

Quantum Technologies Strategic Capital Investment & Training and Skills Hubs in Quantum Systems Engineering Calls: Frequently Asked Questions

Background

In March 2015, EPSRC announced two calls for proposals to augment the UK's existing research, innovation and skills investments in quantum technologies. This investment results from the £270 million UK National Quantum Technologies Programme, which was launched in late 2014. The overall vision, as set out in the "National Strategy for Quantum Technologies" is to:

"...create a coherent government, industry and academic quantum technology community that gives the UK a world-leading position in the emerging multi-billion-pound new quantum technology markets, and to substantially enhance the value of some of the biggest UK-based industries."

Documentation relating to the two calls for proposals is available on the EPSRC website:

- Strategic Capital Investment call: <http://www.epsrc.ac.uk/funding/calls/quantumtechstrategicinvestment/>
- Training and Skills Hubs call: <http://www.epsrc.ac.uk/funding/calls/quantumhubs/>

The "National Strategy for Quantum Technologies" is available at:

<http://www.gov.uk/government/publications/national-strategy-for-quantum-technologies>

An information day for both calls was held on 29 April 2015 at the MacDonald Hotel & Spa in Manchester. This document is a summary of questions and answers discussed at the information day and frequently asked questions posed to EPSRC.

Many of the questions addressed to EPSRC relate to issues falling under the assessment criteria for the calls. Applicants should therefore articulate their case in a way that they are satisfied would **convince peer reviewers** that they are addressing the stated requirements.

Frequently Asked Questions

Issues Common to Both Calls

1. **Q:** Where can information on existing UK quantum technologies investments be found?

A: Details on EPSRC investments, including details of the Quantum Technology Hubs and Centres for Doctoral Training, can be found on the EPSRC website. See: <http://gow.epsrc.ac.uk/>. Applicants should contact grant holders directly for further details or to discuss opportunities to collaborate.

2. **Q:** What is meant by "augmenting" the existing landscape of quantum technologies investments in the UK?

A: The UK National Quantum Technology Programme (UKNQTP) has made a number of significant investments aimed at realising the social and economic benefits offered by quantum technologies for the benefit of the UK. The current

calls for proposals form part of this initiative and applicants are expected to demonstrate how their proposal will complement existing UK capability and contribute to the strategic objectives of the UKNQTP. In particular, applicants should consider the UKNQTP's emphasis on creating a coherent academic, industrial and governmental quantum technologies community. Although there is an expectation that proposals will work closely with existing investments, the nature of any collaborations will depend on the technical focus of the proposal. EPSRC acknowledges a range of possible approaches and will be guided by peer review assessment.

3. **Q:** Are the two calls following a common assessment process?

A: No, the calls are being conducted through synchronised but separate processes.

4. **Q:** Will EPSRC sift reject proposals?

A: EPSRC will reject proposals that fall outside the scope of these calls prior to peer review.

5. **Q:** How will proposals be assessed at the prioritisation panel stage?

A: The panels will consider the full assessment criteria, but will be asked to consider strategic vision and contribution to the UK National Quantum Technologies programme as a major criterion.

6. **Q:** Are partial awards a possibility?

A: Yes, EPSRC may make partial awards where recommended by the panel and in accordance with the strategic objectives of the UK National Quantum Technologies Programme.

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7. **Q:** Are multi-institutional bids permitted?

A: Yes. Multi-institutional bids should be submitted by the lead institution on behalf of all partners. Only one set of documents should be submitted per bid. Institutional statements of support are required from all partners.

8. **Q:** Who should sign the institutional letter of support?

A: It should be signed by a senior member of staff who has the ability to make financial decisions.

9. **Q:** How is a Training and Skills Hub different from a Centre for Doctoral Training (CDT)?

A: The Training and Skills Hub model was developed by EPSRC in response to the strategic objectives of the UK National Quantum Technologies Programme. Although this training model shares some similarities with the CDT scheme (both models are focussed on developing doctoral level skills) there are some differentiating features:

- Training and Skills Hubs should act as a national-level resource to enable the development of the UK's emerging quantum technologies industries. Consequently, there is an expectation that Training and Skills Hub activities will be co-created with stakeholders and will strongly emphasise co-working and mobility initiatives to integrate training across the UK's, academic, industrial and governmental quantum technologies community. Training and Skills Hubs should be outward looking and encourage peer-to-peer contact outside the Hub, as well as within it.
- CDTs provide thematic training for cohorts of students completing a four year doctoral programme or equivalent. Training and Skills Hubs can also offer full doctoral programmes for new students, but we envisage that they will also offer a range of training initiatives aimed at existing doctoral students. This might take the form of a package of training "niches", connected by cohort-based activities and/or connections to partner organisations.
- Training and Skills Hubs must include a dedicated "Career Accelerator Fund" to support the career development of the most promising doctoral quantum engineers.

10. Q: How many cohorts of students can be requested?

A: The Training and Skills Hub model differs from a CDT (see Q9). Nonetheless, awards will have a duration of five years, so there is the potential to include two cohorts of new students enrolling in a four year doctoral programme.

11. Q: Is there a requirement to leverage funding from additional sources?

A: There is no formal requirement to demonstrate leveraged funding. However, there is an expectation that proposals will be informed by the requirements of stakeholders.

12. Q: Are international students eligible for funding?

A: Yes, up to 10% of studentships can be used to support international students. For further guidance, see: <https://www.epsrc.ac.uk/skills/students/help/flexibility/>

13. Q: Can funds be used for international exchanges?

A: Yes, international collaboration to further the strategic ambitions of the UK National Quantum Technologies Programme (UKNQTP) is encouraged.

Applicants should keep in mind the need to balance the benefits of international collaboration with the UKNQTP's ambition to preserve the UK's competitive advantage as a global supplier of quantum devices, components, systems and expertise.

14. Q: What is meant by the “applicant team”?

A: The “applicant team” refers to the core group of staff that will be involved in running the Hub (e.g. the Director and Deputy Director). Potential supervisors or staff delivering training should not be named on the application form, but can be included in the two page “track record” document.

15. Q: Can industry, government and/or civil society organisations benefit from the Hub's training activities?

A: Yes, as this will facilitate knowledge transfer and expose students to skilled people outside academia. For example, applicants might allow external organisations access to training courses developed for doctoral students. However, EPSRC funding should not be used to directly support industrial training.

16. Q: Can I request funding to bring in industrial researchers to deliver training?

A: Yes, this is an eligible cost and may provide opportunities for co-working. However, applicants should focus on how this will benefit doctoral level training, as reviewers will need to be convinced that the proposed activities are appropriate and represent good value.

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17. Q: Are refurbishment costs eligible?

A: Yes, provided that the refurbishment costs relate to specialist infrastructure essential for the operation of the items of equipment that are requested.

18. Q: Can you give further details on the four areas of strategic focus, or examples of the kind of equipment that might be requested?

A: The four strategic areas defined in the call documentation result from an analysis of UK quantum technologies investments, including road mapping activity conducted within the UK National Quantum Technologies Programme. These investments relate to a diverse portfolio of technologies that are at different levels of maturity. EPSRC has not set particular restrictions on the kind of equipment that might be requested, as peer reviewers will be asked to assess

whether requested items are appropriate based on the definitions provided in the call document.

19. **Q:** Are service costs eligible?

A: Service costs can be only be included if they are an included in the purchase cost of items of equipment.