UKRI and the Technician Commitment

Ellen Meek and Nik Ogryzko
UKRI

- UKRI brings together 7 Research Councils, Innovate UK and Research England.
- The central UKRI function provides strategic oversight across the councils and addresses cross-cutting themes.
UKRI as a funder

Dual Support Research funding
- Competitively awarded funding
  - Responsive mode
  - Targeted opportunities
  - Institute support
- Quality Related funding

Business and Innovation
- Innovate UK
  - Targeted opportunities
  - Knowledge Transfer Partnerships
UKRI as a Research Organisation

STFC
• ISIS, Royal Observatory…

MRC
• LMB, UK DRI…

NERC
• BAS & BGS

7300 employees across 30 locations, in 8 different countries
4300 based in Centres, Institutes, Units & National Laboratories
3300 employees in science based roles
**UKRI and BEIS**

UKRI is a “non-departmental public body sponsored by BEIS”

Subject to the Higher Education and Research Act (2017)

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### BEIS R&D allocations 2020 to 2021

<table>
<thead>
<tr>
<th>Organisation or Programme</th>
<th>R&amp;D allocation 2020 to 2021 (£m)</th>
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<tbody>
<tr>
<td>UK Research and Innovation</td>
<td>8,447</td>
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<tr>
<td>UK Space Agency</td>
<td>547</td>
</tr>
<tr>
<td>UK Atomic Energy Authority</td>
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</tr>
<tr>
<td>Met Office</td>
<td>144</td>
</tr>
<tr>
<td>National Measurement System</td>
<td>114</td>
</tr>
<tr>
<td>National Academies</td>
<td>230</td>
</tr>
<tr>
<td><strong>BEIS programmes</strong></td>
<td></td>
</tr>
<tr>
<td>Core programmes</td>
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<tr>
<td>Aerospace Technologies Institute</td>
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</tr>
<tr>
<td>Automotive Innovation Programmes</td>
<td>85</td>
</tr>
<tr>
<td>Centre for Connected Autonomous Vehicles</td>
<td>43</td>
</tr>
<tr>
<td>Building Information Modelling</td>
<td>2</td>
</tr>
<tr>
<td>Energy Research Accelerator</td>
<td>3</td>
</tr>
<tr>
<td>Materials Processing Institute</td>
<td>4</td>
</tr>
<tr>
<td>Energy Innovation Programme and Climate Science</td>
<td>243</td>
</tr>
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</table>
Why become UKRI?

• To develop a strategy for research and innovation

• To support cross-cutting activity across the Research Councils
Talent and Skills
Talent and Skills

- **Building the capacity and capability** of our research and innovation workforce is vital to delivering the 2.4% target.

- UKRI is taking an overarching view on what the future research and innovation workforce will look like, and the **systems-level interventions** required to achieve it.

- Considering **UKRI’s different roles and responsibilities** in nurturing and developing talent.
Challenges

Recruitment, retention and succession planning for technical expertise
- Gatsby Charitable Foundation suggests that the UK needs 700,000 more technicians by 2020
- 2.4% GDP target will increase demand further
- Status of research technical specialists in upcoming visa system

Demand for analytical, data and knowledge management skills
- Ranging from specialist support to general data literacy and skills
Recognising Technical Talent

RCUK Statement of expectations for technology / skills specialists

Technology / skills specialists make critical intellectual contributions to research through the provision of core technical excellence, and in maintaining and developing new technologies and methodologies across all of the Research Councils’ remits. Research Councils (RCs) support technology / skills specialists through grant funding because we recognise that the skills these people provide are essential to the delivery of cutting edge research. Our support is to:

- Attract and retain researchers with cutting edge skills and expertise for the future UK national capability
- Collaboratively drive forward innovative areas of research
- Support Research Councils’ ability to maximise the return on investments
UKRI Infrastructure Roadmap
Infrastructure Roadmap

Diverse workforce of research technicians, technology skills specialists, infrastructure managers and other professional groups

31% of the business workforce
10% of the higher education workforce
36% of staff in UKRI landscape analysis
Infrastructure Roadmap

- Top barriers to effective infrastructure operations
  - Skills recruitment and retention
- A long term perspective and career track are essential to increasing the attractiveness of infrastructures as employers
- Investment in Technical Careers is a key part of UKRI’s upcoming Talent Strategy
  - Systems level approach to skills and talent
What do we do for technicians currently?

• A lot of effort and good practice across the councils already
  • Part of our work will be to extend this across UKRI

• Examples from our own council backgrounds:
Juan Antonio Vizcaíno, Proteomics Team Leader and Grant holder

Dr Juan Antonio Vizcaíno works as an EMBL-EBI Proteomics Team Leader at the Wellcome Genome Campus just south of Cambridge.

EMBL-EBI, the European Bioinformatics Institute, is a leading computational biology research facility providing bioinformatics data, services and training to scientists. Dr Vizcaíno’s position is technology development, building open data analysis tools and adapting databases to new standards.

BBSRC’s Bioinformatics and Biological Resources Fund (BBR) enables the development of technical skills and technology and was designed for Research Technical Professionals (RTPs) like Dr Vizcaíno. His successful application will enable him to establish, maintain and enhance high-quality bioinformatics and biological resources to facilitate ground-breaking research.

Dr Vizcaíno points out that “RTPs have to be given a career path and a future – the traditional postdoc to professor route does not apply to everyone. But currently no other career paths within academia are properly recognised.”
Karl Burgess, Head of Metabolomics and Panel member

Dr Karl Burgess works as the Head of Metabolomics at the University of Glasgow. He is responsible for the day-to-day running of the metabolomics facility, including supporting experimental design, supervising of facility staff, training scientists, and data handling.

BBSRC regularly invites scientists like Karl Burgess to become members of its Pool of Experts or various review panels. Encouraged by his previous experience of reviewing grants, Dr Burgess applied for and was selected to become a member of the Transformative Research Technologies Fund (TRDF) panel. His expertise is a valuable addition to TRDF which aims to pump prime innovative cutting-edge research technologies with the potential to impact life science research.

As a trained bioinformatician, Dr Burgess always enjoyed working at the intersection of data and biology, which made him feel at home in the –omics sector. His facility handles about 4,000 to 5,000 samples a year and he says that he prefers the technical problem solving to answering purely biological questions. He adds: “This job is unique and you never know what you will be working on the next day. We had everything so far, from salamander venom and wildebeest hair to the ink used by Robert Burns.”
EPSRC Delivery Plan

Our long-term aspiration is to ensure that the role of outstanding leaders, teams and contributors who deliver UK research and innovation is valued and supported. In particular, the essential contribution of technical and software experts should be recognised by establishing funding mechanisms to support their career progression.
EPSRC RSE Fellowships

- A Research Software Engineer Fellowship is a personal award for exceptional individuals who demonstrate leadership and the combined expertise of software engineering along with a solid knowledge of the research environment.
- Introduced in 2015, with the aim of raising awareness of RSE roles, **improving career paths and reward/recognition** within universities
- **11 Fellows** funded to date
- **Next call** due to be launched on **30 June 2020** (outline applications followed by full proposals)
Technician commitment

- UKRI signed the Technician Commitment in December 2019
- Our deadline to submit an action plan is January 2021.
Our plan must consider our role:
  - As an Employer of technicians
  - As a Funder of technicians
Technician commitment

• As an employer, we’re working with directly employed UKRI technical staff from STFC, NERC and MRC to create our action plan.

• As a funder, we’re working with Councils to understand the needs of their technical communities.

• And trying to engage with the community virtually.
Technician commitment

In developing our plan, we have to be mindful of a range of related projects across UKRI:

• Development of a new UKRI Funding Service to streamline and consolidate funding opportunities

• Research and Innovation infrastructure

• Research Environment and Culture
  • Bullying and Harassment
  • Equality, Diversity and Inclusion
  • Research Integrity
“Although software is essential to the majority of research, the structure and incentives of academia do not support the development of reliable software. Traditional academic career paths do not support software engineers, academic evaluation does not reward work with software, and funding models do not meet the requirements of software engineering”
Impact of COVID-19

- COVID-19 has had a profound impact on the sector
- Technicians and research staff are unlikely to be able to work from home
- Technicians may also be in more precarious positions than academic staff
- UKRI is working with the sector to understand the impact of COVID-19
Impact of COVID-19

• Technicians have been keeping the MRC-Harwell facility running throughout the pandemic

• Technicians have been contributing to COVID-19 research, for example structural studies at STFC facilities

• Technicians are among the first to return to our centres to enable research to restart
• Technicians are essential to solving our biggest challenges

• Technicians will be essential to economic recovery