



**National Federated
Compute Services**
NetworkPlus

**Autumn Conference
22-23 September 2025**

Enhancing HPC Adoption Through User-Centred Design

**A Roadmap for Inclusive Innovation in Environment, Health, and
the Built Environment**

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Why? (Motivation)

HPC powers climate modelling, healthcare analytics, infrastructure simulation.

Barriers remain:

- Complex access procedures**
- Awareness & training gaps**
- Trust, privacy & governance concerns**

Many potential users are not yet engaging with HPC.

Motivation: Make HPC usable, trusted, and inclusive.





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Project Aim and Objectives

Aim:

To make UK HPC more accessible, trusted, and inclusive

Co-design a user-centred roadmap for a national HPC federation

**Directly aligned with NFCS NetworkPlus pillars: Community,
Technology, Governance**



Project Aim and Objectives

Objectives

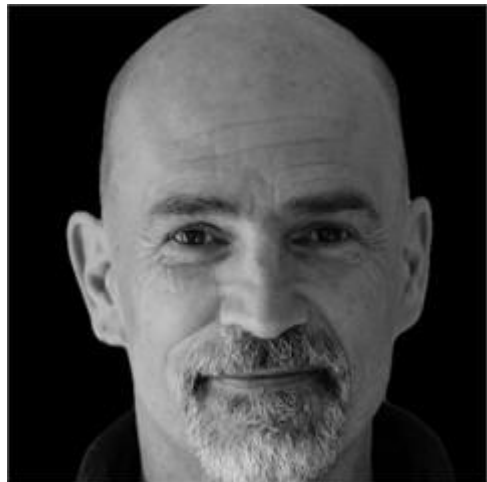
1. Identify barriers to HPC access (Community & Governance)
2. Co-design roadmap for inclusive HPC federation (Cross-cutting)
3. Understand technical challenges post-access (Technology & Community)
4. Explore trust, safety, and governance across sectors (Governance & Community)



Project team

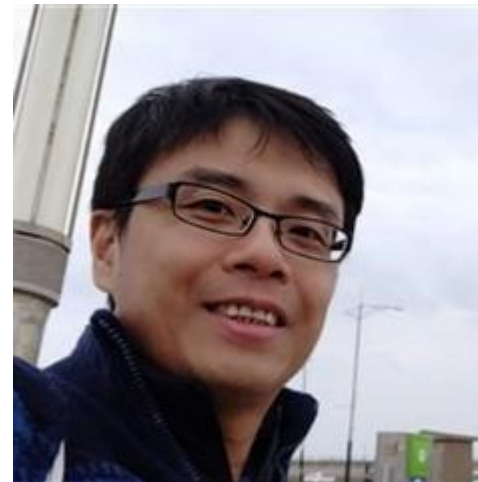
Dr Tariq Umar

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Prof Jim Smith

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Dr Kwok Chun

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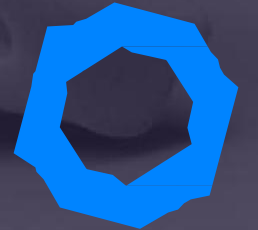
Methodology:

Surveys → capture current barriers & needs

Workshops (NHS, construction, environment, international)

Focus groups → expert users

Facility visits & training → test practical onboarding packages





Who? (Stakeholders)

Process (delivery team):

- UWE Bristol (PI & Co-Is)
- Collaborators: Imperial, NTU Taiwan, Vatican Observatory, ITU Turkey, Coventry, Arcadis

Outcome (beneficiaries):

- NHS & health researchers
- Built environment & construction professionals
- Environmental scientists
- Industry partners
- Policymakers & funders



What? (Contributions)

By project end (July 2026):

- User-centred roadmap for national HPC federation
- Recommendations on access, usability, governance
- Personas & use cases for onboarding/training

Beyond project:

- Wider adoption pathways (NHS, construction, environment)
- Influence NFCS policy pillars
- Position UK in global HPC federations



Activities & Timeline

2025: Ethics approval,
stakeholder survey, NHS & Built
Env. workshops

Early 2026: Environmental
sciences workshop, international
engagement

Spring 2026: Focus groups,
facility visits & training

Summer 2026: Final roadmap,
recommendations, dissemination





Expected Impact

Community: widen HPC participation (esp. underrepresented).

Technology: interoperable, user-friendly workflows.

Governance: trusted, secure collaboration models.

Long-term: UK leadership in international HPC federations.



Closing

Why? Inclusive HPC adoption matters.

Who? NHS, environment, construction, academia, industry, policy.

What? A roadmap shaping UK's HPC future.



We need your help

We want to research to sider
participants
Participate and share our survey

