

# Cross-border HPC: EuroHPC LUMI as a model for EOSC

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# EOSC Goals - <https://eosc.eu/about-eosc>

- **Seamless access to** content and **services** via common AAI,
- Access to data from various sources which is **FAIR** and ideally open
- Access to services for **storage, computation, analysis, preservation and more,**
- Adoption of **standards** so data and services can be combined,
- **Helpdesk, training and support** to improve use of EOSC.

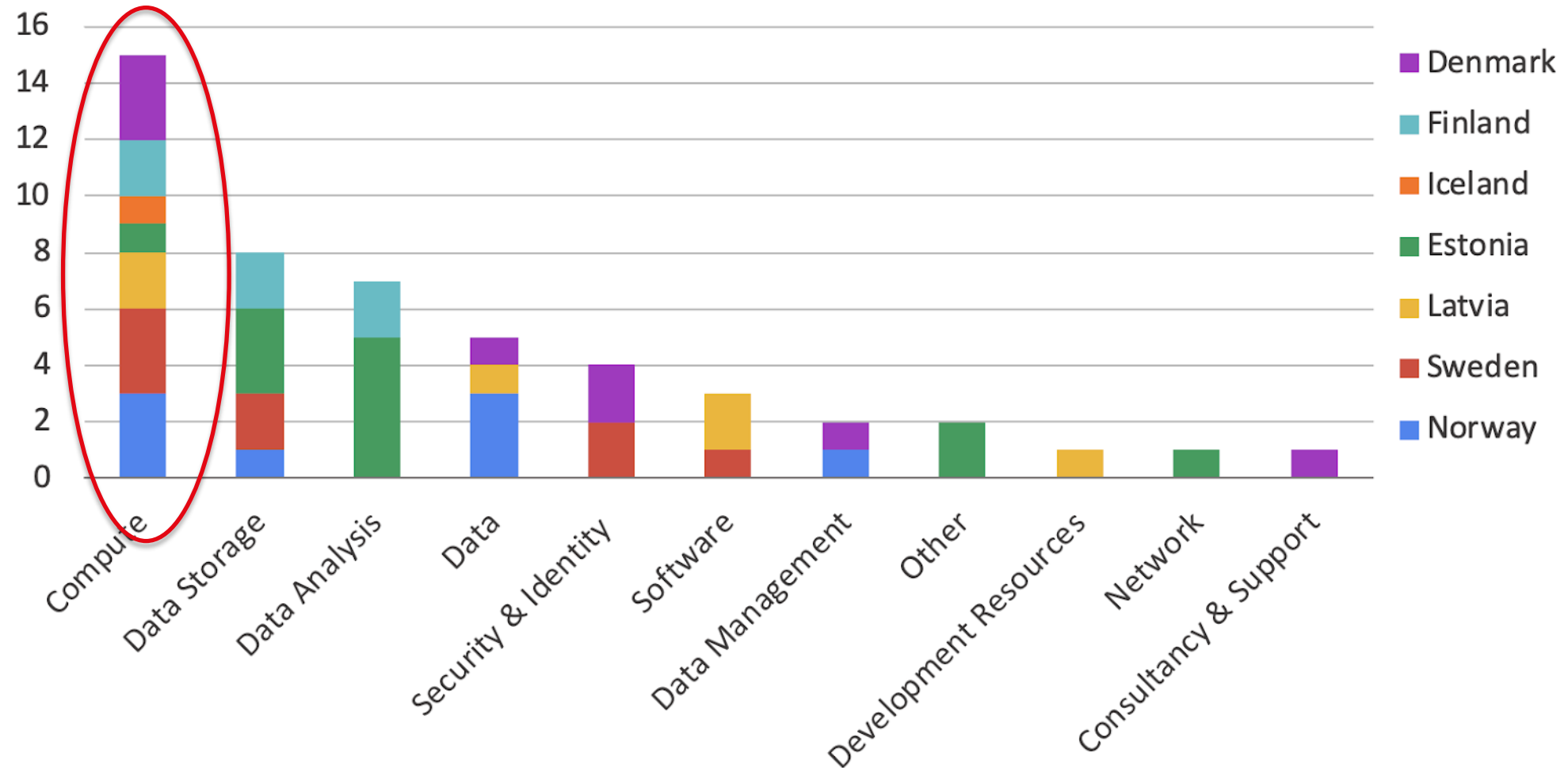


**Not a greenfield deployment!**

**Existing national or university  
support services**

# Results of the service discovery

Service Category per Country





# For example, each country has an HPC service

## Computerome 2.0 - HPC →

Provided by **DeiC** 🇩🇰 / doi: [10.23673/9pcr-fq51](https://doi.org/10.23673/9pcr-fq51) ([stats](#))

Access to Computerome is available to everyone interested in Life Sciences

## Garpur HPC cluster →

Provided by **University of Iceland** 🇮🇸 / doi: [10.23673/8x14-2a69](https://doi.org/10.23673/8x14-2a69) ([stats](#))

General purpose HPC cluster run by University of Iceland

## Puhti →

Provided by **CSC** 🇫🇮 / doi: [10.23673/84jn-jz91](https://doi.org/10.23673/84jn-jz91) ([stats](#))

Computing cluster for serial and parallel jobs.

## UT Rocket →

Provided by **University of Tartu** 🇪🇪 / doi: [10.23673/ph6n-0144](https://doi.org/10.23673/ph6n-0144) ([stats](#))

General purpose HPC cluster in UT HPCC.

# Crucial components for providing services across the border



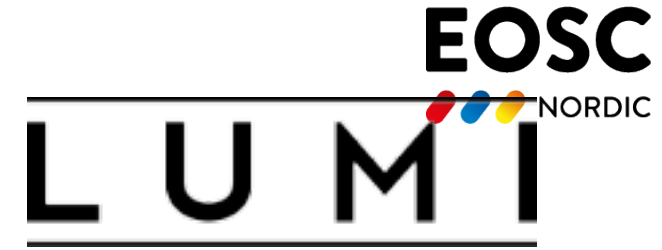
## How can we achieve it?

# EOSC Service model



- EOSC Service complies with **EOSC Rules of Participation**.
- EOSC Service follows **EOSC Architecture**.
- **Motivation: EOSC Sustainability model**
- **Benefit: Scalable, applicable to a wide range of services**

# LUMI model

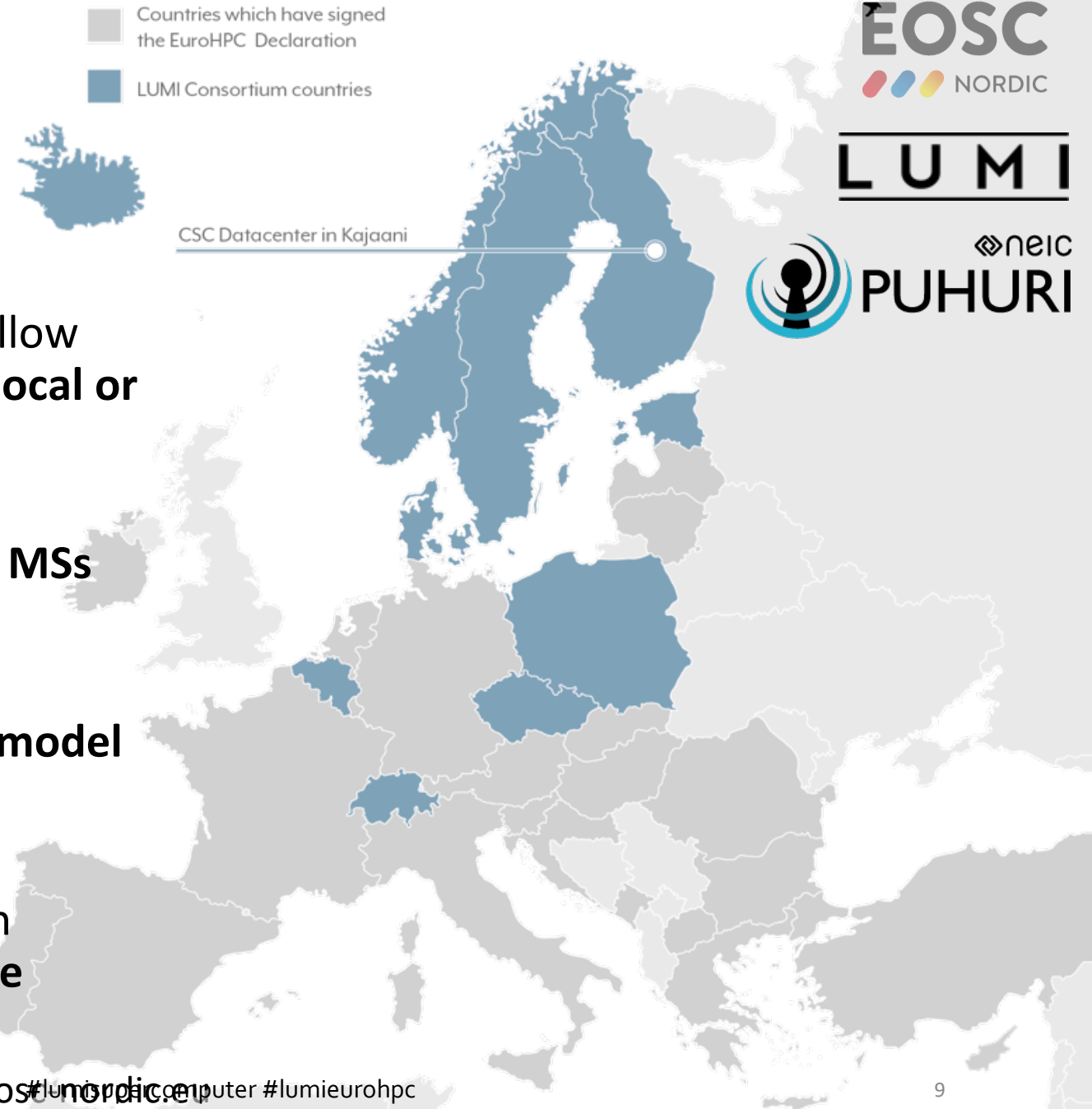


- LUMI is a pan-European pre-exascale supercomputer, part of EuroHPC  
LUMI countries are Finland, Belgium, Czech Republic, Denmark, Estonia, Iceland, Norway, Poland, Sweden, and Switzerland.
- Co-funding model where **consortium members** agree on **common principles** of service offering and delivery.
- **Motivation: pooling of resources**
- **Benefit: strong motivation for using the co-funded service**





# LUMI Access Architecture

- EuroHPC LUMI is using NeIC Puhuri to allow Resource Allocators to treat **LUMI as a local or national service**
- The resources of LUMI **are allocated by MSs and EU** according to investment shares.
- LUMI has agreed a **common allocation model** used by all allocators
- LUMI accepts **digital identities** based on MyAccessID with **high level of assurance**



# Accessing LUMI cross-border



Ilja Livenson  
IT Specialist

Dashboard

Marketplace

Projects 17

My services

Audit logs

Issues

Team 15

Billing

Test4all

ORGANIZATION WORKSPACE

Support Documentation EN Log out

Marketplace offerings

Organization workspace / Marketplace offerings

Categories


- > Chromatography (6)
- > Electrophoresis (2)
- > HPC (4)
- > Infrared spectroscopy (2)
- > Mass-spectrometry (2)
- > Microscopy (2)
- > Platform (1)
- > Private clouds (6)
- > Solids NMR (1)
- > Solution NMR (5)
- > Storage (12)
- > VMs (13)
- > X-ray spectroscopy (1)

Security


Certification

- ☐ ISKE L
- ☐ ISKE M
- ☐ ISKE H

Search for offerings...




LUMI ETAIS / Regular Access






LUMI UT / Regular Access





NICPB HPC





Rocket (UT HPC)



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# LUMI Sweden Fall 2022

## This Round is Open for Proposals

This round gives access to the Swedish share of the pan-European pre-exascale supercomputer LUMI in the EuroHPC programme during 2023.

The deadline for submitting proposals is 2022-10-14 15:00.

More information about this round is available at <https://snic.se/allocations/compute/x-large/>.

Create New Proposal for LUMI Sweden Fall 2022

## Resources

Resource	Centre	Upper Limit	Available	Unit	Note
<a href="#">LUMI-C</a>	<a href="#">LUMI Sweden</a>	—	58 000	x 1000 core-h	
<a href="#">LUMI-G</a>	<a href="#">LUMI Sweden</a>	—	3 000 000	GPU-h	
<a href="#">Storage</a>	<a href="#">LUMI Sweden</a>	—	29 000 000	TB hours	

Click ▶ above to show more information about the resource.

## PRACE Access Calls

### Open Calls for Proposals



#### EuroHPC Regular Access

● Open



#### EuroHPC Development Access

● Open



#### EuroHPC Benchmark Access

● Open

## Browse through all Calls



#### EuroHPC Regular Access

● Open



#### PRACE Development Access

● Closed



#### EuroHPC Development Access

● Open



#### PRACE Benchmark Access

● Closed



EUROPEAN OPEN  
SCIENCE CLOUD

Find resource...

All resour... ▾

🔍

My EOSC Marketplace ▾

[🏠](#) > [Resources](#) > [Aggregators & Integrators](#) > [Aggregators & Integrators](#) > [Applications](#) > [LUMI ETAIS / Regular Access](#)



## LUMI ETAIS / Regular Access

lumi etais / regular access

Organisation: [Test Nordic Provider](#)

☆☆☆☆☆ (0.0 /5) 0 reviews ☐ Add to comparison ☐ Add to favourites

Access the resource

Manage the resource ▾

🔌 ORDER REQUIRED

[→ Webpage](#) [→ Helpdesk e-mail](#)

[Ask a question about this resource?](#)

- ABOUT
- DETAILS
- REVIEWS (0)

LUMI share of ETAIS (EE) for Regular Access

### SCIENTIFIC CATEGORISATION





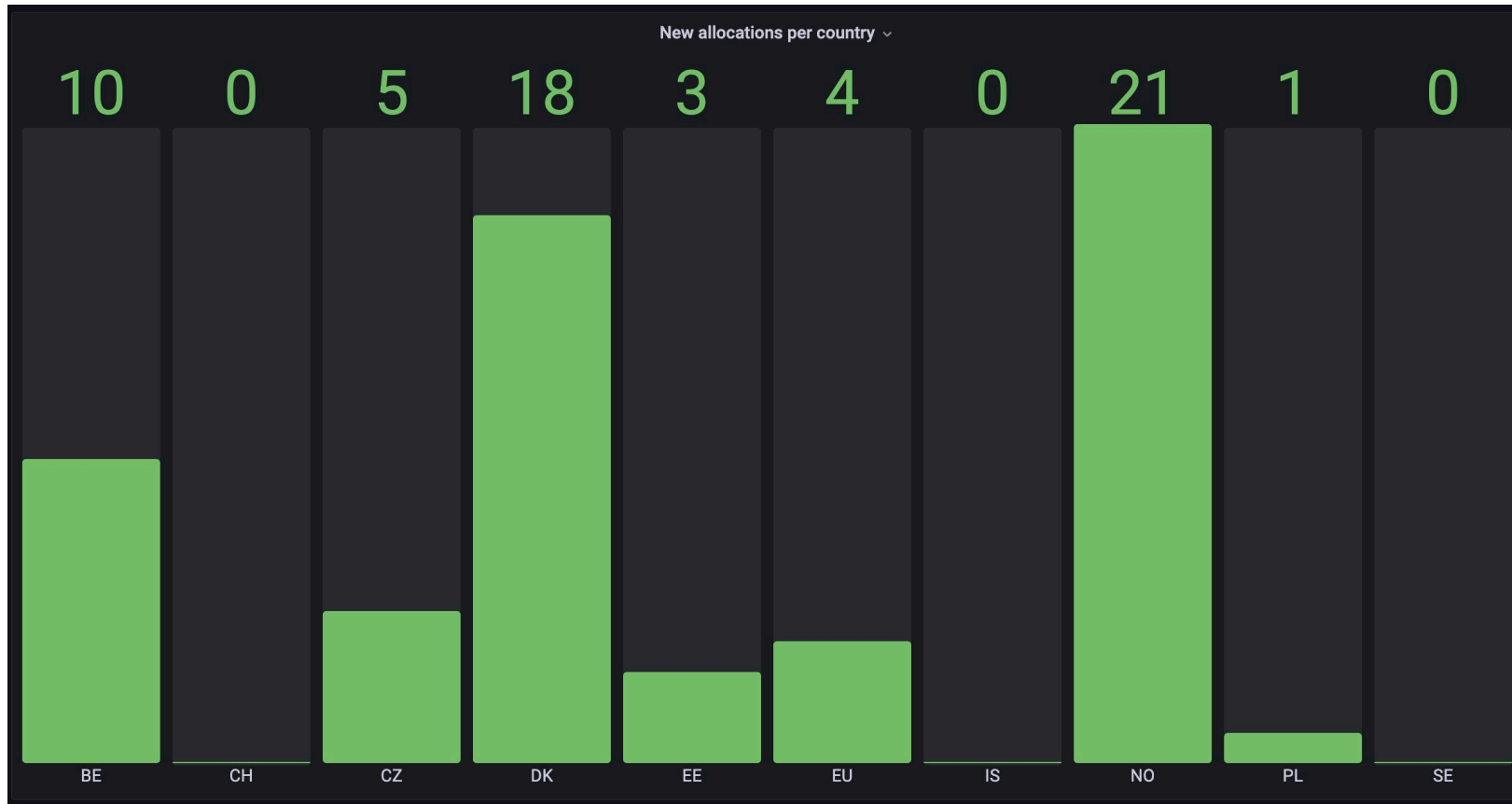
# Orders for **all** services in EOSC Core (Aug-Sept)

Service	2022		Total		Approved SO
	08	09	Sum		
B2SAFE	2	3	5		3
B2DROP	1	3	4		2
ADAM SPACE	1		1		1
AMNESIA	1		1		1
ARGO MARINE FLOATS DASHBOARD, ...	1		1		1
ARIA (ACCESS TO RESEARCH INFRA...	1		1		1
ATMO-4CAST		1	1		1
DATAVERSENO		1	1		1
DE.NBI CLOUD: CLOUD COMPUTING ...	1		1		1
DEEP TRAINING FACILITY	1		1		1
<b>Total Sum</b>	11	16	27		17

**27 requests**  
**17 approvals**

<https://opsportal.eosc-portal.eu/metricsEOSC/ServiceOrder/2022-08-01/2022-09-30/list/off#stats>

# Orders for **LUMI** services in Puhuri (Aug-Sept)

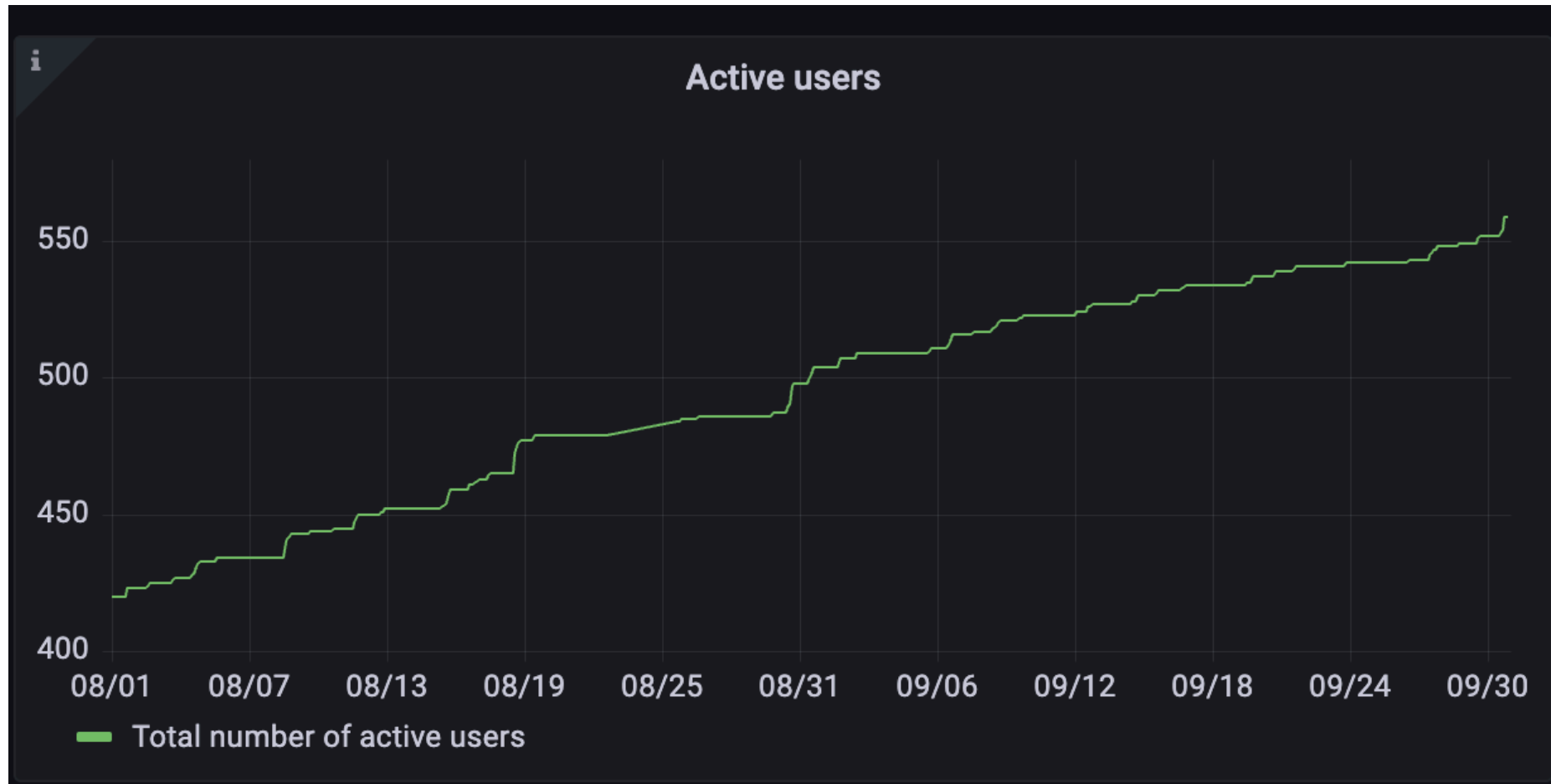


**62** requests  
**62** approvals

<https://puhuri-stats.neic.no/>

[www.eosc-nordic.eu](http://www.eosc-nordic.eu)

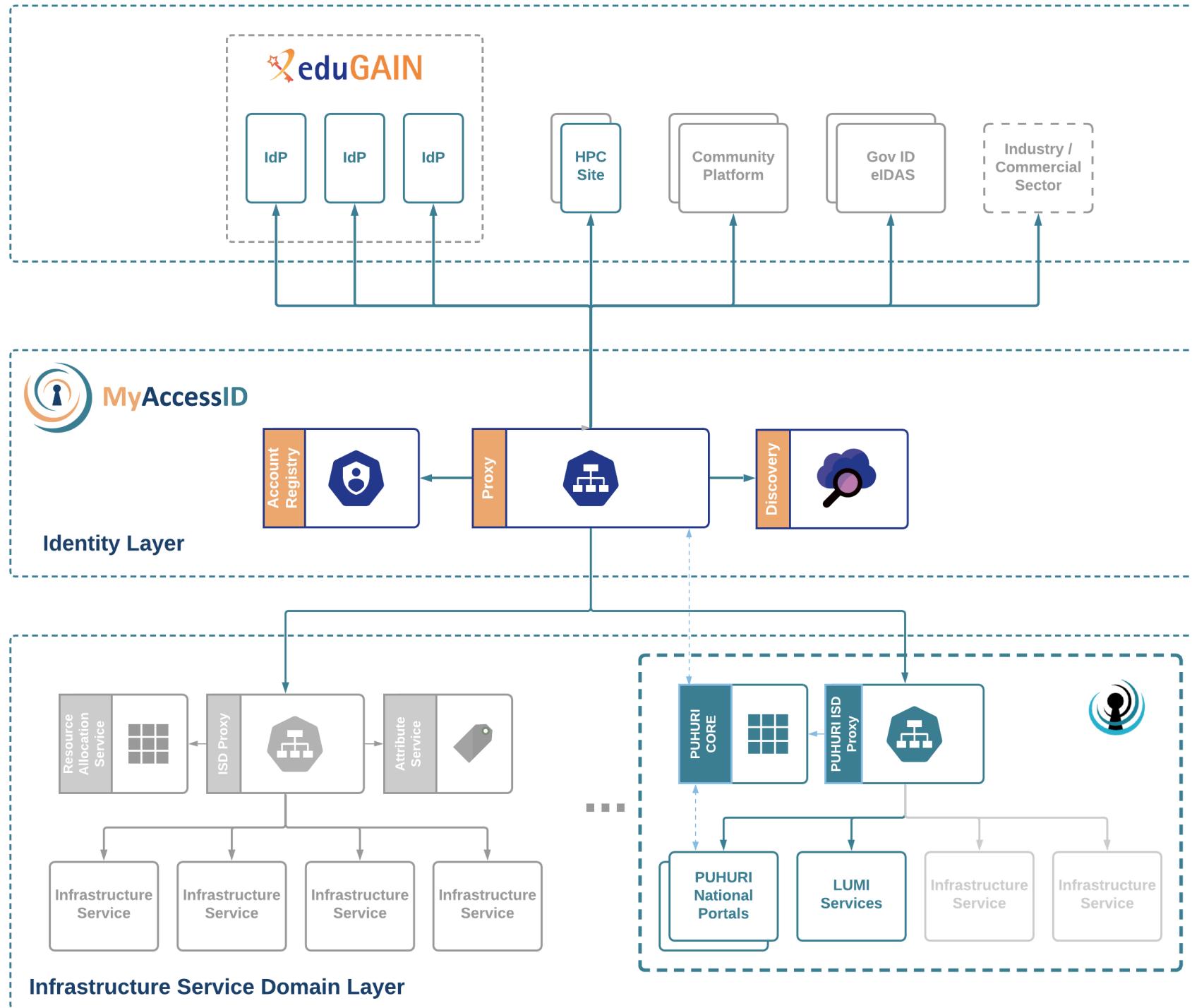
# New orders translate to new LUMI users



EOSC Goals	LUMI
<b>Seamless access to content and services</b> via common AAI	Yes (MyAccessID)
Access to data from various sources which is <b>FAIR</b> and ideally open	Users' choice
Access to services for <b>storage, computation, analysis, preservation</b> and more	Yes
Adoption of <b>standards</b> so data and services can be combined	Users' choice
<b>Helpdesk, training and support</b> to improve use of EOSC.	Yes, for LUMI services

# Many thanks!

Visit <https://www.eosc-nordic.eu/> for updates on the project!





# Request and approval flows

