



# Management structure of the ET Collaboration

ET-0069A-20

ET Steering Committee

## Introduction: start-up of the collaboration and of its management structure

This document describes the organization proposal for the ET collaboration. It should be in force after the official approval of the ET project in the ESFRI roadmap expected in September 2021. Meanwhile the ET collaboration is represented by the ET Steering Committee that concentrates the CB and EB duties and power described in this document.

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## 1 The ET management structure

The ET proposal for the 2021 update of the ESFRI roadmap contains a first embryonal description of the ET organisation, suggested by some of the institutions participating in the ET proposal and signing the ET consortium agreement submitted on that occasion. An update of the submitted organigram, realised by the ET steering committee, is shown in Figure 1. The overall organisation scheme of ET sees two main composite elements, the “project” and the “collaboration”, having many overlaps, links, relationships and synergic roles.

This document describes the Collaboration Board, the Executive Board and its components.

## 2 The Collaboration Board (CB).

The CB represents the ET collaboration. The CB includes representatives from each participating Research Unit (RU).

### 2.1 Research Unit (RU) definition

Usually groups belonging to the same university are regarded as a single research unit.

In case of a National or Regional research institution with geographically distributed sections, each local section is usually defined as an independent RU. Exceptions can be agreed on by the CB with a qualified majority of ~~75%~~.

In case both a local University and a national or regional institute's local section are present in ET, if there is an affiliation mechanism between them, they usually constitute a single RU.

The CB has flexibility and discretionarily to adapt the above indications to specific and motivated cases.

### 2.2 CB Composition

Each research unit, having more than 1.5FTE (Full Time Equivalent), is represented in the CB by at least one delegate. A certain level of correlation between the FTE declared by the RU and the number of its delegates is expected. This proportionality is implemented according to mechanisms, to be defined by the CB, balancing the effective (positive or negative) growth of a RU with the need of a rather stable composition of the CB.

The proportionality could be implemented either on the number of delegates expressed by the RU or by the weight of the vote of each RU delegate. In the first case, a proportionality formula suggested in the SC has been having a number of delegates per RU equal to “ $\text{int}(1+nFTE/m)$  if  $nFTE \geq 1.5$ ,  $m=5$ ”. The definition of the number of delegates should be based on regular and synchronous verification performed every  $n$  years ( $n=1$  or  $2$ ).

Commentato [MP1]: To be updated by the CB

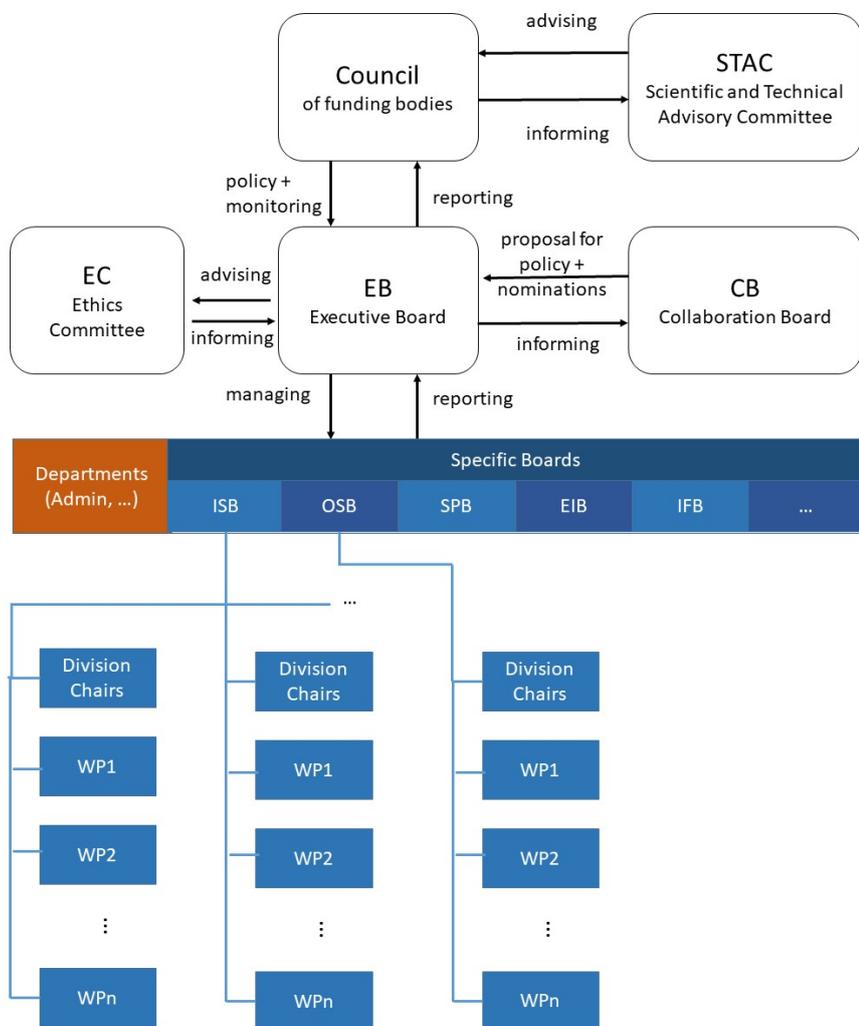


Figure 1- ET management structure (derived from the ESFRI proposal). Specific Boards are the Instrument Science Board (ISB), the Observational Science Board (OSB), the Site Preparation Board (SPB), the E-Infrastructures Board (EIB), the Internal Financial Board (IFB).

### 2.3 CB Activities

The CB elects its Chair for a three-year term.

The Chair coordinates the work of the CB. In particular, the Chair calls the meetings of the CB that should take place at least two times a year.

The CB elects the Spokesperson (SP) for a three-year term.

**Commentato [MP2]:** A two year mandate can be also considered

The CB defines and suggests the long term strategy of ET.

The CB suggests to the Executive Board (EB) and to the Council the main expenditures and all the members of the EB.

The CB defines the membership rules for the ET collaboration.

The CB defines the publication rules for the collaboration.

The delegate in the CB of each RU has the responsibility to declare the FTE composition of his/her RU.

The CB has the duty to verify, according to detailed analytical methods, the effective participation in terms of FTE of each RU. For this purpose, the EB must maintain an activity description (WBS; ...) detailing activity sharing, involvement and roles of the collaboration members.

The CB suggests the chairs of the “specific boards”

The CB decides on the entrance of new research units in the ET collaboration

**In the start-up phase:**

- a) Research units, applying to participate in the ET collaboration, belonging to the institutions who are signatories of the ET consortium agreement submitted to the ESFRI procedure, will be automatically accepted.
- b) Applications have to be submitted to the Steering Committee instead of to the Collaboration Board
- c) In the first year, only one delegate per RU is allowed

## 2.4 Common funds

In parallel to the realization and management of a shared budget at project level by the Council, the ET collaboration has the possibility to set up a shared budget at collaboration level by collecting common funds. The CB has the authority to set the amount and the rules of these common funds. Common Funds will probably not be operative in the first one or two years of the collaboration.

## 2.5 The Spokespersons (SP)

The Spokesperson

1. Represents the Collaboration in front of the Funding Agencies and in the Executive Board (EB); he/she is the main communication channel between EB and CB.
2. Is a member of the EB and participates in the EB activities and meetings.
3. Proposes the nominations of members of the Executive Board to the Executive Board Manager (EBM) and to the Council, thus forwarding the suggestions of the CB.
4. Reports the activities of the Executive Board to the Collaboration Board

## 3 The Executive Board (EB)

The Executive Board (EB) is the central body of the ET project, managing its core activities. The EB has the duty to realise the ET infrastructure and to coordinate the design, preparation, assembling and commissioning of the ET observatory.

### 3.1 The EB composition

The EB composition will certainly change in the different phases of the project, but we can give here a general definition.

The EB is chaired by an Executive Board Manager (EBM).

The EB is subdivided in specific boards that can change according to the different phases of the project. Currently the following specific boards have been identified (see Figure 1):

- A) The Instrument Science Board (ISB)
- B) The Observational Science Board (OSB)

- C) The Site Preparation Board (SPB)
- D) The e-Infrastructures Board (EIB)
- E) The Internal Financial Board (IFB)

In the initial phase, the chairs of these specific boards are members of the EB. In future, a delegate of each specific board will sit in the EB.

An administrative department (and other functional department) will be created under the executive board. Their delegates can be members of the EB.

Technical figures (Technical manager, Site Manager, Quality Control, ....), decided by the EBM and endorsed by the Council, can be members of the EB. Some apical roles of the EB can be appointed directly by the ET Council.

### **3.2 The Executive Board Manager (EBM)**

The Executive Board Manager (EBM) coordinates the activity of the Executive Board (EB).

The EBM is appointed by the ET council. In certain phases of the ET life, EBM and spokesperson roles can be played by the same person, having both the roles. This is the case for the start-up phase, until the EBM will be appointed by the ET Council.

The EBM:

1. Appoints the members of the Executive Board, evaluating the suggestions (or the indications) of the CB, through the spokesperson, and receiving the indications of the Council.
2. Chairs the meetings of the Executive Board.
3. Coordinates the work of the Project with the support of the Executive Board
4. Reports the activity of the Executive Board to the ET Council.
5. Supports the SP to prepare the report to the CB.

### **3.3 The “Specific Boards”**

The Specific Boards are a collection of operative elements of the ET project addressed to the definition, realization and management of specific aspects of the project. Currently the Steering Committee defined one Specific Board, the Instrument Science Board (ISB), is defining the Observational Science Board (OSB) and the Site Preparation Board (OSB) and it is expected to work on the definition of the E-infrastructure Board (EIB) and of the Internal Financial Board (IFB).

#### **3.3.1 The Instrument Science Board (ISB)**

The first objective of the ISB is to deliver the ET Technical Design Report (ET-TDR) of the infrastructure and of the detectors starting from the ET Conceptual Design Report (ET-CDR). The ET-TDR production will be an iterative process and its timing is defined in the overall roadmap of the project.

The second objective of the ISB is to identify the missing technologies and suggest a plan for R&D activities. This must be a living plan, regularly updated. The first delivering of this plan is expected in March 2021.

The current structure of the ISB is shown in Figure 2.

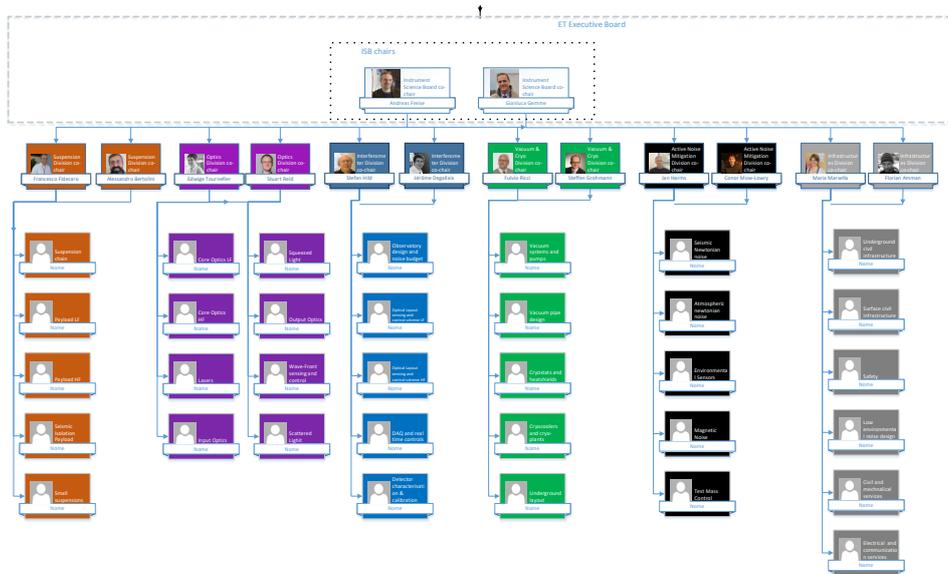


Figure 2- The Instrument Science Board structure.

### 3.3.2 The Observational Science Board (OSB)

The OSB will detail the ET science case, evolving from the current conceptual level toward the future implementation of the data analysis environment of ET. The OSB will detail the possible science in ET, will prepare the data analysis requirements and will indicate the computing requirements for ET. The OSB is currently under discussion in the SC.

### 3.3.3 The Site Preparation Board (SPB)

The SPB will coordinate the effort on the site related activities, formulate the site specifications for Einstein Telescope, and prepare the choice of the site for the Einstein Telescope observatory. The composition, organization, and precise mandate of the SPB is currently going to be defined by the SC.

### 3.3.4 The E-Infrastructures Board (EIB)

The EIB will define the specification in terms of computing and storage resources, networking, local and distributed e-infrastructures of ET. It will study the computing models that can be adopted in ET and the synergies with the e-infrastructures available or expected in Europe in the next decade.

### 3.3.5 The Internal Finance Board (IFB)

The IFB will have the mandate to evaluate the financial needs of the ET project, collecting and harmonizing the inputs received from the other technical boards. The IFB will, also, suggest the funding tools needed to the EB to elaborate a financial strategy to be proposed to the Council. The IFB will be discussed inside the SC.

## 3.4 The ET council

The ET council is the apical management body of ET, where the funding agencies are directly represented. Its organization is beyond the scope of this document, but it is expected that a balancing

between the representativeness and the financial role of each institution is implemented.

### **3.5 The Scientific and Technical Advisory Committee (STAC)**

The STAC is an external advisory committee of the Council composed by global experts on the different scientific and technical aspects encountered in ET. We expect that the Executive Board, in case of need for specific subjects, can propose to the council or can organize in autonomy external advisory committees having a limited lifetime.