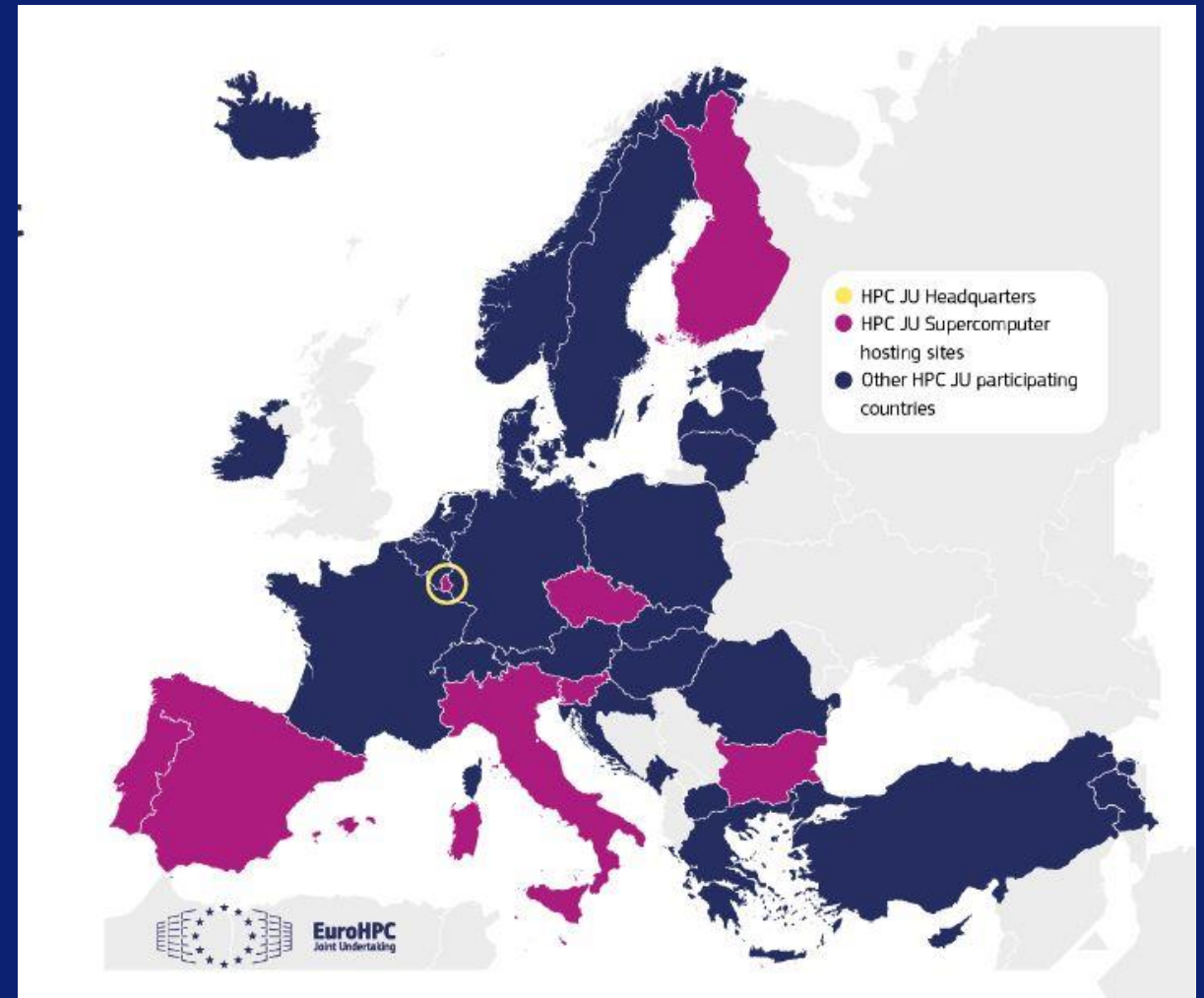# EuroHPC Joint Undertaking

Mikael Borg

Vetenskapsrådet

Swedish Research Council

The Swedish Research Council is Sweden's largest governmental research funding body at Swedish universities, colleges and institutes.
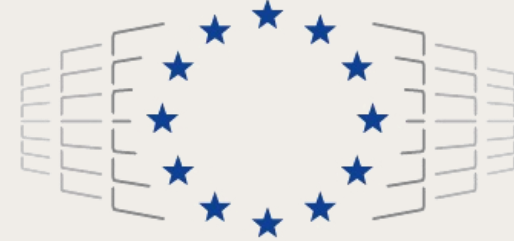
Vetenskapsrådet

The role of the Swedish Research Council

The Swedish Research Council plays a leading role in developing Swedish research of the highest scientific quality, thereby contributing to society's development.

- We provide funding for researcher-initiated basic research

- We initiate and support strategic initiatives in research

- We work for an efficient research system

- We work to ensure that researchers gain access to advanced research infrastructure

- We analyze the conditions of the research, evaluate research and give the government advice on future research policy

- We coordinate and develop communication about the significance, results and conditions of research

- We promote international collaborative research

EuroHPC JU – partnership for High Performance Computing

- **Purpose:** To develop a World Class Supercomputing Ecosystem in Europe

- **Members:** EU, 32 states, 2 private partners (ETP4HPC och BDVA).

- **Activities:**

  – Developing a world-class supercomputing infrastructure.

  – Supporting research and innovation activities.

  – Strengthening the European knowledge base.

- **Budget:** ~ €1.1· 10^9 2019-2020 (50% from EU)

https://eurohpc-ju.europa.eu/

EuroHPC Governance

Governing Board

Representation by members. EU 50% voting rights.
Policy making and funding decisions.
SE: David Edvardsson (Dpt. of Edu.) & Magnus Friberg (SRC)

Industrial and Scientific Advisory Board

RIAG

INFRAG

Executive Director

Draft multiannual strategic research and innovation agenda

Advice to GB re. acquisition and operation of the supercomputers

Daily mgmt., legal representative of JU

Swedish Research Council

- Advice Dept. of Education in Governance Board.

- Cofunding EuroHPC JU grants

  – Together with Vinnova

- Member of LUMI Consortium.

Contacts:
Magnus Friberg, magnus.friberg@vr.se (EuroHPC JU GB)
Mikael Borg, mikael.borg@vr.se (EuroHPC grants, LUMI)
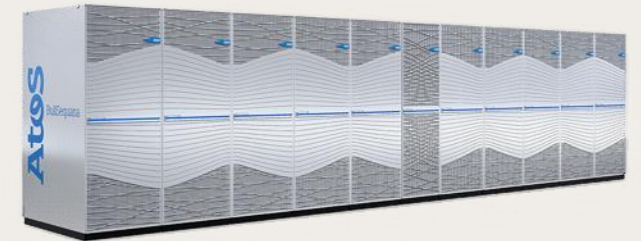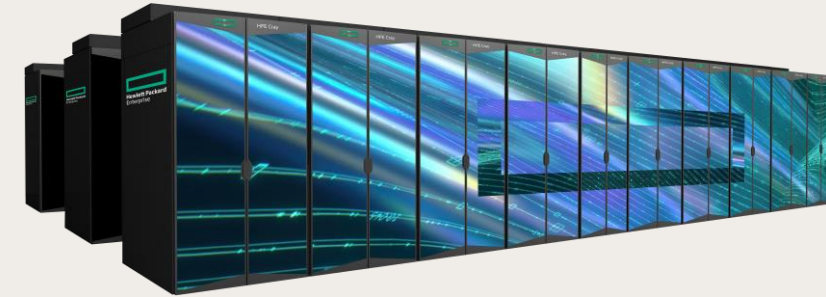Lars Gustavsson, lars.gustafsson@vinnova.se (EuroHPC grants industry)

EuroHPC Reference Group @ SRC

- Niclas Andersson, LiU

- Fredrik Dahlgren, Ericsson

- Anna Delin, UU & KTH

- Hans Karlsson, UU

- Erwin Laure, Max Planck Gesellshaft

- Gilbert Netzer, KTH

- Jeanette Nilsson, RISE

- Marie Skepö, LU

EuroHPC – Supercomputers

- 2 open calls 2019

- 2-3 pre-exascale systems & 5 petascale systems procured

  - Pre-exa: LUMI, LEONARDO (Cineca, BullSequana XH2000) + BSC (status unclear)

- Construction phase, operational in 2021.

  - Each system financed with 50% EuroHPC/50% consortium.

    - EuroHPC to allocate 50% of capacity in open calls (up to 20% to private sector).

- SRC member of LUMI consortium (3.5%).

  - SNIC/UU *Accepted Third Party*

- Additional investments planned.

EuroHPC – Research and Innovation

- Annual calls according to Work Plan (GB decision).

  – 2021 Work plan to be amended

- Open calls on EuroHPC web site
  – Also published on vr.se (when participating).

- 3yr projects, H2020 rules (≥3 entities, different countries).

- 50% EuroHPC, 50% member states
  - Sweden: SRC and Vinnova cofinancing.

- So far: 5 projects with Swedish partners granted.

- Previous calls (examples):

  – H2020-JTI-EuroHPC-2020-01: *Advanced pilots towards the European exascale supercomputers & Pilot on quantum simulator*

  – H2020-JTI-EuroHPC-2019-1: *Towards Extreme Scale Technologies and Applications*

- Probably no new RI calls in 2021.

EuroHPC Programme - process

- GB decides work plan with calls.

  – National funders indicate participation.

    – Based on funding situation, scope.

- Calls open, consortia can apply.

  – **Please inform SRC about submissions.**

- EuroHPC JU organize evaluations of applications.

- EuroHPC GB decision.

- Negotiations with granted consortia.

- Grant Agreement EU <-> consortium.

- Funding from EuroHPC, co-funding from member states.

- €10M; 2020-2023; *Exploratory platform, flexible FPGA based emulation*; Coordinated by BSC
  - An evaluation platform of pre-silicon IP and ideas, at speed and scale.
  - Software development and experimentation platform to enable software readiness for new hardware.

- €5.9M 2021-2023; KTH in consortium; https://www.ligateproject.eu/
  - Enhance the CADD technology of the drug discovery platform EXSCALATE.

- €3M 2021-2023; *Improve the performance, scalability, and energy efficiency of an industrial LBM-based computational fluid dynamics (CFD) software*. Coordinated by CS Group.

- €9.9M 2020-2023; *Helps facilitate access to all high-performance computing-related technologies for SMEs*. Coordinated by U of Stuttgart.

- **Great opportunities for ground breaking research!**

- **Utilize the upcoming HPC resources!**

- **Engage in EuroHPC projects!**

- **Contact SRC in case of questions!**

Vetenskapsrådet