



UNLOCKING EDI ACROSS THE NICER PROGRAMME Spotlight Report

November 2024

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Executive Summary

This report brings together the activities, findings and conclusions of the 'Unlocking EDI in the NICER programme' project conducted between May and November 2024 on behalf of the NICER programme by Oliver Fisher and Peter Craighan from the University of Nottingham.

The objectives of this project were to facilitate a self-assessment of EDI activities across the NICER centres to identify Strengths, Areas for improvement and Lessons Learned about EDI for similar projects in the future.

It conducted two main activities, an online workshop using the Equality Diversity and Inclusion cards and a survey adapted from the EDI maturity survey developed by the University of Nottingham, with participants from the centres and hub that make up the NICER programme.

The EDI cards activity identified areas under their direct control, particularly the diverse nature of the centres as a particular strength whereas they identified engaging externally to the centre as an area for improvement seeking contextual guidance to help this wider engagement.

The findings from the survey indicated again that the activities in the control of the centres for example the development, working environment, communication and events was a strength with varied example evidence provided. More challenging were elements when responsibility for EDI considerations crossed over with that of the institutions comprising the programme for example in training, infrastructure or use of data.

When categorised and analysed through the framework of the EPSRC's EDI expectations, the centres provided evidence and examples that spoke to the vast majority of the expectations, indicating how the combination of varied contextual activities of the centres was already addressing EDI in a varied appropriate way providing examples of how it was embedded in the activities of the centres both in their work and in terms of the consideration of the EDI implications of their research.

Lessons learned from this process showed how EDI was already being addressed in an embedded way in day-to-day activities and research with benefit to the research resulting from an integrated approach. Tensions were identified from this work between the desire for a framework of guidance but not have this contribute to a tick box exercise, the desire for EDI to be led by an individual but also be everyone's responsibility and the tension between project and institutional EDI for example. Improving how to engage more widely outside the centres was an area for improvement but with potential significant benefits to the research. The complexity of EDI raises the need for contextual guidance and awareness depending on the centres, research and organisations involved.

In conclusion this self-assessment process demonstrated how EDI has been considered and enacted upon across the NICER programme in an integrated way to the benefit of the research. This can be a source of confidence and examples of practice for the future of connected projects and more widely. Improving EDI and learning from this process needs to be considered in a reflexive contextual way, with awareness of the tensions at play. Through this self-assessment, the project can help contribute to an ongoing reflexive integration of EDI to the benefit of research and those involved with it not becoming a tick box exercise of criteria to meet.

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1. Background

The circular economy is an economic model focused on reducing waste and maximising resource use by designing products and systems that enable reuse, recycling, and regeneration. Achieving equality, diversity, and inclusion (EDI) within this model is essential to building a sustainable system that benefits both people and the planet. Integrating EDI principles within the circular economy fosters a more equitable distribution of resources, a broader spectrum of innovative solutions, and a more resilient, adaptive system. Diverse, inclusive teams bring a wealth of perspectives and insights that enhance creativity, improve problem-solving capabilities, and drive more effective, holistic solutions, outcomes crucial for addressing complex environmental and economic challenges. Yet, a significant gap exists between EDI research and the practical, day-to-day application of inclusive practices needed to bridge this divide (Gagnon *et al.* 2022).

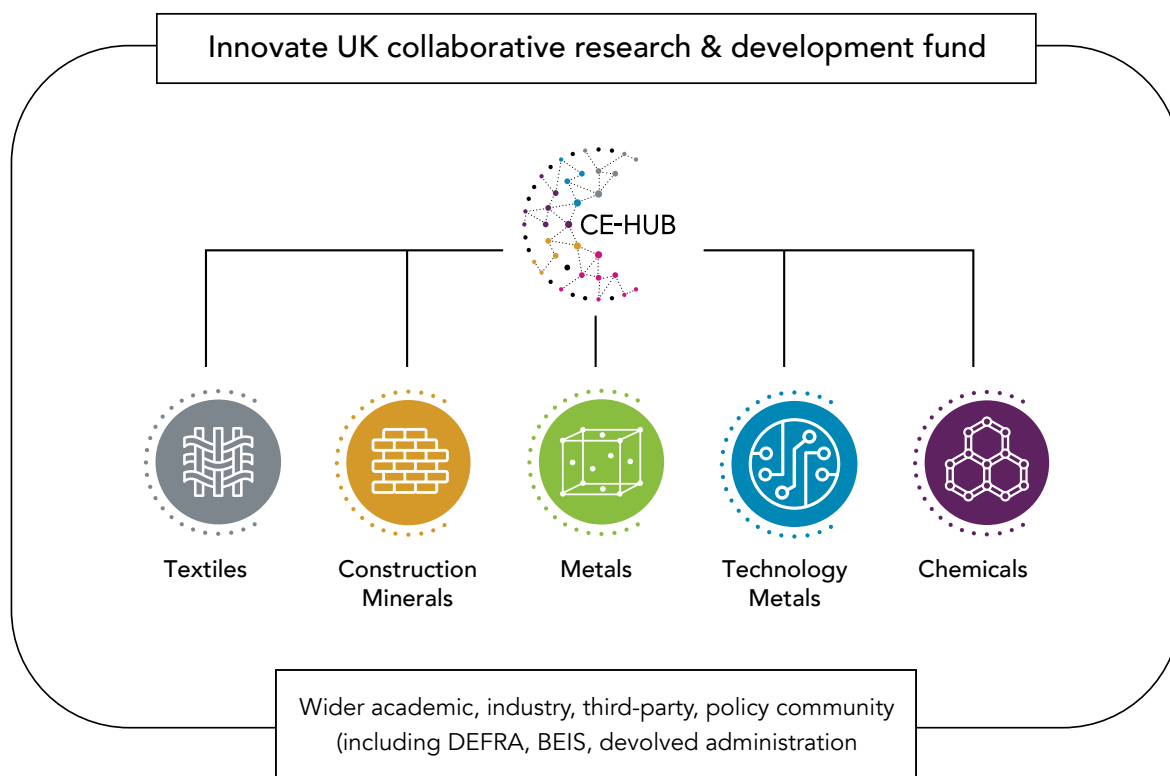
This report presents a self-assessment of the initiatives undertaken by the UK Research and Innovation's (UKRI) National Interdisciplinary Circular Economy Research (NICER) Programme to embed EDI throughout its activities. By sharing these insights, the report aims to support broader efforts to foster an inclusive research culture and to inspire further progress toward a diverse and equitable circular economy. The perceptions of EDI may vary among individuals. For the scope of this study, the following definitions are adopted:

- **Equality:** Equality is about ensuring that every individual has an equal opportunity to make the most of their lives and talents. No one should have poorer life chances because of the way they were born, where they come from, what they believe, or whether they have a disability.

- **Diversity:** Diversity concerns understanding that each individual is unique, recognising our differences, and exploring these differences in a safe, positive, and nurturing way to value each other as individuals.
- **Inclusion:** Inclusion is an effort and practice in which groups or individuals with different backgrounds are culturally and socially accepted, welcomed and treated equally. This concerns treating each person as an individual, making them feel valued, and supported and being respectful of who they are (Fisher *et al.*, 2024, p. 2).

The UKRI NICER Programme is a four-year £30 million investment sponsored by the Department for Environment, Food and Rural Affairs (DEFRA) to move the UK towards a circular economy. The Programme is made up of five Circular Economy Research Centres, each focused on a speciality material flow, and the co-ordinating Circular Economy Hub (CE-Hub). The structure of the NICER Programme is outlined in Figure 1. The Programme aims to deliver research, innovation, and the evidence base to move the UK towards a resilient UK circular economy. The NICER programme is the largest and most comprehensive investment in the UK Circular Economy to date. The programme is delivered in partnership with industrial organisations from across sectors and DEFRA, to ensure research outcomes contribute to the delivery of industrial implementation and government policy.

Figure 1. Structure of the NICER Programme Circular Economy Hub and Research Centres

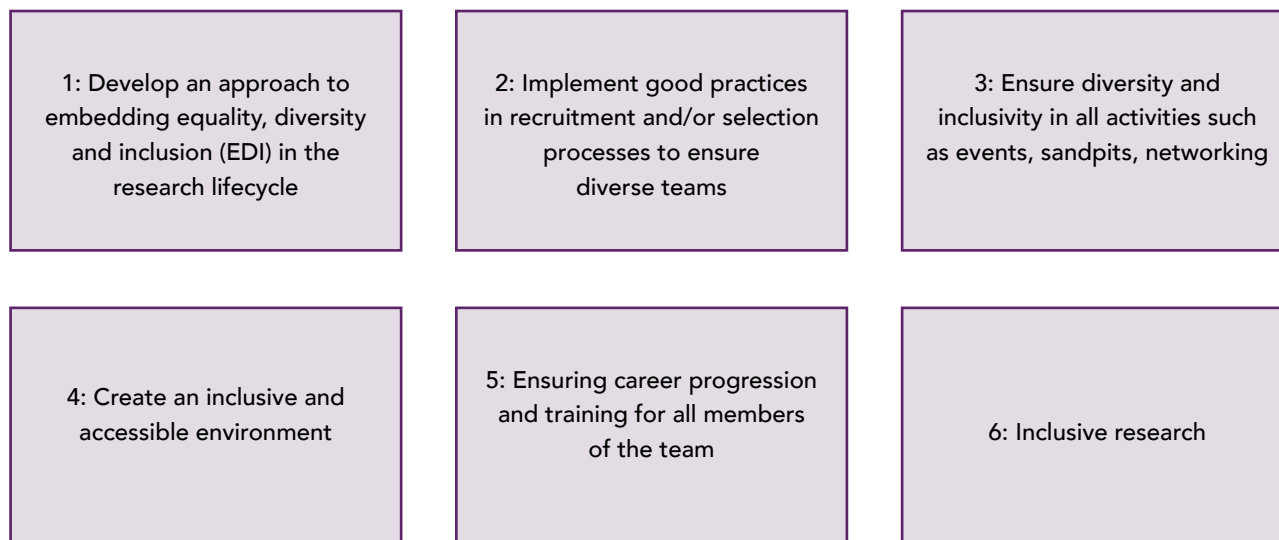


The CE-Hub is the coordinating Hub for the NICER Programme (grant number: EP/V029746/1). The CE-Hub aims to harness and scale-up the UK’s leading research capabilities, providing the evidence base, inspiration and capacity to accelerate the transition towards a global circular economy.. One of the key pillars of the CE-Hub is building an **Inclusive Community** that enables multiple stakeholders from diverse backgrounds and perspectives to have a voice, and to help shape a future CE that is better for everyone.

EPSRC is dedicated to advancing EDI and has established a long-term action plan to foster inclusive practices across its funded projects. In 2022, EPSRC introduced the “EPSRC Expectations for Equality, Diversity and Inclusion,” which guides the engineering and physical sciences community in identifying and

addressing EDI barriers specific to their environments, taking into account factors like location, discipline, role, and career stage (EPSRC, 2022a). These expectations are structured into six thematic areas, as shown in Figure 2, and were developed collaboratively with EPSRC’s EDI Strategic Advisory Group and members of the research community. Rather than a pass-or-fail standard, these expectations are intended to serve as a framework to embed inclusive practices throughout research processes. Although the expectations were published after the CE-Hub and Research Centres were established, they provide a valuable benchmark. Within this report, these expectations serve as a foundation for reviewing the initiatives undertaken by the CE-Hub and Centres to embed EDI throughout the NICER Programme.

Figure 2. The EPSRC EDI Expectations (EPSRC 2022a)



Although they are labelled as ‘expectations’ it is important to note that they do not represent a prescribed standard to meet and therefore ‘meet expectations’. They are framed as a series of prompts and considerations to be reflexively considered in relation to the work and its context: as stated of the expectations:

‘It is not an exhaustive list of every barrier, but a resource to help you identify and overcome local barriers and to be used alongside other toolkits provided by organisations and your local institution.

Everyone is capable of doing something, regardless of role, seniority, subject matter or research project size. We do not want people to be overwhelmed by these expectations and we encourage you to be curious. This is not a pass or fail exercise but an opportunity to embed inclusive actions into the way research is carried out.

Embedding these expectations is not about ticking a box (or every box, in other words, every expectation). It is about helping people on the journey to positive change. It’s about what is right for you and your team, your context and where you are on that journey, whether you are at the very start or further down the line.’

(EPSRC, 2022b)

The EDI expectations are used in this flexible contextual way as a series of prompts when used in this document as a way to reflexively consider how inclusive actions have been embedded in the NICER programme.

The NICER Programme presents a unique opportunity to reflect on and draw lessons from the integration of EDI principles within a large-scale, interdisciplinary research initiative. By aligning with the EPSRC EDI expectations, the programme aims to identify actionable ways to close the gap between EDI research and implementation, building a foundation for sustainable, systemic change. Reflecting on the successes and challenges encountered thus far, this self-assessment seeks to contribute to the evolving discourse on EDI in research and circular economy initiatives. The insights and lessons gathered will be instrumental in informing future strategies that foster a more inclusive research culture, reinforcing EDI as a central tenet of the transition toward a resilient, resource-efficient, and circular economy in the UK.

2. Aims and Objectives

The aim of the project was to generate reflections on the efforts made to embed EDI best practice throughout the CE Hub & NICER Programme and generate new understandings of the EDI opportunities and challenges that may emerge from the circular economy transition. Information was gathered through two online workshops using the EDI Cards, an EDI maturity survey and evidence gathering of EDI activities and initiatives led throughout the CE Hub & NICER Programme.

To achieve this, the project aimed to:

1. Facilitate a self-reflective evaluation of EDI activities across the NICER Programme to understand current practices, progress, and areas for growth.
2. Analyse findings to highlight both successful practices and opportunities for enhancing EDI, providing actionable insights and lessons learned for future initiatives.
3. Expand the conversation on EDI by examining its role, challenges, and potential within the broader circular economy transition.



3. Methods

The self-assessment activities described here employed two main methods to enable members of the NICER programme centres to reflect on their EDI activities and practice through a series of activities and surveys. These were workshops using EDI cards (Craigon *et al.* 2023, University of Nottingham 2023) and an adapted version of the EDI maturity matrix developed by EDI staff at the University of Nottingham (see Appendix 1).

3.1 The EDI cards

The EDI cards are a card-based tool intended to help people to engage with issues of EDI in relation to their research, responding to the questions

- How inclusive is my/our work?
- Who does it include or exclude and how?
- How does EDI relate to me and my work?

They were developed by a team at the University of Nottingham funded by the Connected Everything project (grant number: EP/S036113/1). They were developed with a focus on researchers and research activities, but they are more widely applicable and have been used more widely. They are made available to use and are supported by a series of resources on the University of Nottingham's website (University of

Nottingham, 2023). They comprise physical and digital versions and are it is intended for potential users to use them in their own way with support from the guidance materials made available on the website. An introductory paper and further details can be found here (Craigon *et al.*, 2023; University of Nottingham, 2023). The EDI card set comprises 156 cards divided across four themes and a set of guide cards and 12 individual categories.

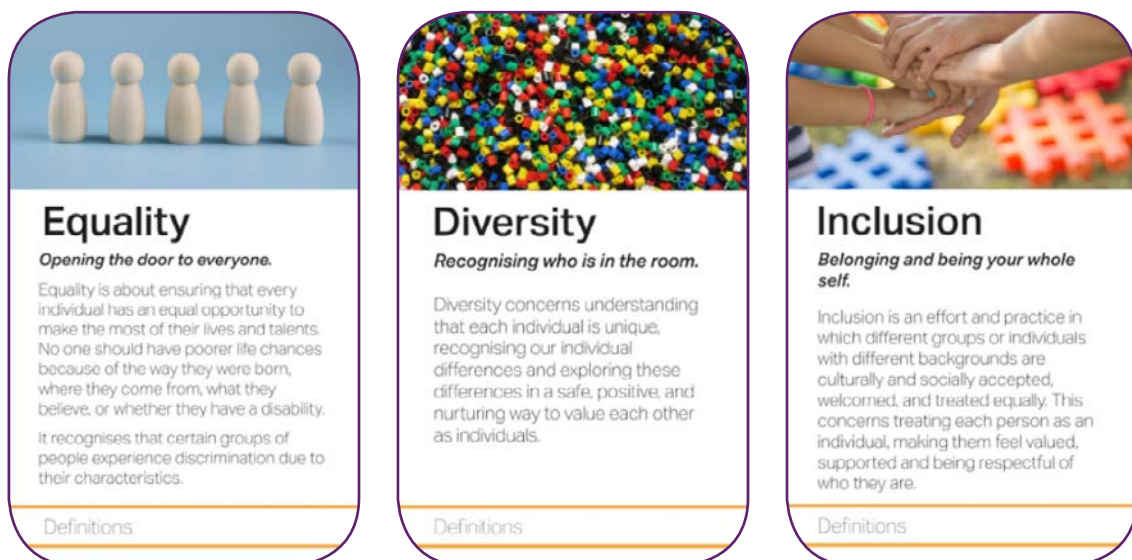
Anatomy of a card

Each card is set out in the same way with an image followed underneath by its title, some short explanatory text and then a series of open questions to help users relate the issue on the card to their own context and situation (see figure 3).

Use case

The cards were used online via the online whiteboard Miro (Miro, 2024) supported by conversation on Microsoft Teams (Microsoft, 2024). This was chosen to allow for remote and distributed participation amongst the centres so that they could participate from where they were. This online setup replicated the tasks that would be done in a face-to-face session with adaptations made for the affordances of the online method of using the cards.

Figure 3. Examples from the Equality, Diversity and Inclusion Cards (Craigon *et al.*, 2023; University of Nottingham, 2023)



3.2 Activity 1 - EDI cards Self – Reflective workshop

The EDI Cards Self-Reflective Workshop used the EDI cards to guide 18 total participants, drawn from each of the centres, in examining EDI efforts across the NICER Programme through two interactive group activities: 'Random Draw' and 'EDI by Design'.

'Random Draw'

As an initial 'icebreaker' the participants were asked to select cards at random from each of the themes and then volunteer reflections on how they applied to their own work and experience. With each card drawn the group were asked to reflect on it again in relation to their work and then how it may combine (or not) with the previous cards selected.

This activity was used as an icebreaker activity to help the participants familiarise themselves with the cards and encourage discussion, it was not used as part of the data captured for this project.

'EDI by Design'

Following the Random draw exercise the participants from each centre were asked to complete a process board (See figure 4) by selecting cards (which were laid out alongside) and annotating them to identify in relation to EDI:

- Strengths of the centres work –
- Areas for Improvement in the centres work
- Lessons learned
- Challenges

They were given the following instructions (a worked example was provided as guide):

- Take a few minutes to look through the cards.
- Use the process board to help layout as example:
- The focus of the discussion is EDI in the activities of your NICER Hub or centre
- Use the cards to help identify (or use sticky notes to put your own ideas)
 - Strengths of EDI in your work or things that went well
 - Areas for improvement for your EDI work
 - Lessons learned regarding EDI that came from your work
 - Challenges associated with EDI
- Arrange on process board provided
- Aim to consider each level for your NICER centre or hub
 - EDI strengths / areas for improvement
 - Lessons learned
 - Challenges

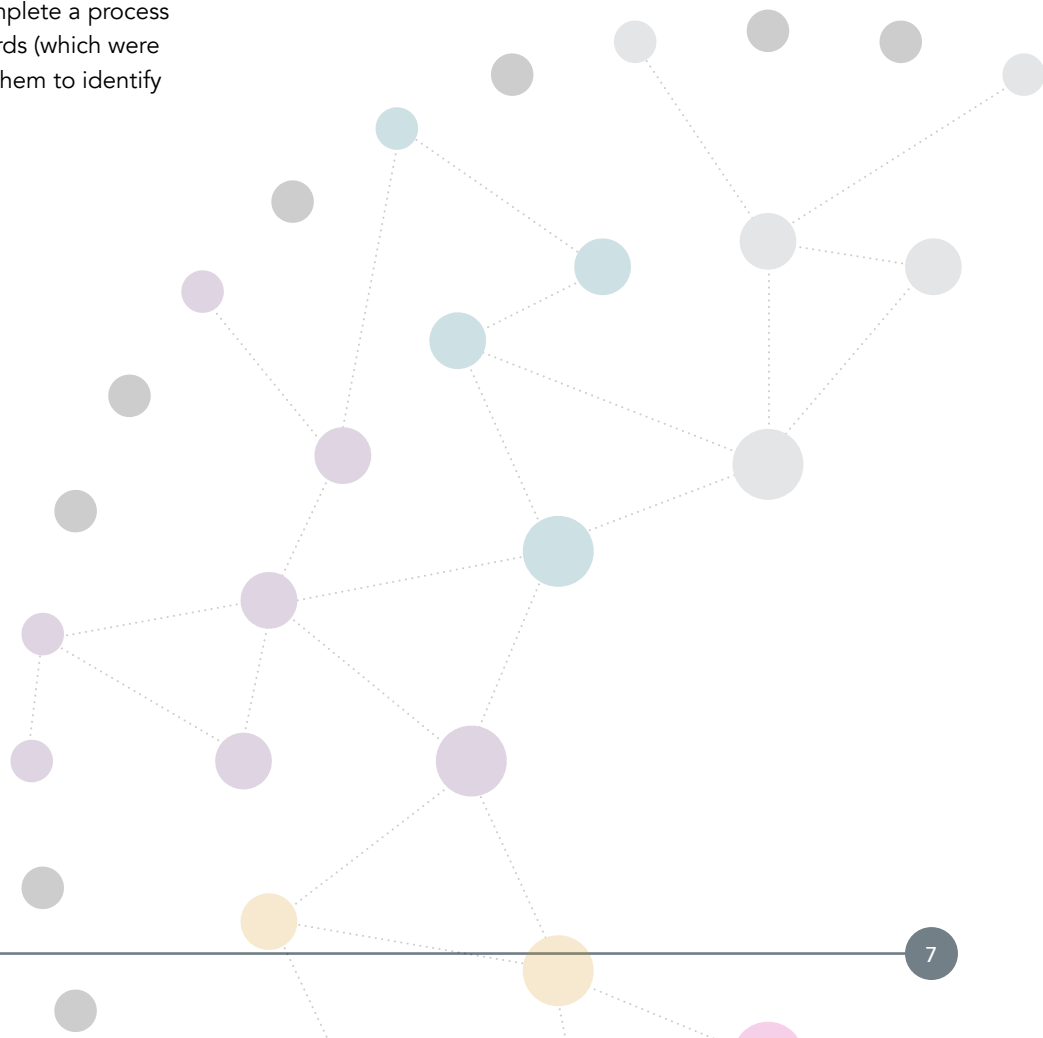


Figure 4. Blank process board from EDI cards Self-assessment workshop

Your Hub or Centre	
EDI Areas for improvement	EDI strengths/ Things that went well
Annotations	Annotations
Lessons learned (from areas for improvement)	Lessons Learned (from strengths)
Annotations	Annotations
Challenges (associated with areas for improvement)	Challenges (Associated with strengths)
Annotations	Annotations
Recommendations	

They were also given a space to record their recommendations underneath their process board.

The groups completed a process board for each centre and were then asked to contribute collectively to a second Miro board under the questions:

- Overall Feedback
- Connections between centres
- Differences between centres
- Recommendations for the future
- 1 thing to do differently around EDI

3.3 Activity 2 - EDI Maturity Self-Assessment survey

To broaden consideration of EDI, each NICER Centre was asked to complete a self-assessment survey using an EDI maturity matrix (see Appendix 1). This tool was adapted¹ from the University of Nottingham's EDI maturity matrix created by the EDI team to encourage each Centre to reflect on their practices and pinpoint areas for EDI growth. The matrix was customised for the NICER Programme, aligning it more closely with the EPSRC EDI Expectations. It was divided into three core themes:

- **EDI Engagement:** This theme evaluates how well EDI is integrated into the NICER Programme's overall mission, questioning whether EDI is seen as foundational or as an additional task. Sub-themes include EDI culture and efficacy, governance and leadership, and external communication and outreach, assessing how deeply EDI principles are woven into day-to-day practices.
- **EDI in Core Activities:** This theme reviews the proactive efforts to incorporate EDI into core programme activities. It focuses on event inclusivity, fairness in awarding processes, and the accessibility of resources and infrastructure, aiming to foster an equitable environment in all programme facets.
- **Staff EDI Experiences:** This theme examines the NICER Programme's approach to EDI across staff experience, recruitment, professional development, and research activities. It reflects a commitment to creating an inclusive workplace where diversity is integral to both the culture and operations.

The survey contained a series of questions based on these themes and asked respondents to self-assess their current level of activity in each area as '**Emerging**', '**Developing**', or '**Ambition**':

- **Emerging:** This level signifies the initial stages of EDI implementation. While some EDI data and processes may be available, they are generally limited in scope and depth. Actions are reactive rather than proactive, often occurring only when prompted.
- **Developing:** At this level, there is progress towards integrating EDI practices within the organisation, but with areas for improvement. EDI efforts may be more structured than at the Emerging level but lack full consistency and integration into everyday practices.
- **Ambition:** This level reflects a mature and comprehensive EDI framework that is systematically embedded in organisational practices. EDI efforts are proactive, data-driven, and continuously evolving based on best practices and staff feedback.

Respondents were encouraged to collaboratively discuss each question and determine the level their Hub or Centre had achieved. They then provided justifications and specific examples to support their assessment. For clarity, each question was accompanied by examples of what Emerging, Developing, and Ambition levels might look like. Sample responses are shown in Table 1, with a full set of questions provided in Appendix 1. The qualitative data gathered from these responses were summarised and analysed accordingly.

¹ For example, questions relating to student EDI was removed as they were less relevant to the NICER programme and questions were reworded to refer to the NICER programme and EPSRC EDI Expectations. Questions as used can be seen in Appendix 1.

Table 1. Examples of Emerging, Developing, and Ambition Levels for EDI Self-Assessment Survey

Question	Emerging	Developing	Ambition
1. To what extent is representation data analysed routinely against relevant benchmarks?	Some high-level data is available and reviewed when requested. Limited benchmarks have been identified. Data analysis does not always generate actions.	High level and local level data is available and reviewed when requested. Some relevant benchmarks have been identified. Data analysis is used to set actions and targets on an ad-hoc basis.	Representation data is readily available, systematically reviewed against relevant benchmarks, and used to set actions and targets.
4. To what extent can everyone contribute towards developing and leading research activities, regardless of seniority or experience?	Contributions are primarily made by those with higher seniority or more experience, with limited opportunities for others to participate.	Contribution is actively encouraged across activities with some support and guidance provided accordingly.	A culture of inclusivity is well-established, with contribution from all levels is actively encouraged and well supported across activities.
10. To what extent have imagery and language been reviewed across all communication platforms to support the message of diversity and inclusivity?	Materials are reviewed on an ad-hoc basis to ensure imagery and language are positive. Other informal activity may take place.	A plan of action to communicate positive messages is in place. Effort is made to diversify role models presented by the organisation. The use of inclusive imagery and terminology is evident. Communication is integrated into communication on other issues. Clear signs of progress are evident.	Diverse representation and language are at the forefront when creating new materials. Imagery and language are routinely reviewed.

3.4 Activity 3 - EDI and the Circular Economy Workshop

The objective of this work was also to encourage wider consideration of EDI in relation to the circular economy. This was addressed through a second workshop that asked participants to use the EDI cards to reflect on the EDI aspects of a circular economy value chain, specifically focusing on the remanufacturing of laptops.

Details of this case study and its outputs after provided in 'Case Study 1'. Furthermore, the complementary CE-Hub Flexible Fund project, titled *Creating the IDEALL Roadmap to an Inclusive, Diverse, and Equal Circular Carbon Economy for ALL (IDEALL)* (see Case Study 3), is discussed alongside other initiatives featured in the Case Studies section.

3.5 Analysis – EDI cards and survey

This part of the project was intended to facilitate a self-assessment of EDI activities by the centres. This was approached by providing members of the centres with tools and the opportunity in the form of the cards and survey to reflect and self-assess their approach to EDI. The analysis has therefore been designed to promote this aim by focusing on summarising and collating the responses and evidence provided by the representatives of the centres with a light touch. The evidence provided in the results is primarily these summaries with connections being drawn between this data in the reflections and commentaries that follow each section.

Following the presentation of the summary results and commentaries for the cards exercise and the survey individually, this data is then viewed through the lens of the EPSRC's EDI Expectations (EPSRC, 2022a; 2022b) to act as a framework for consideration of the results, identify activities in line with these expectations and consequently gaps, strengths and areas for improvements of the EDI activities of the NICER programme in relation to the EDI Expectations of the EPSRC.

This approach to analysis has been taken to complement the nature of this project as a self-assessment and the non-exhaustive or prescriptive nature of the EDI expectations. Using this approach will help show the EDI activities of the NICER programme in relation to the categories and approaches of the expectations and allow for connection of this project and inspiration for others to be drawn from this work.

3.6 Potential Limitations

The following elements need to be borne in mind when considering this report

- Self-Assessment – This project is a self- assessment. This prioritises the expertise and experience of the centres in their work but may result in less critical or negative perspectives being recorded.
- The contextual nature of EDI means that there is no appropriate standard or measure to compare the responses and activities with – objectively defining strengths, areas for improvement and 'good practice' is therefore challenging, hence taking the self -assessment approach
- The responses to the cards exercise and survey were collected on the condition of anonymity for the participants. Given the unique details of the programme and relatively small number of people involved this has required removing identifying details from the responses to protect this anonymity. Examples have therefore been made non-specific and generic (apart from those in the case studies).

4. Report Findings

4.1 EDI Cards Self Assessment Workshop

The results from each of the process boards completed by the centres are summarised and have been collated into prose as below with identifying details removed to preserve anonymity. The words in **bold** refer to the cards that had been used and annotated to contribute this element of the findings.

Six groups undertook the workshop activities with their EDI by Design process boards and activities described below. Each image of the process boards (Figures 5-10) is given to illustrate with the cards used and annotations summarised directly below. Content of annotations have been redacted to protect anonymity and summarised below the image of the board.

4.1.1 Group 1

Figure 5. Group 1 process board from EDI cards Self-assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

One group used the cards **Recruitment** and **Lack of Understanding** to identify how at the beginning they had struggled to recruit an EDI lead and felt there was a lack of guidance from the UKRI funders to inform the EDI activities of the programme (came about with the EDI expectations part way through).

The lessons they drew from this covered the need to recruit an EDI lead (**leadership**) and the need for clear guidance (**Goals and aims**) in place from the beginning to be co- designed across the programme and reviewed regularly with each individual knowing their responsibilities (**Governance**). A collaborative approach was needed (**Co-production**) along with recognition that expertise is distributed amongst team members requiring a collaborative approach to mitigate potential consequences of a system that does not include multiple worldviews (**Co-Design**).

The challenges associated with the areas for improvement were the lack of time in a busy workload (**Time**) to seek guidance on EDI and recruit EDI leads and a lack of clarity about how to apply EDI in the day-to-day role (**Complicating**) They also identified the cultural norms (**Cultural**) of an individual and the lack of data across the programme to allow for monitoring and evaluation (**Data**).

Strengths

In terms of strengths this group identified the value of a survey (**Data**) which enabled improvements for the team and their communications and engagement strategy (**Communications**) which included EDI to be as accessible and inclusive as possible and seeking feedback on this to enable improvements (**Feedback**). Having highlighted it as an area for improvement (see above) the goals and aims became clearer with the release of guidance in March 2022 (**Goals and aims**).

The lessons learned from these strengths were the value of feedback to make improvements (**Feedback**), capture lessons learned and share good practice across the centres and also to prioritise EDI in all elements or work (**Priorities**). The impact of the work would have been improved with greater knowledge of EDI at the outset (**Impact**).

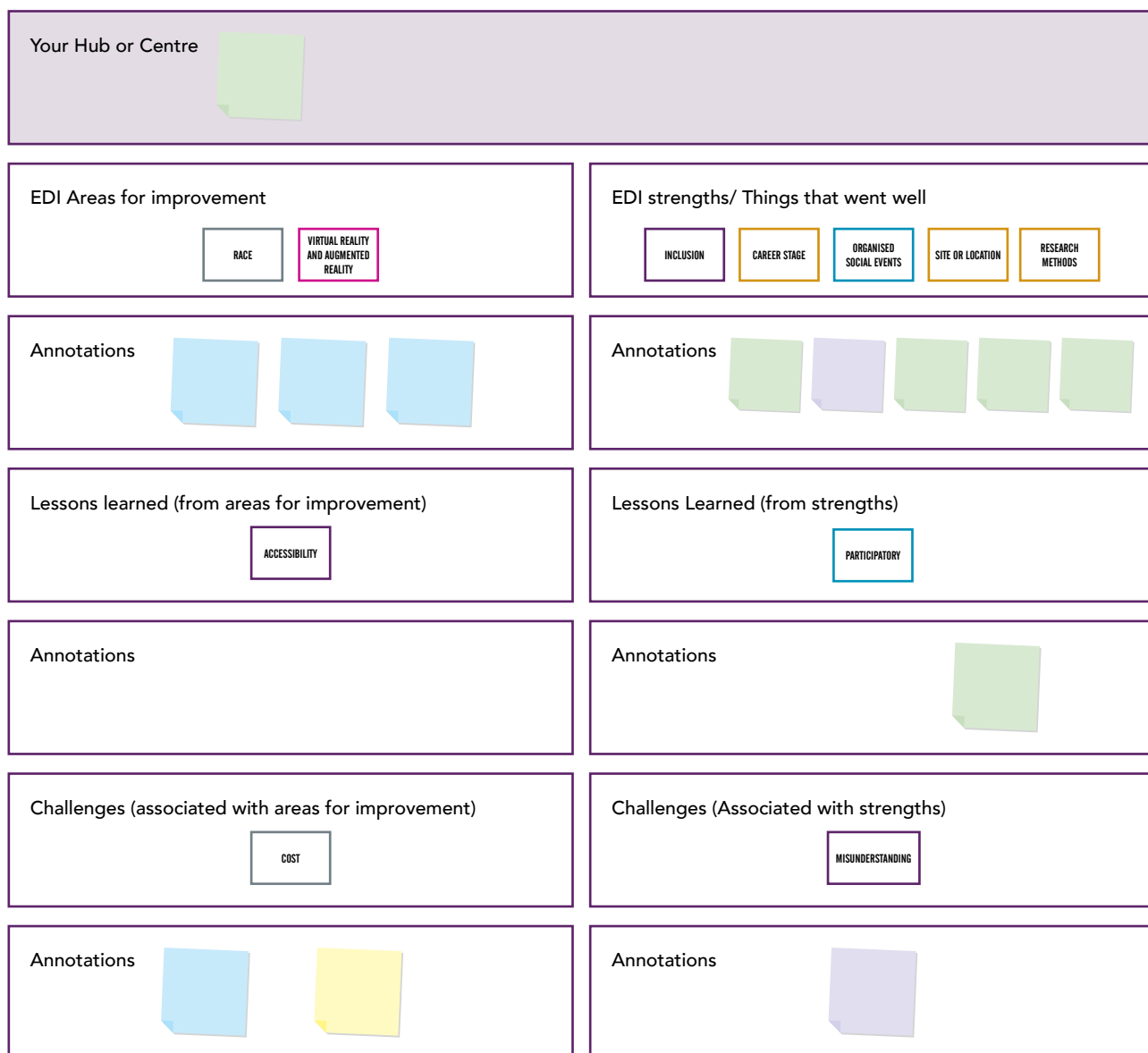
The challenges associated with this were identified as **Time** and **Data Privacy and Security**.

Recommendations

This group made the recommendations that an EDI framework, process and training is in place from the start to enable good practice to be embedded in individuals' role and work. Leadership is also required from the start and for example an EDI Key Performance Indicator across the programme. Surveys can provide data and annual and biannual reports can be used to share good practice.

4.1.2 Group 2

Figure 6. Group 2 process board from EDI cards Self-assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

This group raised the issue of working with the general population as research partners and financial and ethical issues, such as the need to compensate for people's time (**Race**). They also identified that some technology did not accommodate the needs of the users and that State-of-the-art technology is expensive (**Virtual reality and Augmented Reality**).

In terms of lessons learned they used the **Accessibility** card.

Challenges that they identified included developing strategies to work with people who are engaged with the communities that you are trying to reach and costs associated with improving the accessibility of technology. (**Cost**).

Strengths

This group highlighted that they had researchers at different stages of their career working together (**Inclusion**) and also external initiatives such as student placements and recent graduates to help support career development and growth and building portfolios and networks (**Career Stage**). They mentioned a stakeholder engagement platform (**Organised social events**), the opportunity for random participants to join their studies (**site or location**) and mixed methods approaches to research to enable a wide demographic to be reached (**Research Methods**).

Lessons learned from this was about running research activities on the street to give results closer to real life (**Participatory**).

Challenges identified concerned trust and interdisciplinary and subject bias (**Misunderstanding**).

4.1.3 Group 3

Figure 7. Group 3 process board from EDI cards Self-assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

This group identified the need to think about how to advertise more widely (**Socio-economic background**) and whilst they had a good gender balance in PhDs and technicians this was less the case in more senior positions (**Sex**). Also **Organised Social Events**.

The cards they played as lesson learned were **Education Status, Customisation, Recruitment, Governance** and **Co-Design**. The idea was put forward to set up an EDI email address for anonymous reporting of issues.

In terms of challenges this group played the cards **Disability, Grant Applications, Lab work, Pragmatic, Accessibility, Economic, Confidentiality** and they commented that they were limited by the nature of the work.

Strengths

In terms of strengths they played the cards **Inclusion, Race, Religion or belief, Nationality, Conferences and Events, Cultural** and indicated that there was a wide range of religions and nationalities across the project.

As lessons learned this group played **Impact, Confidence, Respect, Reputation** and noted having a gender balanced Advisory board and management board.

The following cards were played as challenges: **Informal social interaction, Skills/Abilities, Desk work, Safe space, Confidentiality, Cost, Time**. It was noted that more initiatives were needed on a personal level to arrange informal social events especially for people from foreign countries.

4.1.4 Group 4

Figure 8. Group 4 process board from EDI cards Self-assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

This project focused on a particular industry with many of the work packages related to engineering with less connection to economic and other approaches (**Worries**) and broader approaches may be more suitable and efficient (**Preferences**). The group pointed to the group of researchers being diverse but also under high pressure (**Interests**), indicating that several researchers were coping with high stress (**Temporary Impairment**).

Lessons learned from this include that listening and support are very important (**Support**) and that having a safe space (**Safe Space**) to confess feelings can help reduce worries and stress. Having the right to debate can help in unifying ideas preferences and interests (**Debate**). They also played the cards **Alternative Contribution, Listening** and **Resistance**.

The challenges identified included playing the cards **Level of Ambition, Goals and aims, Perception, Data, Customisation** and it was indicated that direction and orientation from leadership can change identified issues (**Leadership**).

Strengths

The Strengths of this group identified were identified as having a varied group of researchers (**Cultural**) for whom the centre has organised a lot of events (**informal social interaction**). They also identified that Respect was a core value in the project (**Respect**).

In terms of lessons learned they identified that research participation can improve understanding of cultures and improve respect within a team (**Research Participants**) and they also pointed to how the opportunity to visit and work at different sites helped in good practice for circular economy adoptions (**Site or location Interpersonal**).

Challenges identified were keeping people informed as information was sometimes missed (**Human in the Loop**) and also whilst the centre has an EDI representative no measure or inclusive design was proposed to supervise (or monitor) their performance (**Impact, Satisfaction, Inclusive Design**).

This group made the recommendation for a universal framework to help EDI implementation and a more active role for EDI representatives.

4.1.5 Group 5

Figure 9. Group 5 process board from EDI cards Self assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

This group identified that they focused on people with high levels of education and advanced degrees (**Education Status**), and that timing, location and costs of events and how they often involve alcohol can be improved (**Social Events**). They also noted that EDI was not their area of expertise (**Lack of understanding**).

In terms of lessons learned they identified that there were competing demands for time and deliverables/ outputs (**Priorities, Time**) and there was lack of consideration and awareness of cost (**Cost**). They also noted difficulty in locating resources to help with improvement (**Skills/abilities**).

This group highlighted a challenge from areas for improvement as hiring policies which were well intentioned but missed the EDI aim (**Intentions/ Tickboxing**).

Strengths

In terms of strengths they highlighted frequent and timely communication (**Communication**). They also highlighted the input from people of lots of different career stages and experiences (**Career Stage**) and that they have a wide range of nationalities across the centre (**Nationality**) and a wide range of languages spoken by different people (**Linguistic**).

Lessons learned from the strengths were to continue to engage proactively (**Diversity, Equality**).

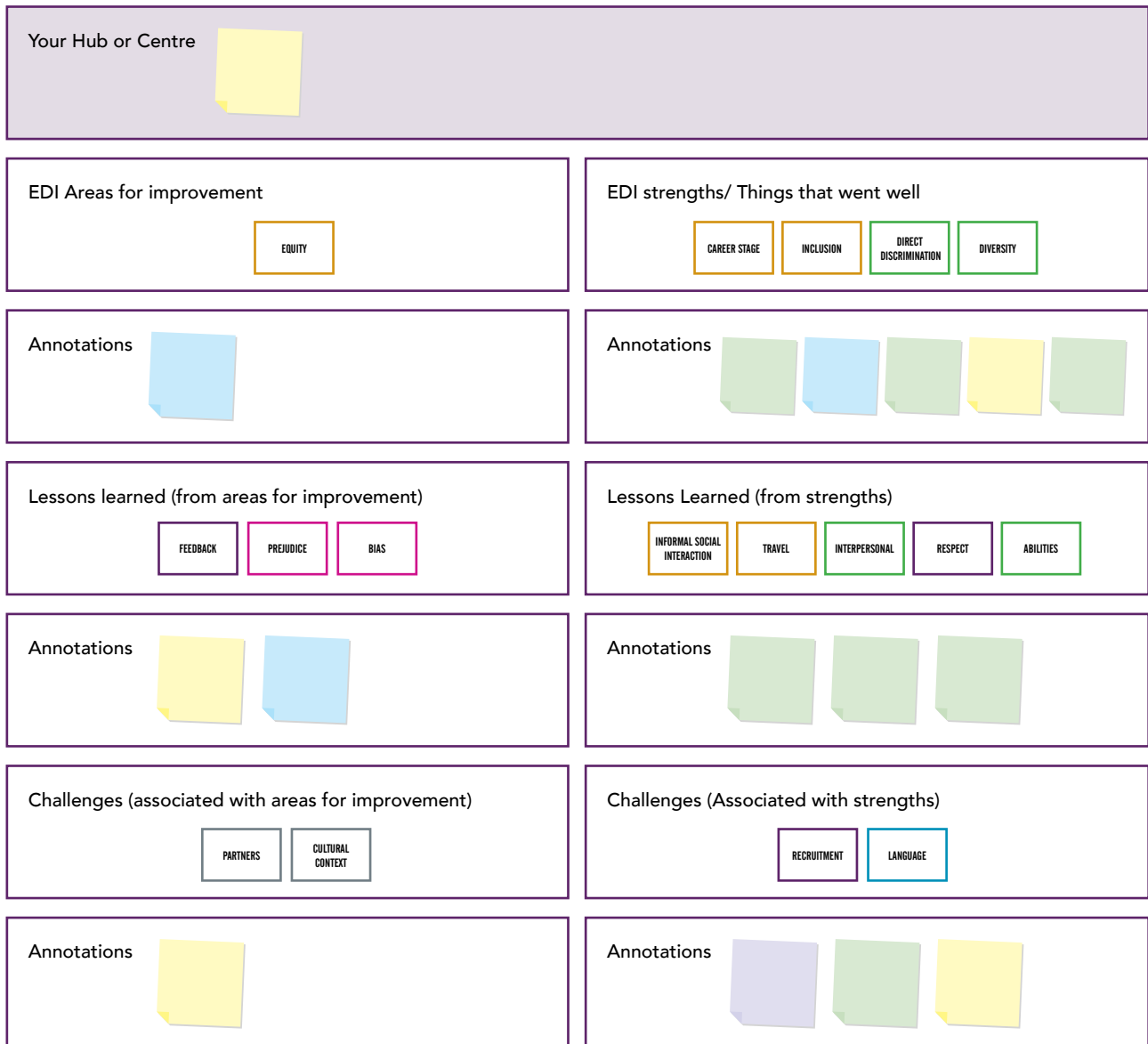
Challenges identified were that people thought that 'it's not my job' (**Avoidance**) and that there may be culture clashes (**Resistance**).

Recommendations

The group recommended that they should continue the diversity of career stage, nationalities and languages. It was identified that it would be helpful if EDI could become a more integral part of the workflow with greater resources to support oneself. They highlighted that they should not assume that it's someone else's responsibility and there should be more provision for EDI training.

4.1.6 Group 6

Figure 10. Group 6 process board from EDI cards Self assessment workshop (Content of annotations have been redacted to protect anonymity and summarised below the image of the board. NB - The titles of the cards used are given in the coloured boxes to make them legible here. The cards used in the workshop follow the same structure and appear similar to those shown in figure 3).



Areas for Improvement

This group identified a potential issue around a subject in relation to their centre and how they could engage indirectly with communities affected by it via groups and organisations etc (**Equity**).

Lessons learned included the need for the collection of more EDI information from stakeholders along with input and feedback on the research programme to allow for more in depth analysis for example around bias (**Feedback**). They also identified that there may be inherent bias amongst certain stakeholder groups, for example big industry or banking as well as towards certain communities for example artisanal workers or unions (**Bias/ Prejudice**).

They identified the challenges on how the research focuses on specific and technical input which could be extended to gather participants views on EDI etc (**Partners, Cultural context**).

Strengths

Strengths identified included a strong ECR cohort with regular activities and regular opportunities to present (**Career Stage**) and how engagement with all levels equally is built into core activities (**Inclusion**). They identified that they were a diverse group in terms of characteristics (nationalities, gender, biological sex, career stage etc) which all contribute to common goals and all are required to deliver (**Diversity**).

They learned lessons through developing an ECR cohort and arranged informal bi-weekly catch ups and a series of training events with a social activity for team building. They also held informal webinars to communicate research findings to the wider project team and other centres as well as the NICER summer school (**Informal social interaction**). They held events online not just in person (**Travel**). They also recognised different skills and backgrounds and to consider how best they can collaborate (**Respect and Abilities**).

The challenges identified were how each institution engages their own staff and PDRAs (**Recruitment**). It was also identified that the language used can impact the engagement with other backgrounds or career stages, potentially for recruitment and that there is a risk of overly technical language or jargon so there is a need to tailor communications to the audience (**Language**).

4.1.7 Recommendations From EDI Cards workshop

In the separate overall feedback part of the workshop the participants indicated that they needed more guidance and knowledge, EDI was considered an equal and shared responsibility and is everybody's responsibility. It is also not something to be scared of as trying is better than not trying. It also needs to be embedded across all activities.

In terms of connections and differences between centres it was noted that they were adopting best practice and learning from one another, but it was noted that they had experienced a spectrum of different challenges.

They recommended that there is a need to reshape the image of EDI so that it is not just a tick box and tools and develop methods to support diverse groups in working together were needed which would need research.

In response to identifying one thing to do differently to improve EDI it was suggested:

- To target recruitment of under-represented groups.
- Learn more about the human condition.
- Develop specific Key Performance Indicators around EDI.
- Pool knowledge from research on diversity potentially in a review piece.

4.1.8 Drawing things together – EDI Cards workshop

Considering the reflective self-assessment exercise, as a whole, there are commonalities between the issues identified as areas for improvements and strengths of the programme. All of the centres identified that they comprised a diverse group of researchers in terms of nationality, language and career stage amongst other characteristics. This contributed to a collegiate inclusive working environment where individuals of all levels were encouraged to engage and contribute, and they are supported in their development.

On the other hand, how the centres widen their engagement with stakeholders such as businesses or public(s) was the most prominent area identified for improvement to place the work in a wider social context. This was presented in terms of enabling engaging more widely in research activities or recruiting or promoting work which may be impeded by technical language or jargon and the focus on highly educated specialists due to the specific nature of the work undertaken. This was also accompanied by a desire for greater resources, guidance and expertise around EDI to address a perceived lack of skills.

This was brought together in the recommendations with the need for (contextual) guidance to help address different challenges across sectors and specialisms despite sharing experience across the programme. This was supported by recommendations to provide a framework for guidance and 'learn more about the human condition' potentially in a review piece.

Given the division between the strengths and areas for improvement it is interesting to note how the strengths focused on the makeup and activities of the centres whereas the areas for improvement focused more on external engagement with different audiences, with a recognition of the benefits that this can bring in terms of engaging with different groups. This demonstrates a wide appreciation of EDI as not just focused on the nature of the team and activities but part of relating work to its wider social context, an interesting and important consideration to come about from the reflections of this self-assessment exercise.

4.2 Self-Assessment of EDI Maturity Across NICER Programme

Through the Self-Assessment survey the CE Hub and Centres were asked to reflect on how effectively EDI principles are integrated into their engagement strategies, core activities, and staff experiences. Responses from the EDI maturity survey have been collected and evaluated to identify areas of strength and opportunities for growth. The 'Numerical Summary' score represents the mean level the centres assessed themselves to be at with 1 being emerging, 2 being developing and 3 being ambition as introduced above. The 'scores' therefore range from 1 as a minimum to 3 as a maximum. They should only be considered as a qualitative guide and not a quantitative measure. The text responses to the question are summarised alongside each question.

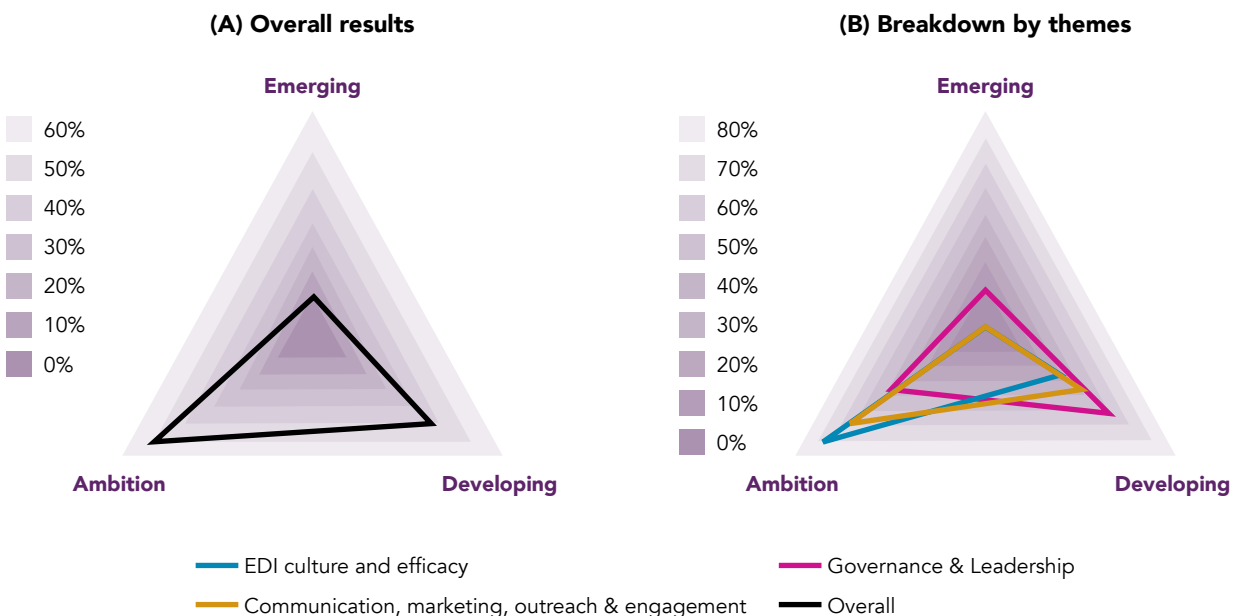
In addition, radar graph visualisations were developed to show the distribution of responses across the centres and hub within three categories: Emerging, Developing, and Ambition, for each theme and subtheme. Responses from each centre and hub were totalled for each theme, then normalised as percentages to illustrate the distribution across the categories. These percentages were then averaged across all centres and the hub and plotted in Figures 11-13. The radar graph consists of multiple axes radiating outward from a central point, with each axis representing a specific category.

4.2.1 EDI engagement

EDI Engagement aims to evaluate how well EDI is integrated into the NICER Programme's overall mission, questioning whether EDI is seen as foundational or as an additional task. Figure 11(A) highlights that on average more than half of the responses (52%) reflect an ambitious stance towards embedding EDI, indicating a strong commitment to making it an integral part of the NICER Programme. A significant portion (40%) of the response were still in the developmental phase, working towards fully integrating EDI into their practices, while only a small fraction (8%) is at the initial stages of EDI integration. This indicates that while many have made significant strides, certain areas are still building or initiating efforts.

Breaking the analysis into subthemes in Figure 11 (B) reveals distinct patterns. EDI culture and efficacy is the strongest area, with 73% of responses indicating ambition and 27% in development, showing a widespread commitment to fostering an inclusive culture. In contrast, governance and leadership emerge as an area for improvement, with only 30% at the ambition level, 50% developing, and 20% still emerging, pointing to gaps in leadership engagement and strategic oversight. Communication practices are relatively strong, with 60% at the ambition level and 40% developing, and no emerging responses. A breakdown into the average score for each question and summary response is provided in Tables 2-4

Figure 11. Distribution of responses across the three EDI Engagement categories, Emerging, Developing, and Ambitious, broken down by overall engagement and the subthemes of EDI Culture and Efficacy, Governance and Leadership, and Communications



EDI Culture and Efficacy

Table 2. EDI Culture and Efficacy questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
1. To what extent is EDI understood as an integral part of CE-Hub or Centres activities, rather than an add-on?	3	<p>All centres scored themselves Ambition (3) in response to this question</p> <p>Evidence given related to accessibility and dissemination of events to ECRs leading activities and compliance training as part of their employment. The evidence also pointed to a general embedding of EDI through accessibility, anti-discrimination, work-life balance policies. Leadership committed to EDI was also highlighted with good practice embedded throughout management, governance, research, communication, marketing and engagement strategies.</p>
2. How broad is the EDI knowledge and understanding of all protected characteristics, beyond those of well-known charter marks?	3	<p>All centres scored themselves Ambition (3) on this question.</p> <p>The responses all highlighted mandatory training on EDI provided by the institutions employing the members of the programme.</p> <p>Other events specifically highlighted and provided by respondents covered issues such as public engagement, neurodiversity, EDI awareness raising and summer school activities.</p>
3. When there is a problem relating to EDI (such as accessibility, fair treatment or dignity and respect), does everybody know who to speak to or which process to follow?	2.2	<p>Respondents pointed to help being available through individual institutions and provided training at a departmental level but they also highlighted provisions within the centres such as policies and practices and anonymous EDI surveys. Some respondents mentioned identified EDI leads as individuals with responsibilities for EDI within the programme as a point of contact. It was raised that working across multiple institutions could lead to uncertainty about who to approach and where to raise issues.</p>

Governance and Leadership

Table 3. Governance and Leadership questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
4. To what extent can everyone contribute towards developing and leading research activities, regardless of seniority or experience?	2.6	Opportunities for different people of different levels to contribute to the work of the centre was highlighted across the centres, whether this is through for example collegial regular meetings of presentation of work through webinars. Participation from all groups and levels, e.g. ECRs, PIs, PhD students is actively encouraged and supported and in one case engagement with advisory boards and industry groups was highlighted.
5. To what extent is the diversity of your leadership team actively and transparently monitored?	2	Centres indicated that their management and advisory boards were diverse along lines of different protected characteristics to reflect the nature of the research community and also included ECR representatives e.g. with members of the team posted on the website for transparency.
6. What initiatives are in place to advance leadership diversity?	1.8	Centres identified that they make efforts to create an inclusive environment maintain the diversity of their leadership. They encouraged representation from a wider range of groups at workshops and conferences for example by having ECRs take on leadership of workshops etc. They also identified initiatives to improve diversity for example through a working group to embed initiatives, pulse surveys, Athena Swan and gender-blind recruitment for example.
7. To what extent do leadership functions understand and advocate for EDI in daily life?	2	Centres identified measures to promote EDI in day-to-day activities. For example flexible, part time and remote working for research and support staff, encouraging all staff to present at meetings and workshops and hosting cultural events to showcase diversity. Also mentioned were actively supporting applications from a wide range of people through neutral wording of adverts for example as well as informal advocacy and promotion of good practice.

Communications, marketing, outreach and engagement

Table 4. Communications, marketing, outreach and engagement questions and results summary from EDI self-assessment survey

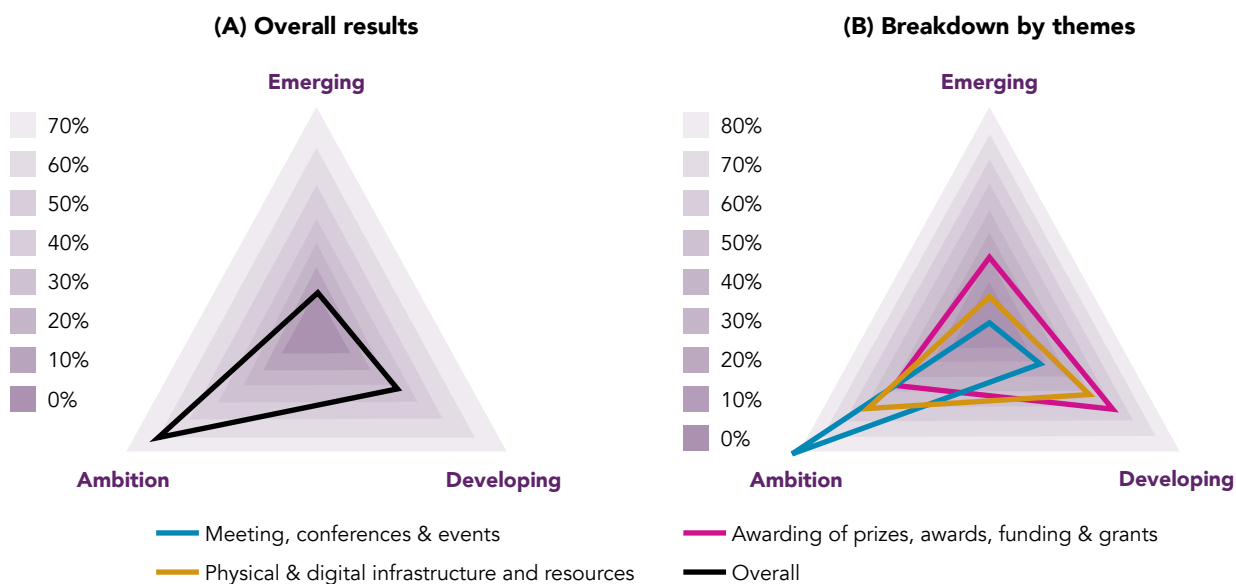
Question	Numerical Summary	Responses Summary
8. To what degree is accessibility a routine consideration in the production of communications (marketing materials, web content, newsletters, emails)?	2.6	Centres all indicated that they build in accessibility into their websites and other channels and marketing materials. For example this included: providing subtitles, recordings and written transcripts and tailoring communications for different groups, alongside formal communications and engagement strategies and accessibility statements on websites.
9. To what extent is there engagement with diverse groups and/or organisations outside the NICER programme? e.g. Widening Participation, civic engagement	2.4	Centres conducted a wide range of outreach and engagement activities for example hosting workshops with participants from policy, industry and the third sector, government and academia, including ones with a specific EDI theme. They also conducted science festival activities and school outreach visits. They host students from widening participation programme and provide additional support for disadvantaged groups to enable participation in centre activities.
10. To what extent have imagery and language been reviewed across all communication platforms to support the message of diversity and inclusivity?	2.8	Centres indicated that they considered imagery and language across platforms, for example using plugins to check for readability of posts and to ensure a diverse range of staff are used in marketing materials, actively seeking feedback on advertisements for example, but in one case this was identified as not being a formal process.

4.2.2 EDI in core activities

The radar graph results for the EDI in Core Activities theme, as shown in Figure 12(A), provide insights into the extent to which EDI has been integrated into the NICER Programme's core activities. Overall, 60% of responses indicate an ambitious approach to incorporating EDI, while 32% are in the developing phase, and 8% are emerging. This suggests that a majority of the network is actively working to embed EDI in their core activities, though there remains room for growth in some areas. Breaking the results down into subthemes reveals varying levels of integration. For Meetings, Conferences, and Events, a significant 80% of responses reflect ambition, with only 20% in the developing stage, indicating that EDI considerations are strongly prioritized in these areas. In contrast, the Awarding of Prizes, Awards, Funding, and Grants

subtheme shows more variability, with 33% at the ambition level, 47% developing, and 20% emerging, pointing to a need for greater consistency and attention to EDI in these processes. The Physical and Digital Infrastructure and Resources subtheme, which includes reports, websites, and newsletters, reflects a more balanced distribution, with 53% of responses indicating ambition, 40% developing, and 7% emerging, suggesting ongoing progress with some work still required to fully integrate EDI across all resources. These results indicate positive momentum in incorporating EDI into core activities, with clear strengths in events and communications but opportunities for further development in areas like funding and infrastructure. A breakdown into the average score for each question and summary response is provided in Tables 5-7.

Figure 12. Distribution of responses across the three 'EDI in Core Activities' categories, Emerging, Developing, and Ambitious, broken down by overall and the subthemes of Meetings, conferences and events, Awarding of prizes, awards, funding and grants and Physical and digital infrastructure and resources.



Meetings Conferences and Events

Table 5. Meetings Conferences and Events questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
1. To what extent is diversity of speakers and audiences considered in the organisation of events?	2.6	Centres indicated that they made efforts to vary the pitch and audience of different events to cater for different groups and provide a diverse range of speakers, including on panels. One centre indicated that they recorded diversity data to help inform subsequent events. There are formal event management processes and documents to help with this. In certain cases due to the nature of the research area it was impossible to ensure diversity in all cases.
2. To what extent are inclusive meeting practices the norm? e.g. time of day; papers in advance in accessible format; arrangements to ensure equitable contributions; diverse representation; looking beyond the 'usual' sphere of reference to bring in fresh ideas etc	3	Centres all identified this as an area of strength through inclusive meeting practices of, for example, providing paperwork in advance, making recordings and notes available after the meeting and providing flexible timings or online options to maximise accessibility.
3. To what extents are the barriers to participation explicitly considered in the planning and undertaking of events both online and in person?	2.8	Inclusive participation in events was addressed by considering accessibility of venues and location of events. For example hosting them in each of the four nations and providing hybrid options to maximise accessibility and making them free of charge to remove potential barriers to participation.
4. To what extent is a culture of participation in EDI opportunities enabled? Such as equality networks, learning opportunities, committees etc.	2.8	Participation in EDI events was actively encouraged by centres and some hosted specific EDI themed events or training such as summer schools or workshops. Also, for example, partnerships were developed with industry, professional bodies and other universities to provide a diverse representation and mentoring, training and work experience opportunities.

Awarding or prizes, awards, funding and grants

Table 6. Questions and Awarding or prizes, awards, funding and grants results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
5. To what extent is diversity data re. funding recipients routinely examined?	2	<p>This question was not applicable to some centres because they did not allocate funding. For those that did some indicated that they used data to understand the evolution of their centre.</p> <p>EDI was a key criterion in assessing applications for funding by the panels to encourage greater diversity in research teams and ECRs leading proposals and they indicated the potential value of a survey to consider the application process, support and impact of funding allocated.</p>
6. To what extent have awarding processes been reviewed for accessibility, inclusivity and unintended barriers?	2	<p>This question was considered to not be applicable by some centres and elicited little comment. It was pointed out that awarding small prizes the focus was on academic merit, but opportunities were shared equally with signposting to other awards or sources of support.</p>
7. Where applicable, to what extent have initiatives been put in place to increase the participation and success of under-represented groups? This could include unconscious bias training for funding panels, diverse panels, positive action initiatives for potential recipients etc.	2.4	<p>Examples given to support underrepresented groups included giving free tickets to conferences, engaging with different and new partners and ensuring that panels at conferences or for recruitment interviews have representation from underrepresented groups, supported by training in unconscious bias for example.</p>

Physical and digital infrastructure and resources (e.g. reports, website, newsletters)

Table 7. Physical and digital infrastructure and resources questions and results summary from EDI self-assessment survey

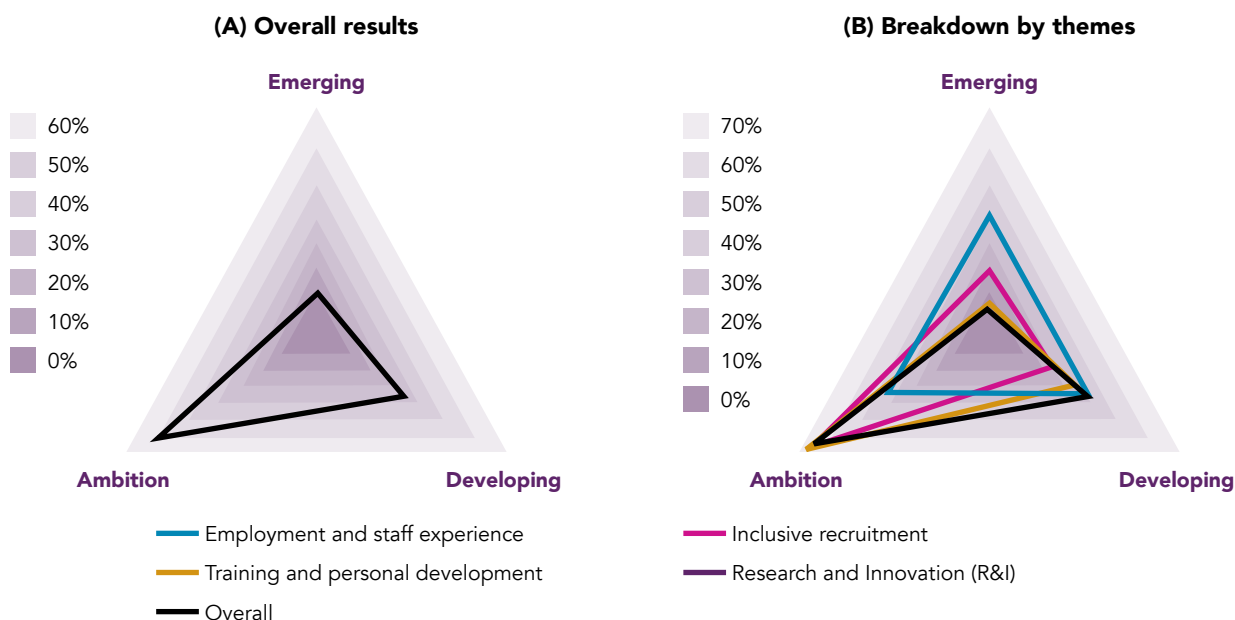
Question	Numerical Summary	Responses Summary
8. To what extent do those developing physical and digital spaces and resources routinely consider EDI at the design stage?	2.6	Each centre indicated that EDI was considered at the design stage of, for example, websites, reports and videos whereas one other pointed to their University's action plan for inclusive environments covering buildings and management of staff and services. In line with policies one centre indicated that their events were planned to be as inclusive as possible.
9. To what extent do relevant staff feel trained and equipped to include EDI considerations in the design and usage of physical and digital spaces and resources?	2.5	Some centres thought this was not applicable to them. Others indicated that this was part of the EDI training at their institutions where the support is available as this is who is responsible for the spaces. It was indicated that no specific activities were organised through the centre other than the inclusive events noted above.
10. To what extent are routes for staff/participant feedback clearly defined, visible and utilised?	2.2	Each centre indicated that they invited feedback ranging from informal verbal or written feedback to data and surveys being collected for review after events. It was also indicated that regular meetings were used to give staff opportunity to feedback about EDI issues amongst other things.

4.2.3 Staff EDI Experiences

The radar graph results for the Staff EDI Experiences theme, as shown in Figure 12(A), provide insights into how the NICER Programme approaches EDI across various aspects of staff experience, recruitment, professional development, and research activities. Overall, 56% of responses reflect an ambitious stance on EDI integration, 29% are developing, and 15% are in the emerging phase. This distribution indicates that a majority of the network is actively working to create an inclusive workplace, with ongoing efforts in some areas to further advance diversity initiatives. Breaking the results down into subthemes reveals distinct patterns. For Employment and Staff Experience, responses are evenly distributed, with 33% at the ambition, developing, and emerging levels, highlighting an area in need of more focused efforts to improve staff experiences related to EDI. In Inclusive Recruitment, 60% of responses

indicate ambition, with 20% developing and 20% emerging, suggesting a relatively strong commitment to ensuring inclusivity in recruitment processes. Training and Personal Development shows a positive trend, with 67% of responses reflecting ambition, 27% developing, and 7% emerging, indicating good progress in providing development opportunities. Finally, in Research and Innovation (R&I), 63% of responses indicate ambition, 32% developing, and 5% emerging, highlighting a strong commitment to embedding EDI into research practices, though some work remains to ensure full integration. These results demonstrate a positive commitment to EDI in staff experiences across recruitment, development, and research, with some areas, such as employment experience, requiring further focus and development. A breakdown into the average score for each question and summary response is provided in Tables 8-11.

Figure 13. Distribution of responses across the three 'Staff EDI Experiences categories, Emerging, Developing, and Ambitious, broken down by overall and the subthemes of Employment and staff experiences, Inclusive recruitment, Training and personal development and Research and innovation.



Employment and Staff Experience

Table 8. Employment and Staff experience questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
1. To what extent is representation data analysed routinely against relevant benchmarks?	1.4	Use of data was more limited with some centres indicating that they had limited data, had chosen not to collect personal data or believed it was available but were unsure about its use. Others indicated that they reviewed data against sector averages or through surveys.
2. To what extent is there intentional activity to draw on the insights of equality groups?	1.4	Centres indicated that staff had access to equality groups through their institutions but may not through the project. Others indicated that there was a consistent inclusive approach to sharing information or the formation of for example ECR club. Indications of how EDI was integrated include using it as a KPI in monitoring and adding it as part of the daily agenda.
3. To what extent is there intentional activity to respond to areas of emerging good practice to develop a more inclusive workplace?	2.4	Centres pointed to both informal and formal processes to build on good practice with comments about an inclusive workplace or flexibility in hybrid working and schemes for those with young families. Centres also pointed to being flexible along the line of three themes in their EDI strategy: Promoting fairness and respect, encouraging diversity and providing equal opportunity. The project has also taken the opportunity to conduct surveys and assessments of EDI practice across the programme.

Inclusive Recruitment

Table 9. Inclusive Recruitment questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
4. To what extent are recruitment and progression data routinely analysed and trends observed?	2.2	Centres pointed to recruitment data being the role of the institutions not the project itself but did point to their groups being diverse compared to the field and recruitment and progression being transparent to all.
5. To what extent is EDI considered in recruitment processes. Consider advertising, selection, interview panels etc.	2.6	The centres provided indications of EDI in their recruitment processes for example: building a diverse recruitment team, unconscious bias training and examining adverts to avoid bias in language for example ensuring they are gender neutral and adverts being disseminated widely through non-traditional media. EDI is highlighted in adverts and subject to a question in interviews and applications for funding subject to an anonymous review system.

Training and Personal Development

Table 10. Training and Personal Development questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
6. To what extent is EDI considered in the design and development of training and personal development opportunities? Consider accessibility, inclusivity, language, feedback etc.	2.6	Responses to this question varied with some indicating there was not much training or use of feedback forms to others highlighting focus on ECR events and career development with feedback captured and analysed and used to tailor future events. Opportunities are made available for staff to attend conferences and flexibly develop their career.
7. To what extent are opportunities for development offered, which aren't directly related to promotion? Coaching, mentoring, skills development, opportunities to be involved in projects/committees outside of substantive duties etc.	2.75	Responses to this focused on ECRs and involving them in wider activities to develop their skills, for example as CO-Is on projects or as a representative on the project management board. ECRs are encouraged to showcase their work through marketing channels and blogs and participate in summer schools for example. This is supported by mentoring between experienced and more junior staff members and external experts to broaden their responsibilities and knowledge sharing. One centre pointed to the success of this with researchers securing academic positions, promotions and awards.
8. To what extent are staff supported from diverse backgrounds to take up training and personal development opportunities?	2.6	Centres indicated that staff were encouraged and supported to take up training and development opportunities with this often provided for at the individual institution level, with for example funding for career development, and institution HR progress reviews. In addition centres encouraged researchers to take up opportunities with these embedded into projects and for example surveys capturing requests for development and training from across the project.

Research and Innovation (R&I)

Table 11. Research and Innovation questions and results summary from EDI self-assessment survey

Question	Numerical Summary	Responses Summary
9. To what extent is EDI considered in the development of R&I activities and teams?	2.8	<p>The responses from centres focused on the EDI activities and support for research teams, highlighting their diversity and equal and collegial working environments and the embedding of EDI into research alongside all other activities. It was mentioned that diversity led to greater innovation and creativity in decision making.</p> <p>In addition a centre highlighted how issues of accessibility were a focus of their research, supported by an external partner, in terms of consumer behaviour accessibility and finance of the technology they were researching.</p>
10. To what extent is EDI central to the allocation of research awards, funding and grants.	1.75	<p>This question was considered less applicable as some centres did not distribute or allocate funding. Others indicated that processes were reviewed to increase diversity in both formal and informal way through review criteria for example.</p> <p>Another example highlighted how funding was directed into specific consumer behaviour research as this was a gap that had not been previously prioritised</p>
11. To what extent is diversity considered in the selection of participants for research?	3	<p>Some centres indicated that this was not applicable to them.</p> <p>Here centres highlighted the diversity of their project teams.</p> <p>Others highlighted that EDI was considered, for example engaging with stakeholders from each part of the supply chain, but also not being subject to a formal process aside from University ethics review.</p> <p>One centre highlighted surveys of a diverse community including socio-economic background regarding consumer behaviour with responses analysed against EDI criteria. They also engaged with a variety of industry partners to produce case studies.</p>
12. To what extent is EDI considered in the preparation and dissemination of research outputs?	2.8	<p>Research outputs are made accessible and open access with research also publicised across different platforms for example websites, social media, blogs etc. Researchers of all levels are encouraged to present, and events are made free of charge to allow for participation.</p>

4.2.4 Drawing Things together – Survey responses

Considering the responses and findings from the survey the centres assessed themselves most strongly regarding concerning the knowledge and importance of EDI and its integration into activities such as meetings and events and the conduct of research, particularly in terms of research teams, activities and dissemination. In line with the findings of the cards exercise support and personal development was a particular strength.

Areas which were assessed as less universally positive concerned the use of data in relation to recruitment and staff experience and leadership for example. Other areas which were less universally positive included the distribution of funding and grants which was often not in the remit of individual centres so therefore not applicable to them directly. Another factor in the was whether the factor was the responsibility of the centre itself or the institutions which employed the individual members of the

centres of the NICER programme. For example, training and recruitment or infrastructure EDI considerations were identified as the remit of the institutions and therefore differed across the different institutions represented in the centre. EDI in relation to these issues was therefore less in the control of the centres and undertaking EDI work in relation to these areas would run the risk of duplicating effort or be made challenging by different institutional structures. These activities may therefore be inconsistent, and this highlights the issue that the work of the programme does not exist in isolation from other institutional or contextual factors and nor do the centres have control, even if this was desirable, over certain elements of EDI that were the subject of the survey. This shows the need for EDI approaches and activities to be considered not on an isolated project level but also in terms of how they appropriately interact with wider structures and processes to help contribute to progress on EDI in a complementary way without duplicating activities or effort.

4.3 Categorisation through EDI expectations framework

To discuss the results from the exercises they will now be viewed through the framework of the EDI expectations (EPSRC, 2022a; 2022b).

As noted at the outset the EPSRC's EDI expectations were made available part way through the NICER programme. In order to build on the identified desire for a framework and guidance for EDI and relate the self-assessment of the centres provided through the project we will now use the categories and headings of the EDI expectations as a lens to begin the discussion of the findings from the self-assessment process.

Table 12 below shows the EDI Expectations, a summary of the responses provided relating to each expectation and then examples of relevant practice identified.

The final column of the table provides a summary qualitative judgement of the NICER programme against the EDI expectations based on the evidence provided.

This is solely a summary judgement of the evidence provided to this project with EDI in line with the EDI expectations. This appropriates the language employed by the EDI Self-Assessment survey of **'Emerging'**, **'Developing'** and **'Ambition'**, but the judgements cannot be considered to be the same as the survey. Where significant evidence was provided of how the programme is addressing the expectations this is labelled as **'Ambition'** and where there are gaps in the evidence or identified areas for improvement these are labelled as **'Emerging'**. Where evidence is mixed this is labelled as **'Developing'**. This should be treated as a high level summary judgement as making more concrete judgements would be complicated by the non-prescriptive nature of the EDI expectations and the limitations of the current work noted above.

Table 12. Self – Assessment findings categorised according to EPSRC’s EDI expectations (EPSRC, 2022a; 2022b)

Theme	Expectation	Summary	Examples of EDI practice	High level summary
1: Develop an approach to embedding equality, diversity and inclusion (EDI) in the research lifecycle	1.1 Everyone can contribute something regardless of seniority or experience.	This was clearly prominent in the self- assessments provided by the centres with much of the responses focusing on involving groups of all levels, particularly Early Career Researchers in all elements of the work of the centres	People of all levels and experiences were included in the activities of the centres from PI to PhD students, this included being on advisory boards and working groups around EDI and more widely.	‘Ambition’
	1.2 Embed EDI during the planning of all activities to remove as many barriers as possible.	Across the centres, a wide range of approaches were identified and highlighted around embedding EDI in all activities. These included: Recognition that there were contextual factors that were outside the control of the centres such as the makeup of the field in which they worked and the (lack of) diversity.	The conduct of events and meetings. Events provision to allow for participation from as wide a group as possible through flexible and hybrid approaches. Physical and digital approaches, consideration of place and location, provision of free tickets. Engagement with different groups through partners and outside organisations. Adaptation of research methods to engage research with different groups e.g through research location and wider considerations of the social elements around the resource of interest and commissioning of research to explore consumer behaviour.	‘Developing’
	1.3 Reflect on mistakes as learning opportunities which form a key part of continual development.	Elements of the self- assessment were not framed in the terms of mistakes and respondents did not independently use this language. Having said this each centre identified areas for improvement through their self-assessment card exercise.	Wider engagement with external partners and groups beyond their area and those connected to the research area. For example businesses and groups associated with the sourcing of raw materials related to their area of interest.	‘Emerging’

	<p>1.4 Develop an understanding of your local context (barriers, opportunities) by learning about the wider EDI environment</p>	<p>The responses to the self-assessment demonstrated an appreciation of the specific context in which the centres worked and the implications they had for EDI practice within their work.</p>	<p>A significant observation was how significant elements in relation to EDI were the responsibility of the individual institutions (e.g recruitment, HR, training) that made up the centres, it was therefore challenging to create a centre-based approach to these elements as they were outside the centres control and providing training etc may duplicate that provided by institutions.</p> <p>Centres gave indications of the make-up of their own subject area which indicated an appreciation of the barriers and opportunities afforded by the context in which they worked. Such things included:</p> <ul style="list-style-type: none"> • Make-up of the academic discipline • Presence of external groups and partners that may be able to help with accessing a wider more inclusive group in relation to research • The attitudes of important stakeholders, such as businesses or banks who may affect issues of EDI in relation to the work again outside the centres control. • The nature of the work which makes some activities and subjects more appropriate for wider engagement whereas others may be less appropriate as opportunities for embedding EDI in the work. <p>Events were held with diverse groups such as industry, policy, the third sector and schools for example in order to engage widely and gain a wider understanding of the context in which the centres were working.</p>	<p>'Developing'</p>
<p>2: Implement good practices in recruitment and/or selection processes to ensure diverse teams</p>	<p>2.1 Ensure all opportunities have been openly advertised through diverse channels with thought given to language, flexibility and reasoning for essential criteria.</p>	<p>All centres indicated that they undertook certain activities to promote EDI in relation to their recruitment and selection activities.</p> <p>This applied differently to different centres as many did not distribute funding and recruitment practices were shaped by the institutions of which the centres were made up.</p>	<p>Where they had control over selection for different activities centres identified the following steps some took to ensure diversity:</p> <ul style="list-style-type: none"> • Panels • Boards inc ECRS and diversity <p>Centres indicated that they gave consideration to advertising opportunities in diverse channels and the use of inclusive language and some acknowledged that the technical nature of their work may result in off putting jargon in work and recruitment.</p>	<p>'Developing'</p>

	<p>2.2 People involved in the research, including advisory boards, have been fairly recruited, following a process which incorporates current good practice. Consideration is given to positive action whilst avoiding overburdening individuals and creating a balance of expertise from different organisations and career stages.</p>	<p>The diversity of the research teams and associated group and advisory boards was highlighted across the centres with involvement from different career stages and diverse groups. How this was achieved and what practice was followed was not explicitly highlighted by the centres and the impact of this on the workload of the individuals involved was not directly addressed but this is not to say that they did not follow good practice. Sometimes it was highlighted that the nature of the research community or specialism limited the available diversity so there are elements outside of the control of projects which affect efforts to improve EDI.</p>	<p>The research teams and advisory boards were considered to represent the diversity of the research area with opportunities taken to improve this diversity where the opportunity occurred.</p>	<p>'Developing'</p>
	<p>2.3 Where a grant is required to undertake a selection process, e.g. to award funding, whether for people or projects, an appropriate process has been followed to manage bias and safeguard the quality of decision-making.</p>	<p>Most of the centres indicated that they did not distribute funding so this area was not directly relevant to their activities. Where funding was distributed there were measures put in place to promote inclusivity alongside other considerations.</p>	<p>For those centres that did allocate funding EDI was a key assessment criterion for proposals with for example the promotion of projects being led by ECRs.</p>	<p>'Developing'</p>
<p>3: Ensure diversity and inclusivity in all activities such as events, sandpits, networking</p>	<p>3.1 Publish a code of conduct for organised activities.</p>	<p>There was no explicit reference to codes of conduct for events yet this is not to say that they did not exist</p>		<p>'Emerging'</p>
	<p>3.2 Activities are explicitly inclusive, accessible and diverse for speakers and attendees.</p>	<p>Across the centres steps were taken to address accessibility of events for speakers and attendees.</p>	<p>Giving consideration to location and place of an event and providing a mix of online and face to face events to maximise accessibility.</p> <p>Involving people of all levels in the conduct of events – this was particularly mentioned in relation to early career researchers who were widely involved in activities of the centres and encouraged to participate in events widely.</p>	<p>'Developing'</p>
	<p>3.3 EPSRC grants are committed to removing barriers to participation in all activities that they deliver</p>	<p>The centres provided activities and events in varied places and formats to allow for a range of accessibility and inclusion needs.</p>	<p>Hosting a mixture of face to face and online events.</p> <p>Holding events across a variety of locations e.g across the four nations of the UK to promote accessibility.</p>	<p>'Developing'</p>

<p>4: Create an inclusive and accessible environment</p>	<p>4.1 Establish an inclusive environment where all can thrive and all voices in the team are valued, regardless of personal circumstances.</p>	<p>It was often highlighted the collegiate environment of the work of the centres with participation and involvement of all career levels across activities. This allowed the voices of particularly ECRs to be involved and heard in the centres and their activities.</p> <p>Certain examples were mentioned of stress affecting members of a centres which affected the supportive working environment of the centre, although the origin of this was not discussed and it was indicated to be temporary in nature.</p>	<p>People of all career levels were involved in the work of the centres through both formal meetings, presentation and workshops to informal catch ups to promote an ECR community for example as well as hosting and running events across the programme and with external partners for example. Surveys and other feedback mechanisms were also used.</p>	<p>'Ambition'</p>
	<p>4.2 Provide regular communications (for example newsletters, e-mails, team meetings) with colleagues to underpin the approach to EDI.</p>	<p>Although not explicitly EDI themed, centres produced regular communication in different forms through different channels with a focus on accessibility and widening the audience.</p> <p>Events included specific EDI elements for example through a summer school.</p>	<p>The centres produced regular communications with their centres and associated stakeholders through different forms of newsletters, websites, events and presentations for example. With specific EDI elements included in a summer school for example.</p>	<p>'Developing'</p>
	<p>4.3 Ensure effective and robust processes for managing bullying and harassment are in place. This is supported by active allyship.</p>	<p>There was not specific mention of instances of bullying and harassment in the self-assessment exercise and how these were dealt with so no comment in relation to this can be made. Episodes of stress affecting the working environment of the centre were mentioned however</p>		<p>'Emerging'</p>
<p>5: Ensuring career progression and training for all members of the team</p>	<p>5.1 People are supported in setting achievable career goals and provided continuing professional development opportunities.</p>	<p>Opportunities were highlighted across the centres for ECRs and staff to get involved in varied activities to contribute to their personal and career development.</p> <p>Development and inclusion of ECRs was highlighted as particularly important across the centres, involving them in activities and encouraging them to present their work for example as career development opportunities. In one example a centre highlighted the members of staff who had progressed to permanent positions or been promoted as an example of their success in promoting professional development.</p>	<p>This included opportunities to present and discuss work both within and external to the centre and programme, engaging with formal and informal networks and external partners to engage, provide and develop opportunities for career progression suitable to the individuals of the centres</p> <p>This was complicated by the division of responsibilities for training and development between the centres and the institutions which employed their staff.</p>	<p>'Developing'</p>

	<p>5.2 Encourage mentoring and coaching opportunities, whether informal or formal.</p>	<p>Formal and informal mentoring and coaching opportunities were discussed across the centres from both colleagues partners and external groups.</p>	<p>Mentoring opportunities were made available and developed with internal and external experts and across institutions.</p> <p>Opportunities to broaden engagement through participation in events, blogs, videos, or work on projects outside their core area of work were highlighted as mentoring and coaching opportunities.</p>	<p>'Ambition'</p>
<p>6: Inclusive research</p>	<p>6.1 Diversity is included in research design, for example the user voice is included in the research and/or consideration is given to ensuring diversity in study participants.</p>	<p>There was less discussion about considering inclusivity in the design of research with this category being less applicable to certain centres whose focus may be on particular technical research areas which did not involve research participants directly.</p>	<p>Examples were given of how a different or wider approach to research to include more social aspects or respond to particular stakeholder need brought benefits or were of significance. These included for example:</p> <ul style="list-style-type: none"> • Taking research activities out into the community to enable people to participate who may not otherwise have been able to – and learning from the challenges this brings • Identifying and responding to a need through the research process. E.g. research into consumer behaviour for particular products and services to understand barriers and inform research around a particular technology for example. • Thinking more widely about the social context of the production of, raw materials for example and engage with groups associated with this in order to contextualise and broaden the appreciation of how it is produced EDI issues and context of research. 	<p>'Emerging'</p>
	<p>6.2 Research outputs are accessible and inclusive</p>	<p>Research outputs were made open access and disseminated in different form and formats across different channels to promote accessibility and inclusivity</p>	<p>Publication of open access papers and dissemination of results in different formats and channels to promote accessibility.</p>	<p>'Ambition'</p>

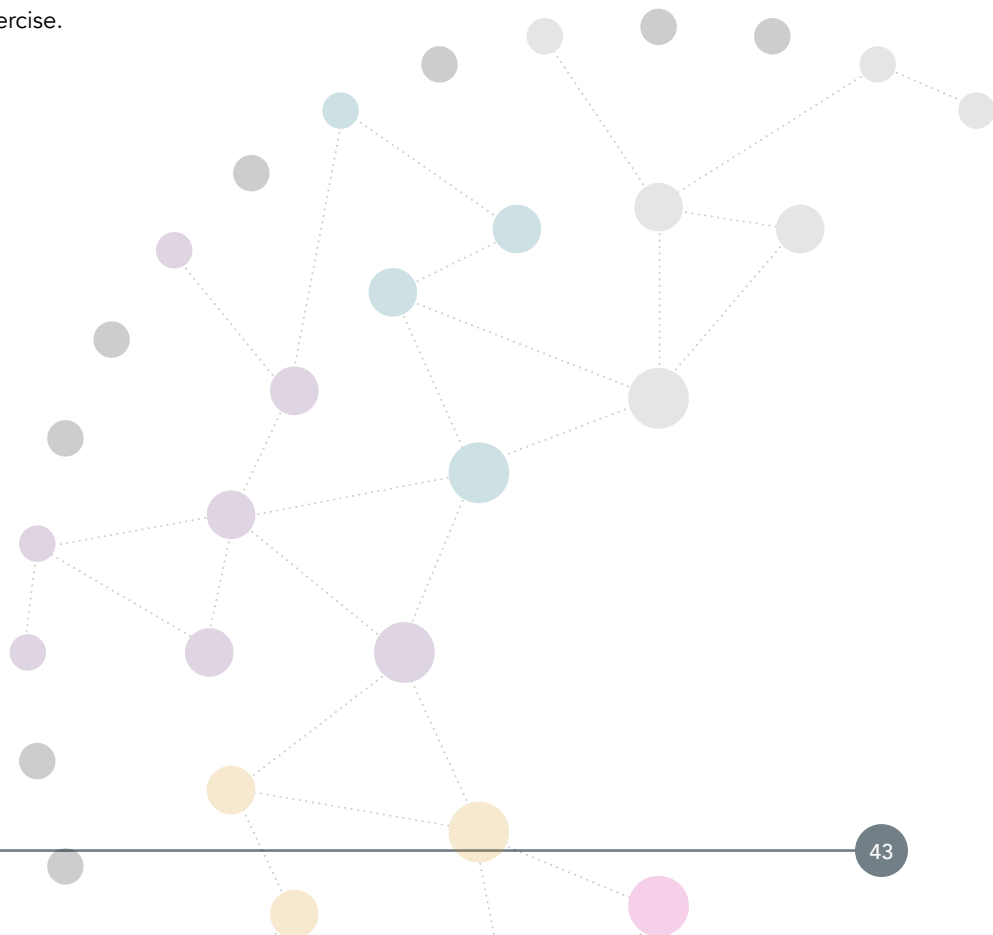
4.3.1 Drawing things Together – EDI expectations

Categorising the responses of the centres according to the EPSRC's EDI Expectations shows how the activities of the NICER programme are in line with the framework of expectations already, endorsing the approach that the centres have developed for integrating and embedding EDI into their work. From this perspective the centres are already addressing EDI in line with expectations with the examples shown in the responses potentially acting as a case study of one way in which the expectations can be 'met' for other researchers or indeed those involved in the NICER programme going further.

This could be seen as an endorsement of the approach of the centres and a reassurance to those who desired a framework or more guidance to help with their work. Where details were missing or activities were implicit rather than explicit for this framework may provide the reassurance of 'doing the right thing' and enable the centres to make their work more explicitly in line with expectations. This could help focus the EDI work of projects but this focus runs the risk of prioritising meeting the criteria and 'ticking the box' over a genuine reflexive contextual consideration of EDI which the non-prescriptive nature of the Expectations seeks to discourage. Care needs to be taken to ensure that providing guidance and following expectations does not result in EDI becoming a tick box exercise.

Where there are gaps in this classification, for example according to codes of conduct or processes for dealing with bullying and harassment, this could be attributed to them not being found in the responses (due to not being subject of a question) of the centres rather than not having examples of work in this area. These expectations could also help provide a focus for the development of work to be able to respond to these criteria more fully.

Categorising the EDI practice collated through the self-assessment process through the framework of the EDI expectations also serves as a valuable example of how EDI practice is integrated into research projects, demonstrating its value in contributing to high quality research. This pragmatic demonstration could be of use to others seeking to use the expectations or indeed EPSRC and others who may be interested in the bigger picture of their expectations and the challenges associated. For example considering EDI in research design shows some of the challenges and areas for development faced by researchers and how this may provide an alternative perspective to benefit the research and its quality, demonstrating the value of an EDI perspective when it may not be immediately apparent.

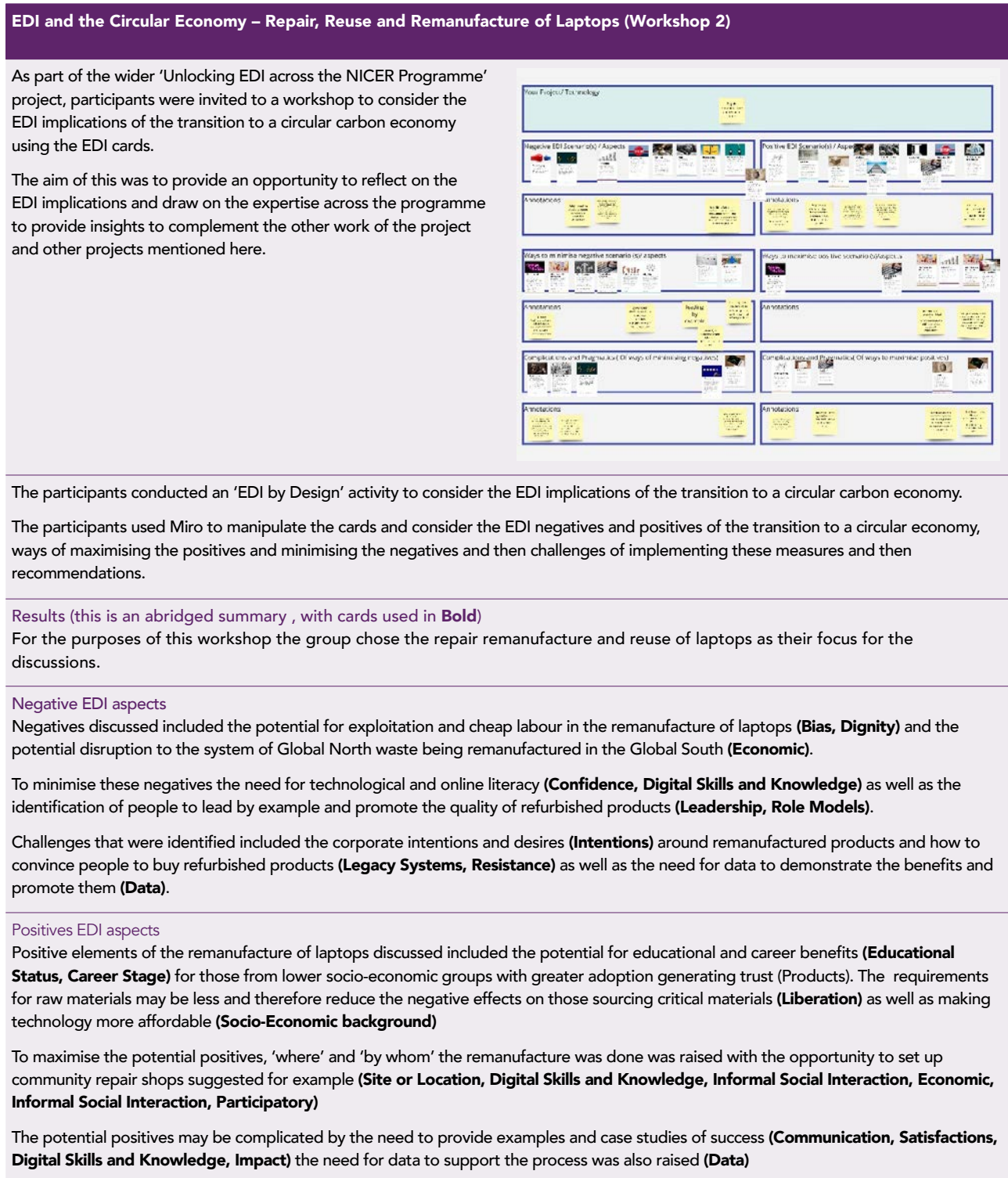


5. EDI Activity Case studies

The following four case studies associated with this project show different ways in which EDI concerns have been integrated into NICER programme activities as examples of practice to potentially build on for others.

5.1 Case Study 1 - EDI and the Circular Economy repair reuse and remanufacture of laptops (workshop 2)

Figure 14. Case Study 1 - EDI and the Circular Economy – Repair reuse and remanufacture of laptops (Workshop 2)



Overall recommendations

The group recommended including EDI as a measure or KPI alongside other factors and developing way of integrating it into the product and service design process (**Goals and aims, Impact**) supported by specific funding to support EDI (**Finance**)

Impact and Lessons learned

This activity demonstrated a potential method of integrating EDI considerations into the wider work of a project or centre. Such an activity could be used in multiple ways for example:

- The focus on a case study allowed participants to benefit from each other's perspectives and share expertise and could be used as a reflective, awareness raising or educational task in isolation (as with the summer school activities).
- Such a task could be used to focus on an area of research or work and consider its EDI considerations. This could be done in advance to integrate EDI considerations into a project – hence 'EDI by Design' or done retrospectively as a reflective assessment.
- Activities to consider EDI in relation to a research project, could potentially engage partners, stakeholders and others in research to generate different perspectives and approaches to the benefit of both inclusivity concerns and the research as a whole – integrating EDI to mutual benefit rather than seeing it as an extra or an add on.

5.2 Case Study 2 - A Soft and Critical System approach exploring Equality, Diversity, and Inclusion challenges in a Research Project Team

Figure 15. Case Study 2 - A Soft and Critical System approach exploring Equality, Diversity, and Inclusion challenges in a Research Project Team.

A Soft and Critical System approach exploring Equality, Diversity, and Inclusion challenges in a Research Project Team

As part of their course one team member conducted a study into EDI challenges focusing on one of the centres.

This project aimed to:

- facilitate action learning and participatory assessment of the challenges of embedding EDI in project and individual practice. The goal was to engage stakeholders in actively identifying and understanding these challenges and exploring potential solutions through collaborative participation and reflection.

The project's objectives and activities included:

- Conducting Interviews
- Collaboratively Agree on solutions
- Propose recommendations
- Compare model with real world

The project discussed how

- EDI is responsibility of individual HEIs so cannot be 'imposed'.
- Agreement to share knowledge and good practice across programme at the outset.
- Lack of framework from UKRI was a challenge
- Lack of relevant knowledge, a framework and criteria – inhibited work as to know if doing the 'right thing'.

The project employed Soft Systems methodology and Critical Systems Heuristics to explore EDI in relation to the centre.

It gave an opportunity for members to reflect on the challenges of EDI and acts as an example of how considerations of EDI may be supported by other work (in this case a project for a course) to the benefit of the centre and supporting others more widely

5.3 Case study 3 - Crafting the IDEALL Circular Carbon Economy Roadmap – An Inclusive, Diverse, and Equal Circular Carbon Economy for ALL

Figure 16. Case Study 3 - Crafting the IDEALL Circular Carbon Economy Roadmap – An Inclusive, Diverse, and Equal Circular Carbon Economy for ALL.

Crafting the IDEALL Circular Carbon Economy Roadmap – An Inclusive, Diverse, and Equal Circular Carbon Economy for ALL

Background

The chemical industry is one of the largest and most energy-intensive industries in the world. While the environmental impact of the traditional linear carbon economy is well-known, its role in perpetuating inequalities among marginalised groups is often overlooked. The Circular Carbon Economy (CCE) offers not only a chance to cut emissions by reusing and recycling carbon in a closed loop, but also an opportunity to fairer more inclusive future

Vision

Our vision is an inclusive Circular Carbon Economy (CCE) that fosters environmental sustainability, social equity, and economic resilience. In this CCE, carbon resources are continuously reused, recycled, and repurposed, minimising waste and reducing reliance on fossil fuels. By prioritising inclusive growth, this economy will ensure that the benefits of low-carbon innovation and sustainable practices reach all communities, especially those historically marginalised and disproportionately impacted by pollution and climate change. It will uplift underrepresented voices, empower local economies, and ensure that all people have the opportunity to participate in and benefit from the transition to a low-carbon future.



Project Overview

In this multidisciplinary project, expertise from engineering, sociology and business shall work together with industry and policy partners to develop new understandings of the EDI factors that may emerge when transitioning towards a CCE. We shall work with stakeholders to co-develop a preliminary roadmap that will provide a clear and actionable plan for integrating EDI considerations into CCE initiatives, including policies, practices, and programs.

Roadmap Development

Three workshops were conducted as part of this project, engaging over 75 stakeholders to co-create solutions for embedding EDI within CCE initiatives. The first two workshops used the EDI in research cards shall be used to help: (A) identify EDI positives and EDI negatives of the transition towards a CE; (B) ways of maximising positives and minimising negatives; and (C) identify practical challenges of implementing these steps. Insights from these workshops, combined with a scoping review of current practices for integrating EDI into CCE initiatives, informed the development of a preliminary roadmap. This roadmap was presented for feedback during a follow-up workshop hosted at the University of Surrey. Participants critically assessed the roadmap, identifying gaps and limitations.

Their feedback was used to iteratively refine the roadmap, improving its strategic focus and addressing potential risks to its implementation.

5.4 Case Study 4 - NICER Workshop on: Engaging with Equality Diversity and Inclusion using the EDI Cards

Figure 17. Case Study 4 - Engaging Early Career Researchers in Equality, Diversity, and Inclusion (EDI)

NICER Workshop on: Engaging with Equality Diversity and Inclusion using the EDI Cards

On Friday 15th September 2023, researchers Peter Craigon from the University of Nottingham and Oliver Fisher from the University of Surrey lead a workshop aimed at helping early career researchers (ECRs) engage with Equality Diversity and Inclusion (EDI).

During the workshop the ECRs took part in two activities that used the EDI cards, a 'Random Draw' and an 'EDI by Design' exercise, to promote and facilitate discussions around EDI and research.



Outcomes and Impact

More than 20 early career researchers (ECRs) participated in a workshop held during the NICER Programme's annual summer school for ECRs. This workshop offered a valuable platform for ECRs to explore EDI considerations within the context of their research, fostering an inclusive culture among NICER-affiliated ECRs. The participants engaged enthusiastically with the activities, to identify both potential EDI benefits and challenges in their circular economy projects.

Building on the success of this workshop, the CE-Hub commissioned the workshop coordinator to conduct a comprehensive self-assessment review of the EDI initiatives embedded within the NICER Programme, the 'Unlocking EDI in the NICER programme' project.

Lessons Learned

The use of EDI cards and activities in the NICER Programme's summer school workshop provided valuable insights into fostering EDI awareness and engagement among early career researchers (ECRs). Participants responded positively, engaging in meaningful discussions that broadened their perspectives on EDI in research contexts. The random selection of cards in the first activity effectively sparked conversation, though participants suggested refining the activities for more focus. Feedback highlighted a need for additional guidance, such as pre-selecting cards or labelling them by theme, to help manage the volume of content and ensure more structured participation. A key takeaway was the potential to expand these sessions, possibly creating longer, tailored workshops that could deepen EDI understanding and directly support research design. This session reinforced the flexibility of the cards while underscoring the need for adaptable facilitation guidance, paving the way for future sessions that could further integrate EDI into participants' daily research practices.

6. Reflections and Lessons Learned

The aims and objectives of this project was to facilitate a self- assessment of EDI across the NICER programme and identify lessons learned to help inform similar projects in the future. To this end the project has sought to prioritise the responses and evidence given by the respondents from the centres through the project activities as they are the experts on their activities, context, barriers and challenges they face. The lessons learned from this project revolve around a number of potential tensions discussed below

6.1 Nature of EDI – Desire for a framework but not a ‘tick box’

Respondents indicated that they would like more guidance or a framework to help guide them in their activities around EDI. The EPSRC’s EDI expectations could be considered to be such a framework to help guide EDI in research activities. It does not however represent a prescriptive set of standards to be met in order to ‘meet expectations’ as may be expected. In contrast and as noted at the outset of the EDI expectations

‘It is not an exhaustive list of every barrier, but a resource to help you identify and overcome local barriers and to be used alongside other toolkits provided by organisations and your local institution... This is not a pass or fail exercise but an opportunity to embed inclusive actions into the way research is carried out. Embedding these expectations is not about ticking a box (or every box, in other words, every expectation). It is about helping people on the journey to positive change. It’s about what is right for you and your team, your context and where you are on that journey...’ (EPSRC, 2022b)

Judged by these criteria, the categorisation of this project’s findings through the lens of the EDI expectations provided evidence against the expectations in a varied way, providing evidence to against to the vast majority of expectations, illustrating how certain challenges may be addressed in different ways according to context.

6.2 EDI already being addressed

The lesson to be drawn from this could be that EDI is being ‘addressed’ already and that confidence could be drawn from how the activities of the centres have been ‘validated’ by the expectations themselves with the combination of a number of small activities, integrated into activities such as meetings, research activities and dissemination. People are already addressing EDI through these activities and the list of activities and practices collated in this project demonstrates a range of potential approaches by which could be built on for the future. Defining ‘good practice’ however is more difficult as this is dependent on context, perspective according to some standard of what ‘good’ looks like as in this case the examples have been provided by a self-assessment not subject to external validation. This could be supported by the use of data an area which was shown as less developed from the survey responses.

6.3 Internal strengths vs external challenges

Broadly speaking the areas that were identified as EDI strengths by the centres, for example their research environment, mentoring and development opportunities meetings and communications for example were all areas where they had responsibility and control. By contrast areas identified for improvement often involved other organisations, a combination of institutions or people or processes and were more challenging. It may therefore prove beneficial to develop approaches to EDI which take into account the institutional context in order to prevent duplication of effort and processes which may cause frictions

6.4 Challenge to engage more widely

An area for improvement identified was how to (more) effectively engage with groups external to the project(s). For example, this could be in terms of reaching underrepresented groups through recruitment or engagement or how to work with groups or stakeholders involved with the area of work of interest. This was

contextual with the centres experiencing differing challenges but identifying the potential need to pool knowledge and approaches and consider diversity challenges more widely. Examples were given of how such external engagement was beneficial, for example working with different partners and people at different sites, considering the social context of the production of natural resources, developing research around consumer behaviours or taking research activities to a different location in a community to reach a different audience.

It is noteworthy that the responses to the activities demonstrated a recognition of EDI as extending beyond the make-up of a research team, to wider concerns about the social context of the work and discipline area and the wider implications it may have.

6.5 Integrated approach – EDI benefitting research

As with the previous point, the responses of the centres also demonstrated the integration of EDI into the work of the centres as an important, beneficial part of the centres research and activities rather than an 'extra' or add on to be considered separately from the wider activities of the centre. This demonstrates a recognition that EDI contributes to high quality research with EDI considerations prompting different approaches or insights to research practice to the benefit of the research activity. Examples given by the centres or the activities highlighted in the case studies of the IDEALL project (See Case Study 1) or wider CE workshop (Case Study 4) could potentially act as examples to thinking more widely, involving different perspectives or shaping existing research to be more inclusive through EDI by Design for example.

6.6 Need for an EDI lead – and everyone's responsibility

With EDI being integrated into the activities of the centre and not separate there is a similar tension between where and who has responsibility for EDI considerations within such work. EDI was highlighted as everyone's responsibility and indeed the breadth of activities highlighted in the responses highlights EDI as concerning everyone, with each therefore having a role to play. It was also raised however the benefit of having an EDI lead as somebody to oversee EDI activities with time allocated, but this potentially could lead to it being seen as an extra or being that person's responsibility and 'not my job'.

6.7 Need for contextual guidance

The desire for guidance and viewing the findings through the EDI expectations emphasises that this needs to be contextual guidance to engage and include depending on local, situated challenges and contexts. The examples here could act as starting points or ideas to adapt and try to integrate as part of research to benefit of the inclusivity of the community and the implications and impacts of the research produced. – How this is done would benefit from collaboration across research and stakeholder communities as this is where the contextual experience lies to help provide guidance and benefit to the research.

7. Conclusions

In conclusion the 'Unlocking EDI in the NICER Programme' project has revealed a wide range of ways in which EDI was integrated and enacted across the NICER programme. When viewed through the framework of the EDI expectations then the responses of the centres were shown to speak to the vast majority of them. To this extent despite professed uncertainty the centres could take confidence that they as already addressing EDI in line with expectations. The activities and the reflections created show the breath of activities and approaches that are relevant to the EDI agenda with a number of tensions and trade-offs were identified to help guide contextual EDI practice the future without reducing it to be a tick box exercise.

Contextual guidance and consideration is needed to provide and appropriate reference point for EDI activities so that people feel that they have support and guidance. This however should not be so rigid as to promote a tick-box approach to EDI. We have facilitated a self-assessment which has its limitations but it may be useful as a model to promote reflexivity and appropriate ways of judging EDI which can be adapted based on the local knowledge of the people working on the ground – not imposed from above.

Overall this project can be a source of examples to show that EDI is often being addressed already and is something that everyone can and should participate in and how they may contribute. EDI is shown to contribute to good practice for research practice, culture and other elements of work so its integration is beneficial in varied ways, so it should not be seen as an extra or a distraction. As shown here comparatively small actions across a wide range of activities can add up to a significant integration of EDI to the benefit of work. Having said this it is always open to improvement and requires varied perspectives, different views and contributions to work on areas for improvement and work to improve Equality, Equity Diversity and Inclusion is always ongoing and never done.

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Appendix

Appendix 1 – Survey questions for EDI self assessment survey

Equality Diversity and Inclusion (EDI) in the NICER Programme - Self-assessment survey

Please complete one version of this survey on behalf of each hub or centre. Please also complete the consent form and see the accompanying information for more details. Please return this to Peter Craigon.

This self-assessment survey is adapted from the University of Nottingham's EDI Maturity Matrix, a toolkit designed to support excellence and ambition in embedding EDI practices. It has been updated to include elements of the EPSRC's EDI expectations and to reflect activities typically undertaken by research projects, networks, centres, and hubs.

It provides you the opportunity to reflect on EDI engagement, EDI in core activities and staff EDI practices in your local area and provide evidence of your activities. The purpose of this is to reflect on strengths, areas for improvement and lessons learned on EDI in the NICER programme. The responses along with other activities will be combined to provide an overall 'self assessment' of EDI in the NICER programme and will be anonymised as far as possible.

Guidance to Complete the Form

The EDI survey is designed to be completed with relative speed and ease. Reflecting on the discussions you had using the EDI cards during the NICER EDI workshop on 15/07/2024, please self-evaluate your Hub/Centre's engagement with the EDI questions surveyed as Emerging, Developing, or Ambition. A description of possible example measures undertaken to help self assess which level you are at is provided for each question.

Please use the drop-down menu to tick and select either Emerging, Developing, or Ambition for each question based on your assessment. Please select only one level (Emerging, Developing or Ambition) per question.

You are encouraged to engage others in this process and complete the EDI survey as part of a team activity to reflect widely on EDI in the activities of your centre.

Please consult with others to complete the survey and provide evidence to:

- Recognise and capture activities and areas of strength
- Highlight areas of EDI which require further development
- Identify lessons learned for incorporating EDI into research activities

Examples of evidence may include, but is not limited to:

- EDI training events and/or educational resources for staff, panel members or wider community
- Support and training for staff.
- Engagement with diverse communities both within and outside of academia
- Funding research projects and/or activities that address issues of EDI, and actively seeks to incorporate diverse perspectives into its research agenda.
- Evaluating progress on EDI goals, which may include tracking metrics related to diversity, conducting surveys or assessments of member experiences, and soliciting feedback from stakeholders.
- Leadership that demonstrates a commitment to EDI through their actions and decisions, such as appointing diverse leaders, establishing EDI committees or working groups, and incorporating EDI considerations into strategic planning processes.
- Policies and practices that promote inclusivity and equity, such as anti-discrimination policies, accessibility accommodations, and support for work-life balance.
- Actively recruiting and supporting members from diverse backgrounds. This can be evidenced by demographic data on network members.

You are welcome to include any comments you have for each question in the space provided. Additional space is provided at the end for any supplementary evidence or remarks regarding your Hub/Centres' efforts in integrating EDI that may not be covered in this survey.

Contact Information for Assistance

If you have any questions or encounter any issues while completing the survey, please contact either Oliver Fisher or Peter Craigon.

EDI Engagement

EDI Culture and Efficacy

1. To what extent is EDI understood as an integral part of CE-Hub or Centres activities, rather than an add-on?

Emerging -1	Developing -2	Ambition -3
EDI is considered as a separate part of activities. Occasionally, equality impact assessments are completed to assess impact of activities	Some, but not all, teams and functions have systems in place to ensure EDI is embedded within the design of policies, practices and activities.	EDI is embedded. It is considered at planning stage and throughout all CE-Hub and Centre activities.

2. How broad is the EDI knowledge and understanding of all protected characteristics, beyond those of well-known charter marks?

Emerging -1	Developing -2	Ambition -3
Although there is some knowledge of the protected characteristics, the needs and experiences of those groups in the workplace or learning environment are not thoroughly considered.	Some of the protected characteristics are prioritised. The process of exploring the needs and experiences of these groups and subsequent implications for practices has begun	All staff have a good awareness of the protected characteristics and are able to consider these in relation to their work or environment. There are opportunities for continuous learning to further develop EDI knowledge and awareness.

3. When there is a problem relating to EDI (such as accessibility, fair treatment or dignity and respect), does everybody know who to speak to or which process to follow?

Emerging -1	Developing -2	Ambition -3
There are pathways for resolving EDI issues, however these are not always universally followed and understanding around these processes vary.	Some colleagues have a good understanding of resolution pathways; others may know who to ask if unsure.	Pathways for resolving EDI issues are visible and understood by the majority. Colleagues are encouraged to raise issues, as active partners in the EDI agenda.

Governance and Leadership

4. To what extent can everyone contribute towards developing and leading research activities, regardless of seniority or experience?

Emerging -1	Developing -2	Ambition -3
Contributions are primarily made by those with higher seniority or more experience, with limited opportunities for others to participate.	Contribution is actively encouraged across activities with some support and guidance provided accordingly.	A culture of inclusivity is well-established, with contribution from all levels is actively encouraged and well supported across activities.

5. To what extent is the diversity of your leadership team actively and transparently monitored?

Emerging -1	Developing -2	Ambition -3
Diversity in leadership is informally monitored but not published. Actions based on evidence are not implemented.	Leadership diversity is occasionally monitored and shared with relevant committees. Some actions based on evidence are identified and addressed.	Leadership diversity is routinely monitored and publicised in a transparent way, eg a public statement of commitment and planned actions to diversify. Leadership takes action based on evidence and tracks progress.

6. What initiatives are in place to advance leadership diversity?

Emerging -1	Developing -2	Ambition -3
Initiatives to advance leadership diversity are considered.	Action to increase leadership diversity are discussed and considered. Some trial initiatives have taken place.	A clear plan of action is in place and qualitative and/or quantitative signs of progress are evident or planned for. These are reviewed regularly.

7. To what extent do leadership functions understand and advocate for EDI in daily life?

Emerging -1	Developing -2	Ambition -3
EDI issues are responded to when raised. EDI features in leadership discussions.	There is consistent EDI leadership which advocates some proactive, planned measures to address EDI issues.	Sustained EDI leadership motivates others to develop inclusive practices. It is evident, transparent and open to scrutiny.

Communications, Marketing Outreach and Engagement

8. To what degree is accessibility a routine consideration in the production of communications (marketing materials, web content, newsletters, emails)?

Emerging -1	Developing -2	Ambition -3
Basic awareness of accessibility regulations and UKRI policies. Communications have the minimum level of accessibility for disabled people to meet legal requirements.	There are pockets of good practice in the consideration of accessibility when producing communications. Some colleagues have good awareness of accessibility beyond the legal requirements, but this is not universal.	Accessibility guidance is routinely considered and used to actively inform the production of communications. Hub and Centre staff are regularly reminded and informed about policies and guidance on producing accessible forms of communication.

9. To what extent is there engagement with diverse groups and/or organisations outside the NICER programme? e.g. Widening participation, civic engagement

Emerging -1	Developing -2	Ambition -3
Engagement with external groups occurs on an ad-hoc basis with limited consideration of diversity.	Consideration is given to activities targeted at, and/or in partnership, with underrepresented groups. These are actively delivered.	Well established partnerships and activities with underrepresented groups and communities are in place. New opportunities for engaging with specific groups are continuously identified.

10. To what extent have imagery and language been reviewed across all communication platforms to support the message of diversity and inclusivity?

Emerging -1	Developing -2	Ambition -3
Materials are reviewed on an ad-hoc basis to ensure imagery and language are positive. Other informal activity may take place.	A plan of action to communicate positive messages is in place. Effort is made to diversify role models presented by the organisation. The use of inclusive imagery and terminology is evident.	Diverse representation and language are at the forefront when creating new materials. Imagery and language is routinely reviewed.

EDI in Core Activities

Meetings, conferences and events

1. To what extent is diversity of speakers and audiences considered in the organisation of events?

Emerging -1	Developing -2	Ambition -3
Discussion on increasing diversity of speakers at events has begun, with limited actions. Venue accessibility is considered on an ad-hoc basis.	Efforts are made to increase the diversity of speakers at events. Participants are asked about their diverse needs and efforts are made to manage these.	Diversity of speakers is integral to event planning and clearly visible. Diverse needs of the audience are anticipated and catered for. Good practice is learnt and feedback from speakers used to improve future events.

2. To what extent are inclusive meeting practices the norm? eg time of day; papers in advance in accessible format; arrangements to ensure equitable contributions; diverse representation; looking beyond the ‘usual’ sphere of reference to bring in fresh ideas etc

Emerging -1	Developing -2	Ambition -3
Inclusive practice is not considered when arranging or chairing meetings.	Meeting chairs actively seek to increase EDI and meetings are organised with some inclusivity considerations, for example, time of day and papers in advance.	Meetings are accessible, collaborative and engaging, and efforts are made to ensure diverse voices are heard and respected. There is clear, sustained cultural change in relation to meeting practices.

3. To what extents are the barriers to participation explicitly considered in the planning and undertaking of events both online and in person?

Emerging -1	Developing -2	Ambition -3
Barriers to participation are only considered when they occur with adaptations taken on an ad-hoc basis.	Efforts are being made to identify and address barriers to participation, with some measures in place to improve accessibility for events both online and in person.	Barriers to participation are consistently and explicitly considered in all stages of event planning and undertaking, ensuring high accessibility for all participants in both online and in-person events.

4. To what extent is a culture of participation in EDI opportunities enabled? Such as equality networks, learning opportunities, committees etc.

Emerging -1	Developing -2	Ambition -3
Participation in EDI opportunities is limited and generally viewed as time away from a substantive role which should take priority.	Participation in EDI opportunities is accepted as a valuable use of time, however this is inconsistent.	Participation in EDI opportunities is universally supported and valued as an essential dimension of university life.

Awarding or prizes, awards, funding and grants

5. To what extent is diversity data re. funding recipients routinely examined?

Emerging -1	Developing -2	Ambition -3
Diversity data is mostly observational and rarely examined when considering and allocating awards/funding.	Diversity is a consideration when allocating awards/funding, although this may not be systematised or supported by data analysis.	Leadership routinely reviews data, takes action and tracks progress. Diversity and bias considerations are an integral part of the awarding process.

6. To what extent have awarding processes been reviewed for accessibility, inclusivity and unintended barriers?

Emerging -1	Developing -2	Ambition -3
Awarding processes are reviewed for inclusivity on an ad hoc, one-off or informal basis..	Reviewing the awarding processes for inclusivity is more habitual and there is intent to develop good practice. Qualitative and/or quantitative signs of progress are evident.	Awarding processes are inclusive and accessible. Awarding criteria are systematically reviewed to mitigate unintended barriers to success.

7. Where applicable, to what extent have initiatives been put in place to increase the participation and success of under-represented groups? This could include unconscious bias training for funding panels, diverse panels, positive action initiatives for potential recipients etc.

Emerging -1	Developing -2	Ambition -3
Initiatives outside of the standard University training provision are not apparent. Effort is made to ensure diverse judging/review panels, but this is inconsistent.	Initiatives have been trialled and effort is made increase the participation and success of under-represented groups. Judging and review panels have access to information on unconscious bias.	Commitment to diversify award recipients is evident through a range of initiatives which are offered on an ongoing basis (rather than one-off). Judging and review panels are diverse and suitably trained.

8. To what extent do those developing physical and digital spaces and resources routinely consider EDI at the design stage?

Emerging -1	Developing -2	Ambition -3
EDI is not considered at the design stage and is generally considered towards the end of the process as a quality check.	EDI is considered at the design stage, but needs to be more detailed and systematised.	EDI is an integral and recorded part of the design process for physical and digital spaces and resources.

9. To what extent do relevant staff feel trained and equipped to include EDI considerations in the design and usage of physical and digital spaces and resources?

Emerging -1	Developing -2	Ambition -3
The relevant knowledge to properly consider EDI in the design and usage of physical and digital spaces and resources is not apparent.	Staff have received basic training in EDI and have an awareness of considerations needed in the design and usage of physical and digital spaces and resources, although knowledge may need updating or refining.	EDI knowledge is up to date and staff confidence is high. Staff know where to go to access information and advice, if required.

10. To what extent are routes for staff/participant feedback clearly defined, visible and utilised?

Emerging -1	Developing -2	Ambition -3
Staff/participant feedback is welcomed, but is not explicitly invited and routes to provide feedback are not clear.	There are defined routes for staff/participant feedback, but this can be time-limited (eg during a consultation) or of limited visibility.	Staff and participants routes for feedback are clearly defined and communicated in all relevant spaces. These routes are well utilised and any action, as a result of feedback, is clearly communicated.

Staff EDI

Employment and Staff Experience

1. To what extent is representation data analysed routinely against relevant benchmarks?

Emerging -1	Developing -2	Ambition -3
Some high-level data is available and reviewed when requested. Limited benchmarks have been identified. Data analysis does not always generate actions.	High level and local level data is available and reviewed when requested. Some relevant benchmarks have been identified. Data analysis is used to set actions and targets on an ad-hoc basis.	Representation data is readily available, systematically reviewed against relevant benchmarks, and used to set actions and targets.

2. To what extent is there intentional activity to draw on the insights of equality groups?

Emerging -1	Developing -2	Ambition -3
There is limited consultation with diverse groups. There are not always clear plans in place to address any issues raised.	Some equality groups are engaged in sharing insights and experiences, however this isn't always clearly communicated back to those groups.	There is a consistent approach to creating opportunities for equality groups to share their experiences and shape the development of an inclusive workplace. Developments based on their insights are clearly communicated back.

3. To what extent is there intentional activity to respond to areas of emerging good practice to develop a more inclusive workplace?

Emerging -1	Developing -2	Ambition -3
Developments are driven by the demands of institutional strategy rather than proactive, contextualised efforts to build inclusivity into the workplace.	There is some strong championing of emerging good practice in relation to an inclusive workplace. This tends to rest with individuals rather than being an embedded approach.	There is consistent appetite for seeking opportunities to develop as an inclusive workplace, and an agile response to emerging best practice guidance.

Inclusive Recruitment

4. To what extent are recruitment and progression data routinely analysed and trends observed?

Emerging -1	Developing -2	Ambition -3
Limited high-level data is available and reviewed when requested. Data analysis does not always generate actions.	High level and local level data is available and reviewed, when requested. Some observations are made regarding 'leaks' in the career pipeline. Data analysis is sometimes used to set actions and targets.	Recruitment, promotion and progression data is readily available, systematically reviewed against pipeline data, and used to set actions and targets.

5. To what extent is EDI considered in recruitment processes. Consider advertising, selection, interview panels etc.

Emerging -1	Developing -2	Ambition -3
Limited consideration is given to EDI in recruitment processes, for example reasonable adjustments. Diversity of interview panels is not apparent.	Some consideration is given to EDI in recruitment processes including the use of positive action where appropriate. Under represented groups are encouraged during the application process. Accessibility and inclusivity are considered, but this is not consistent. Interview panels are generally diverse and panellists are aware of and trained in unconscious bias.	Recruitment processes are inclusive, accessible and transparent. Different avenues for advertising are utilised and applicants from under represented groups are encouraged. Applications are anonymised and identifying factors removed. Systemic and organisational barriers to recruitment are routinely reviewed and addressed. Diversity of interview panels is standard and panellists are trained in unconscious bias, which is regularly updated.

Training and Personal Development

6. To what extent is EDI considered in the design and development of training and personal development opportunities? Consider accessibility, inclusivity, language, feedback etc.

Emerging -1	Developing -2	Ambition -3
EDI is considered in the design and development of training, but this is inconsistent. Access needs are requested, but not always acted upon.	EDI is considered in the design and development of training. Accessibility issues are addressed and efforts are made to ensure inclusivity. Feedback channels are in place.	EDI is an integral part of the design and development of training. Inclusive learning and development is embedded within all materials and resources. Feedback is regularly evaluated and informs future developments.

7. To what extent are opportunities for development offered, which aren't directly related to promotion? Coaching, mentoring, skills development, opportunities to be involved in projects/committees outside of substantive duties etc.

Emerging -1	Developing -2	Ambition -3
Staff are encouraged to access the central professional development provision. Local opportunities for development are limited.	There is a general openness to provide opportunities for development. These are usually considered on an ad-hoc and individual basis, although there may be some structured opportunities in place.	Local, contextualised opportunities for development are well established, and there is an openness to consider alternative proposals, ideas or initiatives.

8. To what extent are staff supported from diverse backgrounds to take up training and personal development opportunities?

Emerging -1	Developing -2	Ambition -3
Training and personal development opportunities are available, but these are not well advertised and limited support and encouragement is provided to staff from diverse backgrounds.	Training and personal development opportunities are available and some effort is made to support and encourage take up from diverse groups.	Training and personal development opportunities are wide ranging and include specific initiatives to meet the needs of under represented groups. Barriers to access for under represented groups are recognised and there are clear actions in place to encourage and support take up.

Research and Innovation (R&I)

9. To what extent is EDI considered in the development of R&I activities and teams?

Emerging -1	Developing -2	Ambition -3
Equality Impact Assessments are used to determine the impact of R&I activities on protected characteristic groups, however limited actions are taken as a result of this. The diversity of research teams is not considered.	EDI, in the development of R&I activities, is occasionally taken into consideration. Often, EDI in research development is localised and enacted by individual researchers. Targeted practices are implemented to build diverse research teams.	Research teams are diverse and this is regularly monitored. EDI is embedded within the development of all R&I activities and regularly reviewed throughout project lifecycles.

10. To what extent is EDI central to the allocation of research awards, funding and grants.

Emerging -1	Developing -2	Ambition -3
Limited consideration is given to EDI in the allocation of research awards, funding and grants. No firm actions are taken to increase diversity in the allocation of awards.	A named person has responsibility for ensuring EDI is considered during research funding processes. Processes and criteria are reviewed to remove unintentional barriers for under-represented groups. Effort is made to generate submissions from underrepresented groups.	Leadership routinely reviews data, takes action and tracks progress. Data and feedback from successful/unsuccessful applicants on the process is acted on where possible. Consideration of EDI in allocation is recognised and rewarded.

11. To what extent is diversity considered in the selection of participants for research?

Emerging -1	Developing -2	Ambition -3
No consideration is given to diversity during research sampling.	Effort is made to diversify research participants but is not always consistent.	Research participants reflect the diversity of the community, taking into account the protected characteristics as well as, socio-economic background, caring responsibilities and temporary impairment.

12. To what extent is EDI considered in the preparation and dissemination of research outputs?

Emerging -1	Developing -2	Ambition -3
EDI considerations are rarely incorporated into the preparation and dissemination of research outputs, with minimal attention to inclusivity.	EDI considerations are highlighted in the preparation of outputs and dissemination and they are adapted accordingly.	EDI is consistently and comprehensively integrated into the preparation and dissemination of research outputs, ensuring inclusivity and accessibility in all aspects.

