

# LUMI

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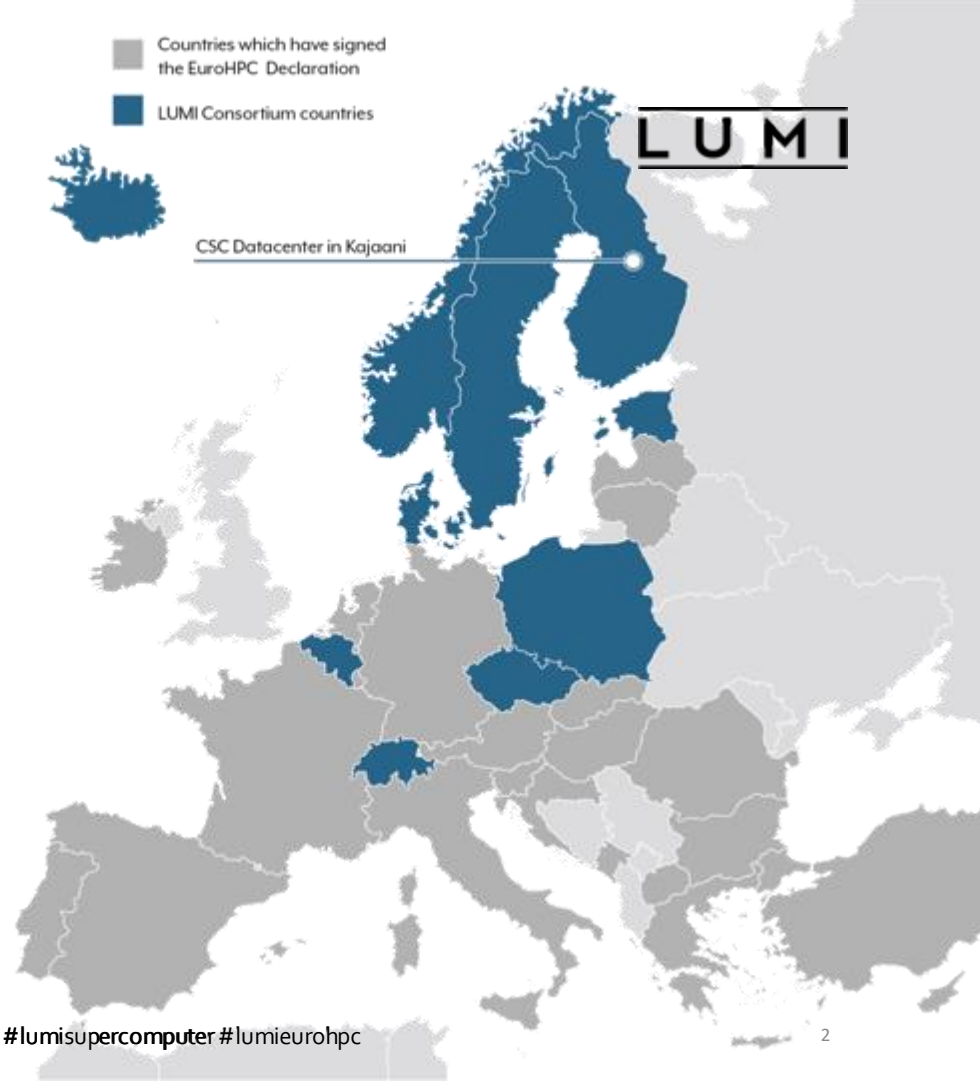


## LUMI world-class supercomputer

LUMI User Support Team – CSC coffee break 14.9.2022 – Emmanuel Ory

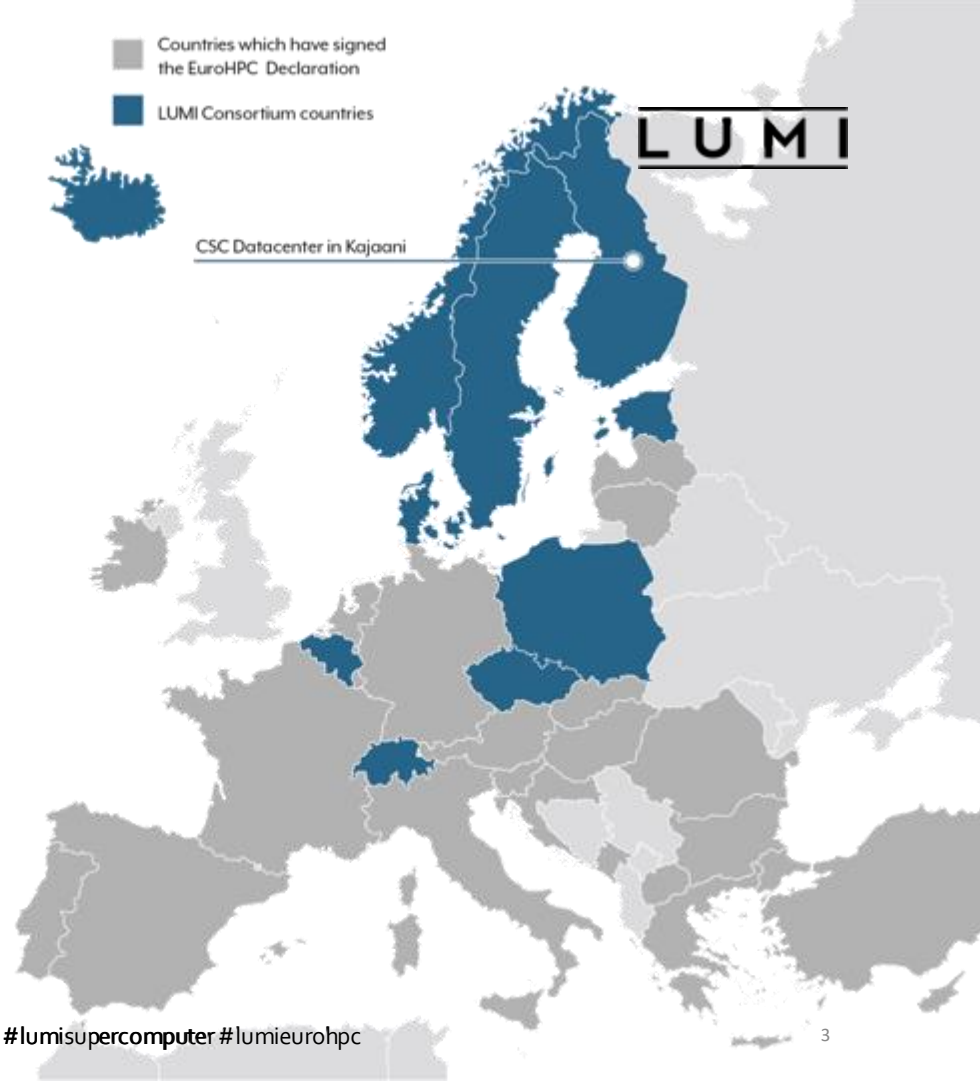
# LUMI – a unique joint endeavor in high-performance computing

- LUMI research infrastructure provides a high-quality, cost-efficient and environmentally sustainable HPC ecosystem based on **true European collaboration**.
- LUMI consortium members are **Belgium, Czech Republic, Denmark, Estonia, Finland, Iceland, Norway, Poland, Sweden and Switzerland**.



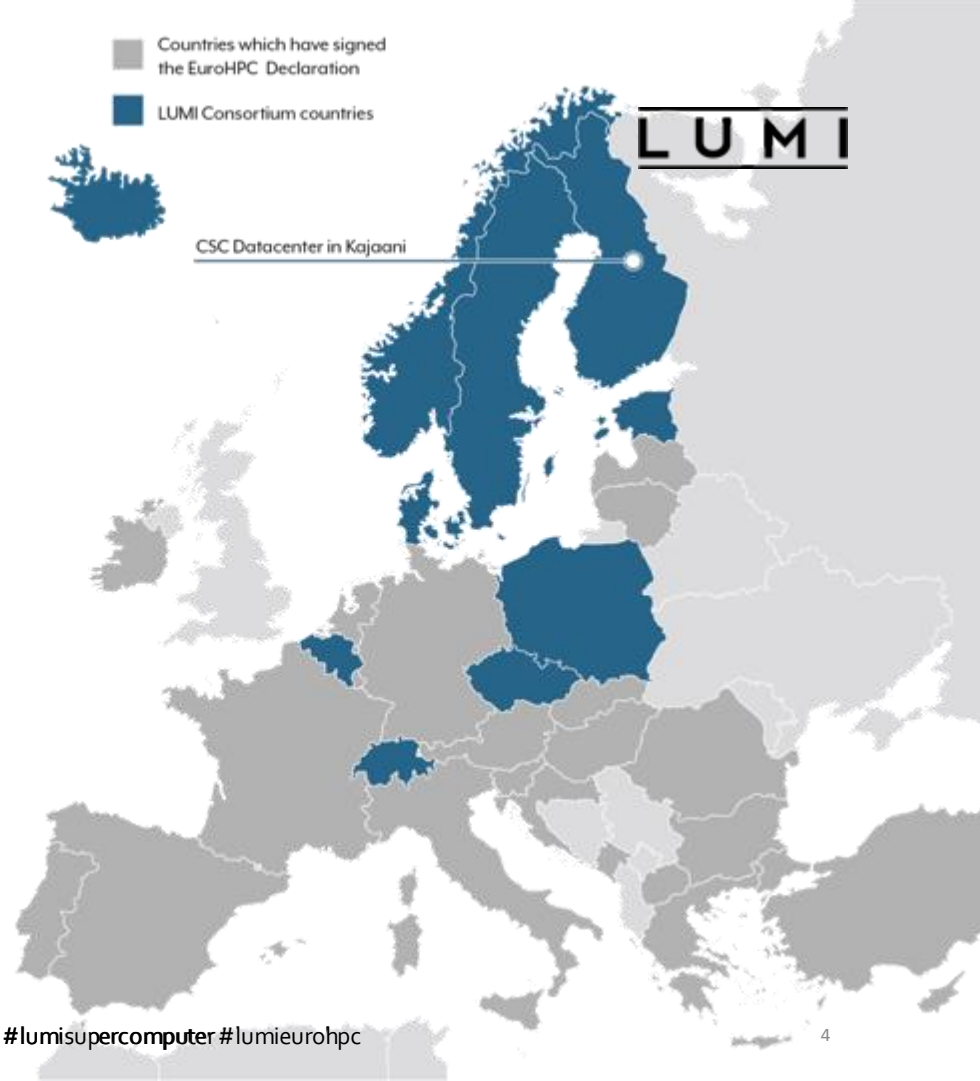
# LUMI – a unique joint endeavor in high-performance computing

- The consortium continues a solid tradition of **collaboration** in HPC training and education, **user support** and data management services
- The resources of LUMI will be allocated per the investments
- The share of the EuroHPC JU (50%) will be allocated by a peer-review process and **available for all European researchers**



# LUMI system architecture

- LUMI is the fastest supercomputer in Europe and third fastest globally (the [Top500 list published in June 2022](#)). LUMI is also the third greenest supercomputer on the planet (the [Green500 list published in June 2022](#)).
- LUMI has a sustained computing power of 375 petaflops (HPL, High-Performance Linpack).



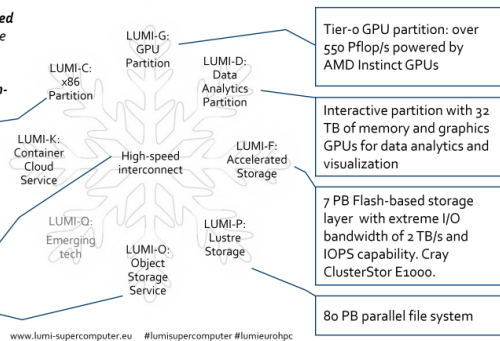
## LUMI, the Queen of the North

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

- Supplementary CPU partition
- ~200,000 AMD EPYC CPU cores

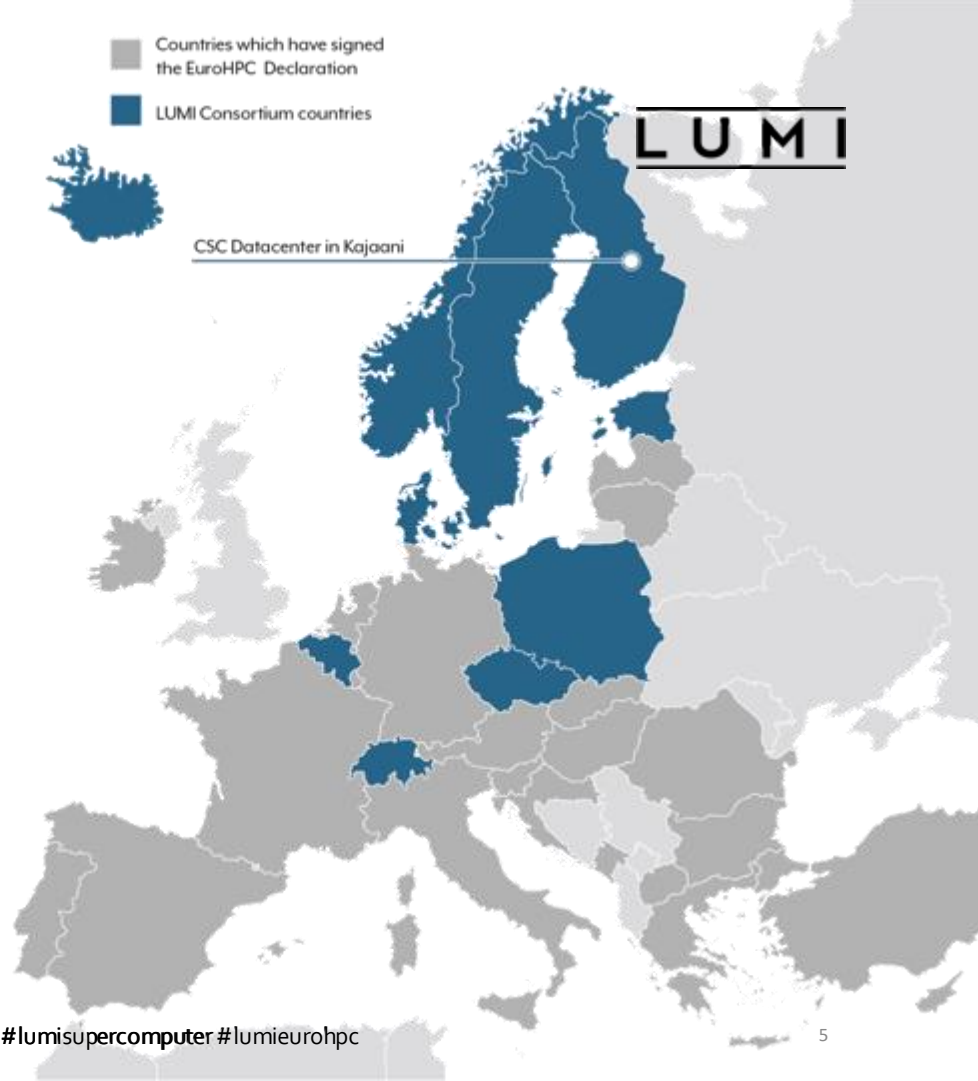
Possibility for combining different resources within a single run. HPE Slingshot technology.

30 PB encrypted object storage (Ceph) for storing, sharing and staging data



# LUST – a unique user support team in high-performance computing

- Centralized virtual help desk run by the distributed LUMI User Support Team
- The model is based on a network of dedicated HPC experts
- Each partner provides 1 FTE
- Level-3 support via local centers, EuroHPC Competence Centers, HPE and AMD
- National support for issues with accounts and allocations

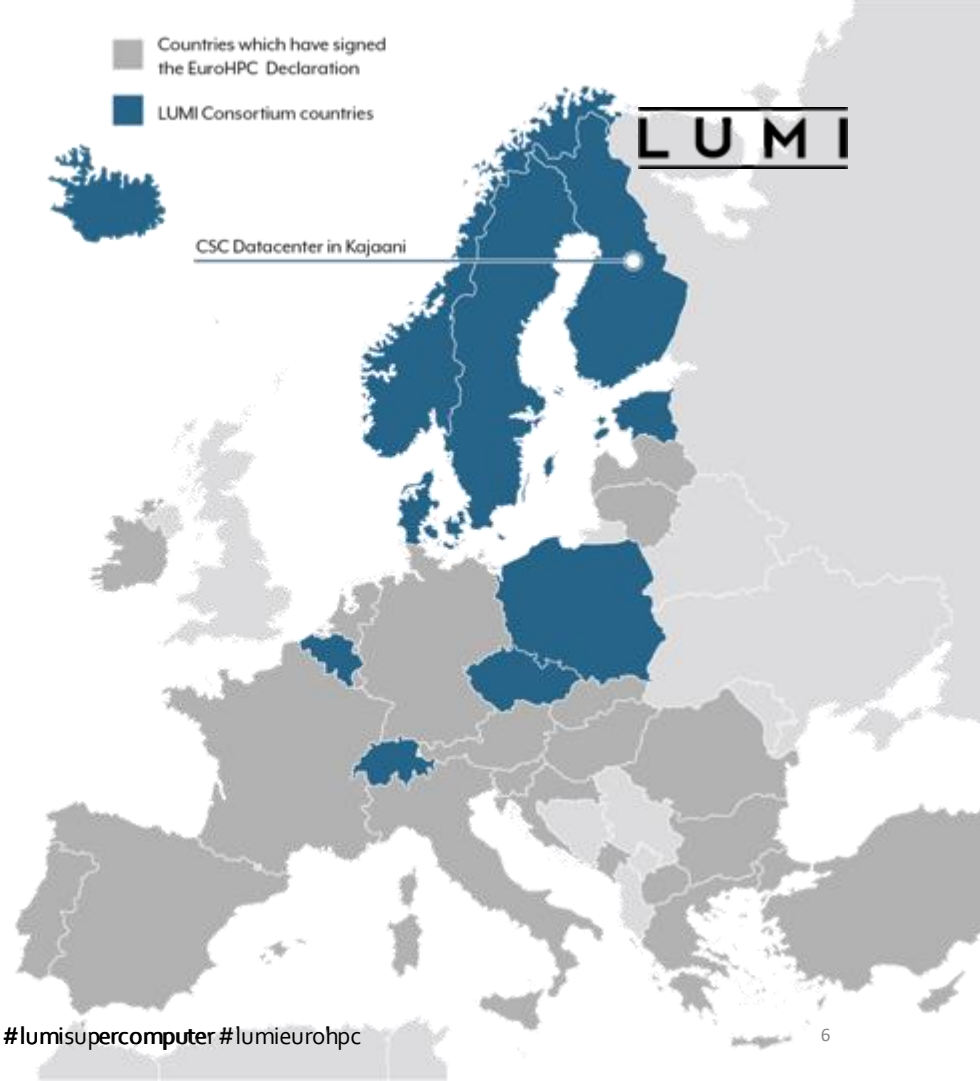




# LUST – a unique user support team in high-performance computing

- **LUST main activities**

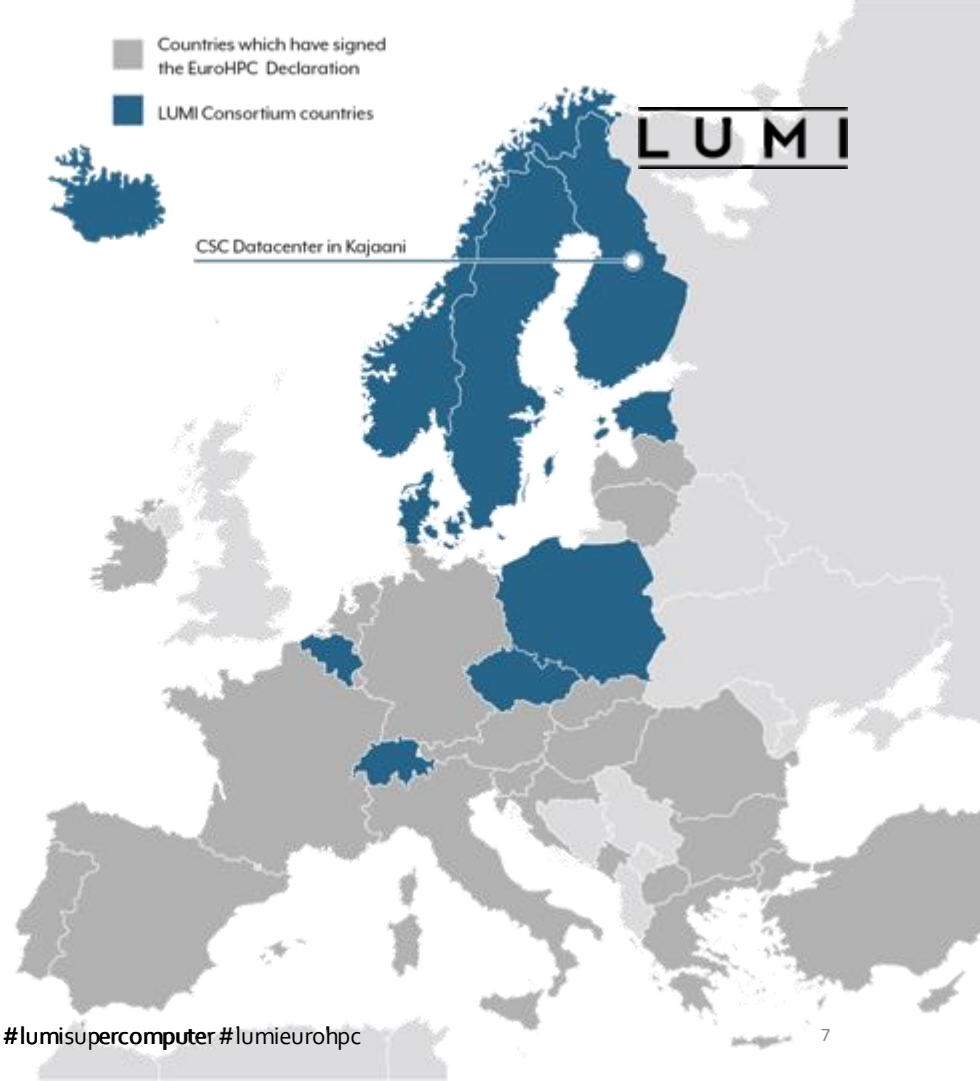
- [Help desk](#) open from Monday to Friday 9-19 EET
- [User documentation](#)
- Computational environment
- User training
- Benchmarking, porting, optimization consultancy



# LUST – a unique user support team in high-performance computing

## • LUST members

- Belgium: Orian Louant, Kurt Lust
- Czech Republic: John Vicherek
- Denmark: René Jacobsen, Christian Schou Oxvig
- Estonia: Anders Martoja, Anne Vomm
- Finland: Heidi Reiman, Emmanuel Ory
- Norway: Abdulrahman Azab, Jørn Dietze, Thomas Röblitz
- Poland: Maciej Szpindler
- Sweden: Peter Larsson
- Switzerland: Rafael Sarmiento



# LUMI

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[www.lumi-supercomputer.eu](http://www.lumi-supercomputer.eu) #lumisupercomputer #lumieurohpc



**EuroHPC**  
Joint Undertaking



The acquisition and operation of the EuroHPC supercomputer is funded jointly by the EuroHPC Joint Undertaking, through the European Union's Connecting Europe Facility and the Horizon 2020 research and innovation programme, as well as the Participating States FI, BE, CH, CZ, DK, EE, IS, NO, PL, SE.

**Leverage from  
the EU**  
2014-2020



European Union  
European Regional  
Development Fund

