

# LUMI

A white Arctic wolf is the central focus, standing in a futuristic, blue-toned digital environment. The background is filled with vertical lines, data points, and particle effects, creating a high-tech, cybernetic atmosphere. The wolf is looking slightly to the right of the camera.

**CSC Finland re-enters CUG with LUMI**

**Dr. Pekka Manninen**  
Director, LUMI Leadership Computing Facility  
CSC – IT Center for Science, Finland

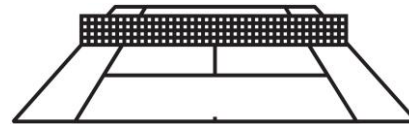
# LUMI: one of the fastest supercomputers in the world



- LUMI will be an **HPE Cray EX** supercomputer manufactured by **Hewlett Packard Enterprise**
- Peak performance over **550 petaflop/s** makes the system one of the world's fastest
  - Fastest today is Fugaku supercomputer in Japan with 513 petaflop/s, second fastest Summit in USA with 200 petaflop/s)

1 system  
**550**  
**Pflop/s**  
Peak Performance

Computing power  
equivalent to  
**1 500 000**  
Modern laptop computers

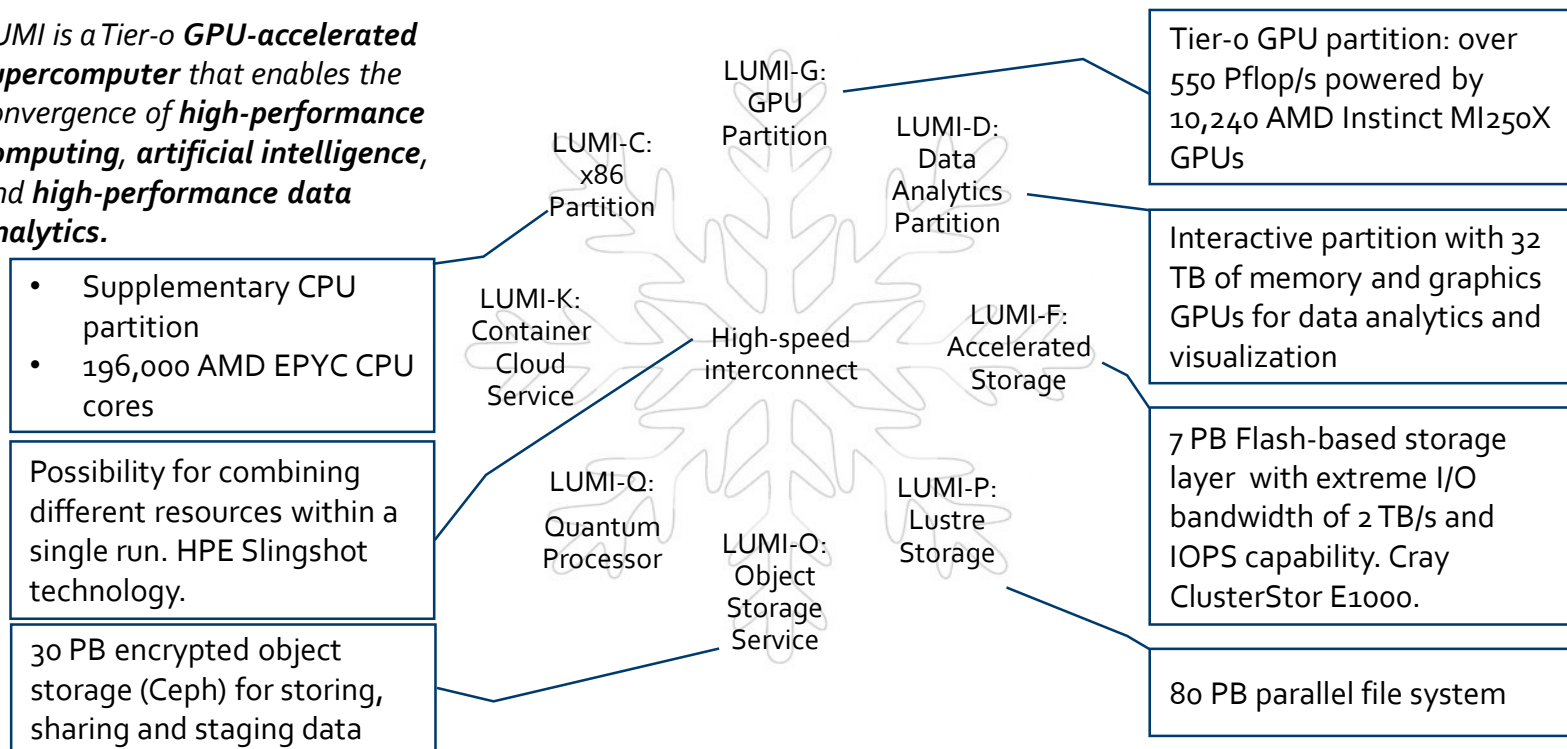


Size of two tennis  
courts

Modern platform for  
High-performance  
computing,  
Artificial intelligence,  
Data analytics  
Based on GPU technology

# LUMI, the Queen of the North

*LUMI is a Tier-0 GPU-accelerated supercomputer that enables the convergence of high-performance computing, artificial intelligence, and high-performance data analytics.*



# LUMI Datacenter in Kajaani

100% hydroelectric energy up to 200 MW

Very reliable power grid: Only one 2 min outage in 38 years

100% free cooling available, PUE 1.03

Waste heat reuse: effective energy price 35 €/MWh,  
negative CO<sub>2</sub> footprint: 13500 tons reduced every year

Extreme connectivity: Kajaani DC is a direct part of the Nordic backbone.  
4x100 Gbit/s to GÉANT in place, can be easily scaled up to multi-terabit level

Elevated security standards guaranteed by ISO27001 compliancy



# LUMI Consortium

- Unique consortium of 10 countries with strong national HPC centers
- The resources of LUMI will be allocated per the investments
- The share of the EuroHPC JU (50%) will be available for all European researchers
- The shares of the LUMI partner countries will be allocated by local considerations and policies – seen and handled as extensions to national resources



