



Engineering and  
Physical Sciences  
Research Council



# EPSRC 3 year EDI Action Plan

2022-2025 | 1st edition



# Contents

<b>Introduction</b> .....	<b>03</b>
<b>Equality, Diversity and Inclusion – why is EDI important for the engineering and physical sciences?</b> .....	<b>04</b>
<b>Our approach</b> .....	<b>05</b>
<b>Our overarching aim</b> .....	<b>06</b>
<b>Our choice of priorities for action</b> .....	<b>07</b>
<b>Setting the context to our activities</b> .....	<b>08</b>
Composition of our engineering and physical sciences community .....	08
Challenges encountered in our engineering and physical sciences community and our portfolio .....	09
<b>EPSRC EDI action plan infographic</b> .....	<b>10</b>
<b>EPSRC Equality, Diversity and Inclusion (EDI) 3-year action plan</b> .....	<b>11</b>
Action set 1 .....	13
Action set 2 .....	16
Action set 3 .....	21
Action set 4 .....	26
Action set 5 .....	29

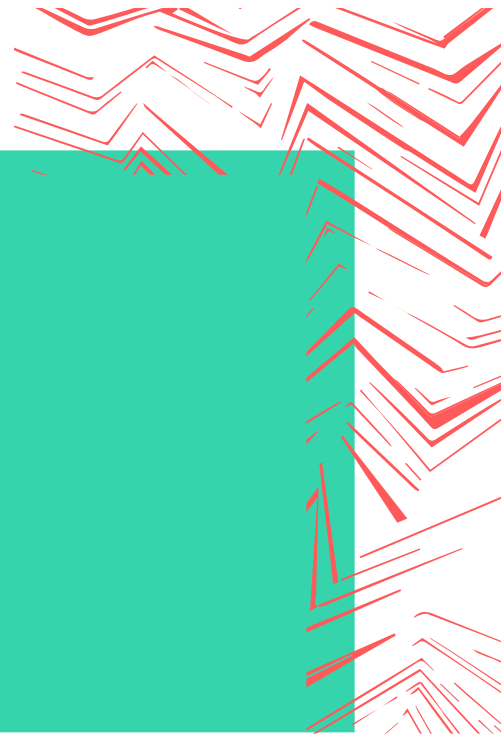
# Introduction

This publication presents the EPSRC 3 year Equality, Diversity and Inclusion (EDI) Action Plan 2022–2025. We detail why equality, diversity and inclusion is important for the engineering and physical sciences, as well as setting the context to our activities by outlining the composition of our community and the known challenges that are encountered as people progress their research and innovation career pathways.

We have developed our action plan in the context of the development of the first edition of the UKRI EDI Strategy and associated UKRI shared EDI actions.

We aspire to ensure equality, diversity and inclusion for all who work in EPSRC. Our actions on internally facing EDI work are included within the UKRI Workforce Plan and the EPSRC People plan. We will actively listen and value everyone who works for and with EPSRC and demonstrate respectful and inclusive behaviours to each other and everyone we work with.

# Equality, Diversity and Inclusion – why is EDI important for the engineering and physical sciences?



Diversity improves research and innovation outcomes, and we need to attract the widest group of people – with different expertise, experiences, approaches and ways of thinking- to join, remain and thrive in the research and innovation system. A diverse group creates the potential for different opinions, ideas and solutions. An inclusive environment enables people to voice their suggestions without fear and to feel valued and welcome. It is vital for the engineering and physical sciences community to be as diverse and inclusive as possible to generate the flow of innovative and novel ideas, innovations and solutions to problems that are needed to enable new discoveries and solve global issues. Attracting, retaining and developing a diverse range of people in research and innovation can only be achieved by making the system more appealing, inclusive and fair. To quote the UK Government’s [People and Culture Strategy – 2021](#) we need “a more inclusive, dynamic, productive and sustainable UK R&D sector in which a diversity of people and ideas can thrive”. All of us in the community have a role to play in reshaping the system to create welcoming and equitable structures, where everyone feels supported, respected and valued.

# Our approach

Our 3-year EDI action plan builds on knowledge, research, data, and expertise from across the research and innovation sector. Our thinking has been informed by conversations held with people from across our community, advocacy groups, learned societies as well as discussions with members drawn from our thematic Strategic Advisory Teams, Strategic Advisory Network and EPSRC Council.

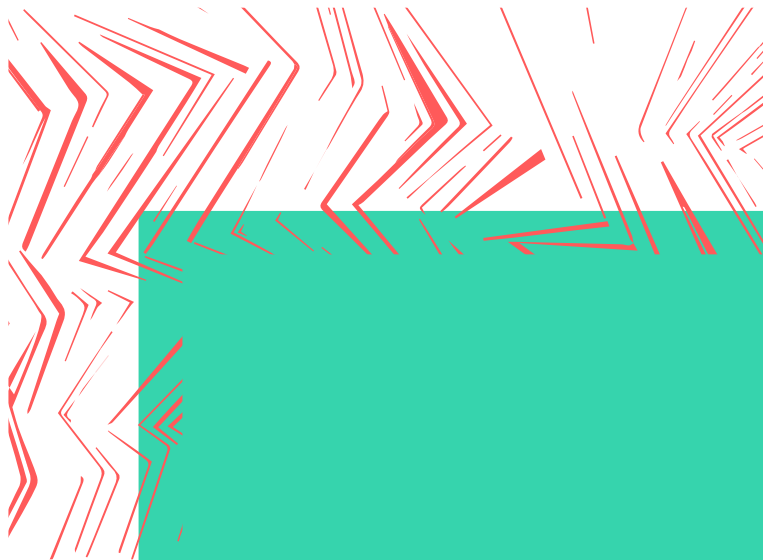
We have reflected on the recommendations, EDI issues and challenges fed back to us in our [gender](#) and [race](#) disparity 'have your say' surveys as well as community and stakeholder engagement activities. We have also built upon our own existing activity and portfolio investigations, deepened our understanding from the research findings of our [Inclusion Matters portfolio](#), as well as broader dialogue with UKRI colleagues. We acknowledge everyone who has shared their valuable insight, experiences and perspectives to help us make change and shape the development of our action plan.

# Our overarching aim

The activities that we will undertake within this action plan are to create a more inclusive research base which will produce the best results for UK research and innovation.

With this action plan we will demonstrate active leadership by **increasing accountability, trust and visibility** of our EDI activities. We will increase our understanding of EDI issues in engineering and physical sciences and continue with our data analysis combined with community engagement on lived experiences.

We will take action to make the engineering and physical sciences system more inclusive for everyone, while putting in measures to reduce the impact of bias and inequities across our portfolio, increasing trust in peer review. We will **increase the diversity of voices**, perspective and participation in our funding portfolio and our strategic advice streams. **Working in partnership** with our community and stakeholders we will support action and cultivate new connections, eliminating barriers and encouraging participation and access so that we are **better supporting people as they progress their careers**.



# Our choice of priorities for action

We have prioritised our actions based on where we can have the greatest value using an approach agreed with our Council.

In EPSRC we will:



# Setting the context to our activities

## Composition of our engineering and physical sciences community

The academic population in the engineering and physical sciences in 2019–20 is of the order of 17,000. Within this population, the gender balance is poor, in comparison to the population of the UK, with 20.5% women and 79.4% men. Of those disclosing their ethnicity, 71% of our engineering and physical sciences community are White, with 22% disclosing their ethnicity as ethnic minority (excluding white minority)<sup>1</sup>, compared with 15.2% of the UK population<sup>2</sup>. The largest ethnic minority groupings within our community being Asian (16%) followed by Other (3%), Black (2%) and Mixed (2%). We have a highly international research community, with 40% of our Principal Investigators in our portfolio in FY 2019–20 identifying as non-UK nationals. This highly international research base means we compare to HESA populations rather than only to the UK population (Census 2011/ONS Population estimates update 2019) or UK labour force survey (ONS). The percentage of people in our academic community disclosing a disability was 3% with 94% indicating no known disability and 3% not disclosing the information.

The UK domicile doctoral student population in the engineering and physical sciences (in academic year 2019-20) is of the order 17,200. The gender balance is better at the student level with 33% women and 66% men. Of those disclosing their ethnicity 76% are White with the next largest groupings being Asian (10%), Black (4%), Mixed (4%), Other (3%). The percentage of people in our postgraduate student community disclosing a disability was 9% with 91% indicating no known disability.

This data is based on HESA data for the academic and doctoral student populations in engineering and physical sciences related cost centres.

For more detailed diversity analysis on our portfolio – applications and awards as well as participation in peer review please see:

- EPSRC detailed investigation on ethnicity in our portfolio: <https://www.ukri.org/publications/epsrc-detailed-ethnicity-analysis/>
- EPSRC detailed report understanding our portfolio by a gender perspective: <https://www.ukri.org/publications/epsrc-understanding-our-portfolio-a-gender-perspective/>
- EPSRC detailed analysis of the diversity of participation in peer review: <https://www.ukri.org/publications/epsrc-peer-review-diversity-data-2014-15-to-2019-20/>
- UKRI data and trends on the diversity of applicants and recipients for each research council including EPSRC: <https://www.ukri.org/our-work/supporting-healthy-research-and-innovation-culture/equality-diversity-and-inclusion/diversity-data/>

<sup>1</sup> Higher Education Statistics Agency (HESA) [Data run: 2019/20]

<sup>2</sup> Office of National Statistics (2019) <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/populationestimatesbyethnicgroupandreligionenglandandwales/2019>



## Challenges encountered in our engineering and physical sciences community and our portfolio

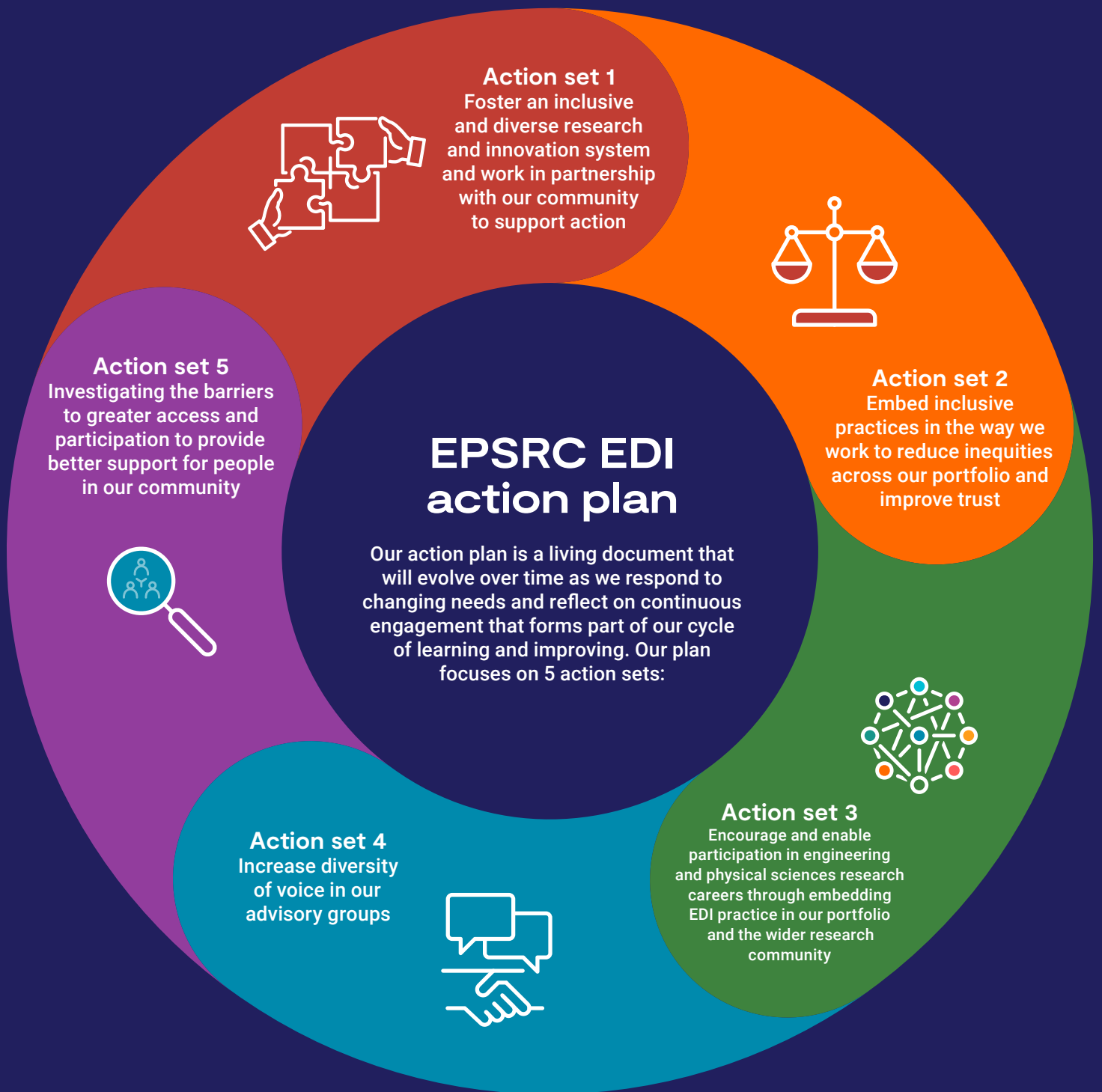
We recognise the multiplicity and complexity of the challenges that our community encounter, particularly underrepresented and minority groups, as they progress through their career pathways in engineering and physical sciences. These include precarity of contracts; institutional gatekeeping; bias and a lack of trust in peer review; a lack of accessible workplaces and a feeling of exclusion; challenging academic workload models; being undervalued with limited access to opportunities, mentoring and crucial networks which can lead to a lack of voice and connections; and a lack of ethnic minority role models particularly in leadership positions. Some of these challenges are evident within our own portfolio:

- Ethnic minority and women researchers are consistently underrepresented in our portfolio.
- Award rates for Principal Investigators (PI), Co-Investigators and Fellowship applicants from White ethnic groups are consistently higher than that of applicants from ethnic minority groups.
- The proportion of PI awardees who identify themselves as Black, Bangladeshi and Pakistani are underrepresented compared to the EPS academic population.
- While award rates by number of grants are similar for men and women, they are not by value of grants, with low numbers of applications from women for large grants.
- Notable differences in applied for grant sizes across genders, with women consistently applying for smaller grants.
- Whilst there has been an increase in the proportion of ethnic minority researchers participating in peer review, this is still not representative of the EPS academic population.
- The number of doctoral students and research grant holders declaring they have a disability is low compared to the UK population.

Gender and ethnic disparity in our portfolio have been two areas of particular focus. Going forwards, activities will not be limited to these areas and will expand to include how we might better support our LGBTQ+ community and reduce barriers for individuals with disabilities. Our overall actions on inclusion will aim to benefit everyone who experiences disadvantage.

If we do not address equality, diversity and inclusion issues, the UK engineering and physical sciences research and innovation community will continue to miss out on the broadest pool of research talent, which will impact on our ability to respond to emerging research and societal challenges to enrich lives and build a strong UK and global economy.

Our EDI action plan seeks to create a culture within engineering and physical sciences research which values individual differences and enables everyone to prosper



The activities that we will undertake are to create a more inclusive research base which will produce the best results for UK research and innovation.

# EPSRC Equality, Diversity and Inclusion (EDI) 3–year action plan

2022–2025 | 1st edition

A key component of our action plan is **working in partnership**, to share ideas and approaches and learn from each other's experiences. Empowering people within our community to take action. We recognise that this is crucial to making progress. We will continue to work with our stakeholders, colleagues and partners to build on this appetite for change and together seek to create a culture within engineering and physical sciences that values individual differences and enables everyone to thrive.

With this action plan we will build on our own existing activity, as well as that within our community and the shared expertise across UKRI. We will address challenges specific to our community, ensuring fairness and inclusivity for all, and develop and implement new interventions to bring about change, evaluating their effectiveness along the way. We will advance good diversity and inclusion practices in the activities we support, groups we convene and the research and doctoral training we fund. With our interventions we aim to use our position as a national funder of research to influence a change in research culture by helping develop and share good practices. We aim to create an environment in which people feel confident and included in the research and innovation system and able to engage with us.

We acknowledge that people and organisations are at different stages of their EDI learning. We will continue to share our experiences, successes, and challenges, learning from ourselves and others, so that together we can engage in the trialling, innovation and creativity needed to foster an inclusive and accessible research system and culture.

Our action plan is a living document that will evolve over time as we respond to changing needs and reflect on continuous engagement that forms part of our cycle of learning and improving. We will take into account the need to ensure efficiency and reduce bureaucracy. Through monitoring and evaluation we will remove processes if they are not effective.

If appropriate, we will revise our plans as the first edition of the UKRI EDI strategy is agreed, UKRI collective EDI actions are refreshed and the UKRI workforce EDI plan is developed. **Our near-term priorities (next 1-2 years) and medium-term actions (2-3 years and beyond)** are largely being informed by our 2021 community engagement focused on disparity and bias.

As an indicative guide, the actions are colour coded:

**Ongoing longer standing actions.**

**Recently introduced actions that are in progress by EPSRC.**

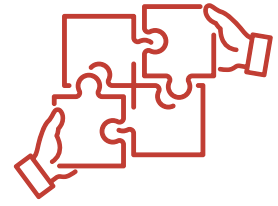
**New actions that EPSRC will take the lead on.**

**New actions where EPSRC will work collectively to progress with UKRI colleagues.**

**New actions where EPSRC will work in partnership with other stakeholders.**

# Action set 1

Foster an inclusive and diverse research and innovation system and work in partnership with our community to support action



## Expected outcome/s:

- We have demonstrated our accountability and made demonstrable progress on our commitments.
- EPSRC is recognised as being open, transparent, accountable and participatory in our approaches.
- We have improved the visibility of our EDI activities.
- People from underrepresented groups in our portfolio are more visible and are being recognised for their achievements and perspectives.
- New connections have been made with a greater diversity of people from across our community.
- Stronger connections to stakeholders across our sector have been achieved which have enabled us to influence and support the implementation of good practice to improve research culture.
- We have well established partnerships with the appropriate learned and professional societies in particular research areas and have gained a detailed knowledge of the EDI issues in each research community.
- Working with other stakeholders we have developed robust evaluation approaches for EDI interventions (to monitor, measure and evaluate change) that consider the longer-term impact on inclusion, culture, and behaviours.
- By celebrating the many important and varied contributions people from underrepresented groups make, including the numerous different career pathways, we have supported the need for diversity and inclusion and inspired people from across the engineering and physical sciences community.

### Colour key:

Ongoing longer standing actions.

Recently introduced actions that are in progress by EPSRC.

New actions that EPSRC will take the lead on.

New actions where EPSRC will work collectively to progress with UKRI colleagues.

New actions where EPSRC will work in partnership with other stakeholders.



## In progress:

	<p>We have actively investigated our portfolio and published our findings that can be found here:</p> <ul style="list-style-type: none"> <li>• EPSRC detailed investigation on ethnicity in our portfolio: <a href="https://www.ukri.org/publications/epsrc-detailed-ethnicity-analysis/">https://www.ukri.org/publications/epsrc-detailed-ethnicity-analysis/</a></li> <li>• EPSRC detailed report understanding our portfolio by a gender perspective: <a href="https://www.ukri.org/publications/epsrc-understanding-our-portfolio-a-gender-perspective/">https://www.ukri.org/publications/epsrc-understanding-our-portfolio-a-gender-perspective/</a></li> <li>• EPSRC detailed analysis of the diversity of participation in peer review: <a href="https://www.ukri.org/publications/epsrc-peer-review-diversity-data-2014-15-to-2019-20/">https://www.ukri.org/publications/epsrc-peer-review-diversity-data-2014-15-to-2019-20/</a></li> <li>• UKRI data and trends on the diversity of applicants and recipients for each research council including EPSRC: <a href="https://www.ukri.org/our-work/supporting-healthy-research-and-innovation-culture/equality-diversity-and-inclusion/diversity-data/">https://www.ukri.org/our-work/supporting-healthy-research-and-innovation-culture/equality-diversity-and-inclusion/diversity-data/</a></li> </ul>
	<p>In 2018, we funded eleven <a href="#">Inclusion Matters multidisciplinary projects</a> (£5.5 million). The projects focus on new approaches to accelerate culture change to enhance equality, diversity and inclusion in the engineering, physical and mathematical sciences. Projects are publishing their outcomes, which include valuable insights into women in spinouts, recruitment, reverse or reciprocal mentoring, reaction to gender initiatives and how to better support researchers with disabilities.</p>
	<p>We have recently updated our <a href="#">EDI web pages</a> which contain useful resources, information and contact details.</p>
	<p>We continue to support <a href="#">Daphne Jackson Fellowships</a> available for people looking to return to a research career after a break of two or more years for family, health or caring reasons.</p>
	<p>We promote <b>UKRI Public Engagement Champions</b> to encourage the development of a research culture that inspires the public, widens participation and awareness, and attracts a more diverse group of people to STEM careers</p>

## In the near term we will:

<b>1.1</b>	<b>Publish our EDI action plan</b> and update this annually with our progress
<b>1.2</b>	<b>Systematically engage</b> with our partners (Learned and Professional Societies, industry, academia) to understand and take collective coordinated action on EDI issues.
<b>1.3</b>	Connect together Research Organisations to create a <b>‘Community of practice’</b> across the UK
<b>1.4</b>	Continue to investigate our portfolio, build our <b>analytical capabilities</b> and <b>engage with our community to take into consideration lived experiences</b> to support inclusive decision making, and to better understand barriers to participation and mitigate against them.
<b>1.4a</b>	<b>partner with expert groups</b> (e.g. Royal Statistical Society and London Mathematical Society) to support the sophisticated intersectional analysis of our portfolio data to reveal further insights and challenges to address.
<b>1.4b</b>	<b>engage with social scientists</b> to expand our quantitative and qualitative data capability



1.4c	continue to engage with our community particularly people with <b>lived experiences</b>
1.4d	<b>develop our intersectional data capability</b> to enable a fuller picture and understanding of the barriers and inequities across our portfolio and community to focus in on actions for improvements. We will publish our findings and associated actions to facilitate insight for ourselves and the wider sector.
1.5	<b>Publish and make visible our discipline specific EDI activities</b> that directly support community action
1.6	Focus on <b>role models in our portfolio to highlight and make visible the varied and important contributions people from underrepresented groups make</b> across the engineering and physical sciences, with a particular focus on women, ethnic minorities, people with disabilities and/or colleagues who represent the LGBTQ+ community.
1.7	Working with colleagues across UKRI (with ESRC leading) and the British Academy we have funded an interdisciplinary team to establish and lead an <b>EDI Caucus</b> . The interdisciplinary network – made up of experts from a broad range of disciplines – will be responsible for providing high-quality research evidence on EDI that informs policy and practice in the research and innovation system. It will address priority evidence gaps by commissioning and undertaking new research and supporting UKRI and the British Academy in testing and evaluating new EDI-related initiatives.

### In the medium term we will:

1.8	continue to develop <b>case studies</b> and raise awareness of potential <b>career opportunities</b> and routes
1.9	Working with stakeholders develop robust <b>evaluation approaches to measure the impact</b> of our new EDI interventions.

# Action set 2

Embed inclusive practices in the way we work to reduce inequities across our portfolio and improve trust



## Expected outcome/s:

- Community perceptions and trust in EPSRC’s peer review process has improved due to proactive and transparent sharing of issues and action to address the issues.
- Access to funding opportunities and participation in our activities has improved.
- Fair and inclusive practices have reduced inequity in our portfolio.
- A greater diversity of people is represented in our portfolio.
- Demonstrable progress has been made in addressing systemic bias in our processes.
- Our application process has in-built flexibility to accommodate a range of different models of leadership and working arrangements.

The following actions are designed to make it simpler and easier to apply for funding by addressing the time scales, process used and entry requirements. Alongside our actions we will work with research organisations to reduce barriers to application including exploring appropriate workload models, providing support and checking their own processes for bias and barriers.

### Colour key:

Ongoing longer standing actions.

Recently introduced actions that are in progress by EPSRC.

New actions that EPSRC will take the lead on.

New actions where EPSRC will work collectively to progress with UKRI colleagues.

New actions where EPSRC will work in partnership with other stakeholders.





## In progress:

### Fair access to EPSRC funding

We are committed to ongoing analysis and adaptation of our funding processes to reduce the likelihood of bias impacting on decision making to ensure we have fair peer review. We have introduced silent scoring at interviews, reduced the number of proposals being assessed at a panel meeting, and introduced unconscious bias and objective decision making training for EPSRC Panel Convenors as well as briefing for panel members on objective and fair decision making.

We have been improving our use of 'plain English' in Calls for funding as part of the UKRI Simpler Better Funding Service.

We are working with the UKRI Simpler and Better Funding programme to ensure that policies under development are inclusive and move us towards a fairer system.

We have been trialling different approaches to peer review using anonymous stages and separation of the consideration of track record, most recently in the New Horizons funding opportunities.

We piloted the Resume for Research and Innovation (R4R&I) in our Fellowships scheme (See the EPSRC fellowship pages or the UKRI news item [UKRI introduces new Resume for Research and Innovation – UKRI](#))

We have improved the [diversity of participation in peer review](#). Since 2016, we aim to avoid single gender panels and have a target of 30% (which has consistently been achieved and surpassed) for the participation of women in panels. We are also exploring different ways to increase diversity and we have set targets for our Peer Review College membership of 30% participation by women and 20% ethnic minority (improving, but not yet achieved).

In 2017 we introduced Equality Impact Assessments which are published alongside funding opportunities.

We have embedded EDI considerations into many larger investments including our programme grants, centres, hubs and institutes and our Doctoral Training Partnerships and Centres for Doctoral Training.

We have analysed our research grants portfolio by gender and followed this with a community survey with agreed actions. The [data report](#) and the outcome of the community input and agreed actions can be found here: <https://www.ukri.org/wp-content/uploads/2022/05/EPSRC-110522-GenderDiversityInOurPortfolioSurveyFindingsAndInterventions.pdf>

We have also investigated the participation in EPSRC peer review and award of grants and studentships by ethnicity. This was followed by community engagement and actions agreed by EPSRC Council. [Our ethnicity data report is published](#), as well as our report sharing our [findings of our community engagement and actions for change: Ethnicity and Race Inequity In Our Portfolio](#).

Work is in progress on the intersectional data analysis of nationality and ethnicity.



## In the near term we will:

2.1	Explore all the routes (e.g. cognitive overload, time pressures) in which bias manifests within our peer review approach and further adapt our processes and provide guidance to reviewers to reduce the impact of bias on decision making.
2.1a	<b>Develop routes to measure the effectiveness of our peer review interventions</b> e.g. collecting information via the panel member questionnaire on whether members felt under pressure, tired and/or overwhelmed throughout the meeting
2.2	Review our process for <b>monitoring and acting on discriminatory comments</b> from peer reviewers.
2.3	Undertake an <b>independent investigation of bias in peer reviewer comments and scores</b> (racism/ sexism/ ableism/ sexuality/ ageist/.../). To understand the depth of implicit reviewer bias and subsequently to reduce this impact using alternate approaches to ensure a fair funding system. This investigation will complement the UKRI Review of Peer Review detailed in the UK Government People and Culture Strategy. (near term: scope of study 2022, delivery 2023-24)
2.4	Explore how we can reduce bias in our decision making. We will <b>work with peer review prioritisation / interview panel members to ensure fair decision making</b> . Working with our community and experts, we will design our panel process and roles to further strengthen the operation and transparency of our peer review panels to promote improved trust and confidence in our assessment and selection processes.
2.5	Actively encourage universities to run mock prioritisation panels – enables people to experience being a panel member, the panel process and learn about helpful/unhelpful reviewers reports. An opportunity to build relationships and increase trust and confidence in the process.
2.6	Explore how we can incentivise and encourage reviewers by giving <b>recognition for high quality useable reviewers reports</b>
2.7	<b>All EPSRC applications will allow appropriate budget requests for the implementation of EDI activities</b> . We will consider if this should be a protected budget (e.g. the budget can only be used for EDI activities) within the funds requested for the grant (achieved through additional T&Cs).
2.7a	<b>Examine how to make administration of grant spend on EDI activities simpler</b> (e.g. for EDI activities on a grant- caring responsibilities, accessibility)
2.8	<b>Evaluate alternative peer review assessment methods</b> e.g. <b>fully anonymised</b> peer review. We will evaluate funding calls 1 and 2 of New Horizons, and the implementation of the Resume for Research and Innovation within our Fellowships scheme. This work will be linked to the development of the new UKRI Funding Service and implementation of actions set out in the UK Government People and Culture Strategy, specifically the UKRI Review of Peer review).
2.9	<b>Evaluate the process used for our NPIF Innovation Fellowships</b> . This process resulted in the most diverse cohort we have funded, and which included a step for universities to inform us how they were ensuring diversity in the applications submitted.



2.10	Work with UKRI colleagues to <b>understand the role of university selection processes on our portfolio</b> with the aim of sharing good selection practices and providing clear communication on accepted good practices for fair selection.
2.11	Determine <b>how universities are addressing the academic workload model</b> , to provide time for researchers to apply for funding and explore what work is in progress already.
2.12	Encourage and communicate the possibilities for <b>open and flexible models of leadership</b> on research and training grants – e.g. joint PI's. Information to be given in funding opportunity documentation.
2.13	Launch a new policy where we aim for <b>at least one Early Career Researcher to be included as a panel member on all prioritisation panels</b> . With <b>all New Investigator Award holders offered panel membership experience</b> . The experience of being a member of peer review prioritisation and interview panels is incredibly useful and will benefit early career researchers in the development of their career, as they develop their understanding of how the funding system operates and how assessment and prioritisation decisions are made.
2.14	Invite all New Investigator Award applicants, regardless of the success of their application, on to the EPSRC Peer Review College.
2.15	<b>Ensure no short deadlines to funding opportunities</b> . Thoughtful deadlines to enable a greater diversity of people to apply. We will commit to funding opportunities to be open for a minimum of 8 weeks unless an urgent business requirement dictates otherwise and/or for reasons not within our control.

## In the medium term we will:

2.16	Work with The Funding Service (TFS) colleagues to develop <b>reviewer guidance</b> on how to write a constructive review and what makes a review useable. This will clarify what we're looking for in a good reviewer's report. Including content, tone, conduct and professionalism.
2.17	<b>Create an evidence base on the broader impact of EPSRC's successful mixed gender panel (peer review and advisory) policy</b> . Since its launch in 2016 we have seen an increase (from 18% to 33% ) in the proportion of women on funding panels and advisory groups. We will explore the impact (direct and indirect) on the broader community and peer review process. To be able to demonstrate the benefits of our intervention, articulate the impact it has had (positive and negative) and to explore broadening this policy to include ethnicity.
2.18	<b>Ensure no short deadlines to reviewer requests</b> . Thoughtful deadlines to enable a greater diversity of people to participate in peer review. We will work with UKRI colleagues to change the deadline for reviewer requests to be open for a minimum of 5 weeks unless an urgent business requirement dictates otherwise and/or for reasons not within our control.



- 2.19** Investigate alternative peer review assessment methods e.g. fully anonymised peer review and separating the assessment of the research idea from the track record, as well as exploring lottery type funding models. This work will be linked to the development of the new UKRI Funding Service and implementation of actions set out in the UK Government People and Culture Strategy, specifically the UKRI Review of Peer review).
- 2.20** Review the Objective decision-making training for EPSRC Panel Convenors to continue to ensure the safeguarding of our funding decisions.

# Action set 3

Encourage and enable participation in engineering and physical sciences research careers through embedding EDI practice in our portfolio and the wider research community.



## Expected outcome/s:

- EDI good practice principles are embedded across our portfolio.
- We have empowered our community with knowledge and resources to embed an inclusive research culture in their workplace environments.
- Cohorts of EPS researchers are collaboratively working together to share EDI learning and good practice.
- Our flagship investments are beacons of good inclusion practice.
- Our enhanced understanding of discipline specific challenges has enabled us to focus our efforts to support community action.
- EPSRC has demonstrated leadership in doctoral education by investing in the highest quality doctoral education provision which supports people following a diverse range of career paths.
- We have provided better support towards the career development of all team members who contribute to EPS research and innovation.
- We are providing better support routes to achieve mobility between sectors and career pathways.
- Our EPSRC Fellows demonstrate advocacy and leadership by mutually supporting each other during their career development.

## Colour key:

Ongoing longer standing actions.

Recently introduced actions that are in progress by EPSRC.

New actions that EPSRC will take the lead on.

New actions where EPSRC will work collectively to progress with UKRI colleagues.

New actions where EPSRC will work in partnership with other stakeholders.



## In progress:

	We have published our <a href="#">EDI Expectations guide and supporting resources</a> to encourage all in our community to be involved in enhancing and embedding EDI good practices. This was co-developed with people from our EDI Strategic Advisory meetings and members of our community. Over time we will collect ‘what works’ and share these with our community alongside the resources from our Inclusion Matters portfolio.
	We have increased our expectations in the investment processes for our Centres for Doctoral Training and Doctoral Training Partnerships so that our <b>doctoral training grant holders drive improvements in EDI</b> , including finding ways to create a level playing field in doctoral student recruitment.
	We have created <b>EPSRC Open Fellowships that provide the opportunity to support up to 50% of a fellow’s time to champion EDI</b> . Several Fellows championing EDI are already funded by the Physical Sciences and Engineering themes. EPSRC Open Fellowships are very flexible in length and accommodate part-time working. They are inclusive of all career stages beyond post-doctoral, open to all EPS research areas and available for technical and applied research as well as discovery research
	The <b>Engineering theme is supporting membership of the Women’s Engineering Society</b> . Each year ten holders of EPSRC engineering grants will be given WES membership, providing them with an opportunity to enhance their understanding of equality and diversity in engineering and engage with EPSRC
	We have funded two <a href="#">Energy EDI network plus</a> to bring together the variety of work on EDI in progress across the energy sector, in both academia and industry, which is often not connected. The network plus grants promote cohesion of EDI action across the research community.

## In the near term we will:

3.1	Working with the Learned Societies we will enhance the current provision of <b>networking opportunities for underrepresented groups, particularly for people who identify as an ethnic minority</b> .
3.2	<b>Gather intelligence from our Inclusion Matters portfolio and share the findings of ‘what works’</b> with our community to empower researchers to embed and enact change in their own environment.
3.3	<b>All large investment grants to demonstrate leadership and ensure the consideration and inclusion of an EDI Plan</b> – with the expectation of an upward learning spiral over time to ensure our investments are beacons of good practice.
3.4	<b>Expect EPSRC Institutes to develop and publish an EDI Action Plan</b> to ensure our flagship investments are beacons of good inclusion practice. We will seek opportunities to work together on EDI were appropriate.
3.5	Develop clear guidelines and expectations for EPSRC grant holders including grant advisory boards to establish good practice and accountability, linked to the <a href="#">EDI Expectations</a>



<b>3.6</b>	<b>Connect Principal Investigators of our large investments and New Investigator Awards/ ECRs to EDI champions from across our advisory groups</b> to support the people we fund becoming beacons of EDI good practice. Providing investigators with a route to share barriers and discuss ‘what works’.
<b>3.7</b>	<b>Develop an EPSRC EDI Sharing Hub</b> – an overarching network for collective knowledge sharing of EDI good practices and ‘what works’ across the EPS disciplines. Bringing together: discipline specific Network Pluses, programme grant holders, research centres and hubs, Inclusion Matters experts, EPSRC EDI Fellowship holders, EDI Champions across research areas and many others to disseminate and consider how interventions might be scaled up, embedded and broadened across the community to result in positive culture change. The hub would include a modest amount of funding to enable agile responses to scale up and the embedding of activities. This could also include secondments into partner organisations to help with knowledge transfer.
<b>3.8</b>	Ensure that the outcome of <b>research we fund creates solutions that are accessible and inclusive to all</b> and does not promulgate inequality, incorporating this into the UKRI framework for responsible research and innovation and for inclusive research design.
<b>3.9</b>	Assist those who deliver our doctoral training investments in evolving and sharing good EDI practice to ensure:
<b>3.9a</b>	<b>fair and inclusive recruitment</b> that embraces routes that are accessible to people following a variety of different career paths, and
<b>3.9b</b>	<b>inclusive workplaces</b> and practices.
<b>3.10</b>	<b>Better support the career development of all members of research teams</b> – including postdoctoral researchers and technicians. Undertaking activities in line with the Technician’s Commitment and Researcher Concordat, working with UKRI colleagues as appropriate
<b>3.11</b>	<b>Better support the routes to career mobility</b> between sectors and diverse career pathways for the people we support. Reviewing our opportunities to increase the permeability into and out of academia of both people and ideas. Engaging with our community, including industry to understand opportunities and barriers in career progression
<b>Research area theme specific EDI challenges and actions:</b>	
	Our aim is to embed EDI good practice principles across the breadth of our portfolio, working with our flagship investments to establish beacons of good practice. We will engage with our research, user and provider communities on EDI issues associated with participation and access to improve our understanding of barriers and opportunities to remove them. A range of activities are in progress across our <a href="#">research themes</a> that support EDI considerations, these include:
	The <b>Digital Security and Resilience</b> team are working with their community to develop technology to support a more inclusive society.
	The <b>ICT</b> team are identifying EDI actions to support the ICT community by working with their recently appointed EDI group and will be performing a deep dive investigation into their funding portfolio – with a particular focus on improving the representation of minority groups in ICT.



The **Mathematical Sciences** team are collaborating with the EDI team to explore how we can improve support and access for people who are neurodivergent. The team on behalf of EPSRC will be commissioning a neuro-inclusion audit of our processes and routes to engagement to understand and mitigate against any barriers and improve accessibility. The team will develop the case for diversity in Mathematical Sciences with an increased understanding of why diversity is beneficial both within EPSRC and across the mathematical sciences community. This will include highlighting role models.

The **Energy and Decarbonisation** team will explore providing or increasing access to mentoring for unfunded early career researchers and will also be engaging with and learning from their newly funded [EDI in Energy Research Network + grants](#). They are also developing a number of EDI Champions on their Strategic Advisory Committee.

The **Engineering** team are identifying EDI actions to support the engineering community by working with their recently appointed EDI group (consisting of Engineering SAT and Early Career Forum members) as well as considering the outcomes and recommendations from their [Tomorrow's Engineering Research Challenges report](#). The team are developing an opportunity focusing on Inclusive Engineering. To better ensure that engineering products and services are accessible and inclusive of all users to ultimately create ethical and sustainable engineering solutions for the future. The team has completed an evaluation of the 2019 call that funded a 12 month membership in WES for 10 Principal Investigators of EPSRC engineering grants. After receiving positive feedback from awardees, the team are engaging with WES to continue this partnership and explore ways to make it even more valuable for recipients and impactful towards promoting gender equality in Engineering.

The **Healthcare Technologies** team are developing case studies to raise awareness and promote good practice. They will consider the inclusion of patients within research programmes to ensure inclusive research design for end users.

The **Physical Sciences** team will grow their engagement with external bodies, including the RSC and IoP, to increase conversation and action around EDI, communicating priorities widely. The team also plan to bring together their EPSRC EDI Fellows to maximise outcomes and explore how to create opportunities for people that have not followed traditional academic career pathways. They will be increasing financial support for Daphne Jackson Fellowships as well as for, and participating in, the Conference for Undergraduate Women and Non-Binary Physicists. The team will be promoting existing flexibility in EPSRC studentship schemes to support the IoP's Bell Burnell Graduate Scholarship Fund and interrogating participation in physical sciences peer review to consider future actions. In addition, they will include dedicated EDI focused sessions in all their university visits.

The **Research Infrastructure** team will be considering accessibility and the user diversity of our large-scale facilities, exploring how to remove barriers.

The **Manufacturing the Future and Circular Economy** team will be expecting their new Research Hubs to embed EDI in all their activities throughout the lifetime of the Hub, identifying the specific EDI challenges and barriers in their own environment and developing a strategy to address these. All hubs include at least one post with responsibility for EDI.





## In the medium term we will:

<b>3.12</b>	If funding allows, increase support for <a href="#">vacation internships</a> provided through our Doctoral Training Partnership funding for <b>local university action to support or facilitate involvement of under-represented groups in postgraduate study</b> .
<b>3.13</b>	Work with our stakeholders to improve access, to ensure a <b>diversity of entry points to doctoral education</b> and tailored support for individuals.
<b>3.14</b>	<b>Bring together our cohort of EPSRC Fellows</b> – to provide a supportive environment where Fellows can network, celebrate their contributions to Research and Innovation, find new collaborative opportunities and mutually support each other during their career development.
<b>3.15</b>	<b>Use existing funding mechanisms to impact EDI change</b> and ownership at a local level within institutions. Explore how we might use routes such as Impact Acceleration Accounts (IAA's) to fund good practices and impact culture change within institutions.
<b>3.16</b>	<b>Monitor and evolve the <a href="#">EDI Expectations</a>, collecting and sharing good practices</b> via a resources hub. Providing recognition and visibility for EDI good practice. Expectation of an upwards learning spiral and maturity of activities to advance over time
<b>3.17</b>	Develop a funding opportunity for EDI and research culture that advances knowledge, inclusion and action in the engineering and physical sciences, building on Inclusion Matters.

### Research area theme specific EDI challenges and actions:

	Our aim is to embed EDI good practice principles across the breadth of our portfolio, working with our flagship investments to establish beacons of good practice. We will engage with our research, user and provider communities on EDI issues associated with participation and access to improve our understanding of barriers and opportunities to remove them. A range of activities are in progress across our <a href="#">research themes</a> that support EDI considerations, these include:
	The <b>Engineering</b> team will be seeking to establish a partnership with a group focusing on racial diversity in Engineering, similar to the model with WES. As well as developing case studies showcasing good EDI practice within our investments, starting with good examples in CDT's.
	The <b>Research Infrastructure</b> team will be seeking to enhance career mobility and recognition for Research Software Engineers, Research Technical Professionals, data stewards and DevOps professions within organisations that UKRI supports.
	The <b>Mathematical Sciences</b> team will be incorporating the findings from the neuro inclusion work to ensure their engagements are more accessible and inclusive to everyone.
	The <b>Physical Sciences</b> team will be developing their EDI Fellows network as more are funded and seeking to consider how the evidence can be used in future EDI activities.

# Action set 4

Increase diversity of voice in our advisory groups



## Expected outcome/s:

- We have built trust and enhanced active listening routes.
- New connections have been made with a greater diversity of people from across our community
- A diverse range of opinions and perspectives in our decision making within our peer review processes and advisory bodies has been achieved.
- The use of targets and inclusive recruitment practices has ensured diversity in our portfolio and our advice streams.
- We are able to create safe inclusive spaces for discussion.

### Colour key:

Ongoing longer standing actions.

Recently introduced actions that are in progress by EPSRC.

New actions that EPSRC will take the lead on.

New actions where EPSRC will work collectively to progress with UKRI colleagues.

New actions where EPSRC will work in partnership with other stakeholders.



## In progress:

Participation in EPSRC strategic advice and governance	
	<p>EPSRC draws on the expertise from within our advisory groups - EPSRC Council, SETB, Strategic Advisory Network and our Strategic Advisory Teams (SAT's) - to provide us with strategic advice on Equality, Diversity and Inclusion. Our advisory meetings on EDI are chaired by a Council member.</p>
	<p><b>This approach:</b></p> <ul style="list-style-type: none"> <li>■ facilitates a flexible resource enabling us to obtain the advice we need in a timely manner,</li> <li>■ enables us to ensure we have a diverse range of perspectives and voices advising us on our EDI activities and plans from across our key stakeholder groups.</li> <li>■ Allows us to work more closely with our SAT's and other stakeholders.</li> </ul>
	<p>EDI considerations are embedded into the strategic and delivery work of EPSRC themes including being a standing item on Strategic Advisory Team agendas. Some themes have EDI champions.</p>
	<p>We have increased diversity in participation in our advisory groups and set targets of <b>30% women and 20% ethnic minority</b> for Strategic Advisory Teams and <b>40% women and 20% ethnic minority</b> for our Strategic Advisory Network and Science Engineering and Technology Board. (Gender targets are met, ethnicity targets newly introduced in 2021.)</p>

## In the near term we will:

<b>4.1</b>	Ensure we have a diversity of voices advising us on our EDI activities and plans. We will:
<b>4.1a</b>	When working on specific issues, create forums for people who have different experiences, representative of different protected characteristics, various career stages and pathways, to facilitate engagement with us and to participate in the development of our actions.
<b>4.1b</b>	Seek expert advice on how to create safe and inclusive spaces for people engaging in conversations about their lived experiences.
<b>4.1c</b>	Pilot and <b>embed approaches to inclusive dialogue and engagement</b> that value and celebrate different voices, expertise, experience and perspectives.
<b>4.1d</b>	Invite <b>EDI specialists and experts</b> to give training to EPSRC workforce and advisory bodies, aligning with UKRI EDI training activities where appropriate, and continue to listen to people with different experiences.

## In the medium term we will:

- |     |  |
|-----|--|
| 4.2 | Work in partnership with the <b>UKRI EDI Caucus</b> on high-quality research evidence that provides insights as well as informs and shapes policy and practices. |
| 4.3 | <b>Review our recruitment practices to improve diversity</b> and targets across all our advisory groups.   |
| 4.4 | <b>Refresh our approach</b> to our EDI advisory streams  |

# Action set 5

Investigating the barriers to greater access and participation to provide better support for people in our community



## Expected outcome/s:

- Deep dive investigations have improved our understanding of EDI related issues and enabled us to address challenges and remove barriers. EPSRC provides better support, improved access, and an increase in participation. This has led to a more representative and diverse portfolio and community in comparison to the UK labour workforce.
- Support for people with disabilities is improved, barriers have been removed leading to greater access and participation
- Working with colleagues across UKRI we have influenced the wider R&I system to remove barriers for researchers and innovators to ensure greater access and participation leading to increased innovation and growth
- We have enabled a culture in our community where different perspectives, skills, and experiences are valued alongside working environments where people feel safe and heard – where everyone can participate
- We have widened access, participation and awareness, attracting a more diverse group of people more reflective of the UK population, to EPS careers.

### Colour key:

Ongoing longer standing actions.

Recently introduced actions that are in progress by EPSRC.

New actions that EPSRC will take the lead on.

New actions where EPSRC will work collectively to progress with UKRI colleagues.

New actions where EPSRC will work in partnership with other stakeholders.



## In progress:

	A preliminary independent investigation on how we might <b>better support neurodiverse researchers</b> is underway with more detailed work to be piloted in partnership with the EPSRC Mathematical Sciences team.
	Working with UKRI Data Analysis we have expanded our analysis capability using intersectional data to gather insights into inequities in our portfolio.
	We are currently exploring the intersectionality of our portfolio through a nationality, ethnicity and regional lens.

## In the near term we will:

5.1	Investigate and subsequently ensure <b>greater accessibility and working environments for researchers with disabilities</b> e.g. to lab spaces and working with UKRI, improve our support (policies and practices).
5.2	Working with the EPSRC Research Infrastructure team we will consider and <b>improve accessibility to and the user diversity of large-scale facilities and equipment</b> that EPSRC supports.
5.3	Share the <b>findings from our neuro-inclusion project and implement</b> the recommendations.
5.4	Work with colleagues across UKRI to explore further <b>how socioeconomic background affects the participation and success of people in research</b> with a view to ensuring widening access and participation to our doctoral education investments working with our training grant holders
5.5	Explore how we can <b>better support our LGBTQ+ colleagues in our community</b> as they progress their careers. Implementing action working in partnership with other stakeholders, particularly Learned Societies, as appropriate

## In the medium term we will:

5.6	Work with <b>national and international stakeholders</b> to broaden our understanding and the challenges that we will seek to address by actively exploring new approaches to pilot, forming partnerships where appropriate.
5.7	Further our work on <b>LGBTQ+, disability and socioeconomic</b> access and inclusion issues.
5.8	Extend our intersectional data capability working with UKRI and relevant Learned Societies.

## Accessibility

To request copies of this article in large print or in a different format, please contact the EPSRC Equality, Diversity and Inclusion team at UKRI:

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