NetworkPlus
UKRI National Federated Compute Services

Summary: Jo Beech-Brandt (EPCC)

- Quick overview of Wednesday
- Thanks to Wednesday's presenters
- Slides are taken from their talks - so please refer to their slides for full information!

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National Federated Compute Services Network Plus

Prof. Jonathan Hays

NFCS-N+ Launch Meeting

5th March 2025

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Objectives

- Scope how current and new compute services could act as a truly UKRI federated service, exploring the challenges and knowledge gaps on the pathway to federation, ready to inform future DRI activities in this space
- Produce a roadmap for federated provision of computational resources
- Scope the data storage needs for the federated service, and in general for UK computational research, again exploring the challenges and knowledge gaps, ready to inform future DRI funding activities
- Build a roadmap that focuses on the data storage needs of the envisioned service
- Act as a DRI NetworkPlus by linking up with networking activities in other DRI workstreams.
- Engage widely with other relevant activities and communities
- Consider how federation could expand the user base
- Embed careful consideration of environmental sustainability

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Project Team

Jonathan Hays
QMUL
Project Lead

Sadaf Alam
University of Bristol
Project Lead

Jo Beech-Brandt
EPCC - University of Edinburgh
Project Co-Lead

Adrian Hines
STFC
Project Co-Lead

Vassil Alexandrov
STFC Hartree
Project Co-lead

David Meredith
STFC Hartree
Project Lead Team

John Masih
QMUL
Programme Manager

Rui Apostolo
EPCC - University of Edinburgh
Community Engagement Officer

TBC
QMUL
Technical Coordinator

TBC
QMUL
Administrator

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Technical Coordinator

Recruitment about to start

Role:

- Key member of the project team
- Provide technical leadership on the delivery of the roadmaps
- Supporting the flexible funding call
- Supporting delivery of workshops
- Collation of evidence and outcomes
- Preparation of the roadmaps
- Building relationships across the UKRI communities

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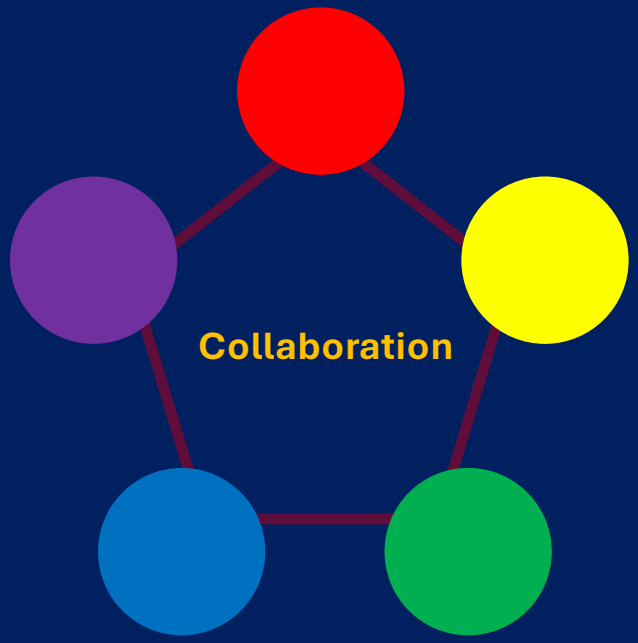
Federated Research Network

Key concepts

1. Decentralisation
2. Interoperability
3. Autonomy
4. Security and Privacy
5. Scalability



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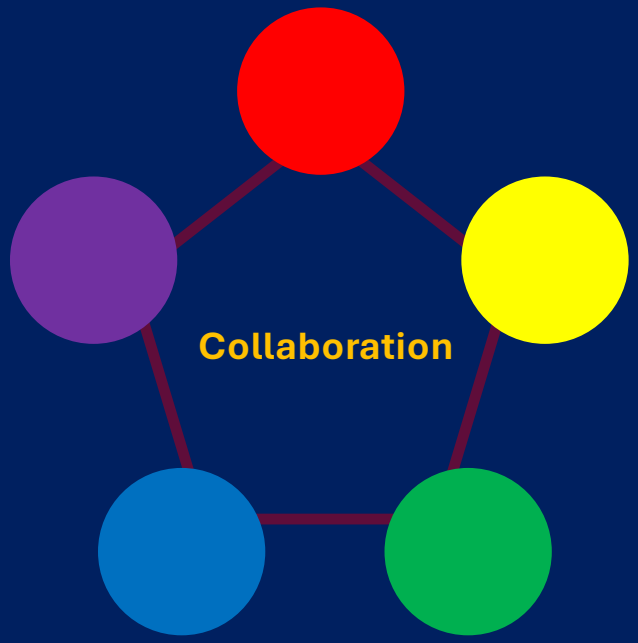
Benefits of Federation

1. Accessibility
2. Efficiency
3. Knowledge exchange
4. Security
5. Resilience



Important to consider the benefits – federation for its own sake doesn't make sense

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~~Levels~~ Elements of Federation

Identity
Authentication
Authorization
Security
Accounting
Allocation
Services
Software
Data
???

Community

Policy

Technology

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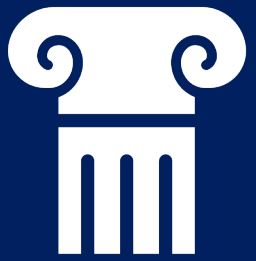
Pillars of NFCS

Community

Technology

Policy



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Pillars of NFCS

Community

Building communities
Engaging with Stakeholders
Identifying existing and emerging user stories
Establishing common nomenclature and standards

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Pillars of NFCS

Technology

Gather the state-of-the-art and existing practice
Knowledge exchange
Evaluating potential technological components
Identifying core federation services

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Pillars of NFCS

Policy

Identify existing and emerging governance and policy approaches
Identify policy requirements based on business cases and user stories
Develop outline policy framework

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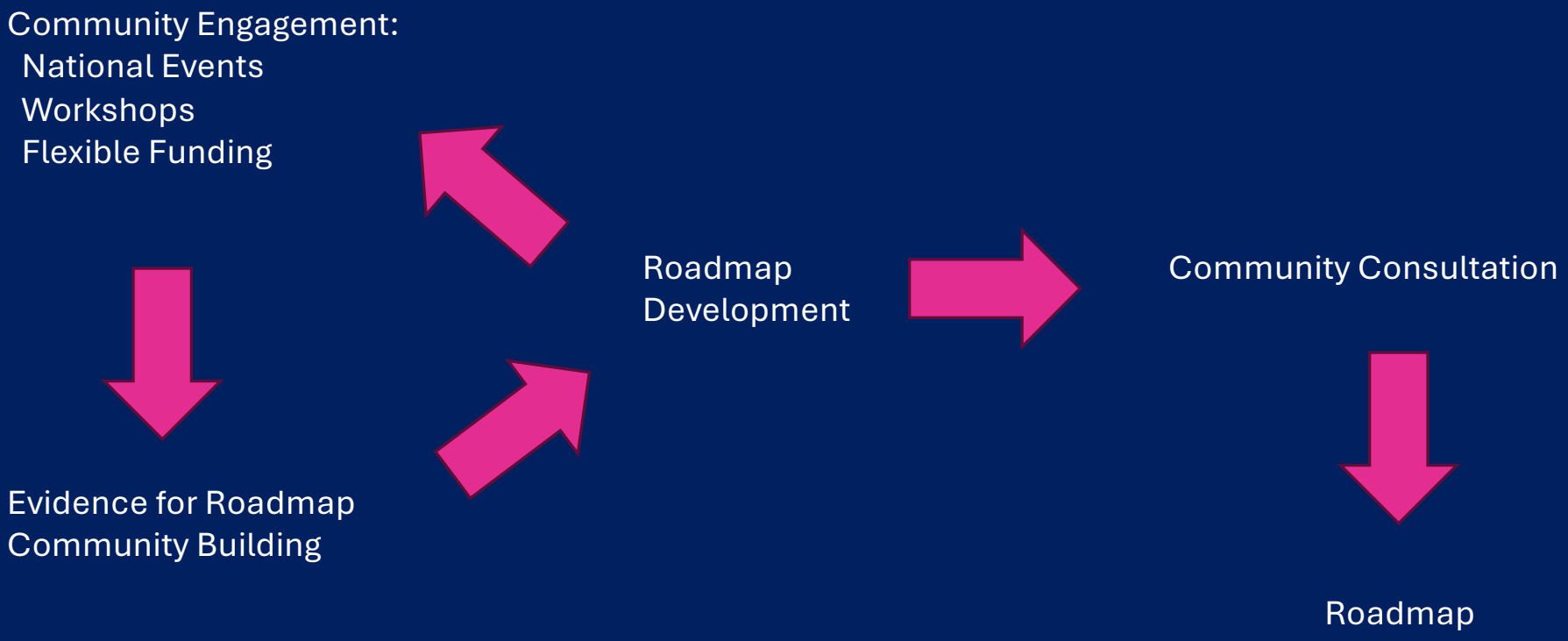
Project Delivery



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National Meetings

4 meetings planned during course of the project (including this one)

Engage with broad cross-section of the community

Share progress

Encourage networking and community building

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Workshops

Themed workshops

Structured around the three pillars:

- Community
- Technology
- Governance

Knowledge exchange

Facilitate communication between projects and project team

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Flexible Funding

~£2m total available for projects supporting the objectives of the Network Plus
Funding a series of projects @80%FEC for up to 1 year in length

Projects should identify which of the pillars they address (more than one is possible)

Projects will be funded at one of three levels:

Small: <£10k – suitable for workshops, community events

Medium: <£50k – likely to cover staff time and associated small costs for a period of up to 6 months. Example activities might include landscape surveying, short technical projects, and community engagement

Large: <£200k – like to cover 1 or more FTE over a year. Examples include technical evaluation projects, and larger surveys or community activities

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Flexible Funding

Proposals must:

- Demonstrate clear alignments with the pillars
- Demonstrate clear and achievable objectives align with the goals of the Network Plus
- Clearly justify all costs and how they support delivery
- Demonstrate an appropriate level of cross-disciplinary engagement for the activity being proposed

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Flexible Funding: Activities

We anticipate that project activity will comprise one or more of:

- Surveys of existing practice
- Assessment of gaps in existing provision – which can be hardware, software, training, services
- Assessment of barriers to entry and on-boarding of new user-communities or providers
- Technical evaluation of existing or prototype solutions
- Community building activities that establish new communities as relevant for the DRI

Other activities that support development of the roadmaps or community building may be included. However, research into, or development of, new technical solutions is not within the scope of activities within the call.

Projects that foster community collaboration are particularly encouraged.

The call evaluation will seek to ensure that a broad range of activities are supported.

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Summary

National Federated Compute Services Network Plus is launched

Series of talks, interactive sessions, and networking opportunities

Feel free to chat with us if you want more information

Great opportunities to be part of it (and get funding!) to shape the future of compute services in the UK

Recruitment of the technical coordinator about to go live – get in touch for more details

j.hays@qmul.ac.uk, sadaf.alam@bristol.ac.uk

Sign up here for announcements:
NFCS-NETWORKPLUS-ANNOUNCE@JISCMAIL.AC.UK

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Summary

Subscribe to the mailing list

Draft funding call document

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Talks from Wednesday

- UK SKA Regional Centre" Enabling radio astronomy in the exabyte era: Louise Chisholm (UCL)
- AIRRFED - DSIT /UKRI AI Research Resource Federation Demonstrator Project: Paul Calleja (University of Cambridge)
- SATRE - A UK Specification for Trusted Research Environments : Chris Cole (University of Dundee)
- FirecREST: a common interface for HPC and AI workflows: Elia Palme (CSCS)
- FRIDGE: Federated Research Infrastructure by Data Governance Extension: Martin O'Reilly (Turing Institute)
- Edge AI Hub : Raj Ranjan (Newcastle)

Science and Technology Facilities Council

uk | SRC

SKAO Regional Centre United Kingdom

UK SKA Regional Centre: Enabling radio astronomy in the exabyte era

Louise Chisholm & Rob Beswick Joint Directors

Ian Collier - Technical Director; **Jack Radcliff** – Community Director; **Jeremy Coles** – Deputy Director

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Launch 5/3/2025

UNIVERSITY OF CAMBRIDGE

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AIRRFED
DSIT UKRI AI Research Resource (AIRR) Federation Demonstrator Project

Creating a joined up AIRR service
&
A look at the art of the possible for a re-imagined UKDRI

Dr Paul Calleja : Director Research Computing Service

SATRE - A UK Specification for Trusted Research Environments

Dr Christian Cole – Reader in Health Informatics

Academic Co-Director, Health Informatics Centre

School of Medicine, University of Dundee

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University of Dundee

The Alan Turing Institute

Ulster University

UCL ADVANCED RESEARCH COMPUTING CENTRE UCL

Research Data Scotland

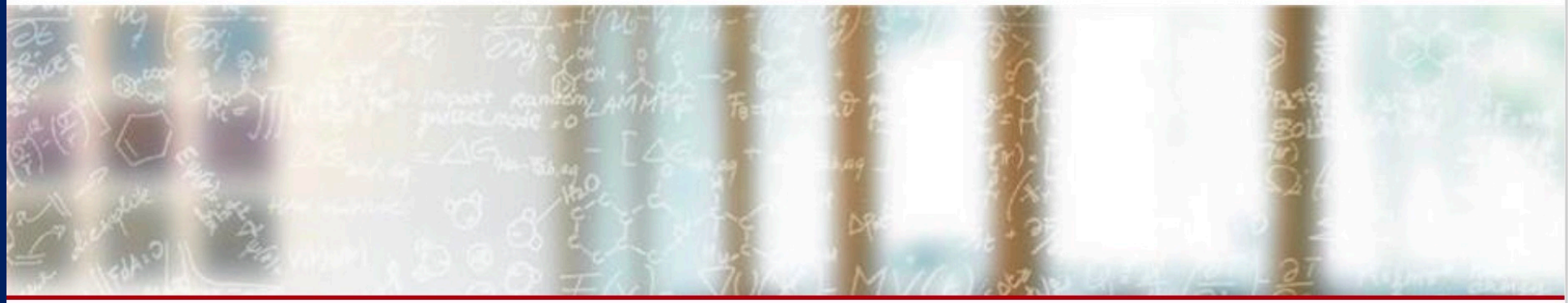
Health Informatics Centre

NetworkPlus

vices

CSCS
Centro Svizzero di Calcolo Scientifico
Swiss National Supercomputing Centre

ETH zürich



FirecREST: a common interface for HPC and AI workflows

Elia Palme – elia.palme@cscs.ch
CSCS - Swiss National Supercomputing Centre
ETH Zurich

March 2025

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FRIDGE : Federated Research Infrastructure by Data Governance Extension - Martin O'Reilly (Turing Institute)

- Awaiting slides!

The Alan Turing Institute

FRIDGE
A DARE UK PROJECT

FRIDGE: Federated Research Infrastructure by Data Governance Extension

Martin O'Reilly | Director of Research Engineering, The Alan Turing Institute

05 March 2025 | NFCS Network+ Launch event

National Edge AI Hub

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UK's National Edge AI Hub

Rajiv Ranjan, FIEEE, MAE, FAAIA

Professor in Computing Science and Internet of Things
School of Computing, Newcastle University

Date: 5th March 2025
Location: One Moorgate Place, London

Mentimeter

Plenary Discussion: How can we maximise success of the flexible funding call

- What factors should we ensure are covered in the call?
- What are the essential ingredients needed in the roadmaps to ensure they are successful?
- Where are the biggest challenges? Consider this for each of community, governance or technology?
- What barriers might get in the way of community participation, and how do we overcome these? Item 4

How can we maximise success of the flexible funding call (coverage, challenges, gaps, etc.)

This is intriguing project call to get involved in, and there is money, but the process seems very complicated, similar to a 1M funding application.

Ensure we know what users actually want

Established scientific communities should be used for promoting this call.

Engagement across ukri

What users want

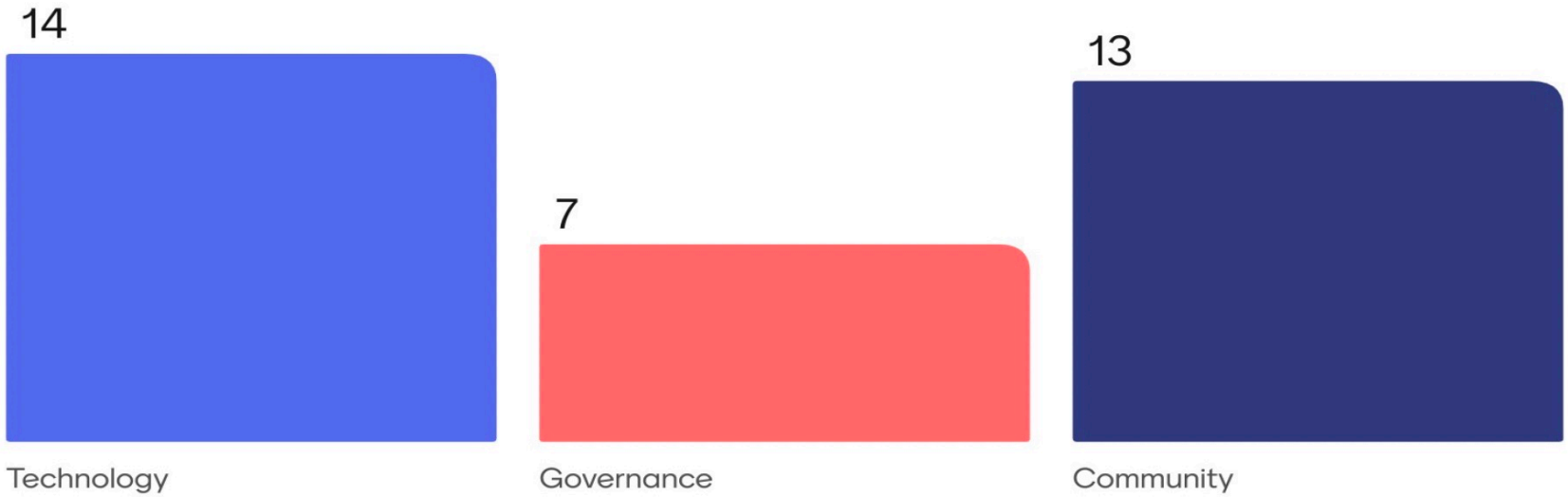
Make proposal format and process as simple and rapid as possible.

Get the widest range of users involved

Ensure we know what the user roles are and that they are all included

Mentimeter

If we do nothing more to facilitate proposals, how likely would you be to seek to get involved in a proposal each of the pillars (select any)



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What factors are likely to affect your decision to seek involvement in a proposal?

Effort required for writing a proposal	Availability of staff at my institution.	Availability	Time
Temporal availability	Staff availability	Time and commitment and alignment with university! Aims	Collaborators, & time

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Mentimeter

ices

What actions could the Project Team take to facilitate involvement?

Give funding to those who do not have money at all; it will be more inclusive. Giving to those who already have funding will overburden them.

Create something like a zenodo knowledge base?

Use rse network, social media, etc

Reach out to dri type investments in ahrc, esrc, bbsrc...

Actively engage with communities through research councils that do not currently 'do HPC'.

I think all the attendees submit proposals together in 2-3 groups. If this is the case, please provide us with the details of all attendees so we can contact you directly.

Building on the knowledge base idea, perhaps a public wiki that people can contribute to whether or not they are associated with a project?

Announce workshops further in advance. 🙂

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