



# SBRI Competition – Fusion Industry Challenges

## Supplier Clarification Questions

This document should be read in conjunction with the guidance provided in SBRI Competition FAQs and UKAEA Fusion Innovation Challenges - Supplier FAQ

- 1. It looks clear from the eligibility tree that UKAEA aren't looking for consortia to bid and that SBRI is designed as a vehicle for small and medium sized businesses. I'd be grateful if you could clarify whether a UK Catapult Centre could bid (potentially with a named SME as a sub-contractor) or whether we could be a named sub-contractor in a bid led by an SME?**

UKAEA welcomes bids from consortia. As mentioned in the Eligibility Section "To lead a project, you can:

- be an organisation of any size
- work alone or with others from business, research organisations, research and technology organisations or other sectors as subcontractors. Applicants are welcome from all sectors.

Contracts will be awarded only to a single legal entity. However, if you can justify subcontracting components of the work, you can employ specialist consultants or advisers. This work will still be the responsibility of the main contractor."

Hence, if you are applying as a consortium, you'd have to decide on the legal entity that will be leading your bid.

- 2. Since this project by SBRI is funded by Innovate UK, does this limit participation to UK based companies only or are EU based companies invited to participate?**

This SBRI competition is funded by the UK Atomic Energy Authority (UKAEA), and EU based companies are invited to participate.

- 3. What kind of deliverable is expected at the end of Phase 1? Our idea is revolving around software, so we proposed to prepare a feasibility study as the deliverable. Would this be acceptable?**

Please refer to the Scope Tab; Your Proposal Section, which states "In phase 1 you must demonstrate the feasibility of your project, in line with the specific themes". The Scope Tab also details elements that must be included in your application".

- 4. Regarding technical milestones, I assume this is connected purely for payment milestones and I assume that there must be a review period for the technical deliverable. Who will be evaluating our milestones? What happens if the milestones are evaluated negatively?**

Yes, your first assumption is correct. Delivery of technical milestones are tied to payment gateways and will have a period of review with the UKAEA technical team. If the milestones received are not of satisfactory quality, there will be an expectation for the supplier to address any feedback before payment is considered.

**5. Do you have an idea about the timeline for evaluation of submitted tenders?**

Dates Tab states:

- "1 August 2021 - Applicants notified
- 1 September 2021 - Phase 1 contracts awarded "

**6. Will there be limitations to budgeting for Phase 2? Timeline or deadline for completing phase 2?**

Eligibility Tab, Funding Section states:

"The second phase involves up to four contracts being awarded to businesses chosen from the successful phase 1 applicants. Up to £3 million, inclusive of VAT, will be allocated for each contract, in order to develop a prototype and undertake field testing for up to 24 months."

**7. One gets an impression that this scheme is primarily intended for businesses, but there are clear statements, such as "applicants are welcome from all sectors" and we can "be an organisation of any size". Can I check specifically that as a university we are indeed eligible to apply?**

You are welcome to apply as a university. Please bear in mind that the application has to show route to commercialisation. Refer to "Question 8. Commercial potential" in the How to apply Tab.

**8. Under "who can apply", one gets varying degrees of steer from the document about whether to apply on our own, or whether to pull in expertise from other partners as subcontractors. The words state we can work with subcontractors, while the diagram showing eligibility states that we should be a "single applicant".**

"Single Applicant" is referring to the condition which states "Contracts will be awarded only to a single legal entity".

**9. Am I right to think that if we need additional expertise - which might be by working with a business - we can do this, but the full application should come only through ourselves?**

Yes, you are correct. The leader of the bid will have to submit the application and the contract will be awarded to that single legal entity.

**10. There are statements under scope that "the supplier will work closely with the stakeholders..." - is the stakeholder in this context UKAEA, or could it be wider?**

UKAEA is a significant stakeholder. You're welcome to consider other stakeholders in the fusion community.

**11. The timescale for Phase 1 is clear, but I did not see how long Phase 2 should last - this is important if we are to outline the plan for Phase 2 as well as Phase 1.**

Phase 2 can last up to 24 months. As stated in the Eligibility Tab, Funding section: "The second phase involves up to four contracts being awarded to businesses chosen from the successful phase 1 applicants. Up to £3 million, inclusive of VAT, will be allocated for each contract, in order to develop a prototype and undertake field testing for up to 24 months."

**12. Would the stakeholder also be a subcontractor?**

It is up to the supplier's discretion on deciding whether to include their stakeholder(s) as a subcontractor.

- 13. We have two distinct ideas, with two distinct teams, although there would also likely be synergies between them. If we decide this is optimal, can we submit two (or more) bids, or is there an institutional limit, and we should combine the two strands into a single bid? If the latter, if one strand is not attractive, but the other is, would the whole application fail?**

You can submit multiple applications; however, each application that you wish to submit will require a separate registration.

- 14. We have a few questions regarding the IP clauses on the application. We would like to invite you to a video call to discuss these questions and comments before we submit our application**

Unfortunately, we are unable to accommodate a video call during the tender period. Any clarifications with regards to terms and conditions should be raised digitally to ensure fairness and access to information for all bidders.

- 15. We have a question regarding the underlined section "17. Intellectual Property Rights 17.2 Subject to Clauses 17.3 and 18.5, the Intellectual Property rights arising out of the Project ("Foreground IP") shall belong to the Contractor. The Contractor hereby grants to the Authority a UK wide irrevocable, royalty-free non-exclusive licence to use the Foreground IP, together with any Background IP supplied by the Contractor during the Project that is required to use the Foreground IP at a fair and reasonable market price. The Authority shall have the right to grant a non-exclusive non-sub-licensable UK wide sub-licence to use the Foreground IP to any third party within the UK and EU at a fair and reasonable market price. The Contractor shall upon written request by the Authority provide a non-exclusive non sub-licensable UK wide licence to any third party within the UK and EU at a fair and reasonable market price." – would it be possible to alter this clause such that this right to grant is subject to the contractors' and the Authority's agreement also."**

The terms and conditions are fixed and align with the SBRI requirements.

- 16. We have a question regarding the clause 17.3 "17.3 The Contractor hereby grants to the Authority a UK wide irrevocable, royalty-free non-exclusive licence, together with the right to grant sub-licences, to use or publish any Data and Results arising from the Project." – would it be possible to alter this clause such that this right to grant is subject to the contractors' and the Authority's agreement also."**

The terms and conditions are fixed and align with the SBRI requirements.

- 17. Three years appears to be a very short time in context of UKAEA STEP (~2040) / Fusion private companies (~2030).**

**"18. Exploitation of Foreground IP and Results**

**18.6 If within three years of its creation, any Intellectual Property in the Results or Foreground IP has not been commercially exploited by the Contractor, and the Contractor is not using its best endeavours to do so, the Contractor shall on written request by the Authority promptly assign the Intellectual Property Rights in the Results or Foreground IP to the Authority. Each party shall bear its own costs in such assignment.**

**a. Would it be possible for this timeframe to be revisited in consideration of the commercialisation timelines in the industry?**

- The terms and conditions are fixed and align with the SBRI requirements.

**b. On what grounds would the Authority use to determine and assess whether commercial exploitation has been achieved?**

- Income generated from your own sales of products based on the IP and / or of income from the licensing of your IP to third parties is one way of assessing the progress of commercial exploitation. This can be in fusion or other industries which are more developed. Securing additional funding to continue commercialisation is another measure of progress. This measure ensures that the commercialisation options presented in the bid are being pursued and that the project / technology will not have been abandoned after completion of the SBRI funding.

**18. We would look for partners to consider the competition, and work across a wide range of sectors. How can I access the list of yesterday's meeting participants, so I can look for potential partners? Also, where can I find more information on the state of the art?**

Please find a link to UKAEA's [Industry Directory](#), which has been put together to facilitate business collaborations and partnerships

**19. I would appreciate if you could share asap the list of participants to the presentation event which took place (names and contact details, of the participants to the event) otherwise it is very difficult for a small SME to consider any application to the call. This is now becoming urgent**

Thank you for your feedback on the link. Our team has fixed the link and it's now working fine.

We cannot share the contact details of participants without their consent; I have therefore included Ray Chegwin in this email. Ray, from the Knowledge Transfer Network (KTN), might be able to facilitate linking you up with potential partners. Please feel free to get in touch with him for support.

**20. We wanted a discussion, to see if we could apply our solution to this area you mentioned in your introductory KTN talk on the recent SBRI call.**

- **development of on-line Tritium production measurement (e.g. Raman spectroscopy)**
- **or in one of the other areas**
- **improving efficiency of tritium and hydrogen systems (e.g. pumps, sealants, inner loop)**

**We were keen on making an SBRI application if we found our solution could make a significant improvement for you. We have done some initial research and there may be a use case. Could we please discuss it and if you think this cutting edge data science will be of no use, we will decide not to proceed**

Would you please email your list of questions? General questions, which are also helpful to all applicants, need to be captured and published appropriately

**21. Will it be possible for us to explore whether our data science is applicable in this SBRI call? We would not want to put an application in, unless it was useful to the end user (UKAEA) and addressed the real problems in an effective way.**

During the competition phase it can become difficult to hold meetings where applicants want to know if they should submit or not by discussing the technical scope in detail. This is to keep an open, fair and transparent competition process, avoiding any unfair advantage developing.

You are encouraged to continue with the application process if you think your proposal fits with the scope you mention.

**22. We would be very grateful if you might be able to direct us towards out any specific challenges addressed by the SBRI call where our capabilities might usefully be applied.**

We are interested in tritium online measurements and the technologies. The spectroscopy features are pretty similar for hydrogen and tritium but, as highlighted in the presentation, the main issue to consider would be the material compatibilities of tritium with your probes.

We think that overcoming this kind of challenge is the main purpose of all this so we strongly encourage you to bid for it.

**23. What sort of facilities does UKAEA have available to test new isotope separation techniques and would we be able to access them as part of a successful SBRI application (for example would we need to specifically cost this in, or would it be free to use?). We have only been able to conduct preliminary laboratory tests to date on our materials, due in part to the lack of specialised testing laboratories.**

At UKAEA, we do not have a platform to test new isotope separation techniques yet but we are currently building a facility which will reproduce a tritium plant. One part of this building will also be dedicated to research and there is where I would expect new processes to be implemented and tested. Not aware of the costs at this current point in time. Suppliers should factor this in their commercial offering.

**24. Do you have any information in the public domain or that could be shared with us regarding the use of MOFs for isotopic separation? Our materials share some similarities to MOFs and therefore any information in helping to understand the current thinking behind the use of MOFs and how they would be applied in a practical sense would be much appreciated.**

Information on the use of MOF for isotope separation can be found using usual research databases and should be widely accessible.

**25. There are two specific themes and we are interested in No.1  
1. Accelerating fusion power plant design with next-generation digital tools**

**There are two sub-themes listed:**

**Exascale artificial Intelligence era Digital Thread platform**

**Optimise the extraction of information and knowledge from experiment and simulation**

**Do we need to address both of these sub-themes and all of the bullet points or does our project need to fit within them somehow?**

You can choose to address one of the two themes, or both.

Bullet points have been included to help guide applicants and clarify what we are looking for in applications (Scope Tab). Your application should highlight which of these areas your proposed solution would address.

**26. Is the Exascale component a requirement or can we offer solutions which otherwise fit but don't necessarily require exascale (although they could be scaled for exascale and we are investigating this aspect at the moment)?**

Exascale is not a requirement. Scalability (Scope Tab) is stated as a preferred component of the proposed solution. Hence, applications are encouraged to highlight their confidence in providing a scalable solution.

**27. We are interested in leading on potentially 2 applications (one for each theme) of the Fusion industry SBRI competition. Would this be allowed? Are there any restrictions on the number of applications you can be involved in, as lead or subcontractor? If you can lead on more than one, would two separate accounts need to be created to complete the application forms? Or can you complete 2 application forms on the same account?**

You can submit multiple applications; however, each application that you wish to submit will require a separate registration.

**28. a. Can we gain access to models of fusion reactors or parts of them which have been prepared for the UKAEA by various RTOs and other organisations in order to run our data analysis on them. We have made contact with some UK RTOs who are willing to collaborate, can we also through the UKAEA gain access to other models so that we can more effectively interrogate the models.  
b. Can we access the different models that are based on input parameters that try to predict or perform some diagnostics relating to the behaviour of plasma in nuclear fusion reactors which have been prepared for UKAEA similarly.  
c. Is there other relevant historical data which UKAEA holds to complement the two sets of data above which could be useful to us in gaining insights into 1 and 2 which we could be given access to?"**

Determining the data that could be shared with a supplier, under contract, is at the discretion of the technical team managing the project. At this stage, where an open competition is ongoing, we could not confirm what data can (not) be shared and what data you might have access to. You are free to highlight in your application the data you would need to support your work, if your bid is successful.

**29. The terms of the competition require bidders to "engage with future customers to understand the needs" or rather, under Scope, Projects we will not fund, first paragraph and first bullet:**

**"We will not fund projects which:**

- do not engage with potential future customers to understand needs"**  
**Since the primary customer is UKAEA, I'm seeking to engage with UKAEA as this is a stated pre-requisite for the application. What is the formal route to request such engagement as part of this project?**

As UKAEA are funded by government, we need to follow due process in promoting a fair, open and transparent competition. Therefore, engagement should take place in the forms of clarification questions during the tender process to provide a clear audit trail.

**30. Can bidders include workshops with UKAEA staff in their proposal without consulting the UKAEA?**

If you believe this is of value, you can propose this as a potential activity in your bid. All bids will be scored accordingly with the published marking criteria.

**31. How can we commit in our proposal to engage with future customers and to deliver SMART objectives if we can't discuss with them at the tender stage their availability?**

In your bid, you can highlight the data and resource you would require from UKAEA to support your project. All bids will be scored accordingly with the published marking criteria. In this pilot phase, the opportunity will exist to negotiate and plan for UKAEA's level of commitment in the successful projects.

**32. There is a 7-month period between 1 Sept 2021 and 31 March 2022, yet the call states the project duration must be 6 months and start September and end by March. Can we start October and end March?**

31st of March 2022 is the cut-off date for projects launched under this competition. The expectation is to have suppliers submit their final invoices and have them receipted before the 31st of March. We can only receipt if the final deliverable is submitted and approved by UKAEA in due course. In your Project Plan, you should highlight when your deliverables will be submitted. This will be scored accordingly with the published marking criteria.