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

AMD Silo AI

### Finland's AI Moment Is Now







*Software is changing the world, and AI accelerates it.* 

AI is transforming every industry at unprecedented speed, creating a €190B market that continues to grow rapidly. *Compute to Impact* addresses both current AI challenges and next-generation breakthroughs - working end-to-end from computing infrastructure to new model architectures *Compute to impact* enables AMD Silo AI to build a comprehensive AI ecosystem where Finnish companies can develop and commercialize solutions through high-impact co-innovation projects

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

### MISSION



Transform Finland into a world-leading AI hub where companies develop next-generation AI by connecting computing infrastructure, industry expertise, and research excellence, driving breakthroughs in AI technology and commercialization through open collaboration.

#### VISION



Finland is a leader in the development of efficient and sovereign AI solutions that combine world-class computing infrastructure with sustainable practices, enabling European companies to build competitive AI products.

### Compute to Impact - roadmap 2025-2030

Ecosystem activities	Strengthening & uniting Finland's AI talent to compete at global scale								
	WP1 Program Management								
	WP2 Ecosystem Building								
	WP3 AI Certification and Policy								
Building the future	High-value AI-driven breakthroughs driven by industries/domains								
	<b>C</b>	WP4 New models							
				WP	5 Domain Prod	uct Library	1		
Compute to apps	N N	Supporting breakthroughs increasingly driven by AI innovation across tech area							
	ο				WP6 AI Comp	onents			
					WP7 Data Res	ources			
Efficient Al	Т			Scaling	g AI in an energy	efficient mai	nner		
		WP8 AI Infrastructure and Tools							
	N	WP9 Efficiency and Effectiveness							
	S WP10 Efficient Confidential Computing								
2025		2026	2	027	202	8	202	9	2030

### **Compute to Impact - workstreams overview**

#### **Ecosystem activities**

Strenghtening the AI ecosystem in Finland

- **Events & engagements**: Connecting stakeholders across the field
- Ambition & direction: Luminary guests, fact-finding missions
- **Amplify voice**: Represent Finnish AI tech & research globally
- **Tech assessments**: Shared maturity models, certifications
- **Policy Radar & influence**: Track EU/national policies, provide guidance, enable participation in roundtables, dialogue with decision makers

#### **Building the future**

Open path for high-value AI-driven breakthroughs across industries

- **Experimentation:** Test new models & AI research innovations, including beyond LLMs
- **Showcase:** Highlight success stories, cutting edge findings
- **Tech transfer:** Share lab results for industrial validation, packaging usable components
- **Technology Observatory:** Prototypes & playbooks on latest models
- **Breakthrough tracking:** Monitor internal/external research labs
- **Future readiness:** Anticipate and adopt new innovations

## Compute to impact - workstreams overview

#### From compute to apps

Breakthroughs are increasingly driven by integrated innovation across technical areas

- Al component creation & sharing: Validate and distribute models & resources in runnable environments in easy-to-use form
- **Open library:** Shared, accessible and compatible inventory of stable base models & components
- **Open tooling:** Low-friction tools for development, deployment & operations
- **Data resources:** Access to high-quality original data, work with memory institutions, enable data cleaning & broad synthetic data use
- **Generative AI alignment:** Methods for domain-specific output and evaluations

#### **Efficient Al**

Scaling AI has become an energy topic and a technical constraint

- **Infrastructure & tooling:** Assess and provide methods in well-designed efficient compute operations
- **Efficiency focus:** Optimized key AI models, open access to computational and development resources
- **Ecosystem education:** Methods, tools, and skills to improve AI solution performance and cost efficiency
- Orchestration & monitoring: Methods & tooling to operationally monitor & improve performance
- **Data center collaboration:** Explore, implement, disseminate methods in balancing system efficiency and compute confidentiality, hardware virtualization

### Main industry focus areas



Defense



HPC / Quantum



Visual media & Gaming



# Examples of potential co-innovation projects

#### **Building the future**

Open path for high-value AI-driven breakthroughs across industries

- Multi-modal and ontology-following AI models
- Creation and controlled editing of video and virtual worlds
- Foundation models in e.g. material sciences and world simulation
- Autonomous systems state-of-the-art
- Precision medicine: molecule science, medical imaging, treatment targeting
- Agentic workflows, reinforcement learning, and reasoning models
- Multi-source AI sensor fusion

#### From compute to apps

Breakthroughs are increasingly driven by integrated innovation across technical areas

- Robotics agentic systems, co-bot coordination
- Memory institutions, archives, data curation, and AI Training
- Synthetic data, GenAl-based data editing, model evaluation, automated training systems
- Secure virtualized AI compute
- AI-assisted simulation in physical environments
- Confidentiality assessment criteria for systematic data integrity assessment
- Localisation of instruction training and quality metrics

#### **Efficient AI**

Scaling AI has become an energy topic and a technical constraint

- Multi-node model training & inference
- Simulation pipelines, integration with model training
- Model distillation, continued pre-training
- Federated and decentralized model training
- System architecture specific operational and optimization guidelines
- Hardware-agnostic AI compute workloads
- Model optimization and efficiency playbooks

### **Call to action for partners**

- Veturi offers significant funding for the partner ecosystem
- **Call for interest:** Parties interested in the ecosystem participation
  - Academic parties, large companies, SMEs
  - Objective to pursue novel and ambitious AI use cases
- Next: Review received interest and invite to kick-off event
  - First identification of project scopes and consortia
- **Timeline for the initiative**: August 2025-July 2030
  - Preparation and planning starting already in May 2025
- Contact: <u>siloai-veturi@amd.com</u>
  - Interim program manager: Sonja Rajala
  - When contacting us, please let us know which topic areas are of most interest to you, so that we can connect the right people to the discussions