

Town Hall Meeting to discuss UKFN 2.0

13:30-15:00, Monday 26th February 2024

Meeting Notes

28/2/2024

- (a) A list of participants is given at the end (Annex 1).
- (b) The notes focus on the discussion of the main themes that emerged from the UKFN 2.0 survey, Items 3(b)-(h) of the agenda (repeated in Annex 2).

Nick Daish & Matthew Juniper

Cross-Research Council participation

[MJ – strong view to extend beyond EPSRC and develop cross-discipline/cross-RC aspect.]

Andy Lawrence
Chandan Bose
David Standingford
Kwing-So Choi
Ubaid Ali Qadri
Yannis Hardalupas
Zahir Hussain

- **[UAQ]** STFC provides scientific computing services in many different areas, helps companies with HPC, AI, high complexity modelling. There is significant overlap with fluid dynamics.
- **[AL]** With creation of UKRI [since UKFN 1.0] there is appetite for cross-council activity. There is NERC for Environmental space, MRC for Health space, INNOVATE UK for Industry (processes and products). Could add Social Science (e.g. air quality, virus transmission). Brings added benefits of sharing investment, cementing communities, new opportunities for councils. There have been a few inter-disciplinary calls by UKRI.
- **[CB]** Suggest SIGs that are cross-cutting. Need interdisciplinary interactions to identify applications important for policy makers, e.g. net-zero transport systems.
- **[YH]** MRC is worth including as health is an important issue for the future and society in general, and research can help with such areas as planning surgery, new tools, controlling infections.
- **[DS]** Running own company working in CFD in range of sectors; also Deputy Chairman of ERCOFTAC, for which UKFN is the UK Pilot Centre. ERCOFTAC is important for reintegration of UK in Horizon programme as it is used for information dissemination and putting together bids, suggesting a stronger link with UKFN 2.0 would be beneficial.
- **[ZH]** Partnering with ERCOFTAC and other similar organisations beneficial for medium to long term through involvement in Horizon. Discipline hopping an example of cross-RC activity. *Our Fluid Nation* report provides useful cross-disciplinary examples.
- **[KC]** Problems are new and complex and difficult to tackle. Needs interacting SIGs, which naturally leads to inter-disciplinary aspect. However, probably difficult.

Regional centres

[MJ – is there strength in forming regional centres?]

Chandan Bose
Ignazio Maria Viola
Paul Griffiths
Yannis Hardalupas

- **[CB]** The Midlands group, which includes Birmingham, Coventry and Aston, provides links to local industry, trains local talent and facilitates local effort.
- **[PG]** A local group is intended to be greater than the sum of its parts. PhD students and ECRs can share interests and resources more widely than just within their own institutions. It provides a mechanism for KTPs.
- **[YH]** There are other existing groups, such as Bath/Bristol/Cardiff/Swansea and Durham/Teesside/... An important question is how to interface UKFN with regional centres.
- **[IMV]** Suggest alternative to regional centres, focused on established centres of excellence, which each consist of one or more institutions. UKFN 2.0 would establish cross-connections or channels between these centres through, for example, collaborative research projects. This then also feeds naturally into a cross-disciplinary perspective.

Role of ECRs

[MJ – how to involve ECRs and what do they need?]

Abhishek Kumar
Abhinav Naga
Chandan Bose
Christina Vanderwel
Edwina Yeo
Jesse Taylor-West

- **[CV]** UKFN 1.0 has been a career enabler for ECRs making much accessible to ECRs across the network. It has been beneficial personally. The NFFDy's and SIGs are both enablers in a career pipeline for researchers.
- **[AK]** There should be regular ECR meetings, which can help with building grant applications, for example.
- **[CB]** The NFFDy fellowships have been a good start. An ECR forum could connect ECRs with each other as well as experienced colleagues. Seed funding would be helpful. Important for ECRs to be involved in leadership roles.
- **[AN]** If there were NFFDy 2.0, perhaps open up to applicants with industrial background, also in the Summer Programme, c.f. Marie Curie doctoral training.
- **[EY]** Prior to NFFDy fellowship, benefited from activities of Biofluids SIG, which had regular ECR-focused meetings. Could provide a template in UKFN 2.0.
- **[JTW]** In agreement – seed funding welcome, continuation of NFFDy Summer Programme important.

Industry/Academia interaction

[MJ – interaction is wider than this, include other RCs and media.]

Andrew Hogg
Chandan Bose
David Standingford
Jennifer Tweedy
Jialin Su
Ubaid Ali Qadri
Yannis Hardalupas

- **[JT]** Works in ‘Mathematical modelling of the eye’ SIG. Trick/key is getting clinicians who understand differences between themselves and researchers. Needs patience as progress is typically slow. SIG has used study group format, where clinicians propose problems, which mathematical modellers work on, resulting ultimately in publications. The process could be extended to grant proposals, but needs the necessary time, which is hard to find.
- **[DS]** Study groups useful way to involve industry. For example, 3-day workshop, for which companies submit problems, some selected for workshop, results form basis for funding proposal, which industry are then happy to fund. Industrial placements also useful. Industry is very time-constrained, and any value proposition has to be easy to sell. UKFN newsletter is useful, as it is open to everyone, with a low barrier to entry.
- **[JS]** Support SMEs, faced with expensive CFD model licences and wind tunnel time.
- **[AH]** UKFN 2.0 can exploit leverage of reports that have already made the case of the wide applicability of fluid dynamics. Tie up with newly-established regionally-based KE Champions programme. Seed funding would facilitate broader interactions beyond the usual ones. Think broadly – include all ‘end users’ of research.
- **[CB]** The UK Fluids Conference could have dedicated sessions to draw in industry.
- **[UAQ]** Innovate UK would bring in access to facilities.
- **[YH]** Increase collaboration with small companies or spin-outs. The network could encourage small companies to join forces and address problems together, e.g. decarbonisation.

Research facilitation

[MJ – Network+ option was not available for UKFN 1.0; did not include much funding for research.]

Ignazio Maria Viola
Zahir Hussain

[IMV] One option for UKFN 2.0 structure is a Supergen Hub, e.g. [ORE \[Offshore Renewable Energy\] Hub](#). The focus is tackling major challenges: identify keystone projects and use workshops to refine details, then seek funding. Brings together centres of excellence [c.f. ‘Regional centres’ discussion] to tackle them. It is inclusive, with a wide committee-based management structure. There is strong ECR involvement in management and research, also a specific forum for the whole community. There is strong connections with senior members of the community. Generates collaborations and there is seed funding for new spin-offs and pilot projects. There can also be strong industrial connections, tackling challenges with industry.

[ZH] Grand challenges, cross-disciplinary – working groups harnessing expertise in specific areas, then bring in larger groups to solve the big problem challenges.

Sharing data and other resources

[MJ – UKFN 2.0 could play a role.]

Abhishek Kumar
Benedict Rogers
David Standingford
Tamás Józsa
Ubaid Ali Qadri

- **[AK]** Can't upload big data. Collaboration with data.
- **[BR]** Proliferation of uncurated data, which can require a lot time to render useful. At Manchester there is a database of test cases, originating with ERCOFTAC [[Classic Collection Database](#)]. This is a set of trusted test cases, which could be an exemplar of how to implement a shared data resource.
- **[DS]** ERCOFTAC also has a [Knowledge Base Wiki](#). For moderately-sized data sets, use of Zenodo, etc. is a reasonable option, but there can be TBs or tens of TBs of data. Including such really big data sets can work out expensive (ERCOFTAC found this out from experience). Any database is a long-term commitment, as its custodians must undertake to maintain it.
- **[TJ]** There may be licencing issues. Take ownership and track who is using a data set and how. There are risks of sharing data inappropriately. A simpler solution could be simply collating a list of the URLs of data collections.
- **[UAQ]** Couple data sets with SIGs, who would format and define how to curate appropriately for their requirements [c.f. Sandia]

Other

Communication/outreach:

Benedict Rogers
Christina Vanderwel
David Standingford
Tamás Józsa

- **[CV]** Not already mentioned, but the UK public are also involved. However, requires finesse to digest research and present to society. There are local efforts to communicate, but would be better to combine for larger impact. How best to do this?
- **[BR]** Use KT fellow or group to reach out beyond local communication.
- **[DS]** Use a PR agency – professionals with high impact at relatively modest cost, much cheaper than dedicated KT fellow(s).
- **[TJ]** Strategy needs to identify the specific targets, e.g. SIGs/industry, students abroad. Needs modern outreach activities, where the landscape has changed in the past 5 or so years. Examples: [UK Turbulence Consortium podcasts](#); [Steve Brunton YouTube channel](#) [on data-driven science and much more].

Non-academic careers:

Ubaid Ali Qadri

- **[UAQ]** Many PhD students do not stay in academia, so how could UKFN 2.0 support transition to industry and adapt their transferable skills to a non-academic environment?
[MJ – find out from people who have left academia what would have been useful.]

Next steps

- Matthew/Nick to produce brief notes of meeting including a list of all participants.
- Matthew/Nick will act as central point of contact initially.
- Andy/Chloe are happy to provide advice on plans as they evolve.

Annex 1. Participant checklist

Meeting attendees [44]

Name	Affiliation
Andrew Bayly	University of Leeds
Amit Chattopadhyay	Aston University
Andrew Hogg	University of Bristol
Abhishek Kumar	Coventry University
Andy Lawrence	UKRI-EPSC
Abhinav Naga*	Durham University
Antonio Attili	University of Edinburgh
Benedict Rogers	University of Manchester
Chandan Bose	University of Birmingham
Chloe Harman-Weaver	UKRI-EPSC
Christina Vanderwel	University of Southampton
David Fairhurst	University of Edinburgh
Daniel Orejon	University of Edinburgh
David Standingford	Zenotech Ltd.
Edward Skevington*	University of Hull
Edwina Yeo*	University College London
Halim Kusumaatmaja	Durham University
Ignazio Maria Viola	University of Edinburgh
Jialin Su	Loughborough University
Jennifer Tweedy	University of Bath
Jesse Taylor-West*	University of Bristol
Kwing-So Choi	University of Nottingham
Katarzyna Kowal	University of Glasgow
Kshitij Sabnis	Queen Mary University of London
Livio Gibelli	University of Edinburgh
Matthew Juniper	UKFN/University of Cambridge
Miles Morgan*	Swansea University
Matthew Turner	University of Surrey
Nick Daish	UKFN/University of Cambridge
Nejdet Erkan	Not known
Petros Ampatzidis	University of Bath
Patrick Geoghegan	Aston University
Paul Griffiths	Aston University
Ryan Doran*	Newcastle University
Richard Green	University of Glasgow
Sepideh Khodaparast	University of Leeds
Stephen Wilson	University of Strathclyde
Tamás Józsa	Cranfield University
Timm Krueger	University of Edinburgh
Ubaid Ali Qadri	STFC Hartree Centre
Yongyun Hwang	Imperial College London
Yannis Hardalupas	Imperial College London
Yukie Tanino	University of Aberdeen
Zahir Hussain	University of Leicester

*NFFDy fellow

Apologies

Name	Affiliation
Angela Busse	University of Glasgow
Alistair Revell	University of Manchester
Sergei Sazhin	University of Brighton
Tamsin Spelman	University of Cambridge

Annex 2. Meeting agenda (for reference)

Town Hall Meeting to discuss UKFN 2.0

13:30-15:00, Monday 26th February 2024
via Zoom

[Zoom link](#)

AGENDA

1. Very brief **introductions**
2. Summarise UKFN 1.0 and outline **purpose of meeting**
3. Discuss UKFN 2.0 survey **themes**
 - (a) Popularity of main elements of UKFN 1.0
 - (b) Cross-Research Council participation
 - (c) Regional centres
 - (d) Role of ECRs
 - (e) Industry/Academia interaction
 - (f) Research facilitation
 - (g) Sharing data and other resources
 - (h) Other
4. Discuss **next steps**

Links

[Survey digest \(.pdf\)](#)

[Survey responses \(.xlsx\)](#)

[Our Fluid Nation report \(.pdf\)](#)

[NFFDy Fellowships \(UKRI\)](#)

MJ/ND, 22/2/2024