

Sikorsky Challenge 2026

AI robotic cells that teach themselves in a 3D twin of your line

For small factories · Ukraine first, then Poland and Czechia · paid monthly

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Top left: the real line today. The rest: the same operation in our AI-built 3D world.

Ukrainian factories cannot find people for monotonous line work

67%

of enterprises name staff shortage their main problem (OSW, March 2026)

69%

say the same (IER survey, August 2026)

71%

record level, June 2026

The hardest jobs to fill: taking parts off the line, inspecting them and packing them into cartons. For small plants the bottleneck is integrators and skills, not robots.



Today: a worker takes every panel off the line by hand

One AI cell takes over one operation on one line



Our product is the AI layer
vision, self-trained skills, tooling, set-up and service.
The arm is a low-cost, off-the-shelf cobot.

Paid monthly — no big up-front capex for a small plant.

Photo of the line → physics 3D twin → the AI trains itself

1

Photograph

We photograph the line as it is.

2

Full-scale 3D model

Our AI builds full-scale 3D models of everything, accounting for the physical parameters of every element.

3

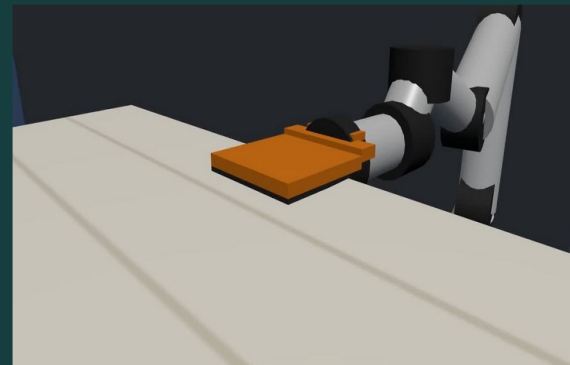
Self-training in 3D

The model trains itself in that 3D world and searches for ways to control the robotic arm for each operation.

4

Real arm

The learned control runs on an off-the-shelf arm. All training happens in 3D.



Anyone can buy an arm and program it. Physics-based 3D modeling with self-training is what sets us apart.

The 3D model, the simulation and the arm control were all built by AI. Physics: Rapier + three.js.

In simulation the cell packs 20 of 20, for every measured panel sag

20/20

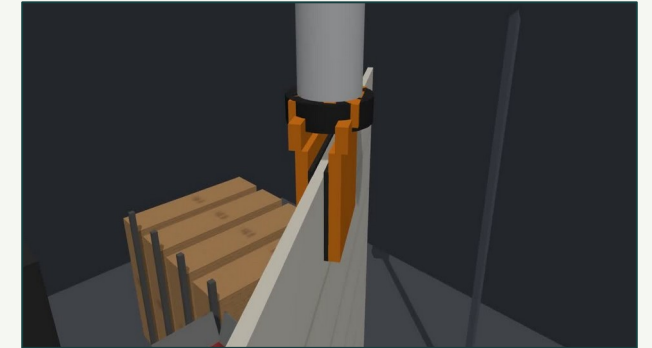
parts per carton, 0 drops, 0 jams at a 30 s line cycle; arm busy ~19 s of 30

10/10

random seeds pass strictly at 2.5° with 12.5 mm sag

Measured panel sag	Insertion angle	Result in sim
up to 7.5 mm	1.75°	20/20 strict
7.5 – 20 mm	2.5°	20/20 strict
up to 25 mm (160 mm carton)	2.5°	20/20
more than that	—	NO-GO: stop, call a person

The cell measures each panel's sag and chooses the angle by a rule found in simulation. Jams are detected from joint position + motor torque; a camera watchdog stops the arm if a camera freezes.



We already have a video of the arm doing the full process end to end in the 3D world.

First process: a real line at TOV Brilliant



Already under way on an off-the-shelf arm, trained and validated in our 3D environment. Next: 4–8 weeks on the factory floor, always with a supervisor.

The task

Hollow PVC ceiling tiles, 595×595×7 mm, ~700–800 g, come off the cutter. The cell picks each one, checks it by camera (incl. backlit), and packs exactly 20 per carton; flexible panels go in with ribs along the span at an angle chosen from measured sag.

Pilot KPI	Go target
Parts done with no human touch	$\geq 95\%$
Arm cycle time	≤ 20 s
Reference defect missed	0
False rejects	$\leq 5\%$
Uptime	$\geq 90\%$
Cartons with exactly 20/20	every carton
Slips at insertion	≤ 1 per 100
Safety incidents	0

Accepted after 5 shifts in a row on target

Customers pay monthly, less than the labor the cell replaces

Ukraine · buy + finance

\$17–18k

cell + \$250/mo subscription

≈ \$670/mo all-in with a 5-7-9 state-backed credit; \$663–791/mo on a 36-month commercial lease. Cell is theirs after 3 years.

Ukraine · robot-as-a-service

\$990–1,290

per month · 2 shifts / 3 shifts

No ownership, no up-front payment. For plants that run 2–3 shifts.

Poland / Czechia

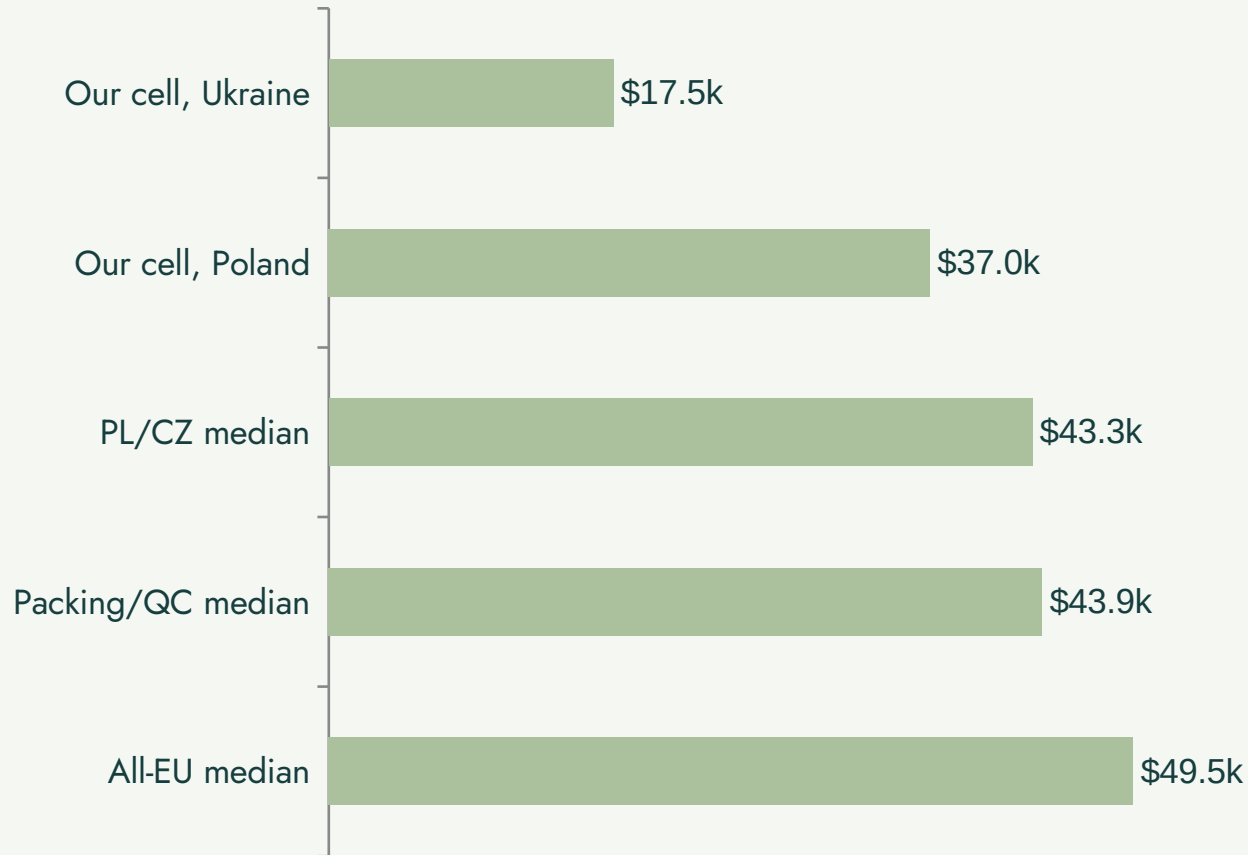
\$37k

cell + \$350/mo subscription

≈ \$1,032/mo on a 60-month operating lease. Customer payback 17.8 months on 2 shifts.

Revenue: cell sale (customer finances via bank credit or lease, we are paid on delivery) + recurring subscription for AI updates, monitoring and service. On 2 shifts a Ukrainian customer pays the cell back in 18–22 months.

Our prices sit well below published EU cell prices



Cell price, USD thousands, excl. VAT. Ukraine shown at the middle of \$17–18k.

21

published PL / CZ / EU cobot-cell prices checked
(palletising, machine tending, packing, QC)

Closest peers: JM-TRONIK CoboInspect (\$39k),
RoboSaveX (\$40–49k), coboty.com.pl (\$43–50k),
Niryo (\$45–51k).

In Ukraine we found no direct competitor. Cobot
market: >\$1.2B in 2025, >\$2.3B by 2030 (Interact
Analysis).

A founder who knows both the AI software and the servo motors

Yurii Halin

Founder & CEO

PhD student in Software Engineering, Yuriy Fedkovych
Chernivtsi National University

Dissertation: engineering of motors and servo motors

Entrepreneur (FOP, Ukraine) · ygalin21@gmail.com

01 Software

AI-built 3D physics twin, self-training, arm control

02 Servo motors

Jam detection from joint position + motor torque

03 Roadmap

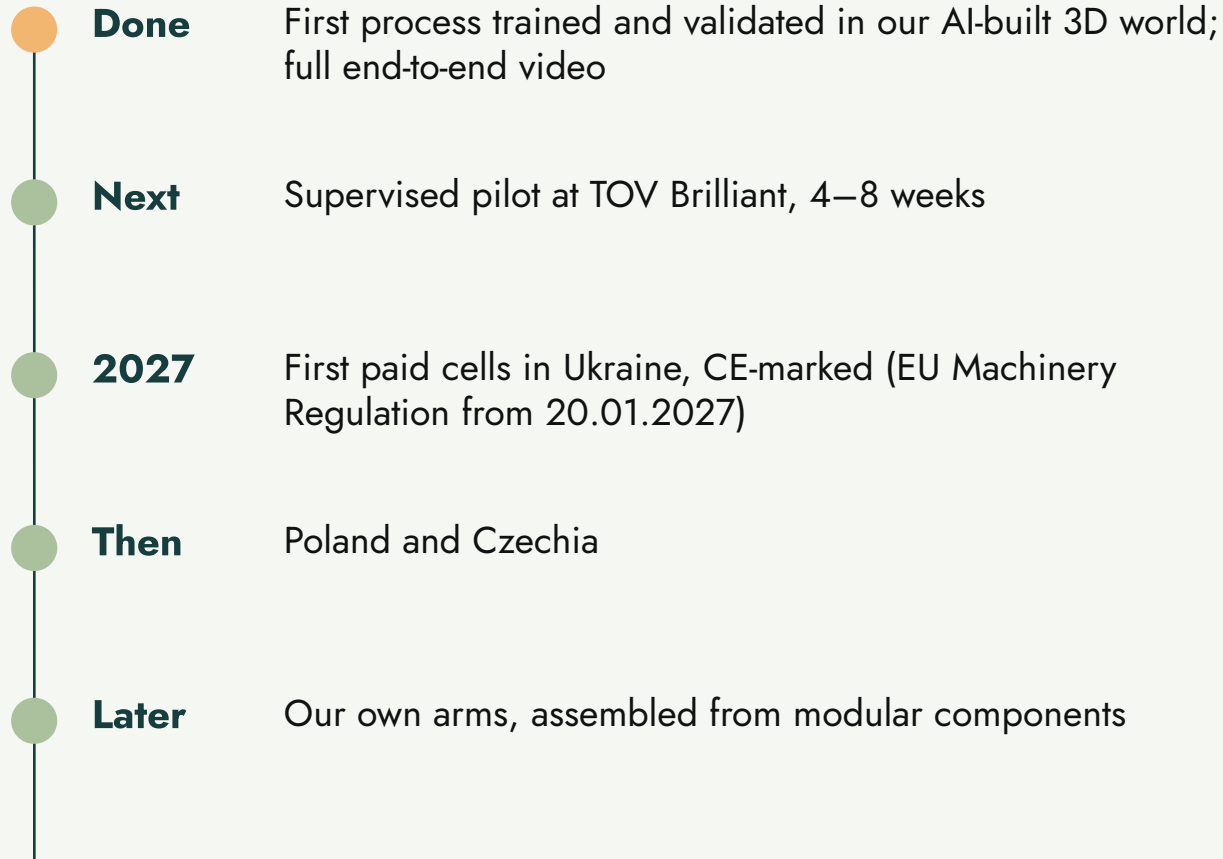
Own arms assembled from modular components — built
on the dissertation work

6 publications since 2025, e.g.

“Method for automated control of rotor engine blade synchronization” — Applied Aspects of Information Technology, 2025

“Multispectral Video Analysis for Human Detection and Injury Classification” — IOS Press FAIA, ICAILE 2026

Where we are, where we go — and what we ask



We ask for

- 1 Investment
- 2 Pilot partners: factories with a manual pick-inspect-pack job
- 3 First customers in Ukraine, Poland, Czechia

Yurii Halin, Founder & CEO
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Today: simulation-validated, pilot being prepared, no paid customers yet.