# Call for Proposals – UK QT Hub Sensors and Timing

# Call Document 2: New Collaborations with Industry

## Proposals deadline: 5pm, 7th September 2020

### Introduction:

The UK National Quantum Technology Hub Sensors and Timing is the UK National Centre of excellence for the development and commercialisation of quantum sensors and timing devices. The QT Hub Sensors and Timing’s mission is to translate state-of-the-art lab technology into deployable practical devices. Collaboration is at the heart of what we do, with academics and leading companies working together to translate research into marketable applications. We are an international centre of excellence bringing together world-leading physicists, engineers, industry and end-users. To support our mission we have a Partnership Resource Fund (PRF) of £2million that will be used to foster a coherent National Quantum Technology Program by promoting inclusiveness and cohesiveness across the entire national quantum sensors and timing landscape.

The PRF will be split equally between funding new partners in academia and new collaborations with industry, to:

* add new science and technology concepts as they emerge outside of the QT Hub Sensors and Timing, involving new partners in academia;
* open up new pathways for academia to have impact with industry partners, in new sectors and on the strategic route to new applications for QT;
* engage with the wider scientific, industry, government, funding and public communities.

### Scope of the New Collaborations with Industry Scheme:

~50% of the PRF is reserved to fund academics initialising and delivering user-driven, engineering-led research and demonstration activities. This will build commercial confidence to unlock additional industrial investment to promote follow-on projects funded within ISCF, Dstl or directly by industry as a route to impact.

Eligible proposals will fit within at least one of the following areas targeted for support:

* Demonstrations in conjunction with instruments developed within QT Hub Sensors and Timing. These should include end-users and/or benchmark against other sensing technologies;
* Techniques for improving the resilience of quantum sensors to environmental and instrumental noise for trials outside of a lab environment including on moving platforms;
* Building links and addressing challenges relating to the use of sensor sub-system and/or component technologies and sensing and timing instruments, where at least one of the subsystems, components or instruments has been developed with QT Hub Sensors and Timing;
* Feasibility studies involving technologies developed with QT Hub Sensors and Timing and at least one new commercial partner, with a specific view to applying for ISCF funding in Spring 2021, or similar.

As with all activities in QT Hub Sensors and Timing, activities supported via the PRF will need to be performed in line with the principles of Responsible Research and Innovation (RRI).

The programme will accept proposals led by any eligible UK academic institution ([EPSRC eligibility criteria](https://www.epsrc.ac.uk/funding/howtoapply/fundingguide/eligibility/organisations/)).

### Funding:

Proposals will be funded at 80% of academic costs. Capital items are not eligible costs. Any non-academic partners are not eligible for any funding. The total funding pot associated with this Call for Proposals is ~£900,000. It is anticipated that, with the exception of Feasibility Studies, projects will have a duration of around 18 months and will deliver the completed results in or before Spring 2022. Feasibility Studies will have a maximum grant award of £50,000 each and should deliver completed results before January 2021.

### Submission Procedure:

Proposals may be submitted at any time prior to the deadline. Prior to submission applicants are strongly encouraged to contact the QT Hub Sensors and Timing PI, Professor Kai Bongs, to discuss the suitability of their proposal.

The maximum length of a proposal will be 4 pages and must be submitted to Jo Smart via email at J.C.Smart@bham.ac.uk. Proposals must address the following sections:

* *Concept and objectives*
* *Alignment to the QT Hub Sensors and Timing project and national programme*
* *Advancement beyond the state-of-the-art*
* *Work Programme*
* *Potential Impacts and Pathways to Impact*
* *Proposed arising intellectual property use and ownership arrangements*
* *Consortium and Resources*
* *Budget justification and requested funding*

Each proposal should include signed statements of support from industry stating their cash and/or in-kind commitments (these are additional to the page limit).

### Evaluation criteria:

Proposals will be evaluated against the following criteria:

* alignment to the objectives of: i) QT Hub Sensors and Timing; and ii) the broader quantum hub programme
* collaboration is with either: an industry organisation that has not previously collaborated with the applicants, or; the proposal is for a significantly enhanced level of collaboration with an industry organisation. Industry support should be demonstrated through indirect cash contribution and/or in-kind support (direct cash contribution will be considered with high favour)
* quality of consortium and implementation strategy
* excellence of the proposed concept, science and technology
* potential impact and ability to realise the impact (clear vision and strategy for working with industry, including understanding of the industry / user drivers)

### Evaluation procedure:

Proposals will be evaluated by a selection of the PRF panel at panel meetings, or a remote-meeting equivalent, following the general EPSRC peer review principles: [EPSRC Assessment Principles](http://www.epsrc.ac.uk/funding/assessmentprocess/prprinciples/). Proposals will be circulated to panel members selected for their expertise by the Chair of the Application and Technology Exploitation Panel. The proposals will also be circulated to The QT Hub Sensors and Timing PI and Director. The panel will discuss the proposals with consideration of the evaluation criteria and provide the ATEP Chair with their advice. The ATEP Chair, QT Hub Sensors and Timing PI and QT Hub Sensors and Timing Director will vote and award funding with consideration of the advice and available budget. A majority decision will be acceptable if consensus can’t be reached, and QT Hub Sensors and Timing PI will have the casting vote, if needed.

Proposals will be evaluated in a fair and transparent way. Confidentiality will be assured through following standard EPSRC procedures. The panel will follow the EPSRC standard procedures for avoiding conflicts of interest: [EPSRC Conflict of Interest procedures](https://www.epsrc.ac.uk/funding/assessmentprocess/) . All reviews will be independent and objective. The panel will seek to avoid selecting reviewers where a conflict of interest is identified, such as:

* anyone with an identified personal or organisational association with the project to be assessed
* anyone with an identified personal association with any other proposal in direct competition for funding.

Anyone asked to provide a review will check to ensure that there is no reason why they should not do so, and should decline the request citing 'conflict of interest' as their reason if they feel there to be a concern. Where a conflict is identified after a review is submitted that review will be classed as unusable and excluded from the process.

Applicants will receive feedback on their proposal and be given a right to reply to reviews and, upon agreement with the QT Hub Sensors and Timing PI, may re-submit an improved proposal.