

**Mercredi**  
**27 septembre**  
9h/18h  
À Cadarache

# LES rencontres — ITER —

Rendez-vous d'affaires & opportunités de marchés

Le réseau des

 **CCI PROVENCE  
ALPES CÔTE D'AZUR**



# Présentation des marchés de F4E

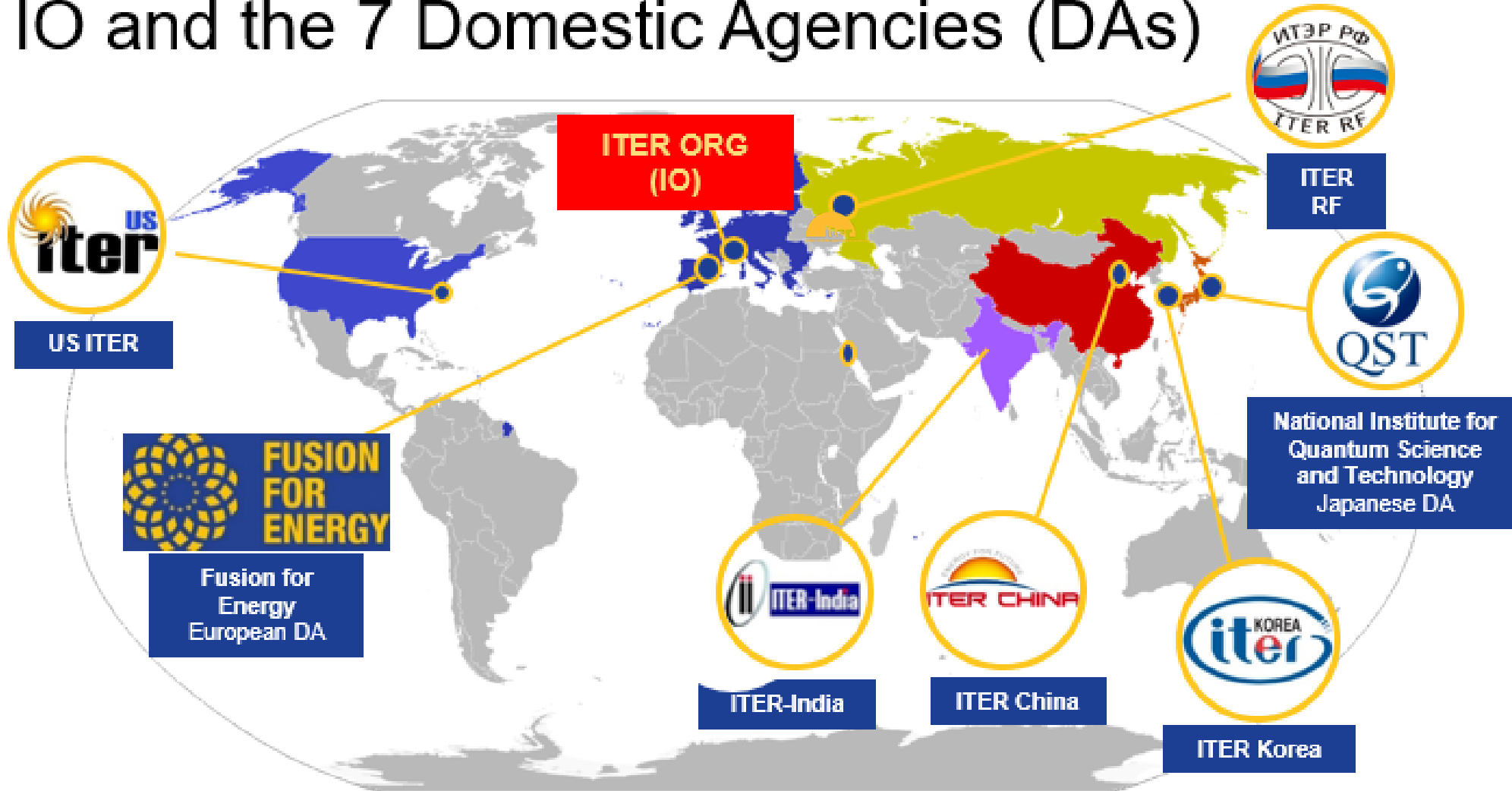
Benjamin PERIER

Senior Market Analysis Officer  
Fusion For Energy



- **F4E and EU/French Industry**
- How to access F4E opportunities
- Upcoming opportunities by F4E

# IO and the 7 Domestic Agencies (DAs)

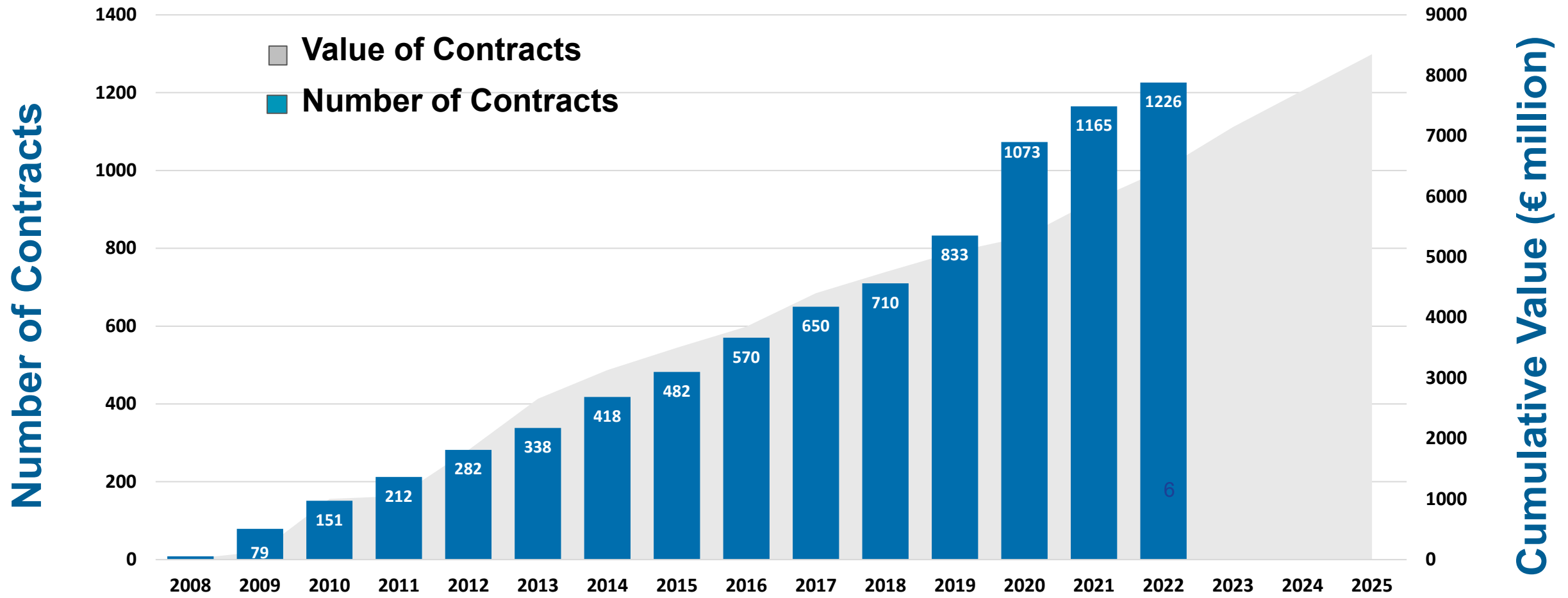


1. **Deliver** the European Contributions to **ITER and the Broader Approach** (...) **making best use of the industrial and research potential and capabilities** of all F4E members in line with competition rules.

2. **Broaden the European industrial base** for Fusion technology for the long-term development of fusion as a future energy source and to ensure a **strong and competitive European industrial participation** in the future fusion market.

3. **Foster** European **innovation and competitiveness** in key emerging technologies to further the development of the *Innovation Union* and its impact at the international level.

# Contracts placed with industry & research labs in Europe (2008-2022)

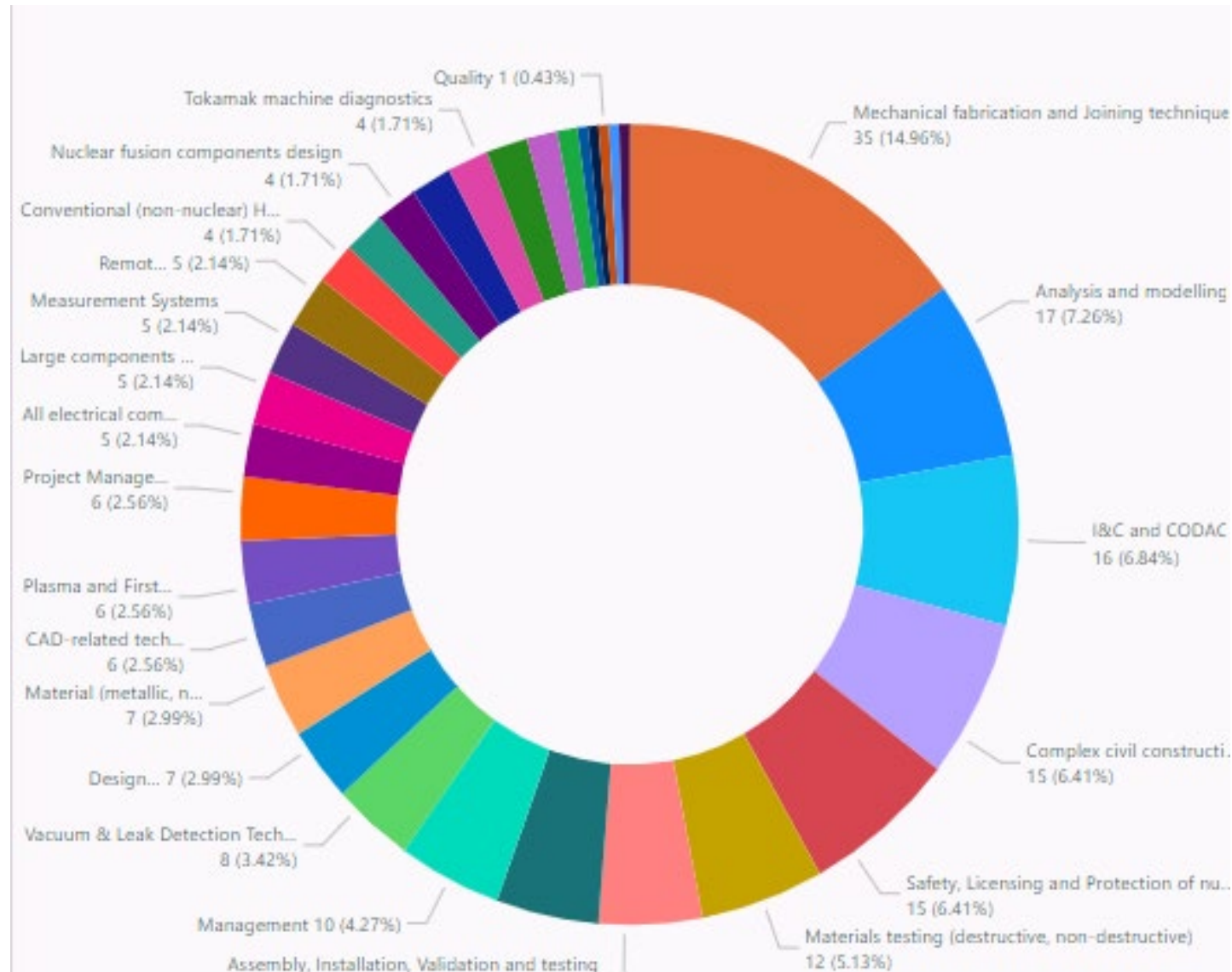


- F4E and EU/French Industry
- **How to access F4E opportunities**
- Upcoming opportunities by F4E

- **De capacité... mais surtout de spécialité**
- **Parfois nécessaire/essentielle pour remplir les *Technical selection criteria***
- **Sous-traitance vs. Co-traitance vs. Consortium**
- **Les Sous-traitants dans la Supply Chain de F4E**
  - ✓ Pas de distinction entre main contractor, co-contractor, sub-contractor (même mode d'enregistrement dans notre base)
  - ✓ Par liste de capacités (Technology list) et d'intérêt
  - ✓ Pendant le pre-procurement (Market Survey, Info Day)
    - **REPONDRE AUX MARKET SURVEY, MEME POUR UNE PARTIE DU PERIMETRE**



# Liste des technologies F4E



Microsoft Excel  
Worksheet

## F4E Market Analysis Group

[benjamin.perier@f4e.europa.eu](mailto:benjamin.perier@f4e.europa.eu) et [mehdi.daval@f4e.europa.eu](mailto:mehdi.daval@f4e.europa.eu)

### Actions:

1. Demander la site des Technologies [federico.arenas@ext.f4e.europa.eu](mailto:federico.arenas@ext.f4e.europa.eu)
2. Faire une selection de Technologies (être selectif)
3. Renvoyer la liste avec ref. aux Rencontres ITER => [federico.arenas@ext.f4e.europa.eu](mailto:federico.arenas@ext.f4e.europa.eu) (indiquer son accord pour transmettre vos info de contact aux potentiels “main contractors” dans le futur

[dijana.samson@cea.fr](mailto:dijana.samson@cea.fr) Industry Liaison Officer France

## ITER ORGANISATION (IO)

### International Public Procurement Rules

Competition, fair treatment, transparency  
Ultimate authority with ITER Council

Geographical scope: **all ITER parties**

Threshold for publication: **100 k€ (services)**

Publication: website and through DAs  
<http://www.iter.org/proc/overview>

Types of contract: commercial procurement, ITER Project Associates, expertise.

Contact: [ITER-Procurement@iter.org](mailto:ITER-Procurement@iter.org)

Tendering: Mandatory registration on IPROC  
[www.iter.org/proc/overview](http://www.iter.org/proc/overview)

Procurement procedures: open call, restricted call, negotiation, competitive dialogue, etc.

Support to locate staff and facilities near ITER site is provided through **Agence ITER France** and *Welcome Around ITER* partnership <http://welcome-around-iter.com>

## FUSION FOR ENERGY (F4E)

### EU General Financial Regulation

(based on Public Procurement Directive 2014/24/EU)  
Wide competition, fair treatment, transparency, proportionality, non-discrimination  
Ultimate authority with European Parliament

Geographical scope: **EU (sometimes Worldwide)**

Threshold for publication: **144 k€ (services)**

Publication: website and TED  
<https://industryportal.f4e.europa.eu>


Types of contract: commercial procurement, research grants, innovation partnerships, framework partnerships, expertise.

Contact: [benjamin.perier@f4e.europa.eu](mailto:benjamin.perier@f4e.europa.eu)

Tendering: Mandatory upload of tenders on EU Supply  
<https://eu.eu-supply.com/login.asp?B=>

## Prime contractor:

Manage documentation...  
Technical selection criteria  
Financial criteria (2x contract annual value)


**Fusion for Energy**  
 Industry and Fusion Laboratories Portal
 

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**Open Opportunities**

- [F4E Calls +3](#)
- [Market Surveys](#)
- [Information Days](#)
- [Other Opportunities](#)
- [ITER Org. Opportunities](#)

**ILO Details**  
Contact your ILO and Access the ILO Network

**Search Partners**  
Connect with potential industrial partners

**Technology Transfer**  
Discover how to bring fusion technologies to the market

**Procurement Documents**  
Find applicable guidelines & documentation

**Industry Portal at a Glance** Show less ^

F4E's Industry and Fusion Laboratories Portal serves as a comprehensive hub for individuals interested in establishing business relations with F4E.


The Portal provides essential information on business opportunities, procurement procedures, guidelines for submitting proposals to Calls for Tender, and reference [procurement documents](#). It also features a partner's database and direct access to the e-procurement platform.

In addition to announcing Calls for Tender (which are also published on [TED](#)), the portal offers access to crucial reference materials like contract notices, specifications, and technical annexes. Any updates about a specific tender, such as corrigenda or changes in deadlines, are promptly shared on the Industry Portal.


Furthermore, the portal serves as a platform for announcing Information Days, conducting Market Surveys, and sharing general information relevant to our procurement activities. Historical announcements can be [found here](#).

It includes a dedicated section for [Industrial Liaison Officers \(ILOs\)](#), enabling companies to locate the corresponding ILO responsible for their territory of operation.


**Here you can:**




Explore F4E Business Opportunities  
[Explore →](#)



See upcoming business events  
[Learn News →](#)



Search for potential business partners  
[partners →](#)



Contact your Industry Liaison Officer (ILO).  
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**Latest Published News** Search:

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Reference / News title ^	Categories ^	Date v
<a href="#">Heating and Current Drive: Magnetic Shielding Market Survey</a>	Market survey	08-08-23
<a href="#">BROADER APPROACH - JT60SA Diamond Window Assemblies contract awarded</a>	Awards	21-07-23
<a href="#">ADMIN [AMF-1482] Extension of Deadline until 14th September 2023 for Call for Tenders for the Provision of Technology Brokerage Services</a>	F4E Calls	20-07-23

\* In the column "Cost Range", an indication of the cost range of the tender is given in the form of letters A, B, C and D.

- A** Item range 300 000 – 2 000 000 EUR
- C** Item range 4 000 000 – 12 000 000 EUR

- B** Item range 1 500 000 – 5 000 000 EUR
- D** Item range above 10 000 000 EUR

<https://industryportal.f4e.europa.eu/>

- F4E and EU/French Industry
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**A** Item range 300 000 – 2 000 000 EUR

**C** Item range 4 000 000 – 12 000 000 EUR

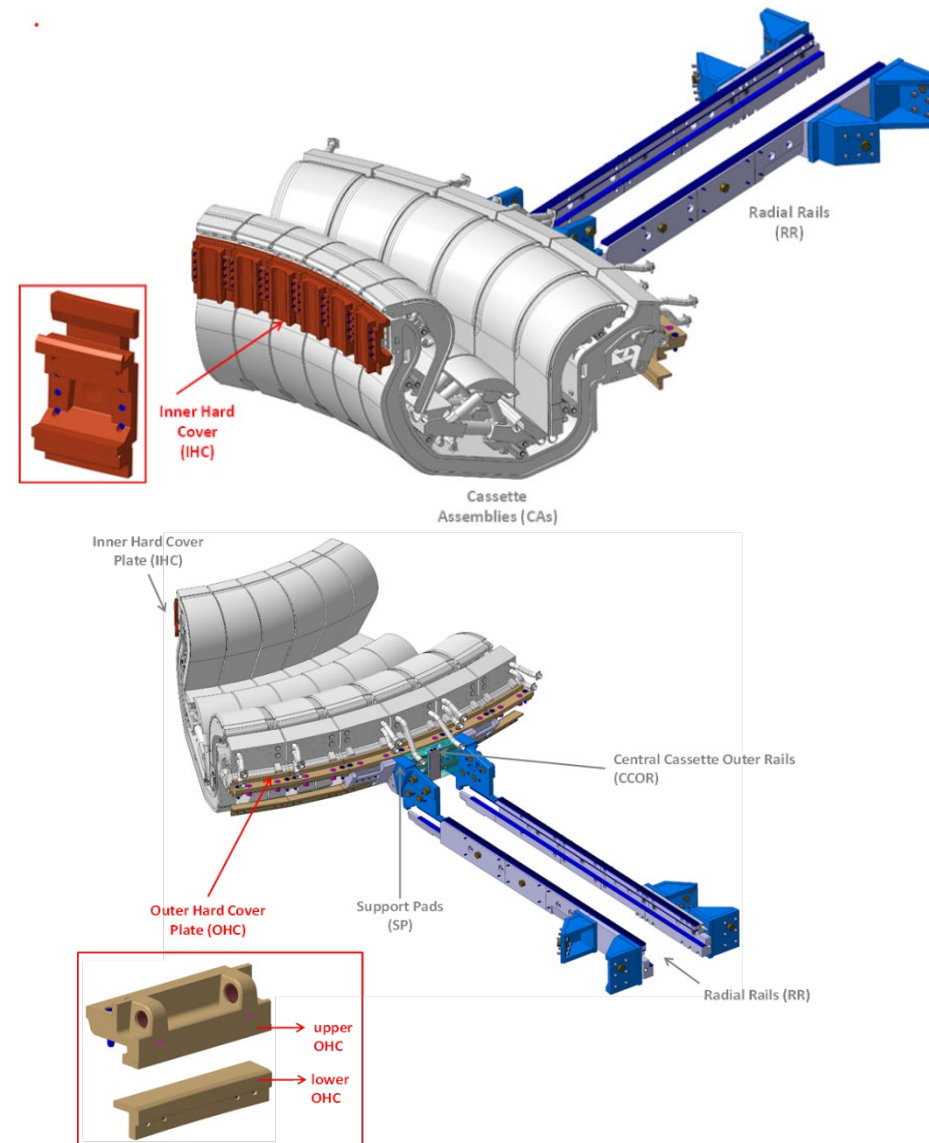
**B** Item range 1 500 000 – 5 000 000 EUR

**D** Item range above 10 000 000 EUR

## Divertor rails. Cat C.

- PA target signature Q1-2024.
- Market Survey in Q4 2023.
- CFT in Q3 2024.
- Contract signature: Q2-3 2025.

Tentative



## NB Cryopumps (3 units, cat D)

- 500 cryopanel
- >650 thermal shield panels
- Tight tolerances

⇒ Target CFT 2024 (1<sup>st</sup> contract 2025)

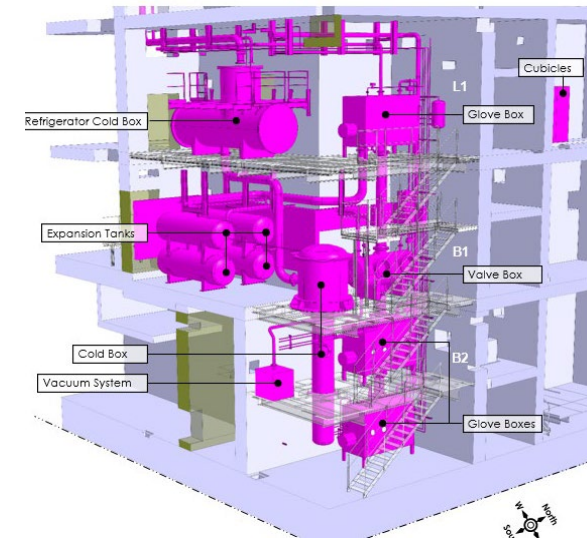
Tentative



Mitica cryopump prototype

## Isotope Separation System (cat D)

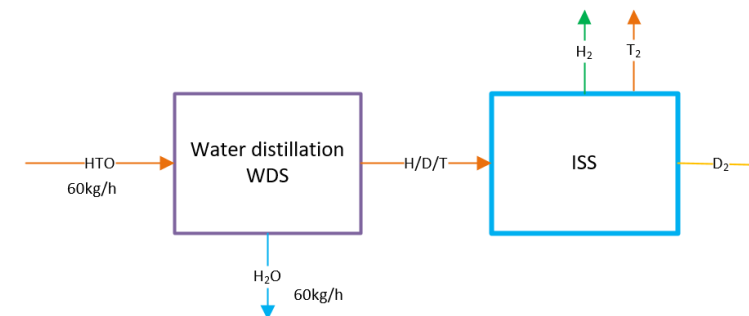
- Cryogenic distillation of >650 thermal shield panels
- Tight tolerances



## Water Detritiation System (cat D)

Market Survey ongoing.

Tentative



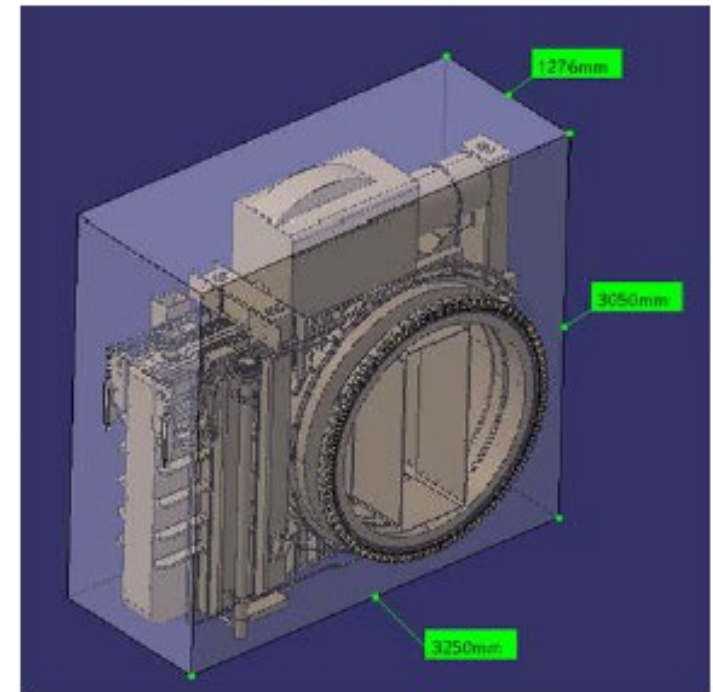


## OPE-1XXY: Absolute Valve Cat. D. (2 units)

- Skills: Fast actuation (<10s); Vacuum tightness (non-SIC) of the valve (metal to metal seal) with diam 1.5 m; Manuf. Of nuclear components (SIC-1) for the casing using nuclear code; Stainless Steel welding; NDTs of Austenitic Steel welds. Target Feasibility study: Q2 2024.
- Forthcoming CFT for alternative Preliminary Design (IO CFT).

Length ~ 3.2 m  
Width ~ 1.2 m  
Height ~ 3 m  
Weight ~ 8.5 t

### Absolute Valve



Tentative

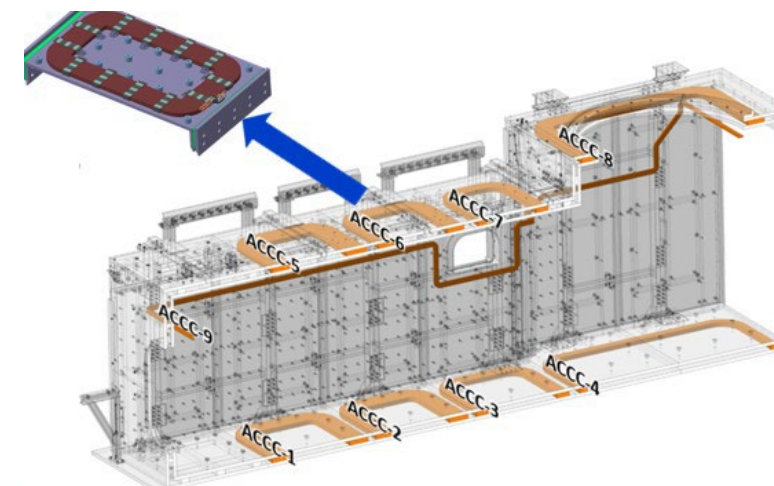
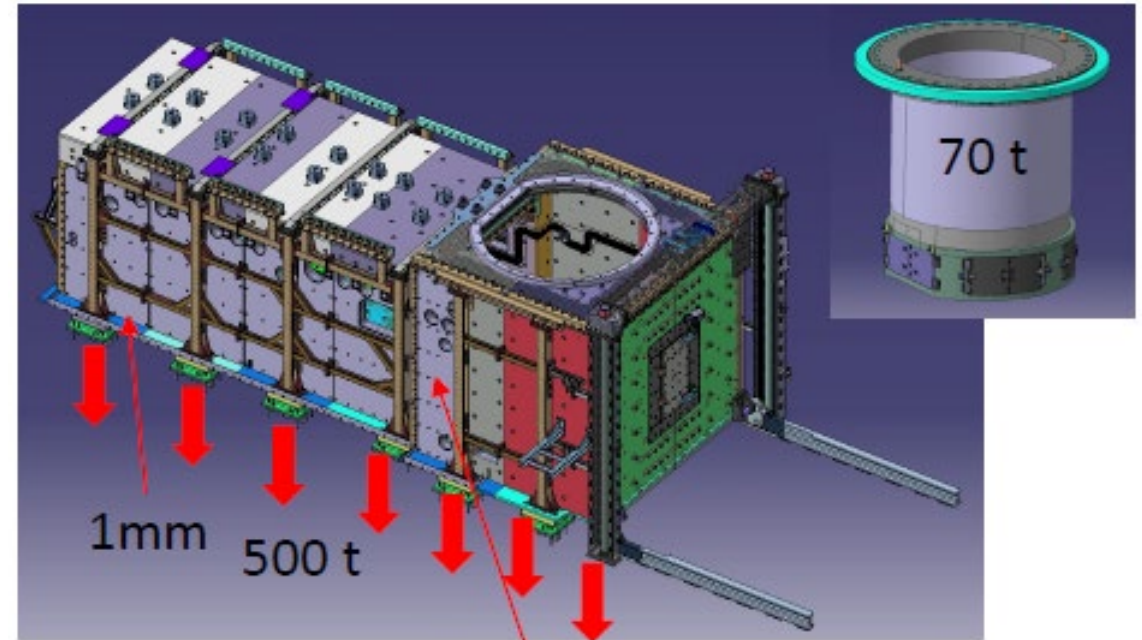
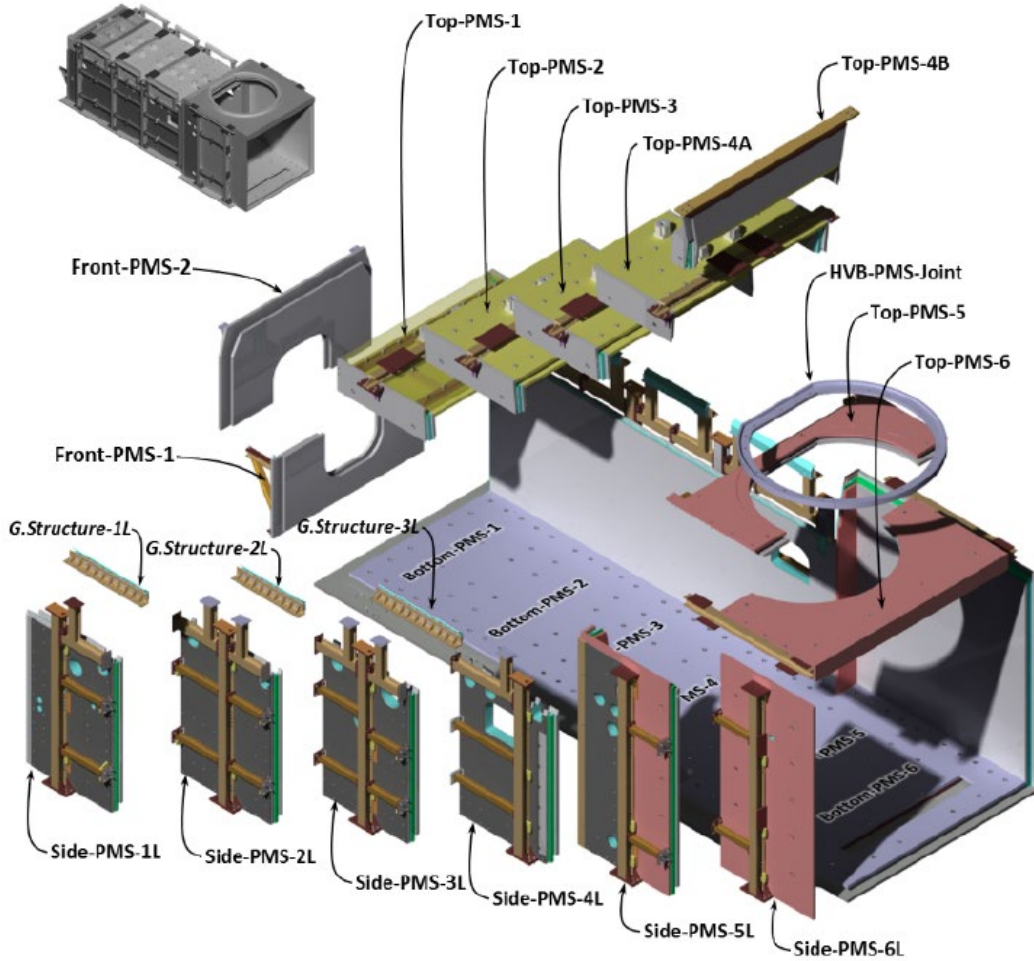
**OPE-1XXY:** Magnetic Shielding (MS) Cat. **D.** (2 units)

- Steel Plate Material S235 (EN 10025-2) (2 x 400 tons): 1 or 2 additional sample(s) possible for characterization.
- Active Compensation Correction Coils (ACCC) Total 2 x 8 units.
  - Skills: Construction and precise assembly (1mm gaps/0.1 mm tolerances) of heavy components (500t) nuclear classified (RCC-MR) + coil design and manufacturing).
- Market Survey to be published.

=> Target CFT: Q3 2024. Market Survey online.

Tentative

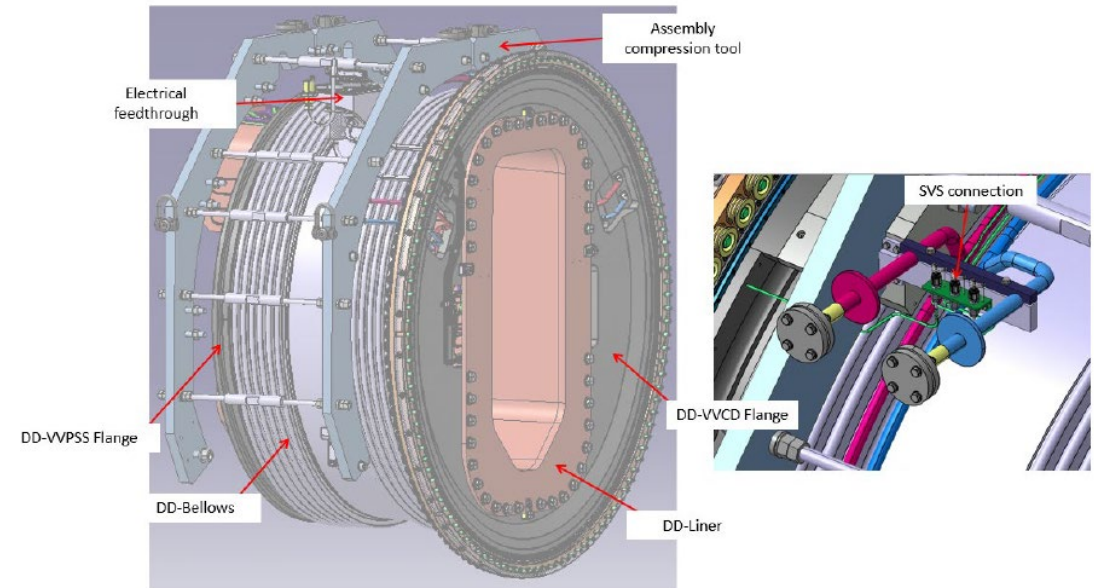
# ITER Heating and Current Drive



Active Compensation Correction Coils (ACCC)

## OPE-1XXY: Drift Duct. Cat. C. (2 units)

- Market Survey done.
- Skills: Nuclear component manufacturing, High Vacuum, Stainless Steel welding, Brazing, NDTs, EBW of CuCrZr.



L1.4 m x W3.2 x H3 m -Weight ~ 5.7 t

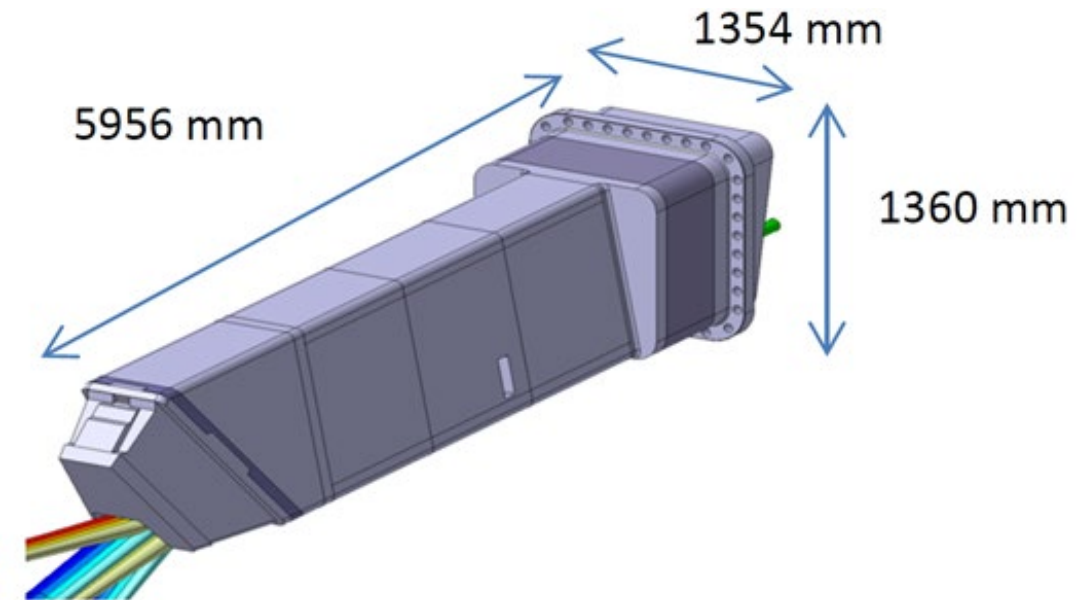
=> Target CFT: Q2-Q3 2024.

Tentative

## OFC-1183: Cat. **D**. 6 Diag PORTS

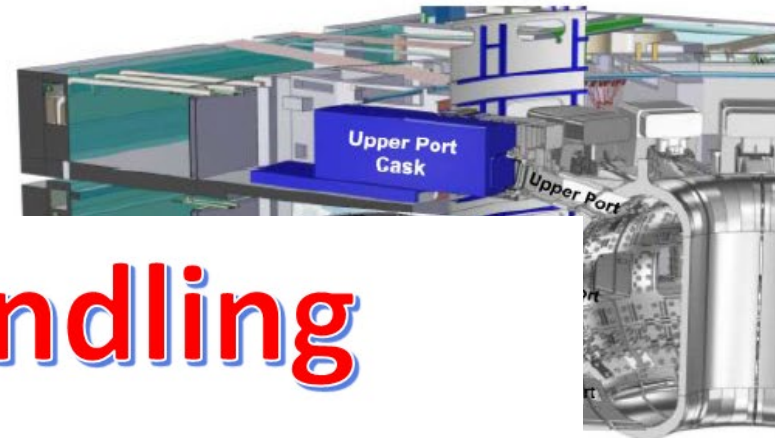
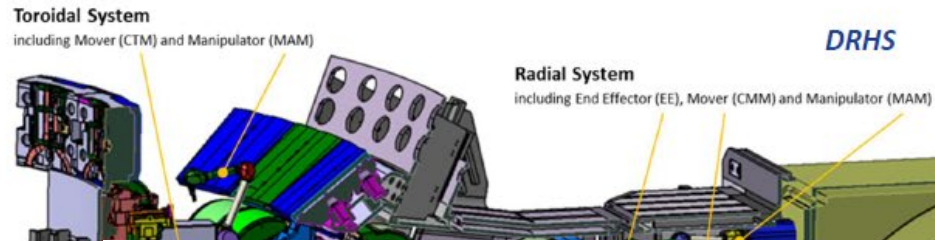
Manufacturing and Assembly.

- Also Assembly of the Test Facility, and testing activities.
- Target => CFT: end Q4 2023/Q1 2024.

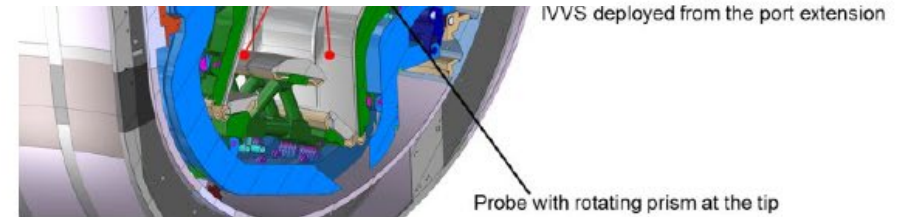
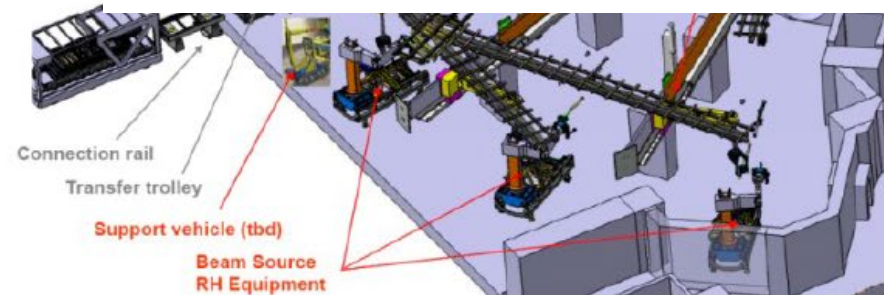
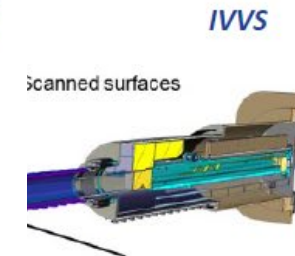


*Upper Port Plug general dimensions*

# Tentative

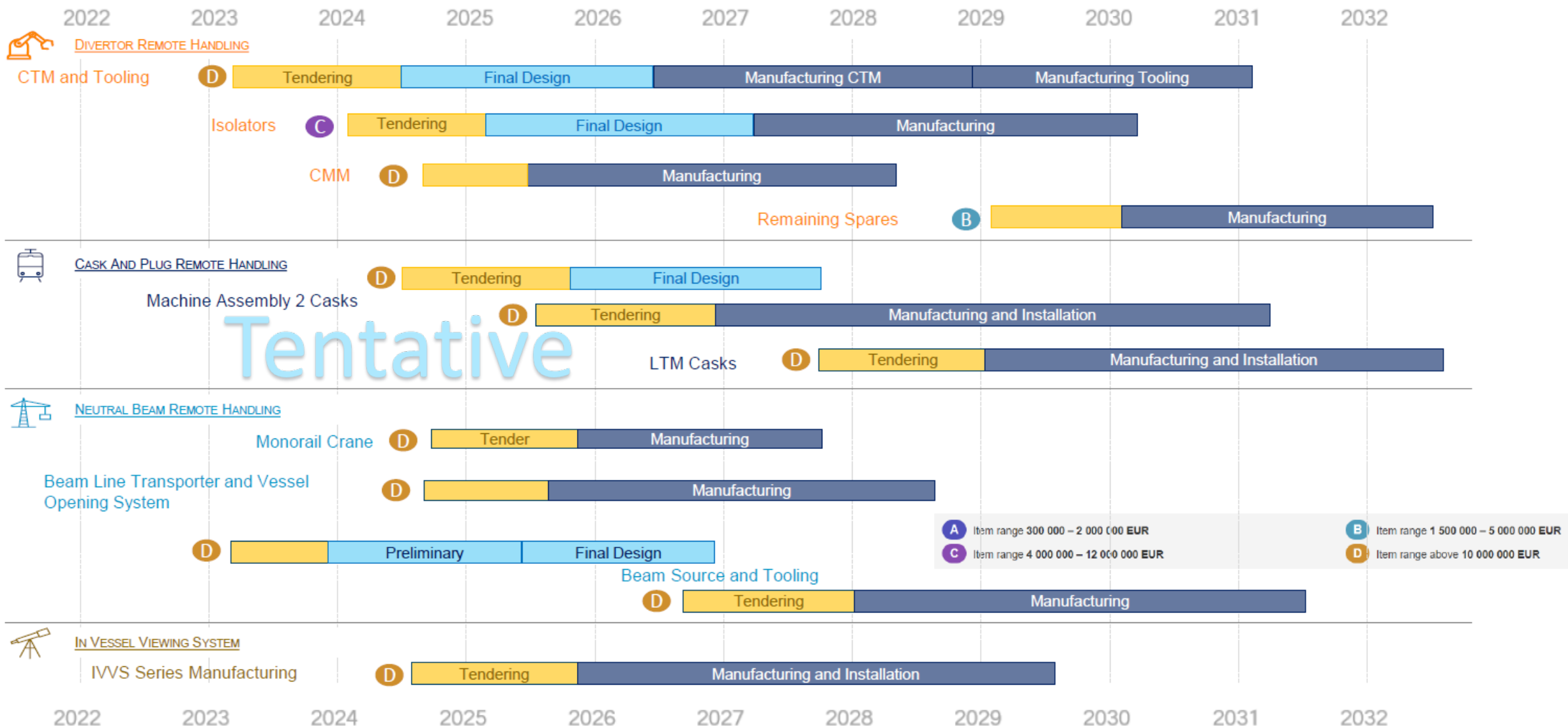


# Remote Handling Manufacturing strategy Under construction



F4E is in charge of the procurement in kind of 4 packages

# ITER Remote Handling



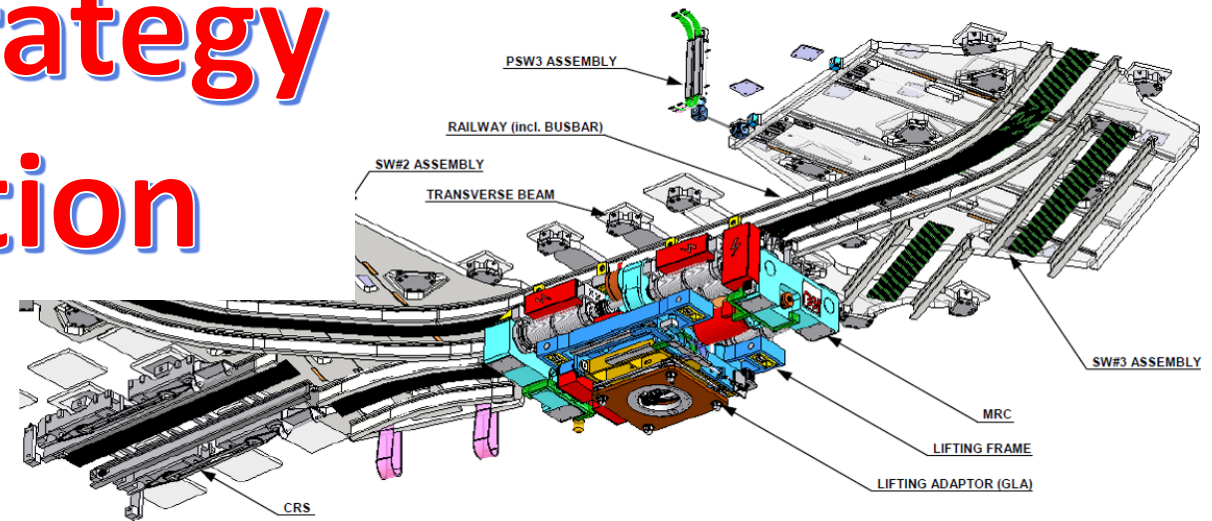
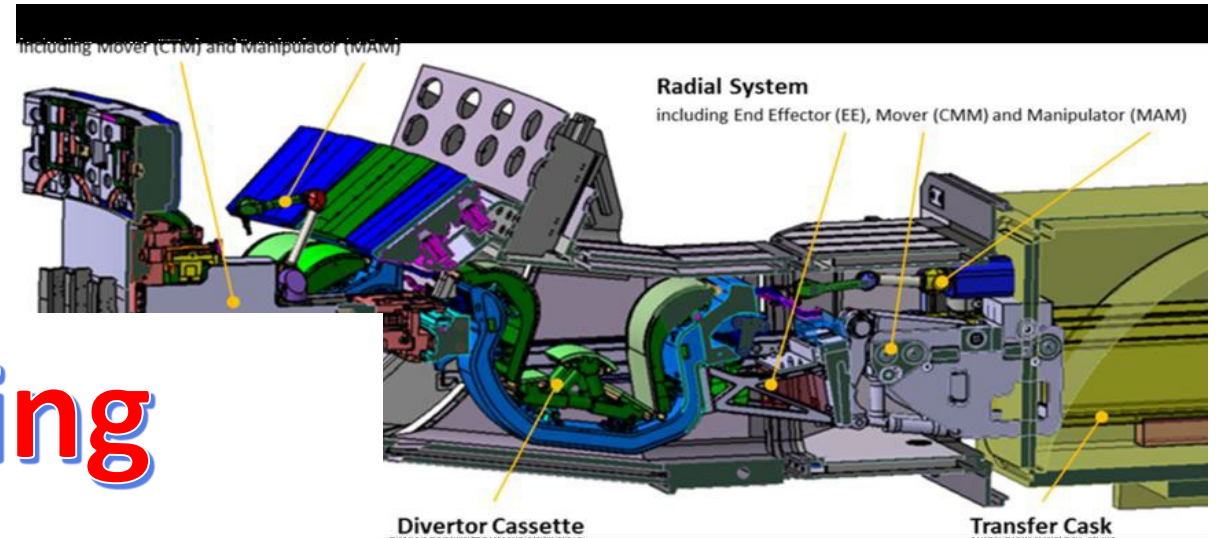
OMF-1347: Cat. **D** Divertor Remote Handling System (DRHS) :  
Final Design of Cassette Toroidal

# Remote Handling Manufacturing strategy Under construction

railway).

- Market Survey closed.

=> Target CFT: Q1-Q2 2024.



Monorail Crane System



## OMF-1487 (TB25):

Infrastructure, Mechanical, Electrical,  
I&C works. Market Survey ongoing.  
Cat. C.

Target CFT Q4/2023.



Tentative

*Bird eye ITER site February 2023; © ITER Organization*

## 2023

**Seismic, Dynamic and Structural** Analyses of ITER Buildings and Mechanical Components Support. (renewal of OMF-1023). Cat. **A**.

- Target CFT: Q4 2023.

## 2024

**Nuclear Analysis Support** (renewal of OMF-0882): CFT: Q1 2024. Cat. **A**.

**Qualification testing:** Cat **B**

- Target CFT: Q1 2024.

Tentative

## 2024

**CAD Design, Dimensional Variation Analysis, General Mechanical and Plant Design Support:** (including scope OMF-1058) Cat. **B**.

- Target CFT: Q1 2024.

**Destructive and ND Testing of Material and Mock-ups:** (renewal of OMF-1082). Cat. **B**.

- Target CFT: Q2 2024.

**I&C Integration Services** (renewal of OMF-0989). Cat **D**.

- Target CFT Q2 2024.

Tentative

## OMF-1497 Integration of the EUROFER Steel in the RCC-MRx for Iter TBMs.

5 Work Packages: Cat. **C** Target CFT: Q4 2023.

- Management, Quality, Technical programme and Follow-up with AFCEN SC-MRx; EUROFER Material File; Design Rules & Data for the EUROFER Base Metal and Welded Joints; EUROFER Procurement and Control; EUROFER Welding and Fabrication.

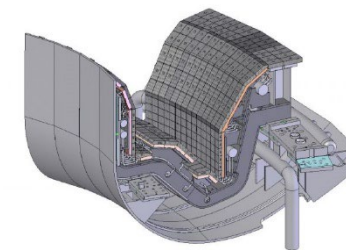
## OPE-1502 Supply of EUROFER Steel Cat. **A**.

- About 30 tons of plates, bars, tubes
- CFT planned for Q4 2023

Tentative

## OPE-1405: Integration and testing of the Actively Cooled Divertor units of JT-60SA

- Estimated contract value: **C**, Target CFT Q4 2023 (Competitive with Negotiation).



Source: JT60SA.org

## OPE-1407: LIPAC Injector Upgrade

- Estimated contract value **A**, Target CFT Q1 2024 (Competitive with Negotiation) (= Linear IFMIF Prototype Accelerator).



Source: IFMIF-DONES.es

Tentative

Merci

Questions

THANKS

## Un évènement :

Le réseau des



## Co-financé :



## Avec le soutien financier :



## Avec la participation :

