

# NeIC and Nordugrid

## A duo of dynamics?

NeIC NT1 Manager  
Mattias Wadenstein  
<maswan@ndgf.org>

2017-06-27  
Nordugrid 2017 conference

# Overview

- What is NeIC?
- What does NeIC want with Nordugrid?
- Future outlook



# What is NeIC?

- The Nordic e-Infrastructure Collaboration (NeIC) facilitates development and operation of high-quality e-Infrastructure solutions in areas of joint Nordic interest
- NeIC is a distributed organisation consisting of technical experts from academic high-performance computing centres across the Nordic countries
- Close collaboration with the Nordic e-Infrastructure Providers (NeIP): Sigma2, SNIC, CSC, DeIC, RHnet



# In 2020, NeIC is a global role model for cross-border distributed and sustainable e-infrastructure services

- Launch pilot projects to establish ambition levels
- Create framework agreement (scope, CPU/storage)
- Establish enabling processes
- and technologies

Share Resources

- Map skills, identify and prioritise needs
- Establish NeIC and cross-border training programmes
- Make NeIC more attractive to competent personnel

Pool Competencies

**Accelerate development and provisioning of cost-effective, best-in-class e-infrastructure services beyond national capabilities**

Secure Long-Term Funding

- map funding sources, modalities and application mechanisms
- Agree on total funding and share from each funding source
- Adapt to unaligned funding periods

Strengthen Stakeholder Dialogue

- Map stakeholders and partnerships
- Create engagement plan (frequency, means)
- Implement stakeholder and partnership monitoring (incl. surveys)

- Activities
  - Collaboration
  - Current events
  - Public documents
  - Training
  - Contact
  - Recent changes
  - Random page
  - Help
- 
- Related Sites
  - NeIC
  - Internal Wiki
- 
- Tools
  - What links here
  - Related changes
  - Upload file
  - Special pages
  - Printable version
  - Permanent link
  - Page information

## Projects [edit]

| Name  | Countries         | Start  | End    | Description  |
|---|-------------------|--------|--------|--|
| <a href="#">Biodiversity</a>                          | DK FI NO SE IS EE | 170101 | 191231 | Nordic-Baltic Collaboration on e-Infrastructures for Biodiversity Informatics                          |
| <a href="#">CodeRefinery</a>                          | DK FI NO SE       | 161001 | 180930 | Collaborative Infrastructure for Scientific Software development                                       |
| <a href="#">Dellingr</a>                              | DK FI NO IS       | 170110 |        | Nordic Collaboration on resource sharing   |
| <a href="#">Earth system modeling</a>                 | DK FI NO SE       | 170101 | 191231 | Nordic Collaboration on e-Infrastructures for Earth System Modeling                                    |
| <a href="#">EISCAT_3D support</a>                     | FI NO SE          | 150115 | 180114 | The NeIC EISCAT_3D Technical support EISCAT_3D community on network, computing and storage challenges. |
| <a href="#">Glenna2</a>                               | DK FI IS NO SE    | 170101 | 191231 | Nordic cloud collaboration - continuation of <a href="#">Glenna</a> project                            |
| <a href="#">NeIC 2017 conference</a>                  | DK FI IS NO SE    | 160501 | 171231 | The biennial Nordic e-infrastructure conference.   |
| <a href="#">Nordic language processing laboratory</a> | DK FI NO SE       | 170101 | 191231 | Implementing a Nordic virtual laboratory for Natural Language Processing                               |
| <a href="#">Project analysis</a>                      | NeIC              | 170401 | 170630 | Develop a framework for lightweight project analysis that is usable also for operations.               |
| <a href="#">Tryggve</a>                               | DK FI NO SE       | 140429 | 171021 | A Nordic platform for sensitive BMS research data.   |

## Operations [edit]

| Name  | Countries      | Start  | End | Description  |
|---|----------------|--------|-----|--|
| <a href="#">Nordic WLCG tier-1 facility</a> | DK FI NO SE    | 060101 |     | NDGF Tier1 is one of 11 regional computing centres of the <a href="#">Worldwide LHC Computing Grid</a> .   |
| <a href="#">Ratatosk Training Programme</a> | DK FI IS NO SE | 170401 |     | Coordinating, disseminating and arranging training on e-infrastructure topics across the Nordic countries. |

## Past activities [edit]

| Name   | Countries      | Start  | End    | Description  |
|--|----------------|--------|--------|--|
| <a href="#">B2Share Nordic</a>                 | FI NO SE       | 140130 | 140930 | Customize the B2Share service for the Nordic communities.  |
| <a href="#">Cognitus</a>                       | DK FI IS NO SE | 140601 | 141231 | Developing the Nordic scientific case for large scale HPC.   |
| <a href="#">Glenna</a>                         | DK FI IS NO SE | 140901 | 161231 | Creating a Nordic federated cloud service and enabling knowledge exchange on managing cloud services |
| <a href="#">NeIC 2015 conference</a>           | DK FI IS NO SE | 140201 | 150601 | The biennial NeIC conference for Nordic e-infrastructure collaboration.                              |
| <a href="#">NHPC Evaluation</a>                | DK FI IS NO SE | 130403 | 140212 | Facilitate an international evaluation of the NHPC pilot project                                     |
| <a href="#">Nordic use of PRACE Evaluation</a> | DK FI IS NO SE | 130701 | 140212 | Facilitate an international evaluation on the Nordic use of PRACE                                    |
| <a href="#">SGAS maintenance project</a>       | NO SE          | 131003 | 151002 | Maintenance of the SGAS accounting system for Grid and HPC systems.                                  |

# NeIC core values

- NeIC services and development will be motivated by providing **added value to researchers**.
- NeIC will be a **reliable** partner displaying integrity, transparency, and accountability in all processes.
- NeIC will strive to be **open**; to new ideas and opportunities, and to its outputs in terms of knowledge, tools and services.
- NeIC will strive for **continuous improvement** in all aspects of its operation.
- NeIC will give priority to **stakeholder engagement**.





## Upcoming training events

This page contains upcoming events from the NeIC [training calendar](#), which includes both NeIC training and stakeholder training which NeIC either participates in or simply wants to advertize. Please refer to the official website for each training for accurate and up-to-date information on for example admittance, costs, etc. You may also want to look for [past training events](#).

### PRACE Autumn School: Modern HPC Development for Scientists and Engineers, Hagenberg/Linz, Austria

2016-09-27 – 2016-09-30

The PRACE 2016 Autumn School programme offers a unique opportunity to bring users, developers and industry together to learn more about the development of scalable applications on modern computer architectures (massively parallel systems as well as many-integrated-core architectures).

[Click to show/hide details](#)

### Matlab, LUNARC, Lund, SE

2016-10-05

Parallel Computing in MATLAB and Scaling to SNIC HPC Clusters

[Click to show/hide details](#)

### Matlab, C3SE, Gothenburg, SE

2016-10-06

Parallel Computing in MATLAB and Scaling to SNIC HPC Clusters

[Click to show/hide details](#)

### Matlab, Uppmax, Uppsala, SE

2016-10-07

Parallel Computing in MATLAB and Scaling to SNIC HPC Clusters

[Click to show/hide details](#)

### Matlab, HPC2N, Umeå, SE

2016-10-10

Parallel Computing in MATLAB and Scaling to SNIC HPC Clusters

[Click to show/hide details](#)

### 1st in Europe: Programming the D-Wave 2X Quantum Computer, CSC, FI

2016-10-12 – 2016-10-13

CSC is arranging together with Aalto University the European first Quantum computing workshop for academic sector.

[Click to show/hide details](#)

### Matlab, PDC, Stockholm, SE

2016-10-13

Parallel Computing in MATLAB and Scaling to SNIC HPC Clusters

[Click to show/hide details](#)

### Data Analytics Insight, ITU, DK

| Di  |         | Mi   |                              | Do                              |    | Fr     |        |
|---|---------|--|------------------------------|---------------------------------|----|--------|--------|
| 26  | 27      | 28   | 29                           | 30                              | 31 | 1. Oct | 2. Oct |
| PRACE Autumn School: Modern HPC Development for Scientists and Engineers, Hagenberg/Linz, Austria |         |  |                              |                                 |    |        |        |
| 3   | 4       | 5  | 6                            | 7                               | 8  | 9      | 10     |
|   |         | Matlab, LUNARC, Lund, SE   | Matlab, C3SE, Gothenburg, SE | Matlab, Uppmax, Uppsala, SE     |    |        |        |
| 10  | 11      | 12   | 13                           | 14                              | 15 | 16     | 17     |
|   |         | 1st in Europe: Programming the D-Wave 2X Quantum Computer, CSC, FI | Matlab, PDC, Stockholm, SE   | Data Analytics Insight, ITU, DK |    |        |        |
| 17  | 18      | 19   | 20                           | 21                              | 22 | 23     | 24     |
|   |         | Introduction to Parallel Programming, CSC - Espoo, Finland         |                              |                                 |    |        |        |
| 24  | 25      | 26   | 27                           | 28                              | 29 | 30     | 31     |
| High-performance geocomputing 2016 worksh   |         |  |                              |                                 |    |        |        |
| 31  | 1. Nov. | 2  | 3                            | 4                               | 5  | 6      | 7      |

# Structure and funding

- 10-year MoU signed in 2013 by the NeIPs (~1/3rd of the budget)
- ~1/3rd of the budget from NordForsk directly
- Rest from in-kind
- Estimated total budget for 2018: > 60 MNOK

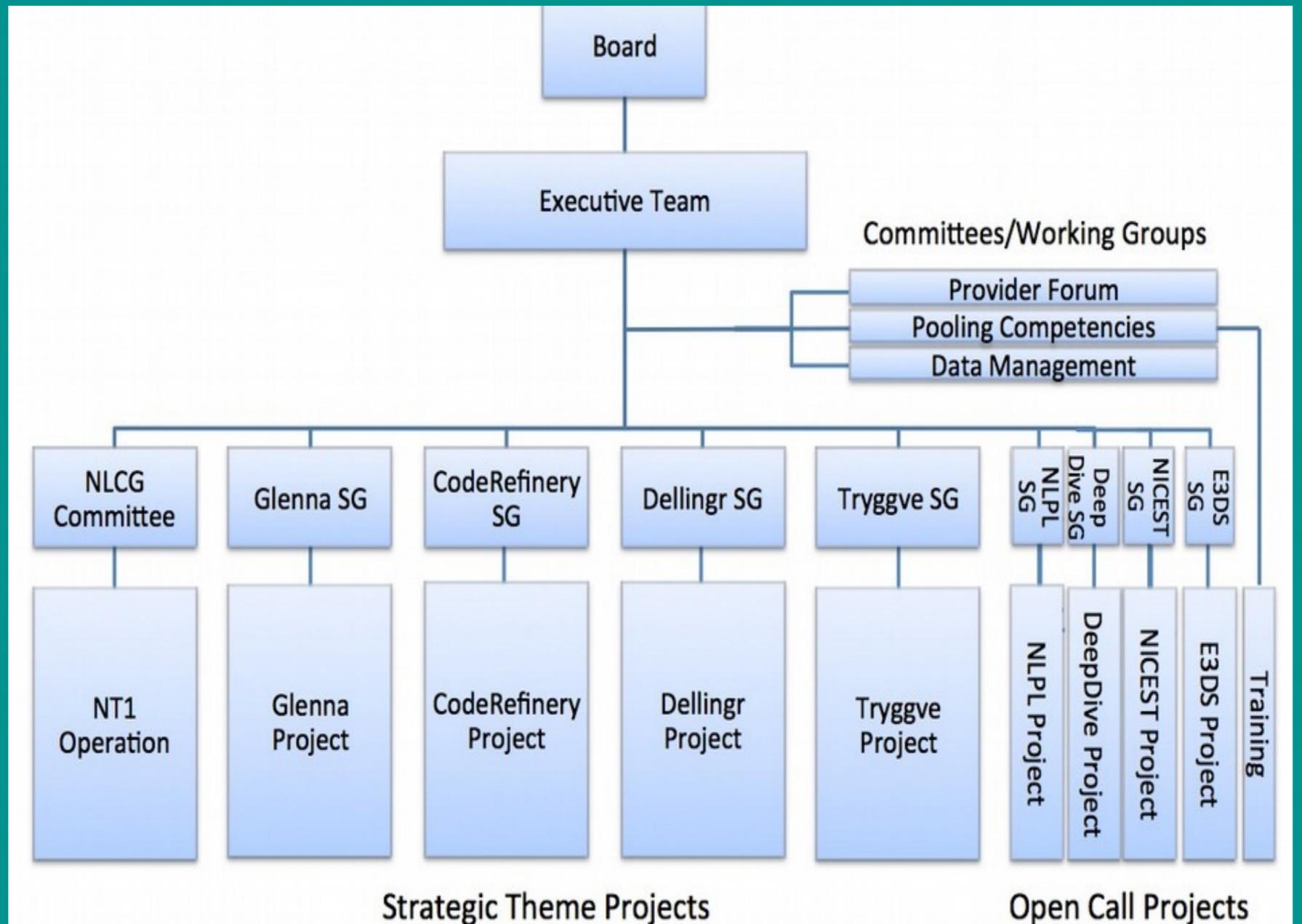


Figure 2: NeIC Organisation



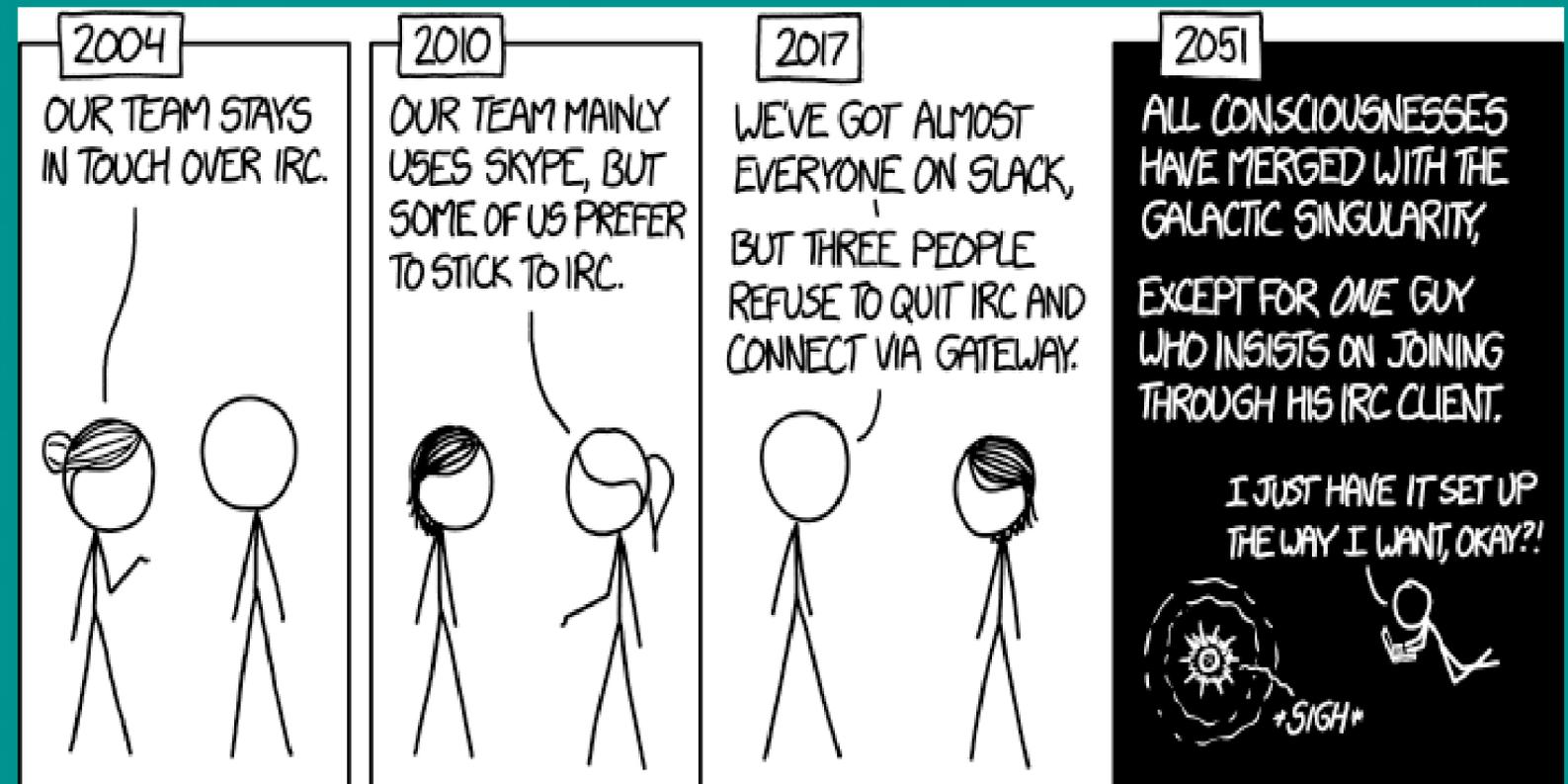
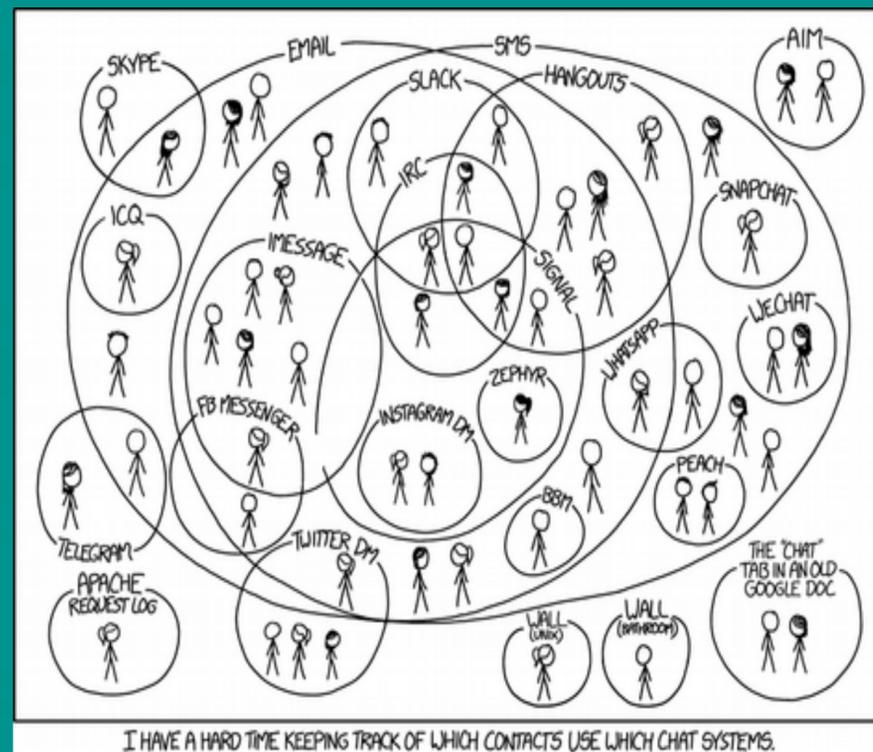
## Tools of Trade (theory)

- Funding model: Co-funding model makes sure that NeIC projects are also of national strategic interest and that there are some synergies.
- Tieto Practical Project Steering (PPS) as common project structure
  - Defining a **common language** and a common standard
  - Being virtual means more documentation needed!
  - All NeIC project managers get PPS training, Steering Groups and Reference Groups are also offered training.



# Tools of Trade (praxis)

- **Chat:** NeIC hasn't invented the chat, but...
  - already NDGF was using XMPP chat for a common Nordic knowledge exchange platform
  - NeIC invited also Reference Groups, Steering Groups, project staff and other stakeholders in a quite substantial Nordic chat platform on slack.
- NeIC hasn't invented **VideoConferencing** either, but..
  - We use it all the time. Also further social media usage is encouraged.
- Actual tools might change (see xkcd.com 1782 and 1810)



# NeIC NT1

- The NeIC activity that coordinates and develops the distributed Nordic WLCG Tier-1 site NDGF
  - The non-NeIC contribution is from all the site admins running services, like ARC-CEs, tape libraries, and dCache pools
  - 6-7 FTEs in NeIC, and roughly similar out on sites
- NeIC staff is operations and development
  - One ARC and one dCache developer, both for enhancing the software through collaboration and for our own expert support
  - Really excellent arrangement that I'd strongly suggest to other production infrastructures, strong contribution to open source projects by means of core collaboration members



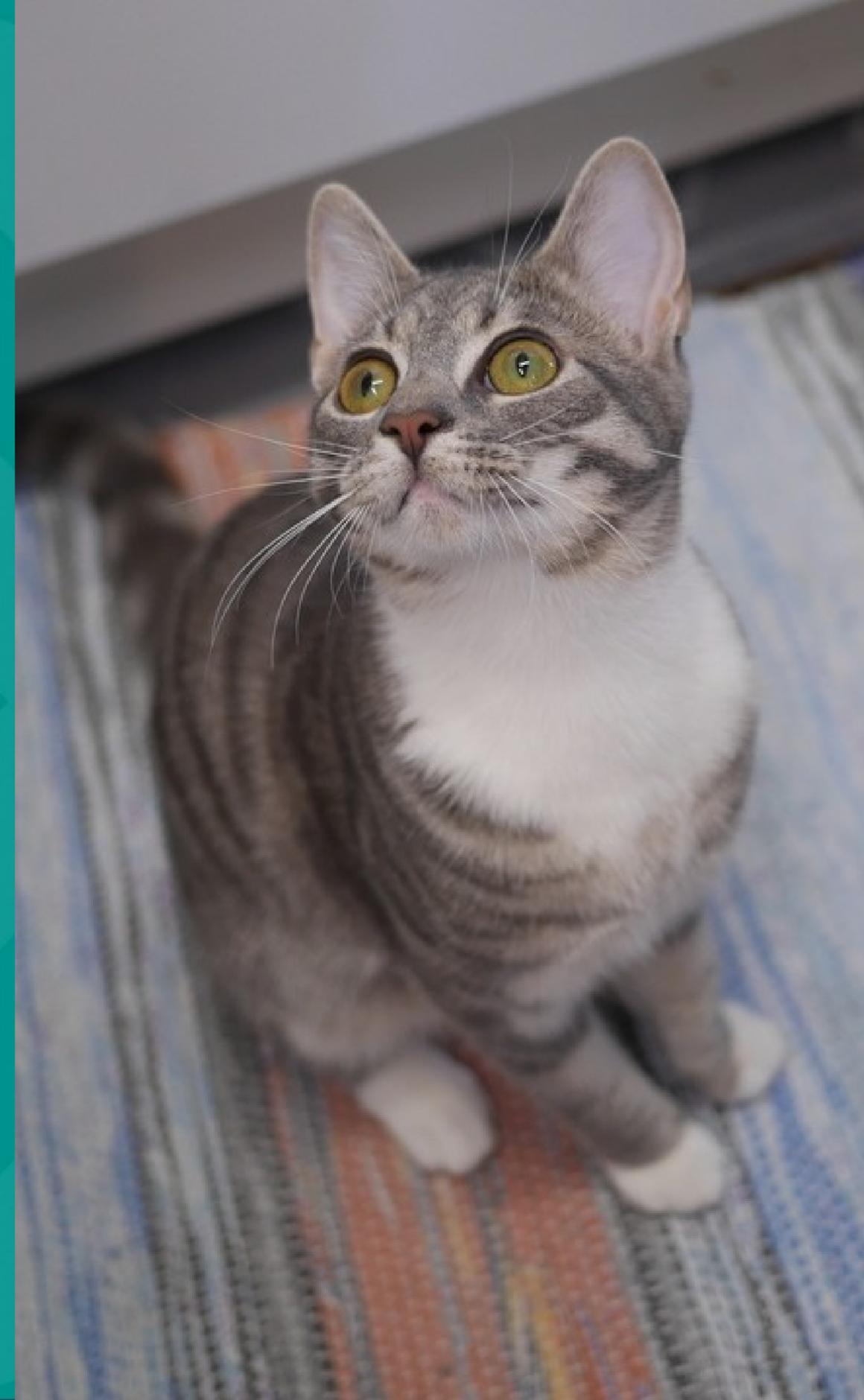
# What does NeIC want with Nordugrid

- Collaboration with a Nordic dimension
  - A collaboration that is **adding value** to researchers
- Essential tool of the trade
  - For NDGF, the distributed Nordic WLCG Tier-1 site
  - Which is how we **share resources** in the Nordics to make up a single site bigger than individual countries could support
- Building a network of people skilled in e-Infrastructure that know each other
  - Creates a **pool of competence** for us and the e-Infrastructure community in the Nordics to recruit from



# Future outlook

- The future is great
- The future is unknown
- The future is before us



# Questions?