



EPSRC - Equality Impact Assessment

| Question | Response |
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| <p>1. Name of policy/funding activity/event being assessed</p> | <p>EPSRC Quantum Technologies Research Hubs</p> |
| <p>2. Summary of aims and objectives of the policy/funding activity/event</p> | <p>Research funding is available to support up to 5 Quantum Technology (QT) Research Hubs with a significant budget. The QT Research Hubs funding can be from £15 million to £20 million (80% full economic cost) per QT Research Hubs. This value includes indexation costs. The duration of the funding will be for up to 60 months.</p> <p>The QT Research Hubs will be expected to act as UK centres of excellence in cutting edge quantum technologies research.</p> <p>The QT Research Hubs will bring together teams of multidisciplinary academic researchers; thereby developing the next generation of quantum technology researchers, academic leaders, and entrepreneurs.</p> <p>They will act as a focus for industry, government, and other stakeholder involvement in QT research, supporting a vibrant technology innovation ecosystem and fostering links with appropriate quantum, infrastructure, and fabrication facilities.</p> <p>The aim of this opportunity is to fund a portfolio of QT Research hubs. This will cover the following areas listed below. We will also intend to make at least 1 QT Research Hub award within each of these specified areas.</p> <p>1. Quantum networks for distributed entanglement</p> <p>This would cover the areas of quantum communication, computing and sensing and include underpinning technology in control systems, and integration. Broad research topics to be addressed include:</p> <ul style="list-style-type: none"> ▪ quantum networks at different scales ▪ scaling quantum communications ▪ distributed quantum computing ▪ quantum safe communications |

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| | <p>2. Quantum computing research to improve quantum computing performance</p> <p>This QT Research Hub or Hubs would work in collaboration with the National Quantum Computing Centre. Broad research topics to be addressed include:</p> <ul style="list-style-type: none"> ▪ hardware development (qubit performance, noise sources, calibration, and control – platform specific and cross platform protocols to be explored) ▪ error mitigation and error correction ▪ benchmarking, verification, theory, and standards ▪ development and execution of applications for noisy intermediate scale quantum platforms and fault tolerant platforms ▪ community building through multidisciplinary science networks for example integration of high-performance computing and quantum computing <p>3. Engineering quantum technology devices and components for sensing, imaging, positioning, and timing</p> <p>Research topics include:</p> <ul style="list-style-type: none"> ▪ quantum systems integration ▪ scale up and manufacturability ▪ integrated optics ▪ hybrid systems ▪ working with application domains to understand how to achieve the full potential of quantum components and devices <p>Applications will be therefore be expected to address 1 of the funding opportunity scope areas. Applications will need to address the majority of the scope bullet points to ensure that the QT Research Hubs vision can be realised with the funding available. Applications may cover more than 1 opportunity scope area.</p> |
| <p>3. What involvement and consultation has been done in relation to this policy? (e.g., with relevant groups and stakeholders)</p> | <ul style="list-style-type: none"> • QT Theme • QT students & fellows • Contacts at universities and Institutes • NQTP Strategic Advisory Board and Programme Board. • Community engagement workshops attended by academics from different institutions and leading figures within the QT community • Community roundtable and engagement workshops • Hubs lessons learnt with current hub management teams |

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| <p>4. Who is affected by the funding activity?</p> | <ul style="list-style-type: none"> • UK's research community and industrial sector concerned with the areas of Quantum Technology; government representatives; UKRI staff. • Research office/institutions and staff • Research councils and staff • External reviewers (outline panel, postal peer reviewers, prioritisation panel) • Academic researchers of varying career stages will be leading and conducting the research. • Industry and the wider innovation landscape. • Technical and support staff will also be employed on the grant. • Hub leadership and management teams will be employed on the grant. • Students may be aligned to the hub, although not directly funded through the hub grant. |
| <p>5. What are the arrangements for monitoring and reviewing the actual impact of the funding activity?</p> | <ul style="list-style-type: none"> • Feedback is sought from those involved in the process and considered when creating the funding activity. • Research outcomes are collected through Research fish and additional data through an annual data return. EPSRC Portfolio Managers are members of the advisory boards. • An annual report will be submitted by the hubs including impact stories. |

As a funder of research, EPSRC remains committed to attracting the best potential researchers from a diverse population into research careers. The Research Councils have together developed the ambitious [RCUK Equality, Diversity and Inclusion Action Plan](#) to outline our collective aspirations for working with the research community, and partners throughout the sector. For policy changes, funding activities and events EPSRC will aim to:

- Select venues that are accessible and where possible accommodate any specific requirement in our planning and organisation of an initiative to support wider participation. This includes for applicants, reviewers, panel members and staff. Included in the interview invitation letter is a request for any access issues to be notified.
- All participants in the process are asked to inform staff if they have any additional needs to enable attendance or participation.
- Offer support for people with caring responsibilities, further details are available [here](#).
- Clearly communicate the timeline and key milestones for funding activities, advertise these widely to reach the largest possible audience.
- Support and encourage panel members to follow best practice in taking positive steps to safeguard funding decisions. Staff will work closely with the Panel Chair(s) to agree approaches that are designed to minimize opportunities for bias and improve transparency of the decision-making process. This includes managing environmental conditions, such as providing appropriate breaks.
- Support flexible working of stakeholders.
- Ensure diversity of peer review assessment and interview panels. Staff will adhere to a mixed panel policy and endeavour to achieve the minimum 30% for the underrepresented gender on the panel.

- Abide by the principles of peer review
- Provide EPSRC staff with tailored unconscious bias training for Peer Review processes and clear guidance for assessors.
- Handle personal sensitive information in compliance with General Data Protection Regulation 2018.

| Protected Characteristic Group | Is there a potential for positive or negative impact? | Please explain and give examples of any evidence/data used | Action to address negative impact (e.g., adjustment to the policy) |
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| Disability | Potentially negative | <ul style="list-style-type: none"> • The assessment process involves an interview stage which may lead to challenges in accessibility and increase the risk of unconscious bias. • All information provided is in written format. A panel and chairs briefing meeting will be provided and briefings will be available in the call guidance. | <ul style="list-style-type: none"> • Reasonable adjustments for specific requirements will be made. Documents will be produced in line with EPSRC formatting guidelines. • Panels are likely to be virtual. Where not fully virtual, the option to attend virtually will be available. Accessibility will be considered when choosing a physical venue. • Panel dates will be provided in advance to give sufficient time for applicants to discuss and plan required adjustments. • Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. EPSRC presence at assessment meetings and during interviews acts as an additional assurance to help ensure unbiased peer review. • We will be able to provide monetary support for any attendees who may request personal assistance e.g., carer, interpreter or note taker. • We will hold a webinar to share call guidance information and to address questions from the community on the application process for the call. |

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| Gender reassignment | No known negative impact | Potential for unconscious bias | <ul style="list-style-type: none"> • Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. • We will ensure that gender neutral language is used in both written and verbal form. • If panel meetings are held in-person we will look to provide gender-neutral facilities where possible. |
| Marriage or civil partnership | No known negative impact | n/a | <ul style="list-style-type: none"> • Standard EPSRC policies will be followed. |
| Parental leave/caring responsibilities/ pregnancy. | Potentially negative | Participation in activity could be restricted by lack of availability due to parental leave/caring responsibilities/ pregnancy. | <ul style="list-style-type: none"> • Reasonable adjustments will be made for individuals if required at all stages of the process. • Timetable of key dates will be made available to applicants and panellists in advance as early as possible. • We will make every effort to ensure that school holiday key dates will be avoided when deciding on panel meeting dates. • EPSRC policies for offering support to those with caring responsibilities will be followed and panel members and applicants will be made aware of these. Panellists will be informed if a panel meeting is to be held virtually as far in advance as possible. • We will ensure that breaks are scheduled in throughout the duration of panel meetings whether held virtually or in-person. • Additional care requirements could occur if individuals are required to attend the panel meeting on a non-working day or work extended hours on a normal working day. It is an individual's responsibility |

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| | | | <p>to check with EPSRC and confirm what costs can be reimbursed prior to attendance at a panel. Further details on the support EPSRC will offer for those with caring responsibilities can be found here.</p> <ul style="list-style-type: none"> • Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. |
| Race | Potentially negative | Potential for unconscious bias | <ul style="list-style-type: none"> • Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. • To be mindful to limit the use of colloquialisms used within both written and verbal format. • We will endeavour to have representation of ethnic diversity amongst panel members and reviewers. |
| Religion or belief | Potentially negative | Potential for unconscious bias | <ul style="list-style-type: none"> • All panel members will be asked to inform EPSRC of any personal circumstances that may affect their ability to participate and how this can be accommodated for. • Ensure religious observances are taken into account when meeting dates are chosen. • To ensure the venue for the panel meeting can provide a prayer/quiet room. • Breaks scheduled to coincide with any prayer times. • Dietary requirements and the opportunity to raise them in advance will be available to all attendees. |

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| Sexual orientation | No known negative impact | n/a | <ul style="list-style-type: none"> Standard EPSRC policies will be followed |
| Sex (gender) | Potentially negative | Potential for unconscious bias | <ul style="list-style-type: none"> Gender neutral language will be used throughout and will be encouraged at panel meetings. We will ensure to select gender diverse panellists and reviewers. Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. |
| Age | Potentially negative | Potential for unconscious bias | <ul style="list-style-type: none"> We will ensure members from across all different career stages/career paths of the Quantum Technology community are involved with the call to ensure we have diversity in perspectives and representation. We will not be equating age with experience and focus on required competencies. All views and opinions will be valued regardless of level of seniority. Evidence requirements for the Director are only about their ability to manage a large complex research grant and collaborate with users. They do not refer to years of experience. Standard EPSRC policies will be followed, including providing training materials for panellists on unconscious bias and empowering all panellists to challenge potential bias. |
| Additional aspects (not covered by a protected characteristic) | Caring responsibilities – potentially negative | Panellists and applicants may have reduced availability if they have to caring responsibilities for a vulnerable person. | <ul style="list-style-type: none"> Panellists and applicants will be informed in advance if a panel meeting is to be held virtually. Timetable of key dates will be made available to applicants and panellists as far in advance as possible. A pre-announcement was |

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| | | | <p>published in advance of the outline stage of the call.</p> <ul style="list-style-type: none"> • Highlight EPSRC guidance on support for carers or caregivers when travelling. • Dates for panels will be outside of school holidays wherever possible. Panel meetings will be held outside of commuter hours and school drop-off and pick up times. • Additional care requirements could occur if individuals are required to attend panel meetings on a non-working day or work extended hours on a normal working day. It is an individual's responsibility to check with EPSRC and confirm what costs can be reimbursed prior to attendance at a panel. Further details on the support EPSRC will offer for those with caring responsibilities can be found here. |
| <p>Additional aspects (not covered by a protected characteristic)</p> | <p>Pandemic/ Transport strike action– potentially negative</p> | <p>In case of a pandemic and/or strike action by national rail services it may be necessary to hold panel meetings virtually (potentially switching from in person to virtual at short notice).</p> | <ul style="list-style-type: none"> • Guidance will be provided to panellists – best practice and tools that can be used such as the hand raising and mute functions. • 'Test runs' will be offered to those who have not used Zoom before. • Extra time will be allocated to assist with cognitive load and 'short term' technical difficulties |

Evaluation:

| Question | Explanation / justification | |
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| Is it possible the proposed change in policy, funding activity or event could discriminate or unfairly disadvantage people? | We have identified potential areas which could lead to bias and have a negative impact, with the risk of unfairly discriminating amongst /unfairly disadvantaging members of the Quantum Technology community. To eliminate the potential for any unconscious bias we have identified these risks and will put mitigating actions in place to reduce potential bias/discrimination. | |
| Final Decision: | Tick the relevant box | Include any explanation / justification required |
| 1. No barriers identified; therefore, activity will proceed . | | |
| 2. You can decide to stop the policy or practice at some point because the data shows bias towards one or more groups | | |
| 3. You can adapt or change the policy in a way which you think will eliminate the bias | | |
| 4. Barriers and impact identified, however having considered all available options carefully, there appear to be no other proportionate ways to achieve the aim of the policy or practice (e.g., in extreme cases or where positive action is taken). Therefore, you are going to proceed with caution with this policy or practice knowing that it may favour some people less than others, providing justification for this decision. | Y | Possible risks and biases associated with the EPSRC Quantum Technologies Research Hubs call have been identified and mitigation has been put in place, for example, through providing panel and chair briefs on unconscious bias. In addition, we will be providing the opportunity to hold interviews and panel meetings virtually, to ensure we remove any unconscious bias for applicants and/or panel members who are unable to attend in-person. Furthermore, we will be providing adequate breaks throughout the day, and ensuring we facilitate an inclusive and accessible event by asking applicants and panel members of any personal circumstances that may affect their ability to participate and how this can be accommodated for by ensuring appropriate facilitates are in place or through putting in place reasonable adjustments. We will continually review and adapt to reduce bias. |

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| Will this EIA be published* Yes/Not required (*EIA's should be published alongside relevant funding activities e.g. calls and events: | Yes |
| Date completed: | 08/12/2022 |
| Review date (if applicable): | |

Change log

| Name | Date | Version | Change |
|------------------|------|---------|-----------------------|
| Ashleigh Bignell | | 1 | Final version created |