



UK Atomic
Energy
Authority

STEP Spherical Tokamak for Energy Production

20 July 2023

Whole Plant Partners, Webinar 7

The delivery model discussed is subject to approval.

UKAEA reserves the right to:

- Postpone, cancel or otherwise amend the planned procurement activity at any stage and at any time.
- Amend, clarify, add to or withdraw all or any part of this document at any time.

Focused Session on Proposed Commercial Terms from RFI2:

Intellectual Property, Liability and Nuclear Indemnities

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To lead the delivery of sustainable fusion energy and maximise the scientific and economic benefit.

UKAEA mission

Deliver a UK prototype fusion energy plant, targeting 2040, and a path to commercial viability of fusion.

STEP mission



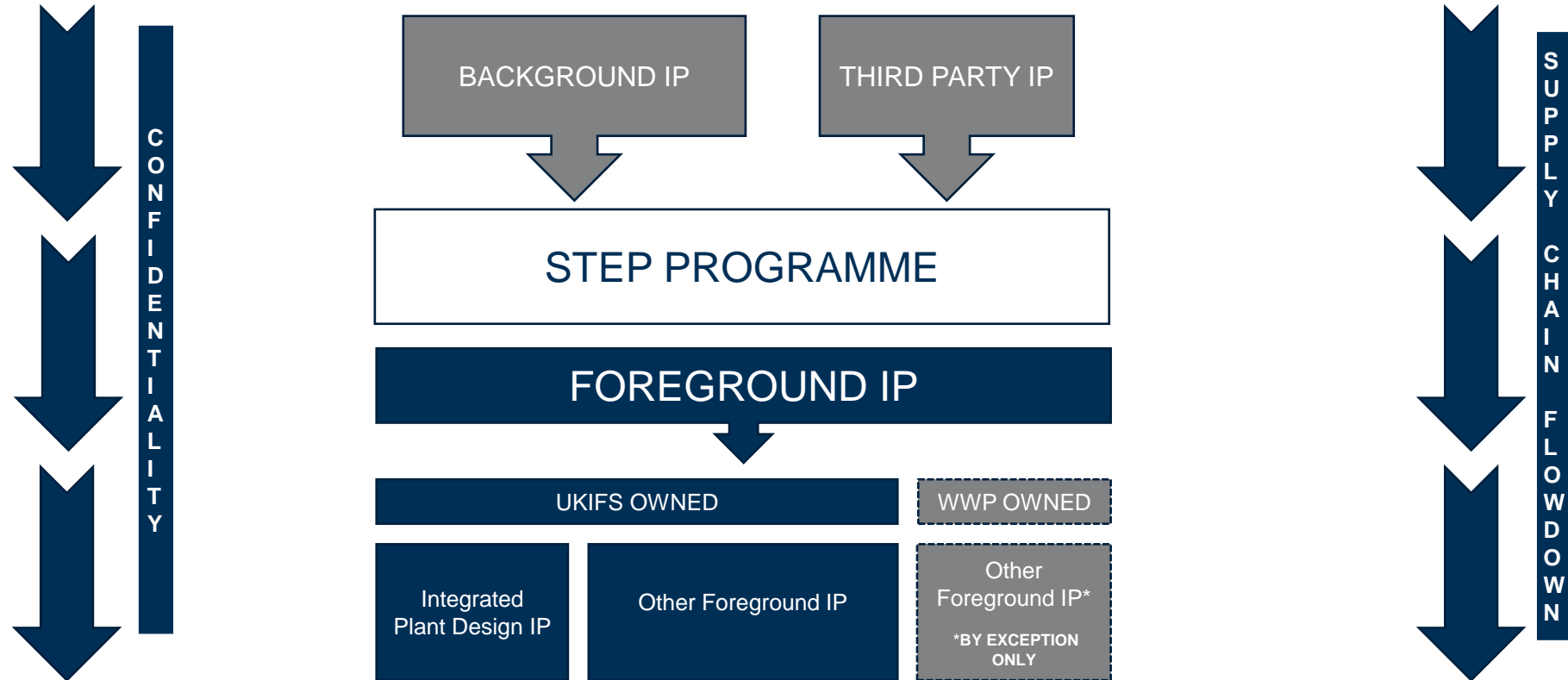
Intellectual Property Nisha



***...the purpose of the STEP
Programme...***



STEP – Intellectual Property

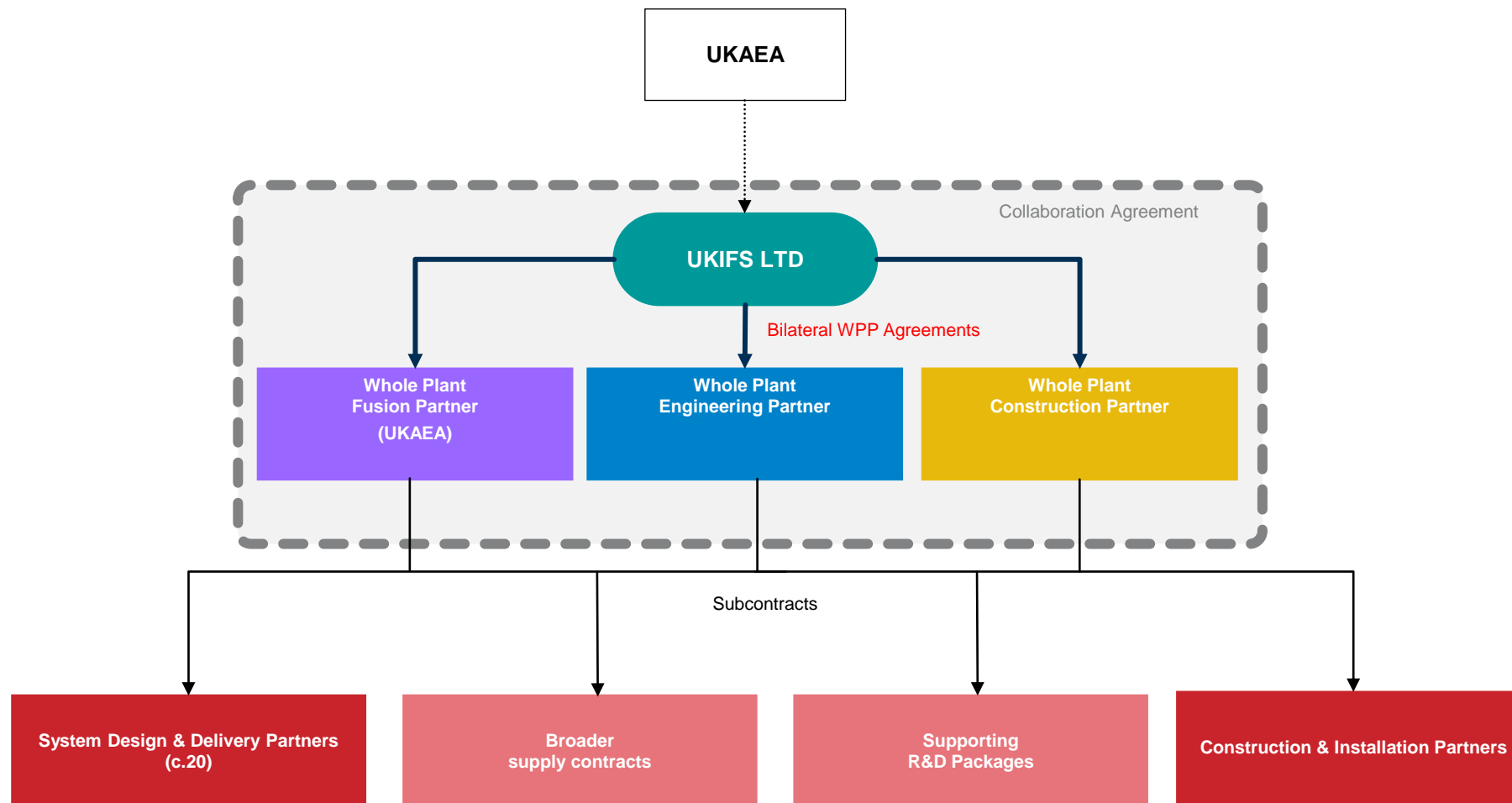


Liability Rob

Overview

1. High-level approach summarised in RFI2, Appendix 3.
2. Informed by relevant Government policy – e.g. “*Ensuring that risks are owned or jointly owned by the party or parties best able to manage and bear them...*” (Construction Playbook).
3. Market engagement now underway to ‘stress-test’ client-side analysis and ensure contracts take an optimal approach for delivering VfM and successful outcomes.

Contract structure



Strategic Collaboration Agreement

1. Focus is on creating an optimal environment for collaboration.
2. No party will have any liability under the SCA except for standard exclusions.
3. Standard exclusions TBC, but likely to include liability relating to matters such as:
 - a. breach of confidentiality requirements;
 - b. breach of third party IPR;
 - c. breach of anti-bribery requirements;
 - d. breach of data protection requirements;
 - e. liabilities not permitted to be excluded/limited by law (e.g. death and personal injury); and
 - f. fraud.
4. No party will be liable for consequential loss.

WPP Agreements & Package Orders

1. Capped liability:
 - a. WPP liability capped at Work Package level to ensure that cap levels and carve-outs are properly tailored to suit the scale and nature of the particular work being performed.
 - b. Cap levels and carve-outs will be consistent with market practice for the type of work being performed.
2. No liability for whole plant performance.
3. Change in law – client responsible for specific / discriminatory changes
4. Seconded – more limited degree of WPP liability for seconded resource.
5. Nuclear liability – covered in next section.

Nuclear Indemnities

Peter

RFI2 Recap

- **Nuclear liability**

- Given the regulatory regime is still evolving and the extent of any nuclear liability has yet to be determined with certainty, the allocation of this liability (and whether that allocation may change over time to reflect the risk profile at different stages in the development of the project) is still being considered

- **Nuclear indemnities**

- Given the regulatory regime for fusion is still evolving and the extent of any nuclear liability has yet to be determined with certainty, whether nuclear indemnities may be available (and if so whether they may be time limited) is still being considered
- That said, once the regulatory regime for nuclear fusion is in place and sufficient insurance capacity is available for operators, UKAEA is minded that any request for indemnification from the supply chain should be refused on the basis that the risk of contractors incurring liability outside the UK is negligible

Regulatory Context

- **UKAEA Fusion Safety Authority's Technology Report – Safety and Waste Aspects for Fusion Power Plants**
 - The understanding of the hazards relating to a fusion power plant is well developed
 - Published safety analyses for conceptual designs of fusion power plants show that even in the case of major in-plant failures from significant internal or external events, the potential for harm to members of the public is low
 - Published assessments of environmental radioactive discharges for conceptual designs of fusion power plant show that the potential for harm to members of the public is very low
- **The UK Government's Fusion Strategy**
 - Lead the development of international fusion standards and regulation, to ensure safety and maximise the global potential of fusion whilst creating important market opportunities for the UK

Regulatory Context

- **Extracts from the UK Government's regulatory proposals**
 - To maintain the existing regulatory approach to operational permitting of fusion facilities (HSE and environmental regulators), given that the radiological hazard of a fusion power plant will be increased but not fundamentally different from current fusion research facilities
 - To legislate to confirm that fusion energy facilities would not be legally defined as nuclear installations
 - The Government has concluded that some form of liability regime would be appropriate for fusion and said it will “publish details in due course”. The intended outcome would be to make sure that third party costs arising from any fusion accident would be met by the fusion operator, and that the cost of the necessary insurance provisions is proportionate to the liabilities involved
- **So, where are we now?**
 - A nuclear site licence will not be required for STEP and the associated regulatory and nuclear liability regime applicable to fission plants does not apply
 - There are currently no specific nuclear liability requirements for fusion operators in the UK, although that may change in light of Government's proposals...

Practical Considerations

- Fusion energy facilities like STEP have a fundamentally different hazard / risk profile to fission power plants
- Radiological damage can only occur, and any nuclear liability issues arise, once radioactive material arrives at the STEP site - which is many years away
- The regulatory regime will evolve in the meantime, and precisely how and where it will end up is currently unclear, but if Government introduces legal channelling of all liability to the operator we do not anticipate any requirement for an indemnity
- Commercial insurance is not currently available, but the liability regime that Government proposes to introduce for fusion is intended to support the development of commercial insurance provision for fusion energy facilities

Practical Considerations

- The nuclear liability and indemnity position does not have to be determined now – it could be considered as / when work packages are awarded
- Even after radioactive material arrives at the STEP site not all activities being undertaken by Whole Plant Partners will have the potential to result in radiological damage or give rise to nuclear liability (many will not)
- The Whole Plant Partner Agreements will contain change in law provisions - these are still being developed, but could allow amendments to be made to those Agreements and/or work packages to address any changes to the fusion regulatory regime that occur (and any consequential impact on the nuclear liability and indemnity position)

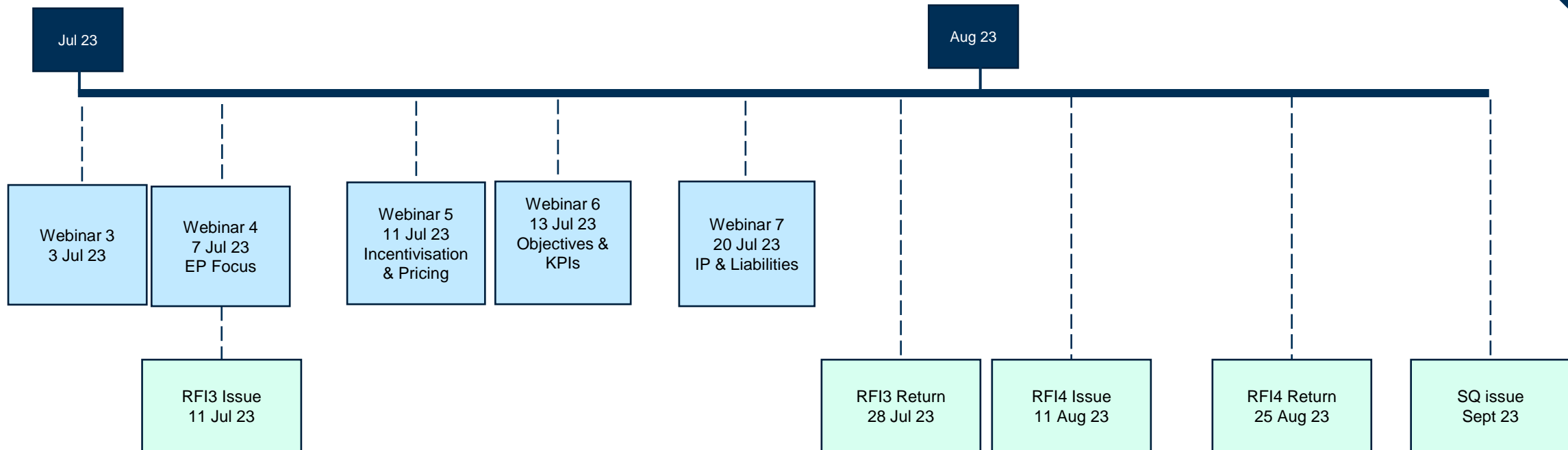
Conclusions

- Hopefully it is now clear why the position on nuclear liability and indemnities is complex and still being considered by STEP...
- As are the RFI2 responses and concerns raised therein. On those responses, we note that the majority of respondents indicated that they had not identified any key risks in the position stated on nuclear indemnities
- STEP's position on nuclear liability and whether nuclear indemnities may be available will be confirmed during the procurement process and may be a potential topic for dialogue

What's planned next?

Sarah

STEP Pre-Market Engagement

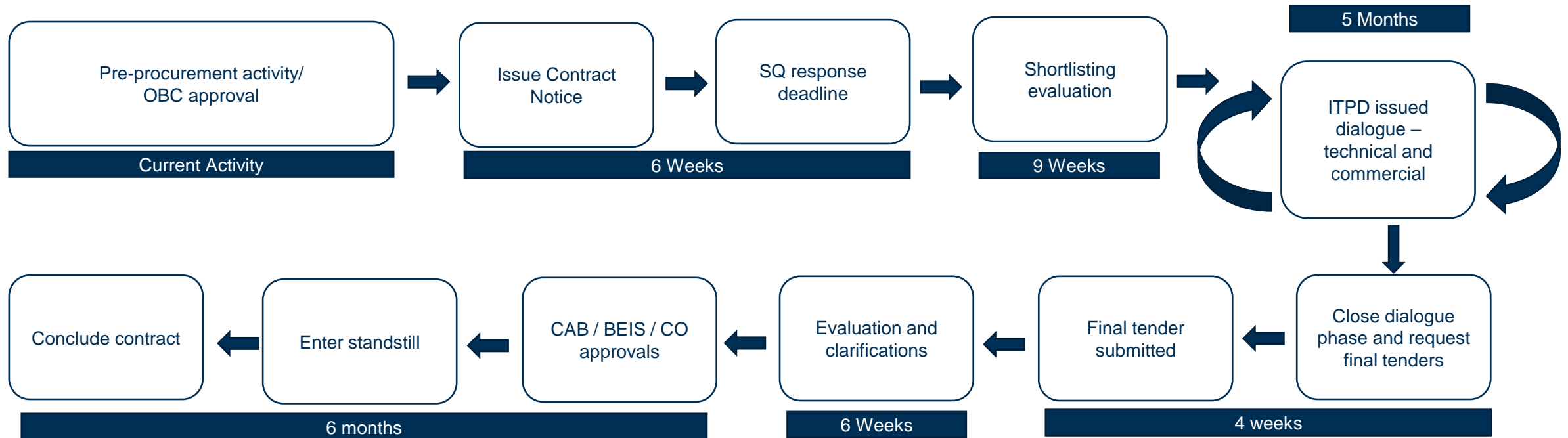


- **RFI3 was issued 11 Jul 23** - This provides further information on programme governance, PMO capabilities, IP, acceptable tendering models, future investment, commitments to fusion, and proposed Selection Questionnaire technical questions
- **RFI4 is scheduled for 11 Aug 23** – This is anticipated to provide some information on proposed Financial Standing Requirements for Tenderers, and information on Profit percentages and levels

Procurement Process Update

Following your engagement, we have been continuing to refine the procurement process to be as compliant and efficient as possible for all parties.

Based on our current planning, we expect to commence the procurement with the issue of the Contract Notice and Selection Questionnaire (SQ) in September 2023.



Thank you.

Any questions – procurement@step.ukaea.uk

If you'd like to find out more about fusion or UKAEA please take a look at these resources:

<https://www.gov.uk/government/organisations/uk-atomic-energy-authority>

<https://ccfe.ukaea.uk/>

www.step.ukaea.uk

<https://www.youtube.com/channel/UCyb9vG8oLE4XvZZLYpcDcFw>