

ORFEUS Bylaws

(approved by the Board of Directors on February 5th, 2018;
amended on April 4th, 2019 – terms of SG position and CP list;
amended on November 22nd 2019 - procedure to be followed in case of default of payment;
amended on November 26th 2020 – UAG Chair term)

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Preamble

This revision of the ORFEUS Bylaws is prompted by the new developments in the field of observational seismology in Europe. It follows from the recent re-organization of the ORFEUS seismic network data archives and from the need for ORFEUS Foundation to maintain a leading position in the domains of data curation, quality control and dissemination, taking into account the ever more important need for providing modern (and thus dynamic) data products and data services. Responding to these new challenges requires changes in the modes of operation of the foundation and the adoption of a flexible, effective and modern governance and execution model. When compared to the existing Bylaws, the new Bylaws more clearly describe the role of the Secretary General as the manager of the activities of the Foundation interacting with, and advised and verified by, the Executive Committee who all follow the direction provided by the Core Participants^s. These new Bylaws attempt to connect the Foundation with the core community consisting of seismic network operators and scientific users. To this purpose the Board of Participants (foreseen in the Statutes) and the User Advisory Group are established, both providing feedback and advise on the initiatives the Foundation is expected to undertake.

Article I Name and Objectives

Section 1. Name. The name of the Foundation is OBSERVATORIES AND RESEARCH FACILITIES FOR EUROPEAN SEISMOLOGY – with ORFEUS as official abbreviation. It shall be indifferently referred to as “the Foundation”, “the Organization” or “ORFEUS” in the following.

Section 2. Legal Entity. The Foundation is a non-taxable and non-profit inter-European society currently registered in The Netherlands. Disputes shall be solved according to the Laws of the country in which the Foundation is registered. The ORFEUS Bylaws regulate the ORFEUS Statutes. The Statutes shall be referred to for any aspects which are not explicitly regulated in the present Bylaws.

Section 3. Objectives. The objective of ORFEUS is to promote seismology in Europe through the collection, archival and distribution of digital seismic waveform data, metadata and derived products. In particular, ORFEUS aims to:

- Develop and coordinate waveform data products, as prioritised by ORFEUS scientific users and endorsed by the Board of Directors (BoD).
- Coordinate a European data distribution system, which includes the ODC (ORFEUS Data Center), and provide support for seismic networks in archiving and exchanging digital seismic waveform data.
- Promote best practice for seismic network operation, data quality control and data management across Europe.
- Drive large-scale collaborative projects within the European observational seismological community.
- Cooperate with international societies and organizations on the global coordination of matters concerning waveform seismology, with specific focus on developing standards and interoperability.
- Facilitate access to seismic waveform data, products and services to the broader Earth science community, in a manner interoperable with the European Plate Observing System (EPOS).

Section 4. Infrastructure and Staff. The ORFEUS Foundation maintains the ORFEUS Data Center (ODC). The ODC is operated in the country of registration of ORFEUS. The ORFEUS staff consists of a.) Secretariat, which includes the Secretary General (SG) and her/his assistant(s), b.) the Director of the ODC and c.) the ORFEUS Treasurer. The Secretariat does not necessarily reside in the country of registration of ORFEUS.

Article II Participation

Participation to the ORFEUS Foundation includes:

- a. Core Participants;
- b. Participants; and
- c. Participants by right.

Section 1. Core Participants. Educational, governmental and semi-governmental institutions are eligible to become Core Participants of ORFEUS. Each Core Participant appoints one representative to the BoD. Core Participants have the duty to pay a fee whose value is decided by the BoD. The institutions in Appendix A are the current Core Participants of ORFEUS.

Section 2. Participants. Educational, governmental and semi-governmental institutions are eligible to become Participants of ORFEUS. Participants have the right to attend ORFEUS plenary meetings and workshops. Plenary meetings are meant to present ORFEUS activities and collect feedback from the participants. ORFEUS workshops target specific topics and are meant to foster cooperation and facilitate coordination. Participants have the duty to pay a fee approved by the BoD. The institutions in Appendix B are the current Participants of ORFEUS.

Section 3. Participants by Right. The European-Mediterranean Seismological Centre (EMSC), the International Seismological Centre (ISC), and the European Seismological Commission (ESC) are Participants of ORFEUS by Right and can send a representative to the BoD in a non-voting capacity. Additional Participants by Right can be selected by the BoD at their discretion.

Section 4. Initiation of the participation. Institutions that wish to become Core Participants or Participants of ORFEUS present a written application to the BoD. Successful applications for Core Participants must be approved by a majority of two thirds of the BoD.

Section 5. Termination of the participation. Participations may be terminated either by ORFEUS or by a participant. Any participant may resign at any time by giving written notice to the Chair of the BoD. The resignation takes effect at the time of receipt of notice, or at any later time specified therein. Any resigning participants shall remain liable for any unpaid portion of participation fees and any other participation fees, assessments or charges levied by the BoD before the giving of such notice. In case Core Participants fail to fulfill their duties, ORFEUS may decide to terminate their participation. Such decision is made by a voting majority of two thirds of the BoD.

Article III Governance Levels

The structure of the Foundation shall comprise of:

- Board of Directors (BoD)
- Executive Committee (ExeCom)
- Secretary General (SG)
- Service Management Committees (SMCs) and User Advisory Groups (UAGs)
- Infrastructure Development Group (IDG)
- Board of Participants (BoP)
- ORFEUS Data Centre (ODC)

1. Decision level: Board of Directors (BoD)

The Board of Directors (BoD) is the governing body of the ORFEUS Foundation and shall take the necessary decisions related to the Foundation, its objectives and activities.

Section 1. Powers of the BoD. The affairs of ORFEUS shall be supervised under the authority of the Core Participants through the Board of Directors (BoD). To this end and without limitation of the foregoing or of its powers expressly conferred by these Bylaws, the BoD shall have power to:

- Authorize strategy on behalf of the Organization;
- Make rules or regulations for its management;
- Create and discharge additional offices or special committees;
- Select, employ or remove such of its officers, agents or employees;
- Approve and terminate core participation and set participation fees;
- Fill vacancies and approve participant rotation in ORFEUS committees;
- Select the Secretary General;
- Review every 4 years and select, when needed, the Secretariat;
- Approve the annual reports of activities and work programme propositions;
- Approve the annual financial report;
- Approve the provisional budget;
- Approve contracts with other organisations.

Section 2. Composition of the BoD. The BoD shall be composed of one authorized representative from each Core Participant.

Section 3. Chair of the BoD. The Chair of the BoD shall, when present, preside at all meetings of the BoD and shall perform such other duties and exercise such other powers as shall from time to time be assigned by the BoD. The term of the chair lasts 4 years, with a single re-election possible.

Section 4. Vice Chair of the BoD. The Vice Chair of the BoD shall preside, in the absence of the Chair, at all meetings of the BoD and shall perform such other duties and exercise such other powers as shall be assigned by the BoD. The term of the Vice Chair lasts 4 years, with a single re-election possible.

Section 5. Term of Office. The term of a participant of the BoD is at the discretion of the relevant Core Participant. A participant of the BoD may be replaced at any time by written notice to the Chair of the BoD. Such replacement shall take effect at the time of receipt of notice, or at any later time specified therein.

Section 6. Resignation. Any participant of the BoD may resign at any time by giving written notice to the Chair of the BoD. Such resignation shall take effect at the time of receipt of the notice, or at any later time specified therein.

Section 7. Meetings and Voting. The BoD meets at least once a year. BoD meetings are led by the Chair of the BoD (or in his/her absence by the vice-chair) and organised by the SG. Both the SG and the President of the ExeCom attend the BoD meetings, in a non-voting capacity. BoD decisions are taken by a simple majority of the participants present unless otherwise specified. E-mail voting is allowed. A quorum is reached with two thirds ($\frac{2}{3}$) of the BoD voting members.

Proxies for any participant of the BoD for any meeting of the BoD can be nominated by written notice by the said participant to the Chair of the BoD. The Chair of the BoD, the President of the ExeCom and the SG may invite other participants to meetings of the BoD, who will attend in a non-voting capacity.

With the exception of meetings to be held in person, decisions of the BoD may also be taken by means of email (pursuant to the conditions and timeline specified in advance to all participants by the Chair) or of a document to be circulated by the Chair and signed by the participants. Participants may attend meetings by means of video-conference, telecommunication or e-rooms that guarantee the participants' identities and their continued effective contribution during the entire meeting.

2. Execution level: ExeCom of the Board (Executive Committee)

Section 1. Executive Committee of the Board (ExeCom). The Executive Committee (ExeCom) is the executive body of the ORFEUS Organization and shall report to and be accountable to the Board of Directors. The ExeCom shall ensure the proper execution and implementation of the decisions of the BoD and shall monitor the effective and efficient implementation of the Foundation's tasks and activities.

The Execom is in charge of establishing and modifying scientific working plans to ensure consistency, coherence and stability of the operation of the Foundation, including drafting proposals for the BoD. Furthermore the Execom shall supervise the Secretary General in the implementation of his/her tasks.

Section 2. Composition. The ExeCom is composed of at least two members designated by the BoD, and the Chairs of the Service Management Committees (SMCs, see level 3). Non-voting participants in the ExeCom are the Chair of the Infrastructure Development Group (IDG, see level 4), the Chair(s) of the User Advisory Group(s) (UAGs, see level 3) and the Director of the ORFEUS Data Center (ODC). The President of the ExeCom will be selected from, and elected by, the ExeCom voting participants and approved by the BoD. The SG organises and attends the meetings of the ExeCom in a non-voting capacity.

Section 3. Duties of the ExeCom. The ExeCom has an active role in defining the following matters, to be approved by BoD:

- a. provide strategic vision for ORFEUS considering UAG feedback;
- b. creation of new committees of ORFEUS;
- c. amendment or repeal of the Bylaws, or the adoption of new Bylaws;
- d. preparation of the guidelines for seismic network best practice, data and services, data policy and intellectual property rights;
- e. preparation and execution of contracts and MOUs;
- f. review of ORFEUS budget;
- g. steer activities of SMCs and ODC;
- h. propose the Treasurer.

Section 4. President of the ExeCom. The President of the ExeCom presides over the ExeCom. In the absence of the Chair or the Vice Chair of the BoD, the President of the Execom shall preside at meetings of the BoD. In addition, he or she supports the SG in representing ORFEUS to the scientific community and the wider public. In case of unavailability of the SG, the President of the ExeCom may temporarily act on his/her behalf.

Section 5. Term of Office of the President of the ExeCom and of the BoD-designated ExeCom members. The members of the ExeCom who are designated by the BoD serve terms of 4 years, renewable once. Appointment and renewal of terms are decided by the BoD. All ExeCom members

are eligible to become President of the ExeCom. Once elected, the President of the ExeCom has a new term of 4 years and may be re-elected once for another 4 year period. The mandates of BoD-designated ExeCom members are staggered in time. The BoD holds the right to prematurely replace the BoD-designated ExeCom members.

Section 6. Meetings and Voting. The ExeCom meets at least once a year. ExeCom meetings are led by the President of the ExeCom and organised by the SG, who also attends the meeting. ExeCom decisions are taken by a simple majority (1/2) of the voting members present. The presence of a simple majority of its members shall constitute a quorum for the transaction of business. Virtual (e.g., teleconference) meetings are allowed and follow the same modality.

3. Secretary general (SG)

Section 1. The SG is the legal representative of ORFEUS, and unless authority is given by the BoD to other officers or agents to do so, he or she shall execute all contracts and agreements on behalf of ORFEUS.

Section 2. The SG is selected through a public solicitation among the Core Participants and is appointed by the BoD.

Section 3. Tasks of the SG are:

- a. carry out the day-to-day management of ORFEUS with due diligence and in accordance with these Bylaws, the instructions and recommendations of ExeCom and the decisions of the BoD and the applicable law;
- b. ensure coordination across all governance levels;
- c. collaborate with the ExeCom;
- d. provide a yearly report to the BoD that includes finances, and plans for the following year;
- e. coordinate and grow the community involved in ORFEUS, in particular with regard to providing open access to waveform data and data services;
- f. maintain and develop institutional-level partnerships and encourage data sharing in coordination of ODC;
- g. organize ORFEUS annual plenary meetings and the ORFEUS Annual Workshop;
- h. actively solicit new partners and alliances;
- i. initiate and manage the ORFEUS component of large infrastructure projects related to ORFEUS activities;
- j. support the UAG Chair(s) to organise UAG meetings;
- k. represents ORFEUS to the scientific community and the wider public;
- l. presides the BoP.

4. Service Management and Advice level: Service Management Committees (SMCs) and User Advisory Groups (UAGs)

Section 1. Service Management Committees (SMCs). A Service Management Committee (SMC) shall be established for each major scientific, educational or research program to which ORFEUS provides services. Initially, these SMCs include committees to manage: 1) a federated service for seismic waveforms, and 2) a service for strong motion event waveforms and related parameters. The BoD may approve the establishment of additional SMCs at its discretion. SMCs operate until

they are discharged by the BoD. Each SMC is composed of at least four members, who elect a Chair. Each SMC should organise its own structure with a MoU or similar agreement between members. The internal SMC organisation must be approved by the ExeCom.

Section 2. Powers of the SMCs. Each SMC coordinates the service activities within the overall policy and strategy proposed by the ExeCom and approved by the BoD.

Section 3. User Advisory Groups (UAGs). The BoD shall establish at least one User Advisory Group (UAG) to serve as an experienced advisory body for the ExeCom. A UAG is composed of at least four external stakeholders with relevant scientific or technical competence. The members of UAGs are proposed by the ExeCom and appointed by the BoD. At least one member of each UAG should come from an organization that is not a Core Participant of ORFEUS. Each UAG meets once a year with the SG, the President of the ExeCom and with the Chairs of the relevant SMCs, and subsequently produces a yearly report with scientific and technical recommendations. The term for members of the UAG(s) is 2 years (preferably terms of members are staggered), with renewal possible; the UAG(s) elects a Chair among its members every two years.

Section 4. Powers of the UAGs. UAGs review practice and services and suggest improvements to the ExeCom on all matters related to the implementation of the services and products. They advise the ExeCom on the prioritisation of new tasks and services.

Section 5. Chairs of the SMCs and UAGs. The Chairs of the SMCs and UAGs shall preside all the meetings of their committees and perform other duties and exercise other powers as may be assigned by the ExeCom. SMCs Chairs are voting members of the ExeCom and UAG Chair(s) is(are) non-voting participants of the ExeCom.

5. Production level: Infrastructure Development Group (IDG)

Section 1. Infrastructure Development Groups (IDGs). The ExeCom, following the advice of the SMCs, will propose to the BoD the establishment of one or more Infrastructure Development Groups (IDGs).

Section 2. Powers of the IDG. The IDG is responsible for the technical development and operational management of the distributed ORFEUS services and infrastructures, following the overall policy and strategy proposed by the ExeCom, approved by the BoD, and coordinated by the SMCs.

Section 3. Membership. An individual or institution may be member of an IDG, whether or not formally affiliated with ORFEUS. An IDG is composed of at least 4 members.

Section 4. IDG Chair. An IDG Chair is elected among all IDG members. The terms of the IDG Chair are 2 years, and must be approved by the ExeCom. The BoD is informed of the general membership of the IDGs. The IDG Chair is appointed as a non-voting participant of the ExeCom.

6. Board of Participants

Section 1. Board of Participants. The Board of Participants (BoP) consists of the participant representatives.

Section 2. *Role.* The Board of Participants (BoP) brings issue regarding data and services improvements to the attention of the SG, to be reported to the ExeCom and BoD.

Section 3. *Meetings.* The Board of Participants meets at the ORFEUS Observatory Meeting. The SG organizes and presides the BoP.

Article IV ORFEUS Secretariat and Treasurer

Section 1. Secretariat. The Secretariat is composed of the Secretary General and her/his assistant(s). The Secretariat may be hosted by any Core Participant.

Section 2. Tasks of the Secretariat. In addition to the tasks of the SG, the SG and her/his assistant(s) provide support for secretarial activities (convening, organising and documenting meetings of the BoD and of the ExeCom, travel, workshops, etc), contracts and licensing, communications and outreach, and shall perform such other duties as shall from time to time be assigned by the ExeCom or by the BoD.

Section 3. Treasurer. The Treasurer is proposed by the ExeCom and appointed by the BoD. He or she is subject to the control of the BoD, shall collect and receive, and shall have charge and custody of, the funds and securities of ORFEUS. She or he shall have such other duties as are customary to the position of Treasurer in an organization of this type such as shall from time to time be assigned by the BoD. The treasurer is located in the European country where the ORFEUS Foundation is registered.

Article V ORFEUS Data Center (ODC)

Section 1. ORFEUS Data Center. The ORFEUS Data Center (ODC) is the centralized facility within ORFEUS that hosts data and services for all ORFEUS data providers that are not part of the European federated infrastructure currently called European Integrated Data Archive (EIDA). The ODC is a core component of the federated infrastructure.

Section 2. Goals of the ODC. Main goals of the ODC include:

- to operate an EIDA node that manages data collection for networks unaffiliated to other EIDA nodes;
- to develop and operate central access services for the ORFEUS community;
- to spread best practice for seismological data management in Europe.

Section 3. Director of the ODC. The Director of the ODC is appointed by the institution that hosts the ODC, with the approval of the BoD. The term of the Director of the ODC is not limited. The Director of the ODC is a non-voting member of the ExeCom.

Article VI Officers

Section 1. Officers and Qualifications. The officers of ORFEUS shall consist of a Chair and a Vice Chair of the BoD, the SG, the BoD-designated members of the ExeCom, the President of the

ExeCom, the Chairs of the SMCs, the director of the ODC, the Chair(s) of the UAG(s), the Chair(s) of the IDG(s), and the Treasurer. Officers, except for the Chair and Vice Chair of the BoD, need not be members of the BoD.

Section 2. Terms of Officers.

Officers	Term duration	Renewable	Maximum total duration of terms
BoD members	indefinite	N/A	N/A
Chair and Vice Chair of the BoD	4 years	once	8 years
ExeCom members designated by the BoD	4 years	once	8 years
President of ExeCom	4 years	once	8 years
Director of ODC	indefinite	N/A	N/A
UAG members	2 years	Chair rotates every two years. Terms of members may be renewed once.	N/A
SMC members	No automatic limit for members.	Chair rotates according to the SMC approved structure and rules.	N/A
IDG members	No automatic limit for members.	Chair rotates according to the SMC approved structure and rules.	N/A
SG	Reviewed after 4 years	Indefinite	N/A
SG assistant/s	N/A	N/A	N/A
Treasurer	Indefinite	N/A	N/A

Article VII

Fees and Dues

Section 1. Core participation. Each Core Participant shall pay such fees or assessments, annual or otherwise, as may be authorized from time to time by majority vote of the entire Board of Directors; provided, however, that all such fees and assessments shall be levied proportionally on all

participants using a scale of proportion decided upon by the Board of Directors at any annual or special meeting.

Section 2. *Participation.* Each Participant shall pay such fees, annual or otherwise, as may be authorized from time to time by majority vote of the entire Board of Directors; provided, however, that all such fees and assessments shall be levied equally on all institutional participants. Additionally, each Participant shall contribute an initial participation fee, as may be authorized by majority vote of the entire Board of Directors.

Section 3. *Resignation and non-payment.* A participant that has resigned from ORFEUS shall not be liable for any fees or assessments levied after the effective date of its resignation. Any participant which fails to pay any fees or assessments may be removed from participation for such non-payments by a voting majority of two thirds of the BoD. The detailed procedure to be followed in cases of default of payment is described in Annex C.

Article VIII Compensation Section

Section 1. *Compensation.* The Board of Directors shall have the power to fix the compensation and fees payable to officers and employees for services rendered to ORFEUS; provided, however, that no member of the BoD shall be paid any compensation for serving as a member of the BoD.

Section 2. *Dividends.* The Organization shall not pay dividends or distribute any part of its income or profit to its participants, Directors or officers.

Article IX Indemnification

Section 1. *Indemnification.* The Organization shall have the power to indemnify any member of the BoD, officer, employee or agent to the fullest extent permitted, and in accordance with the standards and procedures provided by laws of the country in which said person is employed; provided, however, that the indemnification provided for herein shall apply only upon the determination of the Board of Directors that indemnification is proper in the circumstances because such members of the BoD, officer, employee or agent has met the applicable standard of conduct prescribed by the law. Such determination shall be made: (1) by the Board of Directors by a majority vote of a quorum consisting of disinterested directors or (2) if such quorum is not obtainable, or even if obtainable if a quorum of disinterested directors so directs, by independent legal counsel in a written opinion. The foregoing right of indemnification shall be in addition to and not exclusive of all other rights at which such Director, officer, employee or agent may be entitled.

Article X Fiscal Year

Section 1. *Fiscal Year.* The fiscal year of the Foundation follows that of the country of the hosting institution.

Article XI Seal

Section 1. *Seal*. The seal of ORFEUS shall be circular in form and shall bear the words and figures: "Observatories and Research Facilities for European Seismology – 1984" or words and figures of similar importance. The form of such seal shall be subject to alteration by the Board of Directors.

Article XII Amendments

Section 1. *Amendments*. All Bylaws of the Foundation shall be subject to amendment or repeal and new Bylaws may be made by the affirmative vote of two thirds of the entire Board of Directors at any annual or special meeting, the notice or waiver of notice of which shall have specified or summarized the proposed amendment, repeal or new Bylaws.

Article XIII Dissolution

Section 1. *Dissolution*. If the Foundation is to be dissolved, any assets, including a liquidation surplus, shall be reserved for a goal determined by the Executive Committee of the Board, and as much as possible in accordance with the aim of the Foundation. This will be evaluated by the Board of Directors.

Article XIV

Acronyms

BoD:	Board of Directors
EIDA:	European Integrated Data Archive
EMSC:	European-Mediterranean Seismological Centre
EPOS:	European Plate Observing System
ESC:	European Seismological Commission
ExeCom:	Executive Committee
IDG:	Infrastructure Development Group
ISC:	International Seismological Centre
ODC:	ORFEUS Data Centre
ORFEUS:	Observatories and Research Facilities for European Seismology
SG:	Secretary General
SMC:	Service Management Committee
UAG:	User Advisory Group

Annex A: List of ORFEUS Core Participants (members of the Board of Directors are listed in the ORFEUS web site) as of April, 2019.

Austria	ZAMG
Belgium	BELSPO/ORB
Denmark	KMS
Finland	University of Helsinki
France	IPGP/CNRS
Germany	GFZ
Greece	Earthquake Planning and Protection Organization (EPPO)
Italy	INGV
Netherlands	KNMI
Norway	NNSN
Portugal	IPMA
Romania	NIEP/INFP
Sweden	SNSN
Switzerland	ETH
Turkey	KOERI
Turkey	AFAD
United Kingdom	BGS/NERC

Annex B: List of ORFEUS Participants

The updated list is available on <https://www.orfeus-eu.org/organization/participation/>.

Annex C: Procedure to be followed in case of default of payment

General - Any difficulties related to the payment of the fees should be promptly communicated in writing to a special Committee comprising: the SG, the Treasurer, the President of the ExeCom and the Chair of the BoD. The letter should briefly explain the difficulties and specify whether the payment is expected to be delayed, reduced, or not made. ORFEUS can make proposals to mitigate the impacts of unpaid participation fees, including, e.g., the offer of alternative in-kind services to ORFEUS by the Participant in default of payment. Cases of default of payment should be dealt with and solved amicably, based on mutual fairness and understanding.

Core Participants (CP) - Unpaid CP fees have a major impact on the functionality of the Foundation. A CP that is partly or totally in default of payment for two subsequent years, temporarily loses its voting right in the BoD. If a CP is partly or totally insolvent for three subsequent years, the BoD and the CP representative meet to reach a mutual agreement about the continuation of the CP. If no mutual agreement is found, the BoD will decide with a vote following Article II.5 of the Bylaws.

Participants (P) - Unpaid P fees have a moderate impact on the functionality of the Foundation. If a P is partly or totally insolvent for three subsequent years, the SG and the P representative discuss to reach a mutual agreement about the continuation of the participation. If no mutual agreement is

found, the BoD will decide with a vote following Article II .5 of the Bylaws.