



# The Puhuri project and AAI

Anders Sjöström, Lund University

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# Food for thought

## World's 20 Happiest Countries in 2022

1. Finland
2. Denmark
3. Iceland
4. Israel
5. Netherlands
6. Sweden
7. Norway
8. Switzerland
9. Luxembourg
10. New Zealand
11. Austria
12. Australia
13. Canada
14. Ireland
15. United States
16. Germany
17. Belgium
18. Czech Republic
19. United Kingdom
20. Lithuania

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8 of 20 are serviced by Puhuri

12. ...
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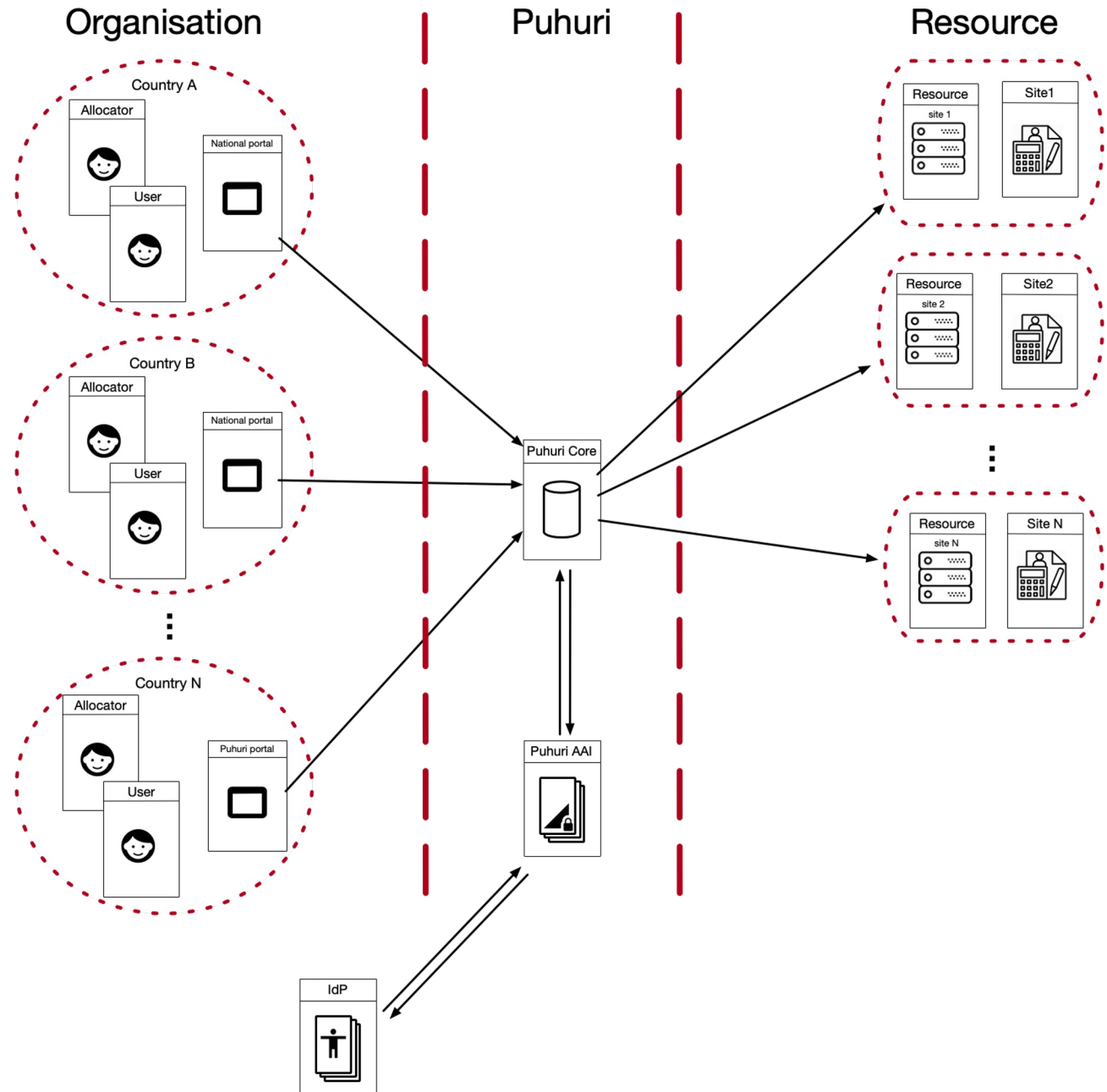
# What is Puhuri?

- A system to facilitate easy and efficient access to high-performance computing (HPC) and related services throughout Europe
  - Reduced administration costs
  - Improved usability
  - federated services for AAI and resource allocation
  - long-term availability
  - sustainable operations
  - well-defined processes
  - trusted AAI solution
  - level of assurance information available

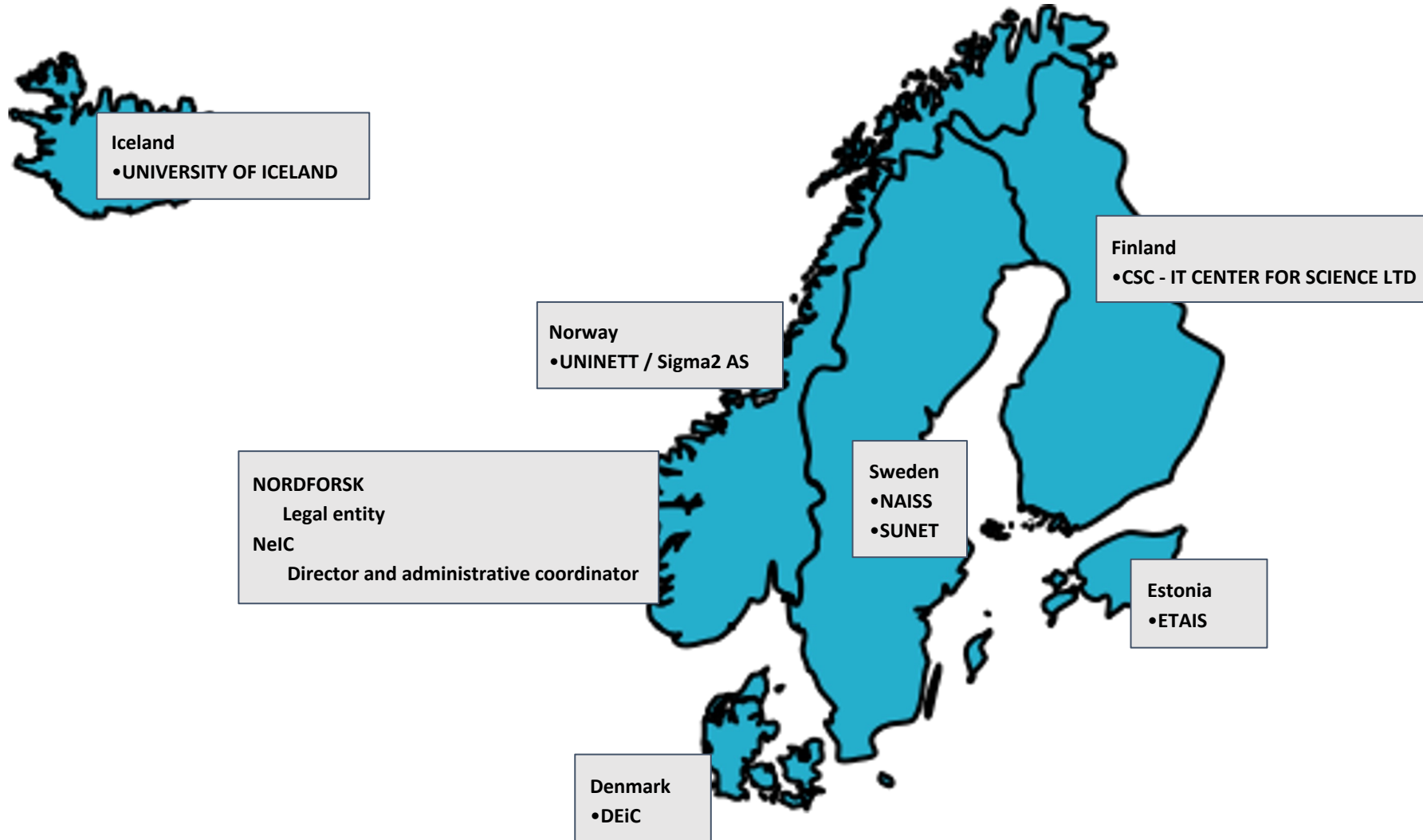


# Where is Puhuri?

- Puhuri sits between the organisations allocating access to resources and the resource providers (which can be the same organisations)
- Puhuri can provide the ability to allocate on resources provided through other infrastructures



# Who is behind Puhuri?



# What is the scope of Puhuri?



Single system multiple service owners

Unified allocation, project, and user management system

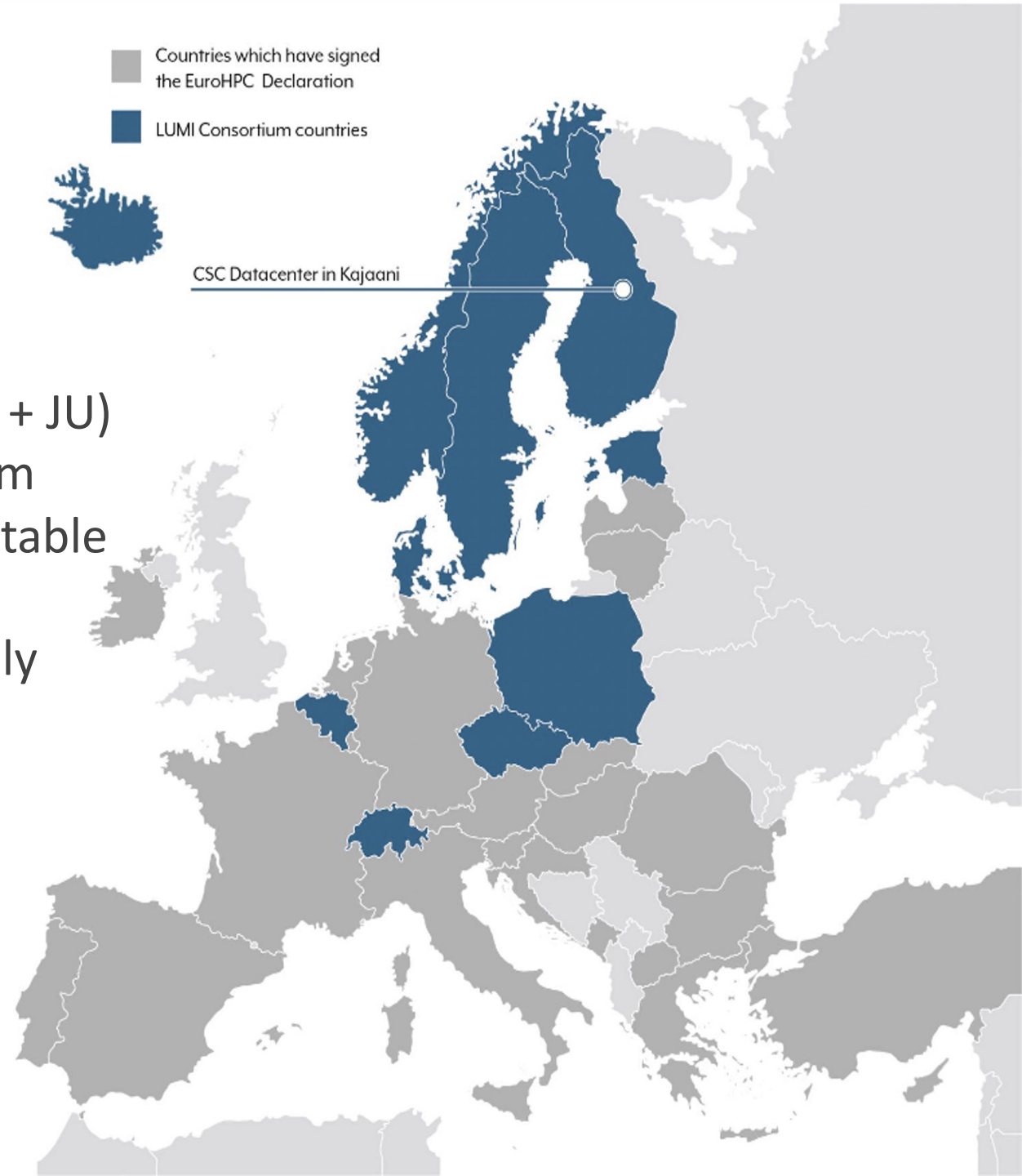
- Authentication
- Authorisation
- Identification
- Resource allocation
- Project management
- Etc.





# Why Puhuri?

- Need to service LUMI
- Multi-stakeholder system (10 countries + JU)
- Each stakeholder allocates on the system
- Automatic population of the allocation table (e.g. grantfile in SLURM)
- Reporting to each stakeholder separately



# Can anyone use a HPC system?

■ Countries which have signed the EuroHPC Declaration

■ LUMI Consortium countries

CSC Datacenter in Kajaani

EuroHPC systems are open to European users:

- Scientific
- Industrial
- Public sector

Project owners (PI:s) can invite collaborators

Users from embargoed countries are not allowed

<https://www.sanctionsmap.eu>



# So we need to know our users...

- Identity
- Access
- Utilization
- Cost
- Traceability

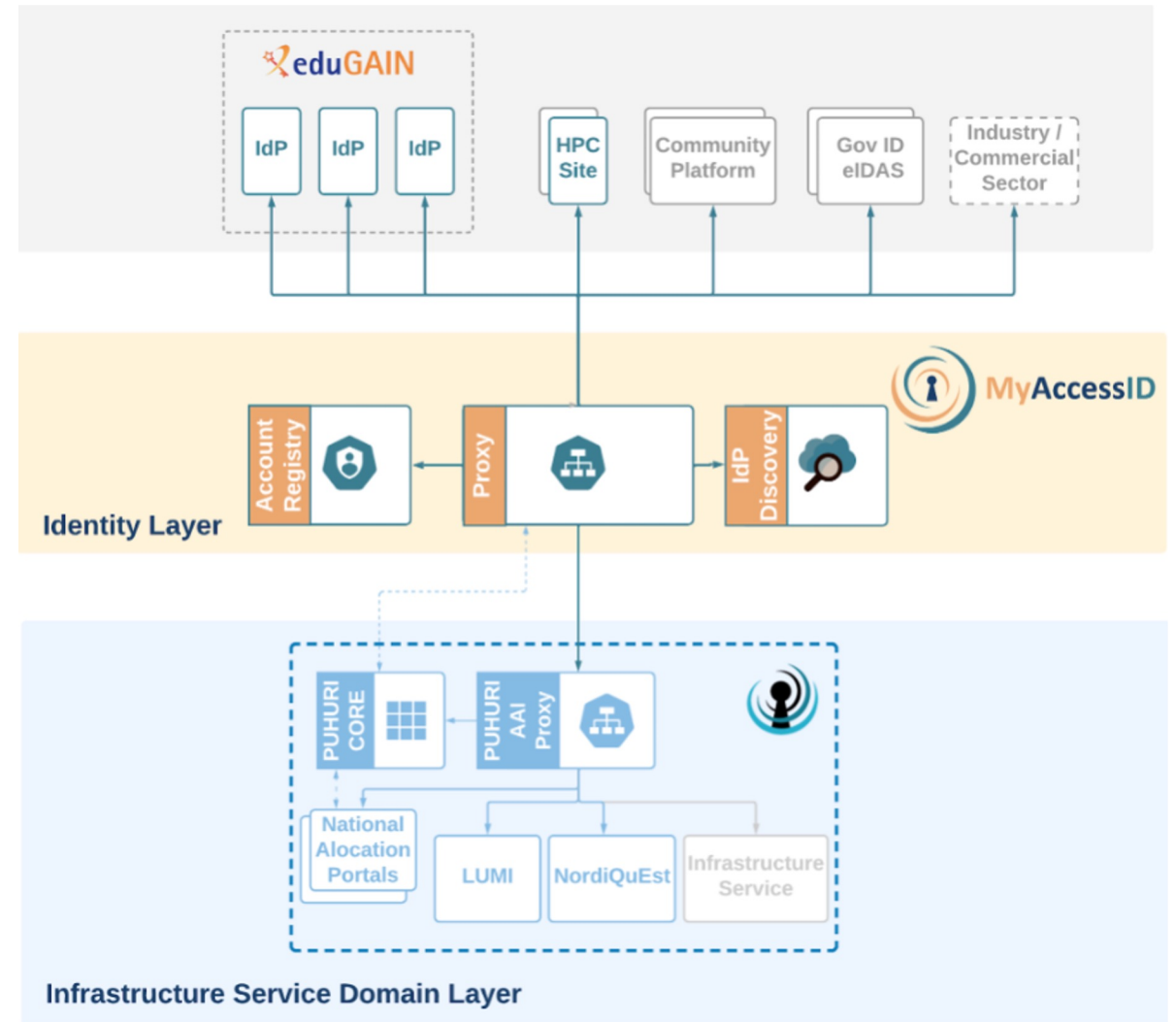


Level of Assurance (LoA) is Important!

# How do we know who is who?

Through MyAccessID

- Receiving Identity information from IdP:s
- Connecting identities at service providers with identity from IdP
- Maintain records of who can use what
- Need LoA information from the IdPs
- Have implemented a system to elevate the LoA



# Users from Industry vs Academic users

- Federated authentication is feasible for many academic users via eduGAIN
- Industry users must be able to register and authenticate, but no such unified system is present

- Verifying user's identity can be a challenge for both groups  
Thus: There is a need for an automatic user identity vetting solution

- Academic users usually get resources for free when as industry users may need to pay per usage

- The user groups may have different expectations (user experience, SLA, security incl. MFA..)

# But why cant you use e-ID?

- Need information on affiliation
- e-ID is not for “logging in” often
- e-ID is your personal ID not your workplace ID

# Is this enough?

- **MyAccessID and eduGAIN enable researchers to use their IdP to access international (European) infrastructures**

Researchers/users are known to the resource provider through the federation

Trust is essential!

- **For the Industry**

Industry can provide a list of eligible users

- **For the public sector**

Public sector knows who is to be using the resource

- **For the academia**

PI can invite co-investigators

# Thank you for attention!

## Questions?

