Research Culture Initiatives in the UK





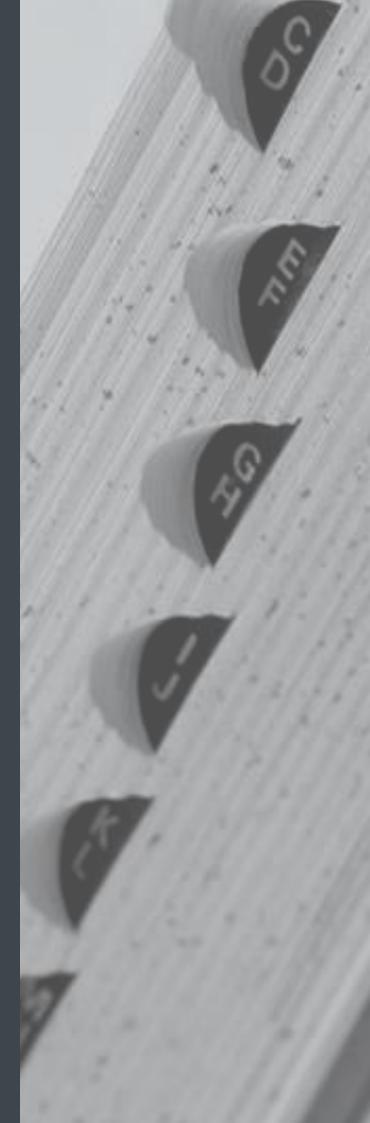




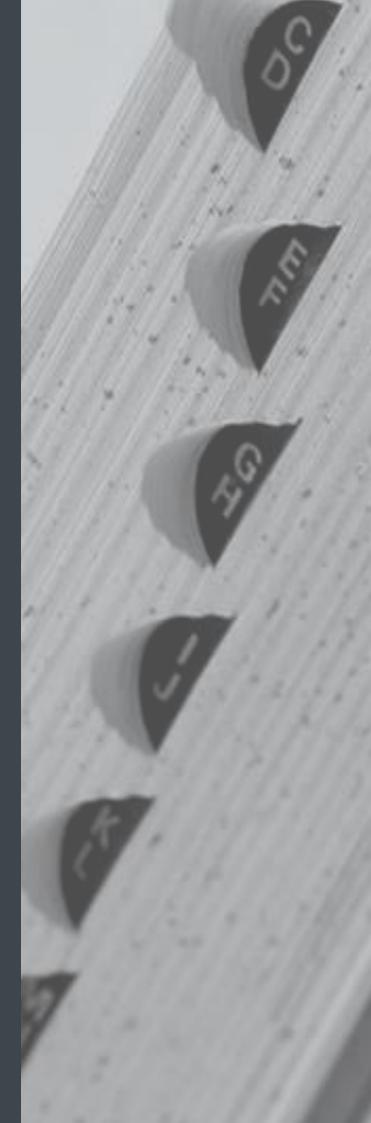
UK Research and Innovation

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Executive summary

Background

People are central to a world-leading research and innovation (R&I) sector—from ensuring that everyone can contribute, to making sure the benefits are maximised for society and the economy. The government's Research and development (R&D) people and culture strategy calls for collective efforts to enhance research culture, with the ambition of unleashing a new wave of research talent by attracting, developing and retaining people from diverse backgrounds, and engendering an environment that nurtures their skills.

UK Research and Innovation (UKRI) commissioned the Careers Research and Advisory Centre (CRAC) – Vitae, Shift Learning, and the UK Reproducibility Network (UKRN) to conduct a 'state of the nation' on research culture, mapping current and past activity to improve culture across the R&I sector, and to consider how it can be better supported in the future. The project aimed to establish a knowledge base that would support UKRI's contribution to the development of a Good Practice Exchange, as outlined in the Government's Research and development (R&D) people and culture strategy. The goal of the Good Practice Exchange is to harness and consolidate existing activities relevant to research culture for the benefit of researchers, research itself, and society.

The project team used desk research, a literature review, the development of a research culture framework, a call for evidence (resulting in 347 initiatives), and four community co-creation workshops. We focused on mapping initiatives thematically, as well as by sector, coverage, level of funding, and whether initiatives involved collaboration or co-production, evaluation, and practice sharing. We also used cluster analysis as a tool to explore the data further. Analysis of the effectiveness of initiatives was beyond scope.

A framework for research culture

The term 'research culture' has gained momentum since 2018 yet remains loosely defined. Using the Royal Society's definition of research culture as encompassing 'the behaviours, values, expectations, attitudes and norms of our research communities', we brought together different perspectives on research culture into a holistic behaviours and values

framework. This was developed and refined through desk research, consultation with key stakeholders, and project workshops.

The framework identifies the behaviours and values that underpin:

- How research is managed and undertaken
- How research ensures value
- How people are supported
- How individuals engage with others

The primary purpose of the framework was to map and categorise initiatives for analysis. However, there was considerable interest in the potential of the framework as a tool to support strategic planning on research culture by employers, funders, and policymakers, including for the Research Excellence Framework (REF). The full framework is in the report.

Key findings

Most initiatives had a focus on higher education contexts

The language of 'research culture' is higher education-centric and is not used widely outside of academia, where other terminology is more relevant (e.g. organisational culture). Reflecting this, there was a strong bias in the desk research, literature review, and call for evidence towards higher education. Most initiatives analysed in the call for evidence related to academia, with a focus on researchers and research activities. A smaller proportion of initiatives related to the public and third sectors, and only a few focused on the private sector. There are gaps in understanding initiatives relevant to research culture beyond researchers in higher education, and particularly in the private sector. There is also a lack of understanding about the contextual factors shaping research cultures across sectors, even where the behaviours and values identified are similar.

 Initiatives often had broad coverage of research culture elements and behaviours

Many initiatives covered a wide number of areas across the research culture framework. Nearly a fifth claimed to address over 20 behaviours and/or values in the framework, with a similar proportion addressing 3-5 behaviours and/or values. More focused initiatives, addressing only 1 or 2 behaviours and/or values, were rare. The broad coverage of many research culture initiatives likely reflects the breadth of what is understood by 'research culture'

and will make effective evaluation of initiatives challenging.

Evaluation of initiatives was often weak or uncertain

Only a small proportion of initiatives had been evaluated. An even smaller proportion of these had been independently evaluated, with others only being self-assessed or having low quality evaluation (for example, using unvalidated surveys with low response rates). Funded initiatives and those involving multiple partners were much more likely to be evaluated than other initiatives. Evaluation methods need strengthening and wider use, with consideration of methods for assessing long-term culture change, as well as relevant and appropriate evaluation for smaller, less well-funded initiatives.

There was a diversity of approaches and activity types

The project identified a wide range of initiatives, with many taking more than one approach. Most initiatives had an educational or informational purpose: resources, training, and studies were the most common. Certain collaborative initiatives were also common, namely networks and workshops. Special interest or campaign groups and conferences were less frequently reported. There remains a gap in understanding how and when different approaches are effective for improving research culture.

• Most initiatives had a UK or region-wide focus

The majority of initiatives identified had UK or region-wide coverage. Many others focused at an institutional or organisational level. By contrast, only a few operated at a departmental or team level. This likely reflects a bias in the call for evidence around people's understanding of what kinds of initiatives were 'worthy' of submission. More information is needed on such smaller-scale initiatives, which were not easily captured.

Many initiatives reported some level of collaboration

Over half of the initiatives reported some level of collaboration. There were barriers to this collaboration, however, such as difficulties paying collaborators and partners fairly and efficiently. Respondents in the call for evidence also identified collaboration, communication and engagement with other areas as a gap in research culture initiatives. Many of these discussed communication and collaboration between sectors, whereas others focused on the necessity of a diversity of contributions to the research endeayour.

While a majority of initiatives had been shared, this sharing tended to be fairly 'passive'

Many initiatives had been shared publicly, though this may be an overestimate of the wider picture due to the declared interest of the project in initiatives involving sharing. Initiatives in the public and third sectors, as well as larger-scale and collaborative initiatives, were more likely to have been shared than those in industry or academia. While a high proportion of all initiatives had been made public, the extent of this sharing was often fairly 'passive'—for example, consisting of posting resources or a case study online.

Early career researchers (ECRs) were commonly targeted

Most initiatives were targeted towards researchers, particularly early career researchers (ECRs). The volume of initiatives focused on ECRs was highlighted in comments, though some mentioned that not all initiatives were well- or easily implemented.

Initiative coverage of EDI matters was broad rather than specific

Initiatives that targeted minority or minoritised groups tended to focus on gender and ethnic minorities. Few initiatives focused solely on specific groups or protected characteristics, and there were gaps in initiatives focused on: LGBTQ+ communities, Black researchers, disabled researchers, those from low socio-economic backgrounds, care experienced people, neurodivergent researchers, and those with caring responsibilities.

This might reflect the large proportion of initiatives focused generally on diversity and inclusion, which could obscure the lack of more focused initiatives

EDI was seen both as being 'well served' and a 'gap'

could obscure the lack of more focused initiatives targeted at people with specific protected characteristics. It could also suggest a need to understand the efficacy of more general EDI-focused research culture initiatives, and if they are meeting the needs and expectations of all intended beneficiaries.

There is a call for more decisive action to improve research culture

There is a strong desire to move from problem identification to action, including the development and effective implementation of policies. Participants in the project indicated that further action should take place with the involvement of research leaders, and by co-led by a wide range of stakeholders, across all career stages and types,

across all sectors, and across all the protected characteristics.

Recommendations

These recommendations are for funders, employers, and policymakers.

Key recommendations



- 1. Facilitate collective effort, building on existing interest and action on research culture. This should be through:
 - The leveraging of existing initiatives and communities whose work has relevance to research culture.
 - The creation of more opportunities for the engagement of everyone involved in the research endeavour, from top-down to bottom-up.
 - More effective cross-sector working, including consideration of the contextual factors that are relevant for understanding research culture in different sectors and types of R&I organisations.



- 2. Enable robust evaluation of research culture initiatives to determine effectiveness across sectors and with different communities. This should be done through:
 - The expansion of support for the evaluation of research culture initiatives.
 - The promotion of tools and approaches for measuring the effectiveness of initiatives.
 - The development of research culture indicators and/or the adaption of existing sector-wide mechanisms.



3. Develop mechanisms to curate and share existing, emerging, and future practices. These should consider the role that evidence synthesis can play in building and making more visible the knowledge base on research culture, informing decision-making and avoiding duplication of effort.

Recommendations for strategic leadership on research culture



1. Create opportunities for strategic leadership on research culture across R&I that can set a shared vision and guide action.



2. Prioritise efforts to ensure that research culture leadership is inclusive of people of all career stages, sectors, backgrounds, and personal characteristics.



3. Incentivise and support senior leaders to challenge existing practices and foster positive research leadership within their organisations.



4. Encourage exploration of the research culture framework as a tool to underpin strategic planning, including gap analyses and policymaking.



5. Model good evaluation and reporting practices and embed these in the design of

Recommendations for shared learning



1. Research culture sharing should encompass learning from all types of practice, including good, bad, indifferent, and emerging practices. Any future Good Practice Exchange should go beyond its working title to foster learning communities.



2. Encourage active research organisations to report, in publicly accessible formats, what initiatives they have in place to support research culture.



3. Encourage publication of all evaluations of research culture initiatives, including those which do not have strong positive outcomes, to enable learning.

Recommendations on evidence gaps and needs



 Focus attention on initiatives for and led by LGBTQ+ people, Black researchers, disabled researchers, those from low socio-economic backgrounds, care experienced people, neurodivergent researchers, and those with caring responsibilities.



2. Consider mechanisms for funding smaller scale, bottom-up initiatives, particularly encouraging effective evaluation of impact.



3. Encourage more investigation into the emerging topic of sustainability within the context of research culture.



4. Investigate what types of activities are most effective for driving change on different aspects of research culture and in different R&I contexts.

Introduction and method

Background and aim

UK Research and Innovation (<u>UKRI</u>)¹ commissioned the Careers Research and Advisory Centre (<u>CRAC</u>)-<u>Vitae</u>, <u>Shift</u> <u>Insight</u> and the UK Reproducibility Network (<u>UKRN</u>) to conduct a comprehensive review of research culture in the UK. This initiative was part of UKRI's ongoing commitment to enhance the research and innovation (R&I) ecosystem.

The project involved a literature review, the development of a research culture framework, a call for evidence, and community co-creation workshops. The project's primary objective was to map and better understand current and past activity to improve the culture and environment of the UK R&I sector. One goal of the mapping process was to reach those outside of obvious research culture channels and learn more about initiatives in a wide range of settings. It aimed to establish a knowledge base that would support UKRI's contribution to the development of a Good Practice Exchange, as outlined in the government's Research and development (R&D) people and culture strategy. The iterative nature of the project meant that the aims and objectives developed during the project. In the co-creation workshops and through the call for evidence, another objective developed around considering what might come next and what a Good Practice Exchange might look like.

UKRI's overarching goal, as set out in their 2022 to 2027 strategy, is to foster an outstanding research and innovation system in the UK that drives economic, social, environmental and cultural benefits for all citizens. Through their six strategic objectives and principles for change, UKRI will drive the shifts needed to allow the UK's world-class R&I system to flourish. The people and culture strategy calls for collective efforts to enhance research culture – with a specific ambition of unleashing a new wave of research talent by attracting, developing and retaining people from diverse backgrounds – and engendering an environment that nurtures their skills.

The proposed Good Practice Exchange aims to harness and consolidate existing activities in the sector for the benefit of researchers, research itself, and society as a whole. By leveraging ongoing momentum and fostering collective action, the exchange seeks to improve research culture and facilitate positive change.

Scope

This project aimed to gather data from a wide range of sectors, including:

- Academic (universities, research institutes, funders, networks).
- Industry / the private sector (research institutes, research & development (R&D) departments, networks, human resources (HR)).
- The public sector, including the NHS, public sector research establishments (PSREs) and public engagement organisations.
- Third sector, including research-oriented charities and volunteering organisations.
- Other organisations involved in facilitating and connecting research activities.

 $^{^{1}}$ We have included a glossary in the appendices which lists the acronyms used in this report (Appendix 15: Glossary).

Overall approach

The project involved several stages, with iteration occurring in between. This was particularly so for the research culture framework (see the section 'Framework development'), which was developed throughout the project. Iterative development occurred through consultation with a diverse range of stakeholders. The report brings together findings from all phases.

Figure 1: Method summary

Developing a framework to describe research culture initiatives

- A framework was developed to describe research culture.
- It was used to inform the literature review, structure the call for evidence, and identify gaps.
- The framework was developed iteratively, with feedback from key stakeholders.

Conducting a literature review to gather information about activities, initiatives and networks

- The review covered a wide range of disciplines, sectors, research types, and groups of researchers.
- Insights from the review informed other stages of the project.
- An initial list of activities was also created.

Putting out a call for evidence across the R&I sector

- A call for evidence was launched to collect data on initiatives addressing research culture.
- It was an online survey structured around the framework.
- Researchers and others in the R&I domain could submit data on their own initiatives or those of others.
- The call for evidence was distributed widely to reach underrepresented groups.

Identifying and filling gaps in the collected data

- Agile processes were used to identify gaps.
- The Shift team searched for new initiatives.
- They entered data and did further research.
- Iteratively assessing the data allowed us to adapt our tactics.

Producing and running cocreation workshops with varied research communities, with a focus on overcoming barriers for research culture

- Four workshops were conducted via Zoom, each with 15-21 participants.
- The workshops were designed to gain a variety of perspectives from people across the research spectrum.
- Participants included underrepresented communities and diverse opinions.
- Participants fed back on the framework, discussed existing work, and developed ideas for a Good Practice Exchange.

Reporting key findings, with recommendations and considerations to inform future championing of a healthy R&I culture

- Quantitative and categorical data was cleaned, tabulated, and analysed.
- Transcripts and the literature review were coded.
- Coding was attentive to the nuance of sector, subject and theme.

We wanted to gain a comprehensive understanding of research culture across different sectors, industries and voices – our approach placed this at the forefront. We recognise the importance of collecting data from a wide and diverse pool of contributors to ensure the dataset reflects the R&I sector and a diverse range of stakeholders, focusing on underrepresented groups in research.

For more details of our methods, please see the following appendices:

- Appendix 2: Research culture framework methodology
- Appendix 3: Call for evidence: Detailed methodology
- Appendix 4: Desk research / gap-filling
- Appendix 5: Co-creation workshops
- Appendix 7: Analysis approach
- Appendix 8: Research culture: A literature review
- Appendix 13: Cluster analysis method
- Appendix 16: Questions asked in the call for evidence
- Appendix 19: Framework mappings, used to map the call for evidence data to the newest version of the research culture framework
- Appendix 21: Project reflections

What do we mean by underrepresented groups?

We use the term 'underrepresented groups' fairly loosely in this report.

While it does often refer to groups of people who have a protected characteristic, we sometimes use it to mean sectors or categories of initiative which were less likely to be engaged with, such as industry.

Mapping research culture initiatives

We developed a research culture framework to provide a holistic view of the many aspects of research culture and to provide a consistent way of describing the values and behaviours that underpin open, inclusive, healthy, and supportive research cultures. This framework was used to map the initiatives from across the UK that were gathered in the call for evidence, as well as the search terms used in the literature review. It has been validated and refined through consultation and expert input and could serve as a useful framework for the sector outside of this report. Indeed, there has been considerable interest in the potential of the framework to categorise practice and inform strategic planning by employers, funders, and policymakers. Participants highlighted the value of a framework on research culture for conducting gap analyses and creating action plans, as well as its potential relevance for the development of research culture indicators for the Research Excellence Framework (REF).

Framework development

The term research culture is used extensively in higher education yet remains loosely defined. What the term means tends to differ depending on the perspective or 'lens' from which it is viewed – for example, from a perspective of research integrity, researcher development or equality, diversity and inclusion (EDI). We brought together all these different perspectives to take a holistic view, maximising its scope and value for mapping examples of practice.

The framework is underpinned by the Royal Society's definition of research culture and has been expressed in terms of appropriate values and behaviours. It was developed using an iterative approach, initially by reviewing a range of documents and reports relating to aspects of research culture – for example, the Science Europe Values Framework² and the range of research culture-related initiatives identified within the research Concordats and Agreements Review.³ Different elements contained within research culture statements and strategies from a range of 20 UK universities were also used to define the framework (see Appendix 2: Research culture framework methodology). Evidence emerging from the literature and desk research further refined the framework.

An important aspect in the framework's development was to validate it from the perspective of different stakeholders. A series of interviews and correspondences were undertaken with key stakeholders and researcher networks who represented a range of perspectives on research culture, to gain feedback on the framework's structure, content and language. Consideration was given to ensure that the framework reflected the views and experiences of different research communities. For example, women, disabled researchers, and Black and ethnic minority researchers were consulted on the framework. 'Research connectors', such as public engagement groups and organisations supporting university-industry engagement, were similarly consulted, ensuring input from non-academic groups.

As with other aspects of the project, it was difficult to establish industry engagement with the framework's development. However, it was helpful to hear in the workshop discussions that many of the challenges identified within academic research were echoed in industry – for example, the driver to publish in high-impact journals, as well as ensuring research integrity, reducing bullying and harassment and sharing knowledge. The list of organisations involved in developing the framework is given in Appendix 2: Research culture framework methodology. The framework was refined further through discussions within the co-creation workshops and subsequent feedback.

² https://www.scienceeurope.org/our-resources/research-culture-values-framework/

³ https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/research-concordats-and-agreements

Overview of the framework

The research culture framework is structured in four sections:

- How research is managed and undertaken
- How research ensures value
- How people are supported
- How individuals engage with others

Sections are split into elements, and each element has 4-7 behaviours which describe it (Figure 3). The elements and behaviours within each of these sections are described in the full framework ().

The interconnectedness of research is such that, inevitably, there is some overlap within the framework, and there are, no doubt, valid arguments for alternative structures and descriptors. An important consideration was how to reflect EDI considerations appropriately given their importance in achieving healthy, vibrant and inclusive research cultures. EDI aspects have been integrated throughout the framework, rather than being identified as a separate section or element, as EDI should be seen as an integral and critical consideration in all aspects of research culture. Based on feedback from interviews and during the workshop, the framework appears to incorporate the breadth of understanding of research culture and provides a useful taxonomy to categorise practice.

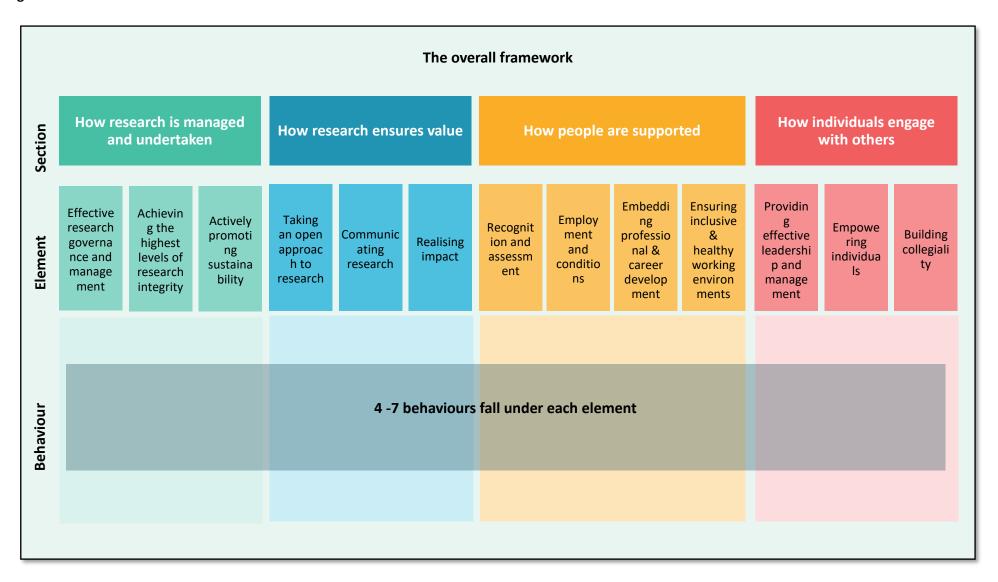
Figure 2: The research culture framework

Research culture: How research is managed and undertaken The behaviours and • Effective research governance and management The standards, structures and policies to ensure good research values that enhance practice, integrity and equity research culture Achieving the highest levels of research integrity Undertaking research with integrity, honesty and rigour to ensure confidence in the methods and results Actively promoting sustainability Minimising the impact of research on environmental, social and economic resources How people are supported How research ensures value • Employment and conditions The recruitment, employment and progression of a diverse Taking an open approach to research research workforce Undertaking research that is openly accessible, collaborative · Recognition and assessment and increases research integrity bringing public value and Broadening what is recognised and valued as contributing to the research endeavour Communicating research • Embedding professional and career development Making research and knowledge available and accessible to all Integrating professional and career development into all career stages Realising impact • Ensuring inclusive and healthy working environments The translation of research into value for communities, society, Environments where all individuals are free to be themselves, included culture and economy feel well supported and confident to express their views How individuals engage with others • Providing effective leadership and management The performance and line management of individuals Empowering individuals Individuals having ownership and responsibility for their

Building collegiality

The creation of healthy, inclusive, supportive communities

Figure 3: The research culture framework structure



The current landscape of research culture initiatives

Our mapping of the current landscape of research culture activities was developed via desk research, a literature review and a call for evidence. Although we gathered information regarding 347 initiatives, we recognise that this is by no means a complete picture: many initiatives will not have been submitted to us or have not been made public.

Of the total of 347 initiatives submitted to the call for evidence, 261 (86%)⁴ were ongoing.

For more information on the data in this section, see Appendix 11: Additional figures.

Academic initiatives dominated those submitted to the call for evidence

Initiatives relating to the academic sector (292) made up the bulk of submissions (84%). This was a significantly higher proportion than for initiatives relating to the public sector (33%), industry and private sectors (30%) and third sector (23%).⁵

The findings highlight a broader issue extending beyond this project – namely, the challenge of accessing and identifying non-academic initiatives that offer valuable insights and potential for learning. The lack of visibility and navigational difficulties in discovering these activities pose a significant obstacle for anyone seeking diverse sources of inspiration and knowledge in the research culture domain. During the co-creation workshops, participants outside higher education discussed various initiatives which offered ways of thinking about and addressing culture that could be innovative in a higher education context. Inevitably, more of these initiatives will exist, but the challenge is knowing where and how to find them, including what language to use when asking about them, and how to have enough contextual understanding to see how learnings might be applied.

While substantial efforts were made to identify and categorise initiatives, it should be noted that in this sample, there is likely to be a considerable non-response bias due to the difficulties of engaging particular communities and segments, and in identifying initiatives which have not been shared or externally evaluated. While we have noted below where patterns seem apparent, these findings should not be seen as fully conclusive.

Initiatives submitted were often educational

Most reported initiatives had an educational and informational purpose: resources (32%), training (28%) and studies (27%) were the most widely reported. Certain collaborative initiatives were also common, namely networks (25%) and workshops (21%).

There were few significant differences between sectors, suggesting these results are not simply due to the prevalence of academic initiatives. However, there were some obvious patterns: 95% of networks related to academia; 80% of statements/concordats/policies and 100% of strategies related to the public sector generally; and 100% of initiatives labeled collaborative also related to the third sector.

⁴ Please note that questions were not compulsory in the call for evidence. This means that for each question, the numbers may not add to 347; participants may not have answered every question. Furthermore, percentages are calculated from the number of initiatives which submitted evidence to each question. This means that we have not assumed people who missed a question are giving a specific answer – e.g. if we have not been told an initiative is ongoing, we are not assuming it is not; the inputter may have missed the question for a variety of reasons.

⁵ Initiatives may relate to more than one sector; therefore, these proportions do not add to 100%.

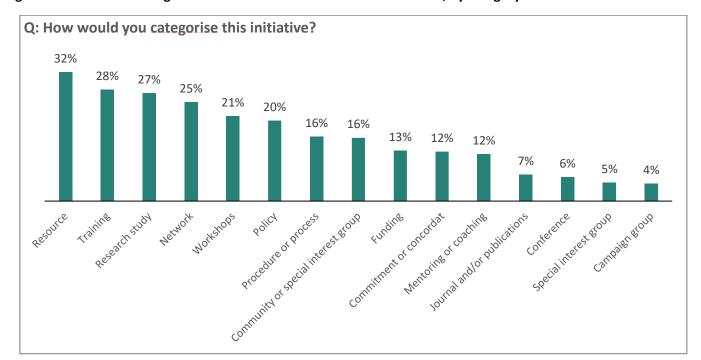


Figure 4: Bar chart showing initiatives submitted to the call for evidence, by category

Base n = 347; 172 missing. Note that this was a multiple-choice question so the number of responses will not total the number of initiatives. All categories with <4% were removed for ease of visualisation.

Special interest or campaign groups and conferences were less frequently reported than other categories. It may be that these are more challenging, more time-consuming, and/or require more funding to set up. If this is true, there may be a gap which a future Good Practice Exchange could look to fill. However, it is also possible that the reason there are numerous training and resource initiatives is because they are considered most effective; this might be work a future Good Practice Exchange may want to investigate further.

More information is needed on smaller-scale and grassroots initiatives

Almost half (45%) of the submitted initiatives were at organisational/institutional level. Only 25 (7%) were at departmental or team level. This may be indicative of how the call for evidence was marketed and the impression people had of what was 'worthy' of submission.⁶ 70% were UK or region-wide, i.e. those operating on a wide scale.

Approximately half (49%) the submitted initiatives had funding of some kind.⁷ 13% did not have funding; for a further 35% the respondent was not sure if it was funded or not. Funding levels varied: 14% had funding of less than £30,000; 15% had funding of over £125,000.

Small-scale initiatives may well offer the diversity of voices and contexts needed to inform a future Good Practice Exchange. However, these are often harder to find, potentially as:

• Small-scale or grassroots initiatives are likely to be relevant to specific contexts, environments and communities. This means they may not be considered 'generic' enough to apply to a wider audience or easily adapted to other contexts without significant investment.

⁶ Please note that initiatives could sit at more than one level.

⁷ The Call for Evidence simply asked respondents whether the initiative was funded. This means that the data distinguishes between initiatives that received any form of funding (whether through grants, or department or organisational funds, outside institutions or settings, or other) and initiatives from settings which are likely volunteer-led or volunteer-run, and do not receive formal funds.

 These initiatives may not have the funding or capacity to focus on advertising or communicating their work outside their immediate area.⁸

Additional targeted outreach to map the research culture landscape is needed, to see what is there and to try to access some not-yet-reached initiatives; this will require new methods that extend beyond the current project. Even where initiatives are small-scale, there is still considerable potential for learning.

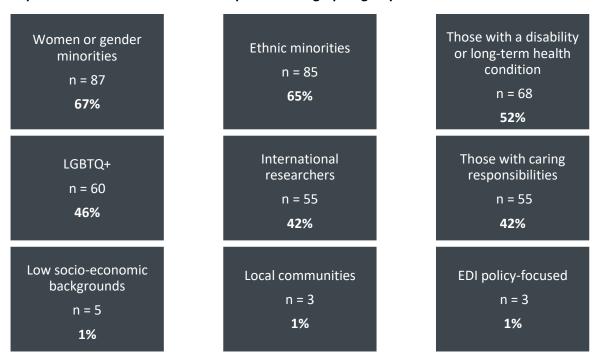
Initiatives often targeted early career researchers, gender and ethnic minorities, but few were specifically targeted at only one of these groups

Most initiatives were targeted towards those involved in research activities (75%), and particularly at researchers. There were a significant number of initiatives (48% of the total) targeting early career researchers (ECRs). There were some differences between academic and non-academic environments, in that significantly more academic initiatives focused on students, early career and mid-career researchers, while more third sector initiatives focused on institutions and funders.

The initiatives that were categorised as targeting specific demographic groups tended to focus on gender and ethnic minorities – 74% fit either or both of those targets. However, there were not many initiatives specifically focused on Black researchers – only three. Furthermore, few focused on people with lower socioeconomic backgrounds, local or rural communities, or neurodivergence (only one initiative). This gap may be because of our methods of collecting data and the challenges in engaging minority groups; however, it may also be a true gap.

Although almost half of respondents (49%) ticked three or fewer options for targeted demographic groups, a minority ticked all, or almost all, options (28%). These were often initiatives specifically focused on EDI.

Figure 5: Proportions of initiatives focused on specific demographic groups submitted to the call for evidence



Other groups with <3 initiatives submitted were: rural communities; STEM; people with neurodivergence; institutions that may be less renowned; independent researchers; and people who cannot read English.

⁸ Baxter, L., & Fancourt, D. (2020). What are the barriers to, and enablers of, working with people with lived experience of mental illness amongst community and voluntary sector organisations? A qualitative study. *PLoS one*, *15*(7), e0235334.

BME Early Career Researcher Hybrid Conference: An example initiative targeting a demographic group

The Black Minority and Ethnic (BME) Early Career Researchers (ECR) conference was founded by Dr Bernadine Idowu-Onibokun, aiming to equip and empower BME ECRs with the tools and skills required to remain and thrive in academia. Beginning in 2016, the conference has grown each year.

https://www.uwl.ac.uk/research/bme-early-career-researcher-hybrid-conferences

Note that all case studies are presented as examples of initiatives present, rather than as evaluated examples of best practice.

While EDI was felt by some in our call for evidence to be one of the areas of research culture currently 'well served' by initiatives (19%), 20% also felt that EDI was an area where there was a 'gap'. While those from minority or minoritised groups were often indicated as target beneficiaries in initiatives, there were far fewer initiatives collected which focused on LGBTQ+ communities, Black researchers, disabled researchers, those from low socioeconomic backgrounds and care-experienced young people. None of the initiatives submitted focused solely on neurodivergence or those with caring roles, though these were included within broader initiatives. While some of these may have been missed in our call for evidence, there may be gaps here around initiatives focused on specific minorities and protected characteristics.

Research is needed to understand how well initiatives that approach EDI broadly respond to needs identified by specific minority and minoritised groups. The need to ensure that future initiatives are led by or co-led by specific minority or minoritised groups (particularly Black researchers), was also emphasised by participants in the co-creation workshops.

Research culture initiatives mapped fairly evenly across the research culture framework

It was clear that in many cases, initiatives covered a very wide number of topic areas, often also crossing framework sections. 20% (71 initiatives) addressed 3-5 behaviours and 19% (65 initiatives) claimed to address over 20 behaviour areas in the framework, indicating initiatives with very broad scope. In a small number of cases, it was clear that individuals were using the call to evidence to report clusters of separate initiatives present in their setting in one submission. Partially as a result, few areas appear at first to be clear 'gaps' in evidence.

Initiatives often related to more than one framework section (Figure 6). For examples of initiatives across the framework sections, see Appendix 10: Case studies and examples.

Breaking our analysis down to the thirteen 'elements' level of the framework, more focused initiatives, addressing only 1 or 2 elements, were rare – making up only 12% (41 initiatives) of our total initiatives. These more focused initiatives were particularly concentrated in two areas:

- Ensuring inclusive, supportive and healthy environments (11 initiatives)
- Supporting career progression (10 initiatives)

Additionally, only 1 or 2 initiatives specifically focused on:

- Realising impact
- Considering the sustainability of research
- Achieving the highest levels of research integrity
- Empowering individuals

This depth and breadth of coverage can be seen in the density map of interventions (Figure 8).9

In the co-creation workshops, many recommendations relating to collaboration and communication were put forward as potential avenues for further work (Appendix 5: Co-creation workshops). These included:

- Involving groups beyond higher education in developing frameworks for research integrity and evaluation.
- Addressing the barriers to co-designing and collaborating with non-academic stakeholders in funding applications and initiatives.
- Forging strong connections between sectors, enabling movement between them.
- Incentivising researchers to communicate with communities that might challenge their perspectives.

There is potential for all sectors to potentially to learn from each other and work together to ensure that research processes and findings are accessible to all by learning from each other. Open and collaborative approaches to research, which actively engage and co-produce, are important for research that drives societal and economic benefits.¹⁰

Figure 6: Proportion of initiatives which relate to each framework section



Base n = 347

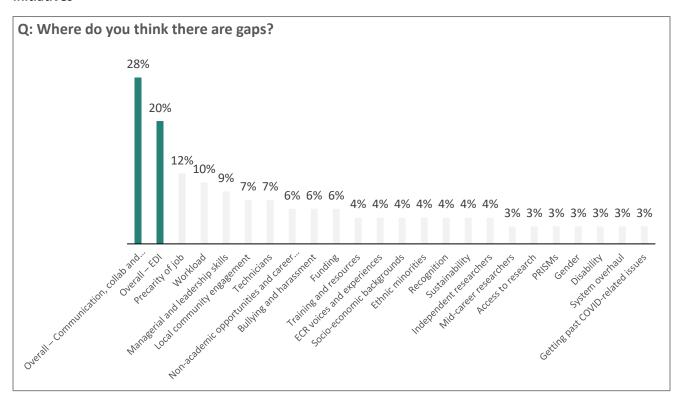
While there are many initiatives, covering a range of issues and needs, sometimes they are contained within a sector or context. Almost two fifths of initiatives collected in the call for evidence were not shared more widely, and we have previously suggested that the proportion of UK-wide initiatives is probably much higher.

Of the 69 responses to the question 'Where do you think there are gaps?' in the call for evidence, 19 (28%) mentioned collaboration, communication and engagement with other areas. Many of these responses discussed communication and collaboration between sectors (often between higher education and all other sectors), whereas others were more focused on the necessity of a diversity of contributions.

 $^{^{\}rm 9}$ This is a screenshot of a map of interventions produced by CRAC-Vitae alongside this report.

¹⁰ Haxeltine, A.; Avelino, F.; Pel, B.; Dumitru, A.; Kemp, R.; Longhurst, N.; Chilvers, J.; Wittmayer, J.M. A Framework for Transformative Social Innovation (TRANSIT Working Paper # 5). TRANSIT: EU SSH.2013.3.2-1; Grant Agreement No.: 613169. 2016.

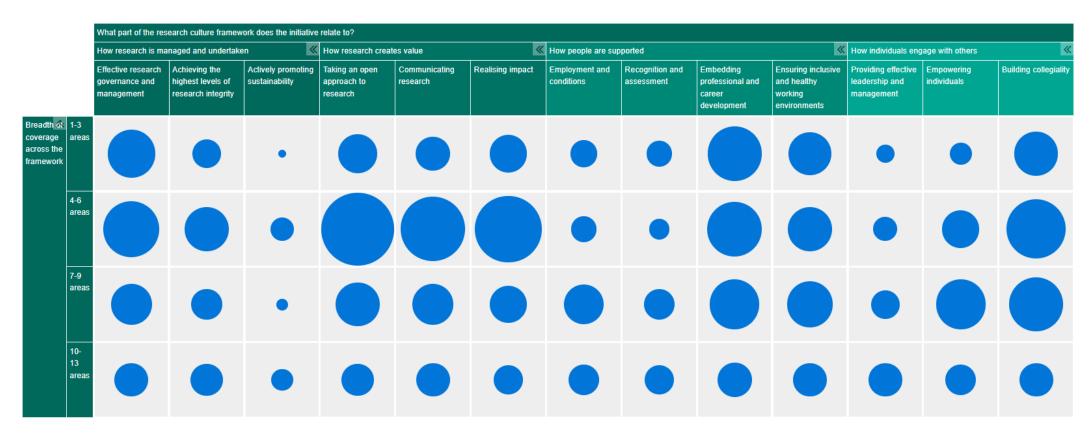
Figure 7: Bar chart showing where respondents to the call for evidence felt there were gaps in research culture initiatives



Base n = 69; 278 missing. Responses given by one participant only have been excluded from this visualisation.

Figure 8: A density map of interventions by framework area and breadth of coverage

Breadth of coverage of initiatives across the research culture framework



This is a screenshot of an interactive EPPI density map, designed and produced by CRAC-Vitae. The size of each circle represents the number of interventions. Along the x axis of the map, there is a column for element of the research culture framework (arranged into sections). Down the y axis there are categories relating to the breadth of the intervention; this is split by interventions which only cover 1 to 3 areas of the framework, interventions which cover between 4 and 6, those which cover between 7 and 9, and those which cover 10 to 13.

Diversity of initiatives and opportunities for learning

This part of the report emphasises that initiatives to develop, improve and enhance research culture exist across the UK; however, different sectors, environments and communities have different expertise and emphases across the framework.¹¹ There is high potential for those in different settings to learn from each other.

Policies and procedures around how research is managed and undertaken are common

Almost half (49%) of the initiatives around how research is managed and undertaken were policies, processes, procedures or strategies. Initiatives were very likely to relate to *implementing effective policies and processes* (79%). This is further evidenced by the literature review (Appendix 8: Research culture: A literature review), which also found that initiatives often took the form of policy statements and protocols. This may be because policies and procedures are often used to provide a clear framework for how research should be conducted and managed.

During this project, much of the feedback we received suggests there is a need for new ways, not necessarily within a policy sphere, to influence management and governance. For example:

"...you want to have multiscale things where there are people who can do systemic change and roll out new policies and practices in an institution but I think that we need to empower everybody in all stages of their area to make changes and drive change."

Participant, workshop 4

This tallied with discussions at the co-creation workshops, where participants' recommendations included:

- Encouraging and incentivising senior leadership to embrace change and create a safe environment for challenging existing practices.
- Co-developing a sector-wide understanding of research leadership and how to foster good research leadership.

Initiatives involving how research is managed were not usually related to providing *open, competent and effective research leadership* (36%). There were some kinds of initiatives which were more likely to be about this: for example, 57% of initiatives categorised as workshops in this section were about providing effective leadership. This may be because workshops are often more focused on providing education, awareness and training about research culture, than on specific technical aspects of research governance. There may be space for other kinds of initiative, other than simply policies and processes, to provide more specific training on research governance topics.

Public sector initiatives around how research is managed were less common

Initiatives within public sector organisations were rarely categorised as being about effective research leadership (16%). There are a number of reasons why this may be the case. It may be that public sector organisations need fewer initiatives relating to these strands because

Actively promoting sustainability: An example initiative

The University of Leeds are partnering with industry to promote Open Science and boost innovation in achieving Net-Zero. It is funded by Horizon Europe and EPSRC. The project aims to address the challenges of sustainable agriculture by using low-cost nature-based solutions for soil health restoration and nutrient/carbon cycling.

https://cordis.europa.eu/project/id/10103 1565

Note that all case studies are presented as examples of initiatives present, rather than as evaluated examples of best practice.

they are covered by existing norms. For example, the public sector always needs accountability, transparency and honesty in the research process, given that their outputs are likely to be published for the public. However, it may be

¹¹ The difference in numbers of initiatives across the framework can be explored further in a density map of interventions by type of initiative, produced by CRAC-Vitae alongside this report.

that there is a gap for work on improving research leadership in public sector organisations, which could inform the design and implementation of targeted interventions or initiatives.

Initiatives relating to how research ensures value were usually around open communication

Initiatives to do with ensuring research value were most often related to communicating research (41%) and taking an open approach to research (43%). We found that there was considerable overlap between the subcategories of realising impact and communicating research, and that collaborative ventures were common for these kinds of initiatives. The literature review also found that initiatives addressing the dissemination of research and open research support were common.

There were differences in the kinds of communication public and third sector initiatives focused on. There were few public sector initiatives around being open to new forms of communication methods; third sector initiatives were more likely to be categorised as relating to connecting with others in accessible and inclusive language and media (Table 1).

Taking an open approach to research: An example initiative

Keele University produced an information resource for open data, called Making Data Open. It aligns to the 'FAIR Guiding Principles for scientific data management and stewardship'. The resource page provides some guidance for the presentation and distribution of open data.

https://www.keele.ac.uk/research/raise/governanceintegrityandethics/researchintegrity/openresearch/stepstoopendata/#access-control

Note that all case studies are presented as examples of initiatives present, rather than as evaluated examples of best practice.

Table 1: Proportion of initiatives around how research ensures value related to the behaviour, by sector

		Sector					
Behaviour	Academia	Industry / private	Public sector	Third sector			
Sharing research, data and other outputs openly	73%	79%	68%	71%			
Contributing to knowledge creation and teaching	65%	67%	72%	71%			
Communicating in accessible and inclusive language and media	62%	67%	66%	85%			
Inspiring curiosity and learning	62%	73%	52%	62%			
Open to new forms of communication methods	48%	42%	32%	50%			
Acknowledging and building on the research of others	45%	55%	44%	50%			

Base n = 347

There may be scope for a mechanism that allows different sectors to influence and shape each other's priorities. For example, there is potential to learn from the third sector's focus on accessible and inclusive communication, as well as their use of language and media to communicate with disabled people.

In the co-creation workshops, participants were clear that inclusivity in communicating research was a key consideration – in terms of the content shared, who it was shared by and with, and the format of this sharing. Furthermore, public sharing can be resource-heavy, and typically small-scale and community organisations may not have the resources available for it.

"Sharing knowledge of research culture challenges and initiatives openly – this is changing through dedicated networks and surveys, including this one."

Respondent to the call for evidence

"I think we need to consider carefully how diverse contributions are recognised, and the different types of contributions that people in the research ecosystem make. A broader range of contributions should be apparent, not just publications, or funding awarded to academics. People in technical roles, PRISMS [Professional Research Investment & Strategy Managers], research enabling expertise is generally overlooked."

Respondent to the call for evidence

"...whether it is an online portal, whether it is a set of meetings every month, whether it's a newsletter, whatever it is, that the information within the Good Practice Exchange is collated and then shared is accessible and diverse so that it represents different cultures, people's communities and also different people can access it and read it. So, it's not written like an academic paper, it has everyday language, braille, screen reader. I think sometimes what happens is we have these big EDI ideas and we go away and we gather all this evidence and it looks brilliant and we learn a load from it and then no one can access it. The key people that need to access it can't, because it's not accessible."

Participant, Workshop 4

Recognition and assessment: An example _____ initiative

Close the Gap: Fair admissions in postgraduate research at Oxford and Cambridge seeks to understand and change the current fact that on average, a Black British, British Bangladeshi, or British Pakistani candidate has been only around half as likely as a white candidate to receive an offer for doctoral study at either Oxford or Cambridge. This project is researching formal and informal admissions cultures, systems and practices, and will develop and test disciplinary-specific, raceliterate modifications and refinements to selection processes that are designed to bring about meaningful change in doctoral candidate selection systems. The project's goal is to halve the current Offer Gap in the Pilot sites by the end of 2025.

https://www.closethegap.ox.ac.uk/

Note that all case studies are presented as examples of initiatives present, rather than as evaluated examples of best practice.

Initiatives around how people are supported and how individuals engage with others often involved valuing diversity and inclusiveness

The sections 'How people are supported' and 'How individuals engage with others' were combined in the iteration of the framework used in the call for evidence. This means there is some overlap. To avoid repetition, these sections have been described together in this part of the report.

The behaviours within these sections that were most highly selected were often related to broadening and valuing diversity across all career types and stages, and creating a research environment where everyone feels welcome, valued, and respected. Other common kinds of initiatives in these sections were around empowering individuals through professional development, mentorship and addressing needs for continued career ambitions.



80% of initiatives were categorised as recognising and valuing the diverse range of competencies needed for the research endeavour.

80% of initiatives were categorised as embracing and respecting diversity.



75% were related to providing a wide range of professional and career development opportunities.

Empowering all researchers to achieve their ambitions is seen as key to a more inclusive research community

The themes of the initiatives above are closely linked – a more inclusive research community will be more likely to empower researchers from all backgrounds to achieve career ambitions. Most initiatives identified in the literature review focused on supporting the research workforce, and included activities like mentoring, coaching, and EDI position statements. The review found there was significant overlap between all sub-categories in these sections of the framework.

However, while many research culture initiatives include diversity and inclusion, there were gaps for specific facets of EDI. For example, there were fewer initiatives relating to flexibility within research careers, fairness and work-life balance. Initiatives were also less likely to deal with disruptions and inequalities in careers because of career breaks, or in finding flexible ways and accommodations for people to ensure healthy working. This was similar across sectors; there were no large differences between academia or industry. Workshop-based initiatives often focused on inclusivity in building collaborative and inclusive environments. They often aimed to ensure individuals felt well-supported and confident to express their views and to build collegiate communities.

Although the relatively high percentage of initiatives indicated that EDI was well addressed, when respondents were asked in the call for evidence about gaps in initiatives addressing research culture more broadly, 14 (20%) mentioned

EDI in general. While the dataset is too small to investigate further demographics within this sample, EDI in R&I in the UK was reviewed by UKRI in 2020.¹² This concluded that there were gaps within EDI initiatives, specifically around: the disproportionate focus on some identity characteristics (specifically, gender); and that efficacy was usually around immediate impact on engagement, such as awareness, rather than on the long-term impact on staff and students. Considered alongside the data collected in this project, there may be scope to further investigate research culture initiatives which focus on long-term EDI impact.

Funding initiatives were most likely to be related

Building collegiality: An example initiative

The British Science Association has a project titled 'The Ideas Fund'. The Ideas Fund was set up to enable the UK public (individuals, community groups and charities) to receive funding directly and support them in working with researchers to explore ideas related to mental wellbeing. The fund is delivered in four areas of the UK, working closely with local universities. A key premise is that projects focus on community aspirations as the starting point, rather than a research/researcher agenda. Many projects with this funding have formed partnerships between community groups and researchers for the first time.

www.theideasfund.org

Note that all case studies are presented as examples of initiatives present, rather than as evaluated examples of best practice.

to *valuing failure and risk-taking*. However, there is evidence that funding is an important tenet of encouraging inclusivity, as inclusive, innovative research and creative research methodologies are often used or developed by underrepresented and under-funded communities.^{13,14} Positive effects around EDI could be bolstered by initiatives to do with funding.

¹² https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-EDI-EvidenceReviewUK.pdf

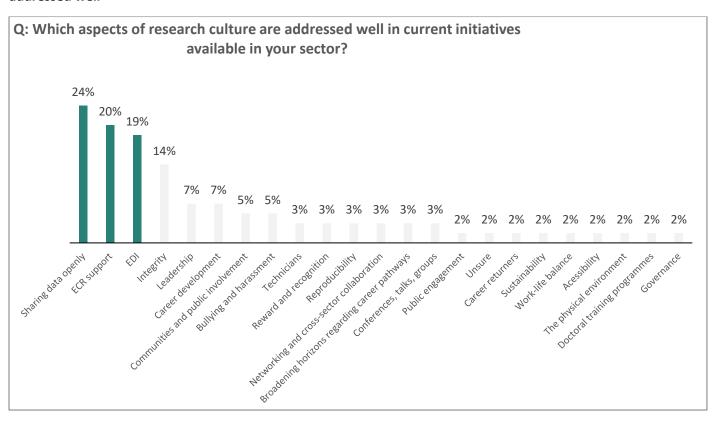
¹³ https://researchsupport.admin.ox.ac.uk/equity-and-inclusivity-in-research-funding

¹⁴ Juliana F. F. Amauchi, Maeva Gauthier, Abdolzaher Ghezeljeh, Leandro L. L. Giatti, Katlyn Keats, Dare Sholanke, Danae Zachari & Jutta Gutberlet (2021): The power of community-based participatory research: Ethical and effective ways of researching, Community Development, DOI: 10.1080/15575330.2021.1936102

Participants' views on areas of research culture 'addressed well' currently

Of the 59¹⁵ responses to the question 'Which aspects of research culture are addressed well in current initiatives available in your sector?', the three aspects which were mentioned significantly more than the others were *sharing* data openly, support for ECRs and EDI in general.

Figure 9: Bar chart showing the aspects of research culture that respondents to the call for evidence felt were addressed well



Base n = 59; 288 missing

The comments relating to ECRs often spoke of the volume of initiatives that focused on them. However, some mentioned that not all initiatives were well or easily implemented.

"Early career researchers are supported by a diverse range of initiatives. Broadly speaking – PGRs [post-graduate researchers] are well-supported too (although this can vary across disciplines – i.e. CDTs [Centres for Doctoral Training] and DTPs [Doctoral Training Partnerships] are great but many PGRs are self-funded or relatively isolated in the SHAPE fields)."

Respondent to the call for evidence

"I think there is a good amount of information/training resources aimed at earlier career staff but these are not always implementable by people at this stage of their career."

Respondent to the call for evidence

¹⁵ Note that this is a low response rate, so any conclusions from the data should be taken within that context.

Responses around sharing data openly were generally positive about the momentum it has gathered in research. Some felt that it was important that unsuccessful initiatives and learning points were shared openly and were wary of an approach that excluded initiatives that did not have a strong evidence base. This was thought also to have a potentially exclusionary impact – for example, smaller grass-roots organisations may have much to offer the sector, but have potentially fewer fully evaluated projects.

"The open scholarship movement seeks to make knowledge of all kinds openly shared, transparent, rigorously researched, and inclusive. The movement is composed of many grassroots and top-down initiatives that have successfully accelerated adoption of open scholarship practices."

Respondent to the call for evidence

Initiatives clustered into 5 broad groupings

Mixed-mode cluster analysis was used to explore the data around initiatives collected in the call for evidence. Our final groupings derived from this analysis are given below. It should be noted that while group descriptors are indicative, not all the conditions in the description will hold in each case for every initiative. The number of cases is small for an analysis of this kind and contains large biases around missing data, so these groupings should be seen as indicative and worthy of further exploration rather than robust or definitive. Full details of our methodology and the profiles of each segment are given in Appendix 13: Cluster analysis method.

Group 1 - 69 initiatives

- Mainly large crosssector projects, that are shared and involve collaboration.
- More likely to be collective activity
 e.g. community, or special interest group, network, conference or committee.

Group 2 - 73 initiatives

- Projects at organisational or department-level, all funded, some of which are shared, but are largely selfassessed.
- Often activities such as mentoring, coaching, training or workshops.

Group 3 - 69 initiatives

- Largely organisation or department level projects with little collaboration, sharing or evaluation.
- •Least likely to involve independent evaluation.

Group 4 - 81 initiatives

- Mix of organisational, departmental and cross-sector, with no collaboration though often shared. Little funding.
- More likely to be policies, procedures, strategies, statements or commitments.

Group 5 - 55 initiatives

- Largely sector-level projects which, often collaborative and shared.
- Most likely to involved independent evaluation.

Opportunities for the Good Practice Exchange

A portfolio of activities

This project highlights the breadth and complexity of the potential scope of any Good Practice Exchange, both in terms of research culture areas to cover and the multiplicity of roles involved comprising UK research culture. While some issues are common across the research ecosystem, others are sector-specific – for example, those which relate to measures such as the Research Excellence Framework (REF) and the Teaching Excellence Framework (TEF). Some issues are more relevant to senior teams, others to professional services, others for independent researchers.

To have one initiative or organisational body covering all these areas is likely to be ineffective. Although we talk of 'The Good Practice Exchange' throughout the report in the singular, we suggest that rather than one structure, a portfolio of activities/initiatives is likely to be required, focusing on different aspects of enhancing research culture. To ensure momentum, attention will need to be paid to how these work together.

For further information on priority areas discussed in the co-creation workshops, see Appendix 12: Priority areas for change.

The need for greater evaluation

Current levels of evaluation

99 (29%) initiatives submitted to the call for evidence were said to be evaluated. The most common approach was via self-assessment (those involved with the initiative also assessed it): 20% of initiatives were self-assessed, while 8% were independently evaluated. For 27% of the submitted initiatives, the respondent was unsure whether evaluation had or would occur. It should be noted that almost half (49%) of these 'unsure' initiatives were gathered using desk research from the Shift team, who were unable to find evidence of evaluation from the public information they obtained outside of the call for evidence.

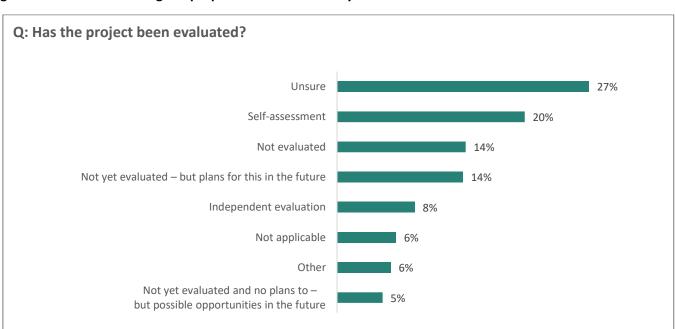


Figure 10: Bar chart showing the proportion of initiatives by evaluation status

Base n = 347Please note that initiatives may have been evaluated in more than one way; therefore these proportions do not add to 100%.

Evaluations described in the literature review were mostly positive – these suggesting initiatives were valued and could evidence, for example, an increase in applications for funding and grant income. Where findings from

evaluations were reported (n = 20), they were mostly positive: feedback from training courses, mentoring schemes, workshops and networking events endorsed the initiatives and suggested value. There were no reports in the literature review of initiatives that had failed or had no positive outcomes; however, a few reports highlighted that the sustainability of the initiatives was uncertain given the need for ongoing funding. Additionally, most reports were produced by the organisation(s) who designed and/or implemented the initiative and so may be subject to bias.

Needs / gaps in this area

Encouraging robust evaluation

Only 8% of the initiatives submitted to the call for evidence were independently evaluated, and this is clearly an area deserving of more attention—without robust evaluation it is difficult to demonstrate the effectiveness of an initiative. In the literature review, ¹⁶ which was explicitly looking for evaluated initiatives, fewer than 40 reports of research culture initiatives either included evaluations or explicitly stated that evaluations were planned. Where evaluations were reported, these were not fully described (for example, not explaining methods in sufficient detail for replication or reporting all results) or were of low quality (for example, using unvalidated surveys with low response rates).

Funded initiatives were more likely to be evaluated than other initiatives (42% vs. 10%). This was also the case for initiatives which had not yet been evaluated, but there were plans to do so in the future (27%). Initiatives categorised as being about funding were also significantly more likely to be independently evaluated (20%) than initiatives not categorised as to do with funding – further suggesting funding is an enabler of evaluation.

The importance of robust evaluation of research culture initiatives and activities should be further promoted — ideally this would be planned at the development stage of an initiative and involve pre- and post-assessment using standardised, validated measures as well as routine data (for example, workforce demographics, grant income) and qualitative methods. Given the often-slow pace of culture change, long-term follow-up assessment is also important to demonstrate causality and ongoing effectiveness. However, it should be acknowledged that this may not be appropriate for all organisations or projects, so attention should be given to context-specific needs and ambitions.

There is a lack of clear evidence on what works to enhance research culture, due to a lack of consistent, robust and long-term evaluation. We need more research to understand the effectiveness of smaller, focused interventions, as well as methods to evaluate research culture change in ways that are appropriate and relevant to different contexts.

Developing consistent research culture indicators for evaluations

The literature review found that where evaluations were reported they tended to be in the form of service evaluations; for example, providing data on attendees at networking events, research grants or outputs attributed to the initiative, or participant satisfaction and feedback surveys. It could be argued that these evaluations thus only focused on the behavioural aspects of 'research culture'. Initiative owners could be encouraged to consistently assess the impact of initiatives more broadly on the *values, expectations, attitudes and norms of our research communities* to ensure a more holistic view.

It would be helpful to develop and validate a set of research culture indicators that assess all aspects of the research culture framework and has relevance in different contexts. There may be a role for the Good Practice Exchange here to work alongside, or even help develop new indicators for REF 2028's expanded 'People, Culture and Environment' element. This work could also draw on the validated measures organisations are increasingly using to assess the wellbeing of their workforces and existing higher education surveys, such as the Postgraduate Researcher Experience Survey (PRES) and the Culture, Employment and Development of Academic Researchers survey (CEDARS).

¹⁶ This section of the report is adapted from the literature review, which is included in Appendix 8: Research culture: A literature review.

Supporting self-evaluation

Independent evaluation may not be a practical choice for many smaller initiatives, particularly without funding. There is potential here for a future Good Practice Exchange to enable more and better self-evaluation for the full range of organisations in engaged in research culture enhancement, through training, guidance and resourcing in evaluation methods. The cluster analysis reveals that self-assessment is particularly likely for Group 2 initiatives which are often activities such as training, workshops or coaching at organisational level. More consistent self-evaluation approaches might allow for more comparability and benchmarking.

Encouraging open publication of evaluations

The absence of evaluations in the literature review that reported failure or a lack of success may reflect a general publication bias (when the outcome of an experiment or research study biases the decision to publish or otherwise distribute it) or outcome reporting bias (selective/distorted reporting of results, and/or biased interpretation of available information). We might assume this would be more prevalent in cases of self-assessment. Indeed, the decision to evaluate an initiative at all, where this is taken after project launch, might also be biased by a perception that it has been successful.

In the co-creation workshops, there was discussion of how decisions on what 'good practice' was might be made, and who might make them. For some, it was essential that ideas which were shared were proven to be effective, via robust evaluation, with the Good Practice Exchange having a role in establishing indicators for 'good' or 'effective' practice. Others feared that evidence of effectiveness might be highly circumstantial. It was also felt by some that it was important to learn from all forms of practice – even those that were unsuccessful, which could be for context specific reasons.

"What's going to be the evidence base required that it is indeed good practice? ... for me to be good practice it would need to be effective, it would need to be monitorable so when you introduce your incentive or your activity you can monitor it and demonstrate that it is producing the required change in culture, practice, process."

Participant, workshop 1

"...being mindful of evidence requirements is very important I completely agree, but also that there is also a space for just talking about what you are doing, but there is a distinction between just talking about what you're doing and that having the authority of evidence."

Participant, workshop 1

There may be a role for any Good Practice Exchange to encourage publication of all evaluations of research culture initiatives, including those which do not have strong positive outcomes, to enable learning.

Modelling good reporting practices

The issue of evaluation raises the question of whether and how the activities of the Good Practice Exchange might be evaluated. Any activities should be planned at project start, to help shape its design and how it will be implemented, in line with the Magenta Book.¹⁷ Funding for such work should consider the importance of longer-term monitoring of success.

¹⁷ https://www.gov.uk/government/publications/the-magenta-book

The need for a place to share practice

Current levels of sharing

62% of the initiatives in our call for evidence had been shared. However, this is likely an overestimate in terms of the picture as a whole – we reached out individually to several people who were identified specifically **because** they had shared information about their initiative publicly. In addition, the term 'sharing' was not tightly defined in the question and 'widely' could have been interpreted differently.

Q: Has the initiative been shared with the wider R&I community / is it publicly available?

Yes

No, but it will be

Not applicable

6%

Figure 11: Bar charts showing the proportion of initiatives by whether they have been shared

Base n = 347; Q: (combined) Has the initiative been shared with the wider R&I community / is it publicly available? Will the findings be shared / made publicly available in the future, or are there opportunities for this?

Activities relating to the public or third sectors were more likely to have been shared (83% and 85%, respectively) than those relating to industry (71%) or academia (62%). UK-wide initiatives were more likely to be shared than those at a regional level (76% vs. 46%). 90% of those with an independent evaluation had shared their initiative publicly.

Needs / gaps in this area that could be addressed by the Good Practice Exchange Active and engaging sharing

While a high proportion of initiatives had been made public, the extent of this sharing was often fairly 'passive'—for example, publishing information or a case study on a website.

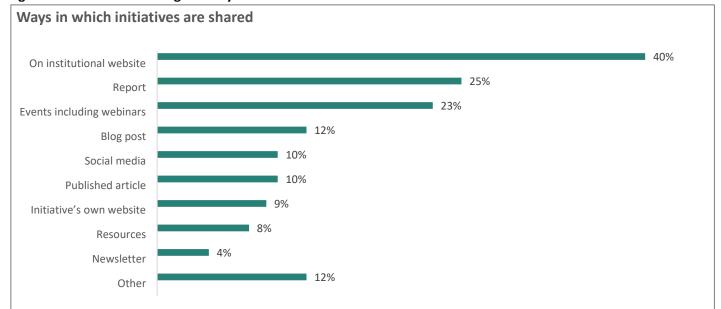


Figure 12: Bar chart showing the ways in which initiatives submitted to the call for evidence were shared

Base n = 210, those who indicate an initiative is shared Q: Please give details of how the initiative has been shared

There is considerable room for improvement in the way that research culture initiatives are shared. There is a potentially valuable role for the Good Practice Exchange in encouraging all active research organisations to report, in publicly accessible formats, what initiatives they have in place to support research culture – and what evidence they have of its effectiveness. The Research on Research <u>registry</u>, Researcher Development Concordat <u>Platform of Practice</u>, and the Knowledge Exchange Concordat <u>repository</u> all serve as good examples. It may be helpful to provide guidance on what information to include and how, to standardise reporting across sectors.

More active sharing of initiatives will help to raise awareness of them and their potential benefits. In workshops there was also a strong, recurring theme that most effective future strategies need to go beyond simply sharing practice or providing training and resources, to foster a 'learning community'. There is a need to synthesise and contextualise, to organise and curate learnings, and create a genuine 'exchange' around the key issues. This will enable people to be challenged as well as to expand their expertise in research culture.

Making sharing easy and reducing the duplication of requests for information would also be appreciated by a sector short on time and eager to see results:

"We have been asked to feed back in several ways to the sector already (e.g. Russell Group survey in 2022, UKRN's research culture research database) and it's quite an administrative burden. We have not seen the results of the Russell Group survey. It's very important that the sector is able to see the results of this work for their benefit, as a compensation for the effort we put in contributing to it."

Respondent to the call for evidence

This might particularly be the case for small-scale and community organisations, who may not have the resources available for sharing their activities.

It should be noted that as many organisations and initiative owners already offer knowledge sharing platforms, there is a need to consider how the Good Practice Exchange can build on, rather than duplicate, effort.

While more and better evaluation is required, also important here is understanding what work is relevant to what contexts, what evidence has been produced, and what the evidence standards are. There may also need to be better support for those who wish to share evidence of their own successes or failures, but currently do not have the skills

or resources to do so. Many workshop participants expressed a desire to learn from all areas of practice – good, indifferent, bad and newly emergent.

Inclusivity in sharing

Inclusivity is a key consideration in defining the role of the Good Practice Exchange, both in terms of the content shared, who it was shared by and with, and the format of this sharing. This is shown in more detail in the section Initiatives relating to how research ensures value, where we detail participants' views regarding inclusivity in communication and sharing.

Sharing of policies and procedures

Initiatives at organisational level were less likely to be shared (44%) compared to those at sector level (88%) or those that were cross-sector (80%). Similarly, those that involved multiple partners were more likely to be shared. Participants in the co-creation workshops felt there may be a role for a future Good Practice Exchange in surfacing organisational-level activities to improve research culture, which are currently less often shared. This is consistent with requests made in the workshops for more sharing of policies around areas like diverse recruitment or promotion. Such sharing would be effective as these initiatives are operating at the 'coalface' in terms of changing behaviours to improve research culture, and examples of good practice can be most effective in engaging senior leaders:

"The University of Liverpool, for example, have just set up a career pathway for technicians I want to see universities setting up career pathways for PRISMs [Professional Research Investment and Strategy Managers] but you need to talk to senior leadership to get them to buy into that. So, a mechanism whereby I could initiate those conversations would be amazing."

Participant, Workshop 3

Other sharing needs

Participants in the workshops wanted to learn from other sectors' expertise, to create more standardisation and to speed up the pace of change. It is notable that these initiatives were often, though not exclusively, in the area of employment practices and HR. This included:

- Mechanisms to reward and incentivise research partners in a timely manner.
- Role expectations, progression routes and processes, particularly though not exclusively for research enablers.
- Recruitment processes, particularly those aimed at attracting diverse talent.
- Working time guidance for leaders and workload models.
- · Best practice in incorporating sustainability.
- Best practice in interdisciplinary working, particularly in industry.
- Techniques for creating meaningful public engagement and community-based participatory research.

A requirement was also expressed for additional development of expertise in the following areas:

- EDI impact assessments.
- Inclusive language.
- Effective implementation of narrative CVs.
- Meaningful community and stakeholder engagement.
- Allyship.
- Management of research students and postdoctoral researchers.
- Accessible and inclusive communication.
- Data curation.
- Open research.

Inclusive recruitment and promotions practices.

Given the interest in sharing policies, such as recruitment and promotion processes, research could usefully be conducted into the range of policies different stakeholders would like to see shared, which they would be willing to share, and under what circumstances. There may be opportunities here to partner with organisations already active in this area.

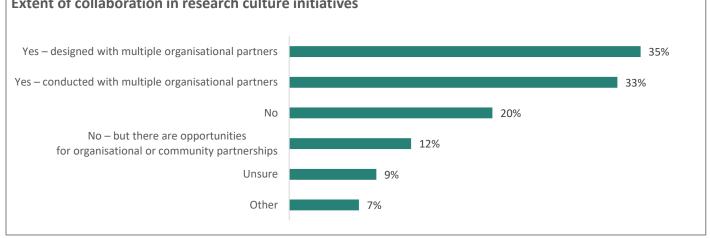
The need to encourage collaboration

Current levels of collaboration

Collaboration was a fairly common feature of research culture initiatives, with over half of initiatives in the call for evidence reporting some level of collaboration (54%).

Extent of collaboration in research culture initiatives

Figure 13: Bar chart showing the extent of collaboration for initiatives submitted to the call for evidence



Base n = 347

Public sector (70%) and third sector (75%) initiatives were more likely to be collaborative, compared to those relating to academia (54%) or industry (60%).

Needs / gaps around collaboration

Collaboration in research culture initiatives

A strong desire to work collaboratively to improve research culture was highlighted by workshop participants. They stressed the need to create genuine top-to-bottom engagement and inclusive leadership. This was supported by the call for evidence, where of the 69 responses to the question 'where do you think there are gaps?', 19 (28%) mentioned collaboration, communication and engagement.

There could be a role for the Good Practice Exchange in catalysing new ideas and approaches around research culture by bringing communities together in an equitable manner. It could encourage better working together to foster innovation and new ways of thinking.

Collaboration between sectors

Many in the workshops thought fostering collaboration and learning across and between sectors was crucial. Participants were keen to find ways in which different sectors could learn from each other's practices – and university-industry learning was a particular area of interest for many. There was an appetite for moving away from a university-centric view of research and research culture – recognising 37 that all sectors have much to learn from each other.

Many of the call for evidence responses discussed communication and collaboration between sectors (often between higher education and all others). Specific suggestions for new initiatives included:

- An inclusive cross-sector forum to lead and define policy on research culture translating good practice into policy to drive systemic change.
- Mapping stakeholders against the research culture framework as one workshop participant said: "I like the
 idea of the different constellations of stakeholders that make up the research ecosystem being visible and
 apparent."
- A mechanism for facilitating new connections described by one workshop participant as "some kind of
 partner exchange thing that really helps people to make those connections and find those ways across those
 boundaries."

Support for collaboration in research activities more widely

Collaboration with all stakeholders – including wider society – was seen as a priority. Participants mentioned barriers to collaboration in research, particularly funders' attitudes to team working and difficulties in paying collaborators and partners in a timely manner. Many noted that there was much to be learned from the healthcare sector particularly in this area.

The need for funding

The literature review highlighted that some initiatives' evaluations mentioned that their futures were uncertain or unsustainable, given a need for ongoing funding. Our workshops too highlighted a lack of resourcing, particularly in smaller, grassroots settings, for funding both for research culture initiatives and their evaluation. There may be a role here for the Good Practice Exchange, particularly to enable able the amplification of voices currently underrepresented in research culture initiatives, or those communities or groups more strongly impacted by poor research culture, for example Black researchers, disabled researchers, and those with neurodivergence.

Other needs

There was a desire among workshop participants for momentum and vision on research culture, particularly in relation to policy change, community building, and evaluation.

Specific ideas were:

- Activities or events to foster leadership on research and research culture.
- Encouraging the use different approaches (particularly interdisciplinarity and co-production).
- Research assessment reform to reward 'non-traditional' outputs of research.
- Co-creating a route for researchers to safely report misconduct.
- Creating a means of encouraging public trust in research.

In addition, there is a need to consider the importance of systemic change, recognising that some of these are global issues. Many negative aspects of research culture are seen to arise from individualistic, competitive and hierarchical systems. These relate to how research is valued, incentivised and funded, as well as how it interacts with other systems (for example the REF). Attention to policy and the consequences of changes elsewhere in the system will need to be an ongoing priority.

Research culture discussions continue to evolve, and it will be important to synthesise and update understandings of where needs exist in the years ahead. To support this, there could be an annual benchmarking survey (the biennial Culture, Employment and Development in Academic Research Survey, CEDARS, is one such mechanism already used widely in the higher education sector). There could also be qualitative work conducted via focus groups or an advisory board with broad representation. This work's relationship to research culture indicators proposed within the new REF and well as to the Concordats and Agreements review will need to be considered.

Research gaps remain in understanding the context-specific aspects of research culture outside of higher education. Importantly, the lived experiences and priorities of some underrepresented groups are not well understood. These areas should be priorities for future research.

Finally, much of the current interest in research culture is being driven by the UK. A greater understanding of research culture internationally will also be important to shaping policy and practice in the future. This is important both in terms of understanding the UK's ability to attract and retain global talent, as well as in broadening the potential to connect and learn from other initiatives.

Key considerations for the Good Practice Exchange

This project has identified the following principles for the development of the Good Practice Exchange, its organisation and governance. The Good Practice Exchange should:

- 1. Take a leadership role and have a compelling vision both for its own activities and for research culture.
- 2. Be inclusive, including in its leadership. This includes diversity in terms of sector, seniority, personal characteristics and job roles. Incentives to participate should be provided where necessary.
- 3. Be action-based and be seen to facilitate actual change on the ground, including through translating practice into policy.
- 4. Champion and amplify existing work. It can do this by considering how existing processes and initiatives can be harnessed and aligned, avoiding duplication of effort.
- 5. Be agile and flexible, and develop mechanisms to evaluate and review what's important, what's working, and what's changing. It should model good behaviour here by building in evaluation considerations from the start
- 6. Reach across the research ecosystem in sharing practice, maximising the potential for learning between different settings and sectors.
- 7. Foster a place for openness and transparency, including failure. Its work must be fully accessible, both in terms of activities and outputs.
- 8. Further a common understanding of research culture. The research culture framework developed to map the interventions for this project provides a useful tool here.

Conclusion

This report has provided a snapshot of the wide range of activities working to change research culture in the UK, operating at a variety of levels, within different types of settings and covering a wide range of topics. There appears to be a strong desire to work collaboratively to take action to improve research culture and some consensus around the key issues which require attention.

Key findings detailed in this report here included:

- Issues around the language of 'research culture', which was used less widely outside of academia, where other language is more relevant (such as organisational culture). There is also a lack of a common language for research culture across sectors, even where the behaviours and values identified are similar. Related to this, gaps in understanding initiatives relevant to research culture beyond higher education, particularly in the private sector.
- Many research culture initiatives have broad coverage of research culture elements and behaviours with few focused on specific issues.
- A lack of robust evaluation, particularly independent evaluation of organisational-level activities.
- A diversity of approaches and activity types, with many taking more than one approach. There remains a gap in understanding how and when different approaches are effective for improving research culture.
- A majority of initiatives with UK or region-wide coverage and few at a departmental or team level. More information is needed on such smaller-scale initiatives, which were not easily captured.
- Over half of the initiatives reporting some level of collaboration, with barriers to collaboration including issues around paying collaborators and partners fairly and efficiently.
- An identified need for more communication and collaboration between sectors.
- A strong focus on early career researchers (ECRs) and uneven focus on those from minority and minoritised groups, with few initiatives collected focusing solely on one specific group or protected characteristic.

There is strong desire to move from problem-identification to action and effective implementation. The Good Practice Exchange will be judged on its effectiveness in generating real change. There will need to be clarity on what that change will look like, and its relevance across the R&I ecosystem—while some issues are common across sectors, others are specific to certain professional roles or disciplines. Recognising this complexity, a portfolio of activities/initiatives is needed to effectively address different aspects of research culture. Attention must be given to ensuring these activities work together seamlessly to maintain momentum.

Choosing the right areas of focus will be crucial in establishing that the Good Practice Exchange works for the entire R&I ecosystem and moves away from a higher education-centric focus. Participants in the project, including those who attended the workshops, submitted to the call for evidence, and consulted on the framework, provided a wide range of ideas for consideration. They also stressed the wealth of existing expertise and experience in relation to large parts of the research culture framework, and that new activities should engage with and build on these. Moreover, it is important to consider that whilst the current name centres 'good practice', the forum must encompass learning from all areas of practice, including good, bad, indifferent, and emerging practices. At the same time, more evaluation of initiatives would enable better decision making about the initiative types that are most effective.

Meaningful engagement with and inclusion of a wide range of stakeholders is crucial to the credibility of the Good Practice Exchange, whatever form this might take. The first sign of this commitment will be the way in which the project is developed, and decisions taken about its leadership and governance. Furthermore, collaboration and community were identified as crucial drivers for sharing good practice and advancing people's knowledge. This report identified various areas that could be shared widely, including techniques for meaningful public engagement, best practices for interdisciplinary working and successful case studies involving diverse groups. Such approaches must be central to activities that address research culture.

The principles for developing the Good Practice Exchange revolve around diversity, connectivity, resilience, and engagement. It is crucial to involve diverse stakeholders in shaping the initiative and amplifying existing work,

fostering collaboration and learning across sectors. The Good Practice Exchange should be adaptable to changing issues and needs, avoiding unnecessary bureaucratic burdens. It should prioritise action-based approaches, curating and promoting information effectively, and engaging diverse groups through accessibility and meaningful involvement. A compelling vision, backed by a comprehensive evaluation framework, will enhance engagement and drive change.

