

## Partnership Resource Fund - Notes for Applicants

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### Introduction

The Quantum Computing and Simulation (QCS) Hub, as part of its EPSRC award, has dedicated £2.8m of funding available over the course of the Hub's five year project for additional research in collaboration with new academic and industrial organisations.

The PRF will allow the Hub to adapt and evolve its work programme in response to new opportunities or requirements in the development of Quantum Information Technologies (QIT) and their applications.

Participants in PRF projects can include:

- Hub researchers or project teams who wish to undertake new, unplanned research in collaboration with an industry partner or with an academic not in the Hub;
- Researchers currently not in the Hub who wish to contribute to the Hub's research;
- Industrial Partners who wish to collaborate with a researcher in the Hub.

Part of the Hub's mission is to develop the careers of early career researchers and to promote diversity and equality, so applications that help to advance this aspect of the Hub are encouraged.

### Academic Partnership Resource Funding (A-PRF)

New academic research partnerships can fund academic research outside the Hub to address specific research, technology development or applications unforeseen in the original plans and to access expertise in new fields that are relevant to the mission of the Hub during its lifetime.

Academic PRF Projects:

- must offer access to skills and/or capacity not already available in the Hub teams, and
- are focused on technology or applications oriented research and delivers against Hub objectives, i.e. in the opinion of the Hub's Management Board (MB) are within the scope of the Hub's objective but were not foreseen in the Programme Proposal, and
- are endorsed by or involve a Hub researcher to ensure that the quality of the proposed additional activity meets the level determined when the Hub researchers were selected.

The PRF aims to be flexible in scope, duration and costs but for guidance, most A-PRF projects are expected to be of up to 1 years' duration with budgets of up to £100k or up to 2 years where there is co-funding available from other sources.

### Industrial Partnership Resource Funding (I-PRF)

Industrial collaborations can fund research that engages with specific expertise or capabilities in an external organisation that can help accelerate or improve the Hub's research, or where an external organisation wishes to collaborate with a Hub researcher to gain new knowledge.

#### Industrial PRF Projects:

- improve the quality, speeds up or expands the Hub deliverables and are relevant for the Hub objectives, and
- involve Hub scientists and a third party, usually a commercial collaborator or an organisation that has unique capabilities, or makes a meaningful contribution (in kind or in cash) to advance quantum computing and simulation technologies, and
- show evidence of expected market impact, technical feasibility of the concept proposed and describe the path to impact, e.g. a path to field testing, prototyping, miniaturisation, integration, scale-up potential or new or better services or products.

The PRF aims to be flexible in scope but most I-PRF projects are expected to be less than 1 years' duration, require an award up to £100k and demonstrate a meaningful industrial contribution.

#### Application Process

The Applicant(s) should include the information requested on the QCS Hub PRF application form, using not more than four sides of A4, including

- Technical description and plan for the project with measurable goals. This should include a brief description of the state of the art in the area, and how the proposal relates to this
- A clear explanation about how it contributes to achieving the QCS Hub objectives
- If it involves new investigators from existing Hub partners, comments on why was this work not planned in the core activities of the Hub
- Reasons for the project starting at the proposed time; include details of related Hub milestones and timing and other external work that may be providing experimental results or infrastructure
- The name and position of the lead applicant
- Parties involved and their roles and include researcher names if they are known. If recruitment is required please briefly explain steps that will be taken to ensure a diverse set of applicants
- The Co-I in the Hub who will endorse the project or be involved
- Any actions to promote Equality, Diversity and Inclusion in the execution of the project
- A brief project plan, including the start and end dates and milestone dates if applicable-please include measureable goals (and intermediate milestones if applicable).
- The total costs to execute the project
- The contributions from each of the parties and co-funders (if applicable)
- The award requested from the QCS Hub

The application must also include the proposed costs using the template provided.

The Application should be sent to the Hub's User Engagement team who will check the Application for completeness and work with the applicant to prepare the final version of the Application. They can help answer questions, make connections with Investigators in the Hub or potential collaborators if required.

All Applications received in the period between the quarterly Management Board Meetings (with a typical 2-week deadline prior to each meeting), will be submitted at the next MB Meeting. The User Engagement team can inform Applicants of the next deadline date.

## Assessment and Award process

The Hub's MB will review and decide on the PRF applications received. It may accept or decline proposals as received, or accept proposals subject to certain conditions or changes. Applications may be resubmitted once in the same form at future MBM's or may be re-written with substantial changes to content or collaborators in which case it will be considered a new proposal.

All proposals will be considered on their own merit and, given the limitations on the PRF budget and the spend profile, relative to each other. The MBM will consider the following:

- The added value of each proposal to the objectives of the Hub:

*Creating a joined up national approach to quantum technology research, innovation and exploitation that harnesses the UK's scientific strengths and ensures that a centre of scientific, technological, manufacturing and economic gravity remains anchored in the UK; and*

*Operating as a national network, with high levels of engagement from industry, with the aim of harnessing and exploiting the research strengths that exist across the UK academic landscape, facilitating partnerships with industry, and tackling the key challenges that need to be overcome to realise the promise of quantum technologies.*

For A-PRF this includes the nature of the proposal, i.e. it moves the current work-plan along faster by providing innovative technology or it opens new opportunities for platform types

For I-PRF this includes the value and/or uniqueness of the industrial contribution and/or the strategic relevance for the industrial collaborator and its sector

- The quality/excellence of the proposed research
- The plan, proposed resources and management of the project.
- The compliance with the Award terms (see below)

The User Engagement team will inform the Applicants of the MB decisions.

## Award Management

The QCS Hub Resource Manager will work with the Applicant(s) to calculate and approve the financial aspects of the award, including overheads.

The Application will then be passed to the Contracts Office at the University that will lead the project, i.e. the Applicant's institution. That Contracts Office will complete the formal Agreement between all the parties involved: the leading University, any collaborating University/ies, the external Collaborator(s) and, save in exceptional cases, Oxford University as the Hub's lead institution. This Agreement will include the project scope and schedule, ownership and use of inputs and results including IP, contributions, liabilities etc. The Project Agreement template was agreed as a schedule to the QCS Hub's Consortium Agreement and it is available on request from the UE Team.

Projects should not start until detailed costs have been agreed and a formal Project Agreement has been signed by all parties. Once the project starts the Applicant will take the responsibility to report progress and final results to the QCS Management Board, the details of which will be included in the formal Project Agreement.

## Non-Academic Collaborators

For external collaborators, the terms of a research collaboration are based on the terms agreed between the Hub's Universities and with the EPSRC which in turn are based on the established principles of Industry-University collaborations in the UK as set out in the Lambert Toolkit. The PRF is flexible and allow for a variety of different scenarios but it is expected that in the majority of cases the PRF will fund a substantial share of the academic research and IPR ownership and exploitation will be treated accordingly. Details will be in the Project Agreement and a blank template is available for review.

We note that in some cases collaboration with an external party does not need to involve its participation in the actual research and instead may be an exchange of confidential information or the supply of equipment or services on an arms-length basis. In such cases it may be preferable that the external collaborator does not need to be a formal party to the Project Agreement and can act as a supplier or supporter whilst still demonstrating industrial relevance and a path to impact.

## Award Terms

- The PRF budget includes £1.4m for industrial and £1.4m for academic projects and will be managed flexibly, but cannot be exceeded;
- The PRF be used for EPSRC qualifying research activity in eligible organisations (i.e. UK Higher Education Institutions) but I-PRF is encouraged to include collaborations with other parties funding their own activities;
- Applicants can be academics in the Hub or academics outside the Hub but with the support from a named Co-Investigator inside the Hub;
- Investigators who receive funding for their time from the core programme will not normally be allowed to claim additional time for PRF projects. Exceptions may apply but will require careful justification;
- Companies cannot apply direct but should work with an eligible academic inside or outside the Hub;
- The PRF is for Research Council funded research activities and can be in collaboration with an industrial partner but industry-led innovation should seek assistance from the UKRI ISCF programme;
- Funding will generally be costed using an FEC model and awarded at 80%;
- Overheads and Indirect cost rates in the EPSRC grant awarded for the QCS Hub were those at the Hub's lead University, i.e. Oxford. For individual projects, they are normally adjusted in line with the actual rates at the participating University/ies but the Hub reserves the right to apply reduced rates depending on budgetary constraints. Rates will be agreed with participants prior to any final Project Agreement being finalised;
- No capital equipment can be funded with PRF; individual consumable items cannot exceed £10,000;
- The earliest spending can start from April 2020;
- No spending is allowed after the end-date of the project, i.e. 30 Nov 2024;
- The QCS Hub Award is subject to an annual spending profile and this same profile applies, with some flexibility, pro-rata to the PRF thus setting additional constraints on what can be awarded by the MB within a particular period;
- All funded projects will be subject to contractual terms as set out in a Project Agreement template. Whilst allowing for adjustments it nonetheless ensures that the terms of the award are observed and that the project supports the mission of the Hub and a standard template will reduce legal drafting;
- Project should not start until the formal agreement has been signed by all parties;
- Applicants have an obligation to report on the progress and the final outcomes of the Project;
- Applications that are not successful in their first attempt may be resubmitted once;
- Decisions to make awards or to allow exceptions are made by the MB of the QCS Hub. In exceptional cases, e.g. in the case of an urgent opportunity, the Hub's Leadership Team may make a decision on behalf of the MB.

This list is not exhaustive and is not a contract. The decision to make an award is at the discretion of the Hub Management Board and subject to the award terms of the QCS Hub.

## Contacts

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