

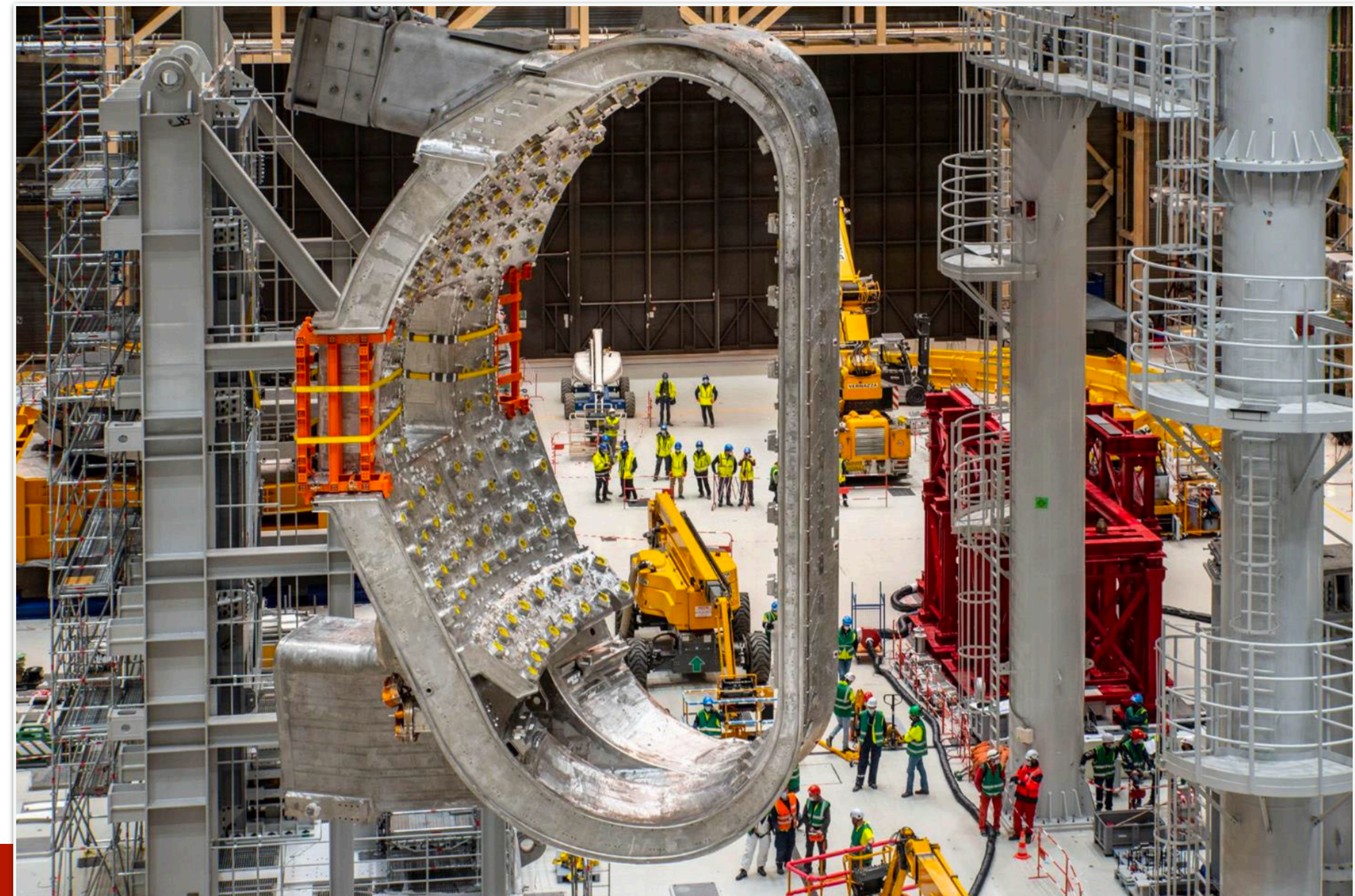
# News from ET-coordination

*ESFRI coordinators Antonio Zoccoli (INFN) & Stan Bentvelsen (Nikhef)*

You are developing an absolute magnificent infrastructure!

- Big Science:
  - “Big Science, style of knowledge initiative [...] characterized by large-scale participation, supported by funding from communities of people, in which activities are performed by large groups of experts and craftsmen.”

Leonardo Biagioni - ITER



# Big Science: Einstein Telescope

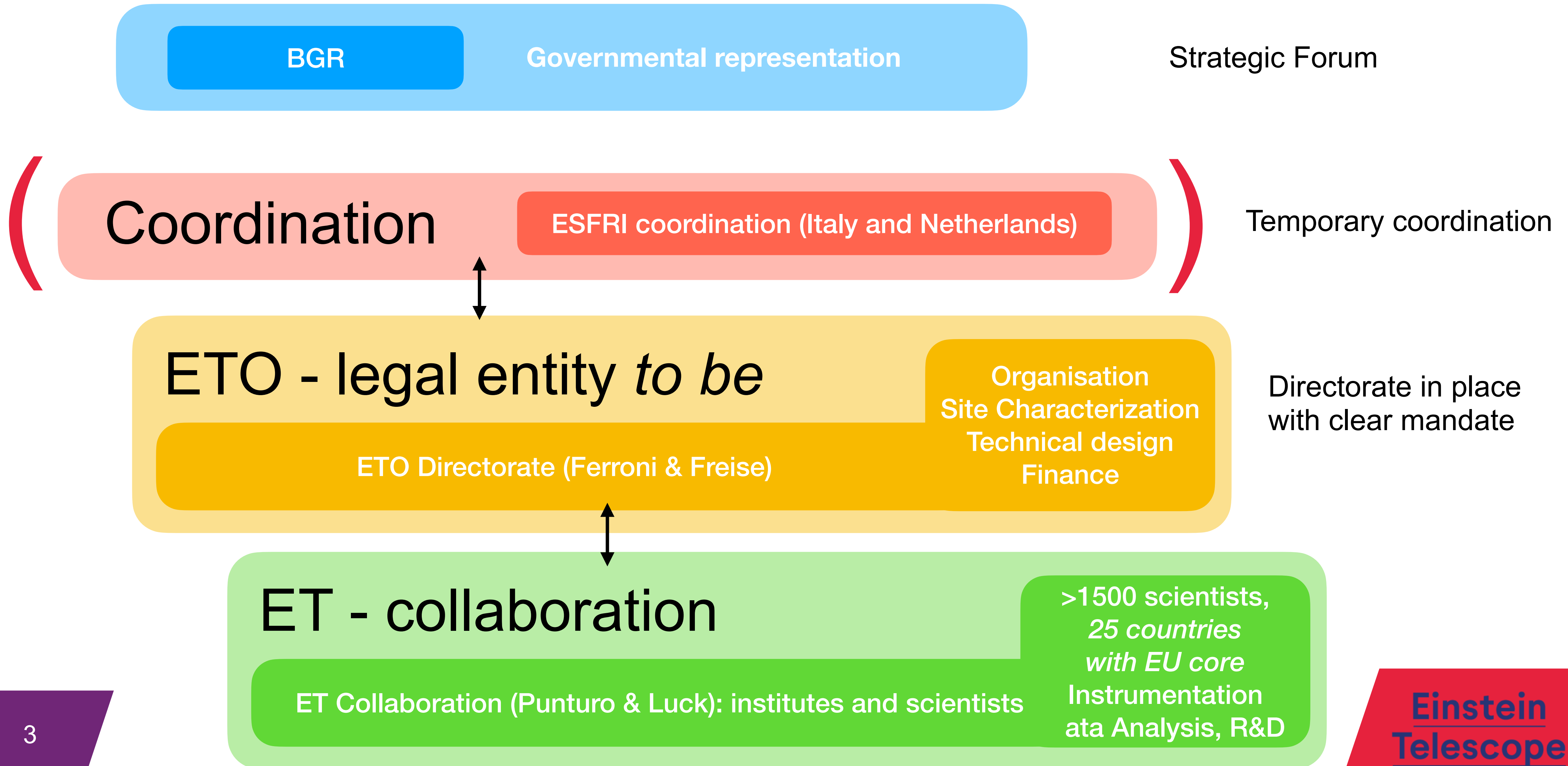
## ET enters a crucial phase

- The (political) momentum for ET in Europe is large
- We have some basic uncertainties on the (design of the) infrastructure

## Good and effective organization is mandatory!

- Timelines are short and the expectations are high
- Further intensify professional project management

# EUROPEAN GOVERNANCE SET-UP



# Governance; European context

**Board of Governmental Representatives (BGR):**  
Platform of European ministries to set up an Interim Council to decide upon the procedure for site selection, the legal entity and the financial framework.

**Project - ET organisation (ETO):**  
Project organisation to prepare to build and operate the Einstein Telescope research infrastructure.

**Site Organisations:  
ET-EMR and Sardinia**

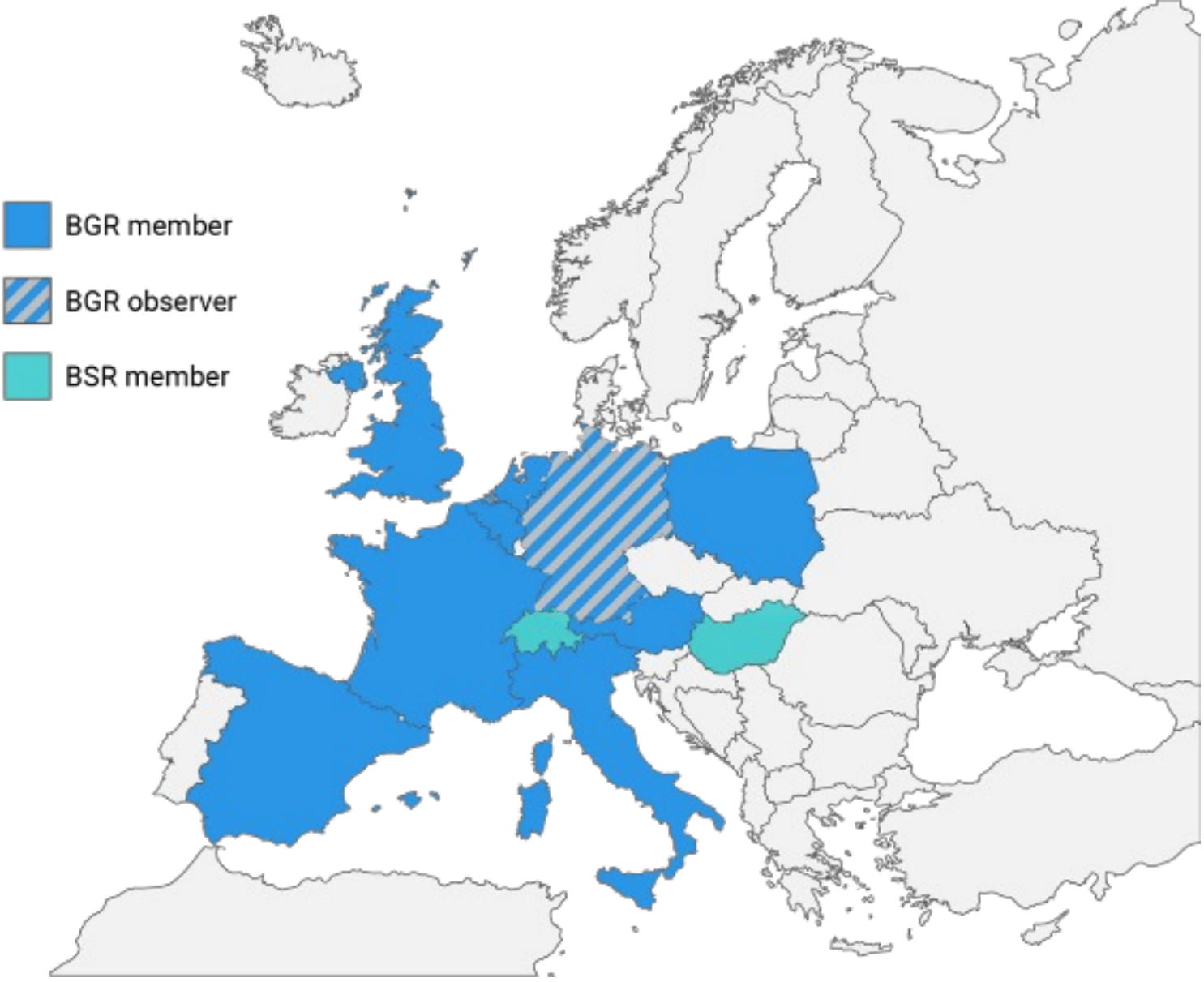
**Site Organisations:**  
Organisations to prepare a bidbook and a host consortium, based on site feasibility studies.

**Board of  
Governmental  
Representatives**

**Project –  
ET organisation  
(ETO)**

**Science –  
ET collaboration**

**Science - ET collaboration:**  
Collaboration of ~1500 scientists defining the scientific goals and requirements.



# Mandate of the ETO

The ET Directors are mandated by the ET Coordinators to:

1. Set up the organization and the operations of the ETO
  - Defining the structure of the ETO (Phase I)
    - e.g. setting deadlines and quality control criteria.
2. Compare the triangle geometry with the geometry of two L-shaped infrastructures
  - In scientific potential, risk analysis and costs
3. Develop a budget plan and schedule for the Design and Preparation Phase I
  - Control the budget and account for the funds allocated to the ETO (Phase I) by the ET Coordinators
4. Steer and oversee the studies and the production of the documentation
  - For the BGR to be in a position to review, modify, update and approve the report and finally set-up the organization for the construction and operation of the gravitational wave detector.

# ETO funding

## Funding of ETO - funding agencies

- ETO needs funding to provide its deliverables
  - Provide a tool to the ETO directorate for all technical studies and deliverables
    - Keywords: *high quality, solid, robust*
- At the level of the funding agencies we will establish an 'ETO fund'
  - ETO needs an MoU based agreement to receive contributions
    - Cash and in-kind contributions at national and institutional levels
    - IFAE will provide the administrative support
    - We set-up an 'Resources Review Board' with the participating FA's to oversee the spendings
  - ET-PP WP2 has provided a MoU tekst for the ETO fund

# Main current responsibilities of ETO

## 1. Constructing the roadmap

- A bottom-up inventory of tasks and deliverables to design the infrastructure

## 2. Advising on the geometry

- Combination of scientific performance, feasibility, risk and cost
  - during construction and operation phase
- Consider international scenario's

## 3. Advising on the site(s) for ET

- Site criteria that includes politically and financially motivated elements

## 4. Interact with EMR and TETI Teams

- A lot of relevant information must be provided by local teams

## 5. Technical design reports

- Develop detailed designs for the various geometries

## 6. The detailed time sequence

- So that site organizations can produce a reliable bidbook by 2026

# ET coordinator meeting with ETO and ETC

## Recent meeting with ETO and EB of ET

- ET is a complex project.
  - Smooth interaction between the various bodies is mandatory to make good progress.
  - Smooth and coordinated interactions with the two local teams is also crucial.
- A review of the current organization seems natural
  - We will setup an external review procedure during the coming months.
- On the short term, an 'internal ET working group' will focus on ETO-ETC
  - The charges of the working group to be discussed.
  - With the aim for further increase the team building between ETO and EB
  - We plan to review regularly, as inspired by e.g. the LHCC at CERN

*Clear procedures, with the aim to work effectively!*



# Mandate of the internal panel

An advisory committee is charged by the ET Coordinators

- will be reporting to the Coordinators as well as to ETO and ETC

Members of this internal board

- ETO
  - Daniela Trani and Roberto Saban
- ETC
  - Marica Branchesi and Patrice Verdier

The proposals of this committee will be based on an analysis of the current organization for the preparatory phase of the ET project and on the organizations to be put in place for the next phases, construction, and operations.

# charges of the internal panel

1. a model of the roles, responsibilities and interactions between the management of ETO and ETC;
2. a model of the roles, responsibilities and interactions of ETO and ETC managements with external entities: Funding Agencies & Research Performing Organizations, 2nd generation Gravitational Waves (GW) collaborations and laboratories, management of other astro-particle experiments for the setting-up of multi-messenger physics programs, APPEC, EU research coordination bodies... ;
3. a model for completing the project structure with a centralized Technical Coordination fully exploiting the expertise and capabilities of the Divisions of the Instrument Science Board (ISB) of ETC on the one hand, and the Engineering Department, the Project Office and the IT Department of ETO on the other hand;
4. a model for the implementation of a coordination of R&D efforts at the European level in the field of ground-based GW detection, optimizing both the ongoing efforts on LIGO/Virgo/KAGRA and making it possible to tackle technological challenges necessary for the design and construction of ET; define responsibilities at the ETC and ETO level to coordinate the effort at dedicated research facilities and to refine and align this R&D organization with Virgo-EGO.
5. A model for the interaction with local teams, aiming at getting all necessary informations needed to accomplish the mandate

# Next BGR meeting

Meeting on October 3-4, 2024 in EGO (Cascina)

Mature discussion on the legal entity of ETO

- Update on the roadmap presented by ETO
- Timeline on decisions , e.g. geometry and location
- Procedure for the bidbook

***This is urgent and we realize that time is flying***

- ***ETO needs the help of all of you!***