

Welcome to the

ITEA PO Days 2026!

📍 Istanbul | 15-17 September



START OF
ITEA
CALL 2026



ITEA PO Days 2026

Opening keynote

Prof. Dr.-Ing. Dirk Elias
ITEA Chairman



ITEA PO Days 2026



Frederik De Vusser
Belgium



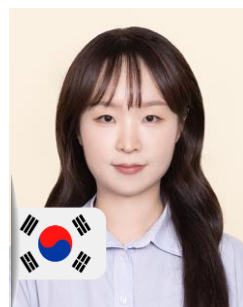
Neil Kochar & Vance Pan
Canada



Teemu Varonen
Finland



Robert Puschmann & Marieke Rohde
Germany



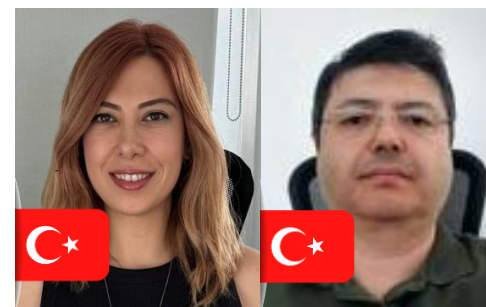
Suvin Kim
Republic of Korea



Agne Alminaite
Lithuania



Jacob Jan de Boer
The Netherlands



Seda Nur Budak & Barbaros Can
Türkiye

Contact points Public Authorities
present in Istanbul

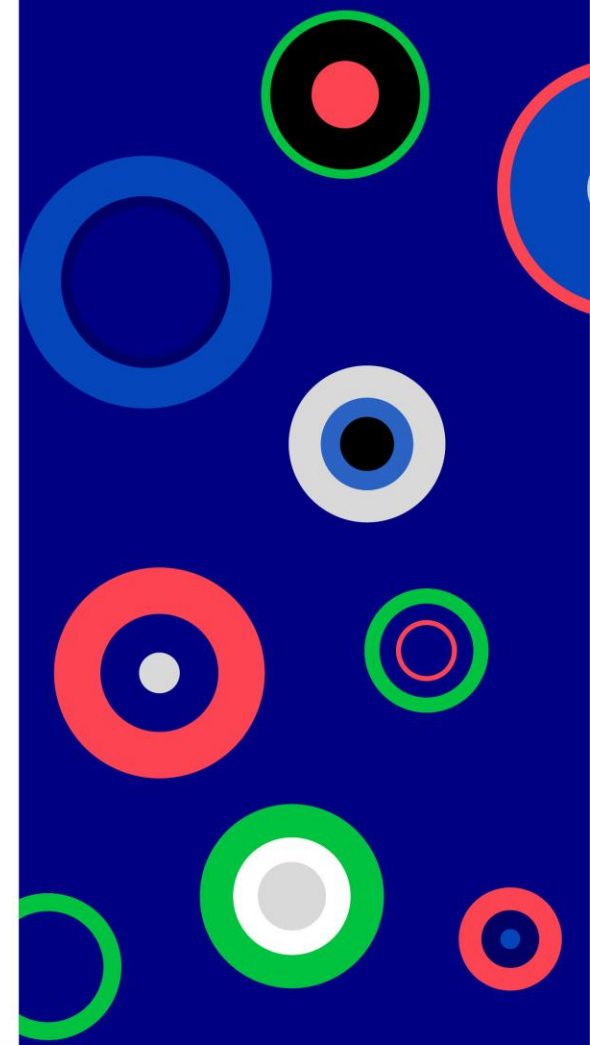
They are here to support you!



Alice Kinghorn & Ben Morris
United Kingdom

Meet the ITEA Office team

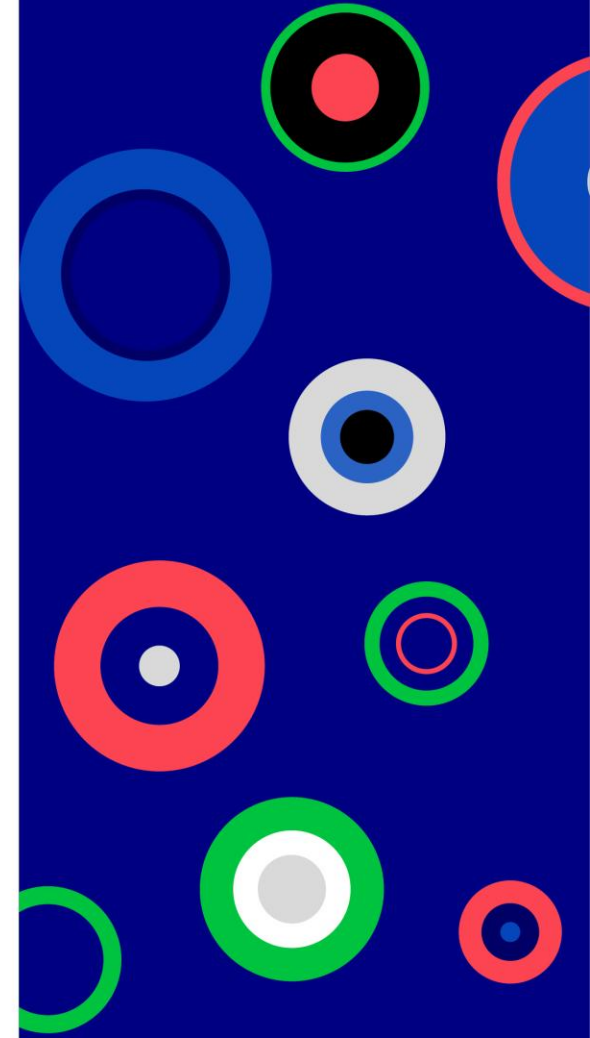
We are here to support you!



Special thanks!



Σ eureka



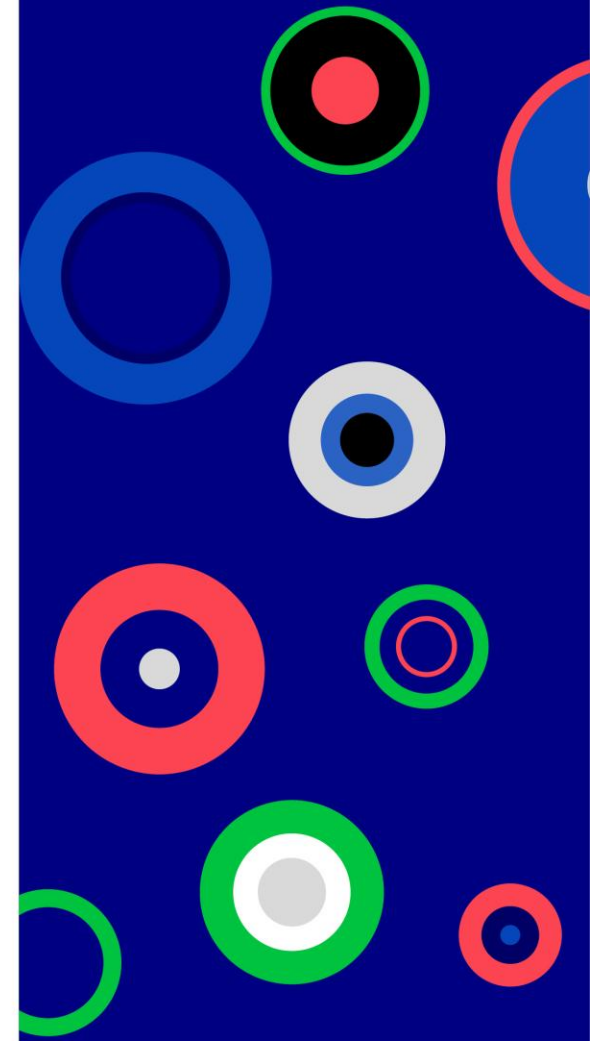
ITEA Call 2025 and ITEA PO Days 2026

Some facts

ITEA Call 2025 and ITEA PO Days 2026

Some facts

- ITEA Call 2025
 - 314 participants
 - 56 POs submitted
 - 25 labelled projects
- ITEA PO Days 2026
 - 340 registrants from 20 countries!
 - 106 ideas in the project idea tool
 - 69 pitches and 80+ posters



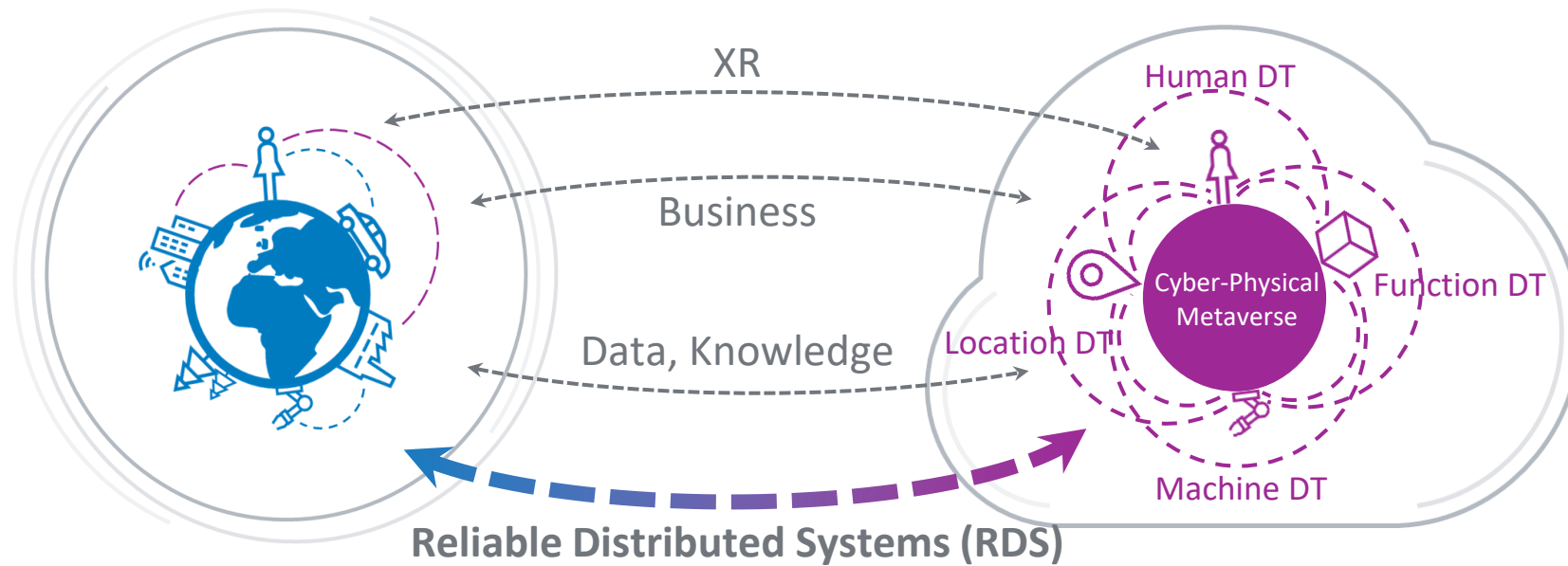
Food for thought

When the Cyber Physical Metaverse Starts to Think

Food for thought

Webinar on the Cyber-Physical-Metaverse

ITEA
PO Days
2026



No question if, only when!

Check:

<https://itea4.org/itea-technology-webinar-cyber-physical-metaverse-introduction.html>

Food for thought

Artificial General Intelligence (AGI)



Photo by Spencer Brown

Eric Schmidt, former CEO Google, April 2025
"Within three to five years we'll have what called [artificial] general intelligence, AGI, which can be defined as a system that is as smart as the smartest mathematician, physicist, artist, writer, thinker, politician... you get the idea," Schmidt said during a panel discussion being part of the [Special Competitive Studies Project](#).

Presented
during the
ITEA PO
Days 2025

Based on the idea of "**recursive self-improvement**," in which AI algorithms are able to learn on their own and increase their capabilities.

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Food for thought

Artificial General Intelligence (AGI)

Imagine AGI helps
to build the
Cyber Physical Metaverse

Imagine AGI uses
the Cyber Physical
Metaverse!

Presented
during the
ITEA PO
Days 2025

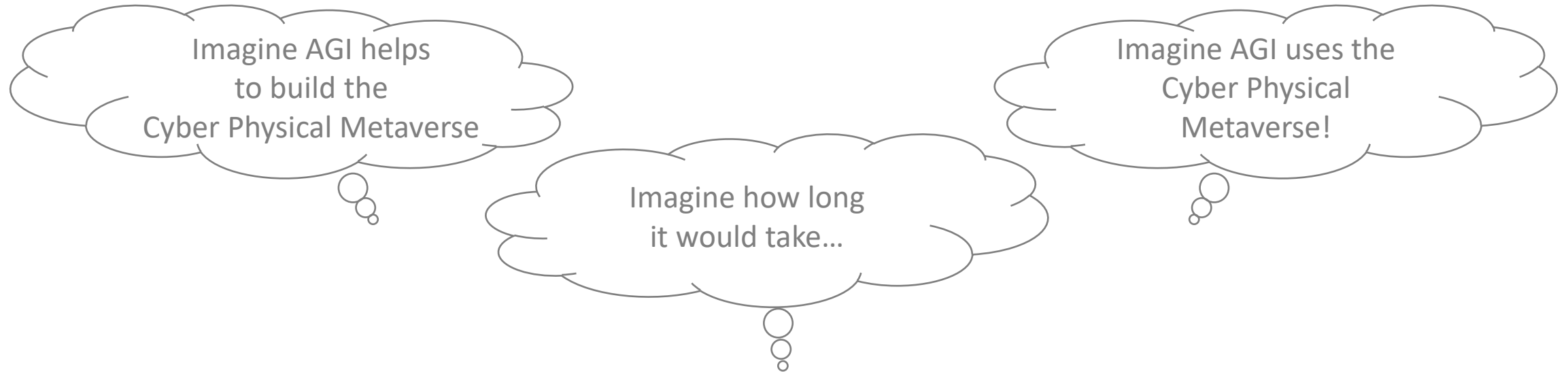
Imagine how long
it would take...

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Food for thought

Self-Improving Systems

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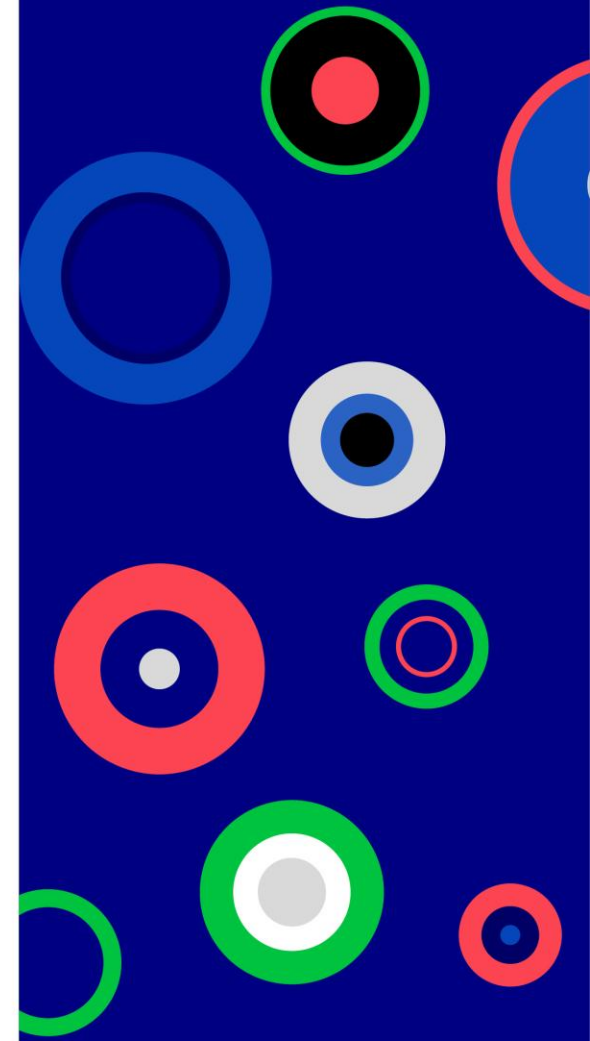


It took much less time
than many thought!

Food for thought

Self-Improving Systems

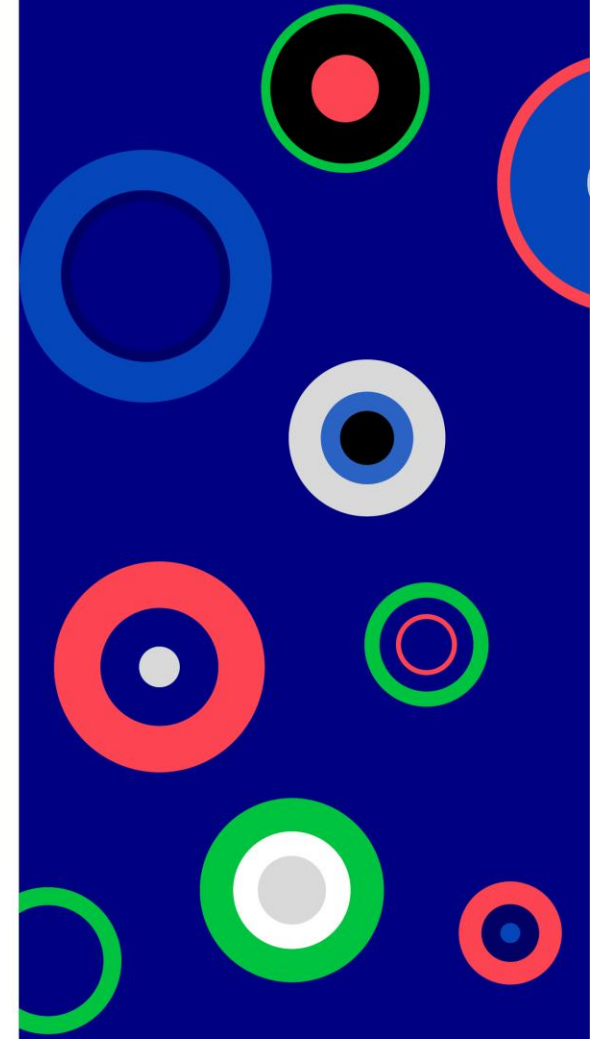
- Various AI based solutions demonstrate self-improving systems, tools and skills capabilities already today.
- Main limitations:
 - Validation
 - Human oversight



Food for thought

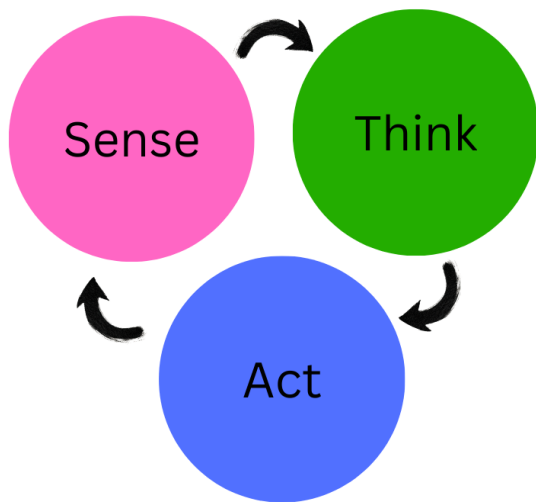
Self-Improving Systems

- Imagine self-improving AI in 'application real time' machine control:
 - Adaptive process control & hardware tuning
 - Self-healing infrastructure & IT service management (ITSM)
 - Robotics fleet orchestration
 - Real-time cyber-defence swarms

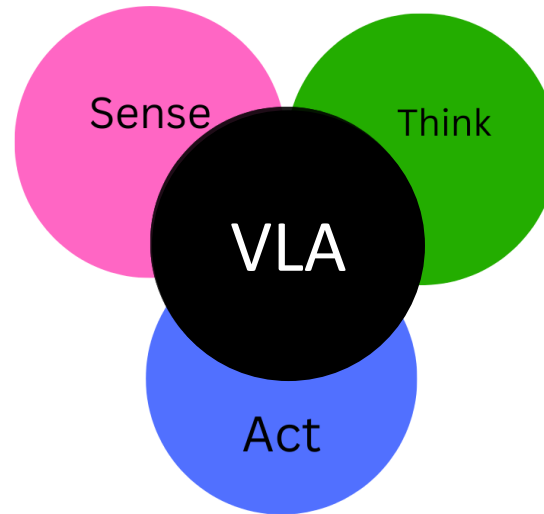


Great progress in Vision-Language-Action (VLA) models **ITEA PO Days 2026**

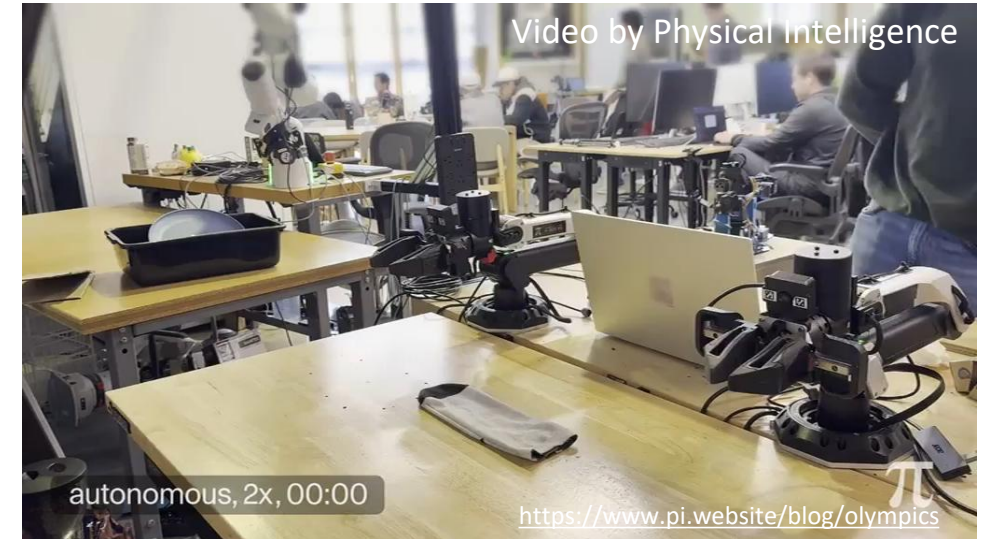
Dexterous tasks become feasible



Classical Robotics



“Pixels to torque”



Public material/slides from internet sources

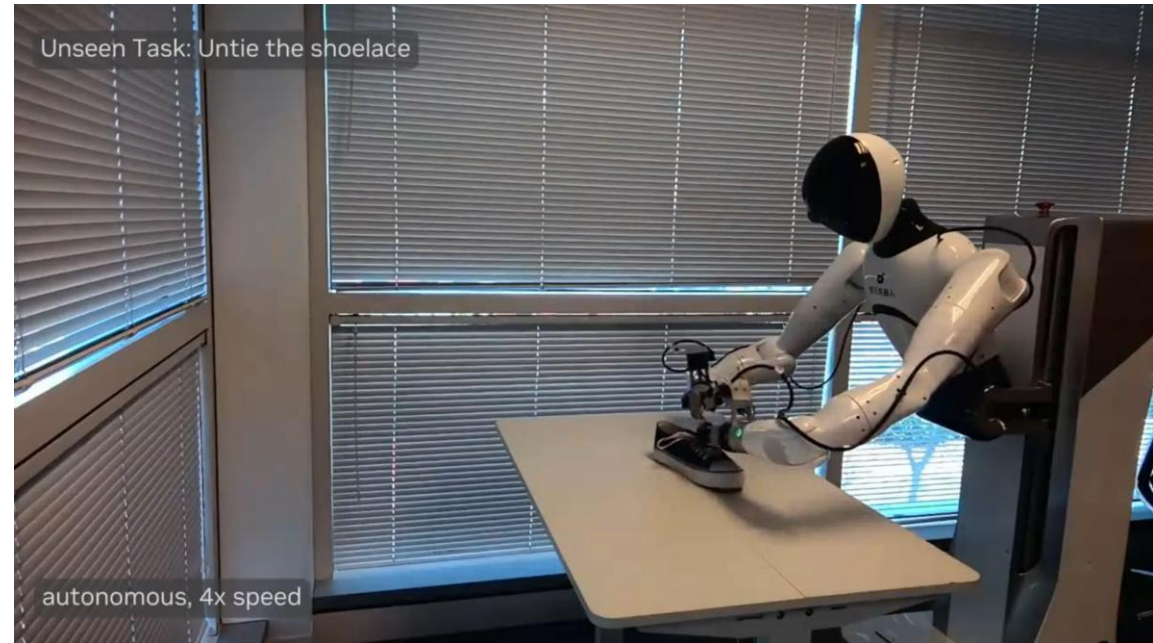
Adopted from: “Vision-Language-Action, explained with a minimum of math and jargon”
<https://roboticsfyi.substack.com/p/vision-language-action-explained>

Even more powerful alternatives evolving

World Action Models (WAM)

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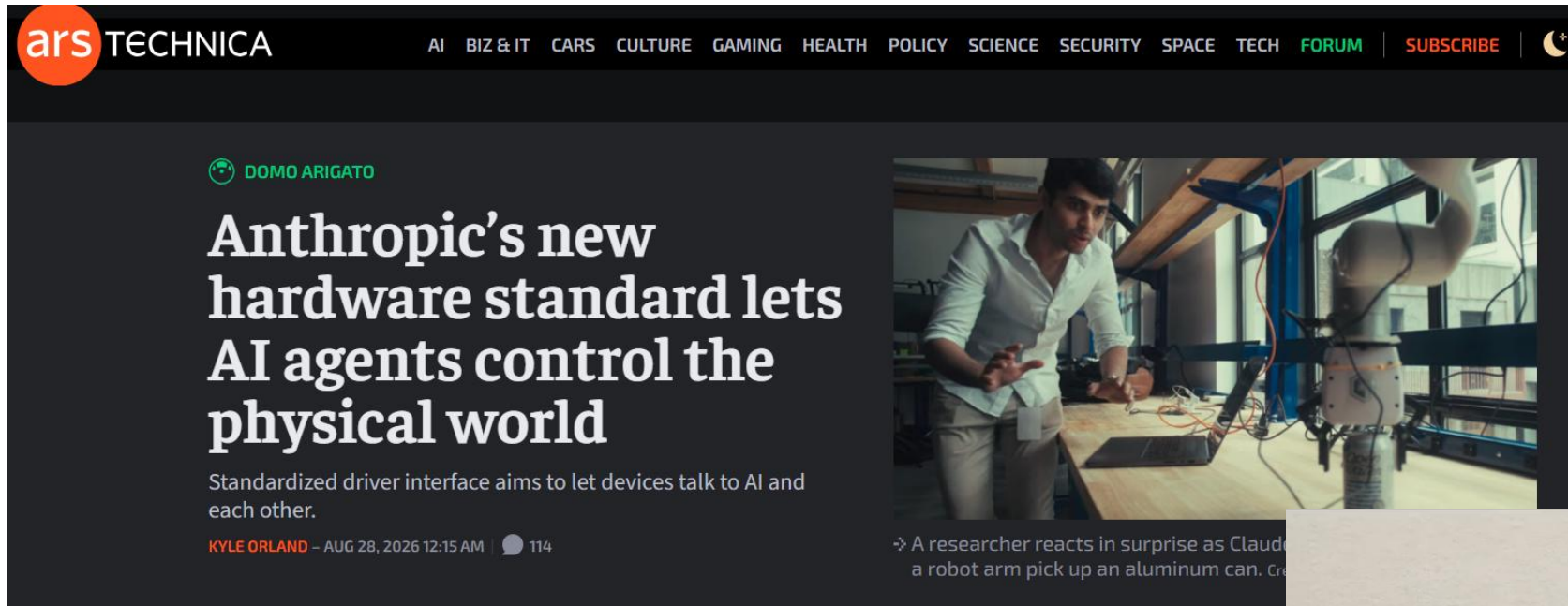
A World Action Model is jointly learning to predict both future world states (what the world will look like) together with the robot actions needed to influence the world to get there.



Public material/slides from internet sources

Model Hardware Standard (MHS)

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Source:

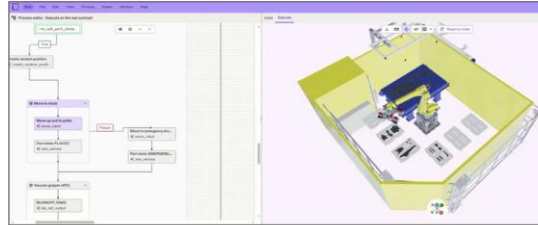
<https://www.youtube.com/watch?v=UxJZrCFzTHY>

Industry never stops!

Applications for all domains

SortMaster Vision

Key technologies from Intrinsic Flowstate



"Skill"-based: Organize the complexity of robotic actions into reusable SW modules

Dynamic motion planning: Real-time motion planning and collision avoidance w/o any adaptations

Transferable: Implement own skills and the know-how into the robot process

Robot-agnostic control: Intuitive control, independent of the robot OEM

Digital Twin: Test and visualize the mission in simulation, in advance before deployment

Perception: Latest AI vision technology based on foundation models to detect and identify parts

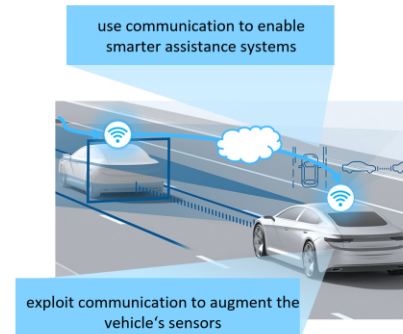
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Public slides by TRUMPF for use in talk by ITEA (Dirk Elias) in September 2026 - please ask Ralph Lange before actual use

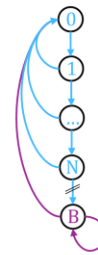
Public

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Cloud-based Vehicle Control & Degradation Strategies Cooperative Longitudinal Motion Control



Markov model, e.g. for packet loss/overruns in



Method Development

- Theoretical Backbone: Network control methods accounting for uncertainties
- Different driving functions as proof of concept such as connected adaptive cruise control (cACC) and lane merging

Demonstrate Performance Improvement

- Integration of algorithms aware of expected (timing) uncertainties in real-world demonstrator
- Monitoring of the network behavior during runtime

Pathologic Case: Degradation Strategies and Local Fallback

- Network control methods accounting for uncertainties
- Hot and cold-stage failover mechanisms

2

Bosch Research | 2025-07-08

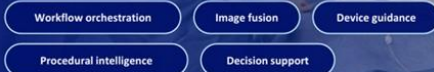
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From minimally invasive to intelligent treatment

Healthcare has become data-rich. The problem today isn't a lack of information — it is turning information into action.

Increasingly, AI brings together imaging, software, devices and data to support care teams:



AI augments the team — the physician remains at the center.

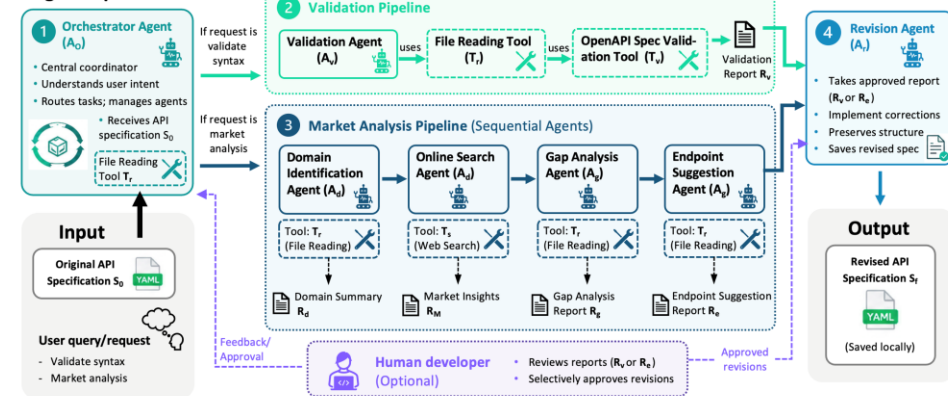
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Demo:

Agent for API specification generation

Agent4Spec Overview



Restricted | © Siemens 2026 | Yongjian Tang



ITEA projects already including CPM aspects

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ITEA Call 2025 projects



BASEECS
Behavioral Analysis and Simulation for Environmentally and EConomically-sustainable Systems



Emotional-AI
Emotional AI for Thriving Communities



SPASH
Smart Packaging and Shipment



SwarmAI
Autonomous AI-powered Swarm Platform for GNSS-denied Scenario-critical Civil Tasks



AlonBMS
AI-Enhanced Smart Battery and Energy Management Systems for Sustainable Energy Storage



TelematiQ
AI-Driven Mobility Intelligence Platform



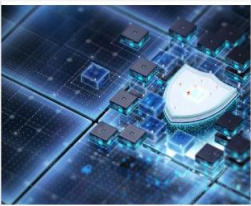
AI-CYBER
Adaptive AI for Cybersecurity Threat Intelligence, Monitoring, Orchestration and Countermeasures



ReliableStream
Reliable Services and Infrastructures for Streaming



GUIDE
Guidance Platform for People with Disabilities (PwD) through Digital Empowerment



AIDRM
Security foundations for an AI Model Protection Solution



TRUST-SMI
Trustworthy AI for Smart Multimodal Health Intelligence



MOTIONS
Monitoring & Optimizing Transport in Last-Mile Deliveries with Intelligent Onboard Systems



ITMS
Intelligent Tutor Matching System



ViTRA
Virtual Twins, Real Sustainability with AI Powered Collaboration



PROGEN
Product Line Engineering with Generative AI for Safety-critical Edge-Devices



AI4CS
Agentic AI for Critical System Software Development



DESDIMI
DEvelopment of a System for continuous and Digital factory optimization during the operation phase



ARAMIS
Agentic AI platform based on MPC Integration and Interoperability for the IIoT



SoSEng
System of Systems Engineering and Control with LLM-based Agent Networks



SafeChain
Federated AI Agent-Driven Hazard Management Platform for Resilient Supply Chains



GLEAM
Green Learning for Eco-Conscious Medical AI



RESOPS
Resilient Operations for Industrial Processes



SCENTINEL
Smell-aware City Environmental Network: Telemetry & Intelligence for Waste and Wastewater Management



iSMOP
Intelligent Shared Mobility Orchestration Platform



MIRAI-MDT
Next-Generation AI-Enhanced Radiology and Clinical Intelligence for Oncology MDT

ITEA projects already including CPM aspects

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ITEA SRIA update 2026

- Strong signals:
 - The shift to more autonomous AI systems
 - The evolution of predictive Digital Twins interacting in real-time with reality
 - The transition towards more distributed and resilient systems
 - The integration of ethics, trust and data governance



Download via

<https://itea4.org/sria/2026.html>

Food for thought

Mind Ray Kurzweil!

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2026



<https://alphafold.ebi.ac.uk/>

https://en.wikipedia.org/wiki/Ray_Kurzweil

Wishing you inspiring
and creative days ahead!