

# NeIC and Nordugrid

## A duo of dynamics?

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Nordugrid 2017 conference



# Overview

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

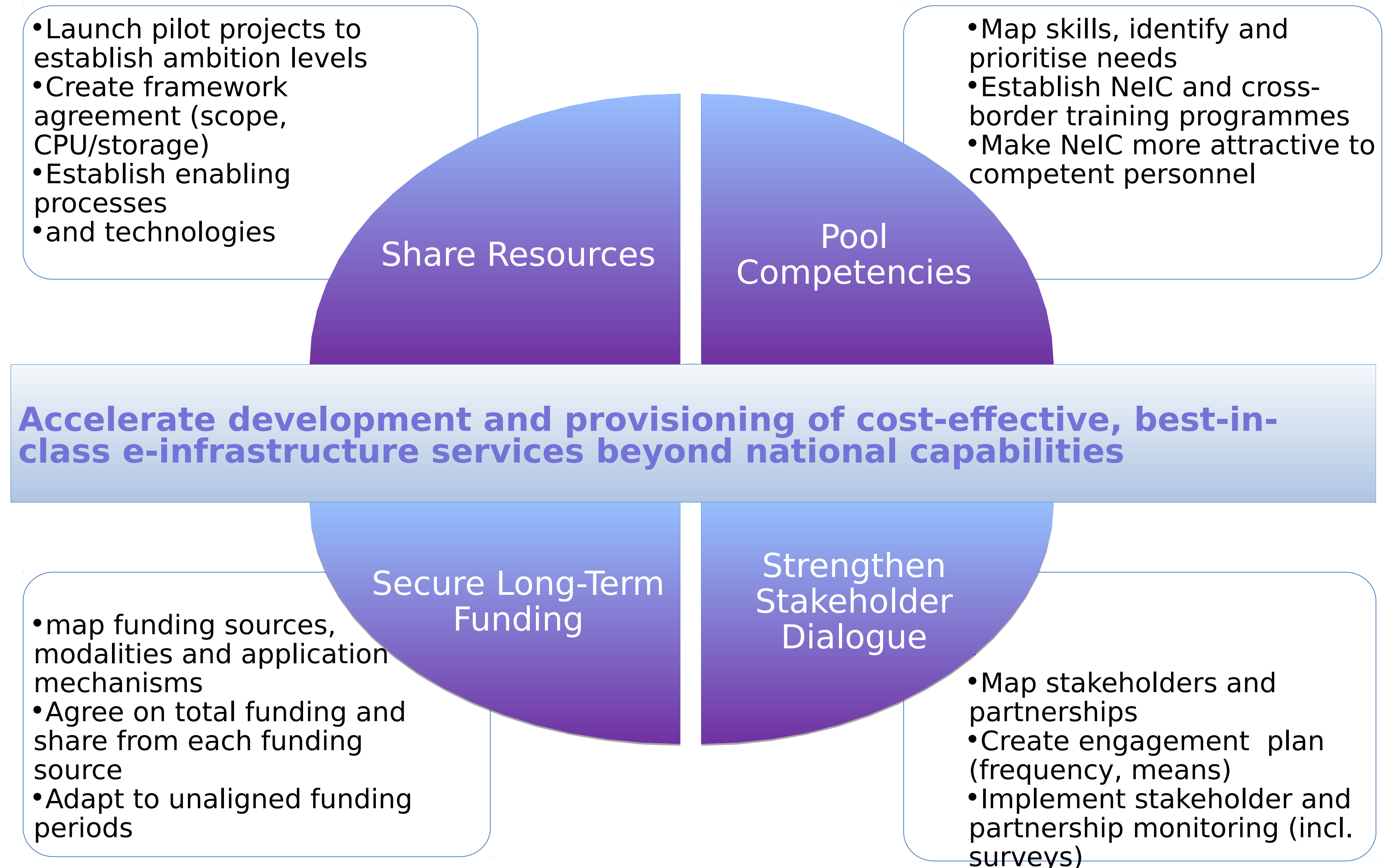


# What is NeIC?

- 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





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



Di		Mi		Do		Fr	
26	27	28	29	30	1	2	3
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	Data Analytics Insight, ITU, DK				
			Matlab, PDC, Stockholm, SE				
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 workshop							
31	1. Nov.	2	3	4	5	6	7

[Home](#) > [Training](#) > Upcoming events

## 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



# 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

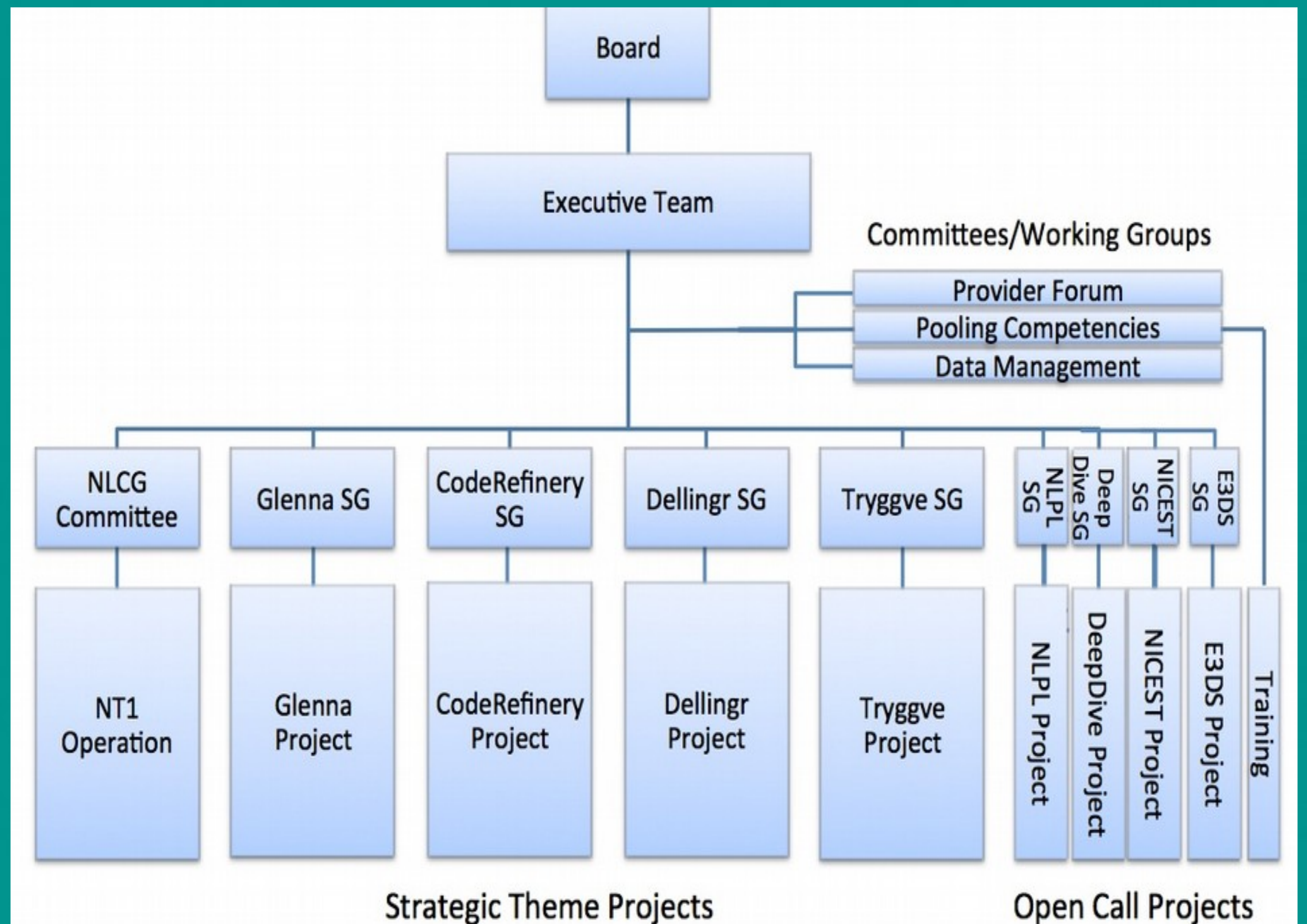


Figure 2: NeIC Organisation





## Tools of Trade (theory)

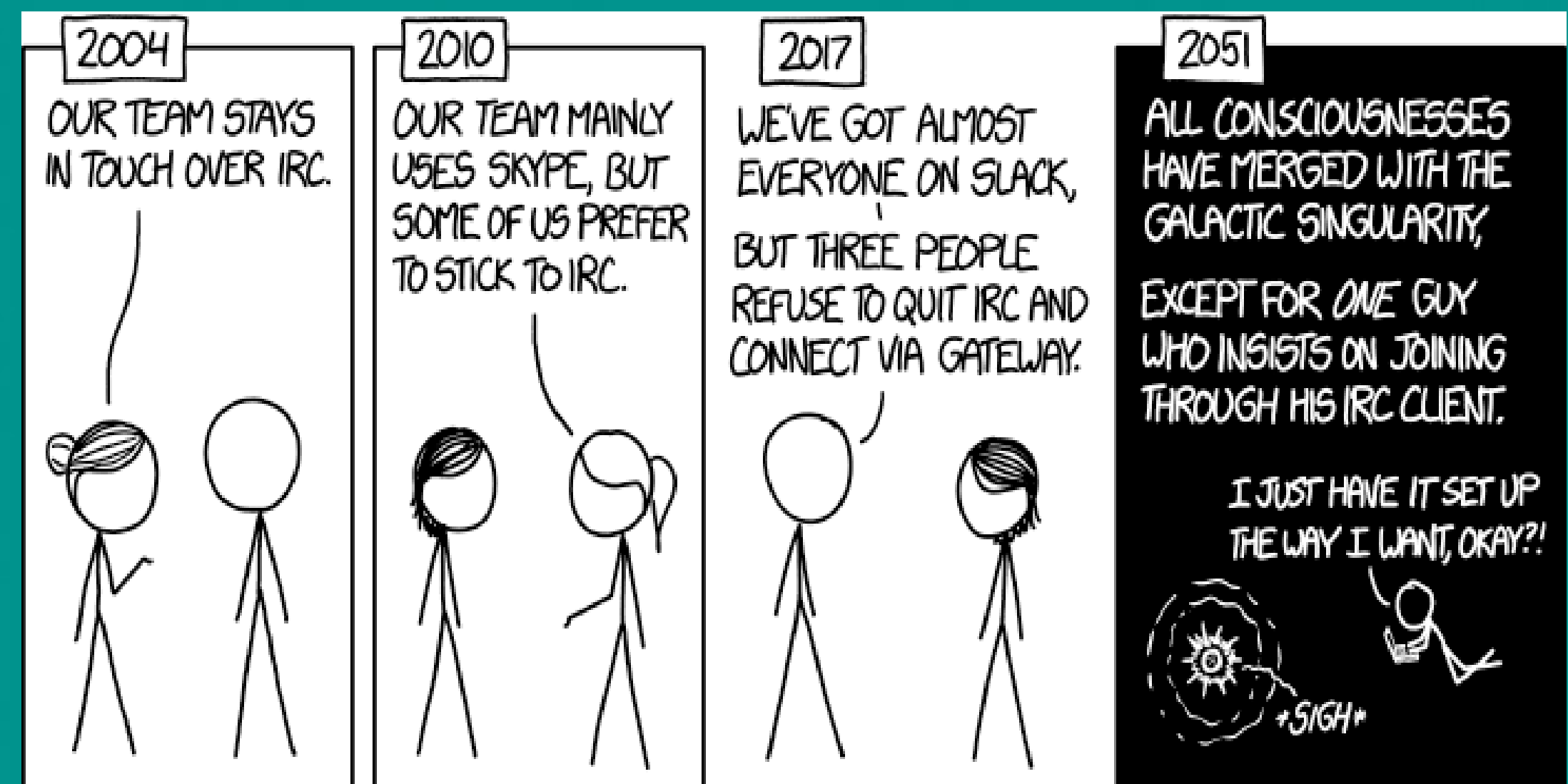
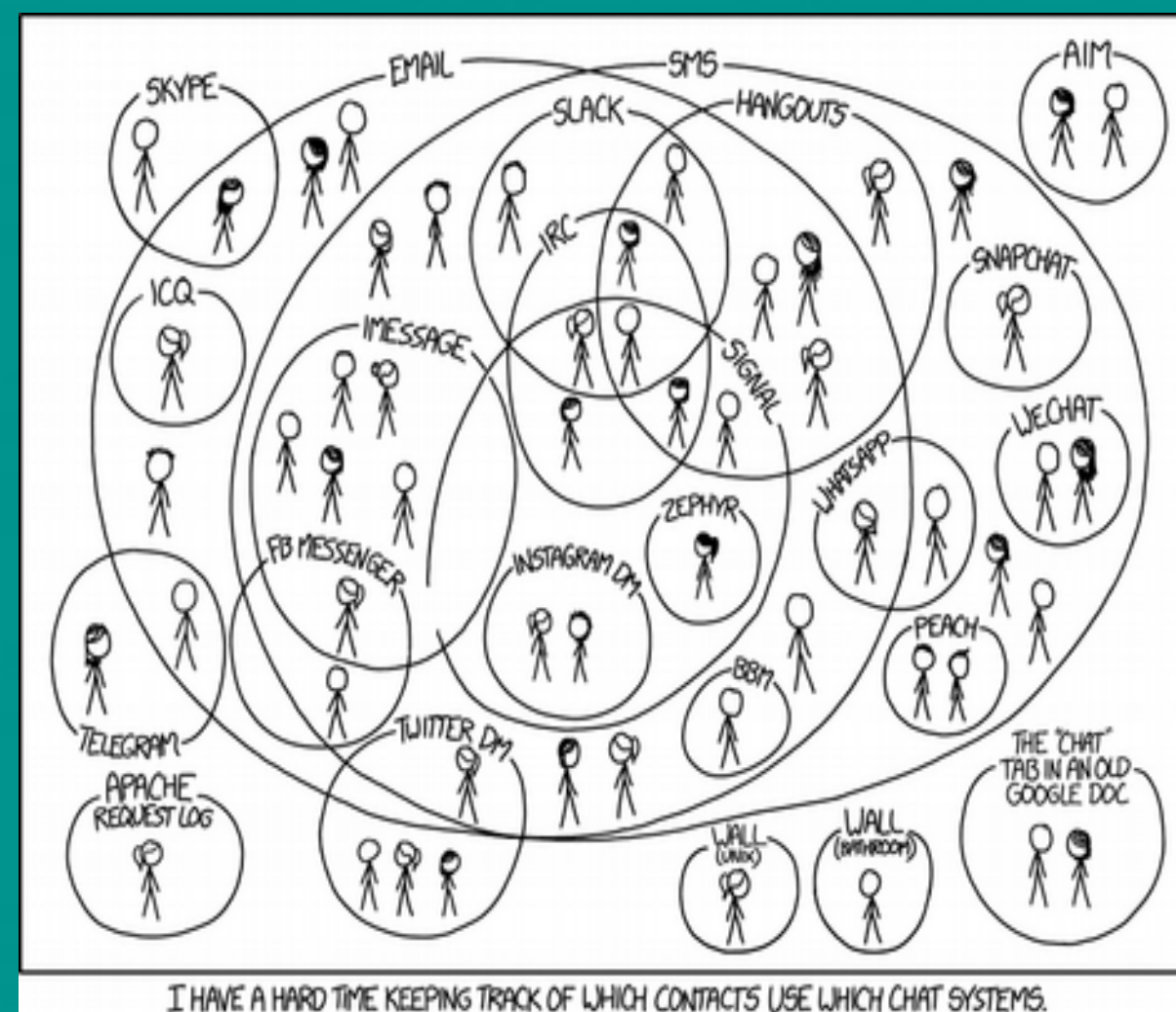
- Funding model: Co-funding model makes sure that NeIC projects are also of national strategic interest and that there are some synergies.
- Tieto Practical Project Steering (PPS) as common project structure
  - Defining a **common language** and a common standard
  - Being virtual means more documentation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





# Tools of Trade (praxis)

- **Chat:** NelC hasn't invented the chat, but...
  - already NDGF was using XMPP chat for a common Nordic knowledge exchange platform
  - NelC invited also Reference Groups, Steering Groups, project staff and other stakeholders in a quite substantial Nordic chat platform on slack.
- NelC 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





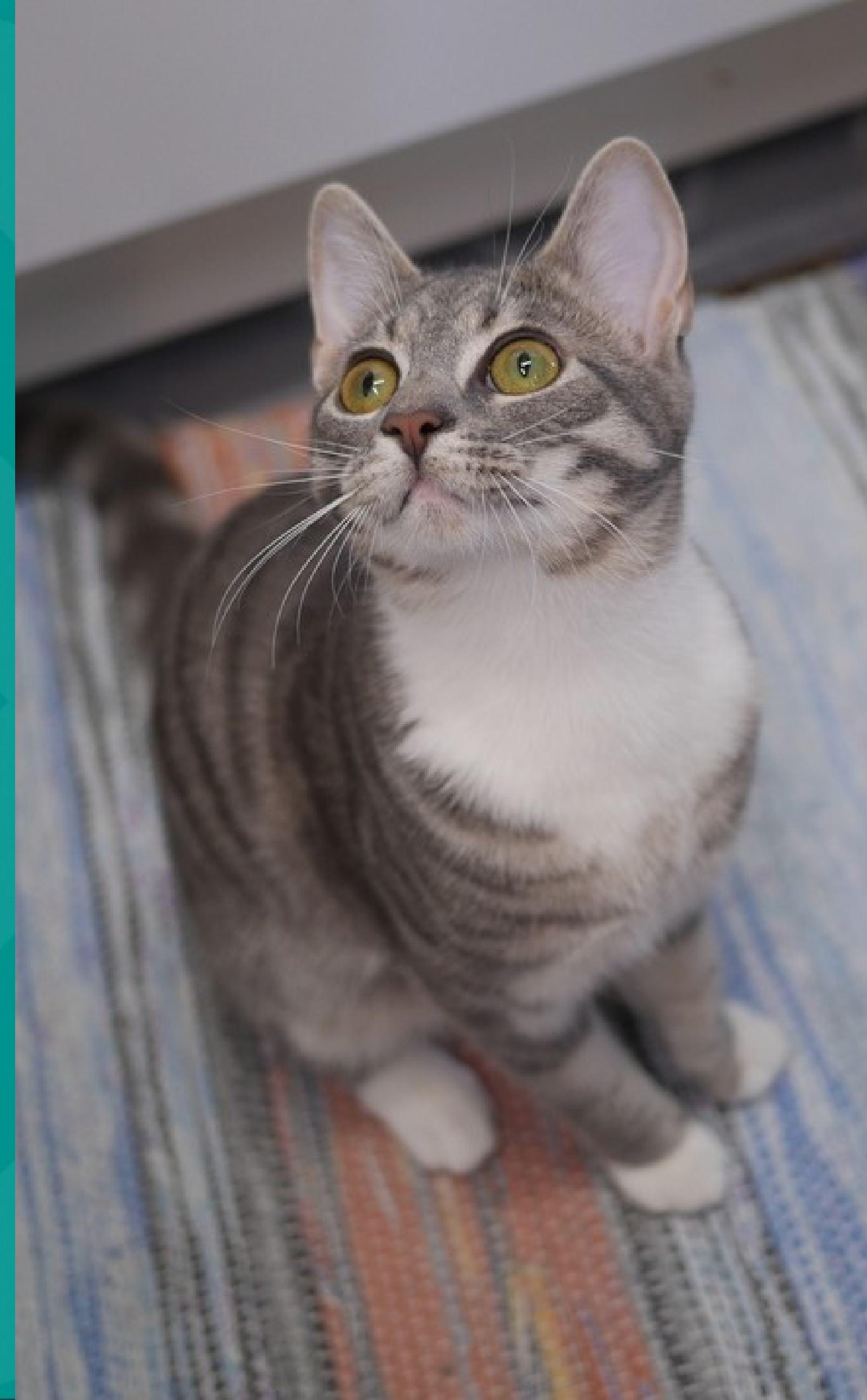
# What does NeIC want with Nordugrid

- 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?