

Embodied Agentic AI

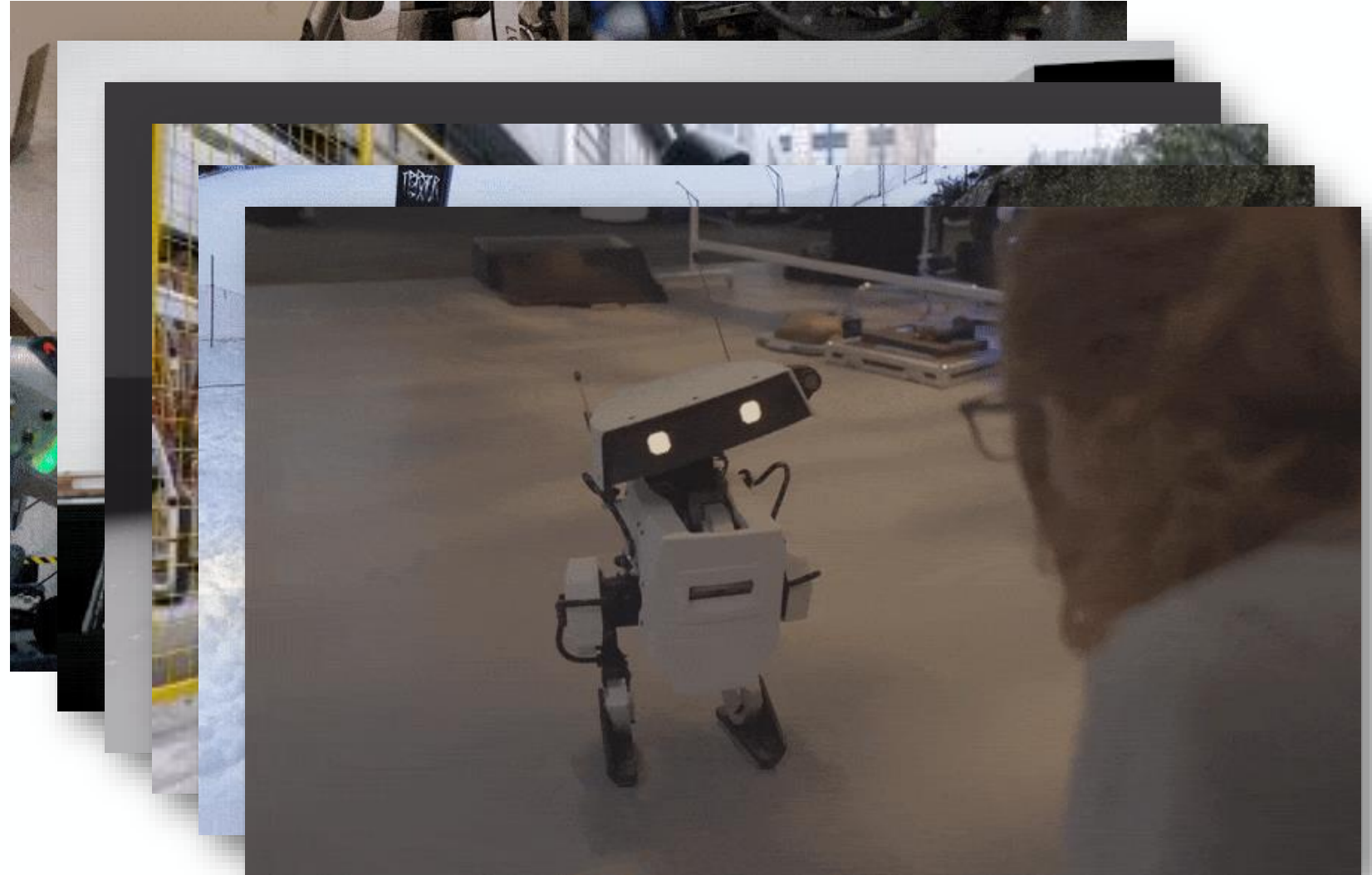
Distributed Applications from Edge to Cloud

Centre for Artificial Intelligence
Embodied Mobile Agents Research Group
10.10.2025

Context: Today's Embodied AI with RL & VLAs

We might be close to robotics'
ChatGPT moment:

- Google's Gemini Robotics
- Figure's Helix VLA
- NVIDIA's Project Groot
- Unitree's "kung-fu" policy
- Deep robotics' agile dog
- Disney's emotive robot



Context: Today's Embodied AI with RL & VLAs

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Foundation models
Vision-Language-Action models

Reinforcement learning
Policies trained in simulation

Why Embodied Agentic AI?

Robots can do so much today, and yet so little



Physical Intelligence (π)

✓ ***Clean the room***

✗ ***Find my keys***



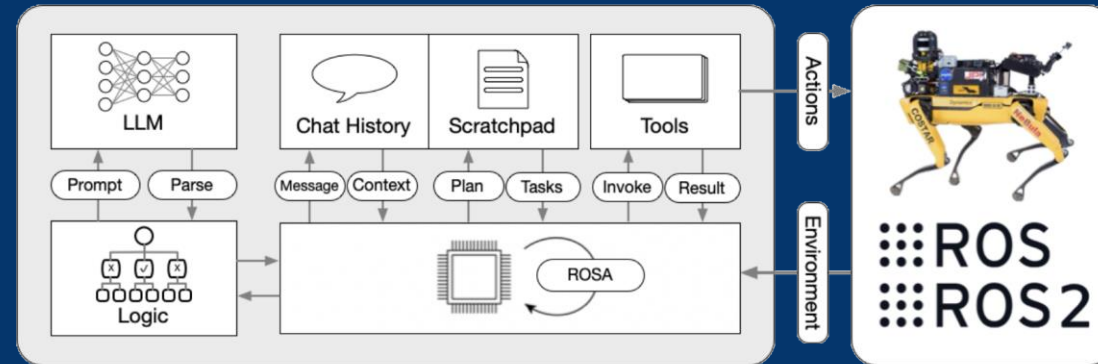
SKILD AI

✓ ***Hand this balloon***

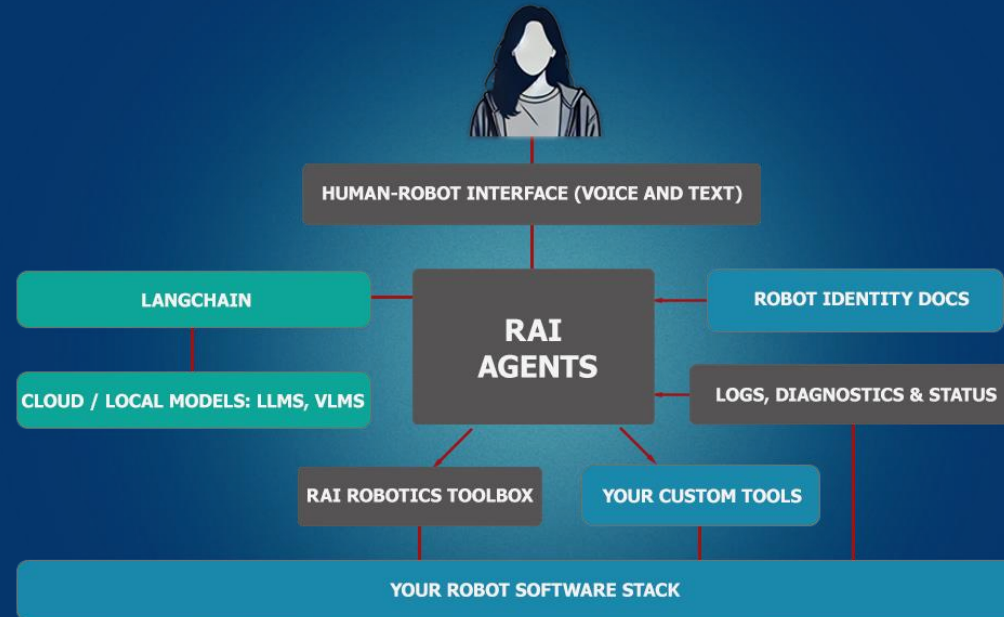
✗ ***Wait here and greet my friends***

Open-Source Embodied AI

<https://github.com/nasa-jpl/rosa>



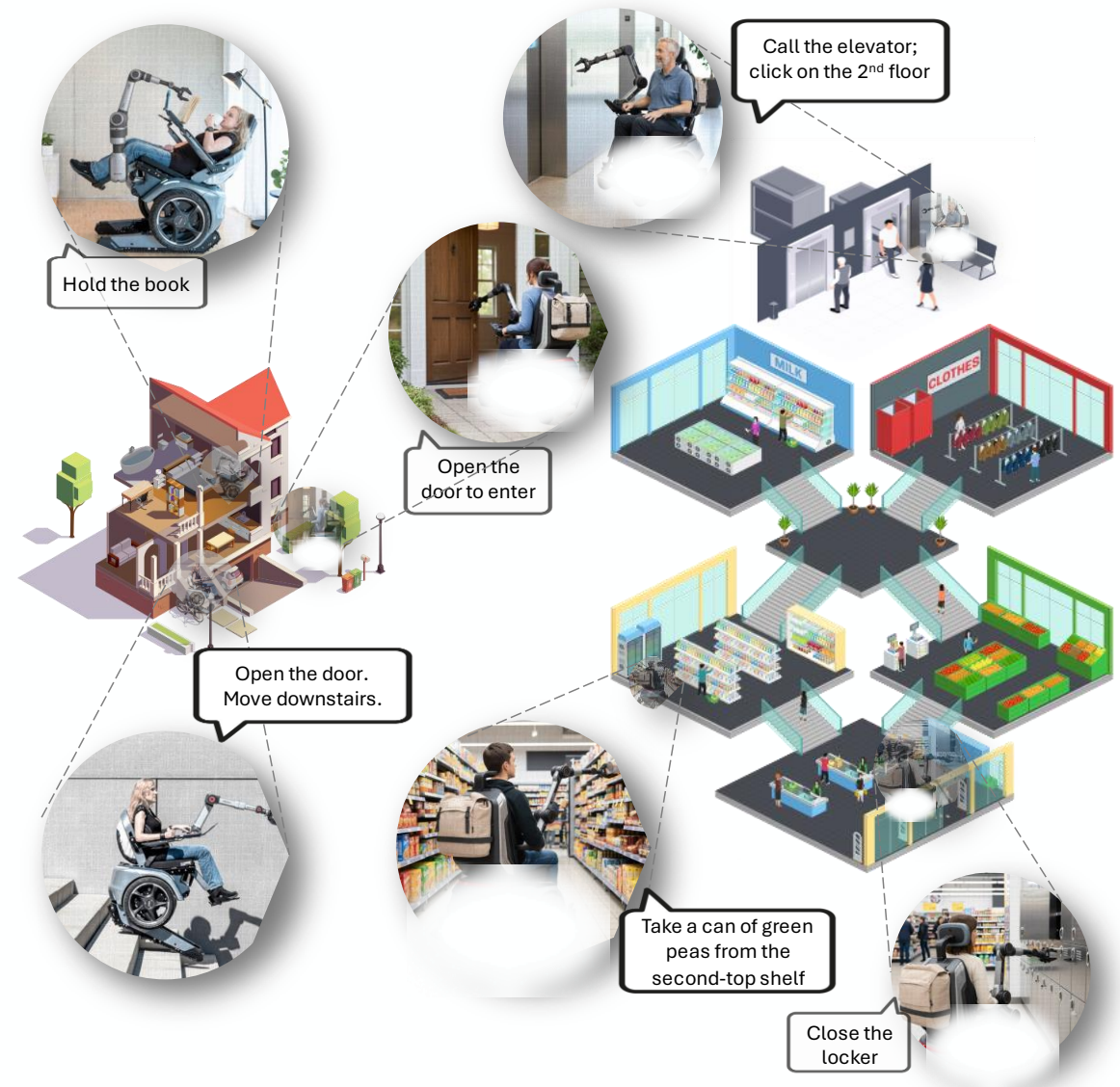
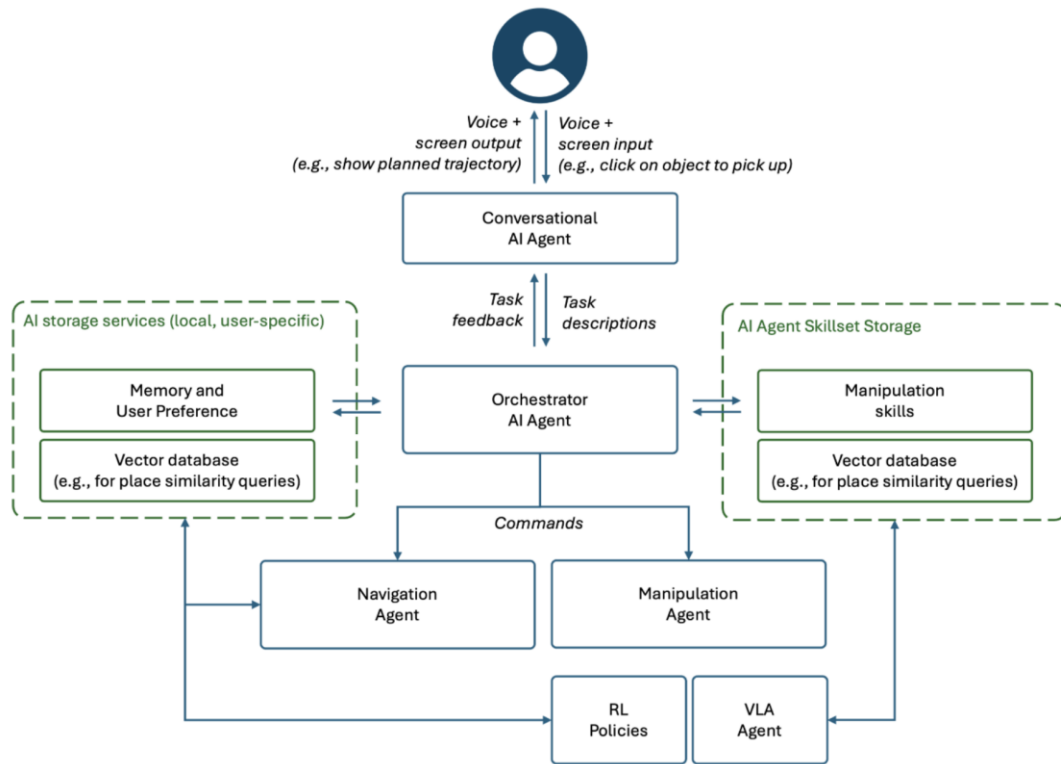
<https://robotecai.github.io/rai/>



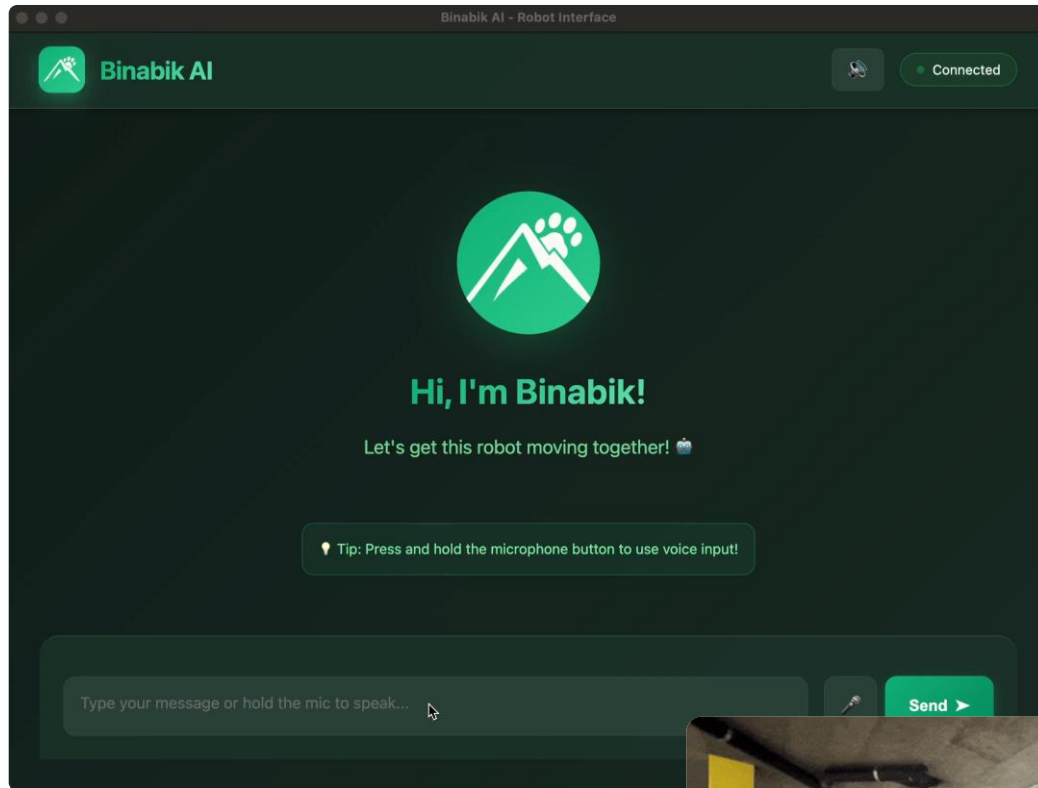
Embodied Agentic AI is today's AI Frontier



Agentic Embodied AI | Examples (1/2)



Agentic Embodied AI | Examples (2/2)



Prompt: Wait here until you see a person sit down, then stand on your legs followed by laying down.



Ultimate Goal

One Agent One Thousand Embodiments

Deployment possibilities from edge to cloud.

Turn any toy or robot with a camera and Wi-Fi connection into an intelligent machine.



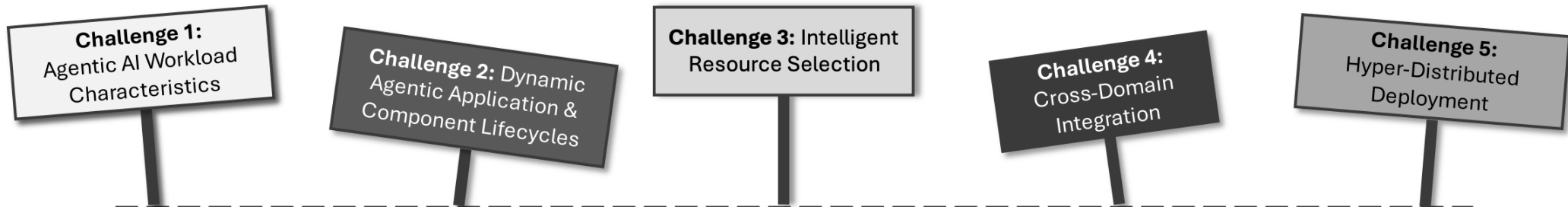
Agentic Embodied AI is Inherently Distributed

Deploying GenAI at scale in IoT / Robotics is still challenging.

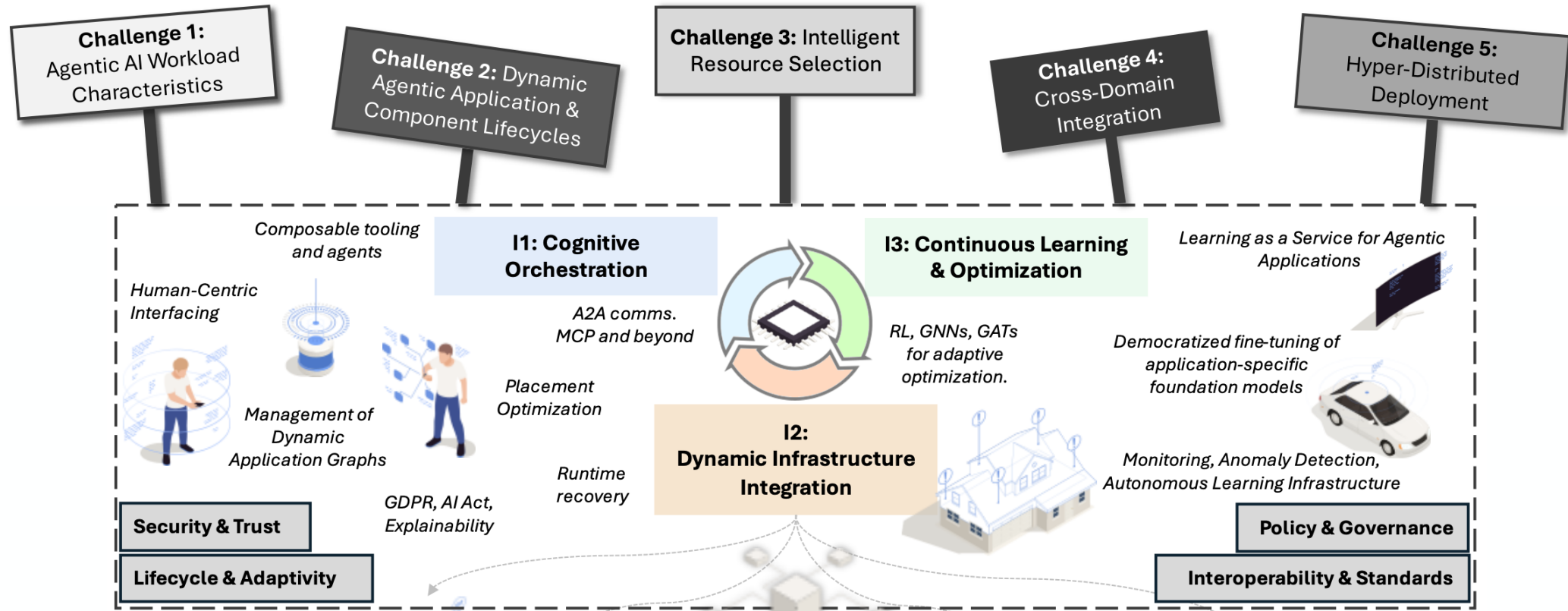
- Cloud vs on-device
- Multi-modal multimedia data with high-bandwidth and low-latency requirements

Deploying Agentic Embodied AI *is even more challenging*

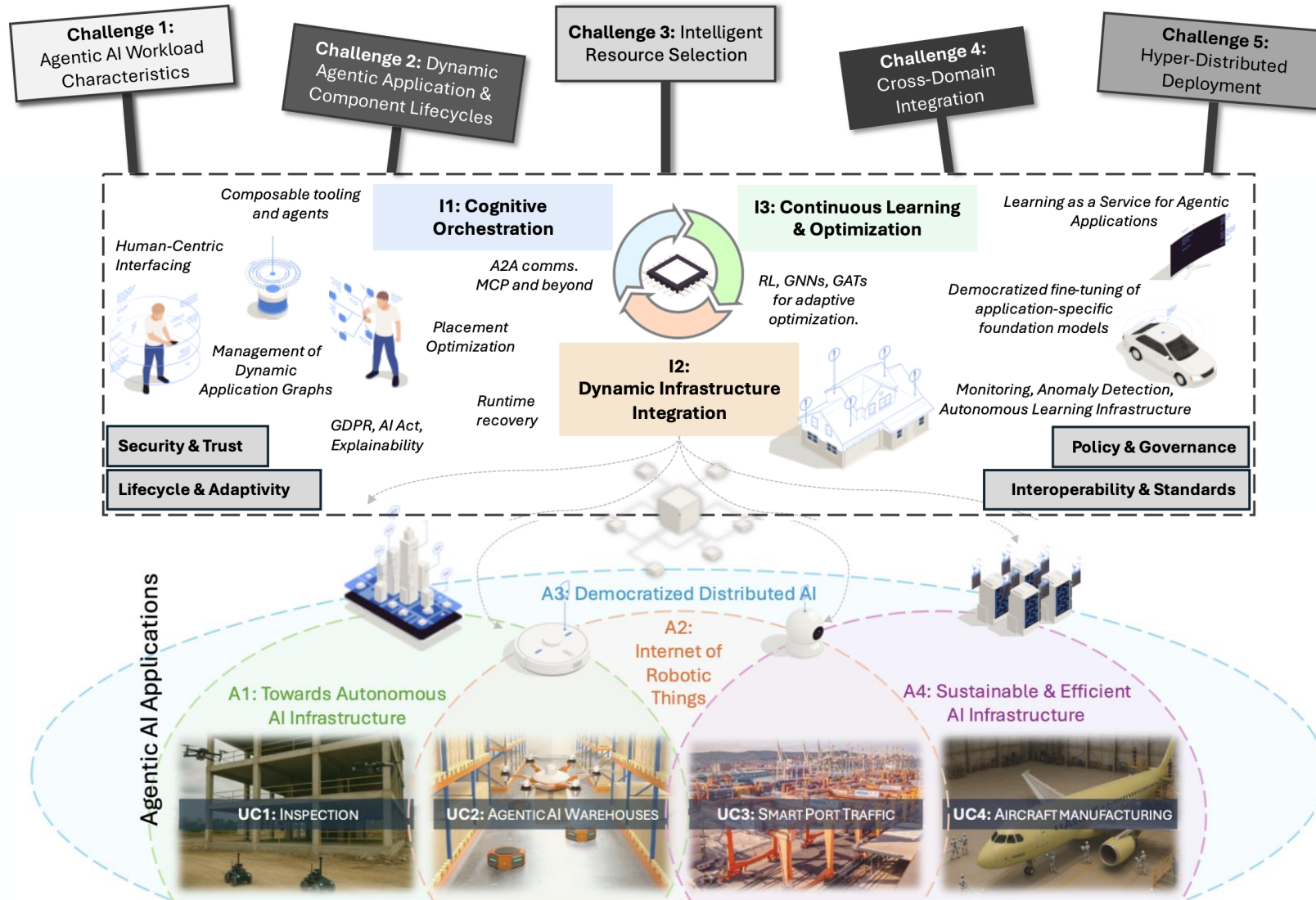
- Variable workloads, lifecycles, resources
- Cross-domain, hyper-distributed



Agentic Embodied AI is Inherently Distributed



Agentic Embodied AI is Inherently Distributed

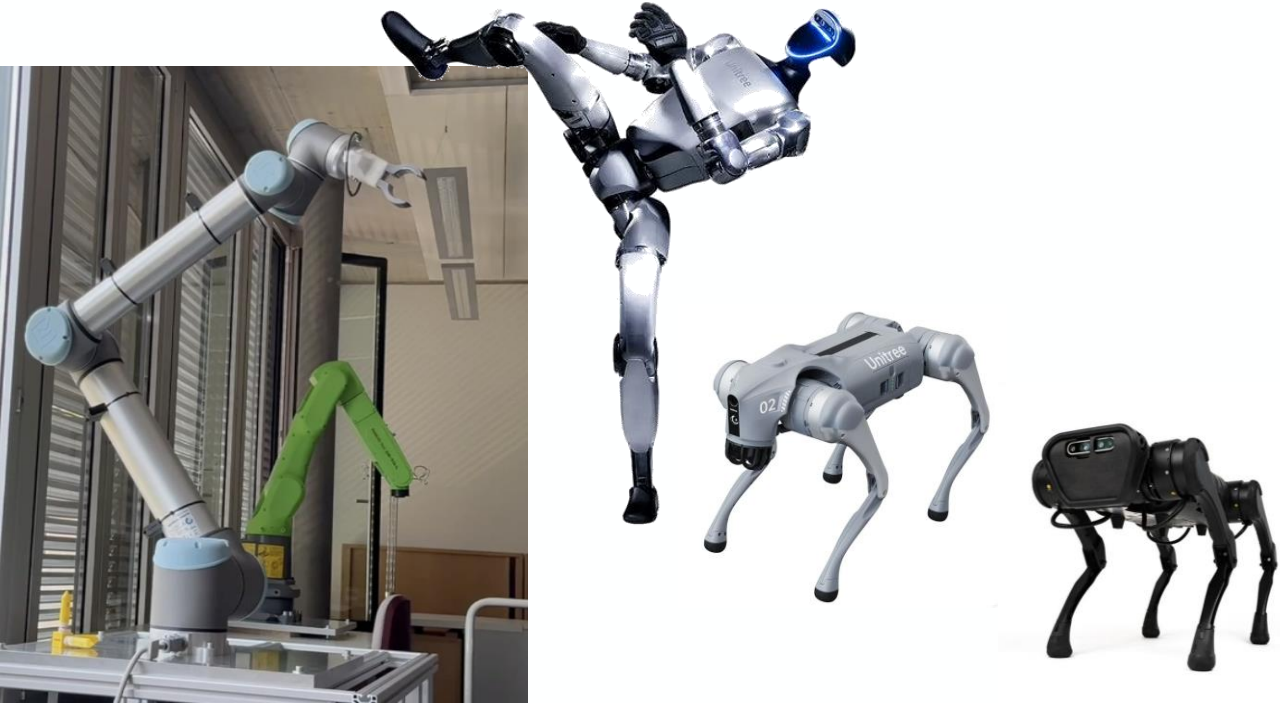


Physical / Embodied AI @ ZHAW's Centre for AI

Growth area for the years to come

Equipment & laboratories

- *Learning Robotics Lab*
- *Autonomous Learning Systems Lab*
- 2x Robodogs, 1x Humanoid



Projects & partners

- LINA: Largest test infrastructure in Europe



Prof.
Scaramuzza,
UZH



Prof. Kovac,
EMPA/EPFL

- Projects: *NCCR Automation, Horizon Europe, SNF/BRIDGE Discovery, DIZH structures*

DAVOS **TECH** SUMMIT

Physical AI - Touching Intelligence



July 1-4, 2026



Davos Congress, Switzerland

Initiators



Q&A