The Safety Brain for Physical AI

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Physical AI is the Next Platform Shift

Macro tailwinds are structural, not AI-driven hype

1. Big Bets

Tesla, Nvidia, Amazon, and OpenAI and (Amazon) already operates 1M+ robots

2. US Reshoring

Industrial relocation accelerates the need for automation

3. EU Competitiveness

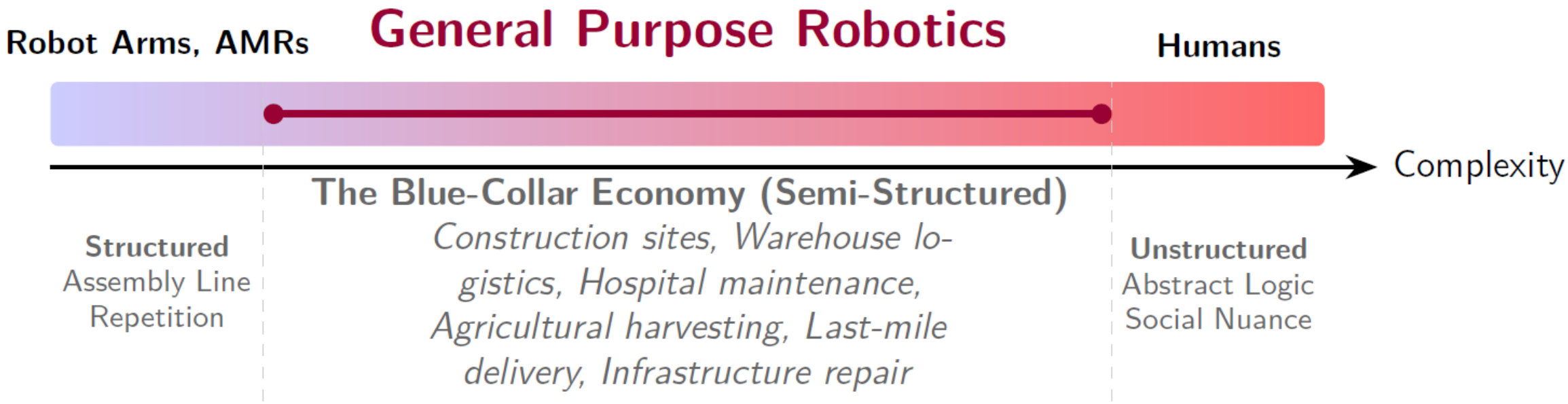
China sees European weakness

▽

Every manufacturing company becomes a robotics company

(1) The U.S. Economy Is Ready to ROAR. J.P. Morgan
(2) Amazon Launches a New AI Foundation Model to Power Its Robotic Fleet and Deploys Its 1 Millionth Robot. About Amazon
(3) A Trade War Between the EU and China Seems Inevitable. The Economist. 11 Jun. 2026

General Purpose Robotics = Flexible Automation

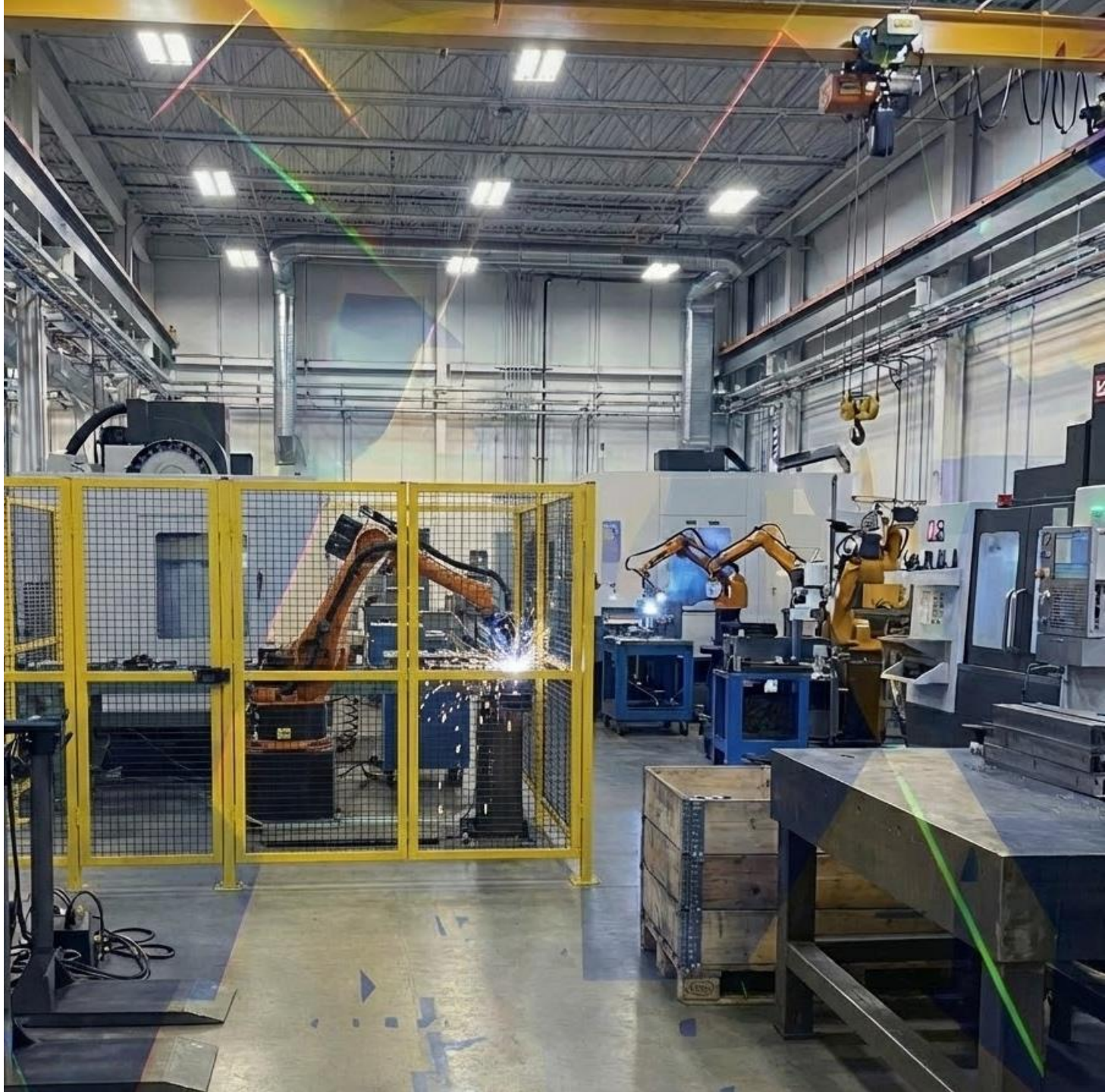


The only option for any manufacturing country to preserve wealth

Conventional robotics

- Automates routine tasks
- Every application needs its own safety
- Safety fences
- Stop when humans around

Good for specialized, structured tasks



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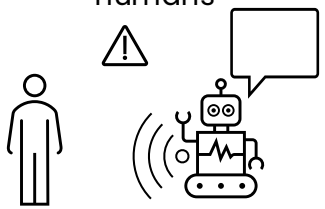
General Purpose Robotics

- Flexible automation
- Higher complexity, less repetitive tasks
- Robots work alongside humans

The robot can do human labor

Gap: SAFETY

I must be careful with humans



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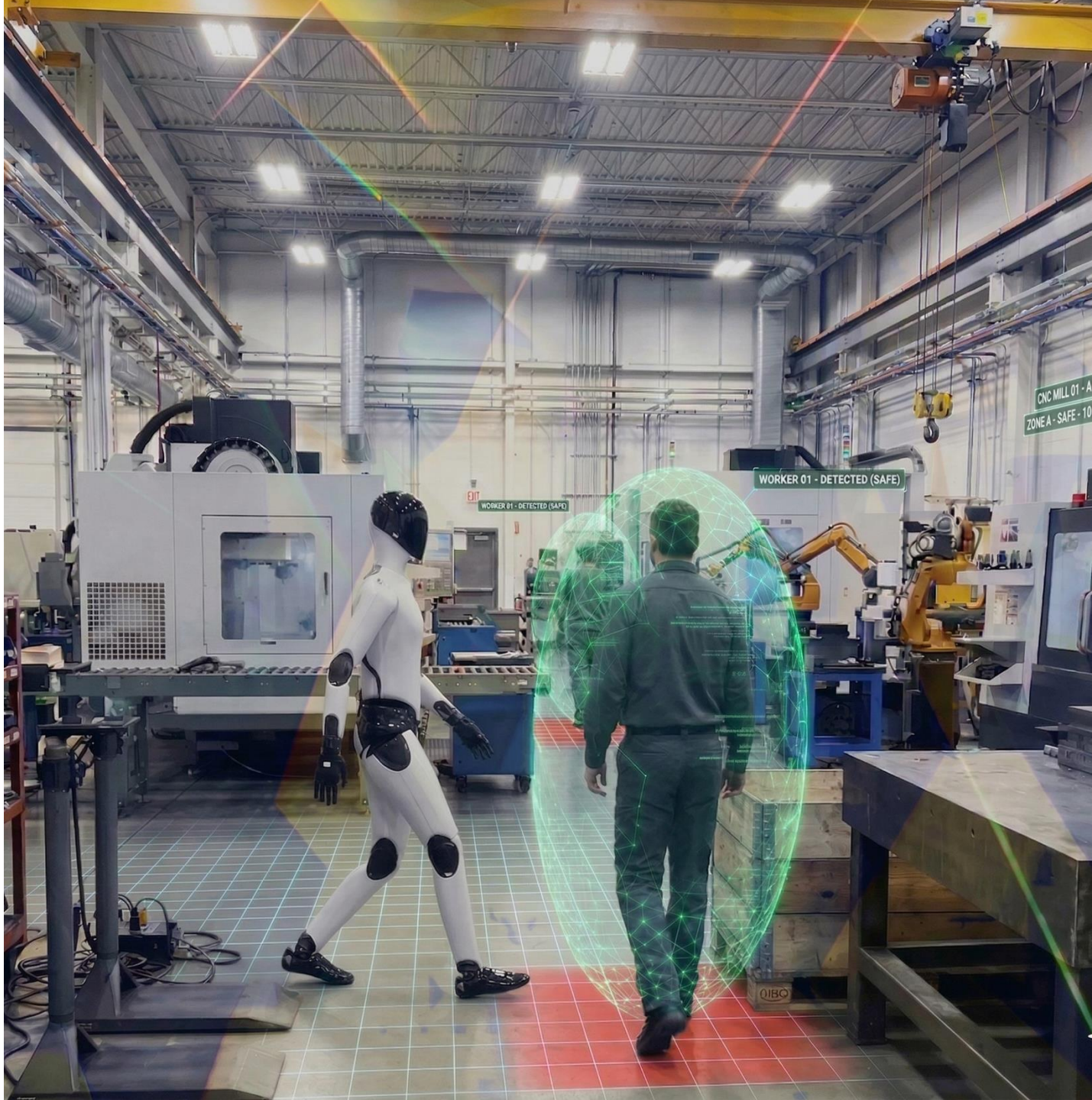
No Safety Cage, No Deployment

- **Machinery Regulation** → certified protection required: The cage is a legal requirement, not a design choice (**ISO/IEC norms**).
- **Cost of one accident** → risk requires it: >$100K, weeks of downtime, reputational harm, and potential gross-negligence liability.
- **Board-level liability** → **management requires it**



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Everyone Is Building Task Brain .
No one has built its Safety Brain

TASK BRAIN

CAPABILITIES: what robots *can* do.

Saturated landscape, tens of billions in funding

UNITREE · Boston Dynamics · SKILD AI · DeepMind · TESLA · Physical Intelligence · APPTRONIK

SAFETY BRAIN

Safety: what robots ***may*** do.

Unoccupied territory: neither hardware (safety eyes) nor software (safety brain) solutions

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Waveye closes the Safety Gap before general-purpose robotics can reach the shop floor

Task Brain & Safety Layer

Technology Stack for Mass Deployment of Industrial Humanoids

Task Level

Cameras

Vision-language-action model

Robot body

UNITREE

BostonDynamics

Safety Layer

Imaging radars

Waveye Intelligence

Safe action model

Waveye Safety Brain™

Argus A3 Imaging Radar

Simple hardware | Powerful SW & algorithms

Spatio-dynamics perception: 3D + instantaneous velocity

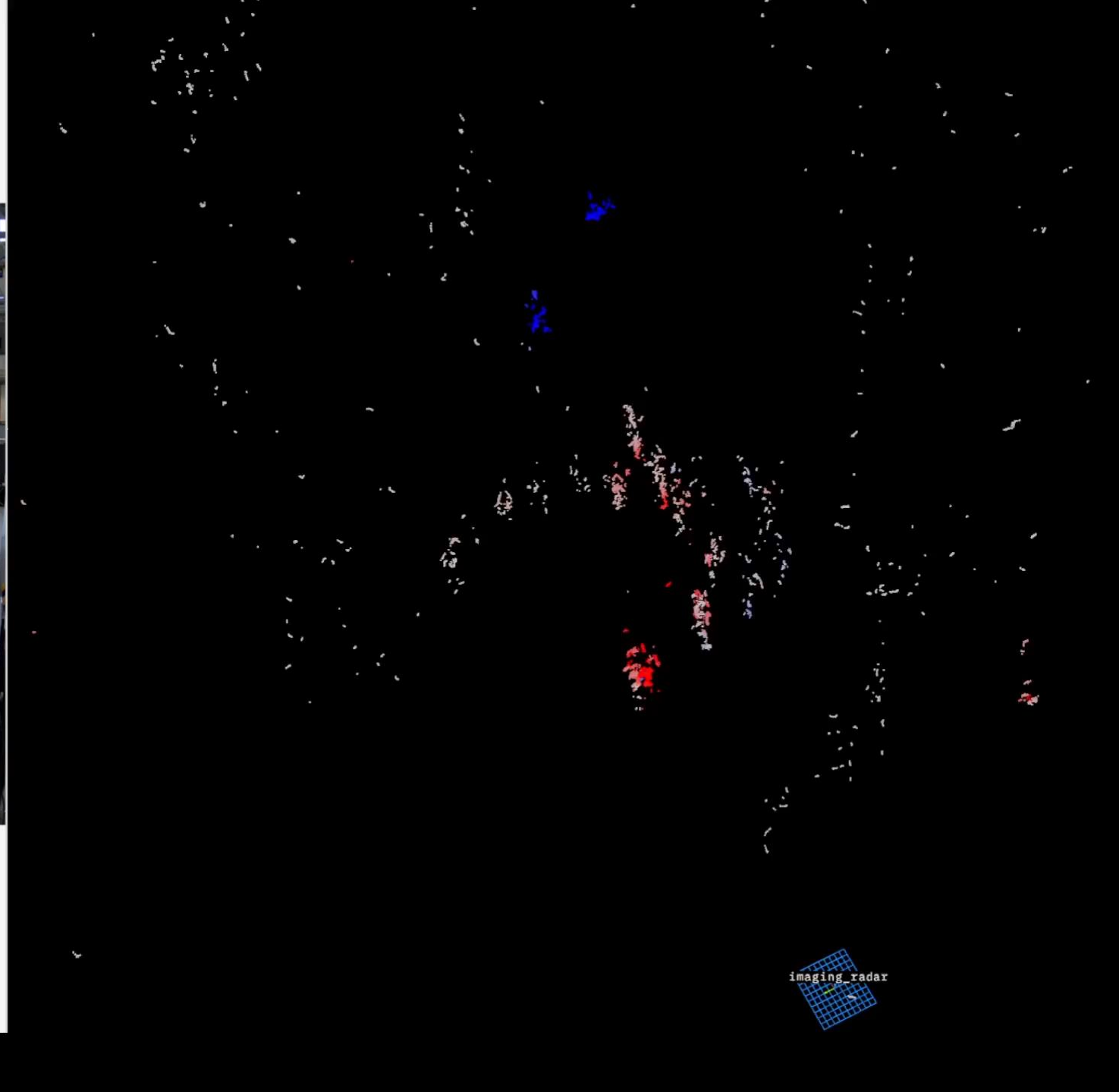
Condition agnostic: Robust for indoor and outdoor, any light

High-information density: 200-600 points on a human

Capable of **safe human detection**, while **preserving privacy**

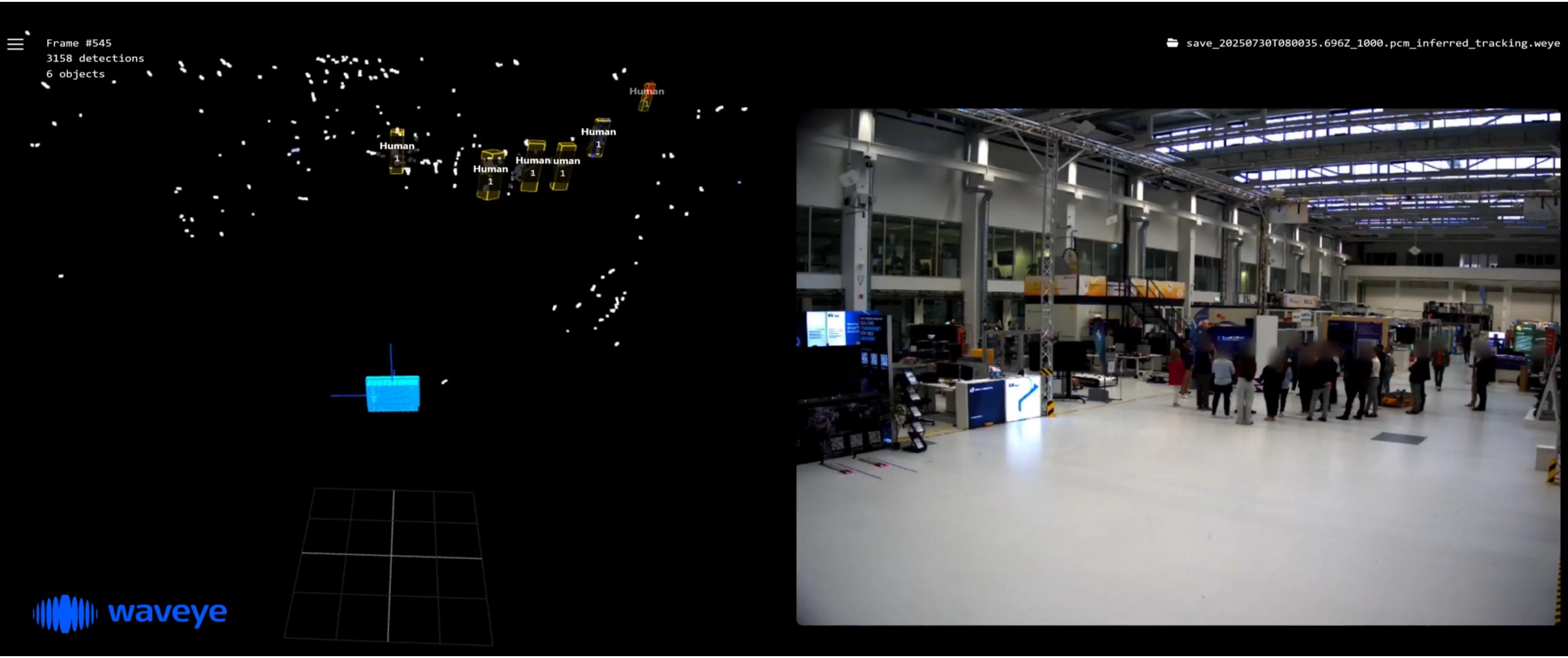
Cost efficient

Spatio-dynamic signatures with 200-600 points

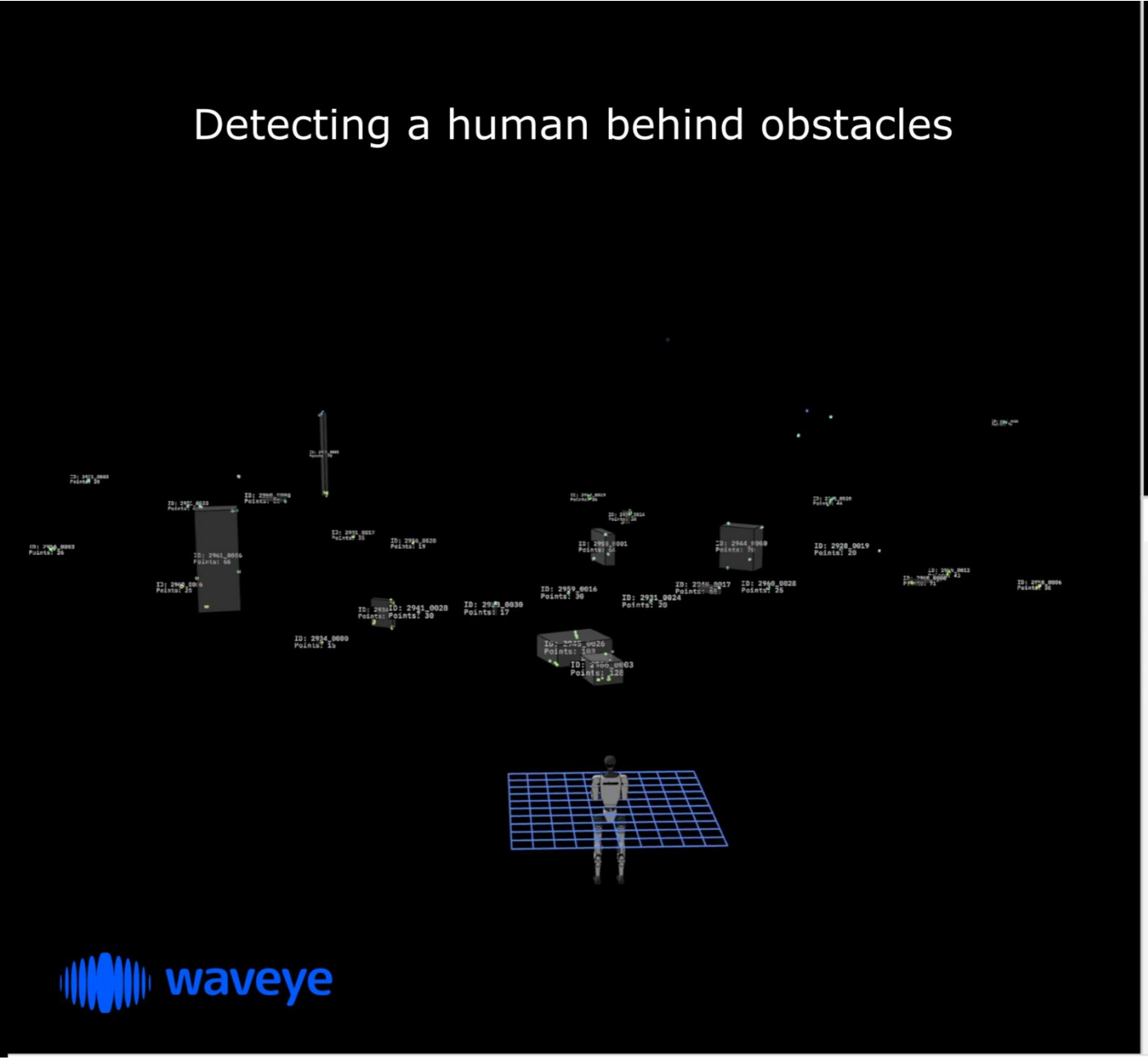


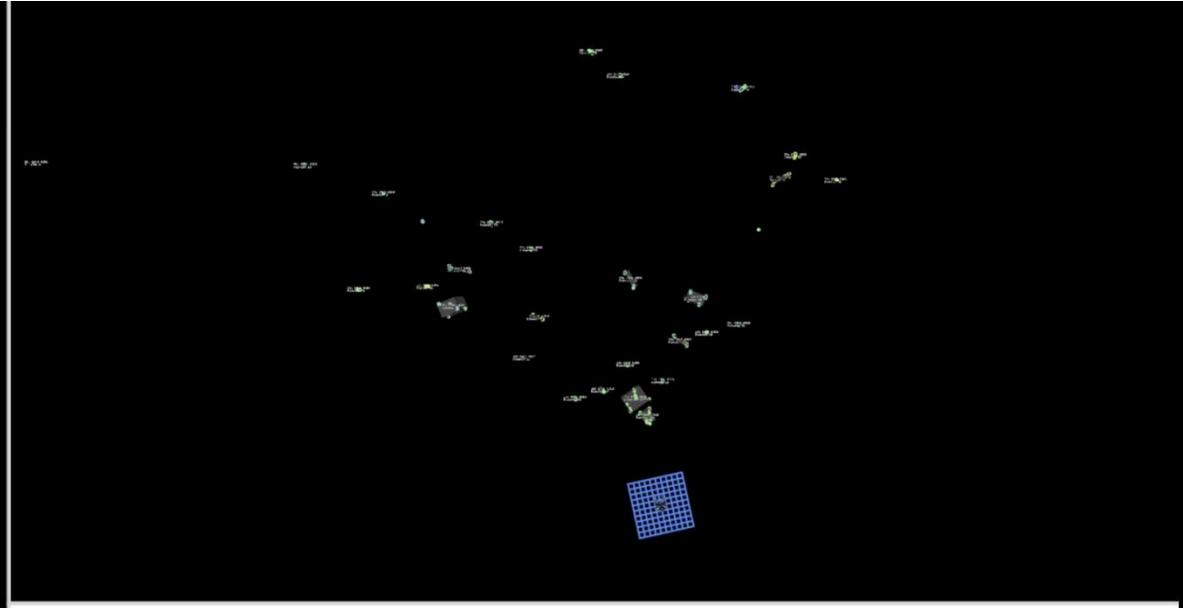
Sufficient information density to see human pose

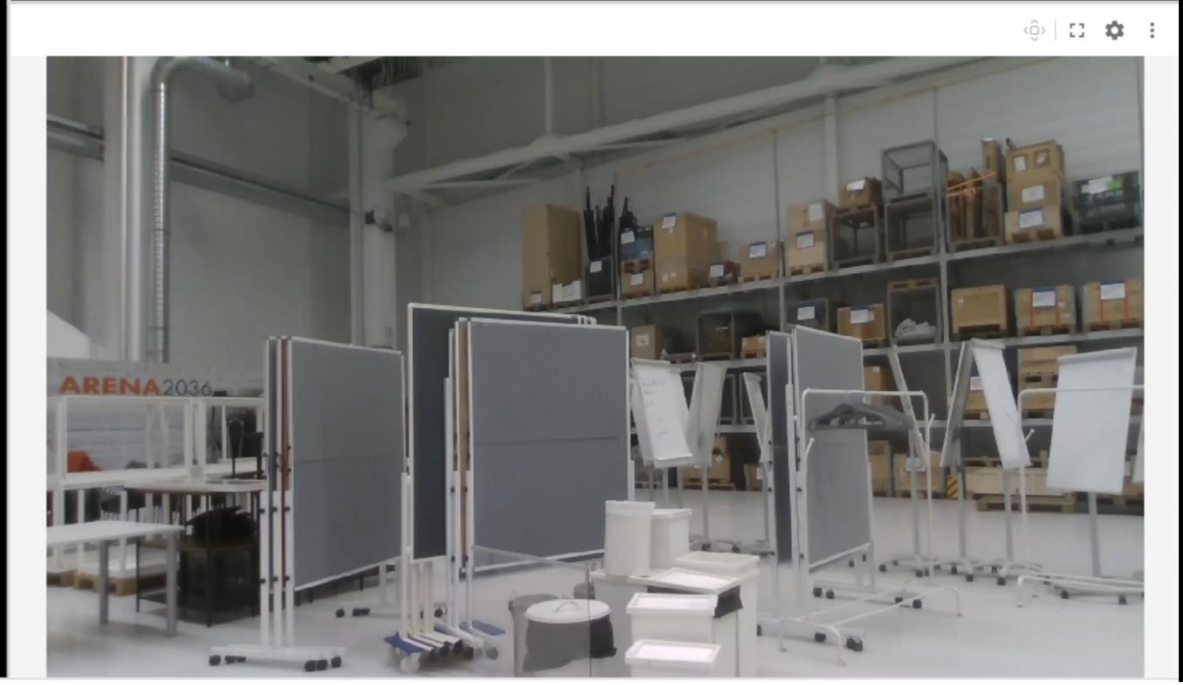
Radar intelligence: detects >20 highly occluded humans



Detecting a human behind obstacles

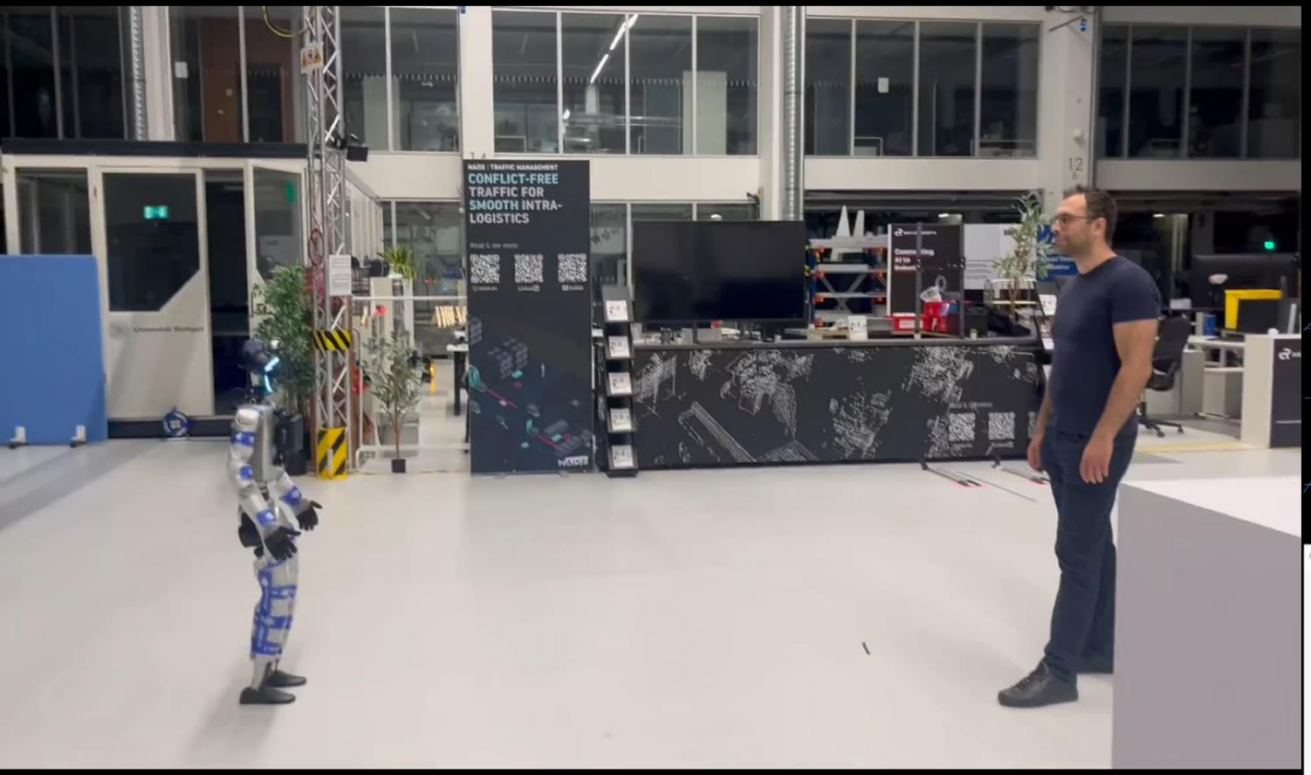


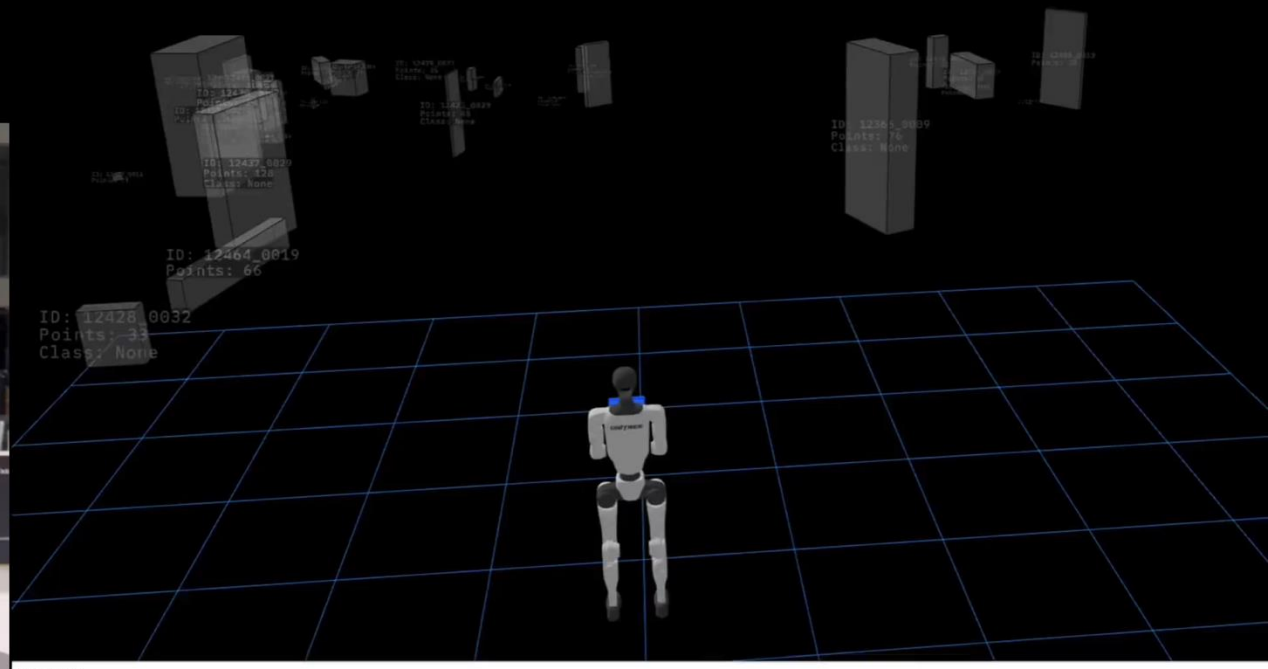




5 minutes long autonomous human following

- Radar track lost: 0 times
- Camera track lost: >200 times





7x speedup

Waveye Safety Brain™

Safety Brain™

Safe action model: external and internal state fusion for safe operation

Waveye Intelligence

Perception: a Large Radar Model capable of 99%+ human detection

LIR: Reality Capture

Patented imaging pipeline: 20x information density

Argus A3

Proprietary hardware: the sensor that embodies LIR

Human safety for general purpose robotics