



# Compute to Impact: Finland as a World-Leading AI Hub

AMD Silo AI  
Vilja Hannula

Mission

# Making Finland the world- leading AI hub



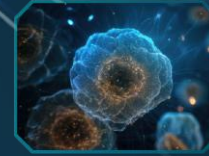
Building an ecosystem where the next generation AI solutions are developed and commercialized through open collaboration between computing infrastructure, industry partners and research institutions.

# COMPUTE TO IMPACT

## Making Finland The World-Leading AI Hub

**AMD**  
together we advance\_

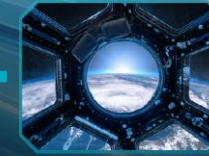
- ✓ DEMANDING COMPUTE
- ✓ HIGH COMPLEXITY
- ✓ OPEN SOURCE



Life Sciences



Robotics &  
Autonomous Systems



Scientific AI,  
HPC & Quantum



Visual Media  
and Gaming

### WORKSTREAM 1: FROM COMPUTE TO APPS

Developing step-changing tools that unlock tangible breakthroughs in our strategic verticals.

### WORKSTREAM 2: AGENTIC & FOUNDATIONAL AI

Breaking the limitations by rethinking how AI is built, trained and used in the future.

### WORKSTREAM 3: EFFICIENT AI

Ensuring radically more scalable, sustainable and affordable compute globally.



# Healthcare & Life Sciences



AMD's Life Sciences team partners closely with healthcare and life sciences organizations to bring computationally demanding research workloads onto AMD GPUs with simplicity and efficiency. We work hand-in-hand with partners to co-develop technical vision and practical solutions that **accelerate time-to-insight across life sciences workflows.**

## Workstream 1

### Drug Discovery

Including e.g., simulating molecular interactions, analyzing large datasets from drug trials and optimizing drug design.

### Omics

Collective technologies used to explore the various types of molecules that make up the cells of an organism. Includes e.g. genomics, proteomic and metabolomics.

### Medical Imaging

Both laboratory-based tests and point-of-care diagnostics. Includes LLM and VLM application for e.g., diagnostic algorithms, medical imaging and biological data analysis.

### Digital Health

Includes telemedicine, health informatics, and wearable technology. Focuses on e.g. design and testing of devices and processing large datasets to derive actionable insights and utilization of LLM/VLMs.



# Robotics & Autonomous Systems

## Workstream 1



Co-creating the open DC-GPU ROCm ecosystem for autonomous and robotic intelligence. Foundations for **learning, simulation and decision-making in complex physical environments** – GPU-agnostic, open-source, built with industry and academia.

### World Model Foundry

Building the open training stack for world models and VLA models. Main themes include e.g. self-supervised pre-training, student-teacher pipelines, scaling laws and edge-friendly distillation.

### Agentic Data Engine

Building open data engines for active data collection, curation and labeling. Main themes include e.g. forward-deployed foundation models, active learning, pseudo-annotation and HIL workflows.



# Scientific AI

Scientific AI focuses on **enabling end-to-end workflows that combine AI models, simulations and large-scale compute** for example with HPC centres. Our interest is in ensuring scientific AI to run reliably, efficiently and at scale with AMD GPUs.

## Workstream 1

### Quantum

Quantum computing frameworks or the application of quantum computing algorithms with large-scale computing.

### Target Domains

Projects democratizing expensive scientific computational steps by leveraging AI in e.g. surrogate models, Earth Sciences and Materials Sciences.

### Agentic Workflows

Orchestrating scientific workflows with a combination of domain-specific and generic computing and AI tools with long-horizon planning.



## Agentic & foundational AI

Next-generation technical breakthroughs at the forefront of AI ensuring sovereignty and competitiveness. Building **top-tier expertise** to produce research, patents and innovations that tackle global challenges.

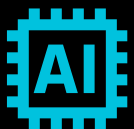
### Workstream 2

Agentic Systems & Methodologies

New Model Architecture

Federated Training

Model Evaluations



# Efficient AI

Insufficient computing power is fast becoming the bottleneck for AI development. We are focusing on **scaling and increasing performance** while targeting a 50 % reduction in energy usage.


## Workstream 3

**Model  
Optimization**

**Distributed  
Training &  
Inference**

**AI  
Deployment**

**System  
Utilization  
Optimization**



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deep dives and  
matchmaking.**



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Senior Program Manager