



# STEP Spherical Tokamak for Energy Production

3 July 2023

Whole Plant Partners, Webinar 3

The delivery model discussed is subject to approval.

UKAEA reserves the right to:

- Postpone or cancel 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 the Construction Partner

**Sarah Palmer – Head of STEP Strategic Supplier Relationships**

**Chris Waldon - Deputy Director of STEP & Chief Engineer**

**Chris Tierney - WPP Capability & Evaluation Lead**

# The Construction Partner (CP)

The Construction Partner (CP) will be a full member of the Integrated Delivery Team (IDT) who will:

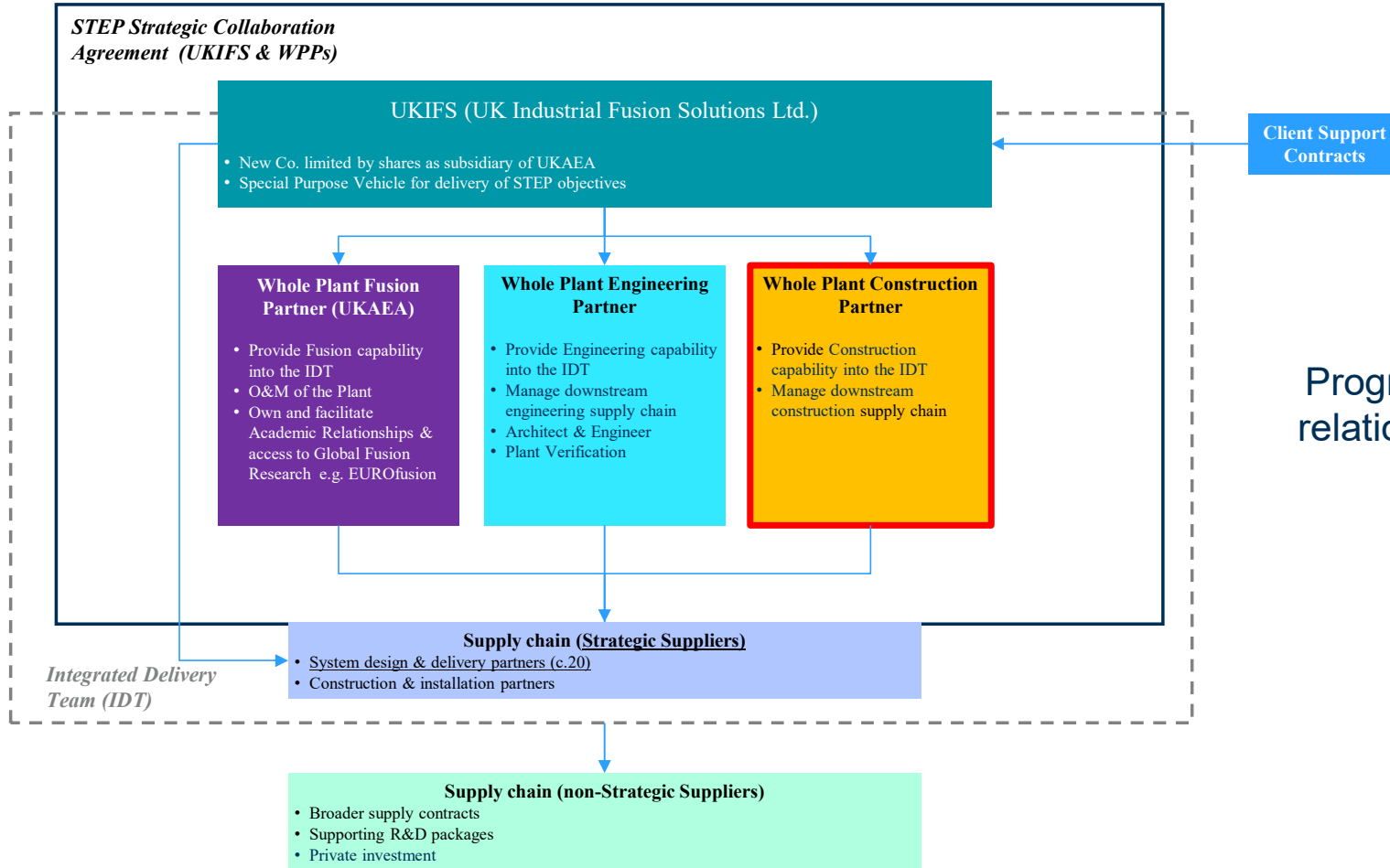
- **supply key personnel under secondment into positions in UKIFS;**
- **supply services to the whole IDT;**
- **lead on delivering work packages developed by and approved by UKIFS (using its seconded staff).**

As the programme develops, subject to performance, we envisage more responsibility passing from UK Industrial Fusion Solutions (UKIFS) to the CP.

On behalf of UKIFS, the CP will manage and develop the physical works at the STEP site and lead the site management arrangements in relation to safety, security, maintenance and management, ultimately leading the construction site in Tranches 2b and 3.

Some of this work (such as managing site safety) will be a service provided across the programme and other aspects, such as specific building design and construction, will be on a package-by-package basis.

# CP as a member of the IDT



Programme Governance and WPP relationships will be expanded upon as part of RFI3

# Self-Delivery

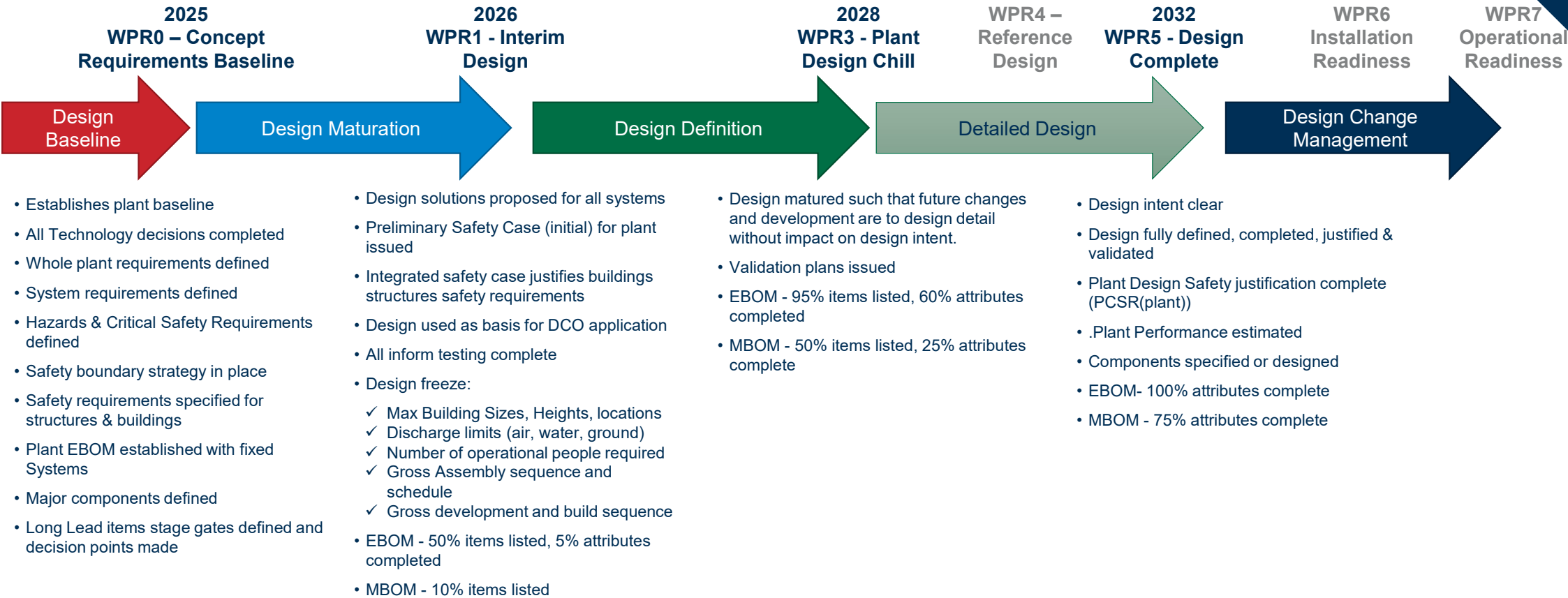
Bidders are not required to "lock-in" full programme lifetime capabilities at Day 1

Whole Plant Partners (WPP) will not be required to self-deliver all work packages / services

In fact, to support the STEP objective of stimulating a fusion supply chain, utilising the WPP procurement and supply chain support will be fundamental

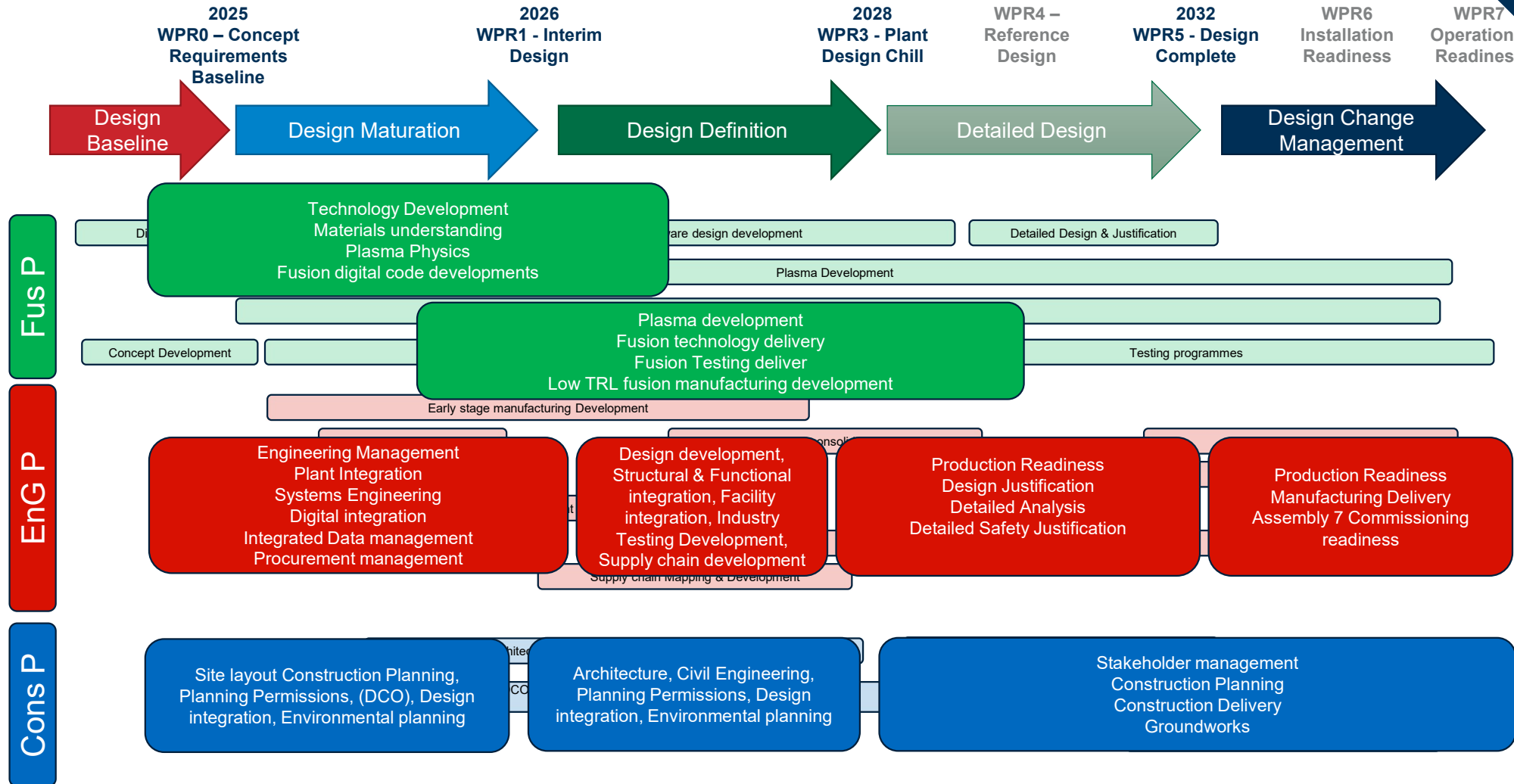
Allocation of work packages / services will be determined on a best for programme basis on a case-by-case basis

# Whole Plant Baseline Reviews (WPR)





# STEP WPP Scheduled Activities



# CP Key Capabilities

## From Day 1 – Appointment to the IDT up to DCO submission (2025-2028)

### Management

- Provision of high-grade managerial, engineering and construction personnel for assignment to the IDT
- High-level Project Management for initial IPTs
- Large-scale Project Control management – planning, budgets, document control, progress monitoring and reporting
- Provision of a complete set of managerial and technical procedures (directly or via associated companies)

### Permissions

- DCO compilation and management
- Subcontracting and managing DCO study contractors/consultants

### Design

- Concept and feasibility studies for layout and building scopes
- Overall Layout design capability – to further develop UKAEA layouts previously developed
- Temporary Facility design, supply, erect

### Procurement

- Vendor pre-qualification and capability studies
- Engagement of initial vendors for the potential provision of long lead items and for the contractual engagement of building contractors at time of DCO permission receipt

### Construction

- Site security hardware installation, software provision and management, site personnel and vehicular access
- Transport planning – construction personnel, general goods movements

# CP Key Capabilities

## From Year 3 – DCO submission onwards

### Management

- Ongoing assignment of high-grade management to the IDT and for overall aspects of general construction onsite
- Provision of full project teams for multiple work packages awarded
- Large-scale Project Control management application – planning, budgets, document control, progress monitoring and reporting

### Permissions

- DCO application adherence control and reporting
- Authority liaison (together with UKIFS)

### Design

- Management of design directly or in sub-consultant offices either in The UK or elsewhere
- Overseeing vendor designs to meet specification
- Ongoing concept and feasibility studies for future developments
- Design of up to 82Nr buildings and separate facilities (current estimate) through the complete RIBA design management process (or equivalent), addressing varying degrees of complexity of scale and content

### Procurement

- Provision of contracted services to sites and fabrication companies offsite
- Provision of general services regarding welfare, accommodation, office management and all support services
- Supply of a wide variety of civil and building items either directly or via sub-contracted packages

# CP Key Capabilities

## From Year 3 – DCO submission onwards

### Construction

- As part of the IDT, operation of site-wide multi-organisational groups to address:
  - HSE
  - Security
  - Quality
- Overall management of the site enclosed area
- Full site management of all resources onsite for the receipt of materials, drawings and services to progress the installation and construction of approximately 82Nr buildings, full layout of roads, services, open spaces, river works, rail works and other such facilities

### Test & Commissioning

- Full provision and management of all installation testing and commissioning

### Hand-Over and Operations

- Collation of full document and data packs in accordance with the work breakdown structure, including Test and Inspection certificates, Operational Procedures, Maintenance Manuals, Drawings, Databases, NZC data, BREEAM data
- Compilation of all-inclusive BIM databases with linkages to all deliverables

# Tendering Model Parameters

Interested Parties may be part of both an Engineering Partner and Construction Partner bid team

- Each lot will be awarded independently (of each other)
- Demonstration of required capacity and management ability to support both roles will be required

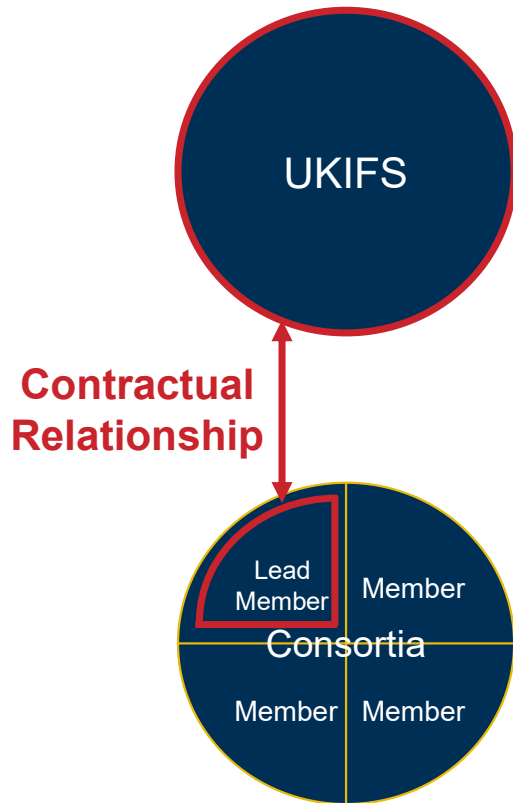
Interested Parties may be a member of more than one bid team, but it may not lead more than one consortium within the same lot - **the same organisation cannot lead two bid teams tendering on the CP lot.**

Interested Parties may lead a consortium tendering on each of the available lots – **the same organisation can lead one consortium on the CP lot and lead one consortium on the EP lot.**

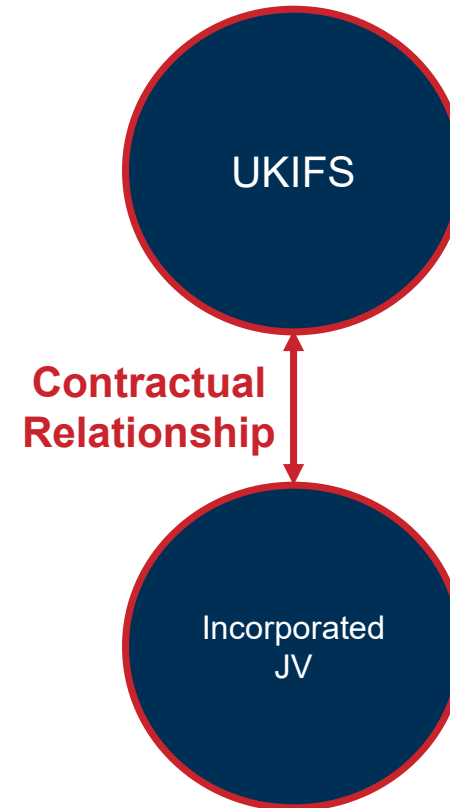
In this instance, organisations will be required to evidence how they will limit the risk of anti-competitive behaviours during the tender process, and evidence their capacity to deliver in the event they were successful in both lots.

# Consortia / Joint Ventures (JV)

## Consortia Contractual Relationship



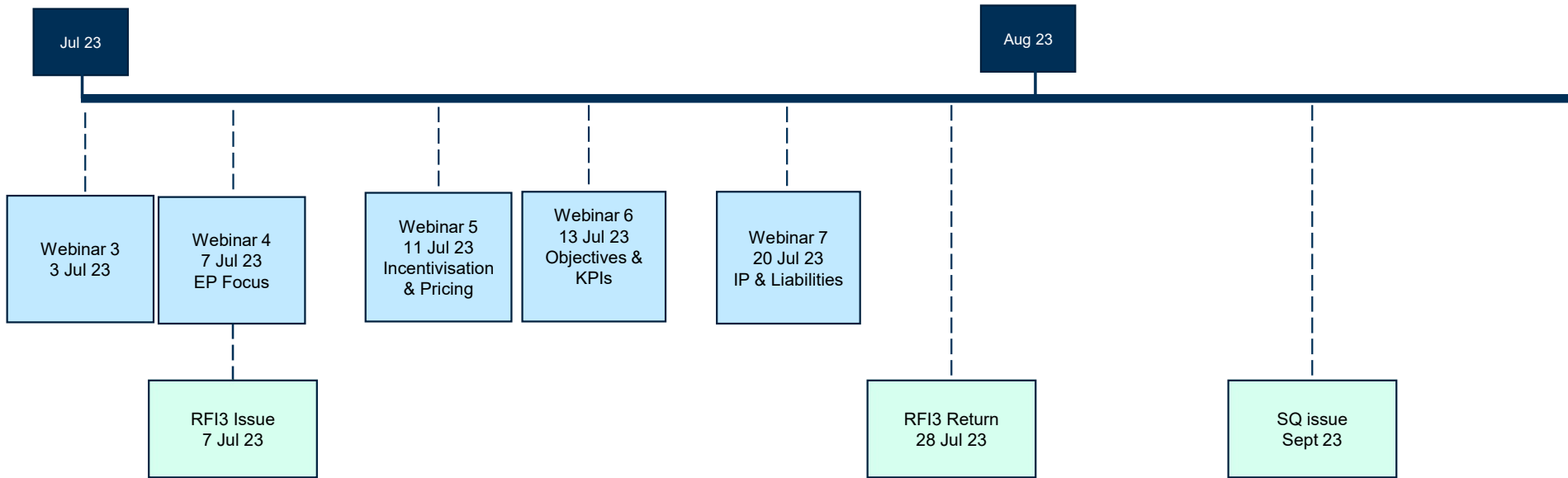
## JV Contractual Relationship



We will require any JV's to be Incorporated at point of Contract award

# What's planned next? Sarah

# STEP Pre-Market Engagement



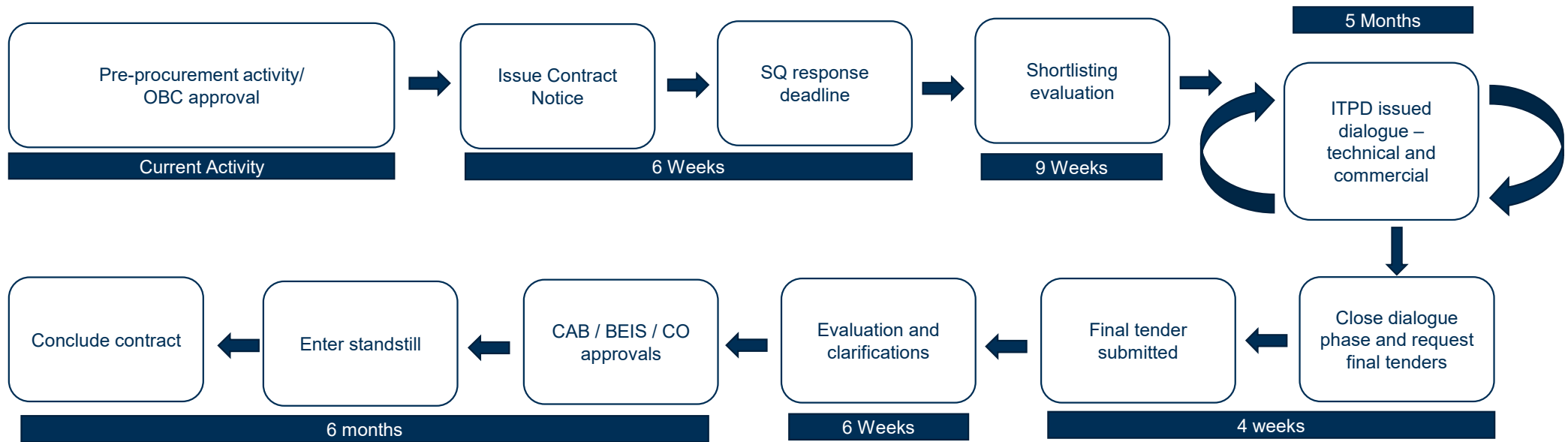
- **RFI2 responses** - Thank you! We are continuing to use the information and suggestions.
- **RFI3 to be issued W/C 3 Jul 23** - This will cover further information on programme governance, PMO capabilities, IP, acceptable tendering models, future investment, commitments to fusion and proposed Selection Questionnaire technical questions



# 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](mailto: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](http://www.step.ukaea.uk)**

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