds a 3D twin from photographs of the skid or machine, with each part separated and named. The expert works at a desk, on a tablet or on the training-room screen. Nothing has to be shut down and nobody has to travel to site.

3.2 Draft: the AI goes first

Experts react well and write badly. So Handover never starts from a blank page. Using the twin's part knowledge, and any SOP or reference document the customer provides, the AI drafts a first version of the procedure: the steps, the parts involved, likely hazards and the checks a competent person would expect. This reuses Genesis's existing procedure drafting. The draft is explicitly marked as AI-generated until a person confirms each step.

3.3 Show & Tell: the expert talks, Handover listens

The expert plays through the draft on the twin and talks, as they would to an apprentice standing next to them. They zoom in, click a valve, highlight a gauge and say what they are doing and why. When the draft is wrong they say so: "No, first you close the discharge." Handover records:

Signal	What Handover keeps
Voice	A time-stamped transcript, linked to every step it describes.
Clicks and highlights	The exact part on the twin, by its identifier and name.
Zoom and camera	The view the expert chose for each step, reused in video and simulation.
Corrections	Reordered, added or removed steps, with the words that caused the change.

An AI co-pilot listens throughout. It reuses the interview prompts proven in EON Tacit to catch the knowledge that experts tend to skip. When the expert states a conclusion without a reason, it asks for the reason. When they hint at a sound, a feel or a reading, it asks exactly what and where. It asks at most one question at a time and never interrupts. A typical prompt: "What tells you the casing is at zero pressure?"

After the session the AI segments the recording into steps, aligning each pause in speech with the part being clicked, and fills a structured record for each step. The expert then reviews the result in the Step Editor.

3.4 The Step Editor is always available

Some experts prefer to work meticulously, one part at a time. Everyone needs to fix things. The Step Editor is the manual mode: click a part, a window opens, and the expert says or types what happens there. They can reorder steps, re-record a single step, add a warning, a branch or an effect. The Step Editor is available before, during and after every other stage, and it is where later enhancements are made.

3.5 Handover Room: settle it on the big screen



The Handover Room is designed for the way procedures are actually agreed: around a shared screen, with people who disagree.

In most training centres a procedure is agreed when someone puts it on the projector and the room argues it out. The senior operator does it one way, the maintenance lead another, and the HSE adviser has a view on both. That debate produces the best procedure, but today its conclusions live in someone's notebook.

The Handover Room turns that session into a structured, recorded workshop:

- The twin and the step list are shown on the big screen. Remote participants join by link.
- Handover listens, attributes each view to the person who expressed it, and opens an **open question** card whenever people disagree.
- When the room agrees, the facilitator confirms and the change is applied live to the steps and the 3D view.
- A **decision log** records what changed, why, and who agreed. Disagreements stay visible until they are resolved.
- The session ends with **named sign-off** by role: expert, L&D, HSE and supervisor.

3.6 Publish: one session, the whole L&D package

Once the record is approved, Handover generates the training package. Six outputs are available at launch. Others are visible in the product and marked Coming soon, so customers can see where the product is going.

Launch output	What it is
SOP	Word and PDF, in the customer's template, with steps, reasons, cautions, tools and PPE.
Quick reference card	A one-page field version of the procedure.
Narrated video	A replay on the twin using the expert's chosen views, with captions. The narration uses the expert's voice with consent, or a synthetic voice.
Genesis simulation	The procedure delivered to Genesis 3, ready for Show Me, Train, Let Me Try and Evaluate Me.
Quiz	Multiple-choice and click-the-part questions, generated from the reasons and cautions in the record.
On-the-job sign-off	A practical checklist for assessors, with critical steps marked.

Coming soon	What it adds
HTML training pages and microsite	A browsable web version of the procedure and its media.
LMS package	SCORM, xAPI and cmi5 packages for the customer's learning management system.
Video quizzes	Interactive video with questions at key moments.
Foundational skills modules	Component-level lessons: what each part is, what it does and how it fails.
Instructor guide and slides	Material for classroom delivery.
Job hazard analysis draft	A starting point for the formal hazard analysis.
Translations	Documents, captions and narration in additional languages.
Field IQ AR work instructions	Step-by-step guidance on AR glasses and phones in the field.
Audit evidence pack	The record, decision log and approvals, compiled for auditors.

4. The Procedure Record: one source of truth

The transcript is not the deliverable. Handover's core object is the **Procedure Record**: a structured description of the procedure, step by step, in which every field carries its provenance.

Field	Example (step 4 of a pump lockout)	Source
Part	V-101 suction isolation valve	Clicked
Action	Close fully, clockwise, until seated	Said at 0:42
Why	The tank can backfill the pump; trapped liquid sprays when the casing opens	Said at 0:48
Cue	Handwheel stops; indicator reads CLOSED	Said at 1:05
Hazard	Stored pressure, liquid release	Existing SOP
PPE	Gloves, face shield	AI-inferred, needs confirmation
Critical	Yes. Requires HSE sign-off.	Set by reviewer

Every output is generated from this record. When a step changes, the SOP, card, video, simulation, quiz and sign-off sheet regenerate together, under a new version number that keeps its own approvals and decision log. When equipment or a standard changes, the expert re-records only the affected steps.

5. Trust in safety-critical work

An AI-drafted procedure is only useful if a process-safety team can accept it. Handover is designed around six rules:

Rule	How it is enforced
Nothing publishes without a named approval	Publishing is blocked until the required roles have signed the current version.
Critical steps need HSE sign-off	A step marked critical cannot be approved by the expert or L&D alone.
Every statement is traceable	Each field links to its source: a moment in the recording, a click, a document or an AI inference.

Rule	How it is enforced
AI-inferred content is flagged	Inferred items are visibly marked until a person confirms or removes them.
Rules decide; the AI explains	Safety gates such as lockout verification are deterministic rules. AI-written text can explain a gate but cannot change or bypass it.
People control their voice and data	An expert's voice or likeness is used in published media only with recorded consent. Recordings and models stay in the customer's chosen environment.

6. Worked example: lockout of a centrifugal pump

The following example is illustrative. It shows how the stages fit together on a common procedure.

- 1. Twin.** A technician photographs a pump skid from several angles. EON Universal produces a twin with the pump, motor, suction and discharge valves, drains, gauges and local isolator as separate, named parts.
- 2. Draft.** The training coordinator uploads the site's existing lockout SOP. The AI maps its steps to the twin and adds a verification step it expects but cannot find in the document. That step is flagged as AI-inferred.
- 3. Show & Tell.** A senior operator plays through the draft in 40 minutes. They reorder the valve isolation, explain why the suction side matters on this unit, and describe the cue they rely on to confirm zero energy. The co-pilot asks two follow-up questions; one answer becomes a new caution.
- 4. Handover Room.** The operator, a maintenance lead, an L&D designer and an HSE adviser meet for an hour. They disagree on whether to drain before or after applying locks. The disagreement is logged as an open question, resolved with the HSE adviser's reasoning, and the change is applied live. All four sign.
- 5. Publish.** The team receives the SOP in Word and PDF, a field card, a narrated video, the Genesis simulation, a twelve-question quiz and an assessor's checklist, all at version 1.0.

WHY THIS MATTERS

The expert's time is spent once, on the part only they can do. Everything that follows is generated, reviewed and approved, and stays consistent when the procedure changes.

7. What changes for the L&D team

	Today	With EON Handover
Expert time	Several interview sessions, then reviews	One Show & Tell session and one Handover Room session
Authoring	SOP, storyboard, video, quiz and checklist written separately	Six outputs generated from one approved record
3D and simulation	Built by a separate team	Twin from EON Universal; simulation delivered to Genesis 3
Review	By email, version by version	In one room, with a decision log and named sign-off
Change	Find and update every file by hand	Re-record the changed step; every output regenerates
Elapsed time	Weeks to months	Target: days

The time figures are targets. Each pilot measures expert hours, calendar time and review cycles against the customer's own baseline.

8. Beyond launch

The same capture and record support further uses. These are on the roadmap and are not part of the launch scope.

- **Capture on the real skid** with a phone or AR glasses, once Handover can reliably tell which real part the expert means.
- **Assessment by recording.** A trainee records themselves performing the procedure on the twin and Handover compares it with the approved record.
- **SOP drift audit.** Compare how experts at different sites actually perform the same procedure with what the document says.
- **Change management.** When equipment is modified or a standard is revised, re-record only the affected steps and re-approve.

- **Equipment makers.** A manufacturer records commissioning and maintenance once and ships the training package with the machine.
- **Incident learning.** An investigator narrates an event on the twin, and Handover turns it into a scenario.
- **Robot and physical-AI data.** Each approved record is a labelled demonstration of a task: part, action, reason and check.

9. Getting started: a one-procedure pilot

The fastest way to judge Handover is to run one real procedure through it, end to end.

We need from you	You receive
Photos of one skid or machine	The six launch outputs for that procedure
Half a day with one expert	The Procedure Record and decision log
Two hours with L&D, HSE and a supervisor	A measured comparison with how you build training today
The existing SOP, if there is one	

Conclusion

Training organisations do not lack content tools. They lack expert time, and they lose the value of that time when it is spread across separate interviews, documents and production teams. EON Handover spends the expert's time once, on the twin, where every word is tied to the equipment. It lets the team settle the procedure together, and it publishes everything L&D needs from a single approved record. Show it once. Train everyone.

About EON AI Ventures

Founded in 2001, EON AI Ventures is a global leader in immersive AI and XR learning for industry, government and academia. It has more than 4,400 institutional customers in over 80 countries, more than 136 million platform downloads, and a quarter-century of accumulated procedural and spatial content. EON already delivers immersive industrial training at scale, including for two of the world's largest energy operators, under contract today. The company operates from Laguna Beach, California (EON AI Ventures Inc.) and Singapore (EON AI Ventures Pte Ltd).

Figures on time and cost to build XR training are industry estimates published by EON AI Ventures in the Genesis 3.0 white paper (2026).

Handover time savings are targets to be validated in pilots.