

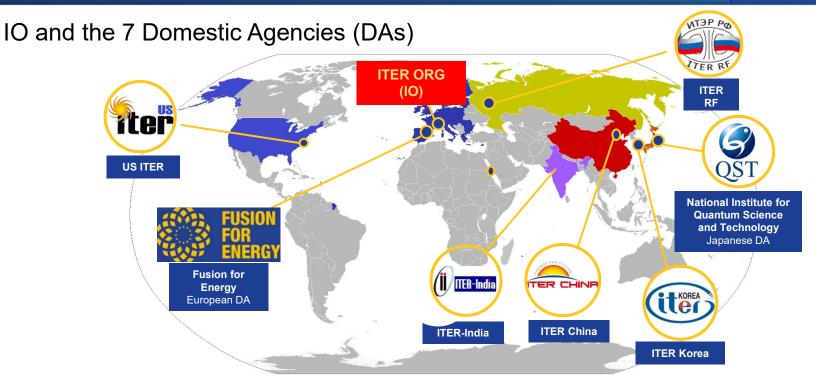
## 2022 June 9-10 Capodimonte, Italy

## IO and F4E Industrial Opportunities in ITER Project



## ITER ORG (IO) and FUSION FOR ENERGY (F4E)





### IO and F4E ways to engage industry





ITER ORGANISATION (IO)	FUSION FOR ENERGY (F4E)
International Public Procurement Rules Competition, fair treatment, transparency Ultimate authority with ITER Council	<b>EU General Financial Regulation</b> (based on Public Procurement Directive 2014/24/EU) Wide competition, fair treatment, transparency, proportionality, non- discrimination Ultimate authority with European Parliament
Geographical scope: all ITER parties	Geographical scope: EU (extraordinary World)
Threshold for publication: <b>100 k€</b>	Threshold for publication: <b>144 k€</b>
Publication: website and through DAs http://www.iter.org/proc/overview	Publication: website and TED https://industryportal.f4e.europa.eu
Types of contract: commercial procurement, ITER Project Associates, expertise	Types of contract: commercial procurement, research grants, innovation partnerships, framework partnerships, expertise

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

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

2022 June 9-10th -NAPOLI - IO and F4E ITER Industrial Opportunities - Mehdi Daval

### **IO and F4E Industry Portals**





ITER - the way to new energy × +	~ - @ X 🗖	Industry & Fusion Laboratories P × +	- 0	×
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Call for Tenders Call for Expertise Open Tenders Forthcoming Tenders Market Survey FORTHCOMING TENDERS		FUSION FOR ENERGY	INDUSTRY AND FUSION LABORATORIES PORTAL	
New Sign up to automatically receive our procurements Notifications	cribe		DATABASE ANNOUNCEMENTS CONTACT HELP	
		-	/elcome to the F4E Industry and Fusion Laboratories Portal	
Image: Tender type:         SEARCH:	$\otimes$		he Industry and Fusion Laboratories Portal is your point of entry for F4E's	- 1
		The Control	usiness opportunities. Here you can:	- 1
INFORMATION		Kau Defenses Desumete	Explore the Business Opportunities, in the Call for Tenders. On the lift, you an see the latest calls, and if you want to look to previous opportunities, just go Search & register for calls A sussail, the fender documentation can be found	- 1
At this moment lter Organization has limited information concerning forthcoming and open tenders, for specific questions please contact lopcd@iter.org		ITER Task Agreements	the details of each of the calls. If you want to be notified about new Calls, FUSION TECHNOLOGY hanges or to ask a question, be sure that you register in the Portat.	
The list is published for information purposes.     The potential tenderers shall declare interest ONLY further Call for Nomination publication or Open tender.		LATEST CALLS P	structions for e-submission, information about the tender process and gistration in the industry portat can be found in the following document. See uccoming buildings discernizing on events such as Market Surveys	
In the column "Cost Range", an indication of the cost range of the lender is given in the form of letters A, B, C and D.     Item range 300 000 – 2 000 000 EUR     Item range 1 500 000 – 5 000 000 EUR		> FRE-CME-108 B PRELIMINARY DESIGN AND FINAL DESIGN OF WCLL TISM SET - ANALYSIS AND DESIGN VALIDA - 16 Km 2022 - 07 July 2022	termination torys, Bauriess forcess, etc. volu can find them and register in the monocreaminations. Could for the catacit details of your indexity Lateral Chiffer (LG). Bach for priorital monocreative for carring a consolute, and to guaranties four indexity when Fill, is locking for potential condicisies. Royces you provide the priorital monocreative for carring a consolute, when Fill is locking for potential condicisies. Royces you provide the priorital monocreative for carring a consolute, when fill is locking for potential condicisies. Royces you provide the priorital monocreative for carring a consolute, when the potential condicisies. Royces you because the priorital monocreative for the potential condicisies. Royces you because the potential condicisies. Royces you are also a lock to potential condicisies. Royces you because the potential condicisies. Royces you are also a lock to potential condicisies. Royces you because the potential condicisies. Royces you are also a lock to potential condicisies. Royces you are potential conditioned to potential conditioned to pote	
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Estimated Publication Period * Tender Type * Title * Coot	range ¢	19 April 2022 - 09 Junie 2022 > F4E-MARF-1173 Provision of Inferim Support Services to F4E	NOUNCEMENTS	
Q2 2022. Call for Tender Aveva Service Contract (ERA)	B Scroll to Top	> F4E-OMF-1331	VF4E Bushess Inteligence Group	
Q2 2022 Open Tender Expert support on maintenance strategy service Contract (YMA)	Δ .	Equipment	4E is looking for supplers of Radiation Resistant Optical Fibers. Ou can see the specification and answer to our few question s by clicking	

### https://www.iter.org/proc/fc

### https://industryportal.f4e.europa.eu/IP\_PAGES/ehome .aspx

\* 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.



Item range 300 000 - 2 000 000 EUR





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

Item range above 10 000 000 EUR



ILOs are a network from different European countries that work together with Fusion for Energy to raise awareness regarding funding schemes and ways to get involved in the ITER project. A series of information days and seminars are planned throughout the year to report on the roadmap of the different procurement packages and facilitate partnerships between companies.

ILOs have permanent contacts with F4E and IO

More information =

https://industryportal.f4e.europa.eu/ip\_pages/ilocorner.aspx

## IO and F4E – The Hot Cell Complex



- Very large project, comparable to Tokamak
   Complex
- Most important ITER system procured in the 2020s
- Scope distributed between IO and F4E

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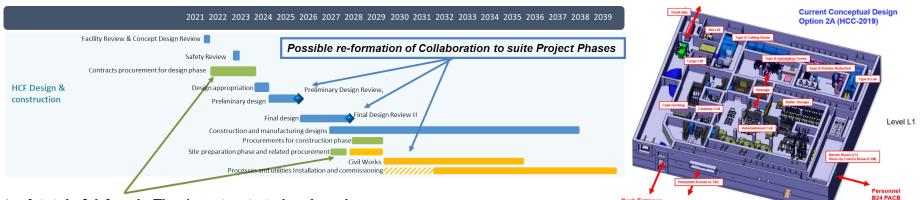


Work packages Project **Construction Works** Remote **Buildings Services** Radwaste Integrator Handling **Civil structural** finishings SS liner Lifts & Cranes Doors **Preliminary Design** Construction/Final Design 10 F4E F4E Execution Design Construction

### **IO Opportunities- Hot Cell Facility**



Cask Entrance



#### > A total of 4-6 main Tier 1 contracts to be signed,

- Project Integrator Ongoing Tender Phase start in June
- Hot Cell Remote Handling
- Radiological Waste Systems
- Civil Works Design
- Building Service Design
- Expected last signature date End of 2023,
- > Following design, Civil Work Construction will be procured,



# FMI (Final Mechanical Installations): CFT start Q2 2022 (to sign by Q3 2023)

### Special features :

- > High volume of work in a restricted space
- > Different types of work but most repetitive
- Co-activities need to be considered
- Fragile components and Handling and installation of PIC/SIC components
- Very good coordination with other in-vessel and in-port activities / stakeholders required
- High importance and priority to qualification of processes and training of personnel (key factor for the success of the installation activities)
- Tight tolerance metrology for reverse engineering and asbuilt data is essential

Area of Competence	Core Competence
Assembly Tooling	
Clean Conditions Working	$\checkmark$
Mechanical and Electrical Codes and Standards	
High Vacuum and UHV	$\checkmark$
Occupational Safety	$\checkmark$
Bending & installing MI cables (limited scope)	$\checkmark$
Process Development and Qualification	
Quality Assurance / Quality Control	
Regulated Construction	
Welding & NDE	$\checkmark$
Clean Conditions Staging	Mainly IO supply
Cleaning	V
Inspection and Non-Destructive Examination	$\checkmark$
Instrumentation Installation	
Metrology	
Lifting and Handling up to 2000kg, up to 40t for port plugs	$\checkmark$
Reverse Engineering, Customisation and Precision Machining, Workshop	$\checkmark$
Tooling Maintenance, Storage and Preservation	$\checkmark$

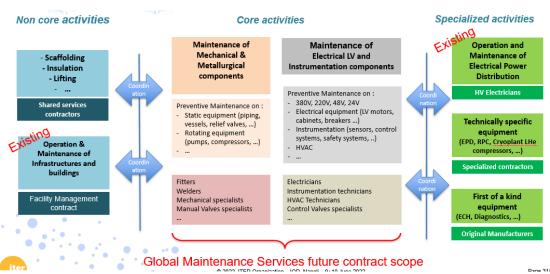
## **IO Opportunities- Maintenance**





### Call For Tender for Global Maintenance Services Contract(s) in 2022.

- => Maintenance of all components turned over to Operations Division (Excluding design modifications / upgrades )
- General coordination of all involved disciplines and contractors
- Coordination, supervision and receiving all the sub-contracted activities
- Based on obligation of results principle
- Strong incentive to propose any upgrade or modification in order to optimize components safety, reliability or integrity level or make maintenance in more efficient way

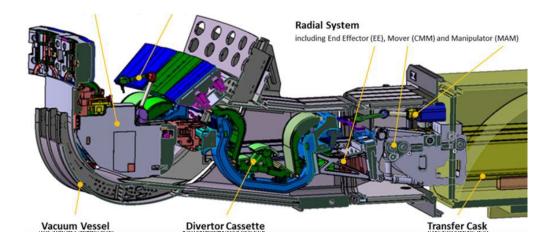




### **Divertor Remote Handling System (DRHS)**

• OMF-1347 Final Design and Manufacturing of CTM, CMM and Tooling CFT Q3-2022





### F4E Opportunities- Neutral Beam and EC

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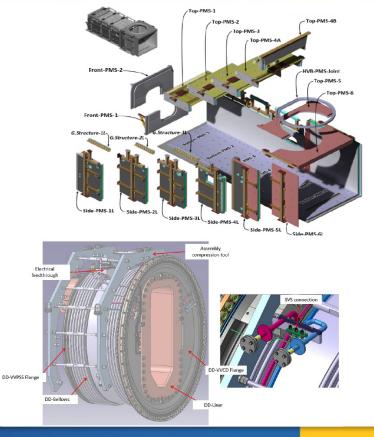


• Active Correction and Compensation Coils of the Passive Magnetic Shielding supply – CFT Q4-2022 CAT D

• Passive Magnetic Shield (PMS) supply – Market Survey Q3-2022 (+related 800 tons of S235 plates in 2023) CAT D

•Drift Duct supply – CFT Q2-2023 CAT. C

•OPE-1203: Neutral Beam Assembly Tooling supply – Published soon CAT. C

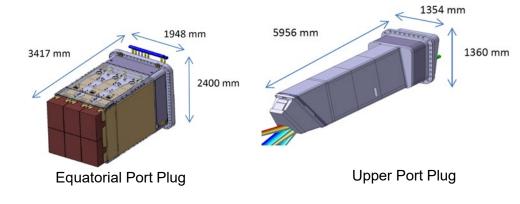


### **F4E Opportunities- Diagnostics**





 • OFC-1183: Manufacture, Assembly and Testing of EU Diagnostics Ports and Testing of EC Upper Launchers - CFT Q4-2022

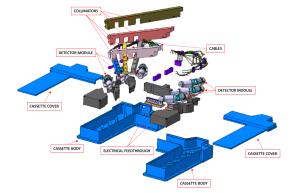


### • OMF-1244: Second Plasma

Manufacturing of Diagnostic Components (RNC, CPTS, CXRS, Pressure gauges,

**Bolometers**)





### **F4E Opportunities- Broader Approach**

OPE-1166: Supply of JT-60SA Cassette Bodies

CFT Q2-2022

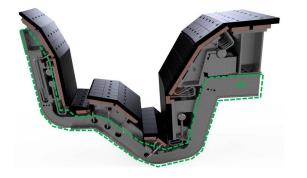


- **Scope:** 36 Divertor modules, including
  - ✓ 36 stainless steel cassette frames
  - ✓ 36 sets of stainless steel pipes and manifolds (including bellows)

OPE-1261: Supply of waveguides and miterbends for JT-60SA

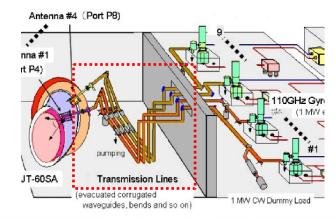
CFT Q4-2022





FUSION

ENERGY



### **F4E Opportunities- Buildings**



TB24	Emergency power distribution system - supply and installation of <b>IP Electrical Diesel Generators</b> for buildings 59-60 – <b>CFT Q4-2022</b>
TB23	Building 14 services post First Plasma – CFT <b>2023/2024</b>
TB17	Electrical Diesel Generators, Fuel Tanks and buildings 42, 43, 57-58 – <b>CFT 2024/2025</b>
AE Service Contract	Architect Engineering Contract for ITER Buildings and Civil Infrastructures – <b>CFT 2024</b>





ITER ORG: <u>ITER-Procurement@iter.org</u>

F4E: mehdi.daval@f4e.Europa.eu

Italy ITER Industry Liaison Officer: <a href="mailto:paolo.acunzo@enea.it">paolo.acunzo@enea.it</a>