BIWEEKLY GLOBAL INTELLIGENCE

PHYSICAL AI COMMUNITY

The source-led briefing on the models, machines, capital and operating conditions shaping intelligence in the real world.

03
Models + algorithms

04
Capital + policy

05
Products + platforms

06-11
Events, voices, data, people

JULY AT A GLANCE

READING TIME / 1 MIN

Six signals we are moving forward..

The developments worth carrying into your next engineering, investment or strategy conversation.

FROM THE FOUNDER

Physical AI is moving from possibility to infrastructure, and the people building it will shape how intelligence enters the real world. This brief follows that journey with curiosity and discipline - separating meaningful progress from noise and turning evidence into shared momentum.

DR. BARAK OR / FOUNDER & CEO, STATE16

01 / MODELS

World models are becoming data engines.

Xiaomi's 38B U0 release connects embodied generation directly to robot-policy training.

Primary paper ↗

02 / INFRASTRUCTURE

Physical AI moved into national strategy.

Japan announced a 140MW AI factory tied to sovereign multimodal and industrial systems.

NVIDIA announcement ↗

03 / CAPITAL

Deployment-scale funding is here.

Humanoid disclosed a $152M Series A at a $1.35B post-money valuation.

Company disclosure ↗

04 / MACHINES

Touch is becoming a platform layer.

GENE.01 combines tactile, proximity, force and temperature sensing in a humanoid body.

PRN Product release ↗

05 / MARKET

Capital is broad; evidence is uneven.

Robotics startups raised $18.8B by 22 June, using a broader taxonomy than Physical AI.

cb Crunchbase analysis ↗

06 / DECISION RULE

Ask what is released, bounded, reproducible.

A strong demo is a signal. A deployable system needs inspectable evidence and operating limits.

16 STATE16 analysis ↗

TECHNICAL SIGNAL / 4 RELEASES

READING TIME / 2 MIN

Models move from scale to deployment.

Four releases across world models, VLAs, home robotics and edge control.

13 JUL / WORLD MODEL · AUTHOR-REPORTED

U0 turns world models into data

38B multimodal model for embodied generation. The paper reports pi0.5 OOD success rising from 36.9% to 63.2%; weights and inference code are released.

Why it matters: the data-engine thesis is inspectable. Deployment gains are not yet independently reproduced.

Paper ↗ · Weights + model card ↗

16 JUL / VLA SCALING · AUTHOR-REPORTED

Xiaomi-Robotics-1 scales beyond 100K hours

More than 100K hours of real-world UMI trajectories; 57.6% reported on RoboCasa365 versus a stated 46.6% prior best. Artifacts are still forthcoming.

Why it matters: scale looks consequential, but reproducibility remains gated by the missing code and checkpoints.

Primary paper ↗

17 JUL / HOME ROBOTICS · COMPANY TEST

ACT-2 defines its reliability scope

Sunday reports 778 successes in 785 autonomous attempts across nine garment types, unseen homes and one fixed checkpoint. Scope and grading are published.

Why it matters: the useful signal is declared scope plus adaptation cost - not 99.1% alone.

Company technical preview + evaluation videos ↗

20 JUL / EDGE WORLD-ACTION MODEL · VENDOR-REPORTED

Cosmos 3 Edge moves actions onboard

Open 4B model plus DROID policy. NVIDIA reports 32 actions per inference and 15 Hz control on Jetson Thor; scripts and checkpoints are available.

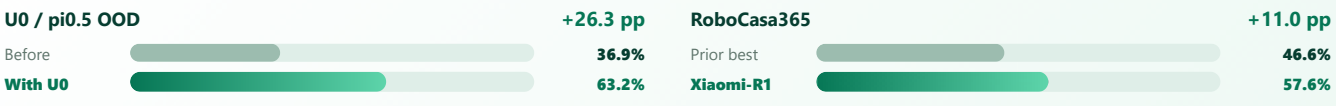
Why it matters: closed-loop latency, thermals and failures now matter more than a benchmark rank.

Release + technical details ↗

Release snapshot: U0 and Cosmos 3 Edge include public artifacts; Xiaomi-Robotics-1 artifacts remain forthcoming; ACT-2 results come from a company-run evaluation.

REPORTED BENCHMARK SHIFTS

0-100% scale / separate tests



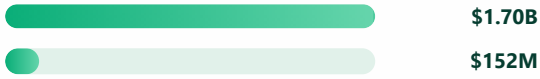
13-26 JULY / DEAL + POLICY DESK

READING TIME / 2 MIN

Capital backs companies and countries.

Amounts are shown only where disclosed in a primary source or cross-checked with a clearly labeled secondary report.

FEATURED DISCLOSED FUNDING / USD



Linear scale. *Atoms amount is secondary-sourced; a16z confirms the investment, not the amount. Sabanto and FANUC amounts were not disclosed.

$1.852B
Two featured disclosed amounts combined; not a market total.

140MW
Planned FRONTia AI factory capacity.

41,250
Planned Vera CPUs + Rubin GPUs.

JAPAN / NATIONAL INFRASTRUCTURE · PRIMARY

FRONTia announces 140MW Physical AI factory

Planned: 13,750 Vera CPUs and 27,500 Rubin GPUs. Construction targets April 2027; operations June 2028. Not yet operating.

- Noetra primary release ↗
- NVIDIA release ↗
- NEC roadmap ↗

UK / SERIES A · PRIMARY

Humanoid raises $152M at $1.35B

Prime Movers Lab led; strategic investors joined. Beta customer rollouts target Q4 2026.

- Primary financing release ↗

US / INDUSTRIAL AI · MIXED SOURCING

a16z backs Atoms; $1.7B remains secondary-sourced

a16z confirms the investment and board seat. Crunchbase reports $1.7B; the amount remains secondary-sourced.

- Atoms company ↗
- Primary investor statement ↗
- Secondary amount: Crunchbase ↗

US / AUTONOMOUS AGRICULTURE · PRIMARY

Sabanto closes an oversubscribed Series B

Leaps by Bayer led. Amount undisclosed; proceeds target commercialization, retrofit kits and field operations.

- Sabanto company ↗
- Company-issued financing release ↗

Also: FANUC invested in Noetra on 24 July; amount undisclosed. FANUC primary release ↗

NEW BODIES + SUBSYSTEMS

READING TIME / 2 MIN

Four systems, four readiness levels.

The releases span debut hardware, company-demonstrated prototypes and supplier production claims.

20 JUL / HUMANOID · FUNCTIONAL PROTOTYPE

Gene.01 adds full-body tactile sensing

Functional humanoid with touch, proximity, force and temperature sensing, plus an announced open digital twin. No independent performance evaluation located.

- GENE.01 product page ↗
- Company-issued product release ↗

24 JUL / INDUSTRIAL ROBOTS · SHOWCASE

Shanghai Electric presents a multi-robot matrix

Portfolio: 41-DoF SUYUAN biped, TUOYUAN wheeled humanoid and a pipe-processing robot. Capabilities are company-reported; scaled deployment is not established.

- Issuer product announcement ↗

16 JUL / HIGH-RISK OPERATIONS · DEBUT

Centaur targets mining, rescue and exploration

Wheeled-legged dual-arm platform with a reported 100-120 kg average payload. Small-scale production is forecast for Q4 2026.

- Pudong government preview ↗

17 JUL / ROBOT SUBSYSTEMS · SUPPLIER CLAIM

Joyson bundles core robot subsystems

Dexterous hand, electronic skin, AI head, hybrid battery and edge controller. Joyson claims volume production but discloses no customers or volumes.

- Joyson company ↗
- Company-issued product release ↗

Readiness snapshot: Gene.01 and Centaur remain launch-stage systems; supplier production claims are not supported by public shipment data.

TACTICAL AUTONOMY / AERIAL + GROUND COORDINATION

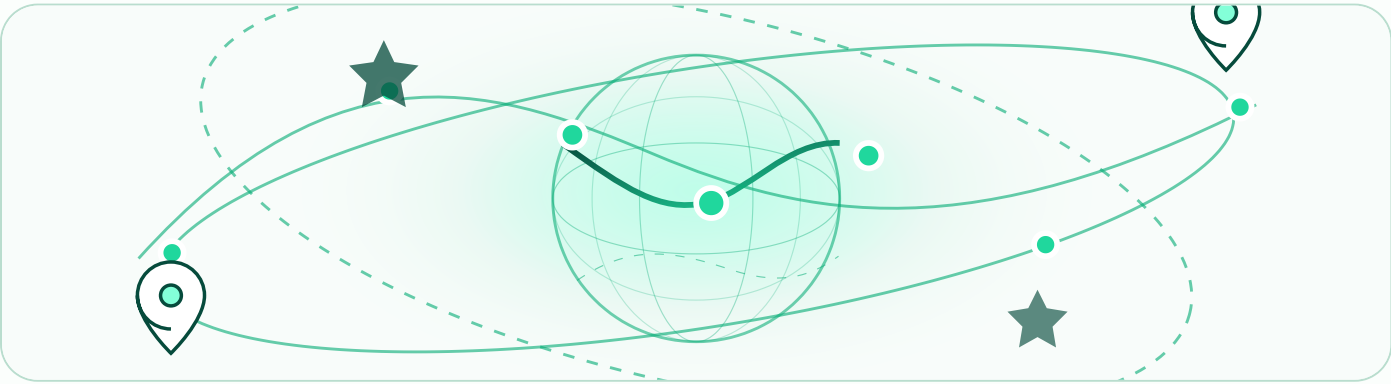
CALENDAR / ORGANIZER-VERIFIED

READING TIME / 1 MIN

Where Physical AI meets next.

Five relevant events. Every date links to an organizer, professional society or government page.

WHEN + WHERE	EVENT	WHY IT EARNS A PLACE
4-5 Aug **Tsukuba, Japan**	**ROSCon JP 2026**	ROS workshops and integration depth for robotics software teams. Official organizer site ↗
18-19 Aug **San Francisco, USA**	**Actuate 26**	Robotics tooling, data and production systems. Official event site ↗
19-23 Aug **Beijing, China**	**World Robot Conference**	China-scale product and supply-chain signal. IEEE RAS listing ↗ Beijing announcement ↗
Sep 2026 **Hamburg, Germany**	**Physical AI Summit**	Embodied intelligence, edge compute, twins, sensors and robotics. Official event site ↗
15-17 Sep **Santa Clara, USA**	**AI Infra Summit: Physical AI**	Infrastructure, models and deployment in a named Physical AI track. Official program PDF ↗



SIGNALS IN THEIR OWN WORDS

READING TIME / 1 MIN

From spectacle to systems.

"

Japan invented modern manufacturing. Now, it is building the AI factories that will power the next industrial revolution.

JENSEN HUANG / FOUNDER AND CEO, NVIDIA / 16 JULY 2026

Official NVIDIA release ↗

SOVEREIGN CAPABILITY

Hironobu Tamba / Noetra

"For Japan to become a global leader in physical AI, it is essential to develop multimodal foundation models."

Joint Noetra / NEC release ↗

REALITY CHECK

Pascal Brier / Capgemini

"Physical AI marks a shift from systems that describe the world to systems that can act within it."

Capgemini Research Institute ↗

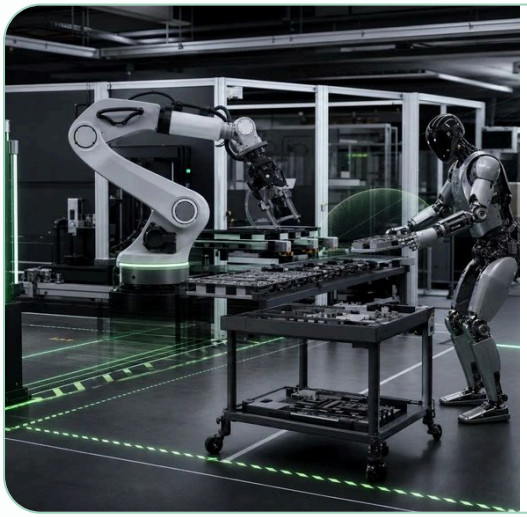
INVESTOR THESIS

Ben Horowitz / a16z

"Industrial AI" is framed as specialized robots applied to industries that move, transform and store physical matter.

Investor statement, 22 Jul ↗

Full context is available in the linked original statements.



STATE16 ESSAY / 19 JULY 2026

Physical AI Enters the Systems Phase

Physical AI is leaving the single-demo era. Competitive advantage now comes from engineering the complete operating stack rather than the most human-looking machine.

A deployable system links sensing, state estimation, planning, control, safety oversight, fleet telemetry and continuous learning.

The commercial test is repeatability: safer operation, stronger economics and less human intervention with every deployment cycle.

DR. BARAK OR / FOUNDER & CEO, STATE16

Continue reading on STATE16 ↗

RECOMMENDED COMPANY / JULY 2026

READING TIME / 2 MIN

Physical Intelligence: the model-first pure play.

WHY IT LEADS IN JULY · JULY FOCUS

Robot foundation models are the product.

Physical Intelligence builds robot-control foundation models - not a general AI product with a robotics add-on.

CORE

Robot policies and cross-embodiment foundation models.

EVIDENCE

Public pi0, pi0.5 and pi0.7 research artifacts.

DISCLOSURE

Private-company activity mix is not independently audited.

Company + research index ↗ · pi0.7 paper ↗

10 PHYSICAL AI-NATIVE COMPANIES / STARTUP-LED

READING TIME /

Physical Intelligence
ROBOT FOUNDATION MODELS
Source ↗

Skild AI
CROSS-EMBODIMENT INTELLIGENCE
Source ↗

FieldAI
FIELD ROBOT FOUNDATION MODELS
Source ↗

Sunday Robotics
HOME ROBOT INTELLIGENCE
Source ↗

Generalist
MANIPULATION FOUNDATION MODELS
Source ↗

Sereact
AI-NATIVE MANIPULATION
Source ↗

RLWRLD
MANUFACTURING ROBOT MODELS
Source ↗

Genesis AI
MODELS + PHYSICAL PLATFORM
Source ↗

Humanoid
INDUSTRIAL HUMANOID SYSTEMS
Source ↗

STATE16
PHYSICAL AI GUARDRAILS
Source ↗

Shared focus: each company builds robot intelligence, autonomous physical systems or Physical AI assurance as a primary product.

GLOBAL MARKET INTELLIGENCE

READING TIME / 1 MIN

Three regions shape Physical AI markets.

Available indicators point to US capital concentration, Chinese deployment leadership and strong Japanese executive priority. Each indicator measures a different layer of the market and is sourced independently.

Robotics funding momentum	$18.8B through 22 June, above the $15B total for 2025. Broad robotics, not Physical AI-only. Crunchbase data ↗	**$18.8B**
US capital concentration	About 75% of 2025 global AI VC deal value, used here as broader capital context. OECD report ↗	**75%**
China deployment leadership	295K industrial robots installed in 2024, about 54% of global deployments. Deployment is not investment. MERICS, Apr 2026 ↗	**54%**
Japan executive priority	More than 75% of surveyed Japanese executives prioritize Physical AI. This measures stated priority rather than spend. Survey details ↗	**>75%**

Market readout: capital, deployment and executive intent are moving at different speeds across the US, China and Japan.

GLOBAL SIGNAL DASHBOARD

Capital / deployment / executive intent

Robotics funding

2025 total — $15.0B

2026 to 22 Jun — $18.8B

Broad robotics funding / $20B scale

US AI venture capital

75%

Share of 2025 global AI VC deal value

China robot deployments

54%

Share of 2024 industrial robot installations

Japan executive priority

>75%

Executives prioritizing Physical AI

SIX NAMES / FOUR RESEARCH CHANNELS

READING TIME / 2 MIN

Six researchers advancing Physical AI.

The July radar spans arXiv, ICML, ICLR and RSS, from world models and lifelong VLA to aerial systems and safety benchmarks.

EMBODIED WORLD MODELS / ARXIV

Xinghang Li

Leads U0, a 38B world model connecting multi-view embodied generation to scalable robot data.

13 Jul 2026 paper ↗

LIFELONG VLA / ARXIV

Yao He

LifelongVLA tackles skill retention with dual-timescale adapters and cache-efficient replay on an xArm.

21 Jul 2026 revision ↗

LATENT REASONING / ICML

Zhuoyang Liu

LaST0 separates low-frequency latent reasoning from high-frequency action generation.

ICML 2026 spotlight ↗

HISTORY-AWARE VLA / ICLR

Myungkyu Koo

HAMLET adds task history to pre-trained VLAs without full retraining from scratch.

ICLR 2026 poster ↗

AERIAL + BIMANUAL VLA / ARXIV

Inkyu Sa

Maps 183 VLA contributions across bimanual robots and UAVs, then identifies 14 research directions.

7 Jul 2026 review ↗

SAFETY BENCHMARKS / RSS

Arnav Balaji

OopsieVerse separates task completion from damage-aware execution in household manipulation.

RSS 2026 paper ↗

Across the work: world models, lifelong learning, latent reasoning, bimanual and aerial systems, and damage-aware execution.

10 STARTUPS TO TRACK

READING TIME / 2 MIN

01 **Sunday Robotics / US**
Home robotics with an unusually explicit reliability scope and fixed-checkpoint evaluation.
ACT-2 evidence ↗

02 **Humanoid / UK**
Industrial humanoids, strategic manufacturing partners and a primary-confirmed $152M Series A.
Financing + roadmap ↗

03 **Generalist / US**
Embodied foundation models focused on manipulation reliability, speed and fast adaptation.
GEN-1 technical release ↗

04 **Sereact / Germany**
AI manipulation with a claimed installed base of more than 200 live systems across Europe.
Deployment + Series B disclosure ↗

05 **RLWRLD / South Korea**
Robot foundation models trained from skilled-worker data for manufacturing and service tasks.
Company releases ↗
Independent AP report ↗

06 **CarbonSix / US + Korea**
Manufacturing-focused Physical AI spanning robot intelligence, hands and manipulators.
Company site ↗
$40M Series A release ↗

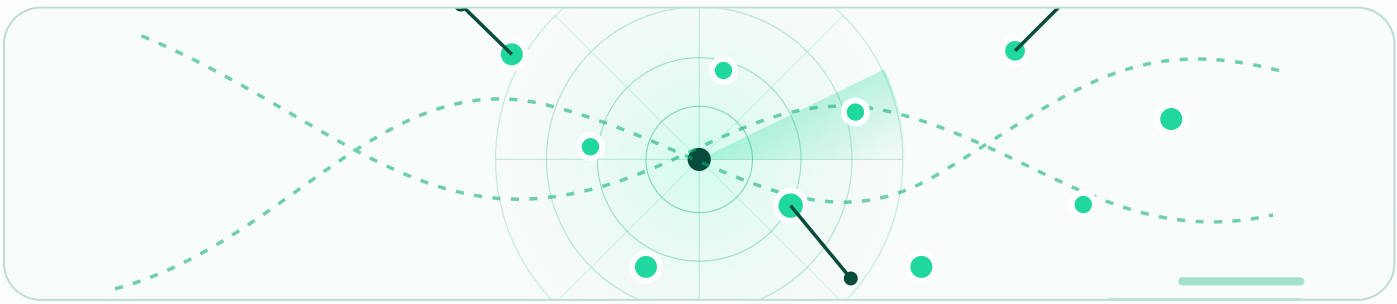
07 **FieldAI / US**
Risk-aware foundation models across legged, wheeled, flying and tracked field robots.
Company + technical index ↗

08 **Genesis AI / US**
Full-stack general-purpose robotics connecting its GENE model to the Eno physical platform.
Company site ↗
Eno product release ↗

09 **Skild AI / US**
Cross-embodiment general-purpose robot intelligence with a pure-play model thesis.
Company + research index ↗

10 **STATE16 / US**
Physical AI assurance: guardrails, operational constraints and auditable evaluation evidence.
Publisher disclosure + product site ↗

Across the list: home robotics, manufacturing, field autonomy, manipulation and cross-embodiment intelligence.



BUILD THE OPERATING LAYER WITH US

READING TIME / 2 MIN

Join the STATE16 Physical AI Community.

A focused community for the people building, funding, evaluating and operating Physical AI.

Join the community | Watch all recordings

WhatsApp | GitHub | Hugging Face | LinkedIn

FIRST WEBINAR / 22 JULY 2026

STATE16 EVENT RECAP

The first STATE16 webinar is on-demand.

STATE16 reports 100+ live participants across an approximately two-hour program. All six talk recordings are available.

100+	~2h	6	6
LIVE PARTICIPANTS	LIVE PROGRAM	SPEAKERS	RECORDINGS

- Dr. Barak Or / Physical AI Guardrail
- Dr. Mike Erlihson / VLA vs. WAM
- Ori Nachum / Neurosymbolic Control
- Yorai Fainmesser / Investor View
- Steven Palma / Open Robotics
- Omri Eitan / Resilient Physical AI

Mission: make Physical AI safer to deploy and easier to evaluate. **Vision:** intelligence acting in the physical world should be bounded by evidence, operational rules and human responsibility. Community page + speakers ↗ | Six-video playlist ↗