



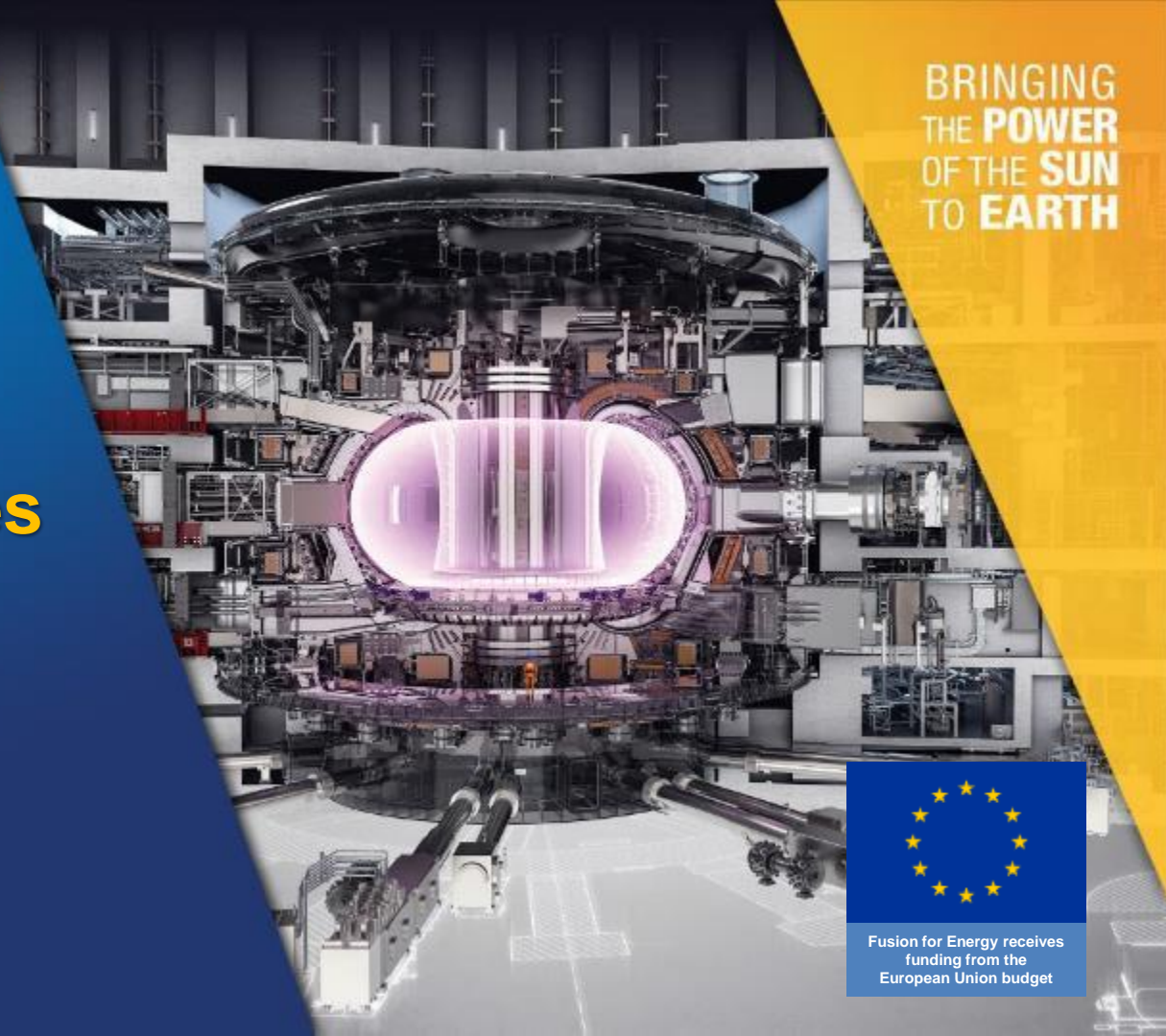
**FUSION
FOR
ENERGY**

EU-ITER: Status and Opportunities

**Gebhard Leidenfrost,
Leonardo Biagioni**

**Forum Fusion Deutschland (FFD)
Garching, 8 December 2022**

**BRINGING
THE POWER
OF THE SUN
TO EARTH**

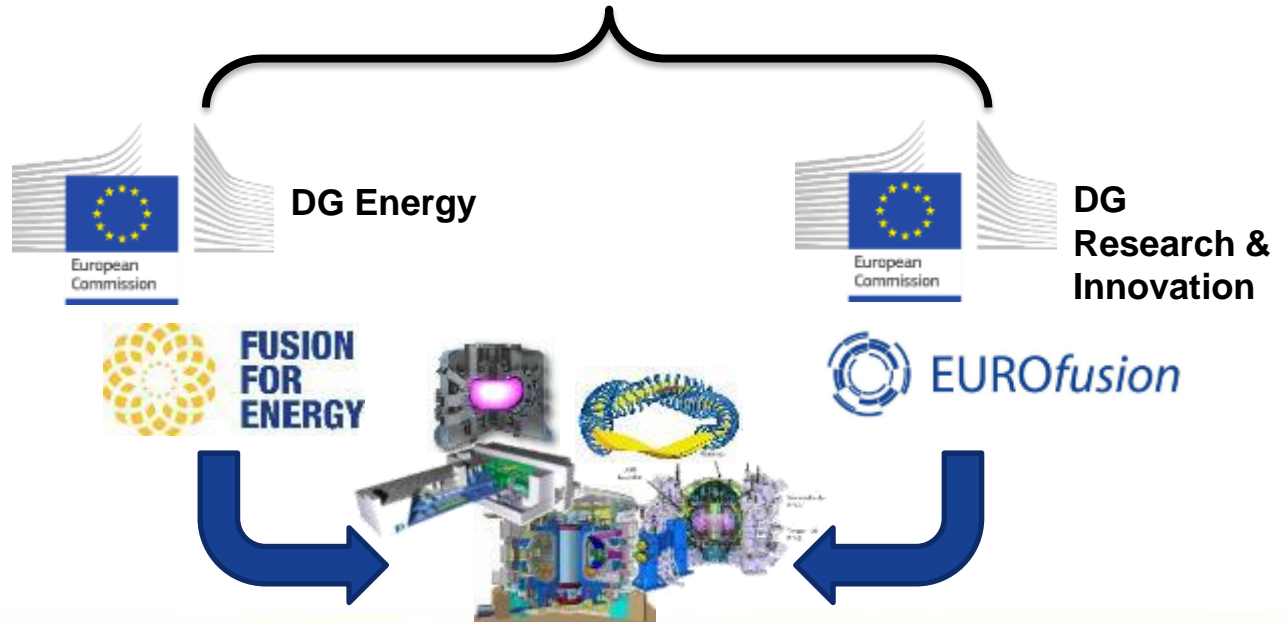


Fusion for Energy receives
funding from the
European Union budget

- **The context for EU fusion development**
- **How to access F4E opportunities**
- **How to be competitive**
- **German participation to date**
- **Status, opportunities and looking ahead**

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Fusion in Europe: Two Main Pillars (+1)



- ▶ **EU public organisation** set up in 2007 for 35 years
- ▶ **Headquarter:** Barcelona, Spain
Offices: Cadarache, France
Garching, Germany
Rokkasho, Japan
- ▶ **Staff:** 435 (mostly engineers)
- ▶ **Budget:** B€ 12+ in 2007-2027 for ITER construction (2008 values)



Fusion in Europe: Industrial Involvement



~3.5 billion EUR
(2022-2027)



Fusion in Europe: Industrial Involvement



5+ billion EUR
(2022-2027)



ITER: Burning Plasma



Responsible for Europe's
contribution to **ITER**

BROADER APPROACH



Working with Japan
on satellite fusion projects

DONES: Materials Testing



Contributing to design & construction
Demo Oriented Neutron Source

DEMO: Continuous Power



Preparing to build power-generating
Demonstration Fusion Reactor

European Fusion Development Roadmap



ITER



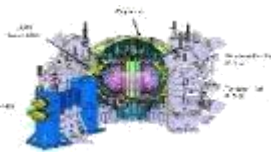
FUSION FOR ENERGY



JT-60SA



FUSION FOR ENERGY



IFMIF - DONES



DEMONSTRATION FUSION REACTORS



EUROfusion



FUSION FOR ENERGY



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Objective 1: Deliver the European contributions to ITER and BA within budget and schedule, making best use of potential and capabilities of all members

Objective 2: Broaden European industrial base for fusion technology for long-term development of fusion as energy source, to ensure strong and competitive European participation in the future fusion market

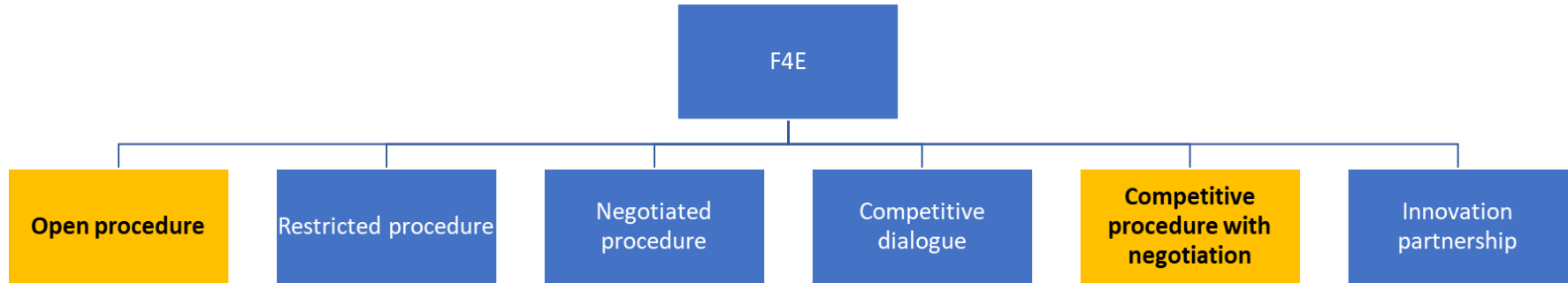
Objective 3: Foster European innovation and competitiveness in key emerging technologies to further the development of the Innovation Union and its impact at the international level

- EU General Financial Regulations

- Key principles:

- Transparency
- Equal treatment
- Widest Competition for best quality and price
- Proportionality
- Sound financial management: economy, efficiency and effectiveness





Contract types:

- Direct contracts
- Framework Contracts (single, cascade and with re-opening)
- Innovation Partnership Contracts
- Grant Agreements / Framework Partnership Agreements



INDUSTRY AND FUSION LABORATORIES PORTAL

Sign In

ABOUT CALLS PARTNERS DATABASE ANNOUNCEMENTS CONTACT HELP

F4E CALLS WORKSPACE

 [Search & register for calls](#)

[ITER Calls for nomination](#)

[Administrative procurement](#)

[Key Reference Documents](#)

LATEST CALLS

22 January 2020 - 28 February 2020

> [F4E-OMF-1048](#)

Service Framework Contract for a Logistic Provider for Broader Approach

Welcome to the F4E Industry and Fusion Laboratories Portal

Important!

As of 1 November 2018, all tenders to F4E must be submitted via the [E-submission tool](#).

Having your Company registered in the Partners Database is not sufficient to submit a tender. For doing so your Company must be registered in the E-submission tool at least 48 hours before the submission deadline of the tender.

For further information, please consult the following tutorials [Supplier registration](#) and [How to submit a tender?](#)

PARTNERS DATABASE



[Get an account](#)

ILO National Initiatives



ILO Access

SIGN IN HERE

Intellectual Property



New portal version coming soon

- Electronic submission of tenders:
 - **EU-Supply**: safe, confidential, user friendly, efficient
- Electronic implementation of the tender procedure:
 - Procurement documentation
 - All communication pre and post-submission

RFT 261802 - F4E-ADM-1136 - Provision of Company Ratings and Reports on Commercial, Economic and Financial Information

Instructions

To submit response:

Please allow some time for sending of your response.
We recommend testing submission before the deadline.
After clicking 'Submit response' you will be required to verify yourself by enter your user name and password.
Evaluate the risk of potential interference (Internet connection speed, Internet connection failure, power failure, change of computerized workplace settings, etc.).

[Detailed Instructions](#)

Response not submitted (Scroll down to submit)

Status of response

Time left: 442:52:12

Time remaining in hours and minutes

- The context for EU fusion development
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- Majority of F4E calls only **accessible to F4E Member States** (EU for the moment)
- No “lowest bid wins” – vast majority of calls awarded by **best-value-for-money** (usual price weight 50-60%)
- **Consortia** can be as competitive as single tenders ... but need extra attention
- **Subcontractors** can (and should) be key enablers

Be agile

- Project boundaries can and will change
- Your role, scope may change

Think lateral

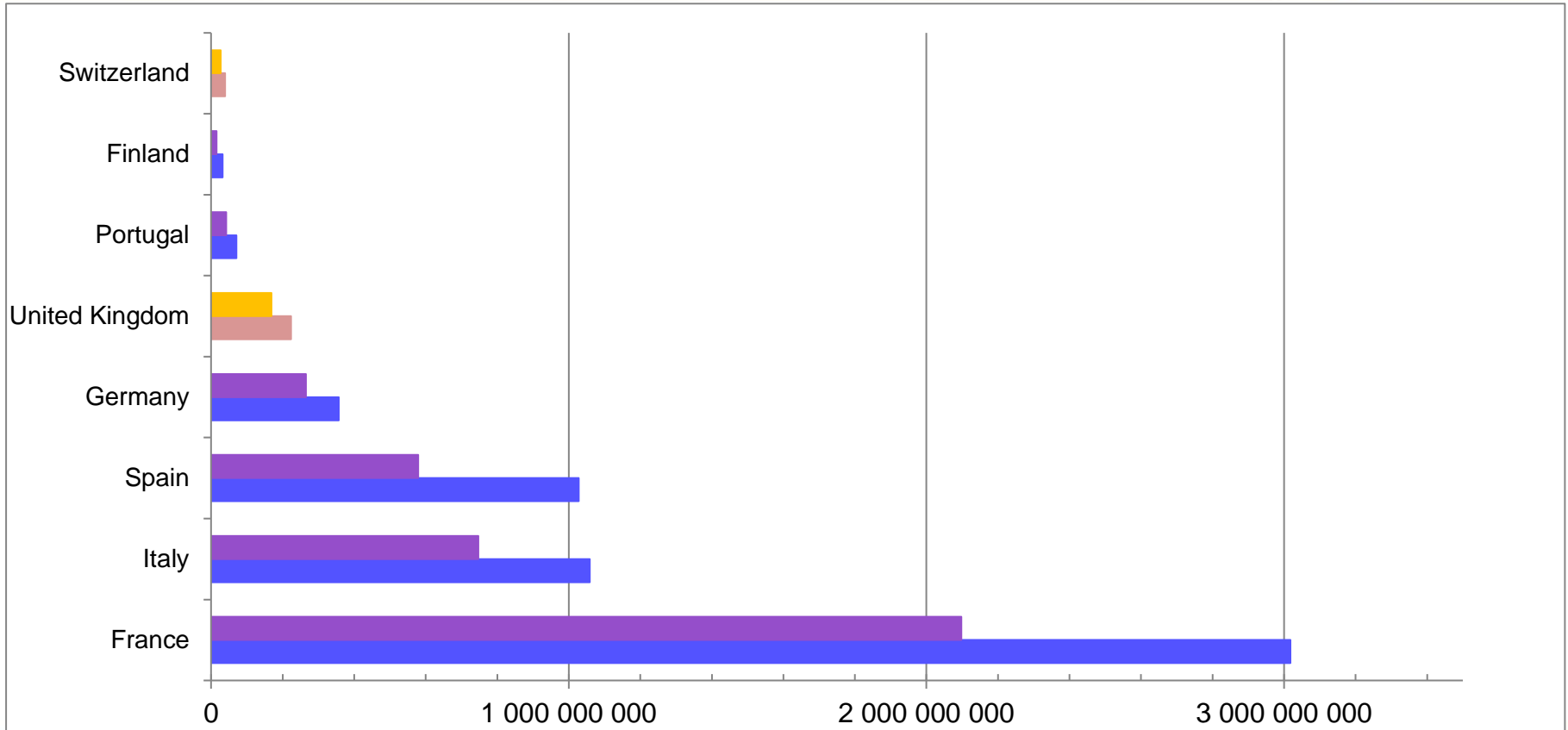
- First-of-a-kind means not all risks can be identified
- Consider B-plans, make them possible

Show a clear value proposition

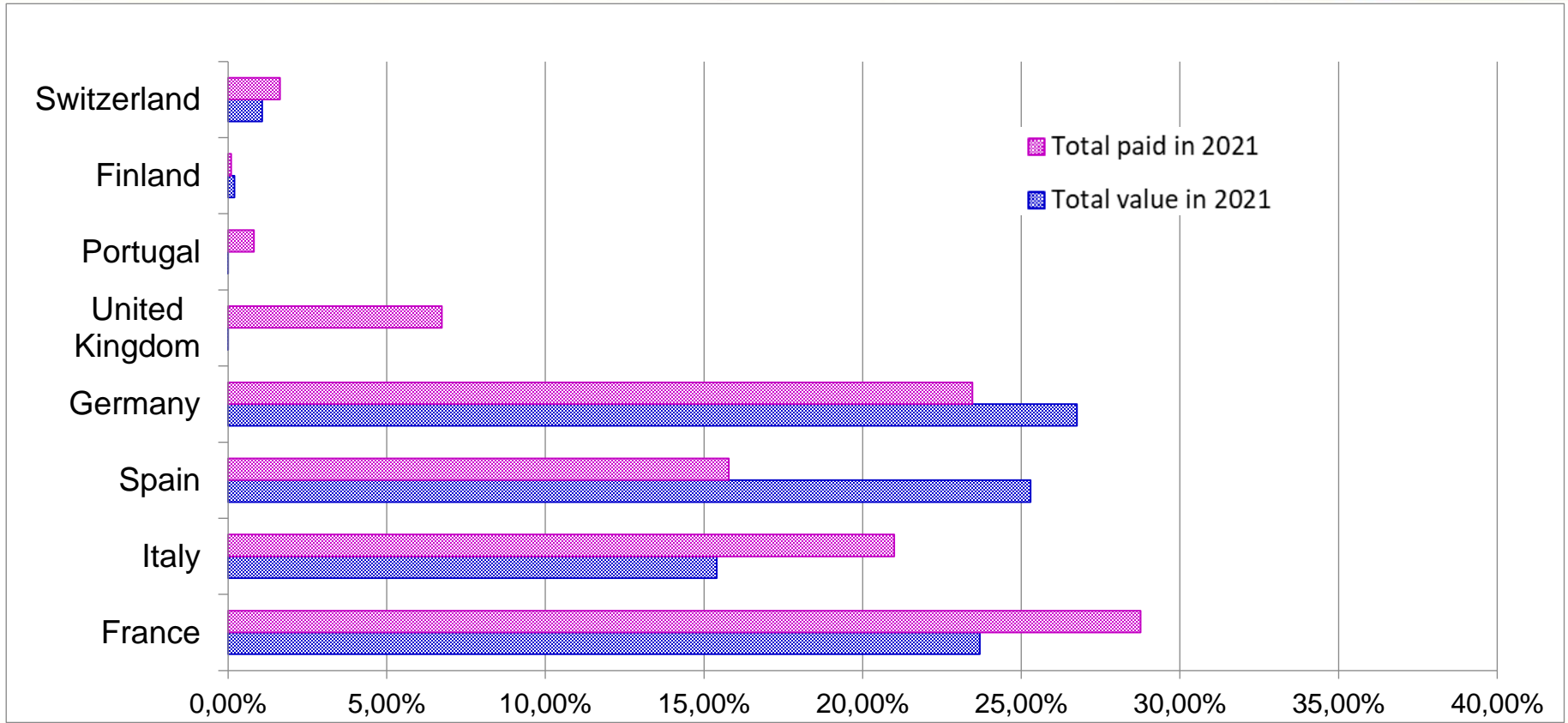
- Best value for money
- Ensure you address award criteria
- Highlight added value wherever it is

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Total Awards and Payments 2007-2021



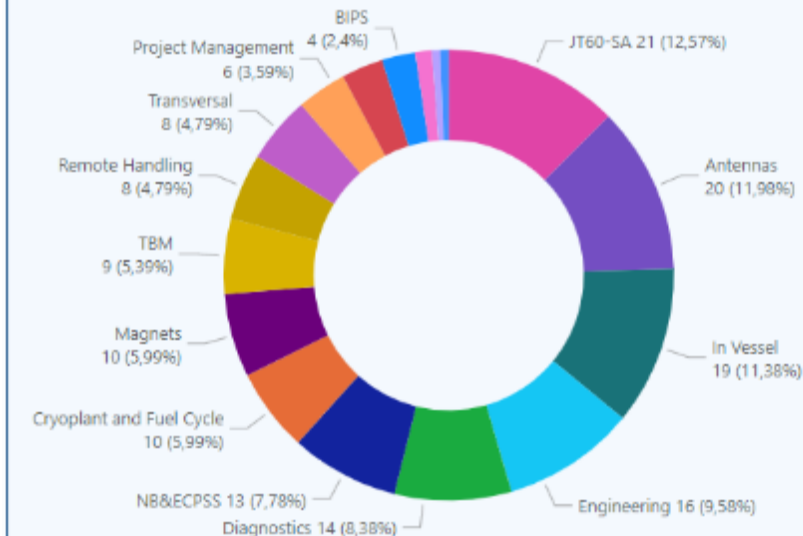
2021 Awards and Payments



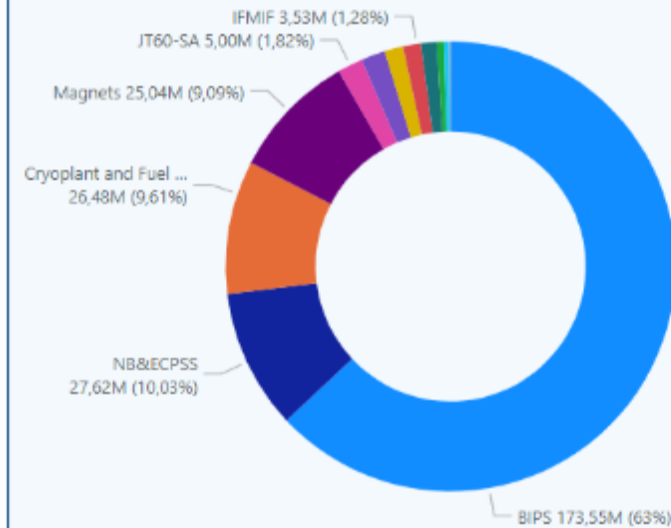
Contracts per Programme

Counting Task Orders with respective commitment

Number of Signed Contracts per Project Team

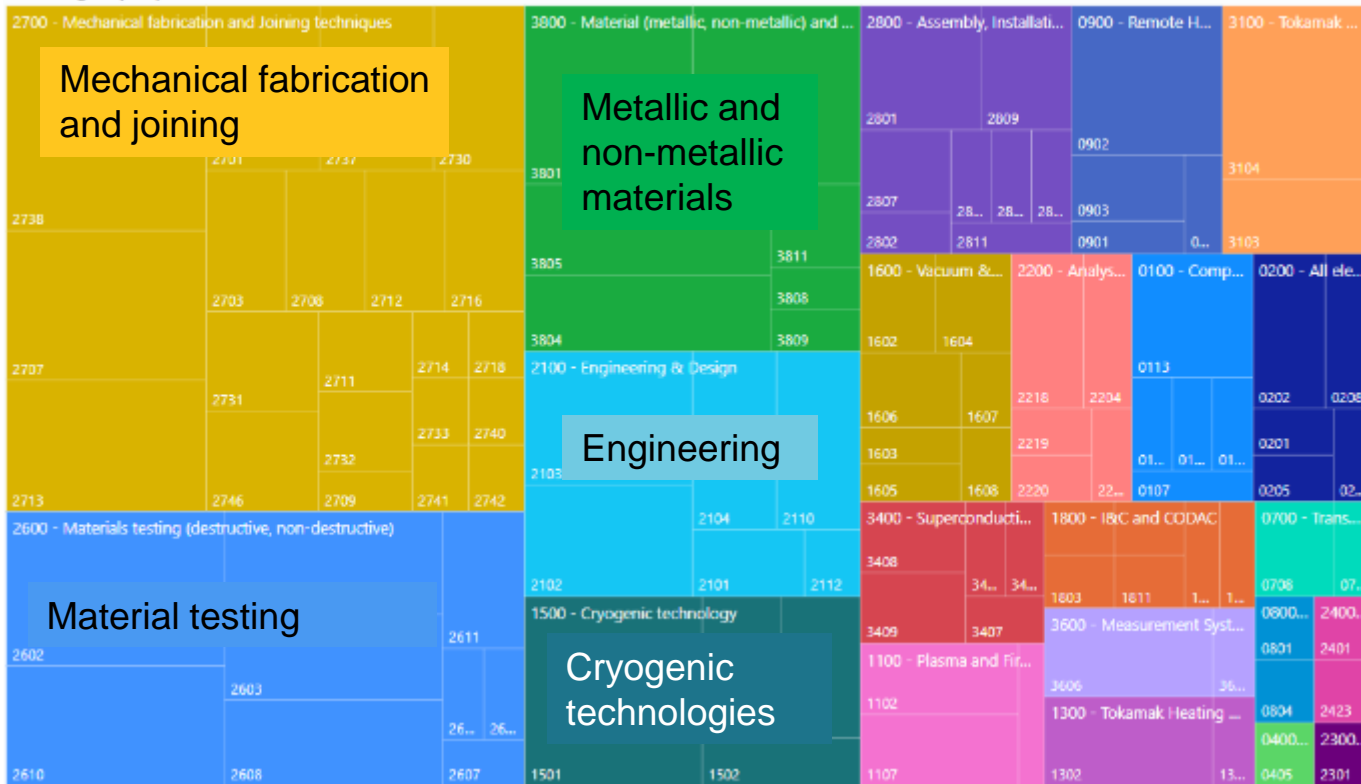


Value of Signed Contracts per Project Team



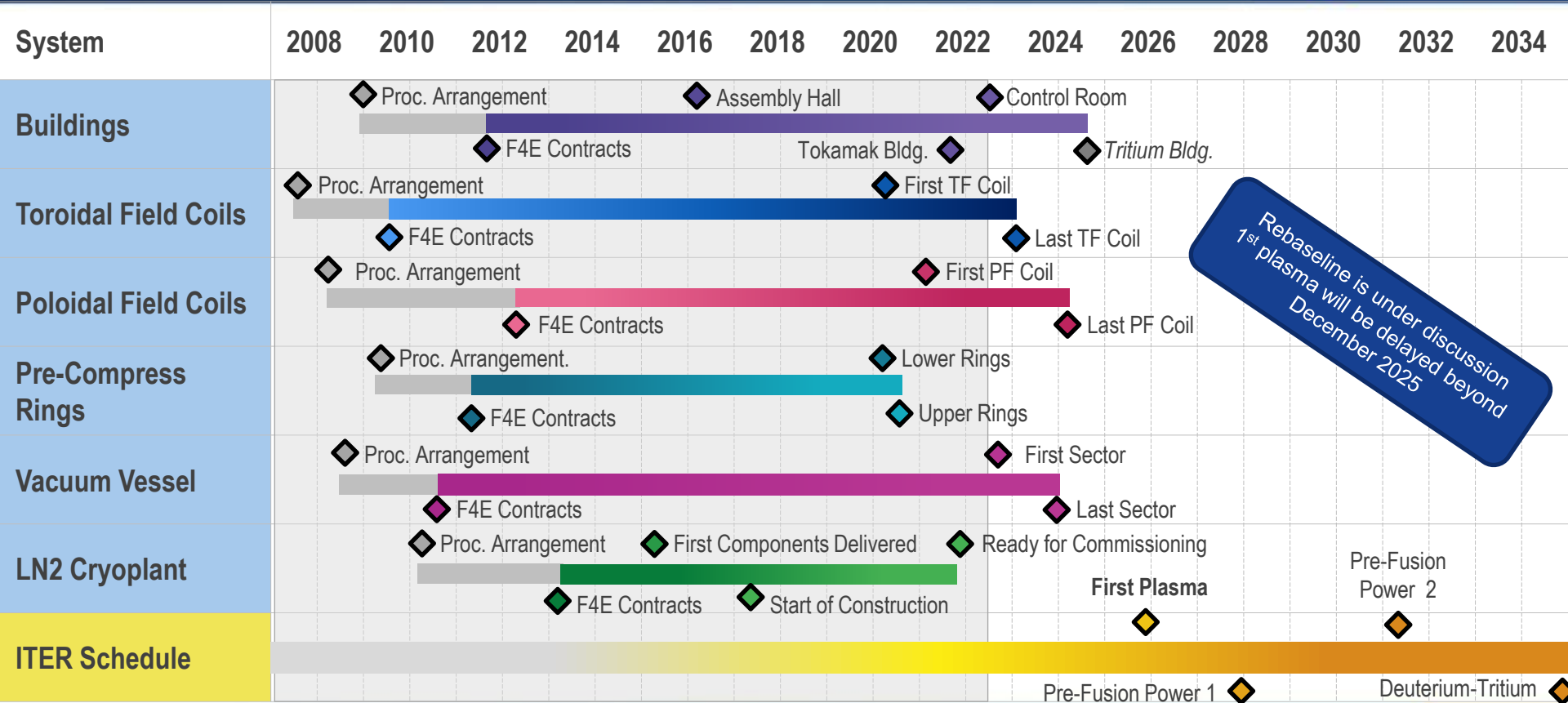
Technological Profile - Contracts

Tecnologies per presence in Contracts



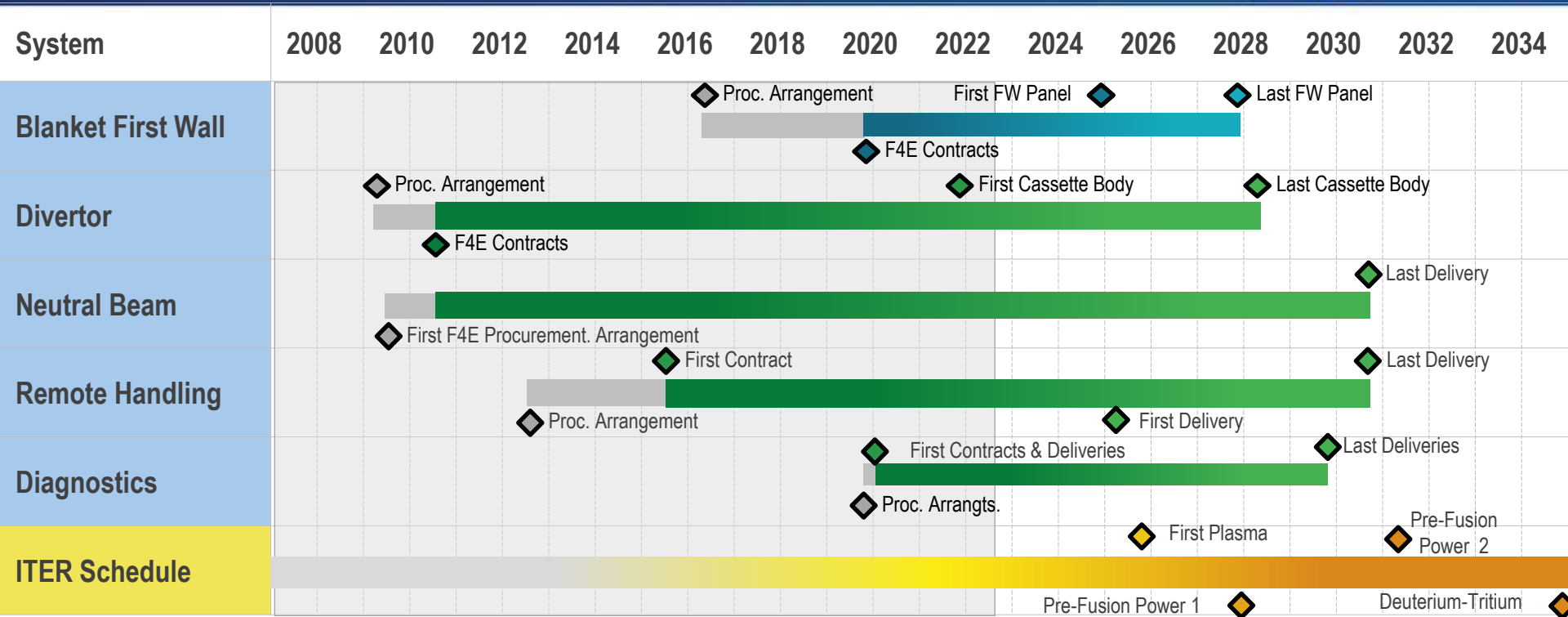
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EU First Plasma Systems Status



Rebaseline is under discussion
1st plasma will be delayed beyond
December 2025

EU PFP1 and PFP2 Systems Status



Dates under review with IO for schedule re-planning & buildings to be replanned (Tritium Building & Hot Cell)

- Detail of upcoming calls in the pdf distributed after the meeting

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

- In 2022 stakeholders addressed **update of Industrial Policy** implementation
- Strategic themes for F4E during 2020s:
 - Preparing for what's next (DONES, DEMO, etc) + **technological sovereignty**
 - **System integration** aspects
 - Appropriate **regulatory environment**
 - Strategic **management of know-how**, Intellectual Property and Technology Transfer
 - **Partnering with private** undertakings
 - Continue **simplification** of administrative aspects
 - ...



Thank You