



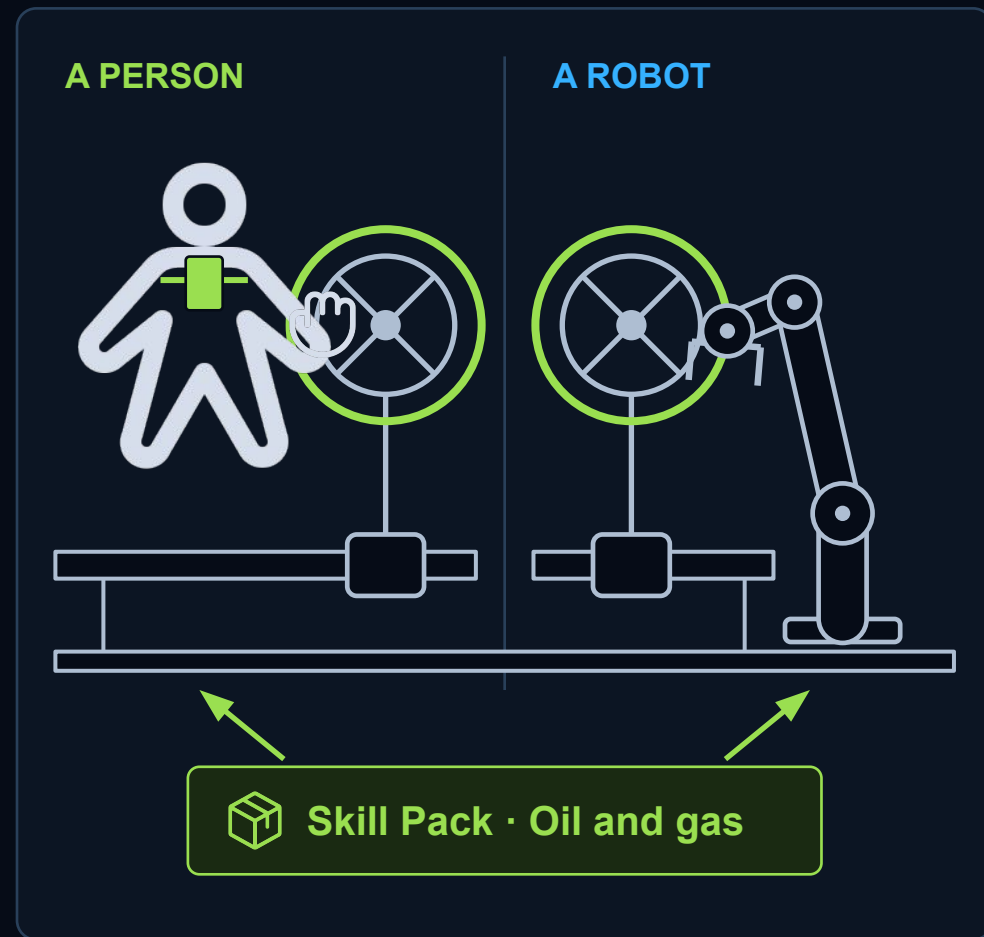
EON AI VENTURES · ROBOT IQ

Teaching robots with human know-how

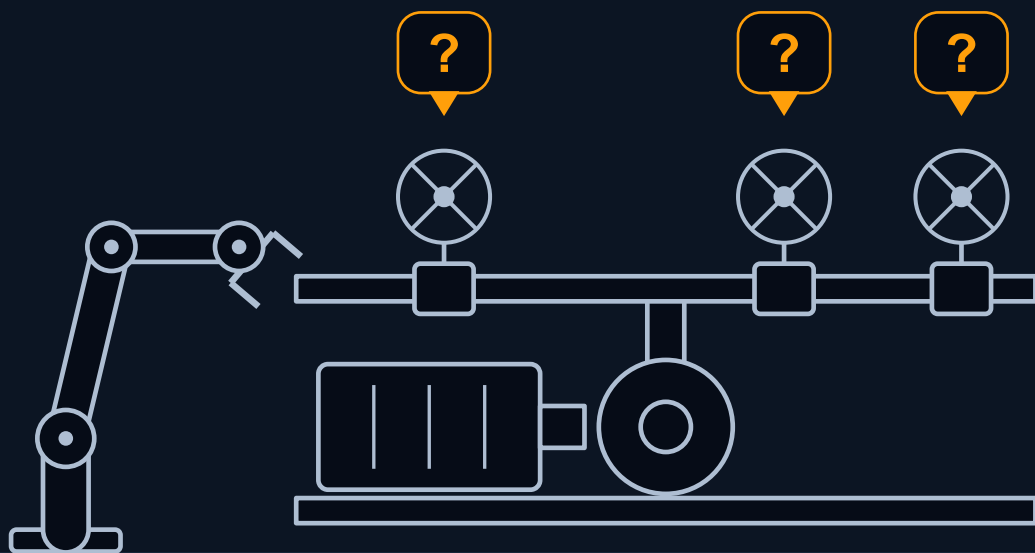
Robot IQ and Skill Packs

One pack, for a person or a robot.

20 October 2026



Robots have bodies, but no know-how

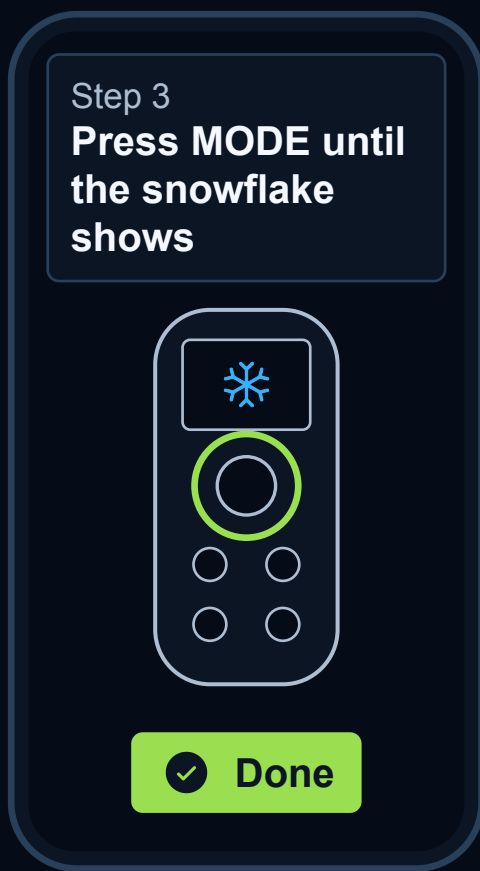


Body: yes. Know-how: no.

- A robot arm can grip a handwheel. It doesn't know which valve to close first.
- Know-how is the order, the right part, and what “done” looks like.
- It lives in experienced workers' heads, not in the robot.
- We found no public dataset of oil-and-gas, pump-skid or lockout work.

Field IQ already teaches people

Every guided session is a demonstration with a teacher's marks on it.



One step, as Field IQ records it

Step 3 · press · MODE button

Time: 2.1 s

Verdict: done · 92% sure

Saw: snowflake icon on the display

Gold run: compared

Sealed: each record chained to the last

A robot could learn the order and the check. **Not how the thumb moved: we keep a photo, not the motion.**

First: learn from human video

-  A person does the job. A camera records their view and their hands.
-  Software tracks the hands in 3D. The robot learns to copy the motion.
-  Cheapest lesson: an hour of hand video gave about 1,400 demos; robot time, 135.
-  **Our edge: Field IQ already knows each step, and whether it passed.**



Demos from one hour, approximate

 **Cheapest lesson**



EgoMimic, arXiv 2410.24221

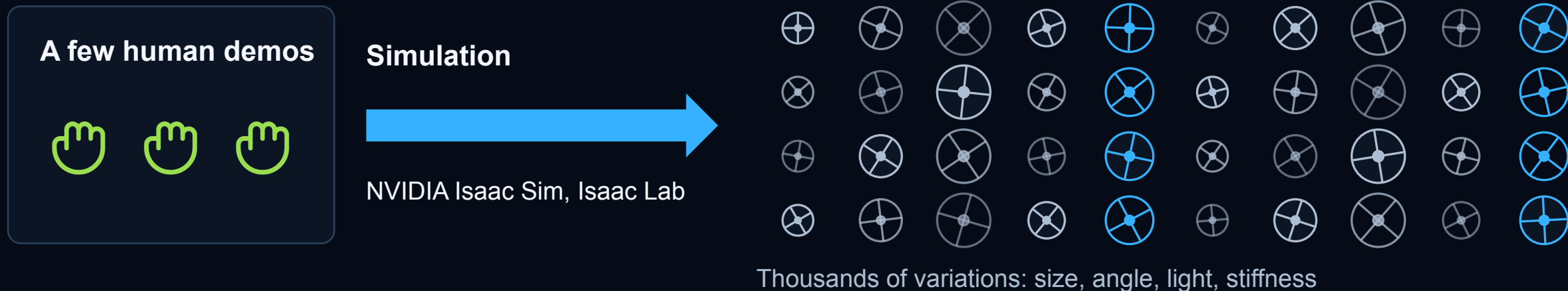
Demos per hour, another study

 **Fastest to record**



UMI, arXiv 2402.10329

Second: practise in simulation



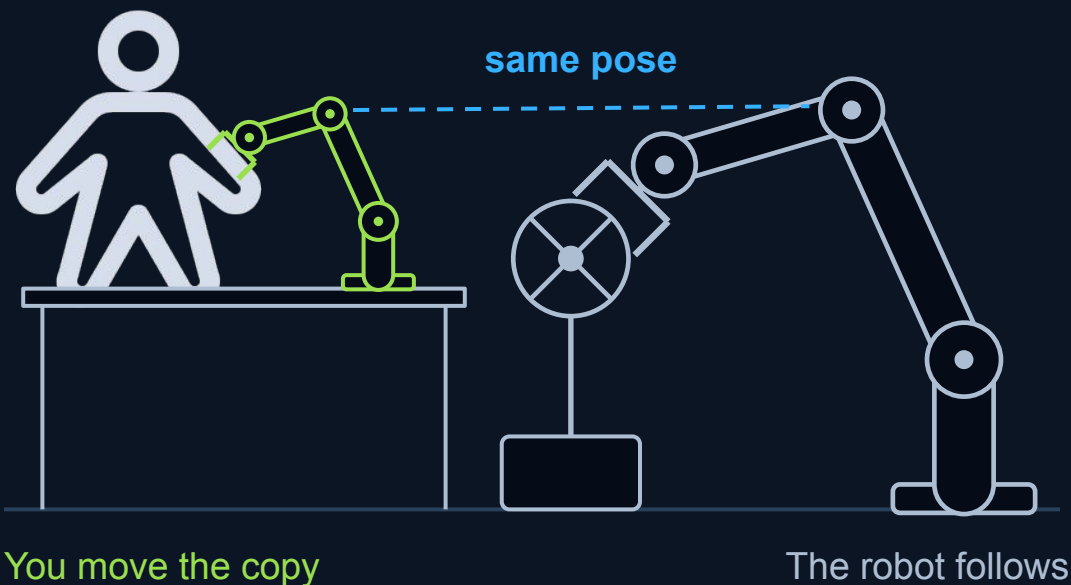
- A simulator is a video-game copy of the world, with real physics.
- But it needs a seed. It can't invent which valve to close first.
- It multiplies: about 200 human demos became over 50,000.
- Head start: Genesis already knows which part moves, and how far.

≡ MimicGen: about 200 → over 50,000

≡ DexMimicGen: 60 → 21,000

Third: a little remote control

GELLO: a small 3D-printed copy of the robot arm



- A person drives the robot. The robot records its own moves.
- Every robot body differs. A few real runs fit the skill to this one.
- On a new humanoid, 20 demos plus other data beat those 20 alone.
- Cheap kit: a GELLO controller costs under \$300 in parts.

EgoScale: 50 h human + 4 h robot, 344 tasks

OpenVLA: 10-150 demos per task

Our pilot plan: 50-100 runs on the real arm

Two birds, one stone

Every guided session trains a person today and teaches a robot tomorrow.

One valve: where each layer comes from

Layer	Comes from	Gives the robot
 What, in what order, what done looks like	Field IQ Field IQ, distilled	"Step 4: close the suction valve clockwise until it stops."
 How the hand moves	Field IQ Field IQ, raw	The hand's 3D path on the handwheel, every frame
 Many versions	Simulation	Thousands of valves: sizes, angles, light, stiffness
 This robot's body	Remote control	50 to 100 runs on the real arm (our pilot plan)
 The base brain	An open robot model	General grasping, fine-tuned on all of the above
 The checker	Field IQ The same Field IQ check	A photo after the move, plus the robot's end-stop reading: done, not done or unclear

Three of the six layers come straight from Field IQ.

Do we capture enough? No.

We keep the steps well. We throw away the motion the phone already measures.

We keep well

- ✓ Steps and action verbs
- ✓ Times to 0.1 s
- ✓ Verdicts and what the AI saw
- ✓ Part names with 2D boxes
- ✓ Expert gold runs
- ✓ A sealed record

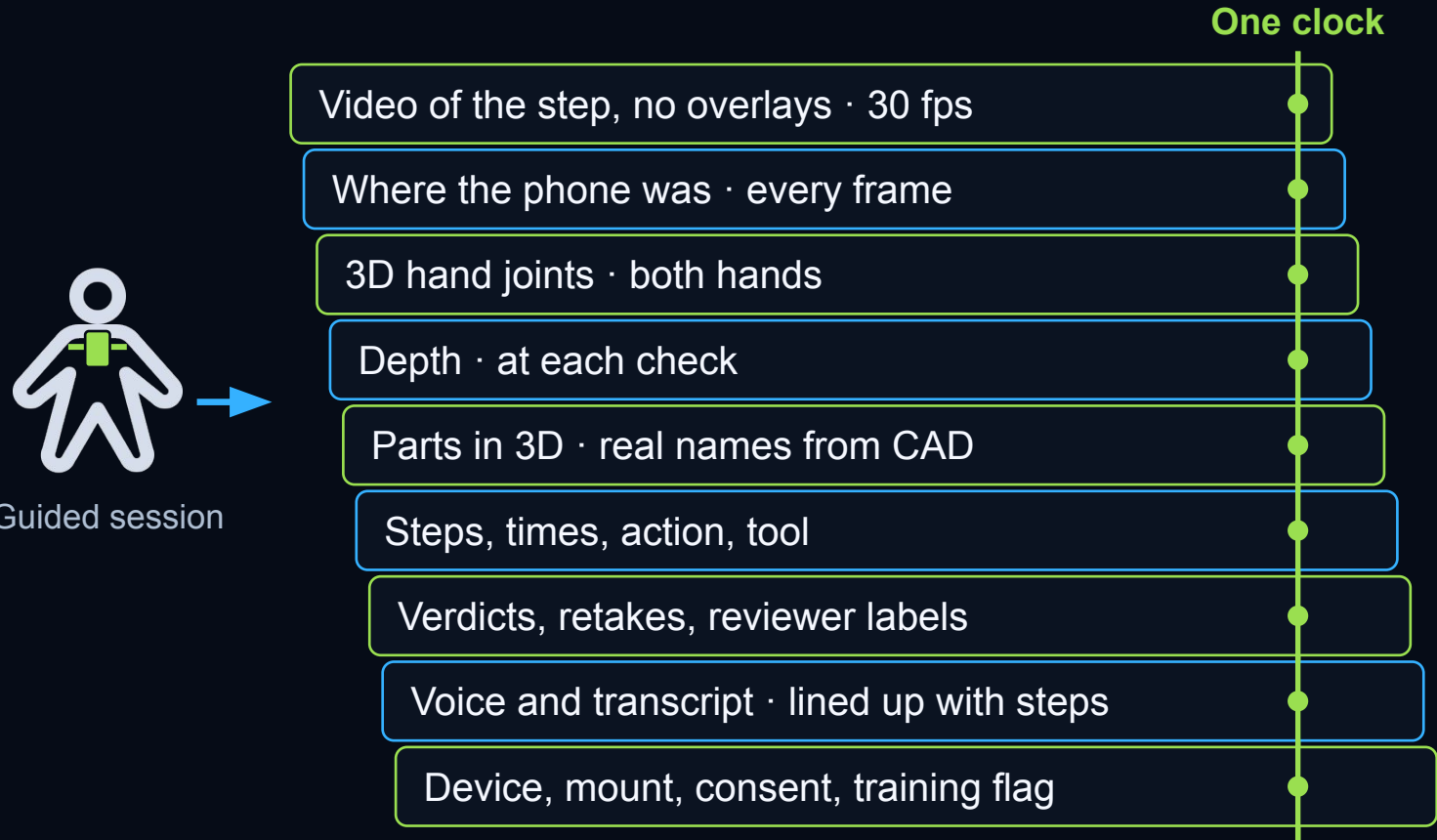
A robot also needs

What	Today	Fix	
Video, 30 frames a second	1 to 3 stills a step	Add video per step	
Phone position, every frame	Worked out, thrown away	Keep it	cheap
Depth	Measured at checks, thrown away	Keep it	cheap
3D hand joints, 21 per hand	Detected, thrown away	Keep them	cheap
Parts in 3D	Pinned, not saved	Save them	cheap
One clock for everything	Not logged	Log it	cheap
Force and touch	A phone can't	Not phase one	

✓ Nothing new is kept before a device test and a new consent screen.

The capture database: every session, one place

One database for every guided session: video, 3D hands, depth, where the phone was, steps and verdicts, on one clock.



 **Size (estimate)**

Video	about 1.8 GB an hour
Phone position	about 21 MB an hour
Hand joints	about 49 MB an hour
Depth	about 246 KB a check
Labels	small

All in **about 2 GB an hour**

20-min lockout job **about 0.66 GB**

1,000 jobs **about 0.66 TB**

Our arithmetic; to measure on a device.

The capture database: find, watch, train



Find

 close valve · failed first check

 Suction valve · Maya

 Retake

 Discharge valve · Maya

 Retake

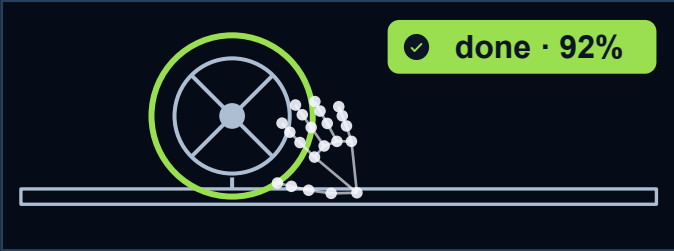
 Vent valve · trainee 7

 Retake

Every 'close valve' step that failed its first check.



Watch



done · 92%

Video with the step bar, verdicts and hand skeleton on top.



Train

 **LeRobotDataset v3**

ParquetMP4meta



 **GR00T flavour**

LeRobot v2modality.json



Export in LeRobot formats for LeRobot, GR00T and openpi.

Four shelves, never mixed. Only the Visible shelf is ever shown.

**VISIBLE** · EON's own video and consented customer sessions · may be shown

**INTERNAL** · open research sets (IndEgo, IndustReal, HoloAssist) · Aiden's team only, with credit

**LOCKED** · Ego-Exo4D, Ego4D · train and test Assess IQ only · never shown, never shared

**OUT** · non-commercial or unclear licences · not used

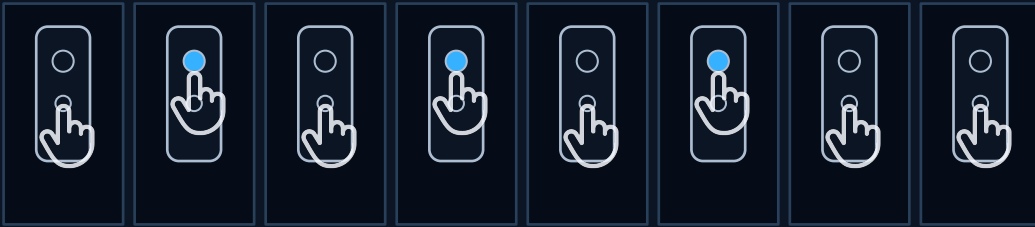
Each customer sees only its own sessions. Video lives in cloud storage, never in the main database.

Raw and distilled: why we keep both

Raw is the master tape. Distilled is the sheet music. We need both.



RAW · the master tape



About 2 GB an hour; about 0.66 GB per 20-minute job (estimate)

Future models

Relabel old jobs

New robot bodies

Proof



DISTILLED · the sheet music

Step 3 · Press MODE until the snowflake shows

Done in 2.1 s

Verdict: done, 92% sure

Part: MODE button

Right part first time

About 10 KB of text a step; up to about 35 MB an hour with hand paths and blurred stills (estimate)

Small and fast

Faces blurred, no voices

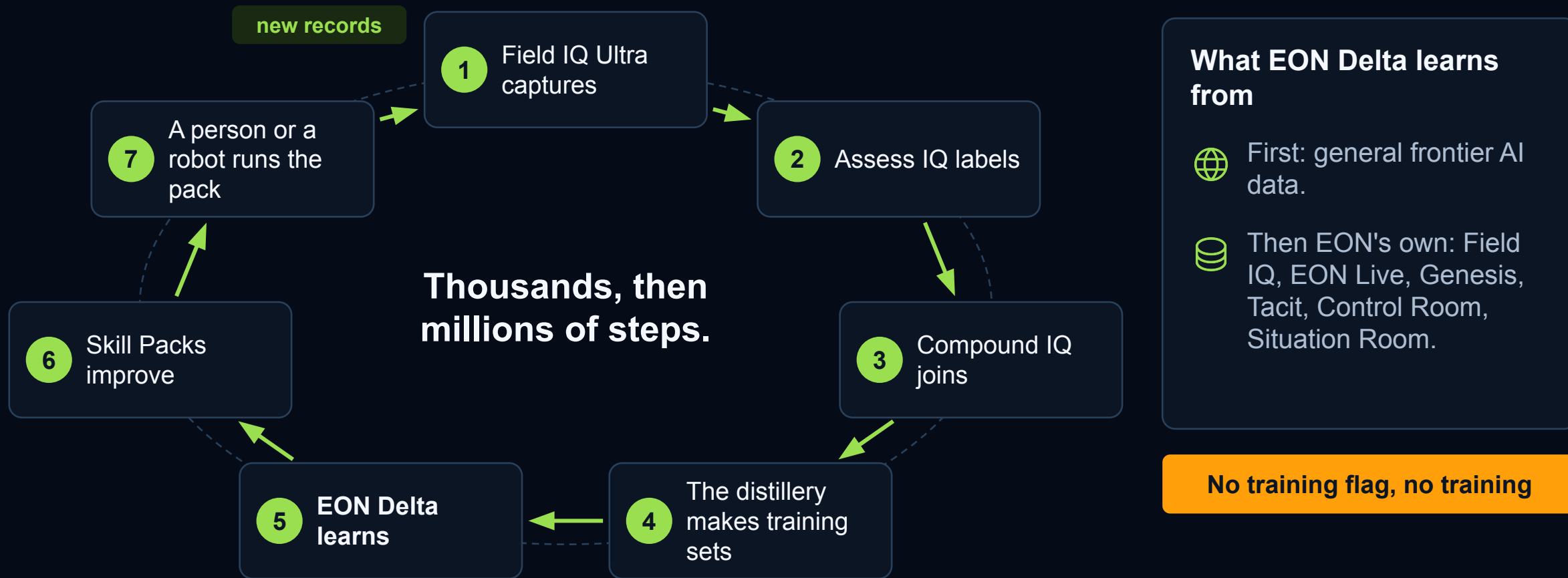
Trains planners and checkers now

Easy to combine

Raw goes to cheaper storage after a set time and is deleted on request. Distilled is kept long term.

The flywheel: every step teaches EON Delta

Every checked step is a record. The more Field IQ is used, the more EON Delta learns.



What a Skill Pack is



Skill Pack · Oil and gas · v1.2.0

Pump-skid module

-  **SOPs:** the steps of each job
-  **Checks:** what done looks like
-  **Parts:** real names from CAD, in 3D
-  **Expert demonstrations:** gold runs
-  **Motion targets:** how each part moves
-  **Safety rules:** hold points, stops, person-only steps
-  **Practice scenes:** a simulator copy
-  **Robot skills:** trained add-ons per robot



Signed

- One industry's jobs, packaged: oil and gas first, then aerospace.
- Inside, one module per machine family, such as a pump skid.
- Each job: steps, what “done” looks like, parts, expert demonstrations, safety rules.
- Signed and versioned, with where every piece came from.

Expert demonstrations come only from the visible library: EON's own video.

One Skill Pack: a person or a robot

Field IQ Ultra runs a Skill Pack for a person.

Robot IQ runs the same Skill Pack on a robot.

Part of the pack	 Field IQ Ultra · a person	 Robot IQ · a robot
 Steps	A card on the phone or glasses	The robot's plan, one step at a time
 What done looks like	A photo check after the step	The same photo check, plus the robot's end-stop reading
 Parts	Names drawn on the machine	Targets to reach and grip
 Expert demonstrations	A gold clip to replay	Training data for the robot's motion
 Motion targets	The Genesis animation	The simulator's goal
 Safety rules	Caution cards and hold points	Hard stops; a person approves each step



The goal: buy a robot off the shelf, load an industry Skill Pack, beat a frontier AI model alone. A goal until our test set proves it.

The roadmap, in the agreed order

Paperwork and cheap fixes first. Robots come later, and only on mock-ups.



Proposed. Dan sets the dates.

Risks and safety

Mock-ups before plants. A person approves every robot step. A failed check stops the robot.



Robot safety



What we do

Mock-ups with no stored energy. A person approves each step. Check after every step. A safety engineer picks the standards.



Privacy and consent

What we do

New consent before video, sound or hands. Codes, not names. Deletion on request.



Customer contracts

What we do

A clause that allows learning. A training flag per session.



Dataset licences

What we do

Ego-Exo4D stays locked: never shown or shared. Robot training on it only if counsel says yes.



Embodiment gap

What we do

Translate hand motion to robot joints. A few runs on each robot. Matched camera views.



Over-promising

What we do

“Beats a frontier model alone” stays a goal until our test set shows it.

What we need from everyone



Decisions

Dan: sign the licences or name the signer; set the M0 to M6 dates.



Permission to learn

Sales and legal: contracts and consent that allow learning from sessions.



Your know-how on film

Trainers: record gold runs and filmed jobs, explained aloud.



Your ideas

Everyone: jobs for the first Skill Pack, and machines to try.

Read next

[Robot IQ white paper](#)

[Robot IQ specification](#)

[Assess IQ deck](#)