UK Research and Innovation

HDRUK Health Data Research UK

ADRUK Data-driven change

DARE UK

Capability and Capacity Building

Stakeholder workshop, Tuesday 8 March 2022

Why Capacity and Capability Building?

- Data science research is underpinned by the staff providing the data preparation, curation, linkage and analysis and by those developing and supporting the research infrastructure.
- This theme will address the challenges by the academic and third-sector communities in the recruitment and retention of the staff but will also look at areas where there may be significant opportunity for change that would support a more efficient use of staff and skills such as output checking.
- Whilst DARE UK Phase 1 has not focused extensively on the area of Capability and Capacity as this is subject to other areas of investment by the UKRI DRI programme, we consider it important to cover this as part of the blueprint as this was a key area of concern from many stakeholders and some of the potential solutions may be a mix of recruitment, training, and technology and therefore in-scope for the next phase of the programme.

First Draft Recommendations (1 of 4)

Working with the Research Software Engineering and Technicians Commitment initiatives to establish agreed career pathways across the UKRI research domains. Also explore other barriers that devalue these roles.

First Draft Recommendations (2 of 4)

Improve recruitment pathways

- Establish a recruitment taskforce to explore effective options including alignment with diversity and inclusivity work already underway in HDR UK, ADR UK and elsewhere. This taskforce could also examine approaches to providing exemplary approaches to attract those making career changes.
- Pilot secondments and exchanges with industry to bring in shortage skills. This could be used to supplement the Phase 2 delivery team.
- Embed participation in the Black Internship Programme in future activity, including interns as members of the future DARE UK delivery team.

First Draft Recommendations (3 of 4)

Improve the availability of training

- Extended the HDR UK Futures Platform to provide a best of breed free on-demand training platform applicable to all UKRI research domain and for cross-disciplinary research.
- Develop a rich set of high fidelity synthetic linked datasets to support training in cross-disciplinary research and data science.

First Draft Recommendations (4 of 4)

Use automation to reduce the dependency on shortage skills

- Pilot the delivery of automation to augment output checking. This is discussed in more details in the Digital Research Infrastructure chapter.
- Pilot the delivery of automation to support policy-drive access request management. This is discussed in more details in the Access and Accreditation chapter.

Where do we need your thoughts?

- What are you current key shortage skills? How do you expect this to change over the next 2-3 years?
- Do you consider that certain skills should be provide through central resourcing (e.g., cybersecurity, output checking, etc)?
- What recruitment and retention approaches have worked and not worked for you?
- Do you agree that we should look to be more porous to allow the flow of skills and staff between industry and academia?
- How should we engage with and support initiatives such as the Society of Research Software Engineering and Technician Commitment?
- What role can internship programmes and apprenticeships (at various levels) play in address the capacity shortage?
- What should be the focus for further training for existing professionals?

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Summary of your thoughts and feedback

What are you current key shortage skills? How do you expect this to change over the next 2-3 years?

- Need to address succession planning, with so much pressure there is a reluctance to recruit junior and less skilled staff.
- Skills shortage in all roles but especially data analysts.
- Data experts who can advise on study design.
- Difficult to retain experienced staff, especially data science and software development.

Do you consider that certain skills should be provided through central resourcing?

- Could work for skills like cybersecurity and output checking.
- Concerns about ‘fair’ access to any central resources and potential for slowing down access.
- Potentially helpful to plug gaps ahead of local recruitment.

What recruitment and retention approaches have worked and not worked for you?

- Standardised job titles (and role profiles) would help recruitment.
- Target qualification requirements on the job and not just to be able to ‘band’ at a higher salary (e.g. do Output Checkers really need a Phd?).
- Establish clear career pathways.
- Minimise use of short term / fixed term contacts.
- Use of LinkedIn has been effective for some organisations.
- Retention is a bigger issue than recruitment.
- Recruit based on aptitude and attitude, then upskill.
- The salary gap is too large…Better work/life balance and interesting activity within the academic and public sector is no longer such a differentiator.
- Lack of progression opportunities leads to challenges around retention.
- Target career changes / later career staff.

Do you agree that we should look to be more porous to allow the flow of skills and staff between industry and academia?

- Definitely need to be able to share staff and skills.
- Can secondment / exchanges be made to work?
- Can we bridge the two worlds of academia and industry? Difficult to bridge culture difference between academia and industry.
- Could we share internships with industry partners?

How should we engage with initiatives such as the Society of Research Software Engineering and Technician Commitment?

- Society of Research Software Engineering have been effective in improving visibility of RSE.
- Professional bodies (e.g., BCS) seen as having no impact.
- Need these initiatives to support the development of “common” career ladders.
- Organisations need to embed these initiatives into their own Learning and Development pathways.
- More awareness needed of the Technician Commitment.

What role can internship programmes and apprenticeships (at various levels) play in addressing the capacity shortage?

- Interest in L6 / L7 apprenticeships.
- Some areas have a reluctance to hire interns – seen as overhead and want to focus on people with high skills. Other organisations making great use of interns.
- Can key infrastructure (e.g., SAIL, EPCC) support paid internships to transition to other organisations?
- Improve school outreach through central coordination and development of materials. Important to highlight supporting roles and not just researchers.
- Needs funding to support start up.
- To what extent can / will AI replace some of these roles? Focus where we need people both today but also in the future.

What should be the focus for further training for existing professionals?

- Need bite-sized training including on PPIE and output checking.
- Need to improve recognition, perhaps through professional qualifications.
- Lots of proliferation of offerings, do we need a one-stop-shop?
- Security is a particularly urgent need for training.
- Short term secondments to support development (1-2 months).
- Exemplar highlighted was the Digital Research Infrastructure Retreat being organised by Durham/N8 on behalf of EPSRC: https://n8cir.org.uk/dri-retreat/
- Availability of synthetic data seen as important to training and development.

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Thank you

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